

**FACTORS INFLUENCING THE INTERNATIONALIZATION OF KENYAN FIRMS IN  
THE CHEMICAL AND ALLIED MANUFACTURING INDUSTRY**

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## DECLARATION

This research project report is my original work and has not been submitted for any award in any University.

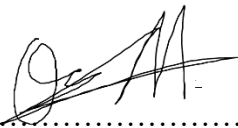
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## **DEDICATION**

This work is dedicated to my family; my dad, Prof. Adu A.M Wasike and my sister Anita Mukonja Wasike for the support they have continued to show me throughout my University education.

## **ACKNOWLEDGEMENT**

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## **LIST OF ABBREVIATIONS AND ACRONYMS**

EAC	- East African Community
COMESA	- Common Market for Eastern and Southern Africa
WEF	- World Economic Forum
GDP	- Gross Domestic Product
KNBS	- Kenya National Bureau of Statistics
KAM	- Kenya Association of Manufacturers
USA	- United States of America
MNCs	- Multinational Corporation
CEOs	- Chief Executive Officer
MDs	- Managing Director
ICT	- Information Communication Technology
SPSS	- Statistical Package for Social Sciences

## **ABSTRACT**

In the last five years, there has been a growth in Kenyan Multinational corporations' foreign participation in emerging markets. Most are encouraged to expand their operations abroad with the promise of digitization and Market liberalization. The main objective for expanding abroad is to compete for limited resources while relying on the provision of markets for their products by the global economy. However, most firms do not have strategies to deal with the fast paced markets they intend to operate in. Additionally, they cannot deal with conflicting policies and the fluctuation of the currency. Therefore, firms ought to review their structure and policies before internationalizing their operations. The study adopted a descriptive research design to answer the how much, where, when, what, or who. Only the senior most ranking officers, the CEOs or MDs and their deputies, were targeted since they are in charge of strategic decision-making and are best placed to have information about factors influencing the internationalization process. The study used questionnaires to collect data from a list of chemical and allied firms registered at KAM. Analysis revealed that age and size, technology, Management and product type significantly influence the Internationalization of Chemical and Allied firms in Kenya. A conclusion was made that due to the continued global technological advancement, chemical and allied firms in Kenya should adopt superior technologies meant to reduce production costs, maximize profits, and give the firms a competitive advantage. Additionally, firms should consider the product's uniqueness and product specificity since they influence a firm's competitiveness. The study recommended developing and acquiring information on the foreign markets prior to expanding abroad which can be achieved through outsourcing for the services of management personnel in the country of interest or employing individuals with international experience and education. Additionally, adopting superior technologies will be key in reducing production costs, maximize profits, and give the firms a competitive advantage. Lastly, the government should actively provide firms with information on foreign market opportunities through the Export Promotion Council. They can also provide financial support to smaller firms wishing to expand their operations abroad.

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background of the Study**

In the last five years, there has been a growth in Kenyan Multinational corporations' foreign participation in emerging markets. Firms in Emerging Markets are encouraged to expand their operations abroad with the promise of digitization and Market liberalization. The main objective for expanding abroad is to compete for limited resources while relying on the provision of markets for their products by the global economy (Cahen & Borini, 2017). However, most firms do not have strategies to deal with the rules and regulations set in foreign countries that they intend to operate in. Additionally, they cannot deal with conflicting policies and the fluctuation of the currency. Therefore, firms ought to review their structure and policies before internationalizing their operations.

According to Vahlne and Johanson (2017), international businesses encompass all commercial activities that support the transfer of services, resources, goods, technologies, and concepts across national borders. It can be conducted through franchising, mergers, acquisitions, greenfield investment, or other cooperative agreements (Gorodnichenko et al., 2010). Cahen and Borini (2017) assert that the Internationalization of firms has been a substantial source of technological transfers and expertise from developed countries to emerging markets. This is based on a belief that businesses in emerging markets benefit from the externalities of Foreign Direct Investment through knowledge spillovers to domestic firms, vertical linkages, and international integration.

Therefore, the Internationalization of an organization can be described as a dimension of growth (Liu & Xue, 2011).

The study intended to examine the factors influencing Kenyan Firms' Internationalization in the chemical and allied manufacturing industry. This is because, in the last 25 years, many Kenyan firms have expanded their operations abroad. Understanding the diverse methods practical to diversifying marketing activities through venturing into foreign markets for chemical and allied manufacturing firms will give these firms a competitive advantage. Most studies conducted on the Internationalization of Kenyan firms focus on various management issues such as firm strategy, human resource management, marketing, finance, and international business as factors influencing Internationalization. However, none of these studies focus solely on the chemical and allied manufacturing industry.

### **1.1.1 Factors affecting Internationalization**

Reduction of Costs is one of the factors that influence the Internationalization of firms. One significant role of any firm's Management is to cut costs and move their operations to a country with lower operational costs when necessary. A good example would be Cadburys which closed shop in Kenya and moved to Egypt due to lower costs. Czinkota (2004) discards this and describes motivations for Internationalization to be the main factors influencing the Internationalization of firms. The motivations for Internationalization are divided into two main categories; reactive and proactive motivations.

Likewise, the political factor is another aspect that influences the Internationalization of business operations. In recent years' countries are working together to increase trade amongst themselves by removing trade barriers and forming single markets through unification and socialization of the

global community. This has promoted preferential trading agreements; this way, countries can trade with each other. Therefore, there has been a formation of trading blocs like the EAC and COMESA for the East Africa region. Many companies take advantage of the formation of the blocs to gain access to the ensuing markets either through producing in the area or exporting (Ball et al., 2012).

Furthermore, competition is another factor that can influence the Internationalization of firms. Businesses need a competitive advantage against their competitors to grow and expand a business in line with customers' needs. Firms expand their operations abroad for this reason. They look forward to digitization and liberalization, which gives them a competitive advantage (Cahen & Borini, 2017). Correspondingly, technological factors play a significant role in influencing Internationalization. Advanced information technology makes it easy to transfer information and ideas across borders. This way, the consumers are enlightened about international goods and services. Additionally, firms can hold meetings between managers from headquarters and overseas subsidiaries without much expense and save a lot of time (Ball et al., 2012).

### **1.1.2 The Manufacturing Sector**

The manufacturing sector is vital in promoting economic growth and structural change. The industry is a backbone for most national economies, making it a critical sector in providing employment to the world's fast-growing population, especially the tropical countries. A report by the World Economic Forum (WEF), which sampled export data for 128 nations with over 70% of the income variations, determined that the manufacturing sector is significantly vital to the prosperity of nations. It explains that manufacturing has multiplier effects caused by its close relationship to the other sectors of the economy. Different studies based on the Kaldor's Law maintain that the manufacturing industry is the engine for economic growth and development in

developing countries. However, Chakravarty and Mitra (2009) dispute that the manufacturing sector is a key influence on employment in other sectors, particularly the services sector, which is a significant source of investment in research and development.

Kenya's Vision 2030 stipulates that the growth of the manufacturing sector is vital in promoting economic growth. This is evident by its contribution to GDP, although it has been stagnant in the past years according to various statistical surveys by the Kenya National Bureau of Statistics (KNBS). Data from economic survey reports indicate that the average contribution of the manufacturing sector to GDP from 2003 to 2010 was 10.3% (KNBS, 2011). Kenya Association of Manufacturers (KAM) data over the same period confirms the same. The Economic Survey (2019) revealed that regardless of the stagnation in the manufacturing sector, there has been a progressive improvement. The industry registered a 4.2% growth in 2018. The growth is impressive and can be associated with the overall economic performance of 6.3% in 2018. There is, therefore, a link between the manufacturing sector and the overall economic performance of Kenya. KAM recognizes that the manufacturing sector's growth is due to increased trade with emerging markets in EAC and COMESA rather than improved productivity and efficiency. Additionally, external trade with countries like the USA has significantly contributed to the growth of the sector.

Over the last decade, there has been a growth of firms registered under KAM. KAM records show that about 55% of the firms were established in the last decade. Most of the firms are have low capital and often have an employee base of less than fifty. KAM divides manufacturing firms into 12 sectors: food and Beverages, Leather and footwear, Paper and hoard, Timber, wood products and furniture, Energy, electrical and electronics, Textile and apparel, Metal and Allied, Pharmaceutical and medical equipment, Building, construction and mining sector, Plastics and rubber sector, Chemical and allied and Motor vehicle and accessories. There are 75 firms registered

at KAM under the chemical and allied sector. This sector employs over 3,000 people directly and another 5,000 indirectly. The firms are categorized into three sub-sectors based on their product: Cosmetics and hygienic, Agrochemicals, paints, and resins. Most of the firms in the chemical and allied sector are big multinational players, and the sector is primarily made up of private companies with no identified public enterprise

## **1.2 Statement of the Problem**

There has been a growth in the popularity of global markets. According to Wells (2001), a review of the strategic Management of firms that have international operations indicates that a majority of investments made are highly influenced by increased global competition, trends in internationalization, and advancement in technology. In recent years, the internationalization process of firms has received a lot of attention from business people and scholars. Many firms have used the available literature to internationalizing their operations. A majority of these firms use their diversification to gain a competitive advantage so as to attain maximum profits and growth.

However, firms occasionally face challenges when expanding to foreign markets because of difference in operational and regulatory framework (Awolusi, 2014). According to Andersson (2004), a firm's internationalization process involves many interlinked aspects, and any firm looking to internationalize its operations must put them into consideration. The aspects include availability of resources, market knowledge and environment, and advancement in technology. Therefore, prior planning will be vital to achieving successful Internationalization. Manufacturing firms are perceived to be essential in a healthy and vibrant economy. They are viewed to be crucial in promoting an enterprise's culture and creating jobs within the economy. Thus, the



Internationalization of manufacturing firms is key to a country's economic performance (Masum & Fernandez, 2008).

Many theories have been proposed to explain the gradual growth of MNCs, but the most profound is the Uppsala model. It describes the internationalization process of firms. According to Vahlne and Johanson (2017), "internationalization is a product of a series of incremental decisions." The model was developed forty years ago, and since then, the structure and circumstances of Internationalization have changed a lot; hence it faces criticism. The Internationalization of firms in Kenya began a few years ago after global markets started offering firms opportunities with unlimited scope for growth. Nevertheless, there are no comprehensible frameworks to assist scholars to understand the reasons behind internationalization decisions, particularly for manufacturing firms (Cahen & Borini, 2017).

Several studies have been conducted about the Internationalization of firms in Kenya. There are no studies conducted examining the factors influencing the Internationalization of chemical and allied manufacturing firms, which is a knowledge gap. Therefore, the study's main objective was to examine the factors influencing the Internationalization of chemical and allied manufacturing firms in Kenya. The study will examine how technology, Management, product type, Age, and size influence the Internationalization of Kenyan firms. The Research Question was therefore: What are the factors influencing the internationalization of chemical and allied manufacturing firms in Kenya

### **1.3 Research Objective**

The study's main objective was to examine the factors influencing the Internationalization of Kenyan firms in the chemical and allied manufacturing industry

#### **1.4 Value of the Study**

Firms in the chemical and allied manufacturing industry can use the study's findings to get more insights into the different factors influencing the Internationalization of their business operation. Additionally, the firms can use the developed framework to estimate the extent of Internationalization within their operations. Many firms internationalize without knowledge of the new market and cultures they wish to venture in. They ignore the legal, political, environmental, and economic factors in the new markets. This could have severe implications for the company's future. Therefore, the findings of this study will be helpful to companies planning to internationalize their operations.

Furthermore, the study findings can enlighten the firm's Management and the government about factors influencing the internationalization of operations. Their knowledge can be used in formulating and implementing policy decision that provides an enabling environment to support the Internationalization of manufacturing firms in Kenya

Lastly, researchers and academicians can use the research as a source of reference for future studies on this and other related topics. The study also highlights other meaningful relationships that require further research.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter will review literature from various theoretical approaches and empirical studies from different scholars that have contributed to the study of firms' internationalization. The chapter reviews the theories of internationalization, the empirical literature as well as the conceptual framework.

#### **2.2 Theoretical Foundation**

##### **2.2.1 Uppsala Model**

Johanson and Wiedersheim (1975) were the first to initiate the Uppsala model. They evaluated the Internationalization of firms in Sweden. The results revealed that most of the firms prefer to gradually expand to foreign markets instead of making large investment commitments. Johanson & Vahlne (1977; 1990) further developed the model and described it to be behavioral-oriented. They described Internationalization as a versatile process that gradually increases operations of a firms in a foreign environment. Therefore, emphasizing on the firm's international knowledge as a key factor influencing internationalization decisions. That is to say, they gain insights from ongoing international activities within and use the knowledge to make future decisions.

Uppsala model describes the gradual process of Internationalization, which makes it relevant for this study. According to Johanson & Vahlne (1977), the model suggests that acquiring, integrating and using knowledge from the country they invest in the context of market trends and environment

is key to the successful internationalize of firms. Some firms first implement an export market-driven approach then gradually move their operations abroad. This enables the firms to learn from experiences they have acquired while operating abroad and reduces any uncertainties that arise during the subsequent expansion to a new country.

The Uppsala model has been dominating the internationalization literature for the last three decades. However, it has not gone uncriticised by different scholars. The model is heavily criticized because of its deterministic nature as it describes the different stages of internationalization (Johanson & Vahlne, 1990). Andersen (1993) describes the models as vague since it lacks detail in explaining the transition between stages. Additionally, Bell (1995) criticizes the model by arguing that the internationalization process is not as easy as indicated by traditional models. Other scholars maintain that the model does not often apply for small firms with high technology due to the fact that they do not internationalize in a stepwise manner (Coviello & Munro, 1995; Jones, 1999).

### **2.2.2 Network Theory**

The network theorist has challenged the Uppsala model in recent years. The network theory fundamentals maintain even though modern firms with high technology fail to demonstrate the incremental process, internationalization is achieved faster through the network partners' resources and experiences (Chen & Yhen, 2011). According to Johanson and Mattsson (1993), the theory considered all firms in a market to be part of a networks through a linkage to their customers, subcontractors, suppliers, and other players in the market. Donnelly (2013) describes a network to be an interconnection of business relationships where all exchange relations happen between firms conceptualized as collective actors. Scholars supporting the Network theory perceive firms'

Internationalization to be a result of natural developments precipitated by network relationships with foreign firms or individuals.

Networking is perceived as a source of knowledge, which is key in cases where there is no relationship with the new country of operation. Thus, networks act as bridging mechanisms allowing for rapid internationalization of firms (Scott-Kennel, 2013). The theory emphasizes that it is crucial to bring the involved parties closer by using the information acquired through establishing and maintaining close relationships with distributors, customers, subcontractors, suppliers, the industry, public and regulatory agencies, and other actors in the market. The relationship must be based on commitment, knowledge, and mutual trust towards each other. (Johansson & Mattson, 1993) argues that firms can only launch and develop their position in a market when they relate to other actors in a foreign network.

Firms with operations abroad develop and establish their position in relation to their competitors. They first network locally before Internationalization to establish connections. A firm's position in local networks gauges its ability to mobilize resources in a network. Therefore, all firms must have either local or international connections to gain a competitive advantage. They must coordinate their operations with other members in the market if they want to be profitable. The coordination influences different aspects of a firm's operation, for instance, price. Thus, imitating ties resulting from networking is hard. This makes the network theory relevant for this study.

### **2.2.3 Theory of Competitive Advantage**

The competitive advantage developed in 1817 by David Ricardo explains the causes of international trade and how it affects different countries. According to Deardoff (2005) the theory describes an opportunity cost as the volume of merchandises or services sacrificed by an

organization so as to produce another good. It ensures the firm has a competitive advantage whether on high or low opportunity cost. Thus, a company's resources should be dedicated to production at low opportunity cost when prices are low to gain a competitive advantage. Even though the theory of competitive advantage was formulated to compare production between countries, it is still relevant today since companies can outsource production services from with other firms in other countries. According to Cassey (2012) international procurement and outsourcing is based on the competitive advantage theory. However, Chang (2002) critiques the theory stating that it does not favor small-scale producers but big producers. He adds that given the fact that most manufacturers using this theory are from agricultural countries, growth of such firms is limited in the long run and rarely attract more investors in the country.

### **2.3 Empirical literature review**

Different scholars support the theory that a product's uniqueness influences export behavior. Cooper and Kleinschmidt (1985) argue that competitive advantages developing from the unique product are positively correlated to the performance of exports. Additionally, competitive advantages drawn from product specificity positively influence the performance of exports (Julien et al., 1994). Therefore, trademarks should be an advantage for businesses with foreign operations (Lefebvre & Lefebvre, 2001). Pollard (2001) observed that the internationalization process sometimes takes longer since the export stage may develop over a protracted period. The Internationalization of firms may likely be influenced by the business environment since the intensity of exports varies across industries (Tyebjee 1994). Bonaccorsi (1994) states that industry structure is important because it influences the link between a firm's size and export intensity. The latter may also vary by geographical location, as proximity to the market can affect the

internationalization process, as does cultural distance (Calof and Viviers 1995). Per-Anders goes further to identify product type as an influencing factor in the process of Internationalization. He notes that the product and contract structure possibly will, in a large extent, explain behavioral variances.

According to Lefebvre & Lefebvre (2001), technological capabilities include a business's present capacity and its future potential to use a firm's specific technology in solving technical complications and improve its production processes, technical functioning, and finished products. According to Ramussen et al. (2000), the level of technological development in communication, transportation, and production impacts the Internationalization process of firms. Young (1987) reiterates that disparities in technological intensity and product life cycles influence a firm's internationalization process. Technology is closely associated with research and development. Burgel and Murray et al. (1998) proposed that regular research and development activities can influence a firm's internationalization process. Furthermore, Ong and Pearson (1984) suggest that in-house research and development activities generate innovations and allow firms to assimilate external technological knowledge better.

Burgel and Murray et al. (1998) argue the Age and size of the firm influence the Internationalization process of a firm. The general expectation is that the Internationalization of larger and older firms is quicker than new and smaller firms. The Internationalization of smaller firms is complex and risk inherent. According to Pollard (2001), smaller firms face substantially larger risks and resource commitment than larger firms. However, Bonaccorsi 1992 and Calof 1994, suggest that the findings should not be an indication that a firm's Age and size influence its ability to operate in foreign markets. The traditional assumption is that firms operating internationally have to be big and aged (Chandler, 1990).

Nevertheless, some researchers have not documented any relationship between the size and Age of a firm and the Internationalization process, while others have found a negative relationship (Calof, 1993). Kilantaridis and Levanti (2002) conducted a study that revealed that smaller businesses export a greater percentage of their sales turnover than larger businesses. The study also found that small and young companies are, more or less, born international. They proposed that knowledge accumulation is crucial for firms appearing to have a very little linear progression from one stage to the next. The significance of Age and size of the firm as a factor influencing Internationalization is still a subject of discussion.

Roth (1990) conducted a study that revealed that managers living abroad influence the performance of firms with international operations. According to Burgel and Murray et al. (1998), managers' international professional experience is key in a firm's Internationalization. Madsen and Servias (1997) concur with this view stating that the international experience of an entrepreneur is an antecedent to participation in international new ventures. Furthermore, Cavusgil and Nevin (1981) also point out that the management expectations on the impact of exports on a firm's growth and the market's security significantly influence a firm's Internationalization. Forsman et a. (2002) adds that previous international experience also influence the internationalization process, expressly in the beginning.



## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1 Introduction**

This section will focus on an approach to studying a research topic. It presents information about the research design, the sampling frame, and the chosen samples. Additionally, it includes an outline that will be used to collect and analyze data. Each section looks deeper into a specific aspect of the study.

#### **3.2 Research Design**

A research design is a plan that gives an outline of all activities necessary to carry out a research project. It specifies the frame of operation within which data is collected, processed, and meaningful insights are formed. According to Kumar (2019), a research design is a guide to data collection and analysis. It is the plan, outline, or scheme used in generating solutions to research problems.

The study adopted a descriptive research design. A descriptive research design describes a subject by creating a profile of a group of people, events, or problems then collecting data that will be tabulated into frequencies (Cooper and Schindler, 2006). This will then answer the questions; how much, where, when, what, or who. Therefore, the research design will obtain information about the current status of the firm's Internationalization and describe the factors influencing it.

#### **3.3 Population of the Study**

Mackey and Gass (2015) define a population as an aggregate collection of research elements of interest to a researcher. KAM has firms registered in the following regions in Kenya: Thika and surrounding area, Asha River, Nyeri, Coast, Nyanza, Eldoret, Nakuru, Nairobi and surrounding area and Naivasha. The study will concentrate on Athi River, Nairobi, and the surrounding area since most chemicals and allied are based there. The firms to be interviewed must be registered with the Kenya Association of manufactures and should have international operations. In addition, the researcher will ensure that the firms nominated to participate in the study represent all manufacturing firms.

This study targeted senior most ranking officers, for instance, the CEOs or MDs and their deputies. A majority of the firms always put CEOs or MDs and their deputies' s in charge of the strategic management process. Since internationalization impacts competitive strategies put in place by firms, it is certain that these senior officers are best placed to have information about factors influencing the internationalization process. This enables them to be able to develop strategies that assist the firms in overcoming the challenges internally. Therefore, we can conclude that the target respondents are CEOs or MDs and their deputies since they have more knowledge about factors influencing Internationalization.

A 2011 KAM report indicates that 700 firms in Kenya are registered under KAM, and 80% of them are located within Nairobi and its surroundings. Further, it reports that only 75 firms registered with KAM fall under the chemical and allied sector, which employs over 3,000 people directly and another 5,000 indirectly. Most of the firms in the chemical and allied sector are big multinational players, and the sector is largely made up of private companies with no identified public enterprise. Therefore, targeting the Nairobi region will ensure ease in assessing the target respondents due to the concentration of manufacturing industries. Based on that data, the target

population for the study will be the 75 chemical and allied manufacturing firms registered under KAM.

### **3.4 Sample and Sampling Techniques**

#### **3.4.1 Sample Size**

Bryman and Bell (2003), define a sample size as a key process in data collection. According to Cooper and Schindler (2006), a sample size is a smaller set of the larger population. Researchers must make sure that the appropriate procedures are followed to choose a sufficient number of respondents. The firms were drawn from the KAM database, which lists registered manufacturing firms. KAM reports that there are 75 firms registered under the chemical and allied category. Given the size of the population and the fact that all firms have international operations, the entire population was cross-examined.

#### **3.4.2 Sampling Technique**

Babbie (2010) describes a sampling technique as a method used to choose the most suitable and qualified respondents to participate in a study. Additionally, Rubin and Babbie (2009) define a sampling technique as a method used to select respondents with a less biased view of the study. A sampling technique guides a researcher in choosing a sample size that can be easily managed while collecting data. The whole population was sampled to take part in the study.

### **3.5 Data Collection**

The study used questionnaires to collect data. Questionnaires are preferred because they make the data collection exercise easier compared to interviews (Carr & Walton 2013). Questionnaires offer the researcher flexibility enabling them to gather data from respondents who are near or far away.

They also do not require the presence of the researcher for data to be collected. In addition, the researcher used questionnaires as it protected the privacy of the respondents since they remain anonymous. Furthermore, the researcher can collect large amounts of data in a short period hence saving time and financial resources that would have been incurred if another instrument such as observation had been used (Carr & Walton 2013).

The questionnaire had both closed-ended and open-ended questions. They will be distributed to the different firms in the sample. Senior-most ranking officers, the CEOs or MDs and their deputies, will be the target respondents as they are in charge of strategic decision-making. Since internationalization impacts competitive strategies put in place by firms, it is certain that these senior officers are best placed to have information about factors influencing the internationalization process. The respondents were allowed only three days to fill out the questions by responding to them appropriately. The researcher then collected the questionnaires back for analysis. Additionally, the researcher safeguarded the confidentiality of the respondents.

### **3.6 Validity and Reliability**

#### **3.6.1 Validity**

A valid research instrument always measures what it is intended to measure (Martensson et al., 2019). The research instrument should be able to match the inferences made by the researcher. The study sought to examine the factors influencing the Internationalization chemical and allied manufacturing firms in Kenya. Face validity was tested to ascertain whether the elements of the research tool are appropriate in examining the factors.

The validity was verified by pre-testing the research tool on 10% of respondents. The responses were analyzed and compared to the findings of previous studies of the same nature. To preserve

the accuracy of the collected data, the respondents who participated in the pre-test were excluded from the main study. The researcher then revised the questionnaire to accommodate the new changes before distributing it amongst the targeted participants for data collection.

### **3.6.2 Reliability**

Reliability is the extent to which an instrument's results could be consistently depended on to be accurate (Vaske et al., 2017). A Cronbach's alpha test is used to calculate the reliability of a study. To ensure there is Reliability, the study used the Cronbach's alpha test. Joseph Cronbach established an alpha of over 0.7 as the threshold for Reliability. Therefore, for an instrument to attain Reliability, it should have a Cronbach alpha of 0.7 and above (Streiner, 2003). After completing the collection of data, it was screened, coded, entered, and cleaned. Then, the Statistical Package for Social Sciences software (SPSS) was used to analyze the collected data.

### **3.7 Data Analysis and Presentation**

The data analysis will seek to shrink the bulk information collected from the participants into meaningful data that could be read and interpreted for developing summaries and identifying patterns. The data collected will be cleaned, coded and entered into SPSS for analysis. Cleaning will entail checking the questionnaire for completeness and anomalies. Since the study is categorized as quantitative, the researcher conducted descriptive analysis to derive means, frequencies, and standard deviations.

Further, A Factor analysis was conducted using SPSS to observe the factor structure in the variables. A factor analysis identifies and reduces factors from a large number of measured variables that do not meet the minimum loading threshold (0.4). Hair et al. (1998) suggested that using factors with factor loading above 0.4 was appropriate for any study. Lastly, inferential

analysis was conducted by formulating a Multiple linear regression model which predicts the response variables based on a set of independent variables. The response variable (Y) was Internationalization, while the (predictor) variables was product type (X1), technology (X2), Age and size of the firm(X3), and Management (X4). Below is the model which was used in the study:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \epsilon$$

Where: Y is Internationalization

X1 – Age and size of the firm

X2 – Technology

X3 – Management

X4 – product type

$\beta_0$  is the intercept

$\beta_i$  (i=1,2,3,4,5) are parameters associated with the independent variable.

$\epsilon$  is the error term

## CHAPTER FOUR

### DATA ANALYSIS, FINDINGS, AND DISCUSSIONS

#### 4.1 Introduction

This chapter details the analysis, interpretation, and presentation of the data. This is based on the responses of respondents collected using questionnaires. The research primarily adopted quantitative analysis, and the findings were presented using graphs, tables, and charts.

#### 4.2 Response Rate

Questionnaires were used to collect data from the respondents. Out of the 75 firms that had been selected to take part in the study, the researcher managed to interview 60 respondents. This is about 80% of the surveyed population as shown in the table 4.1. According to Baruch and Holtom (2008), a survey's response rate of 60% or more is considered decent.

**Table 4.1: Response rate**

<b>Response rate</b>	<b>frequency</b>	<b>Percent</b>
Response	60	80%
Non response	15	20%
Total	75	100%

#### 4.3 Reliability results

The internal consistency of the questionnaire was tested using a reliability test. Results in Table 4.2 show that the questionnaire used was reliable. All variables recorded Cronbach's Alpha values higher than 7. Technology indicated a Cronbach alpha value of 0.798, while Management

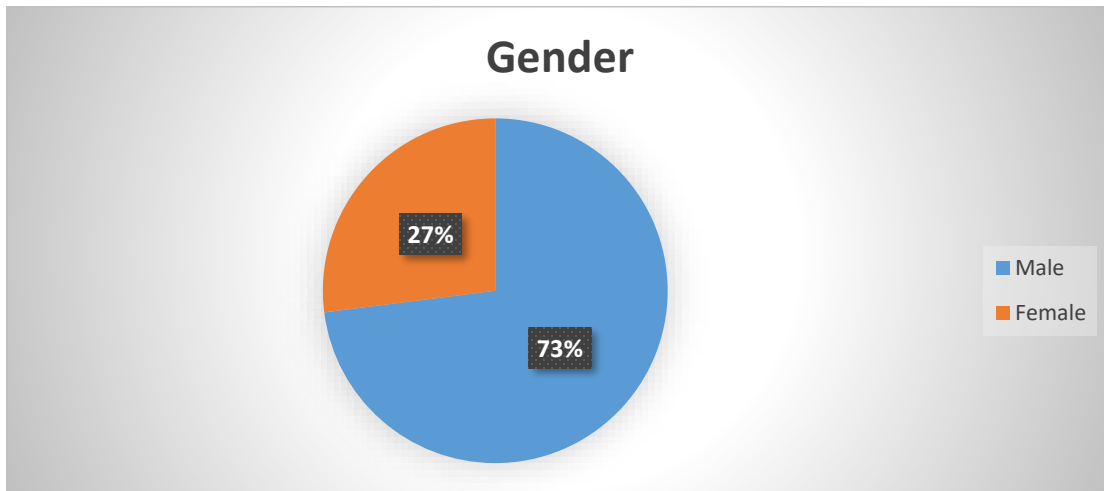
had a value of 0.776 and product type, Age and size, and Internationalization had 0.759, 0.787, and 0.812, respectively.

Variable	Number of items	Reliability coefficient
Technology	5	0.798
management	6	0.776
product type	5	0.759
age and size	5	0.787
Internationalization	5	0.812

**Table 4.2: Reliability test**

#### 4.4 Demographic Information

Analysis indicated that 73% of the respondents were male, while 27% were female. This data is presented in figure 4.1.

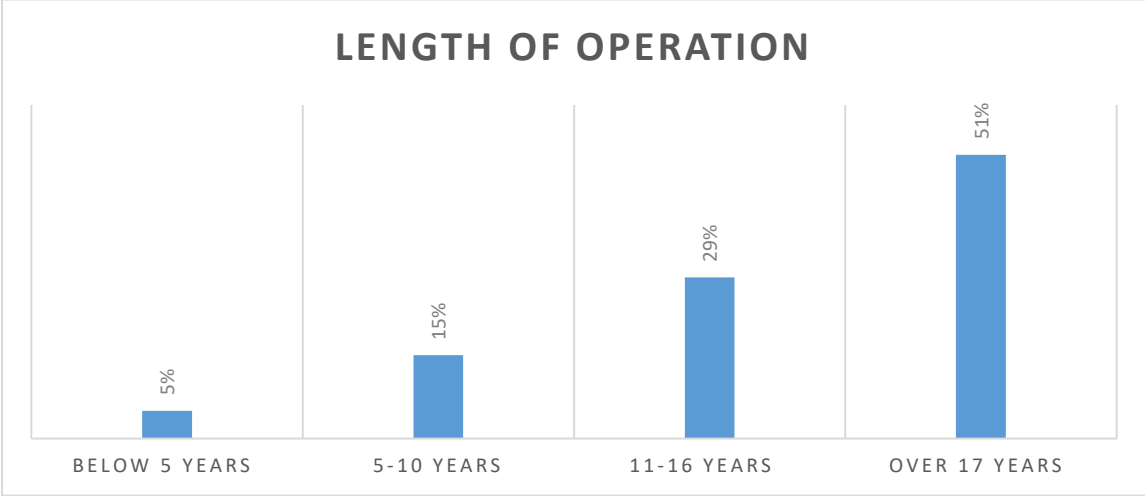


**Figure 4.1: Pie chart presenting gender data.**

Furthermore, analysis of how long the firm has been operational revealed that 51% of the firms had been operational for over 17 years. Additionally, 29% had been operational for 11 to 16 years,

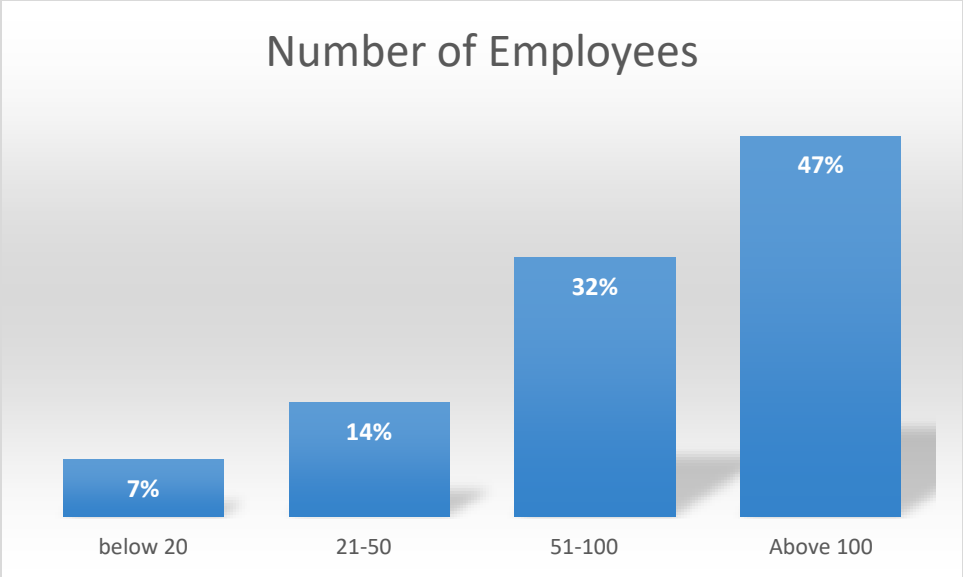


15% had been for 5 to 10 years, and 5% for less than 5 years. The results indicate that the targeted firms had been in operation for a long period of time to engage in Internationalization.



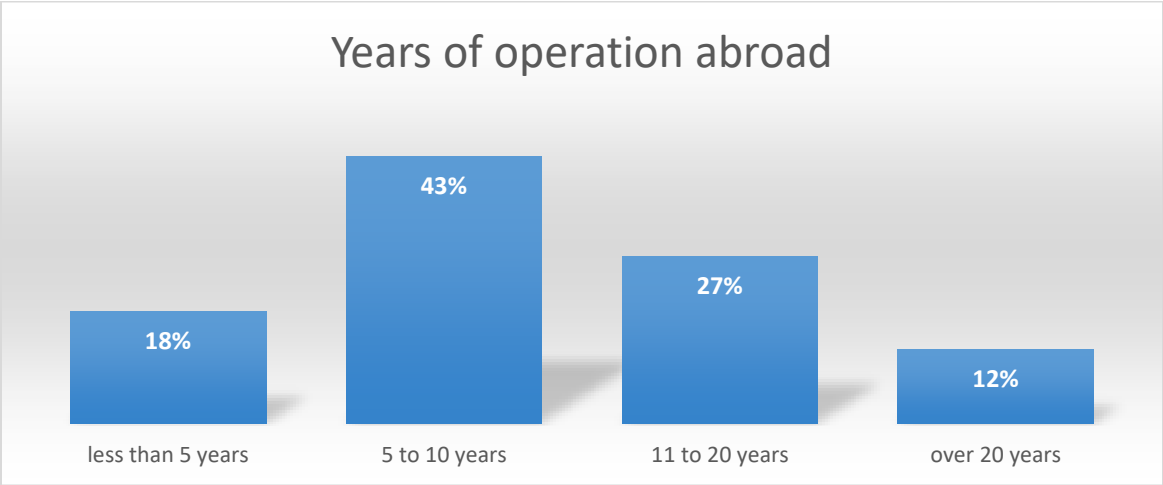
**Figure 4.2: Bar chart presenting length of operation data.**

The respondents were asked to state the number of employees in the firm so as to estimate the company's size. Analysis revealed that 47% of the firms had more than 100 employees, 32% had 51 to 100 employees, and 21% had less than 50 employees. The results confirm that majority of the firms targeted by the study were medium and large enterprises. This provided a basis for the Internationalization of the business operations



**Figure 4.3: Column chart of the number of employees**

Analysis of the data revealed that all the firms had expanded their operations abroad and that 43% of the companies have been transacting globally for 5 to 10 years now. 27% have been transacting globally for 11 to 20 years while 12% and 18% have been for over 20 years and less than 5 years, respectively. The long periods of global transactions are an indication of high levels of knowledge in factors influencing Internationalization. Therefore, the respondents are in a position to give a proper account and unbiased opinion on factors influencing Internationalization.



**Figure 4.4: Column chart of Years of operation abroad**

## **4.5 Factors influencing Internationalization**

### **4.5.1 Age and size of the firm**

Analysis of the firm's Age and size questions indicated that all firms had been operational for more than 5 years and had expanded their operations abroad. The researcher asked the respondent to indicate their level of agreement or disagreement on various statements measuring the effects of a firm's age and size on Internationalization. A majority of the respondent agreed that the Age of a firm influences the Internationalization process (3.74), that a relationship exists between firm Age and size and profitability in international markets (3.54), and that the value of the company's fixed and current assets influences the Internationalization process (3.56). They also agreed that the profitability of the firm influences the Internationalization process (3.68) and that the total amount of sales influences a firm's Internationalization process (3.48).

		N	mean	Std. Deviation
1.	The age of a firm influences the Internationalization process	60	3.74	0.590
2.	the value of the company's fixed and current assets influences the Internationalization process	60	3.56	0.862
3.	The profitability of the firm influences the Internationalization process	60	3.68	0.612
4.	The total amount of sales influences a firm's Internationalization process	60	3.48	0.864
5.	A relationship exists between firm Age and size and profitability in international markets	60	3.54	0.987

**Table 4.3: Age and size of the firm**

#### **4.5.2 Management**

Analysis indicated that top managers in the sampled group had international work experience. Some of the countries listed were Canada, the USA, Germany, China, Russia, South Africa, and Australia. Furthermore, the researcher asked the respondent to indicate their level of agreement or disagreement on various statements measuring the effects of Management on Internationalization. A majority of the respondent agreed that Management commitment is key for the international market penetration (3.97), that Management understanding is key in international market dynamics (3.55) and that Corporate culture influence the Internationalization of operation (3.83). They also agreed that Undertaking aggressive marketing and promotion campaigns influence internationalization of operation (3.82), that Participating in training programs and workshops to enhance skills influences internationalization of operation (3.92) and that communication barriers influence the Internationalization of operation (3.91).

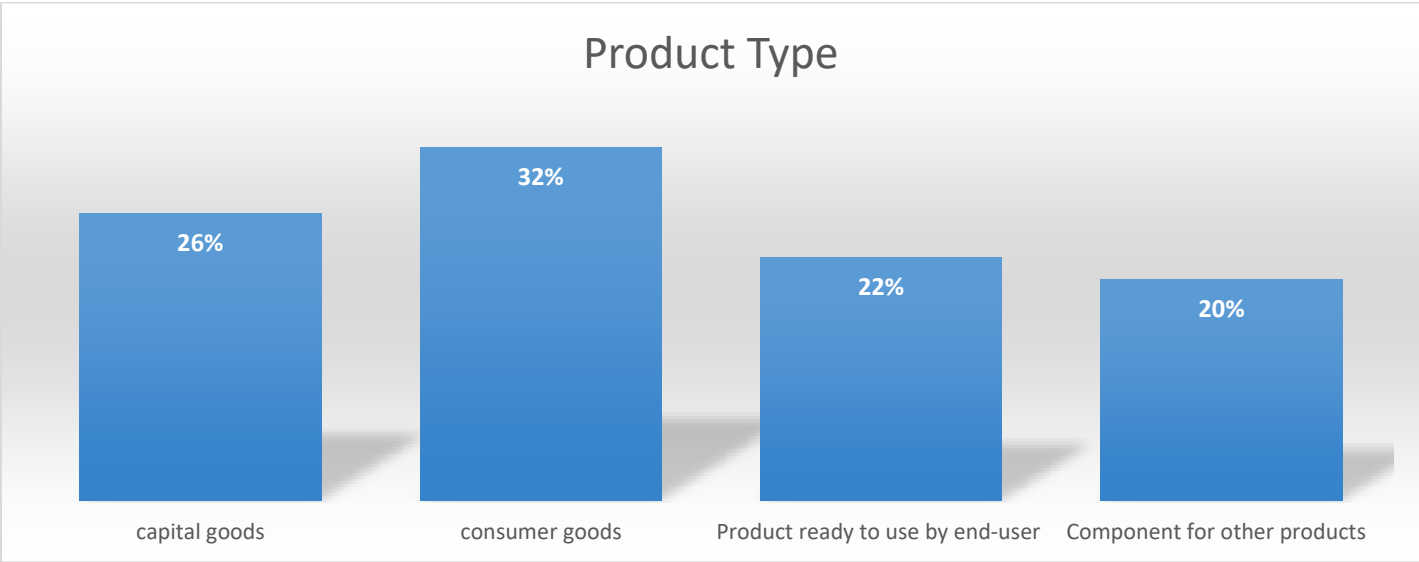
	<b>Effects of Management</b>	<b>N</b>	<b>mean</b>	<b>Std. Deviation</b>
<b>1.</b>	Management commitment is key for the international market penetration	60	3.97	.841
<b>2.</b>	Management understanding is key in international market dynamics	60	3.55	.768
<b>3.</b>	Corporate culture influence the internationalization of operation	60	3.83	.543
<b>4.</b>	Undertake aggressive marketing and promotion campaigns influence internationalization of operation	60	3.82	.389

5.	Participate in training programs and workshops to enhance skills influence internationalization of operation	60	3.92	.474
6.	Communication barriers influence the Internationalization of operation	60	3.91	.488

**Table 4.4: Management**

**4.5.3 Product type**

Responses on a question to determine the type of product revealed that 26% were capital goods while 32% were consumer goods and 22% and 20% were products ready to use by end-user and components for other products, respectively.



**Figure 4.5: Column chart displaying product type data**

Furthermore, the respondents described the innovativeness of their products or services as a crucial factor to successful marketing and as key for growth. Some added that the induction of new innovative products can maintain a company's profitability in the existing product lines. They explained that profitability can be maintained by having one product is in the saturation stage of

the product life cycle while others are in the introduction stage. They also indicated that innovative products are a proof of managerial abilities and that innovation is necessary if companies want to recover losses incurred because of product failures.

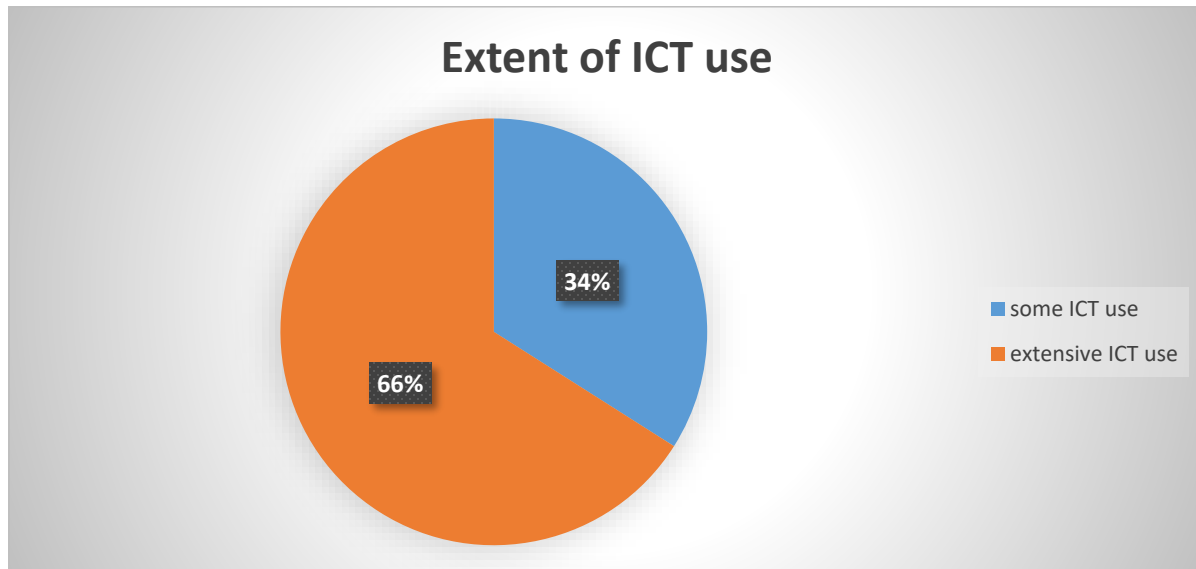
Lastly, the researcher asked the respondent to indicate their level of agreement or disagreement on various statements measuring the effects of product type on Internationalization. A majority of the respondent agreed that innovativeness of their product is important for the successful Internationalization (3.55), that the location of production influences the successful Internationalization (3.98) and that the year of a product manufacture influence the successful Internationalization (3.92).

	<b>Effects of product type</b>	<b>N</b>	<b>mean</b>	<b>Std. Deviation</b>
<b>1.</b>	Is the innovativeness of your product important for the successful Internationalization?	60	3.55	.768
<b>2.</b>	Does the location of the production of the product influence the successful Internationalization?	60	3.98	.411
<b>3.</b>	Does the year of product manufacture influence the successful Internationalization?	60	3.92	.615
<b>4.</b>	Does the likability of your product influence the successful Internationalization?			
<b>5.</b>	Does producing products using environmentally friendly practices influence the successful Internationalization?			

**Table 4.5: Product Type**

#### **4.5.4 Technology**

Responses to the question, please indicate ICT use in the firm showed that 34% of the firms had some ICT use while 66% had extensive ICT use.



**Figure 4.6: Pie chart displaying the extent of ICT use data**

Furthermore, the researcher asked the respondent to indicate their level of agreement or disagreement on various statements measuring the effects of **Technology** on Internationalization. A majority of the respondents strongly agreed that using technology to communicate and market products influences internationalization (4.00) and that ICT intensity influences internationalization (4.08). The respondents also agreed that adoption of product design technologies is influenced by Global social standards (3.31), that changes in channels of communication have Influenced the firm to acquire advanced information exchange technologies (3.38), and that the firm embraces superior process technologies (3.62)

	<b>Effects of Technology</b>	<b>N</b>	<b>mean</b>	<b>Std. Deviation</b>
<b>1.</b>	Use technology to communicate and market products influences a firms internationalization process	60	4.00	.611
<b>2.</b>	ICT-intensity influences a firms internationalization process	60	4.08	.267
<b>3.</b>	adoption product design technologies is influenced by Global social standards	60	3.31	0.751
<b>4.</b>	Changes in channels of communication has Influenced the firm to acquire advanced information exchange technologies	60	3.38	0.768
<b>5.</b>	Our firm embraces superior process technologies	60	3.62	0.768

**Table 4.6: Technology**

#### **4.5.5 Internationalization**

The respondents were asked to define Internationalization. The following definitions were made: it is the process of expanding operations abroad; designing products and services that facilitate expansion into international markets; sourcing, producing or selling materials or delivering services from one or more countries; competitiveness and wider market and Exports and imports.

Additionally, the researcher asked the respondent to indicate their level of agreement or disagreement on various statements measuring Internationalization. A majority of the respondents agreed Internationalization involves coming up with strategies and practices to adapt to the changing business environment (3.85), that the Internationalization of firms should be encouraged



since it promotes the growth of firms (3.36) and that The Kenyan economy supports Internationalization (3.67). They also agreed that Internationalization threatens employment growth (3.56) and that expanding our operations abroad has been profitable (3.38).

	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
1. Internationalization involves coming up with strategies and practices to adapt to the changing business environment	60	3.85	0.376
2. Internationalization of firms should be encouraged since it promotes the growth of firms	60	3.36	0.754
3. The Kenyan economy supports Internationalization	60	3.67	0.516
4. Internationalization threatens employment growth	60	3.56	0.969
5. Expanding our operations abroad has been profitable	60	3.38	0.768

**Table 4.7: Internationalization**

#### **4.6 Factor Analysis**

A factor analysis was used to eliminate indicators that could not explain the responses to Internationalization adopted by chemical and allied firms in Kenya. The retained factors had a minimum loading threshold of 0.4 and were used for further analysis.

##### **4.6.1 Age and size of the firm factor analysis**

As indicated in table 4.8, all the factors had a loading of more than 0.4. The factor loading was between 0.614 and 0.876, implying that the research should retain all factors for further analysis.

This indicated that data collected using Age and size of the firm indicators was reliable and that the measures are reliable determining factors on how Age and size influence internationalization.

		Component
1.	The Age of a firm influences the Internationalization process	.679
2.	the value of the company's fixed and current assets influences the Internationalization process	.651
3.	The profitability of the firm influences the Internationalization process	.648
4.	The total amount of sales influences a firm's Internationalization process	.876
5.	A relationship exists between firm Age and size and profitability in international markets	.614

**Table 4.8: Age and size of the firm factor analysis results**

#### 4.6.2 Management factor analysis

Table 4.9 indicates that all but one of the factors had a loading of more than 0.4. The factor loading was between 0.396 and 0.918, implying that the research should retain five of the six factors for further analysis. The new Cronbach's alpha value was 0.798.

		Component
1.	Management commitment is key for the international market penetration	.813
2.	Management understanding is key in international market dynamics	.761
3.	Corporate culture influence the Internationalization of operation	.918
4.	Undertake aggressive marketing and promotion campaigns influence internationalization of operation	.802
5.	Participate in training programs and workshops to enhance skills influence internationalization of operation	.742

6.	Communication barriers influence the Internationalization of operation	.396
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**Table 4.9: Management factor analysis results**

#### 4.6.3 Product type factor analysis

Table 4.10 indicates that all but one of the factors had a loading of more than 0.4. The factor loading was between 0.295 and 0.876, implying that the research should retain five of the factors for further analysis. The new Cronbach's alpha value was 0.767.

	<b>product type</b>	<b>Component</b>
1.	Is the innovativeness of your product important for the successful Internationalization and growth of the firm?	.801
2.	Does the location of the production of the product influence the successful Internationalization?	.876
3.	Does the year of a product manufacture influence the successful Internationalization?	.654
4.	Does the likability of your product influence the successful Internationalization?	.295
5.	Does producing product using environmentally friendly practices influence the successful Internationalization?	.695

**Table 4.10: Product Type factor analysis results**

#### 4.6.4 Technology factor analysis

As indicated in table 4.11, all the factors had a loading of more than 0.4. The factor loading was between 0.720 and 0.883, implying that the research should retain all factors for further analysis.

Therefore, the five technological measures are reliable determining factors on how technology influences the internationalization of firms.

	<b>Effects of Technology</b>	Component
1.	Use technology to communicate and market products influences a firms internationalization process	.747
2.	ICT-intensity influences a firms internationalization process	.883
3.	adoption product design technologies is influenced by Global social standards	.720
4.	Changes in channels of communication has Influenced the firm to acquire advanced information exchange technologies	.823
5.	Our firm embraces superior process technologies	.862

**Table 4.11: Technology factor analysis results**

#### **4.6.5 Internationalization factor analysis**

As indicated in table 4.12, all the factors had a loading of more than 0.4. The factor loading was between 0.722 and 0.932, implying that the research should retain all factors for further analysis. Therefore, the five measures of Internationalization are reliable determining factor that measure the internationalizations of firms.

	Component
1. Internationalization involves coming up with strategies and practices to adapt to the changing business environment	.722
2. Internationalization of firms should be encouraged since it promotes the growth of firms	.848
3. The Kenyan economy supports Internationalization	.827
4. Internationalization threatens employment growth	.932
5. Expanding our operations abroad has been profitable	.758

**Table 4.12: Internationalization factor analysis results**

#### 4.7 Inferential Statistics

Inferential statistics allows for one to make inferences (prediction) from data. When using inferential statistics, the results from the sample are generalized to the population.

#### Multiple Linear Regression Analysis

Multiple linear regressions was computed to examine whether the variables have a linear relationship. Table 4.13 indicated an R Square value of 0.507, implying that the model only explains 50.7% of the variations in the variable Internationalization. Therefore, 50.7% of the variations in Internationalization can be explained by the variations in age and size, technology, Management, and product type in the model. The remaining 49.3% is explained by other variables not considered in this model.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.712 <sup>a</sup>	.507	.468	.622

a. Predictors: (Constant), Age and size, technology, Management, product type

#### 4.13: Model Summary

Results of analysis of variance (ANOVA) indicates that the overall regression model influences the study positively. Since the p-value ( $p < 001$ ) was greater than the significance level .05, a conclusion can be made that age and size, technology, Management and product type significantly influence the Internationalization of Chemical and Allied firms in Kenya.

		ANOVA <sup>a</sup>				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	20.253	4	5.063	13.089	.000 <sup>b</sup>
	Residual	19.729	51	.387		
	Total	39.982	55			

a. Dependent Variable: Internationalization

b. Predictors: (Constant), age and size, technology, management, product type.

#### 4.14: ANOVA results

Firstly, the study sought to determine the effect of the firm's age and size on the Internationalization of chemical and allied companies in Kenya. The regression results in Table 4.13 indicate a p-value of 0.019 less than the chosen significance level (0.05). This indicates that the relationship between Age and size of the firm and Internationalization is statistically significant. A unit increase in Age and size of the firm while holding all other factors constant, increases Internationalization by .316. Therefore, age and size of the firm influence the Internationalization of chemical and allied companies in Kenya.

For the second specific objective, the study sought to determine the effect of technology on the Internationalization of chemical and allied companies in Kenya. The regression results in Table 4.13 indicate a p-value of 0.000, which is less than the chosen significance level (0.05). This indicates that the relationship between technology and Internationalization is statistically

significant. A unit increase in technology while holding all other factors constant increases Internationalization by .557. Therefore, technology influence the Internationalization of chemical and allied companies in Kenya.

Furthermore, the study sought to determine the effect of Management on the Internationalization of chemical and allied companies in Kenya. The regression results in Table 4.13 indicate a p-value of 0.023 less than the chosen significance level (0.05). This indicates that the relationship between Management and Internationalization is statistically significant. A unit increase in Management, while holding all other factors constant, increases Internationalization by .374. Therefore, management influence the Internationalization of chemical and allied companies in Kenya

Lastly, the study sought to determine the effect of product type on the Internationalization of chemical and allied companies in Kenya. The regression results in Table 4.13 indicate a p-value of 0.223 greater than the chosen significance level (0.05). This indicates that the relationship between product type and Internationalization is not statistically significant. Therefore, product type does not influence the Internationalization of chemical and allied companies in Kenya.

Model		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.131	.520		.253	.801
	Age and size of the firm	.316	.131	.331	2.419	.019
	Technology	.557	.106	.576	5.236	.000
	Management	.374	.187	.131	3.927	.023
	Product type	.216	.175	.193	1.235	.223

a. Dependent Variable: Internationalization

#### 4.15: Individual predictor coefficients

The regression model will be

$$Y = 0.131 + 0.316X1 + 0.557X2 + 0.374X3 + 0.216X4$$

Where: Y is internationalization

X1 – Age and size of the firm

X2 – Technology

X3 – Management

X4 – product type

#### **4.8 Discussions**

The regression results revealed that age and size of the firm influence the internationalization companies. The findings are consistent with Burgel and Murray et al. (1998) who concluded that the firm's age and size influence the Internationalization process. Pollard (2001) added that the general expectation is that the Internationalization of larger and older firms is quicker than new and smaller firms. However, Bonaccorsi 1992 and Calof 1994, disapproves of these findings, arguing that the above statement is not sufficient to conclude that a firm's Age and size influence its ability to operate in foreign markets. They term the statement as old, and that given the new internationalization reforms in most countries vague.

Furthermore, results revealed that management influence internationalization companies. The study findings are consistent with Roth (1990), who revealed that managers living abroad influence the performance of firms with international operations. Additionally, the findings support the Burgel and Murray et al. (1998) study, which concluded that managers' international professional experience is key in internationalization. The study also revealed that technology influences internationalizations of firms. These findings are consistent with Ramussen et al. (2000) who specified that the level of technological development in communication, transportation, and



production influences firms the Internationalization process of firms. Young (1987) also reiterated that disparities in technological intensity and product life cycles influence a firm's internationalization process, consistent with the study findings.

Lastly, the study found the relationship between product type and Internationalization to not be statistically significant thus, product type does not influence the Internationalization of companies. These findings differ from Cooper and Kleinschmidt (1985) argument that competitive advantages developing from the uniqueness of a product influence the Internationalization of firms. Julien et al., 1994 also urged that the competitive advantages drawn from product specificity positively influence the performance of exports. Additionally, it differs from Per-Anders (2001) findings that identify product type as an influencing factor in the process of Internationalization. He notes that the product and contract structure possibly will explain behavioral variances to a large extent.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION, AND RECOMMENDATIONS**

#### **5.1 Introduction**

The study's objective was to examine the factors influencing the Internationalization of Kenyan firms in the chemical and allied manufacturing industry. Five factors were selected from reviewing the literature. These include the Age and size of the firm, Management, product type and technology. This chapter presents a summary of the results, conclusions and recommendations all based on the study's objective.

#### **5.2 Summary**

##### **5.2.1 Age and size of the firm and Internationalization**

Analysis revealed that all firms had been operational for more than 5 years and had expanded their operations abroad. A majority of the respondents agreed that the Age of a firm influences the Internationalization process, that a relationship exists between firm Age and size and profitability in international markets and that the value of the company's fixed and current assets influences the Internationalization process. They also agreed that the profitability of the firm influences the Internationalization process and that the total amount of sales influences a firm's Internationalization process. The factor loading results indicated that all the firm's age and size indicators were reliable in determining how Age and size influence internationalizations. Lastly, the regression results revealed that age and size of the firm influence the internationalization companies.

### **5.2.2 Management and Internationalization**

Furthermore, Analysis indicated that top managers in the sampled group had international work experience. They also agreed that management commitment is key for the international market penetration, that Management understanding is key in international market dynamics, that Corporate culture influence the Internationalization of operation, and that Undertaking aggressive marketing and promotion campaigns influence Internationalization of operation. They also agreed that Participating in training programs and workshops to enhance skills influence internationalization of operation and that communication barriers influence the Internationalization of operation. The factor loading results indicated that only five of the six indicators were reliable if retained for further analysis. A regression test revealed that management influence internationalization companies.

### **5.2.3 Product Type and Internationalization**

Also, the respondents described the innovativeness of their products or services as a crucial factor in successful global marketing and key for growth of the company. There was high agreement levels with the statements: innovativeness of their product is important for the successful Internationalization and growth of the firm; that the location of production influences the successful Internationalization and growth of the firm; that the year of a product manufacture influence the successful Internationalization; that the likability of your product influence the successful Internationalization; and that producing product using environmentally friendly practices influence the successful Internationalization. The factor loading results indicated that four of the five indicators would be reliable if retained for further analysis. The regression results indicated that the relationship between product type and Internationalization was not statistically significant thus, product type does not influence the Internationalization of companies.

#### **5.2.4 Technology and Internationalization**

A majority of the respondent agreed that; use of technology to communicate and market products influences internationalization; that ICT-intensity influences internationalization; that adoption product design technologies is influenced by Global social standard; that changes in channels of communication has Influenced the firm to acquire advanced information exchange technologies; and that the firm embraces superior process technologies. The factor loading results indicated that the five measures of technology are reliable in determining how technology influences internationalizations of firms.

#### **5.3 Conclusion**

The study found that technology is one of the key factors influencing the Internationalization of firms. Due to the continued global technological advancement, chemical and allied firms in Kenya should adopt superior technologies meant to reduce production costs, maximize profits, and give the firms a competitive advantage. Some of the technological strategies include diffusion of technology, technological advancement, and global communication. Furthermore, the study listed Management as a factor influencing the Internationalization of firms. **Therefore, Management should adopt strategies that assist in responding to the need of a customer. Additionally,** management expectations should be managed since they influence exports profitability and the market's security

The study also found the firm's age and size to be key in influencing the Internationalization of firms. The general expectation is that the Internationalization of larger and older firms is quicker than new and smaller firms. This is because smaller firms face substantially larger risks and resource commitment than larger firms. However, this should not be an indication that a firm's

Age and size influence its ability to operate in foreign markets since it is a traditional assumption that is not based on current data. Lastly, the found no relationship between product type and the Internationalization of firms. However, firms should consider the product's uniqueness and product specificity since they influence a firm's competitiveness. Additionally, trademarking products is an advantage for businesses

#### **5.4 Recommendation**

The study recommends developing and acquiring information on the foreign markets prior to expanding abroad. This can be achieved through outsourcing for the services of management personnel in the country of interest or employing individuals with international experience and education. Additionally, taking part in trade exhibitions and conducting market research can be key in understanding foreign markets

The study also recommends adopting superior technologies meant to reduce production costs, maximize profits, and give the firms a competitive advantage. Some of the technological strategies include diffusion of technology, technological advancement, and global communication. This is possible if more resources are allocated towards the process of internationalization. Larger or older firms are more capable of allocating more resources to cushion losses associated with the risky nature of Internationalization. However, smaller firms can experiment both physically and psychologically with exports to relatively close countries, earning them enough resources to support internationalization.

Lastly, the government should actively provide firms with information on foreign market opportunities through the Export Promotion Council. They can also provide financial support to smaller firms wishing to expand their operations abroad.

Future studies should be conducted using a wider sample size. Additionally, a cross-industry study should be conducted, including a degree of significance analysis of each of the factors identified to influence the Internationalization of firms.

## REFERENCES

- Andersen, O. (1993). *On the Internationalization Process of Firms: A Critical Analysis*. Journal of International Business Studies, June 24(2), pp. 209-231.
- Awolusi, O. D. (2014). Factors influencing the Internationalization of Nigerian manufacturing firms: An empirical analysis. *British Journal of Business and Management Research*, 1(2), 79-102.
- Ball, D. A., Gerring, J.M., McNett, J.M. & Minor, S.M. (2012). *International Business: The Challenges of global competition*. McGraw-Hill Education (UK) Ltd
- Barbiero, F., Blanga-Gubbay, M., Cipollone, V., De Backer, K., Miroudot, S., Ragoussis, A., ... & Zachmann, G. (2013). *Manufacturing Europe's Future*. Bruegel Blueprint 21, 2 October 2013.
- Barrett, N. J., & Wilkinson, I. F. (1986). Internationalization behavior: management characteristics of Australian manufacturing firms by level of international development. *Research in international marketing*, 213-233.
- Bell, J. (1995). *The Internationalization of small computer software firms*. *European Journal of Marketing*, 29(8), pp. 60-75.
- Bonaccorsi, A. (1992). *On the relationship between firm size and export intensity*. Journal of international business studies, 23(4), 605-635.
- Bürgel, O., Fier, A., Licht, G., Murray, G., & Nerlinger, E. (1998). *The internationalization of British and German start-up companies in high-technology industries*.
- Cahen, F. R., Jr, M. D. M. O., & Borini, F. M. (2017). *The Internationalization of new technology-based firms from emerging markets*. *International Journal of Technology Management*, 74(1-4), 23-44.
- Calof, J.L. and Beamish, P.W. (1995), " ", *International Business Review, Adapting to Foreign Markets: Explaining Internationalization!* Vol. 4 (2), pp. 115-131.
- Cavusgil, S. T., & Nevin, J. R. (1981). *Internal determinants of export marketing behavior: An empirical investigation*. *Journal of marketing Research*, 18(1), 114-119.
- Chakravarty, S., & Mitra, A. (2009). *Is the industry still the engine of growth? An econometric study of the organized sector employment in India*. *Journal of Policy Modeling*, 31(1), 22-35.
- Chen, T., & Yhen, P. (2011). *Taiwanese Foreign Direct Investment: The Risks of De-Industrialization*, in *Journal of Industry Studies*, Vol. 2, No. 1, pp. 57-68.
- Cooper, D., & Schindler, P. (2006). *Business Research Method (7th ed.)*. New York: McGraw-Hill.
- Coviello, M., & Munro, K. (1995) *Foreign Direct Investments by Korean Firms: An Analysis with FDI Theories*, *Asia Pacific Journal of Management*, Vol. 4, No. 2, pp. 90-102

- Donnelly, N. (2013) *The Emergence and Internationalization of Irish MNEs*. International Studies of Management & Organization, 43(1), 26-51.
- Doole, I., & Lowe, R. (2008). International Marketing Strategy: Analysis, Development and Implementation, 5th edn. Cengage Learning, Hampshire.
- Forsgren, N. (2002) *The Internationalization Process of the Firm – A Model of Knowledge Development and Increasing Market Commitments*, *Journal of International Business Studies*, 8, 23-32.
- Forsman, M., Hinttu, S., & Kock, S. (2002, September). *Internationalization from a SME perspective*. In Conference paper presented at the IMP Conference in Dijon, France.
- Gorodnichenko, Y., Svejnar, J., & Terrell, K. (2010). *Globalization and innovation in emerging markets*. American Economic Journal: Macroeconomics, 2(2), 194-226.
- Guracha, A. B. (2008). *The influence of political risk factors on the internationalization decisions of horticultural exporting firms in Nairobi (Doctoral dissertation, University of Nairobi)*.
- Johanson, J. & Vahlne, J. (1977). *The Internationalization Process of the Firm – A Model of Knowledge Development and Increasing Foreign Market Commitments*. Journal of International Business Studies, March 8(1), pp. 23-32.
- Johanson, J. & Vahlne, J. (1990). *The Mechanism of Internationalization*. International Marketing Review, JMR-07- 4-(11-24)-90 7(4), pp. 11-24.
- Johanson, J. and Mattsson, L. (1993). "Internationalization in Industrial System: A Network Approach," in P. J. Buckley and P. N. Ghauri, eds., *The Internationalization of the Firm: A Reader*. San Diego, CA: Academic Press, pp. 303-321.
- Johanson, J., & Wiedersheim-Paul, F. (1975). *The Internationalization of the Firm: Four Swedish Cases*. Journal of Management Studies, October 12(3), pp. 305-322.
- Jones, K. (1999). *Business Systems in East Asia: Firms, Markets, and Societies*, London, Sage
- Karabulut, A. (2013). *Internationalization of Turkish SMEs: An Empirical Study*. International Journal of Business & Management, 8(6), 68-88
- Kiilu, M. N. (2005). *Perception Regarding Internationalization Capability: A Case of Architectural Consultancy Firms in Kenya (Doctoral dissertation)*.
- Lefebvre E. and Lefebvre L.A., 2001. "Innovative capabilities as Determinants of Export Performance and Behavior: A Longitudinal Study of Manufacturing SMEs." Ecole Polytechnique de Montreal, Mathematics and Industrial Engineering. Chapitre de livre accepte 47 pour publication dans
- Liu, Y., Li, Y., & Xue, J. (2011). *Ownership, strategic orientation, and Internationalization in emerging markets*. Journal of World Business, 46(3), 381-393.
- Madsen, T. K., & Servais, P. (1997). *The Internationalization of born globals: an evolutionary process?* International business review, 6(6), 561-583.



- Malhotra, N. K. (2007). *Marketing Research: An Applied Orientation*. Upper Sadle River, New Jersey: Prentice Hall Pearson International Edition
- Masum, M., & Fernandez, A. (2008). *Internationalization Process of SMEs: Strategies and Methods*.
- Millington, Andrew I., & Bayliss, Brian T. (1990). The Process of Internationalization: UK Companies in the EC. *MIR: Management International Review*, 30(2), 151-161. doi: 10.2307/40228016
- Nzuve, S., & Ogot, E. (2012). *Factors Influencing Business Internationalization in Motor Vehicle Sector: A Case Study of General Motors East Africa*. Available at SSRN 2174913.
- Pollard, D. (2001). The Internationalization of SMEs in transformation economies: A research blackhole. In *International conference on Enterprise in transition* (pp. 2744-2759).
- Reiner, G., Demeter, K., Poiger, M. & Jenei, I., (2008). "The internationalization process in companies located at the borders of emerging and developed countries." *International Journal of operations and production management*, Vol 28. No. 10 pp918 – 940
- Scott-Kennel, J. (2013). Selling to Foreign MNEs. *International Studies of Management & Organization*, 43(1), 52- 80.
- Sharma, G. (2017). Pros and cons of different sampling techniques. *International journal of applied research*, 3(7), 749-752.
- Sullivan, Daniel, & Bauerschmidt, Alan. (1990). Incremental Internationalization: A Test of Johanson and Vahlne's Thesis. *MIR: Management International Review*, 30(1), 19- 30. doi: 10.2307/40228003
- Vahlne, J. E., & Johanson, J. (2017). From Internationalization to evolution: The Uppsala model at 40 years. *Journal of International Business Studies*, 48(9), 1087-1102.
- World Economic Forum (WEF). *The Future of Manufacturing Opportunities to drive economic growth*. A World Economic Forum Report in collaboration with Deloitte Touche Tohmatsu Limited, April 2012.
- Young, S. (1987). Business strategy and the Internationalization of business: Recent approaches. *Managerial and Decision Economics*, 8(1), 31-40.
- Chemical & Allied – Kenya Manufacturers and Exporters Directory. (2021). Retrieved 4 September 2021, from <https://directory.kam.co.ke/listing-category/chemical-allied/>
- Mathworks, T. (2013). *Global optimization toolbox, user's Guide*.
- Trochim, W. M., & Donnelly, J. P. (2001). *Research methods knowledge base (Vol. 2)*. Atomic Dog Pub..

## Appendices

### Appendix I: Data request letter

Corazon Wasike

P.O Box 34623 00100

12<sup>th</sup> October 2021

corazonwasike@gmail.com

To whom it may concern

RE: Data request

I am pursuing a master of business administration at the University of Nairobi. I am undertaking my research project as a requirement for awarding a master of business administration degree. I am carrying out a study to examine the factors influencing the Internationalization of Kenyan manufacturing firms.

This letter kindly requests that you participate in the study. Information provided will be treated with confidentiality and will be used results only used for academic purposes only. Your response will be highly appreciated.

Yours faithfully,

C.W

Corazon Namchu Wasike

## Appendix 2: Questionnaire

I am Corazon Namchu Wasike, a student at the University of Nairobi, school of business undertaking my research project as a requirement for awarding a master of business administration degree. The study's main objective is to observe the factors influencing Internationalisation of Kenyan manufacturing firms. Kindly respond where appropriate.

### Section A: Demographics Characteristics

1. Gender M ( ) F ( )
2. Indicate how long your firm has been operational
3. number of employees in the firm
4. a) Has your firm expanded its operations abroad?  
b) If 'Yes, for how long?
5. Where are most of your customers from?

### Section B: Age and size of the firm

1. When was the firm started?
2. Indicate when the firm first expanded its operations abroad
3. Indicate the size of the firm in Kshs (fixed and current assets)
4. Indicate the net profit of the firm in Kshs
5. The questions below are geared towards understanding the effect of Age and size of the firm on Internationalisation.

	Effects of <b>Age and size of the firm</b>	<b>SD</b>	<b>D</b>	<b>N</b>	<b>A</b>	<b>SA</b>
<b>1.</b>	Age of a firm impacts the Internationalisation of a firm					
<b>2.</b>	the value of the company's fixed and current assets influences the Internationalisation of a firm					
<b>3.</b>	The profitability of the firm influences the Internationalisation of a firm					
<b>4.</b>	The total amount of sales influences a firm's Internationalisation					
<b>5.</b>	a relationship exists between Age and size and profitability of firms in international markets					

### Section C: Management

1. a) Do any of the top managers have international work experience?  
b) If yes, kindly indicate the country, designation and years of experience
2. Do you consider the following factors as important?

	Effects of <b>Management</b>	<b>SD</b>	<b>D</b>	<b>N</b>	<b>A</b>	<b>SA</b>
<b>1.</b>	Management commitment is key for the international market					

	penetration					
2.	Management understanding is key in international market dynamics					
3.	Corporate culture influence the Internationalization of operation					
4.	Undertake aggressive marketing and promotion campaigns influence internationalization of operation					
5.	Participate in training programs and workshops to enhance skills influence internationalization of operation					
6.	Communication barriers influence the Internationalization of operation					

### Section D: Product type

1. Indicate whether your product is a:
2. Describe the innovativeness of your product?
3. The questions below are geared towards understanding the effects of product type on the Internationalisation of firms. Do you consider the following factors important?

	<b>Effects of product type</b>	<b>SD</b>	<b>D</b>	<b>N</b>	<b>A</b>	<b>SA</b>
1.	Is the innovativeness of your product important for the successful Internationalization of the firm?					
2.	Does the location of the production of the product influence the successful Internationalization of the firm?					
3.	Does the year of a product manufacture influence the successful Internationalization of the firm?					
4.	Does the likability of your product influence the successful Internationalization of the firm?					
5.	Does producing product using environmentally friendly practices influence the successful Internationalization of the firm?					

### Section E: Technology

1. Please indicate ICT use in the firm
2. The questions below are geared towards understanding the effect of Technology on the Internationalisation of firms.

	<b>Effects of Technology</b>	<b>SD</b>	<b>D</b>	<b>N</b>	<b>A</b>	<b>SA</b>
1.	Use technology to communicate and market products influences a firms internationalization process					
2.	ICT-intensity influences a firms internationalization process					

3.	adoption product design technologies is influenced by Global social standards					
4.	Changes in channels of communication has Influenced the firm to acquire advanced information exchange technologies					
5.	our firm embraces superior process technologies					

**Section E: Internationalization**

1. What does the successful Internationalization of a firm mean to you?
2. The questions below are geared towards understanding Internationalisation based on your perspective.

	<b>SD</b>	<b>D</b>	<b>N</b>	<b>A</b>	<b>SA</b>
6. Internationalization involves coming up with strategies and practices					
7. Internationalization of firms should be encouraged since it promotes the growth of firms					
8. The Kenyan economy supports Internationalization					
9. Internationalization presents a threat to employment growth of companies in Kenya					
10. Expanding our operations abroad has been profitable					

### **Appendix 3: Firms in the Chemicals and Allied Manufacturing Sector**

Source: Chemical & Allied – Kenya Manufacturers and Exporters Directory (2021)

1. Abc Chemical (Kenya)
2. ASL Ltd
3. Autoxpress Limited
4. Bayer East Africa Limited
5. Bidco Africa Limited
6. Brenntag Kenya Limited
7. Carbacid (CO<sub>2</sub>) Limited
8. Chemicals and Solvents (EA) Ltd
9. Chryso Eastern Africa Ltd
10. Cosmos Limited
11. Craftsman Enterprises (Kenya) Ltd
12. Crown Paints Kenya Plc
13. Decase Chemicals (Ltd)
14. Diversey Eastern And Central Africa Limited
15. East Africa Spectre Limited
16. East African Breweries Limited
17. Elipsis International Ltd
18. Essential Drugs Limited
19. Faram East Africa Limited
20. Flamingo Tiles (Kenya)Limited
21. Geotextiles East Africa Ltd
22. Grand Paints Ltd
23. Halar Industries Limited
24. Hasbah Kenya Limited
25. Housemart Co Limited
26. Imcd Kenya Limited
27. Juanco Sps Limited
28. Kenya Breweries Limited
29. Libya Oil Kenya Limited.(Formerly Mobil)
30. Mega Wholesalers Limited
31. Metro Plastics (Kenya) Limited
32. Mold Tufnell Limited
33. Nasib Industrial Products Limited
34. Nordic Branded Limited
35. Orbit Chemical Industries Ltd
36. Osho Chemical Industries Ltd
37. Pantel chemical ltd
38. Platinum Packaging Limited
39. Polyflex Industries Limited
40. Polythene Industries Limited
41. Premier Industries Limited
42. Priyann Enterprises Limited

43. Pwani Oil Products Limited
44. Rajchem Polymers Limited
45. Sai Chemicals Ltd
46. Saichem Limited
47. Saj Ceramics Ltd
48. Sarrchem International Limited
49. Savanna cement
50. Simba Enterprises Ltd
51. Solovino Ltd
52. Somochem Kenya Limited
53. Spectra Chemicals (K) Ltd
54. Synergy Gases (K) Ltd
55. Syngenta East Africa Ltd.
56. Thika Wax Works Ltd
57. Towfiq Kenya Limited
58. Unilever Kenya Limited
59. Welrods Limited
60. Zenta Agencies