"KAMPALA'S SMALL-SCALE INDUSTRIES:
An Empirical Investigation of Investments in the Manufacturing Sub-Sector. "

BY

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A RESEARCH PAPER SUBMITTED TO THE DEPARMENT OF ECONOMICS IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS IN ECONOMICS
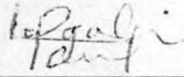
, 1993

DECLARATION

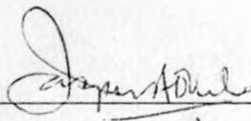This research paper is my original work and has not been presented for a degree in any other university .

Binwe Charles M.

This research paper has been submitted for examination with our approval as University Supervisors.

Dr. P. Jumi

Mr. J.A. Okelo.

DEDICATION

This paper is dedicated to my wife, Dorothy Binwe.

ACKNOWLEDGEMENTS.

ABSTRACT

This is a study on investments, in Kampala's small scale industries. The study concentrates on metal work and woodwork activities of the manufacturing scale industries. A survey questionnaire was used to collect data in Kampala area lone. Besides verbal interviews were held in liaison with relevant government organs on the financial set-up of Uganda as it relates to small scale industries. An investment determination model was developed from existing literature and the model was estimated using 2SLS. The significant variables in the general model are output, credit and training. Significant variables in the metal work activity are output, income and savings while those of the woodwork are output and credit. The financial set up in Uganda was found to be strangling and less accommodative to the small scale industry sector. The SSI was found to be the largest employer of Ugandans and capable of generating employment faster than the large scale sector. Several recommendations are prescribed which include formation of co-operatives among SSI, government involvement in the marketing of SSI products, encouraging subcontracting to large scale firms, increased training and revision of local laws to become more regulatory other than control of SSI.

Table of Contents

CHAPTER 4: DESCRIPTION OF THE SMALL MANUFACTURING SECTOR

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1.   INTRODUCTION

1.0   Background.

This section gives an overview of Uganda's political and economic scenario during the past two decades. It

also discusses the performance of the manufacturing sector in general and that of the small scale industries

in particular. The question that emerges centres on the search for investment determinant characteristics and

a strategy by which to resurrect the small scale industries sector after several decades of neglect and disorder.

Uganda has a wealth of natural resources to support agricultural and industrial production. During the 1960's,

Uganda had begun to exploit this potential. However, the situation drastically changed after the coup d'etat

in 1971 by Idi Amin. Inefficient leadership, chronic mismanagement, disrespect for the law, life and property

led to much of the economy lying in ruins. By 1980, most commercial premises were wrecked and empty.

Manufacturing plants had broken down and a few were operating at 5-20% capacity. The country had now

to depend on imports of virtually everything including simple products such as matches, hoes, shoes and a full

range of household consumer goods which used to be made locally. In terms of human resources, there was

a dramatic depletion of administrative, managerial and technical talent. Public delivery systems became too

blocked to permit the flow of goods and services for the benefit of society.The end result was a serious state

of protracted stagnation.

1 Uganda Goverment, <u>Index of Industrial production 1990/91</u>
((pp. 3-4). Goverment Printer (Kampala), May 1990

The sudden expulsion of non-citizen Asians by Amin in 1972 left the country with very few people with entrepreneurial skills to run abandoned industries and businesses. There was a total loss of power and credibility in the national currency, giving rise to galloping inflation and the birth of the parallel "Kibanda"[2] market.

It was only after January 1986 when the National Resistance Movement assumed control of government machinery that the country has experienced a period of calm, security and relative stability. The NRM government, within the framework of its Ten-Point Programme has engaged some efforts and commitment to sensitize and stimulate an up-turn in the rate of economic recovery of the key sectors namely agriculture and industry. This broad and pragmatic socio-economic programme has initiated a process of confidence restoration both by the international donor community and investors (local and foreign) in the economic future of Uganda.

The formal sequence of implementing the Ten-Point Programme started with the Rehabilitation and Development plan 1987/1990-1990/91. In this plan, the government took some bold steps in undertaking reforms, tight budgeting and cost cutting. The plan aims at checking inflation, achieving a sustainable balance of payments position, restoring production capacity in all productive sectors and rehabilitating all the economic and social infrastructure.

On the side of industrial development, the plan spells out and seeks to achieve the following

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[2] The term Kibanda (Uganda word for temporary shed) is commonly used to refer to all those economic activities that do not conform to the law.

policy objectives and goals;

1.0.1   To rehabilitate existing industries especially those producing essential goods for local consumption and construction through high levels of capacity utilization.

1.0.2   To create self sufficiency in basic consumer goods and reduce the import bill.

1.0.3   To restructure the industrial structure in a manner consistent with goals of building an independent, integrated and self-sustaining national economy[3]. What is being pursued here is the development of linkages within and among sectors of the economy.

1.0.4   To harness existing indigenous scientific and technical capability among artisans, technicians, professionals and women entrepreneurs.

1.0.5   To broaden the industrial base by establishing new industries, especially those which utilize local materials.

1.0.6   To promote the export of industrial commodities especially to the Preferential Trade Area and other African states.

1.1 The Manufacturing Sector.

Most industrial activities in Uganda are based on the processing of agro-based commodities. An industrial base of textiles, sugar, tobacco, beverages, wood and paper, cement, fertilizers and steel had come up in the sixties mainly through non-citizen Asians. Parallel to this was industries

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[3] See Uganda Government, (1986). The Ten-Point Programme, (pp 21, Government Printer, Kampala.)

by state-owned Uganda Development Corporation (UDC). The manufacturing sector has been particularly hit by economic and political upheavals of the 1970's and early 1980's.

The latest sectoral growth figures (as contained in the Background to the budget 1991/92) show that food manufacturing grew by 21.4% in 1990 to account for 6.6% of Gross Domestic Product (GDP). Miscellaneous manufacturing value added grew by 24% to account for 1.9% of GDP. According to the latest available statistics, industrial production in the year 1991/92 was, on average higher than the previous year with capacity utilization rising from around 20% to 35%[4]. This was mainly due to, mobilization of foreign funds for the sector involvement of the private sector in industrial development, attraction of and improvement in skills as well as evolving relatively favourable political weather and financial discipline.

1.2 The Small Scale Industry.

The term "small-scale industry" connotes different meanings depending on the locality and purpose for which the definition is sought. The distinction between large and small industries derives from one or a combination of variables such as quantification of investment in plant and machinery, installed capacity, nature of the industry's activities and workers in regular employment where the industry is located. Consequently, the criterion for describing the enterprise as "small" might be the number of employees, money value of sales, fixed capital investments, maximum energy requirements or various combinations of these and other factors. For purposes of this study, it is taken that a small scale industry is one which employs a maximum of ten people, whose administrative and operational management is in the hands of one or two people usually owners who make the decisions relating to operations of the industry and whose total investment in fixed assets does not exceed US dollars 100,000. Other factor which distinguish large industries from small industries include, source of finance, combination of work place with residence and limited geographical spread of one enterprise.

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[4] See Uganda Government, (1991). Background to the budget 1991/92, Government Printer (pg. 183).

In Uganda, a small scale industry is officially defined as a manufacturing concern, whether it employs factory methods or not, whose total investment in fixed assets does not exceed the equivalent of US dollars 300,000[5]. The definition embraces plant, machinery and employment and includes investment in land and buildings. However, this definition is mainly for operational convenience of policy makers and the banking sector to enable a distinction to be made between various sources of financing for industrial development. In reality today however, the majority of small scale industries in the country are artisan and cottage type. This fact has been established by this survey as will be seen in the ensuing pages.

From the foregoing, certain key questions remain unanswered, namely;

1.2.1   Why government policy statements on paper plans suggest active promotion of small scale industries and yet in practice they (small scale industries) retain a high death rate.

1.2.2   How financial resources can be mobilized for the small scale industries sector.

1.2.3   What the determinants of investments in small scale industries are, as well as their relative importance and characteristics.

1.2.4   Why policies mentioned in 1.0.1 through 1.0.6 above have not registered success in the promotion and development of Uganda's small scale industries.

1.3 The Problem.

It has been the intention of every past and present governments of Uganda to assist the development of the small scale industry sector in the country. The significant common ingredient in all policy statements has been the recognition of the need to pay special attention to the sector through specific promotional measures. However, notably absent in government policy statements thus far has been specific incentive packages, particularly of fiscal and financial nature and the general investment policy as it should affect the small scale industry

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[5] See Uganda Government, (1986) Rehabilitation and Development Plan. Government Printer, (pp 183).

sector. Generally, all policies presently applied and those recommended to the sector are aimed at increasing the sector's output and employment through initial investment, capital formation and overhead investments. Yet, there are no thorough and reliable studies on investments in the sector upon which effective policy formulation and implementation can be based. This study has filled this gap by examining and establishing the relative importance of determinants of investments in the small scale industry sector as well as their characteristics.

Despite minimal government incentive packages implementation on the sector, there has been no evaluation of these inducements on small scale industries' targets supported by empirical evidence. This study has improved this important aspect by underpinning policy statements with empirical evidence on investments in the sector.

1.4. The Objectives of this Study.

The primary objective of this study has been to examine investment determinant characteristics as they relate to Uganda's small scale industries and thus evolve an economic strategy for the promotion and development of the sector. This broad objective has been achieved through the following specific objectives;

1.4.1   Formulating and empirically estimating a model of
            investment determinants for the manufacturing sub-sector of Kampala's small scale
            industries as well as ascertaining the relative importance of each
            determinant and their characteristics individually and in relation to each other.

1.4.2   Providing information to planners and policy makers on the sectors potentialities
            and suggesting empirical evidence on investment determinant characteristics.

1.4.3   Subjectively assessed, Uganda's financial set up in relation to small scale industry
            sector and an improvement in the financial set up to favourably accommodate the
            sector.

1.4.4 Identifying common problems of small scale industries.

1.5 <u>Significance of the Study.</u>

This study provides knowledge of the factors influencing investment in small scale industries in Uganda as well as their relative importance. After examining and prioritising problems of small scale industries in Uganda, the study gives suggestions for a financial set up for the promotion and development of the sector. This information should, hopefully, enable policy makers to assess the appropriateness of the prevailing policies and effectiveness of recommended policies and to formulate constructive and appropriate new policies.

1.6 <u>Justification of the Study.</u>

The pieces of literature reviewed relevant to this study have assisted in the choice of some of

the variables used in the investment determination model. However, this study differs from

previous ones in the sense that not all variables found significant in investment determination in

the previous have been utilized. For example, interest rates, as an investment determinant

variable, was dropped in this study because of two main reasons, viz, Uganda does not have

a developed capital market which makes investment unresponsive to interest rates, and,

considering that the state is still very interested in the movement of interest rates (i.e while

market forces now have a role in the determination of interest rates, the state does not allow

them to fall outside a prescribed margin at least for some time) and that the period under study is

so short (2 years), we do expect interest rates to remain fairly constant. Further variables like

utilities (water and electricity), level of training and type of firm have been ignored in all

previous studies. This study proposed and has found out that they determine investments.

Estimates of the previous investment determination models have used single equation estimation.

By doing so, a lot information has been sacrificed for mathematical convenience. This is because

investment and other macro-economic variables are inter-linked in a complex manner and cross

effects exist across variables and equations. To be able to isolate characteristics of each of these

variables and their relationship in the general investment model, single equation estimation is

not sufficient. We have estimated a set of simultaneous equations to resolve the above problem.

Further, as noted earlier, there is paucity of data in Uganda and there is no comparable study

on investments in the country. So the success of this study will be a major landmark in the

provision of information to policy makers, academicians and other interested parties about

information on investments in the small scale industry sector in particular and the potentiality

of Uganda's industrial sector in general.

CHAPTER 2.

LITERATURE REVIEW.

2.1 Introduction.

This chapter reviews literature on the theory of investments, empirical tests in the theory of investments as well as literature on small scale industries in Uganda and other countries. At the end of this section areas of divergence between what exists and what this study intends to do to fill the information gap is given as the justification for the study.

2.2 Literature Review on Investments.

The term investment has been used in the literature, to denote; transfer of certain amounts of wealth from one ownership or employment to another; the replacement, per unit of time required to maintain the total stock of capital or to denote the non-consumption of a given amount of capital. This was the view held by most classical economists. In the macro-economic models that grew out of the experience of the 1930's, investment was looked upon as an active element determining the total amount of saving that the economy was capable of offsetting. With the recent developments on the theory of investments, net investment is defined as the time rate of change of the stock of capital. If net investment is the rate of change in the capital stock, the decision to invest depends on changes in the desired stock of that asset. Such a decision will therefore be made when the actual stock (K) differs from the desired stock (K*).

2.3   <u>Theoretical Literature on Investments.</u>

This section reviews demand for investment. In order that we do this efficiently, we shall look

at investment functions developed over years. We will review demand-for-investment functions

associated with each paradigm from the classical period to present time. The investment

functions to be reviewed include; investment functions based on Keynes period (1936) classical

investment models associated with James Hicks (1950), and other classical developments

associated with Koyck (1954) and Chenery (1952), and neoclassical investment models such as

Lucas liquidity model theory on investment (1967).

2.3.1   <u>Demand for Investment.</u>

Demand-for-investment functions analyze formal demand for investment goods. Keynes (1936),

who first called attention to the existence of an independent investment function in the economy,

observed that investment depends on the prospective marginal efficiency of capital relative to

some interest rate reflecting the opportunity cost of invested funds. He pointed out that

investment was intrinsically volatile since any rational assessment of the return on investment

was bound to be highly uncertain. Private investors would be the main driving force in

investment decisions. Keynes function was of the form:

$I = I(r)$

Investments = function (interest rate).

$Pvt = -C + R + Rt+1/(1+r) + Rt+2/(1+r)2 + \text{--------} + Rt+n/(1+r)n$

where

        C = initial cost

        R = market interest rate

        Rt+n = net value

A firm can rank its projects according to the present value criterion. At different rates of interest, firms will demand different levels of investment capital.

Keynes present value criterion had its problems. Calculating or obtaining future returns for a combination of investment goods at the present period is unrealistic. Besides, the determination of the discount rate is not easy especially in LDC's. The PV criterion discriminates against projects whose benefits accrue after a long time.

Later Keynes developed the marginal efficiency of investment (M.E.I.) for investment decisions. M.E.I was similar to the PV criterion in that they both incorporated the opportunity cost of capital concept. M.E.I was defined as that rate of interest which discounts the present value of investment to zero. When M.E.I rises, investments fall and vice versa. Keynes M.E.I approach can be written as;-

$$I = f(r,i), \ dI/dr < 0 \ \& \ dI/di < 0$$

where r = market rate of interest,

i = marginal efficiency of capital

The M.E.I criterion is in no way an improvement of the PV criterion. It still involved obtaining future returns and the present value concepts. Calculating M.E.I for a combination of investment goods is very tedious. Keynes analysis excluded determinants of investment demand variables autonomous of interest rates such as; demand for output and entrepreneurs' preferences. Besides application of models to less developed countries is highly questionable because investment decisions are not highly responsive to expected profits than to interest rates. This study appreciates the importance of interest rates in the determination of investments but will

study appreciates the importance of interest rates in the determination of investments but will not utilise them as a variable here because interest rates in Uganda do not reflect the true picture since they are state controlled and are not regularly adjusted to cater for inflationary effects.

After Keynes, the evolution of investment theory was linked to simple growth models by Hicks (1950). These models gave rise to the accelerator theory, popular in the 1950's and 1960's and widely used even today in growth exercises. The accelerator theory makes investment a linear proportion of changes in output. Its extreme simplicity explains its popularity: given an incremental capital-output ratio, it is easy to compute the investment requirements associated with a given target for output growth. In this model expectations, profitability, and capital costs play no role. The functional form of these models is:

$$K_t = bY_t$$

$$DK_t = bDY_t$$

$$K_t - K_{t-1} = b(Y-Y_{t-1})$$

$$I = bDY_t$$

where :-

K_t is capital stock at time t,

Y_t is output at time t

DK_t is desired level of capital at time t

K_{t-1} is past years level of capital

Y_{t-1} is the past year level of output

I is the level of investment

DY_t is the desired level of output.

This study will utilise output as a variable in the investment determination model. However because of the cross effects associated with output and investment we shall diverge by using simultaneous equations and not linear as in the above work so that we can be able to capture

hese cross effects.

The restrictive assumptions behind the accelerator theory led Jorgenson (1967) and Hall and

Jorgenson (1971) to formulate the neoclassical approach. In this approach the desired

(or optimal) capital stock depends on the level of output and the user cost of capital (which in

turn depends on the price of capital goods, the real interest rate, and the depreciation rate).

Lags in decision making and delivery create a gap between the current and desired capital stocks

giving rise to an investment equation that is an equation for the change in capital stock as:

$$Kt - Kt\text{-}1 = It = (I\text{-}a)(Kt - Kt\text{-}1) = a(Yt - Yt\text{-}1)$$

The foundations of this approach have been criticised on the grounds that the assumptions of

perfect competition and exogenously given output are inconsistent; that the assumption of static

expectations about future prices, output, and interest rates is inappropriate, since investment is

essentially a forward-looking process; and that the lags in delivery are introduced in an ad hoc

manner. However this flexible accelerator model is highly applicable in less developing

countries because of the fact that investments in these countries are highly responsive to changes

in output. This study will not use the adjustment, a, because it was introduced in an ad hoc

manner in the literature and does not have any economic significance.

An alternative view, associated with Tobin (1969) is that what matters is the relation between

the increase in the value of the investment due to the installation of an additional unit of capital

and its replacement cost. When the increase in the market value of the additional unit exceeds the

replacement cost, firms will want to increase their existing capital stock.

The ratio known in the literature as marginal Q, may differ from unity because of delivery lags and adjustment or installation costs. However, marginal Q is not easily measured, so what is used instead is the ratio of the market value of the entire existing capital stock to its replacement costs (the average Q ratio).

Abel (1980), Hayash (1982), however, pointed to problems in using average Q. If firms enjoy economies of scale or market power or if they can not sell all they want, marginal Q will systematically differ. Moreover, the assumption of increasing installation costs is dubious. The cost of additions to an individual firm's capital stock is likely to be proportional - or even less than proportional-to the volume of investment, because of the lumpy nature of many investment projects. More important disinvestment, if feasible, is more costly than positive investment: capital goods often are firm-specific and have a low resale value. An extreme but useful view of this asymmetry is to consider investment completely irreversible.

Lucas (1967) introduced the user's cost concept into the demand-for-investment function. He identified both external and internal costs of using capital. External costs arise from interest rates and price changes. The prices of investment goods can rise or fall with time depending on whether the external or internal costs rise or fall. Internal costs increase user's costs through depreciation and adjustment costs. Depreciation costs arise from physical deterioration of the capital goods. Adjustment costs increase as investments increase. They reduce the marginal productivity in the short- run after an increase in investments. Adjustment costs include, managerial adjustments, training costs and administrative changes.

They are an increasing function of investments.

The user costs can be written as :-

$$C = (r+s)Pi - dPi/dt \text{ or}$$

$$I = I(Y, C, P) + SK$$

where :-

I = investment

Y = output

P = price of investment goods

s = adjustment factor

k = total capital stock

sk = total value on depreciation

Apart from the inclusion of interest rates, Lucas incorporated other factors such as price of

investment goods, depreciation and output.

2.4   Empirical Literature on Investments.

Empirical tests on the demand-for-investment functions have been conducted by various scholars

on theories by Hicks, Koyck, Lucas and chenery.

J. Dale and Siebert (1963) tested the performance of four basic investment models. They derived

andestimated four main investment models using the General Motors Corporation (U.K) data for

the period 1943-63.

2.4.1   The Simple Accelerator Theory.

$It = 0.20 + 0.07(Yt - Yt-1) + 0.42(It-1 - SKt-1) + 0.19kt-1$. Investment is a function of output,

past levels of output and past levels of capital stock. Further, it is a function of differences in

output, depreciation in already acquired capital goods, and past levels capital stock. This model

is a modified version of the simple accelerator theory. Dale and Siebert added past levels of capital stock in their model which is not included in the original simple accelerator model. Investment showed a significant positive relation to both the lagged variables i.e both the desired level of capital and lagged net investment.

2.4.2   Estimations for the Liquidity Theory.

The other investment functions tested by Dale and Siebert was Tobin's liquidity theorem. Investment was considered a function of firm liquidity, present level of firm liquidity and past levels of capital stock. L, is the measure of the liquidity position of the firm and K is the level of capital stock.

$It = 0.23 + 0.30(lt - lt-1) + 0.40(lt-1 + skt-1) + 0.17kt-1$

Investment is positively related to current and lagged changes in the desired levels of capital stock and to lagged net investment. L, in this case was used as proxy for desired level of capital. We observe that the simple accelerator model performs much better than the liquidity model for time series data on the motor industry.

2.4.3 Estimations with Expected Rate of Profits as a Proxy for Desired Level of Capital.

A modified version of Tobin's "q" theory was estimated. It incorporates both interest rates and expected rate of profits. The major differences with Tobin's model is that it does not incorporate present and past levels of capital stock. Expected profits were measured by the market value (MV) of the firm. When expected profits of a firm are high, the firm is expected to have a higher market value presently.

$It = 0.28 + 0.09(Mv_t - Mv_{t-1}) + 0.06(Mv_{t-1} - M_{t-2}) + 0.15K_{t-1}$

Investment at time t is a function of changes in the firm's market value and past levels of capital stock. Market value is a proxy measuring expected rate of profits. A firm with high expected rates of profits, will have higher market value. The model lags this value over two past periods and progresses them to investments.

2.4.4   Estimates for the Neoclassical Model.

The neoclassical model incorporates the adjustment cost approach into the liquidity model. The liquidity model was a function of depreciation, interest rates, and inflationary effects on already purchased capital. Assuming that investors do not realise the effects of inflation on already purchased capital or investment, conditions for profit maximisation are, that marginal productivity of capital on capital should equal the adjustment costs. Marginal productivity of capital is given as , e.

$NC = (P_t * Y_t)/e$

Desired level of capital is hence the level of capital stock that the above conditions will hold.

$K_t^* = (Y_t * P_t)/e$

So we can use NC as our desired level of capital. The results become;

$I = 0.24 + 0.32(NC_t - NC_{t-1}) + 0.02(NC_{t-1} - NC_{t-2}) + 0.34(I_{t-1} - K_{t-2}) + 0.18k_{t-1}$

This approach with NC as a proxy for desired level of capital had the desired level of capital insignificant, whereas past levels of investment and past levels of capital was significant. Hence, investment occurred more as a result of past experiences on investments rather than due to liquidity factors and derived desired level of capital. The neoclassical approach presents a more

powerful estimate of investment functions in comparison to the liquidity and accelerator approaches determination of investment functions.

2.4.5 Other Empiricals.

Fazzari, Hubbard, and Petersen (1988a) and Hubbad (1990) tested the role of the financial structure of the firm in the Q, neoclassical, and accelerator models of investment by firm size. They found that financial effects are important for investment but also that there are differences in the sensitivity of investment to liquidity, depending on firms' policies regarding retained earnings. An important macroeconomic dimension of these findings is that, provided fluctuations in cash flow and liquidity are correlated with movements in aggregate economic activity and the business cycle, macroeconomic instability may affect investment mainly for firms that rely heavily on internal finance.

Empirical studies of investment in developing countries show that changes in output are the most important determinant of investment (see Blejer and Khan 1991 and de Melo 1990; Green and Villanueva 1992; Serven and Solimano 1991). To a certain extent this is puzzling, since a substantial amount of fluctuation in output appears to be transitory and therefore should not affect investment. And it is costly to install capital, so adjusting to transitory shocks is sub-optimal. Thus the puzzle remains largely unexplained (see Shapiro 1986), although it may be due to investors' myopic expectations or short planning horizons.

Whatever the case, the implications is that the contraction in demand induced by adjustment measures is likely to have an adverse short-run effect on investment because of its negative effect on output growth. This is apparent in the context of the Q theory of investment. Solimano (1989) shows that in Chile, aggregate investment profitability is proxycyclical so we should expect the market value of capital, and hence investment, to fall in the short-run in response to a slow down in economic activity.

2.4.2   Literature on Small Scale Industries .

The role of small enterprises in providing earning opportunities has been one of the central concerns in the recent debates on urban unemployment problems in developing countries.

The most influential force in placing urban small producers at the centre of recent development debate was the report of the ILO Kenya Mission (ILO 1972). The report's message was very clear: approximately one third of the African urban population earns its living in activities which are characterised by ease of entry, reliance on indigenous resources, family ownership of the enterprise, small scale operation, labour intensive and adapted technology, skills acquired outside the formal school system, and, unregulated and competitive markets (ibid pg 6). These activities, according to the mission, far from being stagnant and only marginally productive, form a sector of thriving economic activity which has the potential for dynamic evolutionary growth.

Bromley (1978a pg 1036) has pointed to the forces which explain the rapid acceptance of the term "small scale" in the international academic and policy prescribing framework; a number of views have traced ideological and intellectual history of the formal - informal sector

distinction and put some order into the rather confused debate. He points out:

"..by most standards the small industries of Chopur (North India) are good industrial entrepreneurs. They live frugally and save, they are highly skilled themselves or employ

skilled personnel, they are quality conscious, able to make improvements in the

techniques of their own and quick to learn from others.

As entrepreneurs, they are tenacious to an extreme. When one industrial venture fails,

their first act is to begin scrapping together savings for another.

As manufacturers, they are versatile and resourceful with a few resources at their own command. If they

cannot buy a machine they will build it themselves. If they cannot produce a technique they will improvise

one of their own. Most are sensitive to new demands and market changes as their information and their

circumstances can permit.

The small industrialists of Chopur have every earmark of the successful entrepreneur, except success. By

and large they do not prosper, when they do prosper it is not for long. The small industrialist firms of

Chopur have never grown beyond a certain point as if there was a physical barrier between the small and

medium size range impossible to cross {McCorry quoted from Staley and Morse, (1965 pg. 233)}."

The examples given by Leys (1975) imply that the urban petty producers help to keep the price of labour

power low and thus contribute to an increase in surplus value accumulation of capital in industry.

Bose (1978) in his study on the slum industries of Calcutta states that "the existence of the large houses

controlling the market ensures effectively that the small enterprise sector producers will have to hand over

their produce to the organised sector for making the goods they themselves have produced". His examples

include small family-based footwear manufacturers and small scale units in mechanical and electrical

engineering which produce at very low prices parts of complete products for large firms which sell

them at high profits. He concludes that "this relationship of what may be called exploitation between the large and small units can exist given the present socio-economic structure only when the small units can get the opportunity of offering themselves to be exploited" (ibid pg 105).

In Japan small enterprises and industrial sub-contracting have played and are still playing an important role in the economy's rapid industrialization. Watanabe (1971) stresses that what is peculiar to Japanese manufacturing is not only the great extent of sub-contracting but even more "the efficient use of small enterprises in a wide range of modern industries through sub-contracting".

Problems in access to raw materials as a bottleneck to the growth of small producers are particularly emphasised by Gerry (1974, 1978) in his work on petty production in Dakar, Senegal. He found that in shoe production the small producers had to switch from the use of leather to synthetic materials since a multinational shoe company was able to achieve a virtual monopsony in the purchase of fine (imported?) leather and had received considerable government protection. The main importer of synthetic materials then tried to "reorganise" the small producers using his own capital and marketing outlets, albeit without success.

2.5   Literature on small scale industries in Uganda.

Scanty literature exists on the small scale industries in Uganda. The little that exists results from government efforts and donors to fund surveys of small scale industries and seminar papers on

industrial development.

In 1987, Friedrich Ebert Foundation funded a survey of small scale industries in rural Uganda entitled "The status of small scale industries in rural Uganda", with the objective of assessing and eventually ascertaining the existence of small scale industries in the rural areas. The team found out that most of the small scale industries were informal and lacked legal status with regard their registration, licensing and tax clearance. This further reveals that official statistics on small scale industries based on registration and licensing must be consumed with a lot of caution.

In 1989, the United Nations Industrial Development Organisation (UNIDO) funded another survey of small scale industries in Uganda entitled "Strategy for the Development of Small Scale Industries in Uganda" with the aim of assessing the potential of small scale industries and proposing policy guidelines for augmenting the sector to provide a livelihood for Ugandans after the agricultural sector. The research concluded by advising that small scale industries should be a preserve of the private sector and that the sector should be exposed to competition early enough as measure to stimulate product quality and protect consumers.

Mathew Kibuuka, (1988), wrote a seminar paper "Financial Requirements for Uganda's Small Enterprises". He expressed concern on how small enterprises in Uganda remain starved of capital because of the structure and environment of Uganda's capital markets on one hand, and peculiar characteristics of small enterprises on the other. He recommended that Government intervention is necessary to cement the relationship between banks and small enterprises as

natural business partners.

F. Banugire, 1989, made an independent research based on the production function approach to determine technology in small scale industries in Uganda. He found out that sub-contracting, factor prices, output, capital formation and form of ownership were significant in the technology transfer process in small scale industries.

CHAPTER 3.

METHODOLOGY.

3.1   Field Survey.

This study analyses only the manufacturing subsector and within the manufacturing sub-sector, we have

concentrated our analysis on metal work and woodwork. This choice was made due to the growth

potential of manufacturing as compared to other subsectors of the industry such as repair

and maintenance. Besides, the two branches of metal work and wood work chosen are

considered to have the highest value added with a wider innovation possibility. A survey

questionnaire was used to obtain the required data (see appendix).

Kampala's small scale industry sector exists in clusters in different areas of the city, viz; Katwe,

Kibuye, Ndeeba, Nakulongo, Bakuri, Nakulabye, Kasubi, Makerere Kivulu, Makerere, Kikoni,

Wandegeya, Mulago, Kamwokya, Ntinda, Nakawa, Kibuli, Kawempe and Bwaise.

This geographical spread is mainly due to the small scale sectors' inability to gain access to

strategic areas such as the industrial area and Ntinda. Metal work and woodwork firms are found

both on the outskirts of the city and within residential areas themselves. Capital goods in the

metal work sector are mainly electricity dependent and so their location is restricted by

infrastructural factors.

For this study, samples were taken from each of the clusters mentioned above. The size of the

sample drawn from the jth stratum depended on N_j (the size of the jth stratum). That is, the larger

the size of a stratum, the bigger the size of the sample out of the 120 surveyed firms. Since we

did not have data on the current size of Kampala's manufacturing sub-sector, we used Freidrich

Ebert Foundation's (FEF) work to estimate the current size of Kampala's small scale manufacturing sub-

sector. In 1984, Friedrich Ebert foundation estimated the size of Kampala's

small scale manufacturing industries to be about 512 firms in total. We used these estimates to

project the current population of small scale industries in Kampala to be around 940 firms.

A sample size of 120 firms has been obtained from the population i.e more than 12%. Out of

our sample, a total of 18 firms were less than a year old and so were eliminated from our analysis as they

could not provide information on monthly or annual sales, besides, their

investments consisted of meagre equipment of less than Ush.50,000. We contended that a sample of 103

firms was representative of the population. Entrepreneur cooperation with the interviewer was generally

good.

3.1.1   Alternative Sources of Information.

Apart from the primary data obtained through the administration of the questionnaire, we also visited

senior officials of the following institutions to gather information related to the history

of, institutional set up concerning, and, policy issues related to small scale industries in Uganda.

3.1.11 Bank of Uganda- Mr. B.R. Twende (Sectretariat Department)

                -Mr. F.M. Odor, Research Department

                -Mrs. M. Bashaija, Development Finance Department.

3.1.12   Uganda Commercial Bank.

-Mr. M. Kibuuka, Credit Division.

3.1.13   Uganda Development Corporation.

-Mr. C. Lwanga (General Manager's office).

3.1.14   Uganda Small Scale Industries Association (USSIA).

-Mr. Hajji Mukasa, Vice chairman.

3.1.15   Department of Industry. Ministry of Industry. Commerce and Cooperatives.

-Mr. G.B. Begumisa (UNIDO, Industrial Economist Consultant).

3.1.16   Ministry of Finance and Economic Planning.

-Mr. J. Ntorantyo, (Head of Industry Section).

3.1.2 Products manufactured.

The products manufactured in metal work include metal windows, doors, welding machines, metal furniture, metal cutters, car bodies, block making machines, "sufurias", "carais" etc. Woodwork products are mainly household wooden produce. They include chairs, tables, sideboards, wall units, single and double beds, doors, windows and other general wood work products of household nature. Products are made largely from local materials using labour intensive methods of production.

3.2   Data and Data Variables.

A total of eleven variables picked from the survey questionnaire have been used in the regression model.

3.2.1 Investment (VEST) has been obtained for the years 1990 and 1991 and includes all machinery bought for use in production over the two year period.

3.2.2 Total capital stock (TSC) includes all capital acquired by the firm over the entire period. Capital that is currently out of order or for some reason, out of use in production is excluded. This is because such capital is replaceable.

3.2.3 Initial level capital refers to the value capital that the entrepreneur had when beginning the business.

3.2.4 Labour force (FOC) includes only full-time workers and those part-time workers who have worked in the firm for a least six months without breaks over their entire working period. Data on casual labour was collected and is displayed in the descriptive analysis in the next chapter.

3.2.5 Savings (SGS) cover only those savings earned from business. It is the average amount of savings an entrepreneur has willingly kept without expenditure on non-firm consumption.

3.2.6 Credit (CRD) refers to money or equipment/physical capital obtained by the entrepreneur as loan(s) from financial institutions. This research excludes interest rates in its analysis. This is because in cross-sectional data of this nature, interest rates remain constant, besides Uganda's capital market is underdeveloped which renders investments less responsive to interest rates.

3.2.7 Income (ICM) has been obtained by subtracting total costs from total revenue.

3.2.8 Output (OPT) has been obtained directly from the questionnaire valued at current market prices.

3.2.9 Capital labour ratios (CLR) has been obtained by dividing the value of total capital by the number of labourers in the firms.

3.2.10 Type of firm (TF) was introduced so as to capture the heterogeneity of the sector. The study analyses manufacturing activities of metal working and woodwork in the small scale industry sector. This is a dummy variable.

3.2.11 Utilities (UTL) is obtained directly from the questionnaire as the sum of the amount of money spent on electricity and water on average annually.

3.3   The Model.

Investment and other macroeconomic variables are inter-linked in a complex manner. We attempt to capture some of these inter-linkages using a consistent set of mathematical equations. Investment indirectly or directly affects output. When it does not affect output directly, it facilitates economic and technical efficiency thus increasing incomes of the entrepreneurs by reducing their total costs. This, however assumes that entrepreneurs are rational beings and will not invest if the investments would not result in adjustment costs exceeding the gains from investment. The entrepreneurs should therefore, have a knowledge of the investment goods they choose. Investment also increases incomes through output. This can only occur if the market for the output in question is not exhausted. It is, however, important to note that profit from a given investment on employment can also be negative or positive. Investment should definitely result in an indirect increase in employment only if the market for output is not exhausted and the firm is operating at full capacity. If the assumption of full capacity does not hold, then investment would result in factor substitution at the expense of labour.

Generally our model is specified mathematically as:-

3.3.1   VEST = VEST(ICM, OPT, CRD, SGS, TF, UTL, U_1)

3.3.2   ICM = ICM(OPT, VEST, U_2)

3.3.3   OPT = OPT(VEST, CLR, UTL, U_3)

3.3.4   FOC = FOC(VEST, OPT, CLR, U_4)

   Where;

   VEST = Investment at time t

ICM = Income of the entrepreneur net of taxes and operation expenses

OPT = Output at market prices

CRD = Credit obtained by the entrepreneur

SGS = Savings (annual)

TF = Type of firm (Dummy, O=metalworking, I= woodwork)

CLR = Capital labour ratios

TSC = Total capital stock

FOC = Number of labourers per firm

ILC = Initial level of capital

UTL = Utilities

U_i = Error term

The main equation of the model is the investment equation. Investment is a function of income, output, credit, savings, utilities and type of firm. The above function is consistent with the determinants of investments mentioned in our literature review. Some variables within the investment function are determined by investment itself, so we cannot estimate 3.3.1 as it is. Income is determined by output and investment. Output is determined by investments and capital labour ratios.

3.4   Estimation Methodology.

The model consists of four equations and four endogenous variables.

To enable us to choose an econometric model for estimation, we have

to identify each equation.

The most useful rule for purposes of identification to achieve our objective 1.4.1 above is called the order condition. It states that, if an equation is to be identified, the number of predetermined variables excluded from the equation must be greater than or equal to the number of included variables less one.

If we let G stand for the total number of endogenous variables in the model, K stands for the total number of predetermined variables in the model, g_i stands for the number of endogenous variables included in equation i, and R_i stand for the number of predetermined variables included in equation i, then identification is to be represented thus;

If $K-k_i > g_i - 1$ then equation i is over identified and if $K-k_i < g_i - 1$ then equation i, is under identified. Using the above rules renders our equations 3.3.1 through 3.3.3 over identified and would recommend two-stage-least squares (2SLS) or maximum likelihood estimators as the accepted econometric methods of estimation. Because of its convenience when using probability models, 2SLS is used in the estimation of our first three model equations. The last employment equation is estimated using ordinary least squares(OLS).

Further, a subjective assessment of Uganda's financial set-up is undertaken in relation to its interaction with the small scale industry sector. It is clear that Uganda's financial system discriminates against the small enterprise sector compared to the attention given to the large producers in as far as credit facilities, management and technical assistance are concerned

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6 Pindyck R.S and Rubinfeld D.L (1976) ; Econometric Models and Economic Forecasts Mcgraw Hill, Inc U.S.A (pg 278).

What has not been clear, however, is why this state of affairs has persisted and what can be done to overcome it. A series of verbal interviews were held with senior officials of the aforementioned (3.1.11 through 3.1.16) government organs in liaison with the Uganda National Research Council (UNRC) with' the aim of obtaining details about the status quo on the relationship between financial institutions and small scale producers. This information has been obtained and interpreted for purposes of policy formulation in chapter six on financing small scale industries.

3.5   Limitations of the Study.

3.5.1   A primary limitation of this study emanates from the fact that there is no comparable study on small scale industries in Uganda. The absence of reliable records rendered us unable to construct a population frame. Further absence of organised serial data since the early 1970's makes this study, and others to come, depend on cross-sectional data which make the findings unique to a particular period.

3.5.2   Another limitation of this study is that it does not analyse inventory investments, but assumes that physical business investments in themselves serve as representatives of investments in general.

3.5.3   The study has not incorporated non-economic factors that determine investments such as individual ability to face risk. There are also high possibilities of having omitted other macroeconomic factors due to scarcity of literature on investments on small scale industries in Uganda. This could limit the accuracy and generality of our results.

CHAPTER 4.

DESCRIPTION OF THE SMALL SCALE MANUFACTURING SECTOR.

This chapter analyses the distribution of variables and some of their salient characteristics in the small industry sector. We shall be able to systematically and meaningfully display data and provide our econometric findings with adequate statistical support.

4.1   Incomes in the small scale manufacturing sector.

Contrary to popular expectations, wages for entrepreneurs in the small scale manufacturing sector were not low. On average entrepreneur incomes in the sector were Ush.351,670 monthly. The lowest figure was Ush.43,700 and the highest was Ush.3,303,000 monthly. These incomes are high enough to encourage and attract entry into the sector. From the survey, it was noted that most of the entrepreneurs in small scale manufacturing were previously in formal sector wage employment as labourers. These incomes are definitely higher than average non-professional staff incomes and labour incomes in the large scale formal sector. For horizontal expansion to occur in this sector, there is need for entrepreneur entry into the sector. Incomes such as these should therefore be maintained and/or increased.

Table 1 Percentage Distribution of incomes for the small scale manufacturing sub-sector
by activity.

Monthly incomes Ush	Metalwork	Woodwork	Subsectorz
v 0 - 46000	6.1 %	17.0%	12%
46,000 - 184,000	33%	44.7%	40%
184,001- 460,000	48.48%	19.1%	34%
> 460,000	12.12%	19.1%	14%
Totals	97.7%	99.9%	100%

M_1 = Ush 385,365,   S.D. of M_1 = 552,000,   n = 43.

W_2 = Ush 381,363,   S.D. of W_2 = 621,000,   n = 59.

S.D.= 24,019, Max = Ush = 3,303,000, Min = Ush 43,700.

The values M_1 and W_2 represent averages of entrepreneur incomes for metal work and woodwork respectively and M represents the population mean. Max represents the maximum value of the variable and Min represents the minimum value of the variable. We used the t-statistic to test the difference between the means. We tested the null hypothesis that there is no significance difference between the two means. The difference between the means of metal work and wood work was not significant at 5% level of significance.

40% of the people in the sector had incomes between Ush 46,000 and Ush 184,000 whereas 74% had incomes between Ush 146,000 and Ush 460,000. A larger percentage of the people, therefore lay in the middle income group of the national economy. Although we cannot be sure that the small scale manufacturing sub-sector would have an equity effect on the economy, we can conclude that expansion of small scale manufacturing would improve the living standards of those joining the sector. This is based on the fact that average labour incomes estimated at Ush 32,000 per month without overtime payments are much higher than the minimum casual labourer wages presently estimated at Ush 17,000.

4.2   Savings in small scale manufacturing sub-sector.

The table below shows the distribution of savings in the small scale manufacturing sub-sector. M represents the mean value of savings in the entire manufacturing sub-sector. Average annual savings are Ush 329,000. It is important to note that these savings could be used to finance activities other than those related to the business. We shall therefore be very cautious about making conclusions on savings. 43.1% of individuals in the sample did not save. Average monthly savings including non-savers were estimated at Ush 27,500. If we exclude non-savers, average savings become Ush 48,000. This sounds reasonable compared to average monthly incomes of Ush 360,000. Theoretically, investments are financed through savings. Given that the research revealed average investments of Ush 332,500 and assuming that all savings are invested, savings would amount to Ush 658,000. This implies that those entrepreneurs who save have the potential of financing their own investments if all savings from firm businesses were strictly used to finance business investments, and firm operations, structure and form of

investments in the sector do not change. By constancy in the structure and form of investment we mean the price of capital goods in the sector do not change due to any external factors such as training, sector advertisements of capital goods etc and internal factors such as innovations accompanied by change in prices of innovated goods.

Table 2   Percentage Distribution of savings for the small scale manufacturing sub-sector by activity.

Annual Savings in Ush.	Metalwork	Woodwork	Subsector
0	34.4%	54.9%	43.1%
0 - 115,000	34.4%	17.6%	16.7%
115,001 - 690,000	25.0%	15.7%	23.5%
690,001 - 1,265,000	3.1%	3.9%	8.8%
> 1,265,000	3.1%	8.0%	7.8%
Totals	100.0%	100.0%	99.9%

$M_1 = 298,105$ S.D. $= 654,143$ n = 43

$W_2 = 331,455$ S.D. $= 609,316$ n = 59

$M = 329,000$ S.D. $= 604,026$

Max $= 3,680,000$,   Min $= 0$.

The mean annual savings for the metal work was estimated at Ush 298,080 whereas that of woodwork was estimated at Ush 331,476. We tested the null hypothesis that there is no difference between means of woodwork and metalwork. Our t statistic is given as 0.054 which gives the result that there is no significant difference in the means of the two observations.

Woodwork has a higher percentage of non-savers than metalwork. In table 4.1.1 woodwork has the largest number of entrepreneurs with incomes of less than Ush 23,000 per month. This indicates that savings could be determined by income. To increase self financed investments, there is need for policies to increase incomes in the sector. However, the puzzling and rather strange fact is that while woodwork had the highest number of non-savers, it had the highest average level of savings. This could suggest that those who can save in woodwork save large amounts of income. The other explanation, and perhaps more realistic one, is that small income generators in woodwork have their income at irregular intervals while the large income generators have a predictable level of income per given period since they are reasonably guaranteed of clientele. The high value of desired level of capital is due to the high costs of capital for this particular sector. The entrepreneurs of this sector stressed the importance of capital to improve the quality and quantity of products which has a direct effect on demand.

4.3 Capital stock in small scale manufacturing.

Table 3 **Percentage Distribution of capital in the manufacturing subsector.**

Value of capital in Ush.	Frequency % share
0 - 115,000	29.4%
115,001 - 690,000	56.8%
690,001 - 1,265,000	5.9%
> 1,265,000	17.8%
Total	99.9%

M = 528,448   S.D. = 792,281

Max = 6,325,000,   Min = 4,600

The average amount of capital in the sector is about Ush 528,500 and most of the manufacturing subsector firms have capital ranging from Ush 115,000 to Ush 690,000. The largest amount of capital was Ush 6,325,000 and the lowest was Ush 4,600. We shall now look at the distribution of capital by activity.

Table 4   <u>Percentage Distribution of capital in small scale manufacturing subsector by</u>

<u>activity.</u>

Value of Capital in Ush	Metalwork	Woodwork
0 - 23,000	3.0%	6.3%
23,001 - 230,000	15.2%	27.1%
230,001 - 460,000	39.4%	33.3%
460,001 - 690,000	21.2%	8.3%
690,001 - 920,000	3.0%	2.1%
> 920,000	18.1%	22.9%
Totals	99.9%	100.0%

M_1 = 610,098   S.D. = 514,717   n = 43

W_2 = 531,714   S.D. = 966,874   n = 59

W_2 and M_1 as defined earlier.

We tested the null hypothesis that there is no difference between capital means of woodwork and

metalwork at 5% level of significance. The value of t-statistic is 2.39 and was statistically

significant.

e5 **Percentage Distribution of investments in the small scale** manufacturing

ector.

lue of investments in Ush	Frequency
0 - 115,000	11.0%
15,001 - 690,000	29.0%
90,001 - 1,265,000	13.1%
> 1,265,000	4.9%
Total	100.0%

$M = 332,419$ S.D. $= 697,429$

Max $= 6,325,000$,   Min $= 0$, $T = 4.813$.

Mean investments in the sector stand at about Ush 332,500 and most annual firm investments lie between

Ush 57,500 and Ush 345,000. Only 6% of the entrepreneurs were able to finance investments of over Ush

621,000.

Table 6   Percentage Distribution of investments in small scale   manufacturing.

Value of Investments In Ush.	Metalwork	Woodwork
0	3.2%	11.8%
0 - 46,000	0.0%	17.6%
46,000 - 115,000	6.5%	9.8%
115,001 - 184,000	29.0%	13.7%
184,001 - 253,000	6.5%	7.8%
253,001 - 332,000	9.6%	13.7%
> 332,000	45.2%	25.5%
Totals	100.0%	99.9%

$M_1 = 371,864$ S.D. $= 325,197$ n $= 43$

$W_2 = 417,473$ S.D. $= 943,621$ n $= 59$

The average values of investment for metalwork and woodwork were Ush 3,718,800 and

Ush 417,470 respectively. We tested the null hypothesis that there is no difference between the

means in investment in metalwork and woodwork and was not significant at 5% level, but was

significant at 10% level. The largest value of investments were in woodwork. This tallies with

the result in the desired level of capital and savings where woodwork had the highest of each

values implying that the cost of capital to the woodwork small scale manufacturing subsector is

highest of all.

4.5 Capital labour ratios in the small scale manufacturing subsector.

Table 7   Percentage Distribution of capital labour ratios in the small scale manufacturing

subsector.

Capital labour ratios	Percentage
0 - 115,000	64.9%
115,001 - 207,000	20.1%
207,001 - 805,000	12.0%
805,001 - 1,265,000	2.0%
> 1,265,000	0.0%
Totals	100.0%

M = 140,346,   S.D. = 229,655,   Max = 1,453,140

Min = 2,760.

Capital labour ratios are obtained by dividing the total value of capital in a firm by the number of casual

and full-time labourers in the firm. 85% of firms in the small scale manufacturing subsector had capital

labour ratios of less than Ush 207,000.

Table 8   <u>Percentage Distribution of capital labour ratios for the small scale manufacturing</u>

<u>subsector by activity.</u>

Value of CLR In Ush.	Metalwork	Woodwork
0 - 13,800	5.7%	14.9%
13,801 - 80,500	34.3%	38.3%
80,501 - 149,500	34.3%	27.7%
149,501 - 218,500	17.1%	6.4%
> 218,500	8.6%	12.8%
Totals	100.0%	100.0%

$M_1 = 157,412,$ S.D. $= 245,456,$ $n = 43$

$W_2 = 140208,$ S.D. $= 189,727,$ $n = 59$

Max $= 1,453,140,$ Min $= 3,772.$

The most mechanised sector is the metalwork sector. 60% of entrepreneurs had capital stock greater than Ush 920,000 compared to 47% of woodwork. There was no significant difference between the branches at 5% level of significance. Differences were, however, significant at 10% level.

4.6 Output in the small scale manufacturing subsector.

Table 9 **Percentage Distribution of output for the small scale manufacturing subsector.**

Value of Output in Ush	Percentage
0 - 2,300,000	15.0%
230001 - 11,500,000	51.1%
11,500,001 - 20,700,000	17.9%
20,700,001 - 69,000,000	13.1%
> 69,000,000	2.9%
Total	100.0%

M = 14,346,112,   S.D. = 18,758,501,

Max = 111,504,000,   Min = 211,600.

Average output in the sector is about Ush 1,434,000. The highest output in the sector is

Ush 111,504,000 while the lowest is Ush 211,600.

Table 10   <u>Percentage Distribution of output in the small scale manufacturing subsector by activity.</u>

Value of Output In Ush.	Metalwork	Woodwork
0 - 115,000	3.3%	8.0%
115,001 - 115,0000	40.0%	62.0%
1,150,001 - 23,000,000	36.7%	14.0%
23,000,001 - 34,500,000	10.0%	4.0%
34,500,001 - 69,000,000	8.6%	8.0%
> 69,000,000	3.3%	4.0%
Totals	100.0%	100.0%

M_1 = 17,264,490,   S.D. = 21,075,061,   n = 43,

W_2 = 12,962,432,   S.D. = 18,960,211,   n = 59.

The above table shows output per sector. 20% of metalwork firms produced output of more than Ush 23,000,000. This is more than woodwork where only 10% had an output of more than Ush 23,000,000. The average output in metalwork was Ush 17,250,000 and that woodwork was about Ush 12,960,000. The differences between these means for mean capital labour ratio were not significant at 5% level of significance.

4.7 Employment in small scale manufacturing subsector.

Table 11   **Percentage Distribution of full-time employment for the small scale manufacturing subsector.**

Number of labourers	Percentage
1	10.8%
2 - 3	46.3%
4 - 5	33.3%
6 - 7	8.8%
8 - 10	7.9%
> 10	1.9%
Total	100.0%

M = 4.73,   S.D. = 7.64,   Max = 16,   Min = 1.

Average employment was approximately 5 persons per firm. Maximum employment reached 16 persons for one particular woodwork firm. Labour generation in the sector can be achieved both through vertical and horizontal expansion. However, horizontal expansion seems a more attractive policy tool.

Table 12 <u>Percentage Distribution of full-time employment in the small scale manufacturing</u>

<u>subsector by activity.</u>

No. of Labourers	Metalwork	Woodwork
< 2	18.2%	38.0%
2 - 4	45.5%	44.0%
5 - 7	15.2%	10.0%
8 - 10	18.0%	0.0%
> 10	3.1%	8.0%
Total	100.0%	100.0%

$M_1 = 4.6$,   S.D. $= 3.08$,   Max $= 15$,   Min $= 1$,

$W_2 = 4.8$,   S.D. $= 10.5$,   Max $= 16$,   Min $= 1$,

The difference between means was not significant at 5% level. 70% of metalwork firms engaged either 5 or 6 labourers as compared to 60% of those in woodwork. The level of disparity in woodwork employment is notable, 8% of the firms in woodwork employed more than 7 labourers with a maximum of 16 labourers, at the same time over 80% employed fewer than 4 labourers. This shows the potential of this sector in employment creation. The causes for these differences should hold the answer to achieving the difference between employment generation potential of the sector and actual employment level.

4.8 Desired level of capital in the small scale manufacturing subsector.

Table 13   Percentage Distribution of the desired level of capital in the small scale manufacturing subsector.

Value of desired level of capital in Ush	Percentage
0	12.7%
1 - 460,000	46.1%
460,001 - 920,000	29.4%
920,001 - 1,380,000	5.8%
1,380,001 - 1,840,000	1.0%
> 1,840,000	5.0%
Total	100%

M = 401,427,   S.D. = 1,218,126,   Max = 11,500,000,

Min = 0.

The average desired level of capital was about Ush 401,400. Earlier, in the review of literature, we noted that there some entrepreneurs who temporarily eke out a living and who did not fully reject wage labour (Rempel 1974). These entrepreneurs are most probably some the 13% who did not require any more capital. They are content with their income and output levels and do not consider increasing investments so as to increase output. Thus they do not desire any more investments. Such entrepreneurs exist mainly in the metalwork industries.

-49-

Table 14   Percentage Distribution of Desired level of capital in the small scale

manufacturing subsector by activity.

Value of desired level of capital in Ush	Metalwork	Woodwork
0	9.1%	10.0%
1 - 460,000	42.4%	50.0%
460,001 - 920,000	36.4%	26.0%
920,001 - 1,380,000	6.1%	6.0%
> 1,380,000	6.0%	8.0%
Total	100.0%	100.0%

M_1 = 747,063,   S.D. = 1,490,538,   Max = 8,510,000,

Min = 0,   t (stat) = 3.3,   n = 43;

W_2 = 788,233,   S.D. = 1,669,846,   Max = 11,500,000,

Min = 0,   t(stat) = 3.3,   n = 59.

The differences between means although insignificant at 5% level, were significant at 10% level.

The high percentage of firms with zero level of desired level of capital could be due to low

demand for additional capital in the sector.

4.9 Initial investments in the small scale manufacturingsubsector.

Table 15 Percentage Distribution of the amount of initial investments in the small scale manufacturing subsector.

Value of Initial investment in Ush	Percentage
0	27.5%
1 - 115,000	33.3%
115,001 - 230,000	13.7%
230,001 - 345,000	15.7%
345,001 - 460,000	3.9%
> 460,000	5.9%
Total	100.0%

M = 183,379, S.D. = 376,688, Max = 3,289,000, Min = 0.

The data in the model represent the amount of initial investments individual entrepreneurs started their businesses with. We assume the amounts of capital which entrepreneurs in the started their business with to represent the initial amounts of capital which entrepreneurs require to enter business, we can say that initial capital requirements in the sector are low. 91% required less than Ush 345,000 and 84% required less than Ush 230,000 to enter business. This does not differ much from House's finding that initial capital requirements in the sector were worth or less than Ush 230,000 as capital.

Table 16   Percentage Distribution of initial investments in the small scale manufacturing

subsector by activity.

Value of initial investment in Ush	Metalwork	Woodwork
0	18.0%	28.0%
1 - 46,000	3.2%	18.0%
46,001 - 92,000	18.0%	14.0%
92,001 - 138,000	6.1%	10.0%
138,001 - 184,000	12.1%	6.0%
184,001 - 230,000	6.1%	8.0%
> 230,000	36.4%	16.0%
Totals	99.9%	100.0%

M_1 = 216706,   S.D. = 243,364,   Max = 1,242,000,

Min = 0,   n = 43,

W_2 = 125,120,   S.D. = 166,566,   Max = 911,720,

Min = 0,   n = 59.

There was no significant difference between the mean initial investment in the sector. All in all, capital barriers for entry into the sector are and potential entrepreneurs would face any major entry problems.

4.10 Training in the small scale manufacturing subsector.

50% of the entrepreneurs were trained in the small scale sector. 90% of the entrepreneurs received their training from both the small enterprise sector and the large scale/medium scale sector. Most entrepreneurs agreed that for one to be involved in day-to-day production, one needed small sector training. It was a general contention that formal education was inadequate for the day-to-day production.

Table 17   Percentage Distribution of entrepreneur training in the small scale manufacturing subsector by activity.

Level of Training	Metalwork	Woodwork	Subsector
No. training	0.0%	2.0%	1.0%
Small scale Sector training	51.4%	38.7%	53.0%
Formal education	14.0%	24.5%	17.0%
Trade Test 3	20.0%	20.4%	18.0%
Trade Test 2	0.0%	2.1%	1.0%
Trade Test 1	5.7%	10.2%	6.0%
Higher levels	8.5%	2.1%	4.0%
Totals	100.0%	100.0%	100.0%

The interesting aspect was that most firms involved in production of capital goods require more technological input other than welding had more formal training than the rest. For example, those manufacturing machines such as metal cutters, welding machines were more trained than those involved in fabrication of products such as windows and doors. We can not test the differences between distribution in the two branches using chi square because it involves the division by probability of occurrence. Some probabilities of occurrence in our data is zero percent.

The discussion on credit to small scale entrepreneurs is carried forward to chapter 6 on the financing of small scale industries in Uganda.

CHAPTER 5: ANALYSIS

5.1   Technique of Analysis

To analyze the data collected, the TSP package, Systems Analysis was used to run our system

of equation. One major advantage of this method, compared to the manual method of analyzing

systems of equation, is its ability to regress all equations simulatenously. This enables to capture

cross casual effects between the endogenous variables apart from solving the problem of

correlation between our exogenous variables and our error terms. The choice of our

instrumental variables is based on Fisher's structurally instrumental variables. The causal effects

embodied in our model can be summarized by the figure below.

Figure 1 Linkages between Investments and other Variables.
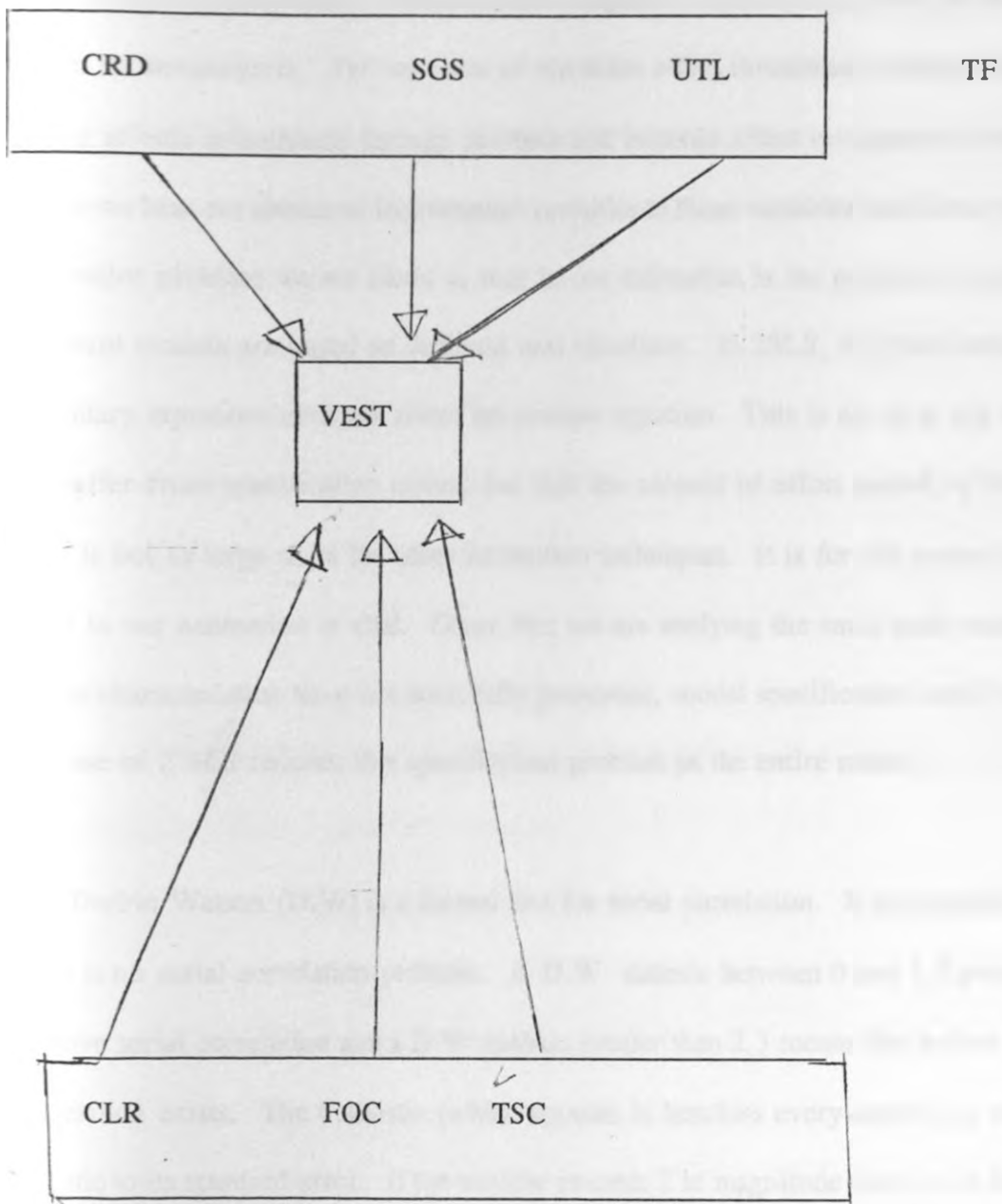
Variables above are defined in Section 3.2. The first row shows those variables which have a direct effect on investments. These are the exogenous variables that have the most close direct effects on investments. The next row of variables affect investments through output. Output affects investments through incomes and incomes affect investments through savings. Hence we bias our choice of instrumental variables to those variables that directly affect output. One major problem we are likely to face in our estimation is the problem of specification. Different models are based on different real situations. In 2SLS, the specification error in the subsidiary equations does not affect the present equation. This is not so to say that 2SLS does not suffer from specification errors, but that the amount of effort caused by the specification error is not as large as in the other estimation techniques. It is for this reason that the use of 2SLS in our estimation is vital. Given that we are studying the small scale industry sector whose characteristics have not been fully presented, model specification could be a problem. The use of 2 SLS reduces this specification problem in the entire model.

The Durbin Watson (D.W) is a formal test for serial correlation. If the statistic is around 2, there is no serial correlation problem. A D.W. statistic between 0 and 1.5 generally indicates positive serial correlation and a D.W statistic greater than 2.3 means that serious negative serial correlation exists. The t statistic (which appears in brackets everywhere) is a ratio of the statistic to its standard error. If the statistic exceeds 2 in magnitude then it is at least 95% likely that the coefficient is not zero.

The standard error of regression is a measure of the magnitude of residuals. Most of the residuals should be between 2 and -2 of the standard errors. The F statistic tests the hypothesis that all the coefficients in the regression are zero. If the F statistic is above 2.7, then the probability is at least 95% that one or more of the coefficients is non zero. The R^2 statistic measures the success of the regression in predicting the values of the dependent variable in the regression.

5.2 Equations Estimated and Results

This section presents results on all our regressions undertaken in our study. An attempt to explain the results is also done this section.

5.2.1 Estimations for the Manufacturing Sub-sector

This section gives the estimation results for the entire sub-sector. Here we limit our presentation to the t statistic and the variable coefficient.

5.2.1.1 The General Investment Equation

Table 18   The t (stat) and the coefficient of the general investment equation

Variable	Coefficient	t (stat)
ConsT	-1288.02	(-0.14)
ICM	-0.01	(-0.75)
OPT	0.014	(2.93)
CRD	0.14	(2.26)
SGS	-0.06	(0.53)
UTL	5480.47	(2.78)
TF	1385.60	(-0.37)

R^2 =0.34637, D.W = 2.0987, SE = 25279.7, F = 8.3867

The table above presents the coefficients of the investment function derived from heterogenous data collected from the manufacturing sub-sector. The F statistic is significant at 5% level implying that our model is well specified. The D.W statistic of 2.09 indicates no serial correlation. The S.E of 5 2280 is quite high but with cross sectional data, residual errors tend to be sparsed ever wider ranges. Besides with an average of Ush 3322000 worth of investments the S.E of regression of 25280 is acceptable.

The significant variables listed according to the level of significance were UTL (utilities) OPT (level of output and CRD (credit). Neither savings (SGS) nor income (ICM) were significant at the 5% level.

Credit of financial capita has a direct relationship to investments. Credit improves the firm's cash balances, making it easier for a firm to acquire investments. Therefore the significant of investments as a function of credit conforms with the general economic theory.

Output has two distinctive effects on investments. The first is the effect of output on investments through incomes. Increases in income through changes in output results in increased savings which finance further investments. On the other hand, increased output of the firm in the short run increases on entrepreneur's desired level of capital and ultimately investments, provided financial capital is sufficient. The marginal values of output and credit on investments is positive and less than one. This implies that the changes in investments is less than the total change in credit and output.

This is expected for output since the total value of output is shared between savings, entrepreneur disposable income and operating expenses. The value that goes to investment should be less than the output itself. The implication of a less than one marginal change of investments given a unit increase in credit implies that small scale entrepreneurs do not use the whole amount of credit obtained on investments has been divided into metal work and wood work sub branches. These branches are heterogenous and quite different in characteristics which include investments. It was introduced to capture the degree of heterogeneity as it relates to investments. At a 10% level of significance the marginal effect of TF on investments is Ushs. 1385 worth of investment. There were two categories of measurement i.e TF1 and TF2. The regression system regressed the variable in an ascending order. This means that total change between category 1 and 2 is UShs. 2770 on average. Definitely TF cannot be ignored and for this reason, we regress the equations directly for each type of firm. This will enable us to comment crudely on the stability of the general investment function.

Savings (SGS) are significant in the general model as a function of investments. The strange aspect about savings in this category is that the marginal effect of savings on investments is shown in the figure below. Increased investments which further increases output, income and eventually savings once again. The effect of savings on investments is therefore always expected to be positive.

Figure 2: <u>Relationship between Savings and Investments</u>

SGS --------------VEST--------------OPT----------------

DPT--------------ICM--------------SGS-----------VEST

The implication of our findings is that though savings were not significant as a determinant of investments in the small scale manufacturing sub-sector, for some of the investments financed by savings, higher savings resulted in lower investments, and greater investments in lower savings. The rate at which investments increase as savings decrease is less than the decrease in savings. This paradox can be explained by looking at the levels of savings and investments critically. Those entrepreneurs with high level of capital stock are the very ones with high savings. If this holds, we would be right to say that there exists a level of investments where the entrepreneur cannot finance investments from savings acquired in the short-run and therefore does not invest.

Small scale entrepreneurs invest with difficult so that in the short run proceeds for savings are diverted to non-business activities to reduce pressure on difficulties of living.

However, this trend is reversed in the long run. At lower levels of savings, investments increase as savings increase, but as savings increase SC^1 or the critical level of savings, investments financed from savings begin to fall. This marginal fall in investments overshadows the rise in investments caused by lower saving levels. Hence the low negative coefficient of savings on investments.

Table 19   **Relationship between Annual Savings and Investments for the Metalwork Industry**
            of the Manufacturing Sub-sector.

Level of Savings in UShs.	Average Amount of Investment
0-230,000	195500
230,001-460,000	322345
460,000-690,000	677695
690,000-920,000	447833
> 920,000	362400

Source: Own survey

The critical level of savings is that level of savings where investments financed by

savings reach a maximum and any increase in savings is not used to increase investments.

Capital stock has reached a maximum.

In the principle above underlies the basic problem of firm stagnation in Chapter 4 and suggests

that credit should be availed to the small scale industry sector. We shall however, not conclude

until we analyze the individual sectoral savings and investment behaviors. The investment

function for the manufacturing sub-sector is more of a function of output, credit and utilities.

Individual branch investment functions have to be analyzed since the above function does not

incorporate the heterogeneity of branches within the small scale industry.

5.2.1.2 The general Income Equation

The significant variable in this set of equation is only output (OPT).

Table 20   Coefficients of and the t (stat) for the general income equation

Variable	Coefficient	t (stat)
CONST	24536.9	(0.967)
OPT	0.2546	(8.98)
VEST	6.31	(0.007)

$R^2 = 0.51$, D.W = 2.26, S.E = 201753, F = 53.56

R^2 of 0.51 implies high explanatory power of the model considering that the data under investigation is cross sectional.

The F statistic is significant at the 5% level implying that our variables explain our model well. D.W of 2.26 implies no serious serial correlation problem. Output was the only significant variable. The marginal effect of a change in output on income given as 0.2546. The effect of the marginal change is less than the marginal change itself. Income is always less than the value of output. Total value of output is paid to labour, households and firms providing raw materials and firm inputs. The value of the coefficient is hence justified.

Investment was not significant at the 5% level. Investments affect income through output. Investments on output can be divided into two. It acts as an injection into technology, hence resulting in direct increases in output capacity of the firm. It also changes the production functions hence output. Capital stock affects the cost of operation, particularly if the capital requires constant change of spares and has high maintenance costs. On the other hand, capital stock determines the production function resulting in changes in capital labour ratios which determine output. Our general model does not capture these relationships so the need to regress two different sets of equation on each branch of the sector.

5.2.1.3   The Output Equation

Table 21   Coefficients and t(stat) for the general output equation.

Variables	Coefficient	t (stat)
CONST	380276	(3.39)
VEST	13.144	(4.417)
CLR	8.77	(0.527)

$R^2 = 0.224$, D.W $= 1.88$, S.E $= 725692$, F $= 14.28$

The F statistic shows that the model specification is significant at the 5% level. The explanatory power of its model is appropriate for cross sectional data. D.W of 1.88 implies no serious serial correlation problem. Modelling of the output equation proved a major problem. Attempts to reduce the standard error of regression by respecifying the model worsened the explanatory power of the model.

The most interesting finding of the output equation is that investments are a major determinant of output. We noted earlier that output also determines investments. The result is a two way process, output acts like a proxy for demand for firm produces, since production in the small scale industry sector occurs on demand. Firms increase investments so as to increase output to meet product demand. Investments act as technological progress, resulting in increases in output capacity.

5.2.2 Analysis on Metalwork Branch

The section below presents analysis and findings for the metalwork branch only. Once more we have limited our table presentations to the t (stat) and variable coefficient.

5.2.2.1   The Investment Equation for Metalwork

The table below presents results for metalwork branch.

Table 22   Investment Equation Results for the Metalwork Branch

Variable	Coefficient	t (stat)
ICM	0.026	(-1.59)
OPT	0.01	(2.60)
CRD	-0.08	(-0.82)
SGS	0.47	(2.01)
UTL	2770.9	(1.91)

$R^2 = 0.25$, S.E = 13100, F = 2.3195

The investment function in the metalwork industry differ a little from the general investment function. The significant variables in this equation are output, savings and utilities. Credit was not significant in metalwork alone. This could be because out of 11 individuals who had acquired credit in the sector, only 3 belong to the metalwork industry.

The level of investments in these firms, though high, was not necessarily higher than the well-to-do entrepreneurs in the sector. This could mean the metalwork sector does not need credit. This might not be the case, we have to look into the level of business and investments before these few entrepreneurs had acquired credit. Their capital stock could have been low.

This, however, does not explain why the credit coefficient is negative i.e that given a marginal increase in credit, investment levels fall. The nature of credit given to small scale enterprises is cash credit. The use of the credit is, therefore, at the entrepreneurs' discretion. The levels of capita and investment for each entrepreneur who received credit in its metalwork branch is shown below.

Table 23   Credit use in the Metalwork Branch (UShs)

Credit Available	level of Investment	Capital Stock	Operation Expenses	Unaccounted Value of Credit
6900000	33810	378810	NA	6487300
690000	184000	269100	184000	52900
1150000	906660	1304560	1150000	88780

Source: Own Survey

From the above table we note that choice on whether to use credit for firm development depends very much on individual entrepreneurs. It follows, therefore, that we cannot directly say that the results from our system of equations are conclusive about small scale enterprise need for credit. It is this personal discretion in the use of capital that explains why the credit coefficient is negative.

The general model does include output as a determinant of investments. Output affects investments through desired level of capital. Production in the small scale industry sector occurs on order. Output is hence a reflection of demand for products. Increased output demand can be met by increases in both labour and capital, to avoid diminishing capital productivity caused by expansion of single factors of production. In the short run, labour is increased by hiring casual labourers, whereas capital is increased by increasing capital stock. General theory also states that output affects investments through incomes and savings. The savings coefficient is positive and significant at 5% level.

Savings are hence a major determinant of investments in the small scale industry sector.

The explanatory power of the model is quite high as compared to the general equation model.

The F-statistic is significant at the 5% level.

In the above equation, the constant term does not appear. In order that TSP package be able

to pick data variables for metal work alone, we used a selection variable TF = 1 which ensures

that only variables TF = 1 be chosen. For woodwork we used TF = 2. This package (TSP),

therefore does not give the value of the constant term since the constant term is a choice variable

at the same time the constant term. The D.W statistic is also not given by this selection method.

5.2.2.1c: Income Equation for the Metalwork Branch

Table 24   Income Equation for Metalwork

Variable	Coefficient	t (stat)
OPT	-0.119	(2.15)
VEST	6.57	(2.01)
$R^2 = 0.124$,	S.E $= 871042$,	F $= 4.41$

Both variables output and investment are significant at the 5% level. The coefficient of output is negative. Investment remains a determinant of income at the 5% level. The income equation differs from the general equation in this aspect. Investments affect income through output implying that investments have a positive effect on output since the sign of the investment coefficient is positive. The F statistic implies that at least one or two of the variables in the equations explain the independent variables. We can afford to content with this low value due to the cross sectional nature of our data.

5.2.2.1d: Output Results for Metalwork

Table 25   The Output Equation for Metalwork Branch

Variable	Coefficient	t (stat)
VEST	74.38	(5.04)
CLR	-55.58	(-2.43)
$R^2 = 0.124$,	S.E = 871042,	F = 4.41

In the metalwork output equation all variables included were significant at the 5% level. The independent variables effectively explain endogenous variable at 5% level as shown by F-statistic.

Marginal changes in investments result in positive changes in output, whereas capital labour ratios negatively affect output. This could be of particular interest to us, since this is a sub-sector that seems to invest a lot in capital goods. The negative coefficient means that if capital is increased faster than labour, or capital is increased and labour is constant, then output declines. This implies that increases in capital result in diminishing productivity. On the other hand, increased labour without an increase in capital or with a less than proportional change in capital results in an increase in output. This conforms with normal micro theory. The t statistic is hence a one tail test to the left. This implies we are testing the probability of an increase in labour constant capital, or increases in labour with a less than a proportionate change in capital

with result in increase in output as capital-labour ratio fall. Our t statistic is -2.4, implying that at a certain low level of capital labour ratios, output will not increase. Here again the marginal productivity of labour shall become negative. Output can, therefore, be increased by increasing capital in the short run, only if this increase in capital is accompanied by a more than proportionate change in labour. Increasing labour alone will increase output a certain level above which any changes in labour will reduce output. Indiscriminate increases in capital will result in diminishing output. This can be explained through maintenance costs and diminishing capital productivity. We therefore take note of this observation.

5.2.3 Equations for Woodwork

5.2.3a: Investment Function for Woodwork

Table 26 **Results for the Woodwork Investment Function**

Variables	Coefficient	t (stat)
INC	-0.14	(-0.49)
OUT	0.07	(6.25)
CRED	0.21	(2.59)
SAV	0.21	(1.33)
TRAN	533.94	(0.288)
$R^2 = 0.63$	S.E = 25978	F = 19.303

The woodwork investment function from the general investment function and the metalwork investment function. The significant variables are output and credit.

Output was significant in both the general function and in the metalwork equation. The strong significance of the relation between output and investments is expected. Output affects investments by determining desired level of capital and incomes, hence increasing savings through which investments are financed.

Savings in the model, although not significant at 5% were significant at 10% level of significance. This could be attributed to the high prices of machines required in the sector. We did not collect data on prices of capital goods in this sector, but did attempt to collect data on DCAP, the desired level of capital.

Unlike machines in the other sub divisions of our study, the investments in this sector were fairly expensive. The desired level of capital reflects the price of machines required in the sector. The average desired level of capital was higher for the woodwork industry than in the other branches in the small scale industry sector. The maximum level of DCAP valued at present year prices was 500,000 shs. Entrepreneurs either had the small amount of capital just necessary to undertake business, or they had acquired large amounts of investments over time hence they had large capital stocks. It is the latter group of individuals who invested using savings and credit or savings alone. Only a few entrepreneurs could afford the costs of investments. As savings increased, investments increased only to a certain level, that is to the level of investments where savings could no longer finance the cost of investment goods. This is supported by the positive savings coefficient. Above this point, savings are no longer a determinant of investments. It is this effect that makes savings insignificant. The wide diversity between the two lumps of data is refracted in capital variable. The high costs of capital in this sector justifies the importance of credit, which was significant in our model.

This result is not due to model mispecification, as our F value is significant at 95% level. The explanatory power of our model is totally acceptable, particularly given that it is cross sectional data.

5.2.3b: The Income Equation for Woodwork

Table 27 The Income Equation for the Woodwork Branch

Variable	Coefficient	t (stat)
OUT	0.53	(13.21)
INV	-5.63	(5.05)
$R^2 = 0.76$	S.E = 161171.9	F = 156.75

The significant variables in this model includes investments and output. All variables included are significant at 95% level of significance. Output was significant in the woodwork output equation and in the general output equation.

The in vestments affect income through output. We shall see in the next equation the effect of investments on output. The marginal effects of investments on income is negative from our results. Gross income is divided into savings and entrepreneur disposable income. Investments can therefore, have a negative effect on savings through this concept. This implies the effect of investments on income through this concept.

This implies the effect of investments on income through savings is greater than the effect of investments on income through output. Savings are used to finance investments as noted in the above investment model.

The total value of output is divided into savings, entrepreneur disposable income, and operation expenses. Savings and disposable income are conflicting uses of the total value of output. Operating expenses cannot be considered competitive of total value of output since it is not to the entrepreneurs choice as to whether to keep aside finance for operations as in the case for savings and disposable income.

This competitive use between savings and entrepreneur disposable income causes the negative marginal effect of investment on income. The analysis above does not in any way contradict the savings coefficient obtained in our woodwork investment model, since the value of output is not a constant. The variations in the value of output result in high variations in income. Large amounts of income mean higher disposable income, thus savings and income cease be become competitive uses. At very low incomes, savings are almost nonexistent, and investments can only be financed by credit if available. The causality between investments and savings has not captured these two situations, i.e at high levels of incomes and at very low income levels. The incomes savings relation, on the other hand, does capture this relation.

A low levels of income, savings are hence low, at higher levels of income, savings are much higher in absolute terms.

The most significant variable is output. This argument holds both in theory and practice. The marginal effect of change in output on income, is given as 0.530. That means that a marginal change in output causes less that a unitary change in incomes. Value of output as we have already stated is divided into operating expenses, savings and income.

Hence a change in output should result in less change than the change in output.

The explanatory of the equation by R^2 is quite high, about 80%. At 5% significant level the explanatory variables effectively explain the independent variable.

5.2.3c: The Output Equation for Woodwork

Table 28 The Woodwork Output Equation

Variables	Coefficient	t (stat)
INV	18.99	(5.826)
KLR	-48.99	(-1.89)
$R^2 = 0.22$	S.E= 741073	F = 6.817

The woodwork output equation differs from the general output equations. In the general output equation, only investment was significant and capital labour ratios were significant. Investment was significant in all the three equations. Both variables were significant at 5% level for the woodwork section. The F statistic is significant at 95% level of significance given proper model specification. The explanatory power of our model was about 0.22, o.e relatively low but given that it is cross sectional data we should be content with this. At 5% level of significance the explanatory variables effectively explain output.

Investments affect output by either changing the firms production functions or by acting as technological injection. On the other hand klr's also affects output. As labour increases given that capita is held constant, or capita is increased at a lesser rate than the increase in labour in the firm results in increases in output. This only applies up to a certain level of labour increases. Any increase in labour above this point result in diminishing marginal productivity

of labour until labour begins to decrease instead of increasing.

5.2.4: Effects of Investments on Labour

To capture the effects of investments on labour we have to first regress the labour equation and analyze the causa effects.

Table 29   Results for the Labour General Model

Variable	Coefficient	t (stat)
CONST	0.939	(1.895)
INV	0.0002	(5.8511)
OUT	$1.6*10^{-5}$	(-1.841)
R^2 =0.76 D.W = 1.88 S.E = 3.72 F (stat)=109.3		

Investment is significant at 5% level as a level a variable affecting labour in the entire manufacturing sub-sector, but the marginal effect of investments on labour is quite low. The above model analyzes the entire manufacturing sub-sector. We noted in the previous chapters that the general blacksmith had little need for capital stock. It is this branch's results that dampens the effect of investments and capital on labour. All the other variables were significant in the investment function. We mentioned that output acts a s proxy for demand for investments. It hence follows that as demand for informal sector output. We have to look at

individual branches in the manufacturing sector to conclude effectively on investment effects on labour.

5.2.4a:The Effect of Investment on Labour for the Metalwork Branch

Table 30: Labour Equation Results for the Metalwork Branch

Variables	Coefficient	t (stat)
INV	$-6.18*10^{-5}$	(-1.94)
OUT	$3.2*10^{-6}$	(8.64)
CAP	$6.92*10^{-5}$	(3.38)
$R^2 = 0.68$	S.E= 1.79	F (stat) =32.56

All variables were significant at 5% level of significance. The low coefficients imply, for any increments in labour in individual firms to occur, large changes in investments output and capital stock have to occur. To make a metal work firm employ one more person, output has to be increased by 312,500 shs. by value. To achieve this level of output investments have to increased 16,181 shs. This value does not differ from the required change in capital stock. The implication of these results is that in the short run it is only through horizontal expansion that the sector can increase employment in the metal work sector. Our model specification is acceptable given the value of our F statistic.

CHAPTER 6

FINANCING SMALL SCALE INDUSTRIES IN UGANDA.

6.1   Introduction

In an attempt to achieve our objective 1.4.3 above, we conducted verbal interviews with senior officials of institutions mentioned in 3.1.11 through 3.1.16 above. We strongly believe that financing of small scale industries in Uganda is at the core of any strategy aimed at the promotion and development of small scale industries. The interviews so held have enabled us to expose and analyse the status quo of Uganda's financial set up in relation to Uganda's small scale industries as well as evolving a financial strategy aimed at revitalising the sector (SSI) and rendering the financial set up more accommodative to the small scale industries. All this information is contained in this chapter.

Capital is a critical factor in the promotion and development of small scale industries. Not withstanding this apparent fact, financing of SSIs in Uganda has been fraught with problems for many years now. For the majority of cases SSIs have virtually had no access to institutional credit for reasons discussed later. This is absurd because lack of credit hampers progress in the SSI sub-sector which is pivotal in the creation of employment, the development of indigenous entrepreneurship and the support small scale industries can give to even larger industries by way of linkages.

There appears to be an unhealthy rift between banks and small scale industries who would otherwise be partners in business. In countries like post war Germany, India and Bangladesh where small scale industries are well developed, the problem of capital is obliterated by a cohesive and congenial partnership between banks and small scale industries. Given that experience, three strategic questions around which this chapter is developed emerge. First is the question of how can the marriage between these two antagonistic 'partners' be arranged and executed for the benefit of both?. Secondly, what can small scale industries do by themselves to become more attractive to banks?. And thirdly, what intervention by Government and NGO's is necessary to stimulate and reinforce the marriage?. The chapter recognises that short of the marriage, efforts to make capital and institutional credit available to small scale industries will continue hitting a moving target.

6.2 Problems and issues suggestive of a need for a strategy and which this chapter specifically deals with include;-

(i) Political and strategic aims of financing small scale industries;

(ii) the business environment in which financial institutions and small scale industries operate in Uganda;

(iii) the structure, strength and weaknesses of the financial system in mobilising capital for financing small scale industries;

(iv) and finally the strategy itself for financing small scale industries in Uganda.

6.2.1 <u>Political economic and strategic aims of financing small scale industries.</u>

The informal sector in Uganda is the majority. Being the majority, participants in this sector have an overwhelming influence on the pace and tempo of growth and development in Uganda. It is axiomatic therefore that the strategy for economic development must necessarily anchor its focus on specific target groups in the lead sector. Briefly stated, the aims of the focus include; include purchasing power, and increased opportunity to convert local raw materials into finished goods using simple skills and inexpensive technology. Specifically stated, strategic aims of financing small scale industries are;-

(a) <u>To distribute productive wealth and consequently economic power</u> and increase the participation of the masses in productiv activities.

(b) <u>To encourage saving and induce the mass of small scale</u> entrepreneurs to add to the future stock of capital. When an artisan is availed credit to buy a hammer, an anvil, a drill or any other productive tool, he is enabled to invest. When the same artisan repays a loan, he is saving in retrospect. If the poor are assisted to understand and actually get committed to the obligation to repay the loan, a firm basis for savings capital formation is founded.

(c) <u>To shorten or obliterate the capital vacuum</u> and interval between saving and investment. Strategically, credit is a facility which enables an entity to engage in an activity which out of equity or savings would not be undertaken at that particular point of time. So making institutional finance available to small scale industries would accelerate the pace of investment and capital formation.

(d) **To promote the banking habit:** if artisans and small scale industries in general become aware of the possibility of shortening the period of accumulating little savings to buy the desired item, their savings could easily find their way in a bank. People are induced to keep their money in a bank when they perceive a need and benefit for doing so. Because of the assurance of a loan people receive an inducement to keep their savings in a bank either as loan repayments or as deposits. For artisans whose income is relatively small, idle cash or accumulations to purchase a lump item like a generator or a power saw may extend to several years of saving. Economic development is accelerated by income shifts from those who hoard or save to those who lend or actively engaged in the productive sector. Credit frees such resources and increases the fund destined for maintaining productive hands and the development of capital markets badly needed to finance small scale industries.

(e) To increase the productivity of small scale industries through a better mix of productive factors. Producing more and better is not a question of working long hours but rather increasing the mix between labour, capital and technology. Without credit facilities, few small scale industries especially artisans can afford to purchase production and quality increasing technology.

To confront and banish inflation; What inflation really hits is investment especially in low yielding and long lived projects characteristic of industry. As a tax at national level, inflation curtails saving and investment. Artisans and small scale industries can never save at a rate faster than inflation to purchase yield increasing plant machinery. Their efforts to acquire technology keep hitting a moving target.

However credit enables small scale industries to catch up with rapidly changing commodity prices and if the inputs purchased are yield increasing the chances are that the returns on investment will be positive and would attract more investment in productive enterprises on subsequent rounds and increase the quantum of goods and services in the market. The miracle with production oriented credit is that every loan disbursed and repaid brings on the market additional goods unlike commercial credit and the value attached to production income is anti-inflation in substance. Production income is normally attended with and derived from sweat and hard work. It is therefore real money which in most cases is spent wisely and rationally which is a sine-qua-non for banishing inflation.

Reading these strategic aims for providing credit to small scale industries one is tempted to blame banks in Uganda for not responding positively to the needs and financial requirements of small scale industries. What really prevents banks from taking on small scale industries as natural business partners?. The fundamental problem here seems to derive from the environment in which banks and small scale industries operate and the peculiar characteristics of small scale industry operators. To appreciate the cause of the repulsive forces and antagonism between these two unwilling partners one has to examine carefully the structure and environment of capital markets in Uganda.

6.2.2 **The structure and environment of capital markets in Uganda.**

In Uganda, the banking/financial system consists of the Central Bank, Commercial Banks, Development Banks, the Cooperative Bank, Credit Institutions, Insurance companies and the Post Office Savings Bank.

The Central Bank is the bankers' bank and its main function is to issue and regulate currency in the economy. It shoulders the responsibility of ensuring the development of banking including enforcement of banking legislation in the country so as to provide the environment and systems for the emergency and growth of capital markets.

Commercial banks are licensed to provide banking facilities to the public. By and large, these are the single holders of financial resources, albeit of a short term nature and cannot therefore be used for medium and long term financing. Nevertheless, commercial banks have a "core" of resources which could be used for long term lending.

This is the proportion commercial bank resources that could be harnessed and redirected into financing medium and long term productive enterprise. There are nine commercial banks in Uganda; Uganda Commercial Bank (UCB), Barclays Bank of Uganda Limited, The Cooperative Bank Limited, Grindlays Bank of Uganda, Gold Trust Bank, Libyan Arab Uganda Bank, Bank of Baroda, Standard Bank Limited and the Nile Bank.

Development Banks include the East African Development Bank and the Uganda Development Bank. These mobilize off-shore funds for on lending and to long term projects in Agriculture, Industry and Infrastructure. They tend to go in for large or bulk lending which is inaccessible to small scale industry entrepreneurs.

The Cooperative Bank is a farmers' Bank owned by the Cooperative movement. However, the events of the 70's forced ti to drift into commercial banking and as of December 1986, the structure of the bank had turned basically commercial as over 80% of the accounts belonged to individual and commercial entities so was the bank's direction of lending.

Credit institutions are licensed to mobilize term deposits to finance specific investments such as building, industry, hire purchase, and specialized mercantile business. These include; Housing Finance Company of Uganda, Uganda Bank Ltd., Grindlays International, Standard Chartered Finance, Diamond Trust of Uganda Limited, Development Finance Company of Uganda, Sembule Investments, The Centenary Rural Development Trust Limited and People's Trust Bank (Rukungiri) Ltd. To this group we add building societies which include, Premier, Equator and Continental Building Societies.

Insurance companies are licensed to deal in claims and mobilize long term resources in form of premiums which could be harnessed for long term development financing. However, inflation has had its toll on this source of capital. Nevertheless, insurers still play an important role in mortgage and long term finance.

It is from these financial institutions that all sectors in the economy including government, compete for credit. Most of these institutions are based in Kampala. Rural banking to a limited extent is covered by UCB with a net work of some 200 branches and the Cooperative Bank Limited with 16 branches. In the main, capital markets in Uganda are dominated by commercial banks. Being repositories of short term funds, commercial banks do not make available a large part of their funds to medium and long term lending. They serve as providers of short term credit to their customers in commerce and trade.

Credit availability is complicated by the limited extent of financial intermediation in Uganda where nearly 50% of the money supply is in peoples' hands. Mobilization of a large volume of currency by banks would substantially improve their liquidity base and growth in industrial output. However, as of June 1988, deposits in the banking system stood at about Ush 9.6 billion. This deposit base is a pittance when compared with credit needs in the economy estimated at Ush 30 billion for one round of financing in all sectors (imports, exports, produce buying, processing, commerce and trade etc.). Put simply, loanable funds in Uganda are too limited to finance more attractive sectors and have anything left for industrial credit.

That therefore, is the structure of financial markets and the environment in which they operate. The section which immediately follows deals with the exposure of banks in the financing of small scale industries.

6.2.3 Availability of institutional credit to small scale industries in Uganda.

Between 1981-1985, lending to industry represented 14-23% of total bank advances and it has since declined due to worsening liquidity position of banks.

Lending to industry consists largely of administered funds from International donor and lending agencies namely IDA, The African Development Bank, EEC, USAID and OPEC. These grants and lines of credit have been extended to UCB, UDB and Cooperative Bank. In the Cooperative Bank, administered funds have largely been used for developmental projects e.g. coffee and cotton rehabilitation projects which include the construction of a few new coffee factories and the rehabilitation of 22 coffee factories. The balance of the ADB line of credit has been used to construct three new cotton ginneries and the rehabilitation of eight old ones.

The Uganda Commercial Bank (UCB) has been handling two IDA lines of credit. The Agricultural Rehabilitation Project (ARP) of US $ 70 million is for rehabilitation, and is geared toward the resuscitation of the export sector through improved supply of imported agricultural inputs and implements over a three year period. Under the IDA small scale industry project credit line of US $ 5.0 million, the bank has selected a number of industrial units. Projects identified include edible oil processing, feed/grain milling, brick and tile making, timber treatment, food processing and furniture making. The profile of borrowers as per UCB records shows that small scale industries especially artisan and cottage as earlier defined have had no access to the IDA line of credit of US $ 7 million administered by UCB.

The UCB also appointed as the executing agency for the implementation of an EEC line of credit worth 4.3 ECU for financing the development of small scale and medium size enterprises in agriculture and industry. As on 30th June, 1988, sixteen small "Small Scale Industry" projects had been financed with the average loan of U.K. £ 12,391.

For the **Uganda Development Bank (UDB)** as of 1986 disbursements to industrial projects constituted 22% of their total lending. Most of this went to large scale industries. Currently UDB has been offered an OPEC line of credit for small scale industries. How this facility will reach small scale industries is under serious discussion within the bank and ministry of Finance and Industry.

Under the circumstances, small scale industry operators take resources to non-institutional sources of finance namely:-

(a) Use of own capital

The majority of small scale industry tend to depend on their own capital to start their enterprises usually acquired through inheritance or borrowing from relatives and friends.

(b) Commodity Credit

This form of credit is prevalent in Uganda. Large wholesalers or importers supply commodities to small and medium enterprises on credit. This credit is normally given to very trustworthy operators and they rarely default because penalties tend to be severe and permanent. Nevertheless, such credit is beneficial to the wholesaler. With most of the banks interested in financing only large enterprises, the commodity credit system is therefore, very popular but expensive to the recipient.

(c)   Investment of Profits.

Most of the small and medium enterprises live humbly and in so doing increase their savings which are re-invested in the expansion of their business. This is most the small scale industries in Uganda have developed.

(d) Borrowing from Private Money Lenders.

Because of the high inflation in the country and the cash transaction business, private money lending activities have increased. Small and medium enterprises rely on them. The interest rates charged are high but the small and medium enterprises do everything possible to recoup them from the sale of their products.

One obvious from the foregoing is that generally small scale industries in Uganda are starved of capital. In the sections that follow, a discussion of why small scale industry doesn't have access to institutionalize credit is attempted.

6.3   Barriers to the availability of institutional credit to small scale industries.

Barriers that restrict credit availability to small scale industries could be categorized as financial, physical, psychological and technological.

6.3.1 Financial barriers.

Financial barriers include; shortage of lendable funds, lack of collateral security, high interest rates, and relatively high administrative costs coupled with high risks attendant to small scale

industry projects. Credit is unavailable to small scale industries because of lack of lendable funds on one hand and the paucity of capital markets to mobilize savings as earlier explained.

Because small scale industries lack collateral security, banks do not lend for fear of assuming more than normal risks with depositors' funds. Although security is not always a sufficient rationale for granting a loan, banks use it is a conservation measure so as not to disappoint the expectations and trust of the providers of their funds. A loan is considered a gift until it is repaid. This serves to remind bankers that once money has been disbursed, it is beyond the bank's control unless proper measures are taken to safeguard the bank's interest before hand and avoid "shutting the door after the horse has bolted".

Commercial banks are primarily trustees of depositors funds and as such, they must organise their operations in a way to make it possible to meet the demands of their depositors as and when called upon to do so. Banks must exercise adequate discretion in the conduct of business so that their commitments to borrowers do not impair their obligations to depositors as no depositor would like to be told that his money was lent to someone else without ensuring that he can repay. Depositors would even be more annoyed when the bank tells them that their money was lent out but could not get it back.

For banks to carry out the lending function in the interest of their business and the economy, they operate within a set of principles and laws centred around the four 'C' namely; character, capacity, capital and collateral.

These combine to restrict availability of credit to small scale industries who in the majority of cases are unbanked, so their <u>character is difficult</u> to assure; they operate near to subsistence margin which implies low capital and no <u>mortgageable assets</u>; they have low educational attainments which express in low <u>capacity</u> to benefit from credit facilities provided unless credit is attended with an advisory component system normally weak or lacking altogether in Uganda.

High interest rates which derive from inflation impose a further restriction on availability of credit. Interest, which is the cost of capital has two main functions. It rations out into uses with highest net productivities societies existing scarce supply of capital and in the long run, it induces people to sacrifice current consumption to add to the stock of capital. Consequently, without a fall in interest rates, low yielding, long lived projects characteristic of small scale industries cannot be undertaken or attractive to banks unless offset by yield increasing technological innovations. The most important problems in Uganda which has a direct bearing on interest rates and capital flows between sectors is inflation. Inflation creates particular credit problems. Savings tend to evaporate so do sources of lendable funds. As of May 1987, the rate of inflation was estimated at 200% p.a. With that run-away inflation almost all savings in financial instruments drift away from industry where comparable rates or return on capital are considerably lower than in commerce and trade. Very few industrial projects can pick up this rate of inflation to generate positive returns on investment. It would therefore not make sense to make credit available for small scale industry investments. To attract funds, small scale industries should be able and willing to pay competitive rates of interest on capital.

At first glance, it seems fair to charge lower interest rates to the poor small scale industry at prevailing market rates of 38-40%. Experience, however, shows that this does not work well. One of the reasons is that loanable funds tend to go to commerce and trade because of their higher rates of return in a relatively short time. Secondly, artificially low interest rates are not conducive to either efficient use of capital or to institutional viability. Concessional interest rates shift credit away from industry in general and small scale industries in particular. They encourage relatively unproductive activity and reduce income opportunities for the poor. Such rates often result in demand for credit which far exceeds available funds. Concessional rates also delay or prevent the build-up of reserves by the credit institution and when coupled with inflation, decapitalise the bank to the point of being forced to close its doors.

Given attendant risks in small scale industry lending and extended gestation periods for industrial products, the bank may be over-exposed due to the risks associated with small scale production. Because of these factors, it is essential that the interest charge to small scale industries includes a premium to offset probable losses. The argument is that the yields on capital invested in small scale industry projects should involve in addition to par interest corresponding to positive profit and that the premium should be conceived as a cost to be covered by the project financed. Consequently, interest rates in small scale industry credit should be at a level which can effectively sieve projects to determine which of the many investment proposals represent the best use of available credit funds at any one time. This calls for high productivity of small scale industry resources (capital machinery and labour) which can be brought about by a well conceived and pragmatic service system presently unavailable in Uganda. To attract credit, small scale industries must be specially assisted to generate higher returns on investment.

This makes it the more necessary for the government to seek foreign lines of credit with lower interest rates for on-lending to SSIs.

The cost of administering credit by banks imposes a further restriction to the availability of credit to small scale industries. Industrial credit unlike commercial credit requires expertise and specialist staff to appraise loan requests and monitor credit use and recovery. Four main factors preclude credit availability to small scale industries. The cost of engaging specialist staff, the scattered nature of worthy borrowers, the smallness of the loans and extended loan terms. All these combine to increase the cost of loan administration. It is worthy noting that actual costs in lending are based on the unit rather than the amount. That is, a small loan takes just as much investigation and administration as a big one. A small loan the size of those applied for by small scale industries cannot recoup the costs to the bank. Further, small scale industry loans a re usually short-medium term, repayable after one or two years and can therefore not generate adequate interest income to recover the costs involved. Consequently, loan proposals for small scale industries are unattractive to banks and this fact restricts drastically credit availability as there is not no cost-reducing credit delivery systems in Uganda for small scale industries.

6.3.2 Physical barriers.

These relate to branch network, operating hours and borrower ratios. Resources available to banks are usually such that they have branches only in urban and sub-urban areas. Thus, many small scale industries and artisans in remote rural areas have to travel long distances if they wish to secure loans. Their plight is exacerbated by the fact that these institutions are only open at

certain times. This restrictive to artisans who have to live their activities undone on the days they go searching for loans. When many consider this and the possibility of not being able to secure any funds despite all the trouble, they decide not to bother.

Tedious credit procedures intimidating loan processes involving long hours of agonizing waiting in the credit office, travelling long distances to initiate a transaction, following up applications closely to obtain action and delays in loan approval discourage borrowing by small scale industries. This tortuous scenario derives from two or three inadequacies. First is the cash economy as a result of which everybody goes to the bank to encash financial instruments. Infrastructural limitations particularly lack of modern accounting machines at sub-urban or rural branches sets in motion other delays. Frauds constitute another nightmare for bankers. So, even though the astute banker is alert to his responsibilities to offer prompt services to his customers so that no long queues evolve in the banking hall, this zeal must be tempered with reality so that the attempt to quicken the process in favour of customers does not turn out to be yet another fraud facilitated. Every additional security by banks to plug loop holes and forestal fraudulent attempts imposes further delays in processing documents which often evokes the displeasure of customers.

6.3.3 Psychological barriers.

Cognitive barriers relate to deficiencies in functional literacy and numeracy among small scale industry borrowers as expressed by the lack of capacity in credit need assessment, unfamiliarity in book keeping techniques and cash flow projections all of which expedite access to institutional

credit. Securing loans usually require filling in and signing various documents, things many small scale industries and artisans cannot do.

Psychological Barriers arise from a sense of inferiority complex among small scale industries in general and women in particular. The relatively inferior position small scale industries feel in themselves renders them insecure with little confidence in themselves. As long as the situation requires the bare-footed artisan to go to the bank rather than the bank to the small scale industry's gate to negotiate a loan facility the social distance between the white collar necktied bank staff and the sorry bare-footed artisan precludes a meaningful dialogue which precedes a loan agreement.

6.3.4 Technological barriers.

Access to credit by small scale industries is facilitated by a readily available and affordable yield increasing technology. For some two decades now, the generation and importation of appropriate technology for small scale industries has been disappointingly low in Uganda. As a consequence, small scale industries have assumed a low energy, low technology character incapable of yielding a return commensurate with market interest rates. There has also been a dramatic decline of the quantity and intensity of support services to assist small scale industries in making the best use of technology otherwise unfamiliar to them.

In a period of inflation and less predictable commodity prices, small scale industries need innovations that relax constraints which relate to country and environment. Unfortunately, small

scale industries in Uganda have had to go about their operations without technological innovations for some time now.

6.4 Main weaknesses of the financial system and small scale industry entrepreneurs.

From the foregoing analysis fundamental causes of the misconceptions and antagonism between banks and small scale industries begin to unravel so do the weaknesses and peculiar problems of both parties regarding their respective access to deposit resources and credit.

It is this peculiarities and conflict which the strategy for the promotion of small scale industries must address and reconcile. Main weaknesses are;-

(a) Dominance of capital markets by commercial banks;

This weakness is expressed in short-term lending with a focus on trade and commerce.

(b) Urban concentration of banking which limits access of rural based small scale industries especially artisan and cottage industries to bank services. Those rural small scale industries which attempt to seek credit from the nearest branch usually 30-50 miles away find it rather costly.

(c) Liquidity squeeze into banks which is attended with shortage of development finance and working capital.

(d) Lack of appropriate or specialised credit institutions to serve the credit needs of small scale industries such as Industrial Development Banks, Mortgage banks, Credit Guarantee Associations etc.

(e) <u>Strict lending policies of banks</u> not tailored to needs and circumstances of small scale industries such as the requirement for feasibility studies, cash flow statements, credit history, equity, collateral and book keeping practice.

(f) <u>Lack of capacity in banks to reach-out</u> and appraise small scale industry project proposals.

(g) <u>Inadequate financial policy support</u> to induce banks to provide financial services to small scale industries.

(h) <u>Run-away inflation</u> which erodes savings, equity and pushes up interest rates.

(i) <u>Limitations on part of small scale industry entrepreneurs</u> especially low functional literacy, low managerial and financial experience, low capability to mobilise capital.

(j) <u>Limited availability and access to foreign exchange</u> by small scale industries for machinery and raw materials.

(k) <u>Failure on the part of small scale industries to organise themselves</u> into self-help and pressure groups to mobilize savings and work closely with banks to secure loans.

From these weaknesses, it is apparent that the strategy to make institutional credit available to small scale industries should spell out the roles of each small scale industry, functionary namely banks, small scale industry entrepreneurs, Government and NGOs in solving the problem. For each functionary to identify its roles it is useful to state in broad terms what needs to be done.

6.5   <u>Measures to increase availability of credit to small scale industry.</u>

To solve the problem of small scale industry credit, at least four measures are needed. The first requires putting in place an integrated and self-sustaining capital market system capable of harnessing and redirecting financial resources from the public and the banking system towards

financing small scale industry production. This involves conceiving a system that has access to dependable sources of funds for small scale industry credit. Such a system needs to be firmly connected to the national grid of resource flows the broad domestic money market.

Having put that system in place, the next measure or strategy should deepen and extend the banking habit to the wider public so as to accelerate deposit mobilization. The third measure has to do with conceiving and putting in place a pragmatic, small scale industry centred and cost-effective credit delivery system. The fourth measure calls for integrating credit with supporting services system.

Instituting Capital Market System.

As noted earlier, Uganda has a production credit problem because of lack of funds on one hand and lack of an appropriate delivery system on the other. It has been shown that the entire banking system in Uganda holds About Ug.Shs. 9.6 billion of which about 70 % is of a short-term nature and can therefore, not be lent out to medium and long- term small scale industry projects. It is estimated that production credit in Uganda for one round of financing requires some Ug. Shs. 20 billion. Using the cost of production methodology, and assuming that there are one million small scale industries each requiring working capital of Ug. Shs. 30,000 per year, the total capital involved comes to Ug. Shs. 30 billion. It is further assumed that 50% of the production cost consists of implicit costs or equity, then the credit demand level for small scale industry production in Uganda comes to Shs. 15 billion which exceeds the deposits level in the entire banking system.

It was also noted earlier that in Uganda, the money market is the commercial banking sector which has to provide most of the funds needed for credit. Because commercial bank resources are of a short term nature, an appropriate capital market system should be instituted to convert short term resources of commercial banks into long term resources. Commercial banks individually control a relatively small percentage of financial resources of a long term nature represented by the 'core'. A close analysis of commercial banks portfolios and resources indicates that there tends to be core ranging between 10-40% which in effect is idle for varied periods and which could be redirected into long term investment in agriculture and industry. A properly conceived and structured financial institution which commands the confidence and trust of commercial banks if it specialized in small scale industry credit could attract and use commercial banks' long term funds represented by the "idle core" in a joint venture for the development of small scale industries in Uganda.

Industry requires long term capital and specialized lending techniques. It is for this reason that in Europe and India sectors requiring long term lending are attended to by specialized corporations of clearers (commercial banks) often in a consortium manner and often with the participation of the central bank. The trend in the UK is for clearing banks to invest their core funds in specialized subsidiaries which develop the necessary capability to attend to such Investment Ventures.

For example in UK there was established the Agricultural Mortgage Corporation (AMC) whose initial capital was subscribed by the Bank of England and the clearers as time went on most of its funds were derived from public issues.

The AMC provides long-term financing to farmers for periods up to 60 years. There is also the Industrial and Commercial Finance Corporation (ICFC) formed by large clearing banks together with the bank of England specifically for small and medium size companies for periods not exceeding 25 years. The ICFC also administers the Technical Development Capital Limited (TDC). The TDC funds originally were provided by insurance, merchant banks and commercial banks to finance specialised agencies along the Uganda Development Corporation (UDC) of the 60s. As a support and back-up institution, there is the Agricultural Credit Corporation (ACC) which provides guarantees for overdrafts to farmers who cannot provide adequate security. In India, the Reserve Bank initiated similar institutions which started as departments of the Reserve Bank and as time went on, they became separate self-sustaining entities. These include the Agricultural Refinance Corporation of India now a big and viable corporation.

In Uganda a start has been made by the Bank of Uganda (Central Bank) to initiate similar institutions and systems that can harness and convert short-term resources of commercial banks into long term ones for financing productive enterprise. By the 1986 amendment to the Bank of Uganda Act (1966), the Department of Development finance was established in the bank to create and administer the Refinance and Credit Guarantee Schemes. The Development Finance Fund (DFF) of the Bank of Uganda is derived from short term resources of commercial banks and redirected in turn to long term lending to productive enterprise. This could well be the beginning of a refinance corporation of Uganda. However, the size of the fund is limited and it is dependent on the capacity of commercial banks are required to invest into the fund (DFF) 5% of their deposits.

The other problem associated with the DFF relates to utilization. As of now, there is no specialized institution to utilize the funds as they flow in. Most commercial banks' lending does not qualify or engender their access to the DFF as it is mostly in trade and commerce.

Acceleration Deposit Mobilization.

To increase availability of capital for small scale industry lending, there needs to be a deliberate crusade to mobilize savings and create a domestic capacity to finance small scale industries. As mentioned earlier, most of the money is in people's hands. Certainly, this hoards capital needed to support productive activities in the economy.

By 1980, there were 74 bank branches of which 29 were around the Southern region where the capital city is located. Each branch catered for an average of about 170,000 people. Obviously, the distribution of bank branches is skewed and reflects a very serious imbalance in the growth of banking in Uganda.

Many rural areas are unbanked and quite a few are not banked at all.

Reasons for the slow growth of banking in Uganda include;- the underdeveloped state of social overhead capital namely; a functional road network; trading centres, police posts and dependable police cadres; lack of education and trust in the banking system by the saving public; lack of appropriate service mix to attract savings; and lack of an appropriate package enforcement of laws which define and strengthen the code of conduct by savers, borrowers and bankers.

Because social overhead capital is lacking in rural areas and yet the banking sector frontier tends to move in rhythm with their development, cash balances by rural savers remain unbanked. Bankers and savers need police protection to minimize attendant risks in the movement of money from one station to another. The proximity of currency centres of the Central Bank to commercial bank branches guarantees a smooth flow of banking business. Consequently, installation of social overhead capital precedes the development of banking and it is imperative that government causes this to happen as it is beyond an individual bank or entrepreneur to undertake.

On the service mix, it should be noted that institutionalization of deposits in a developing country is service elastic. Convenience to the depositor is a key variable. Things like distance from branch, low minimum balance requirements, speed in clearing transactions and beneficial linkages to depositors count immensely. The banking system in Uganda appears not to be service sensitive and has not yet made appropriate headways in this direction.

6.5   Strategic roles of functionaries in financing small scale industries.

Global roles and measures to be undertaken in solving the financing problem are;

(a) Establishing specialised or appropriate credit institutions for small scale industries with appropriate branch network.

(b) Establishing special funds for the promotion and financing of small scale industries such as venture capital, seed/sunk capital, revolving grants, and refinance funds including forex budgets

and foreign lines of credit for on-lending to small scale industries.

(c) Establishing and strengthening credit support schemes especially the Credit Guarantee Scheme.

(d) Rationalise and simplifying credit requirements and procedures.

(e) Rationalising staff and training in banks in light of small scale industry project requirements.

(f) Adopting cost-effective and cost-reducing lending procedures such as group lending, clustering small scale industries and disbursing credit in kind as far as possible.

(g) Strengthening support services to small scale industries such as institutional infrastructure including input supply, marketing, training, training, research and technology development and legislation.

(h) Strengthening international economic cooperation for technical assistance to small scale industries through grants, counter-trade, foreign exchange, foreign lines of credit guarantee.

6.6   Strengthening role of small scale industries.

Perhaps the most important aspect in the strategy of banishing financial constraints that have bedeviled small scale industries in Uganda rests with what small scale industry can do by themselves to impress upon other functionaries their readiness and capacity to benefit from whatever assistance others may provide. Specific roles of small scale industries should include;

(a) Formation of Savings and Credit societies including credit guarantee associations. If small scale industries are to increase their access to credit, this role is fundamental and should not be compromised. Self-help projects of the poor did wonders in post-war Germany, the Republic of

Korea, Bangladesh, India and in Zimbabwe. In those countries, mutual financing programmes make enterprises of the poor self financing. Those countries adopted the strategy of grass root savings and credit movements. Small informal savings groups are organised with ties to formal financial institutions. One of the most successful programmes is the savings movement in Zimbabwe where the savings and credit system is linked to a well defined technical package tailored to the requirements of the savers for which the larger part of the savings are used. By 1982, the Savings Development Movement of Zimbabwe had 140,000 members in 5,500 clubs with assets of U$ 6 million in savings deposits in different banks and real estate finance institutions. With its successful growth wave, the movement is now establishing its own formal people's Development Bank.

Another success story is the Mutual Financing Programme (MFP) in the Republic of Korea started in 1969 by grass roots informal mutual assistance groups in which savings and loans in kind were made by wives who contributed a cup rice a day to a central deposit. By 1982, MFP savings deposits constituted 5.1% of the total deposits in all financial institutions in Korea. From 1974, MFP operations were characterised by excess deposits over loans. The MFP has subsequently become a major source of funds of the Korean Government for the purchase of agricultural produce. Thus, instead of government financing farmers, the reverse has become true in the case of the MFP;

There is yet another success case by the Grameen Bank Movement of Bangladesh where the bank found a new and independent way to reach poorer target groups and motivate them to help

themselves. Programmes such as the Grameen Bank, the MFP in Korea, and the Savings Development Movement in Zimbabwe can help in making small scale industries more self-financing, more productive, with a more equitable distribution of income through the generation of local funds tied to an effective credit system. The success of the above schemes is largely explained by provision of appropriate facilities, advice and incentives which create a climate and a pattern of regular savings among the enormous population of the rural 'poor'.

Self-help savings projects of the poor can do wonders in generating funds to finance development. Formation of the savings movement through grass root groups and associations is a fundamental strategy which should not be compromised. It will have to involve a lot of political mobilization. The strategy lies in all DAs being set targets to have grass root people's savings groups formed at all RC 1 levels in the country with linkages to the nearest formal banking institution. The DAs need to be educated, challenged, and set targets in mobilising idle money through mutual benefit clubs with or without the cooperative movement.

Incentives to support the people's savings movement shall have to include credit matched with the level of savings mobilized by the people themselves. Competitions and prizes among RCs would further strengthen the movement.

Mutual benefit programmes by the poor make disadvantaged target groups attractive to banks, the Government and NGOs. They help put in place appropriate cos-effective capital markets, establish special funds, strengthen credit support schemes, simplify credit procedures, attract

support services and train the poor in problem-solving skills and practices.

(b) Form special interest groups to coordinate problem solving experiences, put pressure on Government and NGOs for specialised assistance that would otherwise be inaccessible outside a group setting.

(c) Initiate and sustain contact with Government and NGOs as a means of communicating felt needs of small scale industry special target groups and secure the desired assistance such as infrastructure, training, foreign lines of credit and required guarantees.

(d) Organise exhibits and fairs to draw public attention and awareness about activities and products of small scale industries.

6.7   Strategic roles of government.

Roles of government in solving financing problems of small scale industries should include;

(a)   Sensitizing small scale industry target groups to form associations and self help organizations.

(b)   Provide incentives to small scale industry entrepreneurs for forming groups. Incentives may include provision of matching funds for capitalizing self-help groups; extending services where groups have been formed etc.

(c)   Support existing financial institutions to extend credit to small scale industries or put in place new and specialised institutions. It is very important on the part of government to put in place enabling legislation providing incentives to induce banks to simplify procedures. Government should promote the "lead" bank idea at the national levels.

Government should strengthen the capital base of the designated bank in proportion to what the bank and small scale industries themselves can do in that direction.

(d) Provide venture capital (risk, or seed capital) by legislation in support of a long term programme to promote and develop the small scale industry sub-sector.

(e) Promote the setting up or strengthening of credit guarantee and refinance funds and scheme for small scale industries such as the ones presently in Bank of Uganda.

(f) Institute the support training programmes for financial institutions.

(g) Provide infrastructure and social overhead capital especially in rural areas including rural road network, police, postage, telephone, electricity, water, research and technology development for small scale industry projects and programmes.

(h) Review and strengthen banking legislation especially directed at strengthening supervisory and promotional roles of Bank of Uganda.

(i) Secure foreign lines of credit and grants to finance small scale industry programmes.

(j) Promote export trade of small scale industry products and through the Central Tender Board Government should purchase small scale industry products and improve the income and repayment capacity of small scale industry borrowers.

(K) Provide a political climate for NGOs to open offices in the country.

(l) Improve the law on joint venture and foreign investment.

6.7 Strategic roles of financial institutions.

Strategic roles of financial institutions should include;

(a) Putting in place an innovative service mix compatible with the savings and credit behaviour of small scale industry entrepreneurs.

(b) Introduce innovations that can mobilise "pigmy" deposits of small scale industry functionaries.

(c) Mount publicity and educational programmes on bank services in relation to small scale industry savings and credit requirements.

(d) Extend the branch network and make operational days and hours compatible with the circumstances of small scale industry entrepreneurs.

(e) Rationalise staffing and training in light of small scale industry project requirements.

(f) Provide project appraisal department for specialised services to small scale industry entrepreneurs.

(g) Simplify credit procedures and link them to small scale industry self-help thrift and pressure groups.

(h) Provide advisory and monitoring services to small scale industry borrowers.

(i) Cause government and NGOs to provide appropriate legislation, venture capital, foreign lines of credit and guarantees.

CHAPTER SEVEN

CONCLUSIONS AND POLICY RECOMMENDATIONS.

In this chapter, we summarise factors determining investments in the SSI manufacturing subsector, then give the effect of investments on output, incomes, and labour in the subsector. Lastly, we give various policy recommendations for the sector.

7.1 The Investment Function

We estimated two different sets of equations for each branch of the manufacturing subsector. Our investment functions for each branch differed.

Table 7.1.1;[7] Comparison of significant variables per branch in the SSI manufacturing

subsector.

EQUATION SIGNIFICANT VARIABLES AT 5% LEVEL

	Tran	Crd	Opt	Icm	Sgs
1) General	*	*	*		
2) Metalwork	*		*	*	*
3) Woodwork		*	*	*	

Output was the only variable that was significant in each of the investment equations. There was no variable that appeared in any one of the equations without appearing in the other equation.

---

[7] tran; represents training, crd; credit, opt; output, icm; income, sgs; savings

The change in the investment function over the entire set of equations was minimal.From this crude method of deductions, we can say that the investment function shows an element of stability, we can state categorically that no one investment function holds for the entire manufacturing subsector. For each branch in the manufacturing subsector we had to estimate a separate investment function.

7.2 Effects of investments on macroeconomic variables.

This section summarises the effect of investment on output, incomes and labour in the SSI manufacturing subsector.

7.2.1 Effects of investments on output

Table 7.2.2   The coefficients and t-statistic of investment in each branch of the SSI manufacturing subsector.

Equation	Coefficient	t-stat
General	13.14	(4.41)
Metalwork	74.38	(5.04)
Woodwork	18.99	(5.83)

The investment variable is a major determinant of the output function. The marginal effects of investment on output are positive.It is hence compatible with the theory fact that investments have a positive effect on output (Jorgenson, 1974)

7.2.2 Effects of investments on income.

Table 7.2.3   The coefficients and t-statistics of investments on incomes for each branch for the manufacturing subsector.

Equation	Coefficient	t-stat
General	0.005	(0.007)
Metalwork	6.57	(2.0)
Woodwork	-5.63	(-5.25)

Investment is not significant at the 5% level as a determinant of income in the general equation. Entrepreneur incomes in the woodwork industry are significant but negatively related to investment. Increases in investment increases the value of output which increases growth incomes in the sector.

Investments on the other hand also reduces net disposable income, through increases in the of income kept as savings. The negative sign of investment implies that in the woodwork sector, the amount of disposable income kept as savings exceeds the increase in income caused by increases in output. Investment in the woodwork sector increases gross incomes but the marginal values accruing to maintenance of capital, labour, operating costs and savings are higher than those accruing to net disposable incomes. Though investments were not significant in the general equation their marginal effects are not positive. It is only in the woodwork industry that net disposable incomes.

7.2.3 Effects of investments on labour

Table 7.2.4 **The coefficients and t-statistic for investments** in the labour equations for each branch in the manufacturing subsector.

Equation	Coefficient	t-stat
General	0.0002	(5.85)
Metalwork	-6.18^*10^5	(1.94)
Woodwork	0.0003	(4.19)

Investments were a significant determinant of labour in each of the branches. The effect of investment on labour, though significant, were very low. Large amounts of investments are required to cause substantial increases in employment. On average to create an extra unit of employment in the sector, Ush 105,200 worth of investment is required.

7.3 Policy Recommendations

The manufacturing subsector activities are the most visible in the SSI sector. There are several macro and micro economic variables that affect the SSI manufacturing subsector. Policy makers can manipulate only some of these variables through fiscal, monetary and structural policies. Our study concentrated on investments in the SSI sector. To achieve increased output and consequently increased GDP, investments in the manufacturing subsector have to be increased.

Our research findings stress the importance of investments on output for each of the branches. In fact investments had significant effects on output in the two branches. Most investments in the woodwork branch were achieved through savings.

The role of credit was not very high for the metalwork branch.

There were only three individuals in the woodwork branch who had received loans for their businesses. This small number could be the cause of the inability of our regression equations to capture the need for investment in our model. Field experience showed that the success of the woodwork industry depended very much on the quality of the firms products.

The financing of investments remains an unsolved issue. Policy makers can recommend investments in the sector to be financed through personal savings or credit. Of the two types of savings i.e forced and voluntary savings, policy makers can only encourage entrepreneurs to increase savings. Though incomes in the sector can be estimated, receipts of payments are received sporadically. The special packages on savings to be provided by the sector need to incorporate this concept. Cooperatives like banks with special emphasis on SSI should be established. Credit is the other means of financing investments. Presently, there are a few institutions considering providing loans to the SSI sector.

Firms in the SSI manufacturing sector employ an average of five people per firm. Increasing employment in the woodwork and metal work branches requires increases in both labour and capital assuming that there are no limitations to demand of firm output.

Because this is not the case, there is need for a two sided policy incorporating both the increases

in product demand and encouraging continued use of labour intensive methods of production. Increasing domestic demand for output can be achieved through large scale advertisement at the macro level since individual firms can not afford these advertisement costs. Investments and the use of labour intensive production are not necessarily contradictory approaches. Firms can be made to invest in capital embodying labour intensive techniques. An example ia a wood-cutter and a saw. A saw requires more human hours of work input at the same time engages an individual at a time. The cutter requires fewer man hours and at the same time engages one worker at a time. The cutter therefore, does not reduce labour per se but, on the contrary, increases work productivity and reduces excess capacity. Factor substitution occurs more effectively where labour specialisation exists.

Production specialisation in the SSI sector is minimal in individual firms. It is unlikely therefore that firms in the sector would effectively implement factor substitution. Factor substitution would only be possible if investments in the sector are geared towards automated goods that undertake all stages of production in the firm with little labour.Investments in the sector should be geared towards labour intensive capital. A good example of labour intensive embodied capital versus capital intensive embodied capital is small steel rolling plant versus brick built iron blast furnace. Shifting investments from capital intensive to labour intensive goods can be done through pricing policies. The policy makers should therefore identify SSI capital goods that embody the use of more labour than others and institute subsidies for this products. Such a policy will not only have effects on labour but will improve individual entrepreneur to increase investments financed by savings. This policy shall have the added advantage of increasing marginal productivity of

labour as labour employment per firm increases plus the saving of foreign exchange at the macro level as firms will now depend less on imported capital goods.

Labour incomes average Ush 30,000 per month. These incomes are not much different from the large scale sector's unskilled labour incomes. They are, however, low for skilled labourers in the large scale sector. Entrepreneur incomes on the other hand are adequate to attract entry into the sector.

Introduction of taxation on entrepreneur incomes will reduce the attractiveness of the sector to entrepreneur. The high unemployment rate coupled with few formal training institutions ensures a large reservoir of manpower for the SSI sector. This has repressive effect on labour wages in the sector. Entrepreneur incomes average Ush 300,000 monthly for the combined SSI manufacturing subsector. Successful entrepreneurs in the SSI sector formally register their firms, shift location and join the large scale sector. What should worry policy makers is hence not SSI sector incomes but the stagnation possibilities of the firms in the sector. A study by Jobs and skills in Africa (JASPA, 1981) showed that most SSI sector firms grow to a certain level after which growth ceases.

The average life expectancy of firms was estimated at 79 months. The firms then die or operate in that low form without any aggressiveness in production for the rest of the period. It is this stagnation noted in these firms that should be the concern of policy makers. Stagnation could be due to inability to increase and improve quality of output through investments and lack of aggressive marketing and managerial skills.

7.4   Conclusions.

The above mentioned policy recommendations can be summarised as:-

7.4.1.   Provision of credit to finance investments in the sector.

7.4.2.   Soliciting of savings through extension services.

7.4.3.   Improved institutions initiated the SSI sector itself such cooperatives to increase

savings, provide credit and train personnel.

7.4.4.   Improved marketing of SSI sector products through increased publicity and

government aided trade exhibitions.

7.4.5.   Review of Local Government Laws, Factories Act and other laws that affect the

sector to change the role of law from being destructive to being more regulatory

accommodative and protective.

These policies should expand the sector's output, potential, labour generation capacity and widen

the local technological shelf by identifying and safeguarding SSI sector innovations.

The benefits of increased entrepreneurship will be spread to other sectors of the economy.

SSI sector development will result in the widening of our local industrial base hence reducing

reliance on the agricultural sector.

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the compilation of this proposal:

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CHARACTERISTICS OF SMALL SCALE INDUSTRIES IN UGANDA.

	MODERN (VISIBLE) S.S.I	TRADITIONAL/COTTAGE/INFORMAL S.S.I
1. LEGAL STRUCTURE	Registered, sole proprietor/ partnership	Not Registered
2. ORGANISATIONAL STRUCTURE	Owner managed. Few hired managers	One person units
3. ACTIVITIES	Processing, Manufacturing & Services	Manufacturing, Handcrafts & Services
4. PRODUCTS/SERVICES	Consumer goods, intermediate goods and services	a) Metalworks Window and door frames, gates, burglar bars, metal boxes, dust bins, saucepans, kettles, stoves, spoons. b) Woodworking Chairs, tables, beds, sofasets, joinery, construction, fittings.
5. REQUIRED KNOWLEDGE AND ATTITUDES	Acquired skills by being trained or employed	Acquired
6. LOCATION	Mainly urban, very few in rural areas	
7. PREMISES	Mostly rented, few owned by individual entrepreneurs, (better buildings for protection of expensive machinery and equipment equipment	Under the hot sun
8. EQUIPMENTS	Modern and power driven	Simple hand tools
	Imported not properly maintained. Face problems in choice of technology. Lack of knowledge about existing technology	Lack of proper tools and equipments
9. MARKETS		Lack of market information and exploited by middlemen. Negative consumer attitudes to locally made goods.
10. SOURCE OF EQUITY	Limited sources. Undependable and no access to credit	Scarce start up capital

11. TURN OVER	Limited due to lack of raw material and funds
12. FINANCIAL EXPERINCE	Inadequate book-keeping and financial analysis
13. REVENUE	Restricted
14. CREDIT NEEDS	
15. ATTITUDES TOWARDS FINANCIAL INSTITUTIONS	
16. CONTACT WITH GOVERNMENT BODIES	Red tape and bureaucracy
17. SELF HELP ORGANISATIONS	No attempt by traders and customers to appreciate each others problems. Organizational problems and lack of commitment. Low level of education and training and re-training.
20. STRATEGIC THINKING	Lack of knowledge of consultancy and high costs
21. RAW MATERIALS	Imported. Inputs a constraint when forex not available

2090X*p2180X   2360X
No financial analysis

Lack of access to credits. Cost of borrowing excessive

Inadequate. Negative and one way.

No organized pressure groups or economic units

Lack of awareness and personal limitations

Inconsistent. Not regular, expensive.

PROBLEMS OF SMALL SCALE INDUSTRIES.

	MODERN (VISIBLE) S.S.I	TRADITIONAL/INFORMAL/COTTAGE S.S.I
1. LEGAL STRUCTURE	Cost of legalising an enterprise to a limited liability company is too high relative to capital base	Lack of recognition by the government and other agencies
2. ORGANISATIONAL STRUCTURE	Limited management capacity, lack of know how. Lack of qualified personnel	Lack of both managerial and technical skills
3. ACTIVITIES	Not based on proper market analysis	
4. PRODUCTS/SERVICES	No supply and demand - analysis	
5. LABOUR	High labour turn-over because of wages, poor training and re-training	
6. REQUIRED KNOWLEDGE AND ATTITUDE		
7. LOCATION	Concentrated in urban areas	
8. PREMISES	Costly, inappropriate for type of industry and activity. Premises are also scarce	Lack of suitable premises, if they have, they are expensive to rent. Lack of water & electricity
9. MARKETS	Local. Mostly consumed in urban	Immediate surroundings (low income) areas.
10. SOURCE OF EQUITY	Deposits from customers/personal savings	Family savings and friends
11. FINANCIAL EXPERIENCE	Some banking experiences with	Trial and error. No bank account. bank accounts
12. TURN-OVER	Medium/high demand potential	Very low. Customer tailored.
13. REVENUE	Moderate and Reinvestible	Immediate needs of owner and family no savings

14. CREDIT NEEDS	Comprehensive (fixed and variable capital)
15. ATTITUDES TOWARDS FINANCIAL INSTITUTIONS	Tedious, expensive and frustrating
16. CONTACT WITH GOVERNMENT BODIES	Suspicious and cautious
17. SELF HELP ORGANIZATIONS	Generally members of USSIA & Chamber of Commerce and Industry
18. STRATEGIC THINKING	Limited - Short term
19. COMMITMENT TO STRUGGLE FOR SUCCESS.	Committed and aggressive

Small amounts with minimal delays
(easy terms)

Lack of awareness, sceptical
 (fearful)

Still limited. RCs extension
services

Very limited

Short term - Work for survival

No alternative. Highly committed.

The table below show the covariance matrices for the equations estimated in our model.

Table 3a; Covariance Matrix for the general Investment Equation.

C(1),C(1)	80,211,654	C(1),C(2)	0.92
C(1),C(3)	-6.062	C(1),C(4)	81.91
C(1),C(5)	0.717	C(1),(6)	-9406587
C(1),C(7)	-28,236,311	C(2),C(2)	0.00021
C(2),C(3)	-4.30D-05	C(2),C(4)	-6.83D-05
C(2),C(5)	-0.000686	C(2),C(6)	-3.275
C(2),C(7)	2.736	C(3),C(3)	2.18D-05
C(3),C(4)	-7.43D-05	C(3),C(5)	-0.0001
C(3),C(6)	-0.1197	C(3),C(7)	-0.0284
C(4),C(4)	0.00404	C(4),C(5)	-0.0014
C(4),C(6)	-28.545	C(4),C(7)	3.404
C(5),C(5)	0.013	C(5),C(6)	-7.04
C(5),C(7)	-50.68	C(6),C(6)	3,886,751
C(6),C(7)	1,496,361	C(7),C(7)	13,669,383

C(1) represents the constant term in each of the investment equations below.
C(2) represents the coefficient of income
C(3) represents the coefficient of output
C(4) represents the coefficient of credit
C(5) represents the coefficient of credit
C(6) represents the coefficient of training
C(7) represents the coefficient of type of firm

The above coefficient tags holds for each of the investment functions below.

Table 3b; Covariance for the General Income Equation.

C(20),C(20)	6.43D+08	C(20),C(21)	-338.54
C(20),C(22)	-2244.05	C(21),C(21)	0.000803
C(21),C(21)	-0.01124	C(22),C(22)	0.640399

C(20) represents the constant term in all the income equations.
C(21) represents the output coefficient
C(22) represents the investment coefficient
The above symbols hold for each income equation estimated.

Table 3c; Covariance Matrix for the General Output Equation.

C(30),C(30)	1.26D+10	C(30),C(31)	-1,296,946
C(30),C(32)	35621.84	C(31),C(32)	276.0005
C(31),C(32)	-26.804	C(32),C(32)	8.853

C(30) represents the constant term in each of the output equations estimated.
C(31) represents investment coefficient in each output equation.
C(32) represents the capital labour ratios coefficient in each output equation.
The above coefficient symbols holds for each output equation.

Table 3d; Covariance Matrix for the Metalwork Investment Equation.

C(2),C(2)	0.00086	C(2),C(3)	-0.000303
C(2),C(4)	-0.000307	C(2),C(5)	-0.002
C(2),C(6)	18.232	C(3),C(3)	0.00014
C(3),C(4)	-3.85D-05	C(3),C(5)	0.00054
C(3),C(6)	-10.753	C(4),C(4)	0.00652
C(4),C(5)	0.00128	C(4),C(6)	-25.198
C(5),C(5)	3,683,732	C(5),C(6)	-109.905

Table 3e; Covariance Matrix for Metalwork Income Equation.

C(21),C(21)	0.00161	C(21),C(22)	-0.0353
C(22),C(22)	1.1485		

Table 3f; Covariance Matrix for Metalwork Output Equation.

C(31),C(31)	10.63	C(31),C(32)	-11.03
C(31),C(33)	-84,575.09	C(32),C(32)	670.48
C(32),C(33)	-2,479,848	C(33),C(33)	1.55D+10

Table 3g; Covariance Matrix for the Woodwork Investment Equation.

C(2),C(2)	7.35D-05	C(2),C(3)	-7.86D-06
C(2),C(4)	0.000974	C(2),C(5)	-0.000136
C(2),C(6)	-2.067	C(3),C(3)	3.17D-06
C(3),C(4)	-0.000483	C(3),C(5)	-1.10D-05
C(3),C(6)	-0.458772	C(4),C(4)	0.272
C(4),C(5)	0.0029	C(4),C(6)	-29.842
C(5),C(5)	0.0013	C(5),C(6)	-1.877
C(6),C(6)	999,727		

Table 3h; Covariance Matrix for the Woodwork Income Equation.

C(31),C(31)	6428.42	C(31),C(32)	-7,635,596
C(31),C(33)	31.57	C(32),C(32)	1.66D+10
C(32),C(33)	-340,429	C(33),C(33)	117.9213

Table 3i; Covariance Matrix for the Woodwork Output Equation.

C(31),C(31)	6428.418	C(31),C(32)	-7,635,596
C(31),C(33)	31.57	C(32),C(32)	1.66D+10
C(32),C(33)	-340,429	C(33),C(33)	117.9213

KAMPALA'S SMALL-SCALE INDUSTRIES.

SURVEY QUESTIONNAIRE.

1. Name of the small scale industry ....

Division of the industry .... Street ....

Postal Address ....

Telephone ....

2. Interviewees.

Name ....

Position ....

Name ....

Position ....

3. When did the firm start business activity ? (year).......

4. Broad industrial activity during:

1980 ....

1981 ....

1982 ....

1983 ....

1984 ....

1985 ....

1986 ....

1987 ....

1988 ....

1989 ....

1990 ....

1991 ....

5. List of products manufactured during 1990.

....

....

....

....

....

5.1 How many shifts did you operate per day of 24 hours during 1990 ? ....

5.2 What was the duration (in hours) per shift ....

5.3 How long were the breaks (tea, lunch, etc) if any in a shift ? ....

5.4 How many days did you work per week ?

5.5 Suppose there was a 25% change in the demand for your products over the next six months, how would it affect your requirements for labour ?

....

Table 1 : Employment Table.

Employee's Designation	Level of Training	Number.
Administration		
....	....	....
....	....	....
....	....	....
....	....	....
....	....	....
....	....	....
....	....	....
....	....	....
Finance		
....	....	....
....	....	....
....	....	....
....	....	....
....	....	....
....	....	....

Production

....
....
....
....
....

Other (specify)

....
....
....
....
....
....

6. What was the book value of your capital (i.e value of machinery, plant, equipment, land, and motor vehicles) during 1991 ?

....

....

Table 2   Revenue Table.

Name of product	Quantity produced	Price (ex-factory)
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....

....
....

7. Answer also for wage bill and output.

Total wage bill Ush.....................................

Total output ....

8. What was the principal machinery associated with your production in 1991 ?

....
....
....
....
....
....
....
....

8.1. What were your production inputs in 1991 ?
....
....
....
....
....
....
8.2. Has the pattern in 8.0 and 8.1 above changed since 1980 ? If yes explain briefly how and why

....9. Do you import any of your inputs ?

If yes how does the quality of locally made inputs compare with imported ones ? Explain briefly...
....
....
....
....
10.1 Which raw materials did you use for the manufacture of each product in 1991 ?

10.2 What quantities of each raw material was used in the manufacture of each product ?

What was the price per unit of the raw material used ?

Name the source of the raw materials.

Table 3   Raw Materials Table.

Product Name	Raw materials used and quantity	Price per unit	Source
....	....	....	....
....	....	....	....
....	....	....	....
....	....	....	....
....	....	....	....
....	....	....	....
....	....	....	....
....	....	....	....
....	....	....	....
....	....	....	....
....	....	....	....

11.1   Do you use electricity in your premises for production ? If yes how easy was it to have electricity facilities fixed into your premises ?
....

....

....

11.2 What is the average cost of electricity monthly ?......

....

11.3 Does your business have access to piped water supplied by the Uganda Water and Sewerage Corporation ? If yes how easy was it to have water facilities connected

to your business premises ? ....

....

11.4 How much , on average , do you pay the water board monthly ? Ush..

12.1 Does your business have a licence ? If yes how easy is the procedure for obtaining a licence for your business annually ? (Easy/Difficult) Explain for your

response. ....

12.2 How much do you pay for your licence annually ? Ush....

....

13.1 Have you ever applied for a loan for your business ? If no why not ?..

....

....

13.2 Why would you want a loan ?...........................

....

....

13.3 Have you ever received a loan ? What type of loan was it ? cash or physical capital loan ?........................

13.4 How much was the loan ? Ush...........................

....

13.5 How did you use the loan ?

...........all applied to business

...........some applied to business (state amount Ush.......

13.6 Have you started paying back the loan ? If yes how much do you pay annually ? Ush ....

14.1 On average, how much did you save last year ? Ush.....

....

14.2 How much of your last year's savings did you put back into the business ? Ush...................................

15.1 Do you pay yourself a salary ? If yes how much ? Ush.

....

16.1 Please kindly indicate your business problems in order of severity..

....

....

....

....

....

....

16.2 Any other comments ?..............................

....

....

....

....

....

....

....

THANK YOU VERY MUCH.