

**FACTORS INFLUENCING THE CHOICE OF PRODUCT
DISTRIBUTION CHANNELS FOR SMALL-SCALE MANUFACTURING
FIRMS: A CASE OF THIKA TOWN**

By

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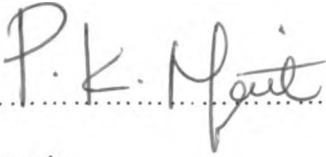
**A MANAGEMENT PROJECT SUBMITTED IN PARTIAL
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DECLARATION

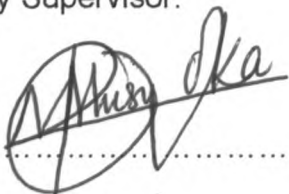
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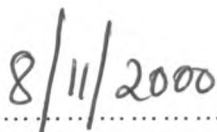
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This management project has been submitted for examination with my approval as University Supervisor.

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DEDICATION

To

my dear parents

Mr. Peter Ng'ang'a Kamau

and

Mrs. Felista Wangui

for their love for education

and

To

my brothers and sister

Sam, Ndungu, Rose and Githuku

for being a great source of

encouragement.

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LIST OF ABBREVIATIONS

G.O.K.	-	Government of Kenya
I.L.O	-	International Labor Organization
K-REP	-	Kenya Rural Enterprise Program
SSE	-	Small-Scale Enterprises
SME	-	Small-Micro-Enterprises
UNDP	-	United Nations Development Program

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ABSTRACT

This study sought to investigate the nature of distribution channels for small-scale manufacturing firms in Thika town and the factors, which influence the choice of these channels. This research was a descriptive study involving 60 firms. A semi-structured questionnaire was used to collect the relevant data, while frequency tables, means, percentages and average ratings were used to summarize the findings and draw conclusions. The chi-square test of association was also used to test for the relationship between the type of distribution channels selected by the firms and the various factors, which influenced the choice of these channels.

The results of the study revealed that most firms commonly used direct distribution channels (61.7%), while only 38.3% of the firms used indirect distribution channels, which included mixed/dual channels of distribution. Among the factors that were most frequently mentioned as influencing selection of distribution channels included middlemen requirements, their availability and their profit margin expectations. Further, customer order sizes, nature of product demand and the location of customers were identified as important factors. The least frequently mentioned factors included distribution methods used by competitors and the type of customers served. The results of the chi-square test of association revealed that a significant relationship existed between the type of distribution channels selected by the firms and the profit margin expected by middlemen, the nature of demand for the firms' products and the size of customer orders. Conversely, no significant relationship was established between the type of distribution channel selected and the sub-sector of the firm, the length of time in business of the firm, the width of the firms' product line and the type of customers served by the firm.

In conclusion, these findings have important managerial implications for small-scale firm operators and other stakeholders intent to assist SSEs to distribute their

products more effectively. One important managerial implication is that there are high costs to making an incorrect channel decision. This is because once a channel decision is made, (whether right or wrong) it tends to be reinforced over time as new products are sold through these established channels. Thus, if the wrong channel is selected, high costs of changing the channel may face the firm. Therefore, SSEs will need to carefully consider the factors, which have been identified as influencing channel selection decisions in their attempts to make decisions regarding the distribution of their products. For instance, this study has revealed that the existence of demand for relatively small and large order sizes in served markets for SSEs may justify the selection of alternative channels for the same market as a strategic product distribution option. In essence therefore, if end customers are willing to buy in large quantities, the firms should aim at serving them directly. Otherwise, it would be more economical to serve them through channel intermediaries.

Finally in terms of public policy, it is recommended that the Government of Kenya develops low-cost and affordable business training programs to equip small-scale operators with the knowledge and skills to make optimal decisions regarding the distribution of their products and on how to choose and retain the right intermediaries for their products.

CHAPTER ONE - INTRODUCTION

1.1 Background

The first problem to overcome in any study of small-scale enterprises is one of definition (Glaser, 1989 and Maalu, 1990). However, at present there is no universally acceptable definition of a small firm (Scarborough and Zimmerer, 1991). The definitions used will differ according to the type of study one is carrying out or the size of the economy being studied. Ombok (1990), observes that, the point under which an enterprise is deemed to be small and the way in which its size is measured has been a debatable subject for a long time. Thus, there is no general consensus as to the definition of a small enterprise. Ekpenyong (1992), in his study on small and medium-scale enterprises in Nigeria supports this view. In his definition, he states that there is no generally accepted definition of a small firm because classification of businesses into large-scale or small scale is a subjective and qualitative judgement.

In a report by the Director General, the ILO (1991) defines the informal sector, which generally encompasses most small-scale enterprises as, "very small-scale units producing and distributing goods and services and consisting largely of independent, self-employed producers in urban areas of developing countries. These enterprises employ mainly family labor and or a few hired workers or apprentices; which operate with very little capital, or none at all; which utilize a low level of technology and skills; which therefore operate at low level of productivity. They are informal in the sense that they are for the most part unregistered and unrecorded in official statistics; they tend to have little or no access to organized markets; to credit institutions, to formal education and training or to many public services and

amenities; they are for the most part not recognized, supported or regulated by the government.”

This definition of the informal sector carries over from an earlier time certain notions that have been overtaken by events. For instance, it is no longer accurate to state that this sector continues to be “unrecorded in official statistics or unrecognized by the government.” However, as a conceptual definition of the informal sector, it does on the whole clarify our understanding of the sector as we see it in Kenya to day.

According to the G.O.K, ILO / UNDP Center Project (1989), the definition of small-scale enterprises includes all enterprises consisting of 0-50 employees. This definition includes all small-scale sectors, which comprise the following subsections:

- (i) A survival subsection comprising of the “poorest of the poor” engaged in economic activities of the last resort, whose returns are extremely low.
- (ii) A micro-enterprise subsection made up of firms with up to ten workers using traditional technologies and serving local markets. These firms are to be found in the rural and urban areas and they account for the major part of employment in retailing, services and transportation business.
- (iii) A small scale enterprise subsection comprising of large firms having 10-50 workers. The share in employment of this sub-section is smaller than that of micro-enterprises though the firms in it are more efficient.

Ndua and Ngethe (1984), in their study of Education, Training and Welfare in the informal sector, define small enterprises as those firms comprising of nine and less workers including the owner. This definition is in keeping with recent trends in the definition of small enterprises where only one criterion is taken as the entry point and then the other characteristics of the sector are built into the enterprises as the research proceeds. Their definition has been adopted with slight modification in this

study. Thus, for the purpose of this research, small-scale firms are defined as those production units (manufacturing) which transform raw material to a product used by the customers or other industries and employ less than 10 people.

1.2 Significance of Small-Scale Enterprises

Small enterprises have for a long time captured the attention of scholars, organizations and governments worldwide. In developing countries, these enterprises have increasingly been the focus of development support programs, especially because of their employment creation potential (House, 1978). In Kenya, the primary role of small-scale enterprises in generating employment opportunities and strengthening the economy has been presented in Sessional Paper No. 1 of 1986 on "Economic Management for Renewed Growth". According to this blueprint, three broad goals are envisaged for such enterprises, provision of goods and services for the domestic market; rapid job creation to meet the needs of the growing labor force and indeginisation of the economy through the development of local entrepreneurship. Other government publications such as the Sessional Paper No.2 of 1992 on "Small Enterprise and Jua-Kali Development in Kenya" and the eighth National Development plan (1997-2001) have given prominence to the role of the informal sector in stimulating national development.

The significance of the informal sector in creation of job opportunities is demonstrated further in a baseline survey conducted by K-REP in 1993. This survey revealed that over 910,000 small and micro-enterprises were operating in Kenya and these had employed over two million people. This survey also pointed out that about 270,000 jobs are created each year by the same sector.

Despite their significance, it is generally recognized that small-scale enterprises face unique problems, which affect their survival, growth and profitability

and hence decrease their ability to contribute to sustainable development. Some of these problems relate to management in general and financial management in particular; demand, sales and marketing and problems related to inventory management (Yambo, 1991). One issue that seriously complicates the problem of small-scale enterprises is ineffective distribution of their products. Thus, lack of access to wide markets coupled with the perceived low quality of their products severely inhibits the survival and growth of these enterprises. Although a limited access to wide markets for their products suggests that small enterprises may use direct distribution channels, this researcher is not aware of any effort that has been made to identify the nature of product distribution channels for the informal sector and the factors influencing the choice of such channels.

1.3 Distribution Channels: An Overview

Kotler (1997) defines distribution channels as sets of institutions, agencies and establishments through which a product must move from the producer to the final consumer. According to Stern and El Ansary (1992), distribution channels perform the work of moving goods from producers to consumers. Thus, they help overcome the time, place and possession gaps that separate goods and services from those who need or want them.

Baker (1992) contends with this view by asserting that distribution channels provide a link between production and consumption by filling any gap or discontinuity, which exists between them. Discontinuities between producers and consumers may arise from a number of causes, namely:

- (i) Geographical separation; the application of the theory of comparative advantage leads to considerable concentration of production both at national and international scale. At the same time, population and economic growth

have resulted in many more widely dispersed consumers wanting access to these products. Thus, distribution creates utilities in place availability.

- (ii) Time; since production and consumption rarely occur simultaneously, with the exception of personal services, then distribution channels help to even out fluctuation in supply and demand by holding stocks and through provision of credit. These activities create time utility.
- (iii) Information; the information needs of consumers vary widely and channel intermediaries can provide a valuable service in advising producers of the needs of consumers and advising consumers of the specific characteristics of the offerings of different producers.
- (iv) Offering; in addition to making goods physically available, channels also provide the mechanism whereby transfer of the legal title to ownership may be accomplished.

Additionally, members of the distribution channel will perform other key functions like financing and risk taking (Kotler, 1997). In financing, the channel members facilitate acquisition and allocation of funds required to finance inventories at different levels of the distribution channel. Risk taking will involve the assumption of risks connected with carrying out the channel work.

1.4 Research Problem

Staten

Once a manufacturer has targeted his products to a particular market a difficult question must be resolved. Should the products be distributed via company owned distribution channels or is it more efficient to contract distribution to an independent organization? This is a question of vertical integration in which the choice is between primary captive agents (company sales force and company distribution division) or primary independent intermediaries (outside sales agents and

distributors). The former option is an integrated channel, which generally affords the manufacturer more control than the latter, which is a non-integrated channel (Anderson and Coughlan, 1987).

This study addressed this problem in the context of small-scale manufacturing firms. Much research has been conducted on distribution channels and factors influencing choice of product distribution channels (Stigler, 1951; Aspinwall, 1961; Bucklin, 1966; Brady, 1978; Calvet 1981; McGuire and Stalin, 1983; Anderson, 1985; Anderson and Coughlan, 1987 and Shaw and Gibbs, 1996). However, most of these studies have been conducted in development countries and application of their findings to small firms in developing countries may require an empirical investigation. Chege (1996) and Amaa (1997) have conducted studies on the choice of product distribution channels in a developing country context. These studies have been based on large-scale industries in Kenya and Tanzania respectively and the applicability of their findings to small-scale industries needs to be tested.

Yambo (1988), in his study on reconnaissance of Jua-Kali support activities in Kenya, asserts that, some features of small-scale enterprises completely differ from those of large-scale enterprises mainly because of the informality of most activities carried out by these enterprises. There is no bookkeeping for instance and therefore no auditing. The whole organization may be an adhoc arrangement "rearranged" as one goes along. In many cases, there are no letters of appointment, job cards, payslips or warning letters for employees, job titles are also oftenly unclear. It is also likely that for most firms, there may be no business name, no permanent business premises, no reliable address and no bank account for the business. Lastly, most businesses may not be licensed to operate.

Further, literature indicates that insufficient distribution of products from the small-scale firms inhibits the growth of these enterprises and leads to wastage of

resources in the form of unsold stock (Ndua and Ng'ethe, 1984). Therefore, if these enterprises are to graduate into medium and large-scale enterprises they will have to make accurate decisions concerning the distribution of their products. Esbin (1994) observes that few small-scale enterprises graduate into medium enterprises. Accordingly, medium enterprises account for only 1.2 per cent of Kenya's total number of firm's and yet these enterprises are necessary if vertical growth is to be realized. This situation has oftenly been referred to as the "missing middle" which is said to stunt economic development. It is against this backdrop that this research sought answers to the question:

What factors influence the choice of product distribution channels for small-scale manufacturing firms?

1.4.1 Research Setting

Thika town was selected as the focus of the current study. This is because it is one of the principal towns in Kenya and is one of the designated "growth centres" within Kenya's regional – urban development strategy (Kiamba, 1983) This town houses the headquarters of Thika District and is part of the Municipality division. Other divisions in the district include; Kakuzi, Gatanga, Gatundu, Ruiru and Kamwangi. Thika town is conveniently located forty-two kilometers from Nairobi, the capital city of Kenya. The population of this town is approximately 101,948 persons according to estimates in the 1997 – 2001 Thika District Development Report. Further, the town serves as an industrial satellite for Nairobi. As a growth point in the metropolitan area, it enjoys a natural attraction as an alternative industrial decentralization to Nairobi. This satellite status has been instrumental in inducing considerable amount of industrial and commercial activities in the town. It is also asserted that,

The proximity of Thika to Nairobi gives the former easy access to metropolitan market, skilled labor, commercial and other business services as well as extension of metropolitan infrastructure facilities and services to the town. The function of this town as an "industrial center" accords it "cumulative effect" advantage which gives the town a focal eminence in attracting industrial and commercial activities (Kiamba, 1983).

The economic base of the Municipality revolves around the manufacturing activities, which account for about 69% of the total wage employment and 70% of the total earnings of the town. Notably, small and micro-enterprises (SMES) have become an important source of employment, with over 5000 person engaged by these enterprises of which 2000 are members of the registered Jua-Kali Associations (Thika District Development Report, 1997 – 2001)

1.5 Objectives of the Study

The objectives of this study were:

1. To determine the factors that affect selection of product distribution channels by small-scale manufacturing firms.
2. To determine the relative importance of these factors in selection of product distribution channels.

1.6 Importance of the Study

It is hoped that the results of this study will be of help to owners of small-scale firms, the government, consumers, society in general and other researchers.

1. Small-scale firm operators, seeking to sell their products to the market will, it is hoped, use the results of this study to improve their performance of distribution tasks.

2. Consumers will gain from a more efficient and effective distribution of products because the products will hopefully be made available to them on time, at the right place and possibly in better quality.
3. The government will use the results of the study to design public policy on small-scale enterprises in order to assist the sector operators access wider markets for their products.
4. Society will benefit, ideally from an economic point of view. Thus, if small firms are able to make better decisions and hence more efficient utilization of the resources at their disposal, such efficiency gains will accrue to society as a whole.
5. This study will also be a foundation to other researchers interested in pursuing a study in the same area and especially in the distribution of products from the informal sector.

1.7 Definition of Working Concepts

1.7.1 Channel of Distribution

This is any entity consisting of a set of related marketing institutions, agencies and establishments responsible for the physical and title flow of products from the manufacturer to the consumer or end user (Stern and El Ansary, 1992).

1.7.2 Channel Structure

This refers to the different levels or stages of a channel (e.g., the various stages of a distribution channel, from a manufacturer to a wholesaler to the final consumer).

Persons or agents handling the product at different stages of the channel are referred to as channel members (Chege, 1996 and Baker, 1992).

1.7.3 Intermediary / Middlemen

This is an individual or business firm that operates between the manufacturer of a product and the end consumer. These may include wholesalers, retailers, agents and brokers (Lynn, 1969).

1.7.4 Channel Length

This is used as a shorthand to summarize the characteristics of a given channel system. The greater the number of intermediaries, the longer the channel. Conversely, the lesser the number of intermediaries, the shorter the channel (Simon and Freimer, 1970)

1.7.5 Direct / Integrated Distribution Channel

This is the type of channel in which the firm sells directly to the final consumer, without using intermediaries (Anderson, 1985).

1.7.6 Indirect / Non-Integrated Channel

This describes a type of distribution channel in which the firm involves middlemen or intermediaries in availing its products to final consumers (Anderson and Coughlan, 1987).

1.7.7 End Customer

This phrase refers to an individual, household or firm that buys the product for incorporation into other products (e.g., individual use) or for consumption (Chege, 1996).

1.7.8 Entrepreneur/Firm Owner

This is an individual who takes the risk of starting and running an own business firm or enterprise for the principal purpose of making profit and growing in business (Bwisa, 1998).

1.7.9 Small-Scale Enterprise / Firm

In this study, these terms are used to represent any production unit (Manufacturing) which transforms raw material to a product used by the customers, or another industry, and employs less than 10 people. In Kenya, the popular terminology of these enterprises is Jua-Kali, which literally means "hot sun". This reflects their beginnings when most of them had no shelter from the sun. This term has however persisted even when the activities of these enterprises are carried out in permanent structures.

According to Kibera (1997), majority of small-scale enterprises in Kenya are to be found in the Informal Sector. This sector covers all semi-organized and unregulated small-scale activities largely undertaken by the self-employed or those who employ few workers. It excludes all farming and pastoralist activities. Informal sector activities are carried out by artisans, traders and other operators under variety of worksites such as temporary structures, markets, both developed and undeveloped plots, residential premises or street pavements. This sector uses simple technology and its main legal feature is that the businesses are not registered with the registrar of companies. Further, operators of the Informal Sector may or may not have licenses from relevant authorities for carrying out businesses (Economic Survey, 1998).

1.8 Overview of the Report

This report is divided into five chapters. The first chapter, the introduction, gives the background, the significance of small enterprises and an overview of distribution channels. It also shows the research problem, highlights the research setting, objectives of the study, importance of the study, definition of working

concepts and an overview of the report. The literature review is contained in chapter two. It gives an introduction, outlines empirical literature on distribution of products from the small-scale enterprises, distribution channel selection process and the factors influencing the choice of distribution channels. Chapter three discusses the research design, the population, sampling plan, data collection and data analysis methods. The fourth chapter gives a summary of the data analysis and a discussion of the findings. This analysis is based entirely on the objectives of the study. Chapter five presents a summary of the findings, policy implications, limitations of the study and suggested areas for further research. The last section consists of the references and appendices.

CHAPTER TWO – LITERATURE REVIEW

2.1 Introduction

Since the publication of the 1972, ILO report on Employment Incomes and Equity in Kenya, the volume of literature on the informal sector and small enterprises in the country and the world at large has been growing very fast. Aleke–Dondo (1993), in his study on the informal sector in Kenya, argues that the attention to small enterprises has been due to the following reasons:

- (i) Employment grew faster in the informal sector than in the formal sector between 1983 – 1987.
- (ii) Goods and services generated by these enterprises have low foreign exchange content. Mostly local goods are used as raw materials, therefore they provide market for local produce and supplies, which is relevant to the government's efforts to save foreign exchange.
- (iii) The sector improves the economic position of women (who own and manage Micro-enterprises) by providing a source of income for them. Studies also reveal that most school "drop outs" end up in this sector. Hence, youth and women welfare is best handled in this policy.
- (iv) This sector is pre-dominantly Kenyan-owned and operated. This augurs well with the policy of Kenyanization of the economy.
- (v) The sector also focuses on the strategy of district focus for rural development. Thus, it ensures equitable development of all regions in Kenya and reduction of rural-urban migration, which has become a menace.
- (vi) This sector is quite dynamic which makes it a proper forum for future industrialization.

Despite the abundance of literature on small and micro-enterprises, empirical literature on the nature of distribution channels for informal sector products and the factors influencing the choice of these channels is scarce or none at all. The much scholars do in this area is highlight in passing the type of product distribution channels used by firms in this sector. Indeed, to the best knowledge of the current researcher, no attention has been committed to determine the nature of and factors influencing the choice of product distribution channels for small-scale manufacturing firms. This chapter reviews empirical literature on distribution of informal sector products. Additionally, a review is also made of the distribution channel selection process and the factors influencing channel choice.

2.2 Empirical Literature

Previous research has examined issues related to the nature, functions and problems of distributing products from the small-scale enterprise sector. ArapChepkurui (1981), in his study on the marketing of agricultural products in Kenya, addressed himself to how open-air sellers made decisions regarding the controllable marketing variables of price, product, place and promotion. His study found that, decisions on marketing mix variables were very intelligently made. He also found that roadside selling was the only source of income for the sellers and that women formed the highest population of both sellers and buyers. ArapChepkurui also mentioned in passing that the distribution channels used were mainly short. However, he did not specifically address himself to the choice of product distribution channels by these sellers.

In her study of rural markets, Muma (1982) found that rural markets played both economic and social functions. She noted that rural markets were channels through which products and ideas were changed. She also asserted that the

distribution role of market places was likely to become even more important in the future. This was because as urban centers continued to grow, open air as well as enclosed markets would be built to serve the urban residents. Her findings confirmed Carson's (1963) assertion that, while market places diminished with economic development in the industrialized economies, they tended to increase in importance in Africa.

Kinsey (1988) summarized the nature of distribution channels in developing countries by asserting that they are generally long, fragmented and inefficient. There are a large number of intermediaries supplying an ever-increasing number of small retailers. Quantities of product offerings are small and inaccurate measures, high wastage and unsalable stocks in foodstuffs are common. Channels as whole are labor rather than capital intensive, with numerous stages incorporated. They are supplied by a large number of widely scattered manufacturers and producers, each providing a limited output. Poor storage and inadequate transport, coupled with the absence of other physical distribution support systems do contribute to this inefficiency. Thus, multinationals in most developing countries tend to develop their own distribution systems where possible.

In his investigation of the physical distribution problems faced by Nairobi's open-air vegetable and fruit sellers, Muiruri (1989) found that, open-air markets were major channels through which vegetables and fruits reached the city residents. These markets formed an important link between the farmers and the final consumers. Moreover, they added time and place utility. They added time utility because buyers could obtain the products at the time they required them. Place utility was added because the sellers strategically positioned themselves on busy streets or at bus stops making it easy for buyers to purchase the products on their way home from their places of work. Thus, sellers took the products to the buyers.

Muiruri also found that distribution problems faced by these traders related to order processing, transportation, inventory management and warehousing. In order processing, problems cited related to inability to obtain desired quantities from suppliers and low bargaining power. Transportation problems included, high cost of transport, goods in transit being seized by city council authorities and non-delivery of goods by hand cart pullers. In inventory management, traders cited some of the reasons why they were unable to satisfy customer needs as, seizure of goods by city council askaris, buying of less quantity than demanded and lack of adequate supplies. Amongst warehousing problems cited, every seller reported that he or she sometimes had been unable to sell everything that had been bought. Hence, the sellers made losses when the unsold products went bad.

Masinde (1996), in her study on small enterprises development through outsourcing activities of large firms, found that although large manufacturing firms in Kenya have the potential for vertical de-integration and outsourcing, the Kenyan business environment provided few incentives for them to do so. In addition, the perceived weakness of small local suppliers meant that they could not benefit from such sub-contracting arrangements with bigger firms. Further, the demands for high quality standards by consumers, influenced perception of lower quality of locally produced parts and components.

Masinde suggested that small and micro-enterprises development could be enhanced through sub-contracting activities with big firms. Therefore, the government would need to improve the economic incentive structure to facilitate this process. Small enterprises would also have a significant role to play. They would have to develop their capacity to bargain with large firms in contractual relations (through improved quality and availability) and with the government through business associations. Indeed, as Kaplinsky (1991) notes, there exists evidence that various

forms of clustering and networking are useful frameworks within which small enterprises can develop considerable bargaining power.

Finally, Kibera (1997) in his paper on marketing strategies for the small business in Kenya contends that most informal sector producers will mainly use non-shop channels and will normally sell directly to final consumers and end users. Additionally, Market places especially in rural areas, will also play a major role in the distribution of both locally produced and imported goods.

2.3 Distribution Channel Selection Process

Distribution channel decisions are among the most critical decisions facing management. This is because channel choices once made, are often very difficult to change. According to Kotler (1997), the company's chosen channels ultimately affect all other marketing decisions. Baker (1992) supports this view by noting that, effective distribution is a sine qua non for marketing success. Therefore, before a firm decides on the type of distribution channel to use, it has to specify the role of distribution within the marketing mix. The firm must also decide whether distribution will be used offensively or defensively. Stanton (1994) argues that defensive distribution involves imitating the place strategies of competition while offensive distribution strategy will aim at achieving differentiation by using unique distribution strategies.

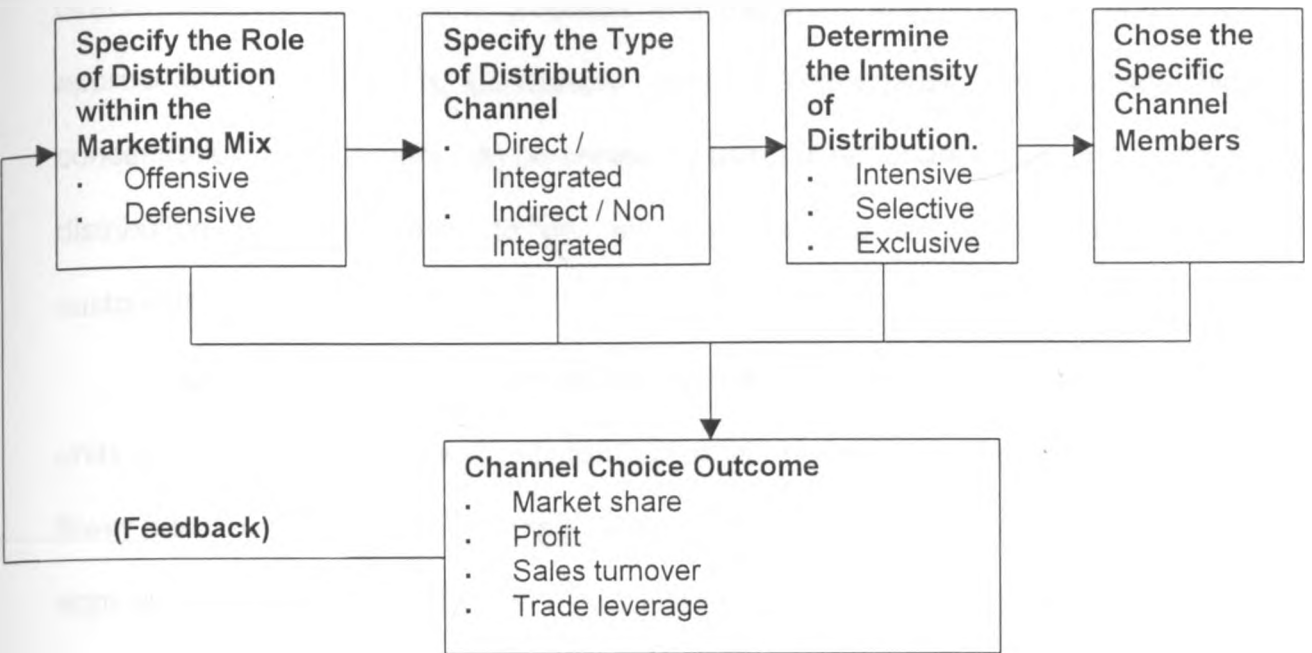
A firm will also select either direct or indirect channels of distribution. Chege (1996) maintains that the firm will face similar choices concerning related distribution functions such as transportation, advertising and warehousing. If a firm chooses to distribute its products directly, it has to decide on the type of and number of own outlets to involve in order to maximize channel output. On the other hand, selection of an indirect distribution channel requires a decision as to the type and levels of

intermediaries to involve in the performance of distributive tasks. Thus, the firm must determine the appropriate intensity of distribution to use; intensive, exclusive or selective distribution.

Intensive distribution involves the firm's product being stocked by as many outlets as possible. That is, any middleman who wants to distribute the product will be allowed to do so. On the other hand, selective distribution entails a strategy of using only some of all those potentially available to distribute the product. Finally, the strategy of exclusive distribution involves getting into an agreement with a particular middleman whereby the manufacturer gives that particular middleman exclusive right to market the product in a given market. The middleman on the other hand usually agrees not to carry any merchandise of competitors (Kibera, 1988).

Lastly, the firm has to choose specific channel members. It is expected that different choice decisions will likely lead to different performance outcomes. Measures of such performance outcomes include market share, profit, and sales turnover and trade leverage. It is assumed that if a firm fails to achieve desired outcomes, it will revise its choices until the most suitable outcome is achieved. A model of the sequence of decision process followed in designing distribution channels is presented in table 1

Table 1: Sequence of Decisions to Design a Distribution Channel



(Source: Adopted from Stanton, 1994: Fundamentals of Marketing: pg. 366)

2.4 Factors Influencing the Choice of Distributing Channels

The choice between an integrated and non-integrated distribution channel is complex and sometimes easily misunderstood (Anderson and Coughlan, 1987). Moreover, it is not possible to capture all the factors that contribute to particular integration decisions but an attempt to describe the major, generalizable forces influencing channel choice is presented.

Brady (1978), advances a model that summarizes the factors that may influence the length of distribution channels. He identifies market characteristics, producer characteristics, environmental characteristics and product characteristics as important factors in determining length of distribution channels. His model is adopted with slight modifications for the purpose of this study.

Among market characteristics that are likely to affect channel choice decisions include, concentration of consumers, number of customers and customers' order

sizes. Thus, where customers are geographically dispersed, it will be difficult to sell directly because of logistical problems and therefore long channels tend to be appropriate (Miller, 1984). Conversely, markets characterized by relatively high concentration of customers can be served by using direct channels. This is because distribution costs are likely to be relatively low due to physical proximity of customers.

Brady (1978) finds that where the number of customers served by business units are many, long channels of distribution will be selected. On the other hand, fewer numbers of customers will require the use of short channels of distribution and application of personal selling efforts. Concerning the size of purchase orders made by customers, Chege (1996) concludes that the size of the average order made is positively related to choice of direct distribution channels. These findings are in agreement with the study by Bucklin (1966), which suggests that purchasing in small quantities would imply high service outputs being delivered and thus necessitating the involvement of intermediaries in the distribution channel.

Company or producer characteristics will also determine channel structure. Among the important factors include size of the firm, length of time in business and market coverage desired. The market coverage desired by the firm may either be intensive or exclusive. Exclusive distribution will involve severely limiting the number of intermediaries handling the companies' goods and services. This will involve exclusive dealing arrangements in which resellers agree not to carry competing brands (Stanton, 1994). In this case, short distribution channels will normally be favored. Intensive distribution on the other hand involves placing goods and services in as many outlets as possible. Thus, when the consumer requires a great deal of location convenience, it is important to offer great intensity of distribution. Long distribution channels will then be selected.

Firm size is also a major determinant of distribution channel structure. Therefore, small companies with limited resources in a competitive industry will normally delegate or "spin-off" the distribution function to enterprises that specialize in these functions. Through such delegation, the firm is able to lower its costs and therefore improve its competitive position. Eventually, however, reintegration of these function may be warranted as the firm's output increases or technology changes because the firm may then find itself capable of performing them at an optimum scale (Stigler, 1951)

The length of time in business of a firm may also determine the nature of its distribution channel. For new companies, long channels may be preferred. However, this may depend on whether the intermediaries will be willing to assume the responsibility from the new company. The latter may lack the power or the ability to convince the intermediary to carry its product (Padolecchia, 1979). On the other hand, for older companies, established in the market, short distribution channels will normally be established.

• Focussing on environmental characteristics, the number of competitors, and ease of entry and exit of producers are critical factors that are likely to affect channel selection. Brady (1978) recommends that where an industry is characterized by ease of entry and exit, long channels of distribution will be suitable. Conversely, in cases where entry and exit is limited, short channels may be selected. This may suggest that for small firms in Kenya, long channels of distribution may be selected, since these are characterized by ease of entry and exit as stated in the ILO (1972) report.

Competitive behavior may also influence channel selection decisions as well. Thus, if firms already established in the market have integrated channels, an entrant into the market may wish to have one also. In this way, entrants signal to customers that they are committed to serving the market and are willing to dedicate resources

(e.g. personnel) to do so. Thus, competitors will imitate the establishments of subsidiaries in each other's markets (Calvet, 1981).

Turning to product characteristics, product service requirements, perishability differentiation, regularity of demand and width of the product line are important factors that may influence the channel choice decision. Product service requirements will affect the channel selection decision. Thus, where the firm's marketing strategy calls for a high level of service (before or after sale), integrating the channel helps ensure that the service will be performed (Keegan, 1984). Though performing service can be specified in contracts with independent entities, ascertaining whether the independent adheres to the contract can be difficult and costly because there are few readily available indicators of service performance unless the firm integrates the channel. Anderson (1995) finds that employee sales people are used more often than contract independent entities for service intensive products.

Product differentiation may also influence the channel choice decision. The extent to which a product is differentiated or standardized can result from a combination of physical product characteristics, selling efforts by the channel members and from the process of consumer choice. Hence a direct channel is likely to be chosen if selling effort is particularly crucial to the differentiation process of a certain product. McGuire and Stalin (1983), conclude that integration is more profitable for a manufacturer than non-integration when consumers perceive products of different manufacturers to be highly differentiated and not substitutable.

Perishability of a product is also important in determining the length of a channel of distribution. If products are highly perishable, use of short channels is called for. For instance, many agricultural products, which are highly perishable, will normally be distributed using short channels. However, this situation may only be true in developed countries. In most developing countries, poor infrastructure and

particularly lack of all weather roads has meant that most produce goes to waste and distribution is mainly through open air markets, hawking and road side selling (Kinsey, 1988).

According to Brady (1978), where the width of a product line is narrow, long channels of distribution may be selected. Similarly, where demand for a product is regular, direct channels of distribution may be favored. On the other hand, a broad product line and characterized by irregular demand may suggest the use of short channels of distribution. Kibera (1997) further identifies middlemen characteristics such as the markets, which the middlemen serve, financial requirements of the intermediaries, services they provide and their availability as being important in choosing between long or short channels of distribution. In Kenya especially, the self-service supermarket is only available in urban centers. Therefore, marketers have to rely on open-air market places and small traditional full service shops to distribute their products in rural areas.

In sum, literature indicates a theoretical framework of distribution channel selection depending on many factors. For the purpose of this study, selection between direct and indirect channels will depend on:

1. The sub-sector of the firm; metal, wood or leatherworks.
2. The length of time the firm has been in business.
3. The profit margin expected by the firm's middlemen.
4. The number of products within the firm's main product line.
5. The regularity of demand for the firm's main product.
6. The type of customer / end user.
7. The size of orders made by the firm's customers.

CHAPTER THREE – METHODOLOGY

This chapter describes the research design, which was used to carry out the research. It covers the research design, population, respondents, the sampling plan, data collection and data analysis methods.

3.1 Research Design

This research was a descriptive study meant to establish factors that influence the choice of product distribution channels for small-scale manufacturing firms in Thika town. Cooper and Emory (1995), assert that a descriptive study is used to learn the, who, what, when, where and how of a topic. Thus, a study of this nature may be used to describe or develop a profile of what is being studied.

3.2 Population

The population of interest in this study consisted of all small-scale manufacturing firms in Thika town. During the pilot study, it was found that most small-scale manufacturing firms engaged in metalwork fabrication, shoe making and leather goods production, and woodwork production. These three categories were adopted for the purpose of the study. Information obtained from the pilot study also revealed the main activities of woodwork, leatherwork and metalwork firms in Thika town.

Woodwork artisans were engaged in production of furniture such as chairs, tables, cardboards, beds, cabinets, coffins, desks, wooden carvings and wood containers, lampshades, coat hangers and curios. In leatherwork production, artisans produced footwear and other items such as handbags, belts, wallets,

briefcases, bags and general upholstery. Metalwork firms were involved in fabrication of products from metal. Their products included cooking pans, rain gutters, grills, charcoal stores, wheel barrows, window frames, chicken feeders, dustbins, lockers, water tanks, farm implements and general metal furniture.

3.3 Sampling Plan

It was not possible to draw up a sampling frame of the small-scale firms, due to difficulties in getting a good enough estimate of the number of these enterprises in Thika town. This problem was partly due to the informal nature of some of these enterprises. The sample was therefore drawn from the major Jua-Kali concentration locations in Thika town (Kariuki, 1989). These locations were identified through a pilot study as having the highest concentration of small-scale manufacturing firms. The concentration regions included Thika Town area, Jamhuri Market area, Thika Industrial area and Madaraka Market area. Concentration locations, which were identified for the three sub-sectors (Metal, wood and leather) include:

(a) Metalwork sub-sector

- i) Thika Town area
- ii) Jamhuri Market area
- iii) Thika Industrial area

(b) Woodwork sub-sector

- i) Thika Town area
- ii) Jamhuri Market area
- iii) Madaraka Market area

(c) Leatherwork sub-sector

- i) Jamhuri Market area.
- ii) Thika Industrial area

iii) Madaraka Market area.

A random choice method was used in selecting the respondents to be interviewed. Respondents to be interviewed were identified by estimating the number of small-scale firms in the concentration locations and then interviewing every third respondent along the street or avenue so chosen (Maalu, 1990). A sample of 65 small firms was visited and the respondents interviewed by the researcher with the help of two research assistants. Out of the 65 responses, the researcher chose to analyze 60 questionnaires, 20 from each of the sub-sectors identified (metal, wood and leather), in order to provide an equal basis for comparison of the results.

3.4 Data Collection Methods

Primary data was required for this study. A pilot study was initially undertaken where 10 firms were visited in order to identify factors to be added to or subtracted from the questionnaire in addition to those from the literature review. A semi-structured questionnaire including both open and closed was then used to collect the data. This questionnaire was administered through interviews conducted by the researcher and his two assistants. Personal interviews were considered necessary since some respondents were found to be semi-illiterate and hence some questions had to be asked in Kiswahili and Kikuyu languages.

The questionnaire was divided into five parts. Part one addressed issues relating to the products manufactured by the firm. Part two, dealt with the customer characteristics for the firms' main product. Part three was concerned with selling and distribution characteristics of the firm. Part four concerned itself with the characteristics of the firm and the environment in which it operated and lastly, Part five looked at the personal details of the respondents.

3.5 Data Analysis Methods

Data analysis methods were carried out using means, percentages and proportion. Average ratings were also used to determine the relative importance of various factors in selection of product distribution channels. Other researchers who conducted surveys on small-scale enterprises including Kessio (1981), Mc Cormick (1986), Dossajee (1992), Wandungi (1994), and Mutoria (1996) used these methods of data analysis. Additionally, the chi-square test of association was used to test the following null hypotheses (Appendix IV and Appendix V).

- (i) Ho: There is no relationship between the type of distribution channel selected (direct or indirect) and the sub-sector of the firm (metal, wood and leather).
- (ii) Ho: There is no relationship between the length of time the firm has been in business and the distribution method selected.
- (iii) Ho: There is no relationship between the profit margin required by middlemen and the type of distribution channel selected.
- (iv) Ho: There is no relationship between the width of the firm's product line and the distribution method selected.
- (v) Ho: There is no relationship between regularity of demand for the firm's main product and the type of distribution channel selected.
- (vi) Ho: There is no relationship between the type of customer served by the firm and the distribution method selected.
- (vii) Ho: There is no relationship between the size of customer orders and type of distribution channel selected.

The alternative hypothesis was:

Ho: There is a relationship between the type of distribution channel selected and the (sub-sector of the firm, length of time in business of the firm, profit margins expected

by middlemen, width of the firm's product line, regularity of demand, type of customer served, and size of customer orders).

CHAPTER FOUR – DATA ANALYSIS AND FINDINGS

In this chapter, the data from the completed questionnaire is summarized and presented in tables, percentages and average ratings. In addition, results of the chi-square test of association between the type of distribution channel selected and various factors are presented. The analysis and presentation of findings is done in five sections.

- (i) Profile of the respondents.
- (ii) Small-scale firm characteristics.
- (iii) Factors influencing the choice of product distribution channels.
- (iv) Relative importance of various factors in the selection of product distribution channels.
- (v) The results of the chi-square test of association.

4.1 Profile of Respondents.

A profile of respondents was considered necessary in this study in order to bring out a more clear understanding of small-scale enterprises and the environment in which they operate. The respondents in this study consisted of the owners of small-scale manufacturing firms in Thika town. However, in some instances, where the owners could not be reached, the managers of the firm or the spouses were interviewed. Table 2 reveals the distribution of respondents as per the title they held in the firm.

Table 2: Distribution of Respondents According to Title Held in the Firm.

Title Held	Number	Percent
Owner	42	70
Manager	14	23.3
Spouse	4	6.7
Total	60	100

From the table, it can be seen that 70% of the respondents interviewed were the firm owners, while 23.3% were the managers of the firm. Only 6.7% of the respondents interviewed were spouses of the firm owners. Other salient characteristics of the respondents are categorized under gender, formal education attainment and attendance of business training.

4.1.1 Gender Characteristics of Respondents

Table 3: Distribution of Respondents by Gender and Sub-Sector.

Gender	Metal		Wood		Leather		Total	
	No.	%	No.	%	No.	%	No.	%
Male	17	85	19	95	14	70	50	83.3
Female	3	15	1	5	6	30	10	16.7
Total	20	100	20	100	20	100	60	100

From table 3, one observes that the woodwork sub-sector had the highest proportion of male entrepreneurs (95%), while the leatherwork sub-sector seemed to have the highest proportion of female entrepreneurs (30% of the firms). On the whole, regardless of sub-sector, only 16.7% of the respondents were female while 83.3% of respondents were male.

4.1.2 Formal Education Attainment of Respondents

The distribution of respondents by their formal education attainment is presented below.

Table 4: Respondents by Formal Education Attainment by Sub-Sector

Education Level	Metal		Wood		Leather		Total	
	No.	%	No.	%	No.	%	No.	%
No Formal schooling	-	0	-	0	-	0	-	0
Primary Level	2	10	4	20	1	5	7.2	12
Secondary Level	14	70	13	65	13	65	40.1 ^b	67
College / University	4	20	3	15	6	30	13	21
Total	20	100	20	100	20	100	20	100

According to the findings in table 4, 67% of the respondents irrespective of sub-sector had gained some formal education to secondary level and 21% had obtained at least college level education. These findings are contrary to the popular conception of the informal sector that, one requires no formal schooling or technical training as a prerequisite to entry. Indeed, all respondents interviewed reported to having attained at least primary level education.

4.1.3 Respondents Level of Formal Business Training

Table 5 shows the distribution of respondents by their formal business training attainment.

Table 5: Distribution of Respondents by Business Training and Sub-Sector

Business Training	Metal		Wood		Leather		Total	
	No.	%	No.	%	No.	%	No.	%
Yes	5	25	3	15	8	40	16	26.7
No	15	75	17	85	12	60	44	73.3
Total	20	100	20	100	20	100	60	100

Table 5 affirms the observation usually made that entrepreneurs in the Juakali sector do not have any formal business training. It is therefore significant that, in this particular study, 75% of entrepreneurs in the metalwork sub-sector, 85% of those in the woodwork sub-sector and 50% of those in the leatherwork sub-sector reported not having attended any formal business training.

4.2 Small-Scale Firm Characteristics.

This section outlines a profile of all the small-scale manufacturing firms studied. Some characteristics examined include, enterprise age, number of employees, type of ownership of the firm, number of products produced, market coverage of the firm's products, the firm's financial strength and the effect of the current economic condition on distribution operation.

4.21 Enterprise Age

Table 6 depicts the characteristics of the small-scale firm's by the length of time they have been in business.

Table 6: Firms Length of time in Business by Sub-Sector

Length of time in Business	Metal		Wood		Leather		Total	
	No.	%	No.	%	No.	%	No.	%
Less than 5 years	11	55	9	45	9	45	29	48.3
5 – 10 years	5	25	3	15	4	20	12	20
10 – 15 years	3	15	4	20	6	30	13	21.7
Greater than 15 years	1	5	4	20	1	5	6	10
Total	20	100	20	100	20	100	60	100

In terms of enterprise age, table 6 indicates that regardless of sub-sector, 48.3% of firms had been in operation for less than 5 years. Equally, 20% of the firms had been in operation for between 5 – 10 years and 27.7% were 10-15 years old.

Only a small percentage (10%) of the firm's was reported to have been in operation for greater than 15 years.

4.22 Number of Employees

Table 7 shows the mean number of employees by sub-sector. From the table, the mean number of employees was found to be highest in the metalwork sub-sector (4.6 employees) and lowest in the woodwork sub-sector (3.35 employees). In the leatherwork sub-sector, the mean number of employees was found to be 3.8.

Table 7: Mean Number of Employees by Sub-Sector

Sub-sector	Mean No. of Employees
Metal	4.6
Wood	3.35
Leather	3.8
Mean Total	3.9

4.2.3 Firms Ownership characteristics

Table 8 represents a distribution of ownership characteristics of small-scale firms by sub-sector.

Table 8: Distribution of Firms by ownership and Sub-Sector

Type of ownership	Metal		Wood		Leather		Total	
	No.	%	No.	%	No.	%	No.	%
Sole proprietorship	19	95	16	85	16	80	51	85
Partnership	1	5	3	15	1	5	5	8.3
Others	0	0	1	5	3	15	4	6.7
Total	20	100	20	100	20	100	60	100

According to table 8, 85% of all the firms were reported to be sole proprietorships and 8.3 were reported to be partnerships. Among other categories

identified were, two firm's being private limited companies and two others being co-operative welfare groups. An analysis by sub-sector revealed that the highest number of sole proprietorships were reported in the metalwork sub-sector, while the leatherwork sub-sector reported the highest number of firms in the 'others' category.

4.2.4 Width of the Firms' Product Line.

Table 9 shows distribution of firms by the number of products produced.

Table 9: Distribution of Firms by Width of the Product Line

Number of products	Metal		Wood		Leather		Total	
	No.	%	No.	%	No.	%	No.	%
One	-	0	-	0	2	5	2	3.3
Two	-	0	3	15	2	15	5	8.3
Three	1	5	4	20	4	20	9	15
Four	4	20	1	5	3	15	8	13.3
Five	8	40	6	30	4	20	18	30
More than five	7	35	6	30	5	5	18	30
Total	20	100	20	100	20	100	60	100

From table 9, it is evident that most firms (60%) produced five or more products. Indeed, 75%, 60% and 25% of firms in the metal, wood and leather sub-sectors respectively produced greater than five products. Therefore, it can be argued that most firms in the metal and woodwork sub-sectors had a fairly broad product width. On the other hand, firms in the leatherwork sub-sector had a fairly narrow product width.

4.2.5 Market Coverage of Firms' Products.

Table 10 depicts the distribution of firms by the geographic scope of their served markets.

Table 10: Distribution of Firms by the Market Coverage of their Products

Served Markets	Metal		Wood		Leather		Total	
	No.	%	No.	%	No.	%	No.	%
Local, within Thika town	17	85	14	70	12	60	43	71.7
Countrywide	3	15	6	30	7	35	16	26.7
Others	-	-	-	-	1	5	1	1.6
Total	20	100	20	100	20	100	60	100

Table 10 reveals, regrettably that, most firms (71.7%) distributed their products within a small radius of their manufacturing site or location. Thus, products were sold within Thika town and its surroundings. Only 26.7% of the firms had countrywide market coverage for their firms' main product. Indeed, only one firm in the leatherwork sub-sector had its products being distributed outside Kenya. This firm mainly sold its products in Kenya and within the East African Region.

4.6 Strength of Financial Resources

The table below reports the distribution of firms' financial strength by sub-sector as reported by the owners of the firms.

Table 11: Firms Strength of Financial Resources by Sub-Sector.

Strength of financial resources	Metal		Wood		Leather		Total	
	No.	%	No.	%	No.	%	No.	%
Very strong	-	0	-	0	-	0	-	0
Fairly strong	8	40	6	30	8	40	22	36.7
Weak	8	40	9	45	7	35	24	40
Very weak	4	20	5	25	5	25	14	23.3
Total	20	100	20	100	20	100	60	100

From the table, it is evident that most entrepreneurs (40%) regardless of sub-sector reported a weak financial state, with 23.3% of the firms reporting a very weak

state of their financial resources. Only 36.7% of the firms reported to have a fairly strong state of their financial resources. None of the firms however, reported to having a very strong financial position.

4.2.7 Effect of Current Economic Conditions

Table 12 reports the impact of the current economic condition of the distribution operations of the firm.

Table 12: Impact of Current Economic Conditions on Distribution Operation by Sub- Sector.

Impact of current economic conditions	Metal		Wood		Leather		Total	
	No.	%	No.	%	No.	%	No.	%
Very favourable	-	0	-	0	-	0	-	-
Fairly favourable	8	40	9	45	11	55	28	46.7
Unfavourable	9	45	10	50	8	40	27	45
Very unfavourable	3	15	1	5	1	5	5	8.3
Total	20	100	20	100	20	100	60	100

According to table 12, 46.7% of all firms reported that the current economic had been fairly favorable to their distributive operations, 45% of the firms reported an unfavorable impact while 8.3% cited a very unfavorable impact of the current economic conditions on their distribution operations.

4.3 Factors influencing the Choice of Product Distribution Channels

This section identifies the nature of product distribution channels used by small scale manufacturing firms in Thika town. Additionally, the factors affecting the selection of products distribution channels are outlined.

4.3.1 Nature of Distribution Channels for Small-Scale Firms

Table 13 below depicts the distribution channels used by the small-scale firms by sub-sector. Distribution channels used will either be direct or indirect. Direct distribution will involve firms selling directly to the final consumer without using intermediaries. On the other hand, indirect distribution channels which includes mixed or dual distribution channels (where the firm combines both direct and indirect channels) will involve firms availing their products to the target markets through intermediaries.

Table 13: Distribution Channels used by Firms by Sub-Sector

Distribution method	Metal		Wood		Leather		Total	
	No.	%	No.	%	No.	%	No.	%
Direct	10	50	15	75	12	60	37	61.7
Indirect	10	50	5	25	8	40	23	38.3
Total	20	100	20	100	20	100	60	100

Data in table 13 shows that 61.7% of the firm's irrespective of sub-sector used direct distribution channels by selling directly in their own outlets or at the point of production. 38.3% of the firms on the other hand, used indirect distribution channels, which include mixed distribution channels. These firms identified retailers, brokers and supermarkets as some of the leading intermediaries for their products. A sub-sector comparison revealed that the highest percentage of firms using direct distribution methods was recorded in the woodwork sub-sector (75%) while the lowest percentage was recorded in the metalwork sub-sector (50%)

4.3.2 Factors Influencing the Choice of Distribution Channels

This section looks at the factors, which were mentioned by various firms as affecting their choice of distribution channels. Table 14, shows data on the distribution of firms by sub-sector and the factors identified as influencing the choice of distribution channels.

Table 14: Factors Influencing the Choice of Product Distribution Channels

Factor	Metal (No. mentioned)	Wood (No. Mentioned)	Leather (No. Mentioned)	Total	
				No.	%
(i) Availability of middlemen	18	18	19	55	91.7
(ii) Middlemen requirements	20	19	18	57	95
(iii) Profit margin expected by middlemen	18	19	20	57	95
(iv) Nature of product demand	19	17	16	52	86.7
(v) Type of customer served	5	11	3	19	31.7
(vi) Customer order sizes	11	14	12	37	61.7
(vii) Location of customers	16	18	14	48	80
(viii) Distribution channels used by competitors	5	2	7	14	23.3
(ix) Desired level of control of distribution operations	12	15	9	36	60
(x) Financial strength of the firm	6	9	11	26	43.3
(xi) Current economic conditions	18	6	14	38	63.3

According to table 14, the most frequently mentioned factors by the firms in selecting distribution channels included middlemen requirements (95%), profit margins expected by middlemen (95%), availability of middlemen (91.7%), nature of product demand (86.7%) and location of customers (80%). On the other hand, distribution methods used by competitors (23.3%) and the type of customer served

(31.7%) seemed to be least mentioned by firms, in terms of influencing the choice of distribution channels.

4.4 Relative Importance of Various Factors in Selecting Product

Distribution Channels

In this section, the average ratings of various factors, which influence the choice of product distribution channels, are presented. These ratings are calculated on a sub-sector basis. (See Appendix III)

Table 15: Relative Importance of Factors in Selection of Distribution channels

Factors	Metal (Average Rating)	Wood (Average Rating)	Leather (Average Rating)	Average Rating (Total)
(i) Availability of middlemen	3.6	3.55	3.45	3.53
(ii) Middlemen requirements	3.95	3.85	3.90	3.90
(iii) Profit margins expected by middlemen	3.75	3.7	3.75	3.73
(iv) Nature of product demand	3.55	3.45	3.3	3.43
(v) Type of customer served	2.85	2.8	2.85	2.83
(vi) Customer order sizes	3.5	3.75	3.6	3.6
(vii) Location of customers	2.95	3.35	3.15	3.15
(viii) Distribution channels used by competitors	2.15	1.9	2.4	2.15
(ix) Desired level of control of distribution operations	2.75	2.6	2.7	2.68
(x) Financial strength of the firm	2.05	2.65	2.85	2.52
(xi) Current economic conditions	3.05	2.45	2.85	2.78

From table 15, the average ratings (total) of all factors influencing choice of product distribution channels regardless of sub-sector can be ranked as follows in descending order.

Factor	Average rating
. Middlemen requirements	3.90
. Expected profit margin by middlemen	3.75
. Customer order sizes	3.60
. Availability of middlemen	3.53
. Nature of product demand	3.43
. Type of customer served	3.15
. Customer characteristics	2.83
. Current economic conditions	2.78
. Desired level of control of distribution operations	2.68
. Financial strength of the firm	2.52
. Distribution channels used by competitors	2.15

These rankings revealed that middlemen requirements, their expected profit margin and their availability were the most important factors influencing the choice of product distribution channels for small-scale manufacturing firms in Thika town. On the other hand, the distribution channels used by competitors were found to be least important in influencing the channel choice decision.

4.5 Results of the Chi-Square Analysis of Association

This section presents the results of an analysis using the chi-square test of association to find if there is any relationship between the type of distribution channel selected (direct or indirect) and various factors, which influenced the selection of product distribution channels. (See Appendix IV and V)

The calculation to find out if there was any relation between the type of distribution channel selected and sub-sector of the firm gave a χ_c^2 value of 2.68 which is smaller than the critical value of 5.99 at 0.55 level of significance with 2 degrees of freedom. The conclusion based on these statistical test results is that, there is no significant relationship between the type of distribution channel selected and the sub-sector of the firm.

The calculation to find out if there was any relation between the type of distribution channel selected by a firm, and its length of time in business gave a χ_c^2 value of 0.717, which is smaller than the critical value of 7.815 at 0.05 level of significance with 3 degrees of freedom. The conclusion based on these statistical test results is that, there is no significant relationship between the type of distribution channel selected and the period in operation of the firm.

The computation to investigate the relationship between the type of distribution channel selected and profit margin expected by the middlemen gave a χ_c^2 value of 6.435 which is greater than the critical value of 5.99 at 0.55 level of significance with 2 degrees of freedom. The conclusion based on these statistical test results is that, there is a significant relationship between the type of distribution channel selected by a firm and the profit margin expected by the middlemen.

The calculation to find out if there was any relation between the number of products (width of the product line) produced and the type of distribution channel selected gave a χ_c^2 value of 1.9853, which is smaller than the critical value of 9.49 at 0.05 level of significance with 4 degrees of freedom. The conclusion based on these statistical test results is that, there is no significant relationship between the type of distribution channel selected by a firm and the width of its product line.

The calculation to investigate the relationship between the type of distribution channel selected and the regularity of demand for the firm's products gave a χ^2_C value of 6.115 which is greater than the critical value of 5.99 at 0.05 level of significance with 2 degrees of freedom. The conclusion based on these statistical test results is that, there is a significant relationship between the type of distribution channel selected and the regularity of demand for the firm's main product.

The computation to find out if there was any relation between the type of distribution channel selected and the type of customer served gave a χ^2_C value of 0.5935 which is smaller than the critical value of 5.99 at 0.55 level of significance with 2 degrees of freedom. The conclusion based on these statistical test results is that, there is no significant relationship between the type of customer served by a firm and the method of distribution used by the firm.

Finally, the calculation to investigate the relation between the size of customer orders and the type of distribution channel selected gave a χ^2_C value of 9.2627 which is greater than the critical value of 7.815 at 0.05 level of significance with 3 degrees of freedom. The conclusion based on these statistical test results is that, there is a significant relationship between the type of distribution channels selected by the firm and the size of orders made by its customers.

CHAPTER FIVE: SUMMARY AND POLICY IMPLICATIONS

This chapter presents a summary of the findings, policy implications, limitations of the study and some suggestions for further research.

5.1 Summary

The main aim of this study was to examine the factors that influence the choice of product distribution channels for small-scale manufacturing firms and to estimate the relative importance of these factors in channel choice selection. Based on extant literature, seven factors were hypothesized to affect the choice of product distribution channels. The sub-sector of the firm, the length of time in business of the firm, the profit margins expected by middlemen, the width of the firm's product line, the regularity of demand for the firm's products, the type of customer served by the firm and the size of customer orders.

The effects of these factors on the channel selection decision are presented below. Additionally, this section also presents a summary of the profile of respondents of the firm's included in the study. This information has been included to provide a deeper understanding of small-scale firms and the environment in which they operate. Further, it is believed this information would also give indications as to why these firms made certain channel decisions.

It is evident from the profile of respondents that 93.3% of all respondents consisted of owners and managers of the small-scale firms while only 6.7% consisted of the spouses of the owners of these firms. Thus, since the firm owners and managers are assumed to make important decisions for a business firm, it can therefore be said that, the respondents in this study consisted of the people who made important decisions for the small-scale firms, and more particularly, decisions regarding the distribution of their products. An analysis of the entrepreneurs by

gender revealed that the highest percentage of male entrepreneurs was found in the woodwork sub-sector (95%) while the highest percentage of female entrepreneurs was found in the leatherwork sub-sector (30%). On the whole, regardless of sub-sector, 98% of entrepreneurs were male while 16.7% were female. These statistics confirm the stereotype of male dominance in the Jua-kali sector.

Concerning education attainment, regardless of sub-sector, 12% of the entrepreneurs had attained primary level education, 67% had attained secondary level education and 21% had at least a college level education. These findings are contrary to the popular opinion that most Jua-kali entrepreneurs did not have any formal schooling. Regarding the level of business training, this study revealed that irrespective of sub-sector, 73.3% of all entrepreneurs interviewed had not attended any formal business training. These findings therefore affirm the observation usually made that entrepreneurs in the Jua-kali sector did not have any formal business training. Indeed, most entrepreneurs interviewed did not think that formal business training was beneficial to their businesses and only viewed it as an additional expense, which often they could not afford.

A focus on the characteristics of the firms revealed that, the majority of the firms (48.3%), regardless for sub-sector had been in business for less than five years, 20% had been in business of 5-10 years, 21.7% were in business for 10-15 years, and only 10% of the firms had been in business for greater than 15 years. In terms of the mean number of employees of the firms, the metalwork sub-sector recorded the highest mean (4.6 employees), while the woodwork sub-sector recorded the lowest mean of 3.35 employees. On the whole, irrespective of sub-sector, the mean number of employees was 3.9. However, it is notable that most employees of the firms were either immediate family members of the owner or part-

time workers engaged when the demand for products was high or when customers placed large orders, which required immediate attention.

Regarding the type of ownership of the firm, most enterprises were found to be sole proprietorships (85%), while partnership consisted of 8.3% of the total. Only 6.7% of the firms were either private limited companies or co-operative societies. The high percentage of sole proprietorships may be attributed to the fact that the entry barriers into the Jua-Kali industry are quite low and hence most entrepreneurs went into business on their own with a paltry amount of capital. Focussing on the width of the firm's product line, a great majority of the firms produced five or more products. It is notable that, although most firms had a fairly large product width, most of these products were not produced throughout the year, but according to certain seasons.

In respect to market coverage or the geographic scope of the firms served markets, it was found that most firms (71.7%) regardless of the sub-sector, distributed their products within Thika town and its environs. Only a small number of firms (26.7%) had countrywide market coverage. Further, only one firm out of the total 60 firms sampled, exported its products to countries within the East African Region. One factor limiting the market coverage for most of these firms was their limited production capacity. Since most firms used labor-intensive production techniques, their production capacities were severely limited and hence they could only produce items to serve local markets.

Turning to financial strength of the firms' resources, this study revealed that a great majority of firms (63.9%) irrespective of sub-sector reported a weak financial position. A weak financial position arose mainly from low level of savings by the entrepreneurs, limited access to credit facilities, and low level of incomes resulting from low profit margins on products coupled with depressed sales levels. Most

entrepreneurs interviewed, reported that a weak financial position negatively affected their business operations and especially their distribution activities. Other findings from the study revealed that, the current economic conditions had been generally unfavorable to most firms' (53.3%) marketing and distribution activities. Only 46.7% of the firms reported a fairly favorable impact of the current economic activities on the distribution of their products. In general, most firms identified the general economic recession experienced in the country as affecting consumer's purchasing power and hence leading to depressed sales levels and piling of unsold stocks. Liberalization of the economy had also affected negatively the performance of most small-scale firms. Thus, with liberalization, the Kenyan markets had been flooded with cheap imports which despite being cheaper than the local Jua-Kali products were seemingly of a higher quality. The worst hit sub-sector was the leatherwork sub-sector, which had witnessed the collapse of many firms. Lastly, the high interest rates charged by most banks and financial institutions had tended to 'crowd out' most small-scale firms from borrowing and hence severely affected their distribution operations, therefore impeding their survival and growth prospects.

In regard to distribution channels used by the firms, it is evident from the study that most firms (61.7%) regardless of sub-sector used direct distribution channels, while 38.3% of the firms used indirect methods of distribution. Direct distribution channels used by the firms' owners included selling directly from the point of production or peddling the products in market places, at bus stations or at roadside locations. Indirect distribution channels included dual distribution channels where the firm used two or more distribution channel structures for distributing the same product to the target markets. The indirect distribution channels used by firms included small retail shops, supermarkets and other manufacturing firms.

The study also found the various factors that influenced the choice of product distribution channels by small-scale manufacturing firms in Thika town. The five most frequently mentioned factors included middlemen requirements (95%), expected profit margin by the middlemen (95%), availability of middlemen (91.7%), nature of product demand for the firm's products (86.7%) and location of customers (80%). Only 23.3% of the firms mentioned distribution channels used by competitors as a factor to be considered in selecting distribution method for a firm's product. Middlemen requirements cited by the firm owners included their desire to buy products on credit and their high quality expectations. Thus, where the level of credit required by the intermediary was high, most firms chose to sell directly at their own outlets than use the intermediaries. On the other hand, cash purchases by middlemen encouraged Jua-Kali entrepreneurs to use indirect channels of distribution. High quality expectations by middlemen implied that, only those products which met the quality expectation of intermediaries would be bought, hence the firm owners had to use other channels (direct channels) to distribute the products that did not meet the quality expectations of the intermediaries.

Concerning profit margins expected by middlemen, it was established that most intermediaries required a fairly high profit margin on the sale of these products. Thus, where it was possible to provide such a margin, the firms chose to use the intermediaries, on the other hand, where provision of such margin to middlemen would affect the manufacturing firm's profits, the firm would choose to use short channels of distribution. Availability of middlemen was also very frequently mentioned as a factor influencing the choice of product distribution channels. Thus where intermediaries were available and willing to stock the firms products, the entrepreneur would chose to use these intermediaries. However in most cases, intermediaries were not available to stock the firms products, and where they were

available. most of them were unwilling to stock products from Jua-Kali industries, mainly because of low quality perception of products from the industry. Hence, in this case the firms had no alternative but to integrate the distribution channels.

Regarding regularity of demand, majority of the firms regardless of sub-sector indicated that most of their products were characterized by an irregular and seasonal demand. Thus, during peak periods of demand, the firms chose to sell directly at their production locations, and during periods of low demand, the firms would try to sell through intermediaries. Focusing on location of customers, it was evident that most firms used long channels where their customers were geographically dispersed and short channels where their customers were geographically concentrated.

A ranking of various factors influencing the choice of product distribution channels using average ratings revealed that middlemen requirements, the profit margin expected by middlemen, availability of intermediaries, the nature of demand for products and the type of customer served were ranked as five most important factors in making the channel choice decision. The distribution channels used by competitors were ranked lowest as a factor to be considered when selecting a type of product distribution channel. ↴

A further analysis using the chi-square test of association revealed that, a significant relationship existed between the type of distribution channel selected by a firm and the profit margin expected by middlemen, the regularity of demand for a firm's products and the size of orders made by the firm's customers at 0.05 level of significance. On the other hand, it was found that no significant relationship existed between the type of distribution channel selected by a firm and the sub-sector of the firm, the length of time in business of the firm, the width of the firms product line and type of customer served at 0.05 level of significance.

5.2 POLICY IMPLICATIONS

The results of this study have important managerial implications for small-scale firm operators and other stakeholders who are intent to assist SSES to distribute their products more effectively.

One important managerial implication is that there are high costs to making an incorrect channel decision. Evidence from the study reveals that once a channel decision is made (whether right or wrong), it tends to be reinforced over time as new products are sold through established channels. Thus, if the 'wrong' channel is selected, high costs of changing the channel may face the firm. This possibility emphasizes the importance of a firm taking a long-run dynamic view of distribution channel choice rather than settling on an alternative that meets only transient criteria (such as convenience and availability). Thus, any attempts to improve the distribution of products from small-scale enterprises must first consider the factors, which have been identified as having a significant influence in the channel selection decision. Indeed, empirical evidence reinforces the long-held institutional view that distribution channel choice is a significant investment that should not be made lightly (Becker and Thorelli, 1980)

This study also finds support for the service output theory advanced by Bucklin (1966). The points in this theory is that unlike small order sizes, larger order sizes would be characterized by less service outputs and are thus more economical for the company to handle. Thus, from a managerial viewpoint, if end customers are willing to buy in large quantities, the company should aim at serving them directly. Otherwise, it would be more economical to serve them through channel intermediaries. Thus, the existence of demand for relatively small and larger order sizes in the served markets would justify the use of alternative channels for the same market as a strategic product distribution option. However, delegation of the

responsibility for handling increased order frequencies is likely to depend on the suitability of existing distributors. If these are unsuitable according to the firms' requirements, the firm may opt to handle the increased orders through a direct distribution channel, at perhaps increased costs to the buyer. Alternatively, the firm could induce buyers to reduce their purchase frequencies by encouraging them to buy in large quantities through, for example, offering quantity discounts.

The findings of this study also revealed that middlemen availability and their expected profit margins were important factors in the selection of product distribution channels. Thus, it seemed plausible that most firms faced by the lack of suitable intermediaries willing to carry their products, chose to use integrated distribution channels (Stern and El-Ansary, 1992). The major challenge for small-scale firms in this case would be how to overcome their inefficiencies due to company size and the perceived poor quality of their products. A possible strategic alternative is for the firms to pool resources with other small firms, perhaps through joint venture arrangements or co-marketing alliances in order to reduce their inefficiencies due to company size. As Masinde (1996) notes, these alliances would also be important if these enterprises are to develop a capacity to bargain in contractual relationships with intermediaries. On the same note, small firms will need to invest in product development in order to counter the perceived poor quality of their products that inhibits their ability to use middlemen to distribute their products. Perhaps by changing their strategy from reactive to proactive strategies towards product development, SSES would be able to overcome many bottlenecks in the marketing and distribution of their products. Boyd and Walker (1990), suggest that proactive strategies will include: a research and development strategy which endeavors to come up with superior technical products, a marketing strategy which is predicated

on identifying consumer needs, an entrepreneurial strategy which structures an organization is a way that will encourage innovativeness and an acquisition strategy.

An interesting variable this study did not consider is the extent of product differentiation for the products manufactured by small-scale firms. These data would have been extremely difficult to obtain and an estimation of this variable would only have been an arbitrary exercise. However, McGuire and Stalin (1983), contend that the extent of product differentiation or standardization can be an important factor in the choice of distribution channels. Product differentiation or standardization can result from a combination of physical product characteristics, selling efforts by the channel members and from the process of consumer choice. Therefore, a direct channel is likely to be chosen if the selling effort is particularly crucial to the process of differentiation of a certain product. McGuire and Stalin conclude that integration is more profitable for a manufacturer than non-integration when consumers perceive products of different manufacturers to be highly differentiated and not substitutable. Coughlan (1985), supports this conclusion with the proposition that highly differentiated products are more likely to be sold through integrated channels.

A big challenge for small-scale operators in this case would be for them to adopt a differentiated marketing strategy that allows them to integrate their distribution operations. Thus, by attempting to concentrate their efforts on certain market segments through differentiated products and services, SSES would be able to specialize and this would also give them an opportunity to carefully analyze the customer needs, and wants and put all their efforts into satisfying the needs of these segments. Indeed, it is argued that the small firms' strength often results from their ability to render a specific product or service competitively. Therefore, limited markets, too small for big firms would provide the best opportunity for these firms (Kibera, 1996).

Finally, this study has important implications in terms of public policy. The government on its part will need to develop low cost and affordable business training programmes that equip small-scale operators with the knowledge and skills to make optimal decisions regarding the distribution of their products and on how to choose and retain the right intermediaries for their products. Further, the government will need to assist small-scale firms distribute their products more effectively and widely by creating an economic incentive structure, that encourages procurement of supplies by itself, other industries and organizations from small-scale industries. For instance, by ensuring that a fair proportion of its total purchases, contracts and sub-contracts for property and services are placed with small-scale enterprises, the government can ensure that SSES have access to wider markets for their products and hence can be able to distribute their products more extensively and probably even more effectively.

5.3 Limitations of the Study

This study had the following limitations:

1. Due to the absence of a sampling frame, a non-conventional sampling technique was used to select the sample to be studied. Thus, the results of the study may only apply to the population studied and generalizing these to a wider population may be erroneous.
2. Lack of co-operation from some respondents reduced the sample size. Thus, despite the fact that the researcher explained to each respondent the purpose of the study some still feared that this was aimed at forcing them to pay taxes.
3. The nature of some respondents required that some questions had to be explained in the Kikuyu and Kiswahili languages. In the process it is possible that some of the original meanings may have been distorted.

5.4 Suggestions for further Research

The following areas deserve further research:

1. A study may need to be carried out to compare the choice of product distribution channels in large-scale and small-scale enterprises. This would possibly lead to more conclusive results regarding the channel structure decisions of firms.
2. A more comprehensive market research should be carried out to determine the relationship between the distribution channels selected by a firm and their performance.
3. Given the recent emphasis by the government of Kenya on an export led growth strategy as opposed to the import substitution strategy, attention could perhaps be focused on the factors that determine selection of product distribution channels in foreign markets by locally based business enterprises.

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APPENDICES

Appendix I: Covering Letter.

University of Nairobi
Faculty of Commerce
Department of Business Administration
P.O. Box 30197
Nairobi.

___March, 2000

Dear Respondent,

I am a postgraduate student in the Faculty of Commerce, University of Nairobi. Currently, I am conducting a Management Research Project on “ **FACTORS INFLUENCING THE CHOICE OF PRODUCT DISTRIBUTION CHANNELS FOR SMALL-SCALE MANUFACTURING FIRMS: A CASE OF THIKA TOWN**”. This is in partial fulfillment of the requirements for the Master of Business Administration (MBA) degree.

I am kindly requesting you to fill in the attached questionnaire the soonest possible and to the best of your knowledge. The information you give is needed purely for academic research purposes and will therefore be treated with strict confidence. In no way will your name appear in the final report.

A copy of the final report will be made available to you upon request

Your assistance and co-operation will be highly appreciated. Thank you in advance.

Yours faithfully,

Pius K. Nq'ang'a
MBA STUDENT

Dr. R. M. Musyoka
SUPERVISOR

Appendix II: Questionnaire

Part One

(Below are questions related to products manufactured by your firm. Please provide an appropriate response.)

Q.1 (a) Which of the following describes your firm's main product?

Metal products []

Wood products []

Leather and Textile products []

(b) Which of the following best describes the number of products within your company's main product line ?

One product []

Two products []

Three products []

Four products []

Five products []

More than five products []

(c) Which one of the following categories describes the nature of demand for your firm's main product?

Regular []

Seasonal []

Irregular []

Others (Please specify).....

(d) How would you describe the profit margin expected by middlemen for your firm's main product?

High []

Moderate []

Low []

Very low []

Part Two

(Below are questions related to the customer characteristics for your firm's main product. Please provide an appropriate response to each question.)

- Q.2** (a) In relation to your firm's products, which of the categories below best describes your products end user?

Individual customers []

Other firms or industries []

Others (please specify)

- (b) How would you describe the size of orders made by your firms customers?

Very large []

Fairly large []

Small []

Very small []

- (c) What is the geographic scope for your firm's served market?

Local, within Thika and Surrounding Towns []

Countrywide, within Kenya []

Others, (Please specify)

.....

Part Three

(Below are questions related to selling and distribution characteristics of your firm. Please provide an appropriate response to each question.)

- Q.3** (a) What is the type of ownership for your firm?

Sole proprietorship []

Partnership []

Others (Please specify).....

(b) What is the location of your firm?

Jamhuri market area []

Thika industrial area []

Madaraka market area []

(c) How do you distribute / sell your products to your customers?

.....

.....

.....

.....

.....

.....

(d) Below is a list of factors that may affect the choice of product distribution methods for your firm's main product (i.e, using distributors / middlemen or selling directly at your shop). Please tick those applicable to your firm. You may tick more than one choice.

(i) Availability of middlemen / distributors []

(ii) Requirements placed by middlemen
(Interms of quality, trade margins, credit terms etc) []

(iii) The expected profit margin []

(iv) The regularity of customer purchases []

(v) The type of customers (individual / industries) []

(vi) Customer order sizes []

(vii) Location of customers []

(viii) Distribution methods used by competitors []

(ix) The desired level of control on distribution activities []

(x) The financial strength of the firm. []

(xi) The current economic conditions. []

(xii) Others (please specify).....

.....

.....

.....

.....

(e) How would you rate the importance of the following factors in selecting a particular product distribution arrangement?

Factors	Very Important	Fairly Important	Somewhat Important	Not Important
(i) Customer characteristics (location and type of customers)	[]	[]	[]	[]
(ii) Middlemen availability	[]	[]	[]	[]
(iii) Middlemen requirements	[]	[]	[]	[]
(iv) Distribution methods of competitors	[]	[]	[]	[]
(v) Firm's financial strength	[]	[]	[]	[]
(vi) Desired level of control of distribution operations	[]	[]	[]	[]
(vii) Expected profit margin	[]	[]	[]	[]
(viii) Economic conditions	[]	[]	[]	[]
(ix) Nature of product demand	[]	[]	[]	[]
(x) Size of customer orders	[]	[]	[]	[]
(xi) Others (Please specify)				

Part Four

(Below are questions related to characteristics of your company and the environment in which it operates. Please provide an appropriate response to each question.)

Q. 4 (a) How many years has your firm been in existence?

- Under 5 years []
- 5 – 10 years []
- 10 - 15 years []
- 15 years and above []

(b) How many employees are working in your firm (including the owner)?.....

(c) How would you describe the strength of your firm's financial resources?

- Very strong []
- Fairly strong []
- Weak []
- Very weak []

(d) To what extent have the current economic conditions impacted on your firm's distribution activities?

- Very favorable []
- Fairly favorable []
- Unfavorable []
- Very unfavorable []

(e) How would you describe the number of competitors in your industry manufacturing the same product as yours?

- Very many []
- Not too many []
- Few []
- None []

(f) To what extent are the product distribution channels used by your competitors in relation to your own?

- About the same []
- Different []
- Others (please specify)

Part Five

(The questions below look at the personal details of the respondent. Please provide an appropriate response to each question.)

Q.5 (a) What title do you hold in this firm?

(b) Gender

Male []

Female []

(c) What is your highest formal education attainment?

No formal schooling at all []

Primary school level []

Secondary school level []

College / University level []

Others (please specify)

(d) Have you ever attended any formal business training?

Yes []

No []

THANK YOU FOR YOUR CO-OPERATION

Appendix III

4.4 Relative Importance of Various Factors in Selection of Distribution Channels.

Table 16: Relative Importance of Various Factors in Selection of Distribution Channels for the Metalwork Sub-Sector.

Factors	Metalwork sub-sector				Average Rating
	Very Important (4)	Fairly Important (3)	Somewhat Important (2)	Not Important (1)	
(i) Middlemen availability	16	2	-	2	3.6
(ii) Middlemen requirements	19	1	-	-	3.95
(iii) Expected profit margin by Middlemen	16	3	1	-	3.75
(iv) Demand for products	14	4	1	1	3.55
(v) Type of Customer served	4	11	3	2	2.85
(vi) Customer order sizes	14	3	2	1	3.50
(vii) Location of customers	8	4	7	1	2.95
(viii) Distribution channels used by competitors.	2	4	9	5	2.15
(ix) Desired level of control of distribution operations.	5	9	2	4	2.75
(x) Financial strength of the firm.	3	4	4	9	2.05
(xi) Current economic conditions.	11	3	2	4	3.05

Table 17: Relative Importance of Various Factors in Selection of Distribution Channels for the Woodwork Sub-Sector.

Factors	Woodwork sub-sector				Average Rating
	Very Important (4)	Fairly Important (3)	Somewhat Important (2)	Not Important (1)	
(i) Middlemen availability	15	3	-	2	3.55
(ii) Middlemen requirements	18	1	1	-	3.85
(iii) Expected profit margin by Middlemen	17	1	1	1	3.7
(iv) Demand for products	13	4	2	1	3.45
(v) Type of Customer served	3	12	3	2	2.8
(vi) Customer order sizes	16	3	11	-	3.75
(vii) Location of customers	9	10	-	1	3.35
(viii) Distribution channels used by competitors.	2	3	6	9	1.9
(ix) Desired level of control of distribution operations.	6	4	3	7	2.6
(x) Financial strength of the firm.	7	5	3	4	2.65
(xi) Current economic conditions.	6	2	7	5	2.45

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Table 18: Relative Importance of Various Factors in Selection of Distribution Channels for the Leatherwork Sub-Sector.

Factors	Leatherwork sub-sector				Average Rating
	Very Important (4)	Fairly Important (3)	Somewhat Important (2)	Not Important (1)	
(i) Middlemen availability	13	4	2	1	3.45
(ii) Middlemen requirements	19	-	1	-	3.9
(iii) Expected profit margin by Middlemen	17	1	2	-	3.75
(iv) Demand for products	12	5	-	3	3.3
(v) Type of Customer served	6	8	3	3	2.85
(vi) Customer order sizes	14	5	-	1	3.6
(vi) Location of customers	10	3	7	-	3.15
(vii) Distribution channels used by competitors.	3	6	7	4	2.4
(viii) Desired level of control of distribution operations.	8	7	4	1	2.7
(ix) Financial strength of the firm.	10	2	3	5	2.85
(x) Current economic conditions.	8	4	5	3	2.85

Appendix IV

3.5.1 Description of the Chi-Square Technique Used.

In order to carry out the chi-square test, a random sample is selected from the population and observed frequencies are presented in a cross-classification contingency table. If a frequency table has got R rows and C columns it is known as R * C contingency table. The entries in this table are made in little squares in the table called the cells and the frequencies in these cells are called cell frequencies. The totals of the frequencies in each row and column are called marginal frequencies. Expected frequencies are then calculated according to the rules of probability theory namely, if two variables are statistically independent then their joint probability is the product of their individual probabilities.

$$e_{ij} = (R_i * C_j) / T$$

Where;

e_{ij} = expected frequencies for a cell that belongs to the i^{th} row and j^{th} column.

R_i = corresponding row total

C_j = corresponding column total.

T = Grand total

The test statistic is the chi-square (χ_c^2) and it compares the expected and the observed frequencies using the following formulae:

$$\chi_c^2 = \sum (O_i - e_i)^2 / e_i$$

Where

O_i = observed cell frequency.

e_i = expected cell frequency

χ^2_c Approaches / approximates a chi-square distribution with $(r-1)(c-1)$ degrees of freedom

Rule:

Given the level of significance as (α) if;

(i) $\chi^2_c > \chi^2_\alpha$ the null hypothesis of non-association is rejected.

(ii) $\chi^2_c < \chi^2_\alpha$ the null hypothesis is accepted.

3.5.2 Requirements for the Chi-square test of Association

1. The test deals with frequencies. Percentages need to be converted to counts of the number of cases in each cell.
2. The Chi-square distribution, although continuous, is used to approximate the distribution of a discrete variable. This results in the computed value being proportionately inflated if too many of the expected frequencies are small. It is therefore generally agreed that only a few cells (less than 20%) should be permitted to be less than 5, and none should have expected frequencies less than unity. Categories may need to be meaningfully combined to conform to this rule.
3. Multiple answers per respondent should not be analyzed with chi-square contingency table analysis, since the normal tabled critical values of the chi-square statistic, for a specific alpha error, no longer apply when more than one cross-tabulation analysis is conducted with the same data.

4. Each observation should be independent of the others. The chi-square test would not be appropriate, for example, for analyzing observations on the same individuals on a pretest - post test experiment.

Finally, though the chi-square test of association can be used to indicate if there is any relation between two variables, it does not give the strength of the relationship that may exist.

Appendix V: Calculation of Chi-Square Tests of Association

3.6.1 Chi-Square Calculated For the Relationship between the Type of Distribution Channel Selected and the Sub-Sector of the Firm.

The null hypothesis was stated as follows:

Ho: There is no relationship between the type of distribution channel selected and the sub-sector of the firm.

Distribution Channel	Sub-sector						Total
	Metal		Wood		Leather		
	(O)	(E)	(O)	(E)	(O)	(E)	
Direct	10	12.3	15	12.3	12	12.3	37
Indirect	10	7.7	5	7.7	8	7.7	23
Total	20		20		20		60

Cell	o_i	e_i	$o_i - e_i$	$(o_i - e_i)^2$	$(o_i - e_i)^2 / e_i$
11	10	12.3	-2.3	5.29	0.43
21	10	7.7	2.3	5.29	0.69
12	15	12.3	2.7	7.29	0.59
22	5	7.7	-2.7	7.29	0.95
13	12	12.3	-0.3	0.09	0.007
23	8	7.7	0.3	0.09	0.012
					$\chi_c^2 = 2.679$

$$\chi_{\alpha}^2 = 5.99$$

The null hypothesis was accepted at 0.05 level of significance with 2 degrees of freedom. Hence, it is concluded that, there is no relationship between the type of distribution channel selected by a firm and the sub-sector.

3.6.2 Chi-square Calculated for the Relationship between the Type of Distribution Channel Selected and the Length of Time in Business for a Firm.

The null hypothesis was stated as follows:

Ho: There is no relationship between the length of time in business and the type of distribution channel selected by a firm.

Distribution Channel selected	Length of time in business						Total
	< than 5 years		5-10 years		> than 5 years		
	(O)	(E)	(O)	(E)	(O)	(E)	
Direct	18	17.9	7	7.4	12	11.7	37
Indirect	11	11.1	5	4.6	7	7.3	23
Total	20		20		20		60

Cell	o_i	e_i	$o_i - e_i$	$(o_i - e_i)^2$	$(o_i - e_i)^2 / e_i$
11	18	17.9	0.1	0.01	0.00056
21	11	11.1	-0.1	0.01	0.0009
12	7	7.4	-0.4	0.16	0.022
22	5	4.6	0.4	0.16	0.35
13	12	11.7	0.3	0.09	0.0077
23	7	7.3	-0.3	0.09	0.012

$$\chi_c^2 = 0.393$$

$$\chi_\alpha^2 = 5.99$$

The null hypothesis was accepted at 0.05 level of significance with 2 degrees of freedom. Hence, it is concluded that, there is no relationship between the length of time in business of a firm and its choice of product distribution channels.

3.63 Chi-Square Calculated for the Relationship between the Type of Distribution Channel Selected and the Profit Margin Expected by the Middlemen.

The null hypothesis was stated as follows:

Ho: There is no relationship between the type of distribution channel selected and the profit margin expected by middlemen.

Distribution Channel	Profit Margin expected						Total
	High		Moderate		Low		
	(P)	(E)	(O)	(E)	(O)	(E)	
Direct	25	20.97	11	12.95	1	3.08	37
Indirect	9	13.03	10	8.05	4	1.92	23
Total	34		21		5		60

Cell	o_i	e_i	$o_i - e_i$	$(o_i - e_i)^2$	$(o_i - e_i)^2 / e_i$
11	25	20.97	4.03	16.24	0.774
21	9	13.03	-4.03	16.24	1.246
12	11	12.95	-1.95	3.8	0.29
22	10	8.05	1.95	3.8	0.47
13	1	3.08	-2.08	4.33	1.405
23	4	1.92	2.08	4.33	2.25

$$\chi_c^2 = 6.435$$

$$\chi_{\alpha}^2 = 5.99$$

The null hypothesis was rejected at 0.05 level of significance with 2 degrees of freedom. Hence, it is concluded that, there exists a relationship between the profit margin expected by middlemen and the type of distribution channel selected by a firm.

3.64 Chi-Square Calculated for the Relationship between the Type of Distribution Channel Selected and the Number of Products Manufactured by a Firm.

The null hypothesis was stated as follows:

Ho: There is no relationship between the type of distribution channel selected by a firm and the number of products manufactured within the firm's main product line.

Distribution Channel	Number of products								Total
	1-3		Four		Five		> 5		
	(O)	(E)	(O)	(E)	(O)	(E)	(O)	(E)	
Direct	8	9.87	6	4.93	12	11.1	11	11.1	37
Indirect	8	6.13	2	3.07	6	6.9	7	6.9	23
Total	16		8		18		18		60

Cell	o_i	e_i	$o_i - e_i$	$(o_i - e_i)^2$	$(o_i - e_i)^2 / e_i$
11	8	9.87	-1.87	3.497	0.35
21	8	6.13	1.87	3.497	0.57
12	6	4.93	1.07	1.14	0.23
22	2	3.07	-1.07	1.14	0.37
13	12	11.1	0.9	0.81	0.07
23	6	6.9	-0.9	0.81	0.12
14	11	11.1	-0.1	0.01	0.0009
24	7	6.9	0.1	0.01	0.0014
					$\chi_c^2 = 1.7123$
					$\chi_\alpha^2 = 7.82$

The null hypothesis was accepted at 0.05 level of significance with 3 degrees of freedom. Hence, it is concluded that, there is no relationship between the type of distribution channel selected by a firm and the regularity of demand for the firm's products.

3.6.5 Chi-Square Calculated for the Relationship between the Type of Distribution Channel Selected and the Regularity of Demand for the Firm's Products

The null hypothesis was stated as follows:

H₀: There is no relationship between the type of channel selected and the regularity of demand for a firm's products.

Distribution Channel	Regularity of demand						Total
	Regular		Seasonal		Irregular		
	(O)	(E)	(O)	(E)	(O)	(E)	
Direct	4	5.55	18	13.57	15	17.88	37
Indirect	5	3.45	4	8.43	14	11.1	23
Total	9		22		29		60

Cell	o_i	e_i	$o_i - e_i$	$(o_i - e_i)^2$	$(o_i - e_i)^2 / e_i$
11	4	5.55	-1.55	2.4025	0.433
21	5	3.45	1.55	2.4025	0.696
12	18	13.57	4.43	19.62	1.446
22	4	8.43	-4.43	19.62	2.33
13	15	17.88	-2.88	8.29	0.46
23	14	11.1	2.9	8.29	0.75

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$$\chi^2_c = 0.115$$

$$\chi^2_\alpha = 5.99$$

The null hypothesis was rejected at 0.05 level of significance with 2 degrees of freedom. Hence, it is concluded that, there exists a relationship between the regularity of demand for a firm's products and its choice of distribution channels.

3.6.6 Chi-Square Calculated for the Relationship between the Type of Customers Served by a Firm and its Selected Distribution Channels.

The null hypothesis was stated as follows:

Ho: There is no relationship between the type of distribution channel selected by a firm and type of customers served.

Distribution channel	Type of customer served				Total
	Individual customers		Other industries		
	(O)	(E)	(O)	(E)	
Direct	25	24.7	12	12.3	37
Indirect	15	15.3	8	7.7	23
Total	40		20		60

Cell	o_i	e_i	$o_i - e_i$	$(o_i - e_i)^2$	$(o_i - e_i)^2 / e_i$
11	25	24.7	0.3	0.09	0.0036
21	15	15.3	-0.3	0.09	0.0059
12	12	12.3	-0.3	0.09	0.0073
22	8	7.7	0.3	0.09	0.0117

$$\chi_c^2 = 0.0285$$

$$\chi_{\alpha}^2 = 3.84$$

The null hypothesis was rejected at 0.05 level of significance with 1 degree of freedom. Hence, it is concluded that, there is no relationship between the type of distribution channels selected by a firm and the type of customers served by the firm.

3.6.7 Chi-Square Calculated for the Relationship between the Type of Distribution Channel Selected and Size of Orders Made by a Firm's Customers.

The null hypothesis was stated as follows:

Ho: There is no relationship between the type of distribution channel selected by a firm and the size of orders made by its customers.

Distribution Channel	Size of customer orders						Total
	Large		Small		Very small		
	(O)	(E)	(O)	(E)	(O)	(E)	
Direct	20	15.4	16	17.89	1	3.7	37
Indirect	5	9.58	13	11.1	5	2.3	23
Total	25		29		6		60

Cell	o_i	e_i	$o_i - e_i$	$(o_i - e_i)^2$	$(o_i - e_i)^2 / e_i$
11	20	15.4	4.6	21.16	1.37
21	5	9.58	-4.6	21.16	2.21
12	16	17.89	-1.89	3.57	0.199
22	13	11.1	1.9	3.57	0.322
13	1	3.7	-2.7	7.29	1.9702
23	5	2.3	2.7	7.29	3.17

$$\chi_c^2 = 9.21$$

$$\chi_\alpha^2 = 5.99$$

The null hypothesis was rejected at 0.05 level of significance with 2 degrees of freedom. Hence, it is concluded that, there exists a relationship between the type of distribution channel selected by a firm and the size of orders made by its customer.