Employment, income and wages in informal sector of Greater Khartoum: findings of a survey

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EMPLOYMENT, INCOME AND WAGES IN INFORMAL SECTOR OF GREATER KHARTOUM

FINDINGS OF A SURVEY

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"Assistance for Formulation and Implementation of National Population and Human Resource Development"

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PREFACE

This is the second working paper of the UNFPA/ILO Project "Assistance for formulation and implementation of National Population and Human Resource Development" SUD/68/P06. The informal sector survey, subject matter of this report was undertaken in May 1988; under the guidance of william J. House the then CTA of the project. The survey was subcontracted to DR. Mohammad Adham Ali Researcher, Economic and Research Council, Khartoum. In actual conduct of survey two of the national counterpart staff, Abdalla Hassan El-Tom and Abdul Hamid Gabbani acted as supervisors. In all four supervisors and 22 enumerators participated in data collection. Needless to mention that the survey could not have been completed without the hard work of project staff, DR Ali and enumerators.

Technical backstopping has been continuously provided by E/POPLAN (ILO) under the leadership of Mr. Eddy Lee and the Regional Advisor, Mr. Nabil Khoury. The United Nations Development Programme of Khartoum has continuously been extending the administrative support for implementation of the project. Finally generous financial support is being provided by the United Nations Fund for Population Activities (UNFPA).

Responsibility for the contents of this report however rests solely with the authors.

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INTRODUCTION

The economy of Sudan like many other countries of Sub-Sahara experienced stagnation and decline during the past fifteen years or so. Its performance can be judged by a low average rate of GDP growth of 2% per annum during 1976-91. The population growth rate (2.9) being higher than that of GDP, a decline to the tune of 18 to 20% in real per capita has been registered during this period. Nearly all other indicators replicate this trend. A host of external and internal factors underlie this poor economic performance.

Sudan also witnessed practically all sorts of human mobility, both induced as well as coercive during this era of economic stagnation. Influx of refugees from neighboring countries, Sudanese emigration to Middle East, displacement of population due to civil war in South and droughts in Sudan constitute the major streams of population mobility, in addition to usual rural to urban migration. A rising rate of urban population growth, particularly in the capital of the country, Khartoum, has therefore occurred.

Khartoum, has usually been a recipient of population from outside. For instance according to 1955/56 population census 14.4% of all the internal migrants resorted to Khartoum. This percentage rose to 25% at time of 1973 census and 39% at the time of 1983 census. These rising fractions imply a substantial increase in the volume of lifetime migrants from 58 thousands in 1955/56 to 510 thousands in 1983. Since 1983 Khartoum experienced a heavy influx of displaced population particularly from South in addition to other usual flows. According to 1990 Khartoum census nearly 600 thousands persons flocked to National Capital yielding yearly average of 100 thousand. Slightly over one-fifths (22.7%) came from South.

Little is known about the Khartoums' labour market performance in the wake of mounting population, pressure and worsening economic conditions. Some broad indications are that major labour absorption took place in the informal sector while the formal sector, predominantly the government, failed to expand particularly since 1983. Khartoum census of 1990 is indicative of a very large share of informal sector in the total employment. Although not strictly defined, yet the census reflects that 66% of the employed were in private jobs, while the remaining being absorbed by the government or companies. Even if the share of informal sector may be some what less than the one indicated by the above cited census, still it is more than twice the estimated share (23 to 25% of labour) for 1974. One can therefore, safely conclude that informal sector took a major share of the labour market entrants during this period.

Informal sector expansion in the wake of worsening macro-economic environments merits a closer scrutiny and investigation. Of particular interest is to document the nature and type of growth experienced in terms of the composition of activities, the organizational issues and infra-structural adequacy. A related and more important querry should concern itself with incomes and wages prevailing in the informal sector and their comparison with rest of the economy.

Not all but some of the above mentioned questions are addressed in this report which deals with the informal sector in Khartoum. This is based on a survey of enterprises operating in the informal sector conducted by Population Planning Unit (PPU) of Ministry of Finance and Economic Planning in May 1988. The PPU undertook this survey under the project" Assistance for Formulation and Implementation of National Population and Human Resources Development" (SUD/86/P06). The project has the following objectives.

1. Long Range Objectives

To have formulated a comprehensive population and human resources development strategy over the medium to long-term periods in line with overall development goals, and to ensure an effective utilization of human resources in order to enhance the economic development of the country.

2. Immediate Objectives

To have created by the end of the project the capacity of the Department of General Planning and Administration to build up a program of work that comprises the analysis, elaboration and implementation of population, employment and manpower programs and policies within the framework of overall development planning. These will be achieved through:

a. *Development and training of counterpart national personnel and institution building.*

b. *Improvements of data base through research studies.*

c. *Establish a system of continued mutual exchange of information among the different Government agencies dealing with manpower, population and employment questions as a focal point in the Ministry of Finance and Economic Planning, under the Director for General Planning and Administration.*

d. *Contribute to the preparation of the population and manpower chapter of the forthcoming development plan.*

These objectives have been operationlized in terms of specific activities such as training of the national staff both at the job as well as abroad, by institution building and enhancing the role of the Population and Human Resource Unit through constitution of a steering committee headed by Director General, Ministry of Finance and Economic Planning with membership of senior officials from line ministries such as Education, Health, Labour, Nnational Population Committee, in addition to other relevant organizations. This committee provides guidance in implementation of the project activities.

That lack of a reliable data base constitutes one of the most serious constraint defying efforts aimed at integration of population and human resource concern with the economic development planning has been duly recognized in the design of the project. Hence various studies and surveys were envisaged to be undertaken during operation of the project. Until now the following three field surveys have been conducted.

1. *Informal sector survey of Khartoum.*
2. *Formal Sector Survey of Khartoum.*
3. *The Displaced Population Survey at El-Obeid and Kosti.*

The data on displaced population collected in September 1990 have passed the phases of coding, editing and are currently entered in the computer for final consistency checks and will be ready for analysis shortly. Formal sector data have already been analyzed and major findings circulated in "Employment and Wages in the Formal Sector of Greater Khartoum" working paper NO:1 of the project SUD/86/PO6. This report presents major findings of the informal sector survey, which follow the brief description of sample design below.

SAMPLE DESIGN OF INFORMAL SECTOR SURVEY

No complete listing exists of small scale and informal sector businesses in Greater Khartoum to serve as a sampling frame. It was decided, therefore, to select a sample of such enterprises from the major areas of concentration of these activities, namely from the industrial areas of the three towns and from a sample of the 50 or more "suks" or small markets picked from a street map of the city. The 3 town councils'administrative offices were visited and an incomplete listing of registered enterprises was obtained in order to get a very rough idea of the relative proportions of enterprises in each sector of activity.

A random sample of "suks" was selected and sketch maps were drawn of the 20 or 50 markets selected, demarcating blocks and the kinds of activities being undertaken in each block. Similar sketch maps of blocks were drawn for the three industrial areas. For the larger industrial areas samples of blocks were randomly selected for survey purposes.

Enumerators were then allocated to the various locations and to specified selected blocks within those areas. Random walks were undertaken by the enumerators around the periphery of the randomly selected blocks to select enterprises for interview. In the case of petty traders collected together in open markets a similar random walk procedure was adopted. Interviewers were instructed to administer the questionnaire where the randomly selected business employed less than 20 persons. Where 20 or more persons were employed that particular enterprise was dropped.

An attempt was made to finish up with a sample representative of the underlying "imperfect" frame derived from the council listings stratified according to the kinds of activities undertaken. A sample of about 2000 enterprises was thought adequate, whereas we finished up in the time and budget available of about 1800. No doubt the sample is not fully "representative" of the whole sector since some activities, such as petty trade, construction and transport are under-sampled. However, it is probably totally impractical to conceive of a "representative" sample of the "small scale/informal" economy given the heterogeneity within the "sector".

Questionnaire and Data Processing

A detailed questionnaire of twenty four pages designed to collect variety of information was administered. The information collected pertained to ownership, organization, asset structure, costs, turn over and profit of enterprises. The employment structure, and detailed characteristics of the employees were also recorded. In addition information on the household income of the respondents (owner operator or managers) preferences as well as problems confronted by the operators was gathered too.

The data collected were edited and processed to remove obvious inconsistencies. As usual there are few cases of non-response. The likelihood of response error in case of variables like income, sales and profit can hardly be ruled out. The quality of data in general, can be regarded as adequate. The report containing the major findings of the survey is ordered into six sections

Organization of informal sector in terms of ownership and management is discussed in the first section of this report. Adequacy of infra-structural facilities is also provided in this section. Sectoral composition, structure of assets, and operation of enterprise is detailed in the second section. Sales and net income of the enterprises is discussed in Section three. This section also contains a multivariate regression analysis to assess determinants of enterprises net income. Employment structure, household income of the operators, and wages of the informal sector employees find their place in the fourth section. Over time growth of the informal sector in Khartoum and problems faced by the respondents are discussed in fifth section. Final section presents conclusions and policy recommendations.

SECTION I
ORGANISATION AND INFRASTRUCTURE

Family based enterprise system appears to be one of the major characteristics of Khartoums' informal sector. Around seven tenths (69.4%) of the total (1756) enterprises covered in the survey were run by the sole owner himself. Out of the remaining 155 were identified as partnership, wherein 92 establishments were having one partner and 44 being with two partners, thus leaving 19 enterprises with 3 or more partners. Nearly half of the partners were also working in the establishments. Approximately one-fifths (21.7%) of the sampled enterprise were found to be run by managers. More than half of these managers (153 out of 293) were related to owners. In other words nine-tenths of the enterprises were operated and managed by owner himself or his relatives.

Family links did reflect also in the employment structure of the informal sector. Slightly more than half of the enterprises exclusively relied on the family labour. Only 850 establishments reported to have wage employees. Among the total employees (2800) covered in the survey one-fifths (23.1%) were relative of the owner of the business while another 4% were working partners.

In terms of broadly defined activities sole ownership was a dominant feature of petty trade, auto repairs and construction. Proportion of non-owner managed firms, on the other hand, were found above average in trade, transport, and agricultural activities. Nearly half of the managed firms were engaged in whole sale/retail trade while 20% each being operative in manufacturing and transport. The details are provided in table No.1.

Table No. 1 Organization & Structure by Sector (Percent of Enterprises)

Sector of Activity	Percent run by owners	% Run by managers	Location in Opens Street or No Fixed Place %	% with Permanent Structure	% Building Rented	% Premises Owned	% with Electricity
Agriculture	33 (9)	67 (9)	10 (9)	25 (9)	20 (5)	40 (5)	16
Manufacturing	71 (394)	19 (394)	9.4 (395)	72 (395)	65 (384)	17 (384)	54
Trade	53 (416)	33 (416)	17 (416)	70 (419)	67 (409)	18 (409)	44
Petty Trade	89 (237)	9 (237)	78 (237)	6 (237)	11 (203)	4 (203)	4.6
Services	82 (208)	14 (208)	65 (208)	25 (208)	26 (192)	5 (192)	18.8
Repairs	77 (138)	10 (138)	22 (138)	57 (138)	58 (136)	7 (136)	45.6
Auto Repairs	85 (114)	8 (114)	54 (114)	37 (114)	34 (111)	4 (111)	21.9
Transport	55 (189)	40 (189)	93 (189)	3 (189)	13 (177)	29 (177)	3.7
Restaurants	63 (41)	22 (41)	0 (41)	100 (41)	90 (41)	10 (41)	36.5
Construction	80 (5)	20 (5)	40 (5)	0 (4)	———	———	0

Parenthesis denote actual number of observations

Spatial spread of informal activities reflected inadequecy of the facilities. Less than half of the enterprises were located in the markets (suks) established by Town Council or shops constructed on privately owned plots. Nearly one thousand enterprises (57% of the total) had no fixed place and were operating in open street and spaces. Similarly less than half (46%) of the enterprises were having some permanent structure while the remaining were operating in the verandas of the parmament structure (8.5%) or were having temporary or with no structure (46%). A very large fraction of petty traders, repairers and those engaged in services or transport were found to be operating in open spaces (see Table No.1). In contrast seven-tenths of those engaged in manufacturing, and wholsale/ retail trade were located in permanent structures. One-fifths of the premises or shops were owned by the operators, while one-thirds were neither owned nor rented mostly being in open street. Over 40% of the operators were paying rent for the premises. Monthly reported rent varied from Ls 2 to Ls 7000, but, only 13% of those paying rents were paying more than Ls 500.

Electricity was available to only one thirds of the operators in informal sector. Most of them were getting the electricity from the town supply, however 6% reported to have their own generators. Petty traders and those who operate in open spaces had little access to this facility (see table No:1). Cost of electricity ranged between Ls 3 to Ls 1000 per month, but more than two-thirds (67%) were paying less than Ls 100 per month.

The data reflect that influx of population to Khartoum may have overburdened and strained the infra-structural facilities. Table 2 below provides information on the location and type of structure by duration of business operation.

TABLE NO:2

PERCENTAGE DISTRIBUTION OF ENTERPRISES BY PERMANENCE AND RENT STATUS OF PREMISES.BY YEAR OF OPERATION

Years of Business operation of enterprise.	Street open no fixed place.	Permanent structure.	Premises neither owned nor rented
0-2	52	38	41
3-5	43	49	29
6-10	36	49	27
11-15	30	50	30
16+	20	63	19

The informatoin at hand can not provide a definitive answer whether or not this settlement pattern was a normal evolution of informal sector. The above table though indicates that recent entrents were disproportionately located in open streets or were not having fixed places.

SECTION -2-

SECTORAL COMPOSITION, ASSETS STRUCTURE AND OPERATION OF ENTERPRISES

Sectoral composition of the informal sector establishments reflected a dominance of trade activities wherein 23.6% enterprises were engaged in whole sale/ retail trade while 13.4% were found in petty trade. This is followed by services and repairs (26.1%). Out of this sub-group repairs accounted for 6.8% and auto repairs for 6.5% with the remaining 11.8% being in services. Manufacturing enterprises were 22.5% of the total. Unfortunately further disaggregation of this important activity is not available. Nearly one-tenths (10.7%) of the total surveyed establishments were reported to be in transport while 2.3% being engaged in restaurants. Agriculture and construction accounted for minor fraction of the total (less than one percent each).

Growth overtime inferred from the informaton collected on years of business operation is suggestive of nearly a doubling of the number of enterprises during the past five years. In other words only 52% of the establishments were having a life of over five years while only 10% of the enterprises were existing for the period of twenty years or more. Keeping in mind the heavy influx of population in Khartoum during the five years preceding the survey it would be interesting to know the sector or activities which absorbed new comers and the resultant impact on the composition of the informal sector.

The data (see table NO:3) reflect a substantial shift towards trade and services at the cost of manufacturing. This is indicated by a declining share of manufacturing classified by life of enterprises. It accounts for 44% of those having existed for over 16 years but only 12.7% in case of those with two years of life.

TABLE NO:3

SECTORAL COMPOSITION BY YEARS OF OPERATION (%).

sector\year	0-2	3-5	6-10	11-15	16+
1. Agriculture	01.6	00.1	0.1	00.0	00.00
2. Manufacturing	12.7	16.5	24.4	35.0	44.00
3. Trade	29.0	27.0	23.0	21.0	17.01
4. Petty Trade	20.0	10.7	11.3	05.8	03.08
5. Services	17.1	10.4	08.3	05.1	06.00
6. Repairs	03.9	10.1	09.2	11.5	11.01
7. Auto repairs	01.4	07.5	09.5	11.5	10.01
8. Transport	12.1	15.1	11.3	05.8	04.07
9. Restausants	02.2	02.3	02.4	03.3	02.05
	100.0	100.0	100.0	100.0	100.0
All Establishment	23.5	23.5	22.0	10.0	21.00=100

As shown by the above table transport also emerges to be an expanding sector. Interestingly repairs and auto repair activities barely maintained their share though underwent a decline during the two year period preceding the survey. Possibly this owes to widely expressed shortage of spare parts in Khartoum as reflected by responses of the respondents, to be discussed in a subsequent section.

Assets Structure:

The questionnaire used in the survey solicited information on various typs of assets owned or rented by the enterprise such as replacement value of buildings, tools if owned or rent in case rented. Data were also collected on initial investment and the

subsequent additions, as well as the value of raw materials and the stock of finished goods. Further-more in response to the question "if you were to sell this business how much do you expect to get for it...." the worth of the enterprises as guessed by the respondent was also documented. These are briefly discussed below.

Building, Tools & Raw Material.

Only 156 enterprises out of the total 1756 reported the replacement value of the buildings. Of these 22% reported the replacement value of the building to be less than Ls 10,000, while 18% reported over Ls 100,000. Similarly 13% of the respondents reported zero or no value of the tools. Nearly two fifths reported replacement value of tools to be ranging between Ls 1 to Ls 1000, while another two-fifts reported the same in the range of 1000 to 50,000. The top 6% however, had the value of tools over Ls 50.000. Only an insignificant fraction (less than 3%) were paying any rent for tools. Just one-fifths of the respondents reported stocks of finished goods ranging from Ls 1 to Ls over 100,000. However majority of these had the finished goods of value less than Ls 1000, while 36% were having over 10,000. Over half (55%) the respondents reported non-zero value for raw materials, most of these being of value less than Ls 500. Only 9% reported value of raw material to be over 10,000. Three fifths of the respondents considered the stock of raw materials to be inadequate. Non-availability and non-affordability were cited as reasons for this.

Investment

Information pertaining to initial investment and subsequent additions ranges from Ls 1 to over one hundred thousand. However only 14% of the enterprises had initial invistment to be over Ls 10,000 while half of the respondent reported the initial investment to be less than Ls 150.

At the sectoral level mean initial investment was the highest for transport Ls (19816) to be followed by trade (Ls 16254). In terms of initial investment restaurants rank third (Ls 13462) while manufacturing attains fourth position with a mean initial investment of Ls 10965. In this comparison petty trade lies at the bottom with only Ls 420 which presumably explains its disproportionate growth during the latest sub-period covered by the survey. Since enterprises were established over a period of time, value of intial investment therefore carries the effect of inflation which can hardly be removed. The estimated or guessed worth of the enterprise (Ask Price) appears to be a better proxy of the asset position of the enterprise which is discussed below in detail.

At the outset it may be noted that tremendous diversity in asset structure characterises the informal sector. Below in table No:4 mean and median values of Ask Price, Buildings and Tools along with standard deviation, and measures of skewness are reproduced.

TABLE NO:4

MEAN VALUES AND DISPERSION OF ASSETS

	No of Enterprises Reported	Mean	Median	SD	Skew-ness	Kurtosis
Tools	1525	17826	1500	74226	4.5	107.8
Buldings	0156	107572	30000	217660	3.3	010.6
Ask Price	1617	067784	10000	171725	4.3	018.2

Median values being a minor fraction of that of the mean and a very large standard deviation simply indicate that excepting few enterprises at the top most of the remaining have little assets. The distribution of the value of buildings and tools has already been discussed above. In case of ask price while 23% of enterprises reported the worth of enterprise to be over Ls 50,000, nearly half of the enterprises (48%) reported it to be lower than 5000. Roughly one-fifths of the total lie at the bottom having less than Ls 500 as their worth. The bottom 186 enterprises on the average have only Ls 42 as their ask price while the top 200 have over 400 thousands. This discrepency or uneven distribution marks other indicators of asset position of enterprises too.

The mean values of ask price by sector (see appendix table No:1) are indicative of the relative assetlessness of petty trade services and auto repairs with low mean values of Ls (3874), Ls(26304) and Ls (25842) respectively. In a ranking on the basis of ask price top three positions are occupied by agriculture, manufacturing and construction. In most cases median values of ask price at the sectoral level are a minor fraction of mean values. This suggests that a large fraction of enterprises in each sector suffers from assetlessness.

Association between ask price and certain characteristics of respondents such as education and that of enterprise such as organization and size is assessed. One finds a positive association between the education level of the respondent (mostly entrepre neurs or partners) and worth of the enterprise. For instance the worth of establishments owned or managed by a college / university graduate (averaged over 66 such firms) comes to 198 thousands. In

contrast the ones owned by illiterates are on the overage worth 20 thousands only. Similarly establishments having managers on the average have ask price of (123,000) in comparison to 40 thousand of the ones solely managed and operated by owner. The partnership enterprises lie in between these two extremes. A positive association between ask price and the number of full time adult employess also emerge. There also appears to be a positive association between the length of life (years in the business) and perceived worth of the enterprise. For instance those enterprises established during the two years preceding the survey worth around one-thirds of those functioning for over 15 years. Worth of enterprises is the largest for Khartoum borne entrepreneurs (Ls 95670). In contrast those coming from Kordofan and Darfur lie at the bottom with Ls 27000 as average askprice. In this comparison entrepreneurs born in South of Sudan lie at the lower end of distribution as reflected by the lowest value of median (Ls 350).

Source Of Funding

Personal or family savings emerge to be the major source of financing the investment. Out of 1337 responses pertaining to the major source of funding approximately over sixty percent (834) cited as own savings from wage employment in Sudan, while 112 or 8.5% saved from their work abroad, whereas an equivalent fraction used family savings. Nearly 6% borrowed from relatives and 2% from local money lenders. Institutional sources for financing the investment in the informal sector seem to have played an insignificant role. Out of the 1337 responses only 12 reported to have benefited from banks. Seven out of these twelve loans were advanced in cases of those having initial investment of over Ls 10,000, in the context of informal sector these are the large investments.

Middle East emigration appears to have had a positive influence on the informal sector. Nearly one-thirds of the enteprises having initial investment of over Ls 50,000 were financed by savings from work abroad. Around 70% of those who reported savings from work adbroad as a source of funding, fall in the two top size groups of initial investment (see appendix table No:2)

Getting Raw Materials & Selling The Product

One-fifths of the enterprises reported not to have any raw material because these did not use any, while 60% of the respondents cited whole saler or retail traders as the major supply source for raw materials. Only 5% of the total reported Government as a supplier of raw materials. Very few respondents were members of either selling cooperatives (3.2%) or buying corperatives (8%).

Nearly nine-tenths of the respondents had individuals or households as their customers. Only a minor fraction (4.5%) cited as traders/big business as their customer, while only 0.3% reported government as their customer. Roughly two-fifths of the respondents reported to have usually less than 5 customers per day while 30% reported to have over 20 customers per day. One-tenths of the respondents had a large contract or order during the past three months, predominantly from small businesses, the share of the government being insignificant (0.6% of the contracts).

In response to a question for assessing underutilization of resources one-thirds of the entrpreneurs reported that they could increase supply of goods/services by 50% or more without additional labour or equipment. Major deterrent in this respect was indentified to be inadequacy of demand. Similarly majority (82%) of the

entrepreneurs reported not to have any plan for expansion, due to lack of money (41%) lack of demand (11%) and lack of spare parts as well as shortage of raw materials.

Work Duration

Majority of the enterprises reportd six days a week operation. However one thirds of the enterprises reported to have worked for seven days a week. While most of the respondents claimed to have fixed hours of work the reported daily working hours varied from 1 to 24. Roughly one-thirds of the establishment reported 8 hours, while 42% reported by have worked for 9 to 12 hours per day. A fraction of the enterprises also reported less than four hours per day as work duration. (see Appendix Table No:3)

SECTION 3

SALES & NET INCOME OF ENTERPRISES

1/

Information on weekly sales or turn-over and net income of the enterprises was obtained from the respondent according to the business conditions such as in a good week, in an average or normal week and in a bad week. It may be noted that while data collected on sales lend a straightforward interpretation in case of the data on net income the meaning varies with the nature of enterprises. The question "what is the net profit of the business after deducting all the expenses including the cost of raw materials wages, rents, water, cost of electricity and licensing fee etc" is likely to fetch a response hardly being definitive with regard to whether or not depreciation of building, tools and other owned capital is reckoned. In addition this net profit is inclusive of returns to labour of owner operator himself as well as his family workers if any. These data limitations needs to be kept in mind while interpreting the findings presented below.

Information on weekly sales and net income for good, average and poor business conditions provided in table NO: 5 reflects a wide variation associated with these conditions. There are also substantial differentials between various groups classified on the basis of sizes of sales (receipts) and net income. For instance in a good week only 8% of the enterprises earn Ls 100 or less, this percentage rises to 43 in a bad business week. In tandem net income or profit as defined above only 11.3% of the enterprise earn Ls 50 or less pergood week, which rises to more than half of the total in poor week (53.6%). In case of an average week almost half of the enterprises have weekly sales of Ls 500 or less and net income of Ls 150 or less. On the other hand roughly one-fourths of the

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1/ Net income is used interchangeably with profit.

Table No. 5

Mean, Median and Skewness of Sales and Profits (Net Income) of Enterprises,

LS/Week

	No. of Enterprises	Mean	Median	S.D	Skewness	Kurtosis
1. Sales in a good week	1731	2308	700	6192	9.5	124.7
2. Sales in an average week	1730	1332	400	3735	14.4	322.8
3. Sales in a bad week	1728	700	160	2796	21.1	618.4
1. Profit in a good week	1721	641	250	1419	7.8	76.8
2. Profit in an average week	1717	372	150	860	8.0	87.2
3. Profit in a bad week	1714	184	50	570	11.5	193.5

enterprises have sale over 1000 and profit or net income of over Ls 300. On the top of distribution 1% have over Ls 5000 as net income and 5% as sales. These differentials by sector and some characteristics of the enterprises are discussed below.

Sales and net income cross-classified by sector of enterprise is provided in Table No:6. There is substantial variation around the overall means of Ls 1438 (sales) and Ls 402 (net income). Petty trade, services, repairs are associated with low level of sales while trade (whole sale and retail) manufacturing and agriculture lie at the upper end of the distribution according to the mean values of weekly sales. Weekely net income (profit) tend to reproduce similar ranking, though, the inter sectoral differentials are somewhat compressed as indicated by the standard deviation. Judging from the median values reported for sales and net income along with the standard deviations for various sectors, it is safe to conclude that both sales and net income widely vary across enterprises within a given sector in addition to inter sectoral differentials.

The data reveal some association between askprice (perceived worth of the enterprise) and both the weekly sales and net income, as reflected by the table NO:6. A closer look at the data also suggests a positive association between education level of the entreprenurs and both the sales and net income. In terms of organisation or management the enterprises managed by owner himself were on the average associated with lower sales and net income in comparison to their counterparts.(See Appendix Table No:4)

Table No. 6

Sales, Profit and Worth of Enterprise by Sector (Mean and Median)
LS

Sector	Sales		Net Income		Ask Price	
	Mean	Median	Mean	Median	Mean	Median
All	1438 (4181)	400	402 (1337)	150	62551 (165985)	6000
Agriculture	2016 (2504)	1200	1283 (1734)	700	111320 (121852)	60000
Manufacturing	1870 (3801)	600	541 (1190)	200	108205 (233659)	14500
Trade	2691 (6813)	1000	470 (995)	150	89689 (185241)	28990
Petty Trade	417 (521)	220	92 (102)	60	3874 (33302)	215
Services	417 (1658)	119	177 (709)	70	26304 (181248)	150
Repairs	885 (3180)	250	331 (1096)	125	53061 (181248)	2750
Auto Repairs	591 (634)	400	249 (268)	175	25842 (80733)	4250
Transport	1029 (3366)	560	675 (3073)	250	50188 (62798)	40000
Restarurants	1672 (1277)	1400	491 (542)	300	46893 (60589)	20000
Construction	1000 (1160)	500	410 (364)	300	101700 (222622)	1500

( ) Represent Standard Deviation

The recent or fresh entrent in the informal sector (those with 2 years or less) were poorer compared to all other operators with mean sales and net income being Ls 1090 and 209 respectively in comparsion to the average of 1438 and Ls 402. However a strong positive association between years of business operation and sales and net income did not emerge in bivariate crosstabulations. The sub-group on the top of this comparision was the one with 3 to 5 years of business operation (See Appendix Table No:5). In terms of origin of the operators, mean values of sales and net income were lowest for those borne in South, while the natives (born in Khartoum) were associated with the highest values. In order to examine further the determinants of the net income(profit) a multi-variate regression was run. The results are discussed below.

DETERMINANTS OF NET INCOME (PROFIT) of INFORMAL SECTOR ENTERPRISES

Multiple regression was run to assess the impact of various explanatory variables on the net income of the enterprises. It needs to be reiterated that the concept of net income or profit used as a dependent variable refers to the sales minuscosts including the wages. However it contains the return to labour of family worker. The depreciation of capital assets may have not been adjusted too.

Net income or profit so defined is expectd to be interactive product of a variety of factors. Foremost among these appear to be the level of technology, which in this case is simulated by capital, or capital per worker. Similarly quality of management proxied by human capital of the respondents such as education, age and experience is likely to have its effect upon net income. In this context the nature of organisation also appears important, thus a control in the regression equation is provided by distinguishing the enterprises with sole ownership.

In order to assess the existence and importance of entry barriers and differential access to capital and other facilities the sectoral dummies are used. Further more the importance of origin of the operator and recency of the enterprises is also controlled in the equation. The variabls are defined below while their mean values and standared deviation are given in table No 8.

1. K (capital) Ask price, the worth of enterprise as estimated or guessed by respondent.
2. (K/L) Capital per labour.
3. (YEARED) years of education of the respondent.
4. Age, age of respondent.
5. YRSOP years of operation of the business.
6. (LAB) : The total numbers of the employed labour plus the working proprietor.
7. (FW) Family worker, Number of family workers worked in the enterprise.

Dummy Variables

Birth Place of Respondent

1. (South) if respondent is born in southern Sudan = 1 otherwise zero.
2. (KD) : if respondent is born in Kardofan & Darfur = 1 otherwise zero.
3. (Migrant) : If respondent was born elsewhere than Khartoum = 1 otherwise zero.
4. YEM 83 If respondent moved in Khartoum after 1982 = 1 other wise zero.

Sector of Operation

1. PT : If enterprise is engaged in petty trade = 1 otherwise zero.
2. REP : If enterprise is engaged in repairs = 1 otherwise zero.
3. A REP: If enterprise is engaged in auto repairs = 1 otherwise zero.

Organisation

(OWN) : If enterprise is run by sole owner = 1 otherwise zero.
(consult) : if respondent consult with competitors for price fixation = 1 otherwise zero.
(Problem) : If the respondent mentioned shortage or lack of raw materials or spare parts as main problem =1 otherwise zero.

TABLE NO:7

OLS REGRESSION RESULTS OF NET INCOME/WEEK

independent variables	(1)	(2)	(3)	(4)
1 . AGE	8.92	9.97	-	-
	(1.13)	(1.24)		
2. $(AGE)^2$	-0.45	-0.05		
	(-.41)	(.48)	-	-
3. YEARED	21.98	24.95	19.67	24.4
	(3.85)**	(4.34)**	(3.47)**	(4.25)**
4. YRSOP	-5.46	-4.64	-3.85	-0.45
	(-1.52)	(-1.28)	(1.17)	(..136)
5. K	.001	-	.001	-
	(4.92)**	-	(4.96)**	-
6. K/L	-	.0009	-	.0009
		(1.71)*	-	(1.63)*
7. LAB	42.54	58.08	42.71	-
	(3.92)**	(5.6)**	(3.97)**	-
8. FW	49.54	45.27	48.51	115.17
	(1.28)	(1.17)	(1.26)	(3.27)**
9. SOUTH	-95.2	-73.5	-96.95	-78.27
	(-0.65)	-.49	(-.66)	(-.52)
10. KD	-	-	28.69	18.10
		-	(.36)	(.225)
11. MIG	42,19	35.59	-	-
	(.57)	(0.48)	-	-
12. YEM	-	-	-135.43	175.46
			(1.71)*	(-2.19)
13. P.T	-99.8	107.1	121.52	-170.2
	(-1.01)	(-1.08)	(-1.24)	(-1.71)*

TABLE NO:8

MEANS AND STANDARD DEVIATION OF THE VARIABLES USED IN THE OLS REGRESSION

		MEAN	SD
1. Net income	(Ls/week)	402.2	1337.5
2. K	(Ls)	62551.1	165986.8
3. K/L	(Ls)	22337.2	058426.9
4. Education	(Yrs)	5.7	5.9
5. Age	(Yrs)	32.36	13.8
6. $(Age)^2$	(Yrs)	1236.96	1029.9
7. FW	(No)	0.38	0.88
8. LAB	(No)	2.65	3.32
9. YEARSOP	(Yrs)	8.6	10.2
10.SOUTH		0.049	0.215
11.KD		0.224	0.417
12.YEM 83		0.23	0.424
13.MIGRANT		0.73	0.875
14.PETTY TRAD		0.135	0.342
15.REP WORKER		0.079	0.270
16.AUTO REPAIR		0.065	0.247
17.SOLE OWNER		0.694	0.461
18.CONSULT		0.176	0.381
19.PROBLEM		0.772	0.420

Regression Results

The regression results reported in table NO:7 are not very encouraging wherein the explained variance ranges from 8% to 15% later in case of a restricted set of explanatory variables. Some of the explanatory variables, persistently emerge very significant. It may also be noted that multicollinearity among

certain explanatory vasiables has been noticed. For instance the partial correlation coefficient of age,(age)^2 with year of business operation is found to be 0.45 and 0.48 respectively. Similarly the partial correlation coefficients of LAB & FW is 0.37 while LABs' partial coefficient with K is 0.33. There are few other case where-in the partial coefficients are higher than 0.20. Given these limitations the results are discussed below.

Technology/capital

State of technology in the regression equation is simulated by respondents' estimate or perception of the total worth of the enterprise. We preferred this variable over the reported replacment value of assets such as buildings, tools and equipment and stock of raw materials as well as finished goods, because of the problems involved in estimating the replacement value of building if it is rented. This requires some arbitrary rate of return to capital to estimate the value of building from the rent paid. Moreover a substantial fraction was neither owning nor renting the premises

The value of capital (worth of the enterprise) emerged to be highly significant in all the equations. Capital/ labour ratio also acquires significance, though at margin (10%) The returns to capital implied by equations are little puzzling, because these are quite low. For instance equations 1 and 3 indicate that for every increase of Ls 1000 in capital or estimated worth of enterprise, there is just accretion of Ls 1 in the weekely net income or profit, yielding a rate of return around 5% per annum at the margin. Perhaps this owes to a wide spread under utilization of capacity due to shortage of spar parts and or lack of demand as reflected by the responses regarding possibility of expansion of output with out additional equipment and labour.

Human Capital

Education of the respondent emerged highly significant explanatory variable in all the equations. The coefficient indicates that each year of educaton adds Ls 20 to Ls 25 to the net income or profit of the enterprise. This result is reflective of the role of education in enhancing individuals' capability to handle the day to day problem as well as having a disciplined approach towards business organisation. However it must be noted that the years of education bear some positive multi collinearity with capital (r = .21) and negative partial correlation coefficient with some less profitable sctor like petty trade (r = .14), and with sole owner enterprises (r= -.20) suggesting some tendencies of better educated being less than proportionate in less profitable enterprises and sectors.

The other human capital variables, age and (age)^2 which proxy the experience of the respondent bear out the expected signs, but fail to acquire conventional statisfical singnificance. This happens even when the years of operation which have multi-collinearity with age and (age)^2 is excluded from the independent variables in the equation (eq : 3/4). Similarly the years of business operation in Khartoum not only fails to emerge as a significant explanatory variable but bears out an unexpected negative sign (see equations 3+4).

Labour Employed /Size of the Enterprise

Labour employed, being factor of production, also reflects the size of the enterprise. The variable emerges to be highly significant with each additional labour adding around Ls 43 to profit or net income of enterprise. Since our dependent variable

profit (net income) is net of wages paid to the employes, this co-efficient can hardly be interpreted as a marginal product of labour. One can prossibly interpret it as rent accruing to entrepreneur after paying wages.

Family Worker

On the average use of family worker has not been very high with the mean value being 0.38. still in some cases family warker could possibly be treated as a major source of labour. Interestingly rather than being a substitute of employed labour, there appears to be a positive association between the two as indexed by the partial correlation coefficient (r = .37). Because of this multi-collinearity the variable of family worker acuires significance only when labour is suppressed by using K/L (see equation 4). Each additional family worker is likely to fetch Ls 115 to profit. Keeping in mind that the dependent variable embodies the returns to labour of the family worker thus affords the interpretation of coefficientas marginal product to family worker. If the family workers was to be paid average wage then the residual would amount to Ls 27 per week.

Migration/Birth Place of Operators

This exercise fails to substantiate the oft quoted disadvantages associated with the migrants. Natives do not have significant edge over migrants. Similarly there were no significant evidence of the discrimination associated with birth place. Respondent born in South of Sudan, a different ethnic and cultural group, is associated with negative sign but fails to acquire statistical significance in any equation.

However, those who migrated after 1983 to Khartoum irrespective of their birth places were found to be earning around one-thirds less than the average, controlling for all other variables. The variable though marginally significant (10%) could be capturing the experience as well as the pressures exerted on informal sector by influx of population during the post 1983 period.

Sector/Activity

In comparison to control group of the manufacturing, whol sale and retail Trade, Transport and Restaurants, the Petty Traders and those engaged in repair earn less, however, it is only the auto repairs which bears statistical significance, in all the equations.

Other Variables

Sole owner operated enterprises proxied by dummy variable "own" are associated with a negative coefficient significant at 5% level. This result is explicable in terms of the quality of management which is likely to be better in managed and partnership firms. Some elements of selectivity could also be underlying this relationship. Sole owner firms have a negative association with capital (r= - 20)
and years of schooling (r= .19). The other variables used such as consult and problem failed to have statistical significance.

The result in general confirm the a priori expectations. Capital and level of technology of the enterprise and human capital of the enterpreneur display their importance. Since both these variables tend to be positively associated the element of selectivity needs to kept in view while interpreting the results. Post 1983 expansion seems to have occurred at the cost of net income or profits of the enterprises or those established during this period were less lucrative in comarison to their counterparts.

SECTION -4

EMPLOYMENT STRUCTURE, LEVEL & DISTRIBUTION OF INCOME & WAGES

Employment Structure

Out of 1756 respondents, 1220 (69.4%) were sole owner of their shop or enterprises. Roughly one-fifths of enterprises (217%) were having a manager, where as more than half of these managers were related to owners of the enterprise. Around 9% of the enterprises were indentified to be partnership. More than half of these partnership establishments (86 out of 155) reported to have 121 partners working while total number of partners in all the establishments amounted to 434, yielding roughly an average of 3 per the partnership firm.

Nearly one-fifths of the enterprises reported to have one or more adult male as family worker. Male family workers in these establishments totalled to 488 resulting in an average of 1.3. Forty six of these establishment reported to have more than 3 adult male family worker. Few establishments (8) reported to have 14 female adult workers. Similarly 20 enterprises reported the engagement of 23 male children. In sum there were 546 family workers and 49 relatives engaged in these establishments. Most of family workers as noted above were adult male.

A perusal of the employees data reflects that enterprises were having 2800 wage employees. Roughly one-fourths (23.1%) of these employees were relatives of the owner, while 4% of the employees were working partners. Nine-tenths of the total employees were full time while the remaining being casual or part time worker. A substantial number of employees (403) were reported to be working as apprentice thus highligting the role of informal sector in human capital formation.

Employers and employees in the informal sector were found to be pre-dominantly male. Among the 2800 employees only 46 were reported to be females. The representation of females in case of respondents (entrepreneurs partner or manager) was equally insignificant (2.4%). Similarly female account for only 3% of the family workers.

Mean values of age and years of schooling in table NO:9 indicate that respondents (owner, partners or managers) were older and more educated than employees. Mean years of age and education being 32 and 5.8 were higher than for the employees,(25 and 4.96 respectively). The percentage of respondents having secondary or higher level of education was reported to be 20 in contrast to less than 10% for the employees.

Sectoral distribution also verifies the edge of entrepreneurs over the employees excepting the case of petty trade where mean years of schooling of the owners is lower than that of employees. In case of age the same trend is exhibited by services. In general, however, one finds a positive association between the mean values of educaton for owner and employees across the sectors. For instance the owners of the repairs and whole sale trade have higher mean values of year of schooling than their counterparts in other sector. This is also borne out by a comparative ranking of employees too.

Migration & Place of Birth

Composition of owners (respondent) and the employees with respect to migration status and place of birth is suggestive of a higher ratio of migrants in the employees (77%) than the entrepreneurs (73%). Those born in South and Kordofan /Darfur, supposed to be affected by civil war and droughts since 1983

TABLE NO:9

Mean Age and Years of School of Operators and Employees by Sector

	Operator		Employees	
	Age	Years of Education	Age	Years of Education
Agriculture	34	7.7	N.A	N.A
Manufacturing	37	5.5	25	4.62
Trade	33	8.1	25	5.69
Petty Trade	26	3.7	22	5.65
Services	24	3.7	28	3.60
Repairs	35	7.0	24	5.75
Auto Repairs	31	5.4	22	5.30
Transport	33	5.7	20	4.74
Restaurant	42	4.4	25	3.30
Construction	41	5.4	28	5.30
Total	32	5.8	25	4.96

accounted for 28% of entrepreneurs and 44% of the employees. In comparison 46% of the entrepreneurs and 33% of the employees were born in rest of the Sudan excluding Khartoum who are regarded to be non-migrants. Thus a larger fraction of displaced population was found as employees than their counterparts. (See Appendix Table No:6)

Sectoral Distribution

Employees classification, according to broad sectoral classification is indicative of a major share of manufacturing sector employing more than two-fifths (42.7) of the total,(see table No:10). This is followed by trade (18.3) and auto repairs (12.4%), while the remaining employees are engaged in other activities. However the percentage of enterprises hiring wage employees is the highest for construction (100%) followed by auto repairs (91%). Only 71% of the enterprises in manufcturing hired 1193 workers yielding an average of 4.2 employee. Average employees per hiring firm is the highest for repairs (4.7), compared to overall average of 3.25 (see table No...) per employing firm.

TABLE NO: 10

Employment by Sector

Sector	No. of Enterprises Total	Percent Hiring Worker	Workers Hired	% of Employees	Mean No of workers
1. Agriculture	9	0	0		
2. Manufacturing	394	71 (280)	1193	42.7	4.2
3. Trade	419	50 (207)	513	18.3	2.5
4. Petty Trade	237	11.8 (28)	34	1.2	1.2
5. Services	208	21 (44)	109	3.9	2.5
6. Repairs	138	60 (83)	281	10.0	4.7
7. Auto Repairs	114	91 (104)	362	12.9	3.5
8. Transport (51)	189	39 (73)	100	3.6	1.4
9. Restaurants	41	78 (32)	182	6.5	2.5
10. Construction	6	100	19	0.7	3.2
Total	1745	(857)	2793	100.0	3.5

Note: Parenthesis denote actual number of enterprises hiring workers

LEVEL & DISTRIBUTION OF HOUSE-HOLD INCOME

House-hold income of the respondents can be worked out by putting three different pieces of information gathered in the survey. Firstly, the respondent was asked to provide net income from the enterprise after deducting all business expenses. Secondly the data on the net income from his secondary job were obtained and finally the information on income due to other members who eat regularly in the household was gathered. The questions on inflow and outflow of remittance were asked but its incorporation in the household income is problematic because one can hardly use remittances as an income on a regular and permanent basiswithout additional information. Thus the house hold income discussed below assumes away the remittances.

Similar to the enterprise income or profit the net income from the enterprise accruing to the household varies with business conditions, in a good, average or bad week. In principle for sole owner the net income or profit of the enterprises should totally be treated as household income, in case of partner and manager the two would differ. In addition to this, income arising out of the secondary activity of the respondent was reported only by 75 respondents. More than half of those reported, have earned less than Ls 200 during a good week. Additions to house hold income made by other household members have been reported by two-fifths of the respondents. Roughly in one-tenths of these cases these members added Ls 200 or less per month, however at the upper end (13% of the cases) such an addition was Ls 2000 or more during the month.

Mean household income for a week of average business conditions works out to be Ls 437. A good deal of variation around this mean value is yielded by the data. Whilst 3% of the households earned over Ls 2000, nearly one-thirds (31.8%) reported weekly income to be less than Ls 100. This sub-group also includes 81 respondents with no income. The remaining households, were in the range of Ls 100 to 500 weekly income (see appendix table No:7)

The composition and level of income by sector is provided in table NO:11 The importance of earnings of other family members in household income is borne out by the table. Roughly one-thirds of household income in the average owes to this source. The remainder of the household income is almost entirely accounted by the enterprise or business while the income due to secondary job or activity of the respondent being minor fraction of the total.

In terms of the sectoral composition household income level is the highest for transporters and the lowest for petty traders. In fact the household income of the latter is around one-fourths of the former. The top position of transporter owes to the heavy contribution of other family members because the income from enterprises is the largest in case of manufacturing. It may be noted that earnings of family members surpass the income from business in case of petty traders.

The per capita income by sector more or less replicates the ranking based on the total household income. Petty traders, repairers and service worker lie at the lowest rungs with per capita income being Ls 35 to 37, while transporters enjoy roughly three times of this level during the week.

Table No.11

Composition and level of Household Income by Sector

LS/week

Sector	Per-caita Income	Family Size No	Business or Enterprises income		Other Income Due to secondary work of respondent	Income due to other family members	Total H.H INCOME
Agriculture	70	6.94	274	(1283)	23	188.64	485.7
Manufacturing	72	8.3	473	(541)	18	105.1	596.7
Trade	67	7.1	279	(470)	7	188.9	475.2
Petty Trade	36	5.5	85	(92)	5	109.0	198.7
Services	35	5.8	117	(177)	13	75.8	205.4
Repairs	37	7.8	191	(331)	13	87.0	291.0
Auto Repairs	46	8.4	280	(249)	39	63.8	382.9
Transport	96	7.4	361	(675)	21	333	714.0
Restaurants	52	8.1	318	(491)	5	102	425.0
Construction	71	7.4	350	(410)	0	175	525
All	61	7.18		(402)		143	437

Parenthesis denote the net income of the enterprises wherein respondent operates.

Association between household income and few characteristics of the respondents is examined through bi-variate cross-tabulations. According to sex of the respondent female headed households earn (Ls 176) less than half of the male headed households. It may be added that famele headed enterprises and households were very few in numbers. A respondent who is partner has lower level of household income (1s 397) in comparison to owner (445) or manager (448). The difference between owner and partner is obvious because the latter gets a part of the enterprise income. The edge of manager over partner is explicable in terms of the size of the enterprise. Since only large sized establishments hire a mamager with a reasonable pay and other remuneration.

A bivariate cross-tabulation between education of the respondent and household income controlling for the sector of economy (see appendix table No:8) reflects a positive association between the level of general education and household income. Interestingly the vocationally trained respondent do not enjoy a similar level of household income as their counterparts with same level of general education but without vocational education. The association between education of the repondents however is weekened once activity or sector is controlled.

Migrant households have lower level of income than the natives. Further classification according to birth place reveals that respondents born in Southern Sudan on the average have household income (223) less than half of the natives (566). Those born in Kordofan/Darfur or rest of Sudan do perform better than their southern counterpart. The respondents who moved after 1983 are associated with lower level of income (252) than those who moved earlier or were natives. Household income fails to have a systematic association with years of business operation.

THE DETERMINANTS OF HOUSE HOLD INCOME

In order to assess the effects of various independent variable on household income of the operators, further investigation is made utilizing multiple regression framework. Keeping in mind that household income essentially is composed of the income from the enterprise or business and the income due to other family members, the determinants of net income or profit of enterprise naturally qualify as the relevant variable for household income. The fraction of enterprise income which flows to household is a function of the position of respondent in the enterprise. If he is sole owner enterprise income is the household income . In case the respondent is partner or manager the share of household in the enterprise income will be less than sole owner.

Family members' contribution to the household income, the second component as already discussed, on the average accounts for one-thirds of the household income, though in certain cases it could be the major source of household income. Unfortunately no information on the exact number or, age, education or nature of work of these contributing household members is available. Family size (F.S) is therefore used to simulate their effect on house hold income.

TABLE NO:12

OLS REGRESSION RESULTS FOR WEEKLY HOUSE HOLD INCOME OF THE INFORMAL SECTOR OPERATION

Independent Variables	Equation (1)		Equation (2)	
	coefficient	Tvalues	Regression coefficient	Tvalues
1. Age_2	8.96	(1.48)	-	-
2. $(Age)^2$	-0.12	(-1.47)	-	-
3. Year Business	-	-	-3.38	-1.34
4. Years Educ.	10.58	(2.46)**	9.79	(2.29)**
5. K	0.0005	(3.32)**	0.0005	(3.46)*
6. Labour	13.47	(1.73)*	14.18	(1.82)*
7 F.S	35.0	(7.66)**	35.41	(7.74)**
8. Owner	144.64	(2.66)**	139.88	(2.56)**
9. Repair worker	-270.91	(-3.02)**	-254.02	(2.84)**
10.Auto repair	-192.35	(-1.94)*	-179.17	(-1.82)*
11.Petty trader	-146.84	(-1.96)**	-168.41	(2.27)**
12.moved after 1983	-127.89	(-2.12)**	-144.64	(-2.50)**
Constant	-102.99	-0.796	76.35	(1.65)*
R-2	0.125		0.145	
DF	1739		1740	
F	12.16		18.38	

Regression results reproduced in table No:12 tend to replicate the associations found in case of the net income of the enterprise excepting the dummy variable used for owner which is highly significant and positive in this case as was expected. The human

capital variable of years of education is significant while age,(age) and years of business emerge to be insignificant even when only one of these is used to avoid multicollinearity discussed already. Capital (K) and size of the enterprise acquire expected signs with conventional significance levels. All the dummy variable for low income sectors emerge singificant. Smilarly the disadvantageous position of recent entrents, those who moved after 1983 is born out by the regression results.

Family size emerges to be highly significant variable of the household income. The co-efficient indicates that one additional family member is essociated with an increase of Ls 35.per week in the household income. The per cipata income on average being roughly twice of this coefficient lends an impression that returns to the family size must be declining. In other words it appears more or less a survival struggle.

WAGE LEVELS AND DISTRIBUTION IN THE INFORMAL SECTOR

Weekely wages ranged between Ls 2 to Ls 950. Free food by employers were provided to nearly half of the employees. Value of food provided ranged from Ls 1 to Ls 98 during the week. In addition 13% of the employers claimed to have paid medical bills of the employee while 19% paid wages during the sickness of the workers.

In consonance with enterprise and household income one finds a good deal of variation around weekely mean earnings of the employees reported to be Ls 87. One-fifths of the employee lying at the bottom earned Ls 34 or less per week. Nearly 50% of the employees were paid Ls 70 or less in contrast to Ls 180 or more for the top 1% employees. Weekly mean wages of the employees tend to vary with the workers' and employers' characteristics. Females though 1.6% of the total employees, earn substantially lower than males, with weekly mean wages being Ls 64 and Ls 88 respectively. Children (aged 15 years or less) accounting for 7% of the total employees, earn less than half of a worker of 26-59 years of age. There is a positive association between age and weekly wages till the age 59, thereafter the association gets reversed for the elderly (age 6o +). In a bivariate cross tabulation there is little discernible association between level of education and weekly wages. However, unskilled on the average get 57% of the wages of skilled worker, mean wages being Ls 62 and Ls 108 respectively.

Weekly wages by sector of the employees according to various characteristics are given in table No:13. Manufacturing, services and transport pay higher wages to full time worker than the remaining sectors. Employees in auto repair and petty trade are at the bottom in this ranking. To a large extent the mean sectoral

TABLE NO: 13

MEAN WEEKLY WAGE OF EMPLOYEES BY SECTOR AND OTHER CHARACTERISTICS

SECTOR	Ski-lled	Unsk-ille	SEX		Size of Firm					Wages	
			Ma.	Fe.	1	2	3-5	6-9	10+	Full Time	other
Manuf-acturing	122	63	101	56	64	93	84	112	113	105	67
Trade	95	62	75	91	64	66	74	89	100	78	47
Petty Trade	154	57	71	-	55	102	-	-	-	72	68
Services	109	76	99	67	91	54	99	167	-	98	60
Repairs	98	48	79	-	60	70	82	72	89	79	69
Auto Repairs	82	61	71	38	55	58	78	72	63	70	75
Transport	113	85	95	63	67	121	119	-	-	79	42
Restau-rants	92	59	73	-	-	63	76	72	73	76	48
Construc-tion	83	76	79	-	-	51	-	-	110	85	70

wages reflect the capacity to pay as proxied by mean sales. This is also substantiated by a positive association between mean weekly wages and size of the firm. For instance the mean wages for a one employee firm work out to Ls 65.00 and gradually rise to Ls 103 for the firm of 10 or more employees. Further examination of the determinants of employees earning is made using OLS regression frame work.

The Determinants of wages

The characteristics of workers such as age, experience, skill, and education alongwith those of the enterprise, such as capacity to pay, size, and whether or not the enterprise experienced expansion in production or employment, are likely to influence the wage outcome. Most of the variables pertaining to these broad classifications are used as independent variables in the regression. The results are reported in table No.13

Both weekly wages and their natural logrithm and hourly wages are used as the dependent variables. The results pertaining to the three equation reported in the table 13 reflect that the explained variance is maximum (0.29) in case when the LN wages are used as the dependent variable. The discussion of the results, below is mostly confined to this equation, though other equations are used for the purposes of comparison and exposition.

Workers' Characteristics

Age and its squared term emerged as a siginificant variable yielding a curvilinear relationship with wage. Since age captures the over all experience of the worker, the association is according to a priori expectations. The variable of job experience similarly

is highly significant positively influencing the employee compensation. An additional month of experience on the job fetches 0:10 Ls per week (see equation I). Years of education, the other human capital variable is significantly associated with the wages. One year of additional schooling adds Ls 0.67 to weekly wages.

TABLE NO:14

OLS REGRESSION RESULTS

Independent Variables	Equations Wages		Lnwage		Hourly Wages	
	B	T	B	T	B	T
AGE	4.08	(6.31)**	0.05	(8.31)**	0.59	(8.1)
(Age)	-0.04	-(4.50)**	-0.0006	(- 6.3)**	-0.006	(6.24)**
Yearsofedu	0.67	(2.08)**	0.009	(3.0)**	0.074	(2.1)**
Jobexp	0.10	(3.2)**	0.0008	(R.8)**	0.01	(3.9)*
Hours	4.61	(12.01)**	0.038	(10.39)**	-	-
Enterpise Sale	0.0005	(2.51)**	0.008	(3.98)**	0.0002	(1.2)
Firm Size	1.54	(4.30)**	-0.014	(4.14)**	0.16	(4.1)**
DUMMY VARIABLE						
Full time	-383	(-0.84)	-0.074	(-1.74)*	-1.74	(-3.5)**
Apprentice	-10.08	(-2.23)*	0.26	(-6.45)**	-0.26	(-6.5)**
Skilled	28.6	(8,96)**	0.33	(11.07)**	3.3	(9.3)**
Repair EMP	-18.0	(-3.99)**	-0.18	(-4.25)**	-2.10	(-4.2)**
Auto Rep EMP	10.9	(-2.65)**	-0.07	(-2.00)**	-1.04	(2.3)**
Restaurant EMP	-22.8	(-4.27)**	-0.15	(-2.98)**	-1.97	(3.4)**
South	0.004	(-0.23)	-0.02	(-0.42)	-0.60	(-1.1)**
KD	-4.4	(-1.52)	-0.001	(-065)	-1.26	(3.44)**
Increase prod	5.7	(1.65)*	0.07	(2.07)**	0.88	(2.31)**
Increase EMPL	6.61	(2.1)	0.05	(1.98)*	0.76	(2.32)**
KHT	-2.5	(-0.84)	0.0003	(-0.14)	-0.87	(1.58)**
CONSTANT	-42.6	(-3.7)**	2.83	(26.27)*	0.61	(0.52)
R-2	0.21		-	0.29	0.19	-
DF	2586		-	2586	2573	-
F	41.98		-	63,04	40.03	-

(*) 10% significance level.

(**) 5% significance level.

Skilled worker according to regression results gets 33% more than the unskilled while apprentice is paid 26% less than other employees. Both the variables are highly significant in all the three equations.

The compensation package of the workers appears to be insensitive to their birth places or migration status. Thus the natives, those born in Khartoum have no edge over the migrant worker. Similarly birth place does not matter. The dummy variables of South and KD both turned out to be insignificant when other variables were controlled.

Being full time employee, hardly appears to be rewarding. The dummy variable used as a poxy reflects a negative association with weekly wages, suggesting that full time employee gets 7% lower weekly wages in comparison to the control group. Although this variable is marginally significant, yet the direction of association bears interesting implications. The informal sector labour market is essentially a buyers market. The survey data reveal that very few employers (7%) hired labour during the past three month. Not a single employer expressed difficulties in hiring labour and no shortage was reported. Under these circumstances the worker may prefer to have a full time job at lower wages to a casual with higher wage rate, thereby maximising income by working longer. The regression results indicate that (see equation 3) hourly rates for full time employees are significantly lower than the casual or ther workers.

Employers' Characteristics

Capacity to pay of the enterprise simulated by weekly sales emerged to be a significant explanatory variable of wages of the employee. Similarly the firmsize indexing the scale of operation of the enterprise also qualified as a significant variable bearing

upon the employee' wages. According to the regression equation an increase in the firmsize by one employee leads to a rise of Ls 1.5 in weekly wages. The effect of growth in output and expansion in the employment experienced by enterprise since establishment was assessed by using the two dummy variables. Both of these variables emerged significant and had positive effect on employees compensation. Thus the emplyees in those enterprises which had either a rise in the production or expansion in employment get 5% and 7% weekly wages higher than their counterparts in the stagnant enterprises.

Employees working in the repair, auto repairs and restaurants are at a disadvantageous position in comparison to the control group. These employees are paid 7 to 18% less than the employees in manufacturing, trade and transport. This result alludes to imperfect mobility of labour as well as strong linkages between capacity to pay and workers' wages.

SECTION-5

NATURE OF GROWTH OVERTIME & PROBLEMS OF INFORMAL SECTORS

It had already been discussed in the introduction that relative share of informal sector in the labour market of urban Khartoum has risen overtime. The findings of the survey do suggest a compositional shift of the informal sector wherein activities such as petty trade expanded relatively more than others particularly the manufacturing. Whether or not this growth and shift was associated with higher or lower level of incomes, better working conditions and other facilities can hardly be inferred from a cross-sectional data at our disposal. Unfortunately there is a real dearth of data which could yield relevent information. Some attempts, very crude, are made below to address some of the questions.

A comparison between 1974 survey of informal sector in Khartoum and the current one is provided in table No:15. It must be noted that only infra-structural facilities and organisational elements can be compared and that even for two sectors (manufacturing & repair)

TABLE NO:15

KHARTOUMS' INFORMAL SECTOR 1974 & 1988

PERCENT OF ENTERPRISES

	Manufacturing		Repairs	
	1974-1988		1974-1988	
1. Fixed place of work	94	73	73	37
2. Remises owned	64	18	61	5
3. Single owner	97	71	94	81
4. No paid employee	73	29	50	26

The above table is reflective of worsening infra-structural facilities as indexed by decline in the fraction of those having fixed place. In other words the informal sector expansion has been more in open streets or temporary premises than in the permanent structure. A drastic decline in the ownership of the premises also emerges from the comparison. Although comparative data on size of the establishment are not available yet one finds a shift away from sole owner and towards hiring non-family labour as paid employee both in the manufacturing as well as repairs.

Non availability of data precludes any intertempral comparisons between enterprise or household income of the informal sector operators. Such an exercise pertaining to wages of the informal sector employee is made below. The tentative nature of the data for the base period should, however, be kept in mind.

TABLE NO:16

INFORMAL SECTOR EMPLOYEES WAGES 1974/1988

	1974	1988	% change
1. Average wages of informal sector			
employee Ls/week.	4.80	87	-
IN 1974 PRICES	4.80	3.84	-20
2. Unskilled labour in government			
grade 18 starting salary.	198	3540	-
IN 1974 PRICES	198	152	-24
3. Per capita GDP in 1974 prices.	94.4	79	-16

The above table essentially brings home the point that employees in the informal sector suffered a decline in their real

wages. The magnitude of this decline being smaller than the one reflected by government pay scale for the unskilled labour and larger than the per capita GDP implies that the stagnation and decline of the GDP brought in its wake relatively more sufferings for the wage employees than the remaining sections of the society.

The above inter-temporal comparison pertaining to wage employees also reflects a narrowing of the differential between formal and informal sector. The employees in the former still seem to enjoy edge over the latter however. Although minimum wage prescribed in the government pay scale for unskilled worker (works out to Ls 63 per week in 1988) is lower than the average wages (Ls 87) yet 48% of the informal sector employees were being paid less than this minimum. A similar comparison between the formal sector wages as yielded by a survey in Khartoum in 1989 with the data of informal sector support the above results wherein differentials are pronounced in case of educated in the formal sector. For instance the average weekly wages for workers with senior secondary education in the formal sector works out to Ls 173 in 1989 in contrast to Ls 89 for informal sector in 1988. Deflating the difference with the GDP deflator suggest that the formal sector employees with senior secondary education level were getting 33% more than their counter parts in the informal sector. Mean wages at the broad sectoral level of formal and informal sector represented below in table NO:17 recount the same story .

TABLE NO:17

COMPARISON OF WEEKLY MEAN WAGES BY SECTOR & FORMAL/INFORMAL

SECTOR	FORMAL		INFORMAL	
	monthly W. 1989	weekly W. 1989	weekly W. 1988	1988
1. Manufacturing	683	158	109	105
2. Hotels/restauran.	773	178	123	76
3. Services	741	171	118	98
4. Construction	879	203	140	85
5. Transport.	903	208	144	76

Note = 1 Col 2 = Col 1x12 divided by 52

Col 3 = Col 2x0.69 (GDP deflator)

Finally a comparison of the distribution of household income groups between informal sector operators and households in Urban Khartoum is made. The latter distribution is estimated and derived from the Migration and Labour Force Survey of Northern Sudan conducted in 1990. The survey data were currently in the stage of preliminary analysis and tabulations were available for all urban areas not for urban Khartoum. Thus two adjustments have been made. Firstly the 1990 income data have been deflated to 1988 prices using GDP deflator and secondly those income data were adjusted upward by a factor of 1.20 to reflect the higher income levels in Khartoum as observed in House Hold income survey of 1978-80. The resulting picture is presented below in table NO:18.

TABLE NO:18

PERCENTAGE DISTRIBUTION OF HOUSEHOLDS BY INCOME GROUP

1988

Income group Ls/week	Informal operators	khartoum urban estimated
Less than 50	12.5	6.2
51 - 100	15.9	18.3
101 - 200	22.2	24.2
201 - 400	18.5	30.2
401 - 500	9.3	21.1
501 - 1000	12.0	-
1000 +	9.7	-

The above comparison, given the limitations of the data is reflective of heterogeneity of the informal sector wherein informal sector operators can be found disproportionately both at the lowest and the top income group of the total. What needs to be highlighted is the relatively higher fraction of informal sector operators in the bottom or the lowest income group.

Preferences And Satisfaction of operators

An idea regarding the level of satisfaction enjoyed by the informal sector operators can be had from the responses to the question "given the opportunity what kind of work would you most prefer to do." Slightly less than half of the respondent (46%) expressed their preference to continue with this business only. In addition one-tenths would like to continue with this business and supplement it with another business (9%) or wage employment (0.8). The remaining respindents (45%) would prefer to give up this business.

As reflected by the Appendix table NO:9 around one-fifths (17%) of the respondents were interested to leave Sudan while 4% of the total expressed their preference for going back to rural areas. In terms of activities at broad sectoral level the level of satisfaction is lower in petty trade, services and repairs than the remaining activities. Only one-thirds of the operators in the former activities would like to continue. In contrast those satisfied in the later sector range from 56 to 64%.

The above is indicative of nearly half of the informal sector enterpreneurs being dissatisfied and would like to leave their business. A cross tabulation of preferences with household income suggests that both the household and per capita income of those who would like to continue (satisfied) are substantially higher than the dissatified. For instance those respondents who stated that they would prefer anything to the business they were locked in, have Ls 267 and Ls 38 as weekly household and per capita income. The fully satisfied enjoy income levels of Ls 588 and Ls 78 respectively. This correspondence between preferences and income is understandable. (see Table No:19).

Problems and constraints

In response to the question" what are the three main problem you face in your business" 88% of the respondents mentioned at least one problem. The data on first main problem indicate preponderance of shortage or non availability of raw material and spare parts. Almost two thirds of the responses fell under this response (see Appendix table NO:10). This is followed by lack of demand (9%) lack of spaces/accommodation (8%) and harrassment by the police or municipal authorities (7%). Interestingly enough not a single

TABLE NO.19

PREFERENCE OF INFORMAL SECTOR OPERATOR

BY WEEKLY HOUSEHOLD INCOME

PREFERENCE	% of Resp-onse	H.HOLD income Ls/week	PER capita income Ls/week
1.Continue with this business only	46.0 (787)	587.8	78.0
2.Continue with this and operate other	9,0 (154)	309.57	46.0
3.Continue this business and go into wage employ	0.8 (14)	261.75	38.0
4.Give up and start other business	14.0 (238)	243.72	38.0
5.Give up and go into wage employment	5.0 (83)	275.77	39.0
6.Give up and move to rural areas	4.2 (69)	353.61	43.0
7.Leave this business for any thing	4.0 (66)	267.29	38.0
8.Leave Sudan	17.0 (293)	335.36	45.0

( ) denote actual number of observations

respondent mentioned shortage of labour as a problem. Similarly lack of funds as a constraint was identified by an insignificant fraction (0.6%) of the respondents.

On the basis of broad sectoral activities the nature of main problem displays a good deal of variation. Lack or shortage of raw material appears to have higher level of incidence on the sector like tansport and manufacturing than the remaining while the services registered the lowest percentage of this response. Similarly lack of demand and harassment are mentioned by relatively higher percentage of respondents in services and petty trade than their counterparts engaged in other activities.

In an effort to examine association between the problems and the characteristic of enterprise or respondent one-finds an unholy alliance between poverty and harassment. Controlling for the sector of activity the respondent who mentioned harassment as their major problem are generally associated with the lowest level of weekly sales and profits. Similarly the fraction of the respondents born in South and Kordofan/Darfur expressing harassment as a main problem is higher than the natives or those born in rest of the Sudan. On the basis of years of operation of the business those with two years or less period registened a higher percentage of response under harassment. Furthermore a cross tabulation of preferences with problems indicates that a higher fraction of those who want to leave business indentified lack of demand, accommodation and harassment than those who would like to continue.

SECTION NO:6

CONCLUSION AND POLICY RECOMMENDATION

Informal sector in Khartoum, like other urban centers of the developing world, is predominantly a family based enterprise system. Nearly nine-tenths of the enterprises or shops were found to be operated and managed by owner himself or his relatives. More than half of the enterprises were relying exclusively on family labour. Those hiring labour employed roughly one-fourths of their work force from their relatives.

Spatial spread of the informal sector bespeaks of the inadequacy of infrastructural facilities. One thousand enterprises (shops) out of the total 1750 surveyed had no fixed place and were operating in open streets or spaces. Similarly less than one-thirds were having an access to electricity. It appears that population growth in Khartoum due to influx from outside as well as the high birth rate exerted its pressure on the informal sector. Almost half of the shops (enterprises) covered in the survey were established during the five years preceding the survey. This doubling of the size of the informal sector influenced both the composition of activities undertaken and strained the infrastrutural facilities which were already inadequate. The data reflect a substantial shift towards trade and services at the cost of manufacturing, a change also exhibited by overall Sudans' economy. Most of the new entrants in petty trade and services found themselves located in open street and with no fixed place of business.

Informal sector is characterized by a substantial diversity in asset structure, income and profits. This is displayed by values of buildings, tools, raw materials, finished goods and respondents estimate of the total worth of the business. Estimated or perceived worth of enterprise with a mean value of Ls 67700 and Median

Ls 10.000 is reflective of an inequitous distribution. For instance the top 200 enterprises have average worth of over Ls 400 thousands in contrast to 186 enterprises lying at the bottom with average value of Ls 42. This discrepancy and uneven distribution marks all the remaining indicators of the asset position of the enterprises.

Worth of enterprise bears out a positive association with the level of education of the owner operator and length of the life of the enterprise. Personal and family savings emerged to be the major source of financing the investment. Middle East emigration had a positive influence on the growth of informal sector. Around three-fifths of those who reported savings from work abroad as a source of funding fall in the two top size groups of initial investment.

Most of the respondents cited wholesaler as their major supplier of raw materials. Households were reported to be the major buyer of the goods and services produced by the informal sector. Very little linkages between the formal and informal sector were found. Similarly very few firms in the informal sector had contracts or orders from the government and public sector organizations.

Information on weekly sales and net income reflects a wide variation by business conditions as indicated by good, average and bad business week. Both sales and net income (profits) exhibit substantial inter and intra-sectoral variation around an overall mean values of Ls 1438 and Ls 402 of sales and net income in an average week. Petty traders, service and repair operators lie at the lower end of distribution while trade, manufacturing and agriculture occupy the upper end.

In a multiple regression framework the determinants of enterprise net income were assessed. The capital or state of technology as proxied by estimated worth of the enterprise emerged to be highly significant variable. Human capital variable such as education of the operator was also found significant and positively associated with net income of the enterprise. The variables of age or experience failed to acquire statistical significance. The variable of labour employed which simulates both the quantity of a factor of production used, as well as the scale of operation bears a positive association with net income,

One fails to find any link in a multiple regression framework between net income and birth place of entrepreneur. Also oft quoted disadvantage associated with being a migrant did not emerge. However those who moved during the preceding five years (1983-88) irrespective of their birth place were found to be earning around one-thirds less than the average, controlling for all other variables. It may be noted that this period is associated with high incidence of population mobility to Khartoum owing to civil war and droughts and resultant expansion of the informal sector.

Employment structure consisted of the self employed owner operators, family workers, hired managers and employees. Non-relative wage employees accounted for slightly over one-thirds of the total work-force engaged in the informal sector, the remaining was made up of self employed operators, family workers and wage employees who were relative of the owners. Informal sector operators as well as employees were found to be predominantly male. Female representation in the employees and owner operators was insignificant being 1.5% and 2.4% respectively. Even among the family workers female accounted for 3% of this sub-group.

Nine-tenths of the total employees were full time while the remaining being casual or part time. A substantial fraction (14%) of the employees were reported to be working as apprentices. This highlights the role of informal sector in human capital formation.

In comparison to self employed owners the employees were found to be younger and less educated. Mean years of age and education were higher for the former than the latter, while one-fifths of the owner operators were having secondary or higher level of education, the employees with this level of education were only 10% of the total.

Nearly one-thirds of the household income of the respondents (owner operators and managers of the enterprise) on the average was accounted by the contribution of family members working outside the enterprise. The remaining two-thirds was due to enterprises operation. A good deal of variation around the mean level of weekly household income of Ls 437 is reported. While 3% of the households earned over Ls 2000, roughly one-thirds were having Ls 100 or less as weekly household income. In terms of the household classifications by sector of activity the transporters top the ranking while the petty traders lie at the lowest position. In fact the household income of the latter is around one-fourths of the former. An assessment of the determinants of household income using the OLS regression framework replicates the results obtained in case of the net income of the enterprise. The additional significant variable being the size of the family having a positive association with household income.

Weekly wages of the employees ranged between Ls 2 to 950 with an average value of Ls 87. Female and children were paid less than their male counterparts. Females were paid three-fourth of wages of males while children aged 15 years or less earned less than half of

an adult male worker. Unskilled worker got 57% of the wages of the skilled. Employees in auto repairs and petty trade lie at the bottom of the wage distribution.

The characteristics of the workers such as age, experience, skilled or not and education level alongwith the capacity of the enterprise to pay emerged as significant explanatory variables of wages in a multiple regression analysis. The capacity to pay was simulated by weekly sales and size of the firm. Employees working in repairs, auto repairs and restaurants were found at a disadvantageous position earning 7 to 18% less than their counterparts in other sectors. This finding is reflective of imperfect mobility of labour as well as strong linkages between capacity to pay of the firm and the weekly wages.

Non-availability of adequate data precludes any inter-temporal comparison which could afford inferences regarding the nature of growth in the informal sector. However a comparison between 1974 survey of the informal sector with the existing one revealed worsening of infra-structural facilities wherein the fraction of the enterprises having fixed place for business declined. Similarly there has been a drastic decline in the ownership of the premises by the operators.

A crude exercise is indicative of a decline in the real wages of the informal sector employees. The magnitude of this decline was smaller than the one reflected by the government pay scale for the unskilled labour and larger than the decline in per capita GDP. This is suggestive of a higher level of sacrifices for working class and wage employees than the other sections of the society in the wake of stagnation and decline of the economy.

In another crude attempt to make a comparison between household income distribution in the urban Khartoum and that of the informal sector a heaviar concentration of informal sector operators in both the lowest and top income groups than all Urban Khartoum was found. In other words informal sector has relatively larger representation among the low income groups and poor. Similarly one finds that while the average wages in the informal sector are more than the minimum wage but more than half of the wage employees in the informal sector earn less than the minimum in the government scales.

Because of the low level of income less than half of the entrepreneurs expressed their preferences to continue in the informal sector. For instance 45% of the respondents registered their preferences for leaving the business. It may be noted that one-fifths of the respondents wanted to leave Sudan. Shortage and non-availability of raw materials and spare parts was identified as a major problem being faced by the majority of operators. Lack of demand and lack of space or accommodation were cited as main problems by nearly one-tenths of the respondents. Similarly 7% of the respondents stated harassment by the police or municipal authorities as a major problem. Interestingly not a single respondent mentioned shortage of labour as a problem.

Policy Recommendations

That the informal sector in Khartoum performed more or less as a labour market sponge during the past decade or so bears similarity with the experience of many other countries in Sub-Sahara Africa. In its course of expansion income and wages of those engaged in the informal sector suffered a decline in real terms probably larger than rest of the society had to undergo in the wake of worsening economic conditions, though subsistence at the margin may have been permitted. No wonder around half of those engaged in the informal sector expressed their dissatisfaction and preference to quit for any better job or work.

Ironical, it may appear, the informal sector rather than unloading the labour has to increase it share of intake in the future because both the segments of formal sector, public as well as private, will not be able to absorb the incremental labour force in urban areas. This is particularly difficult under the conditions when public sector is being regarded as overstaffed and efforts are underway for redeployment of surplus staff, while development of private modern sector requires heavy doses of investment. A JASPA study for instance predicts that 93 percent of all additional job in urban Africa will need to be generated in the informal sector during 1990s'. Given the importance of informal sector at present and its future likely role there is a need to have a small enterprise development policy and plans at the macro level.

Since the conduct of this survey in 1988 many policy changes have been introduced in Sudan. Pertinent to problems of the informal sector operation is the introduction of" commercial investment scheme" in September 1990. Uunder this scheme private sector is allowed to import a wide range of goods on self financing basis and to fix prices on the basis of actual costs. In other words the

pricing of foreign exchange at the unofficial (free) market rate is permitted. Under these conditions availability of raw materials and spare parts, a major problem mentioned by three fourths of the operators, in principle should have eased. However affordability may have become a menacing factor because majority of informal sector entrepreneurs have limited financial resources to buy important raw materials at free market prices.

The financial institutions therefore have to play a major role in improving the the situation. Currently whatever credit facilities, available to private sector, are mostly enjoyed by the large traders (Import/Export) agriculture and large scale manufacturing. There is a need to specify credit allocations for informal sector and small enterprises.

A task force of local experts and officials may be constituted to identify the problems and recommend measures to improve the functioning of the informal sector. There is a need a identify the products to be fabricated and manufactured by small scale enterprise, which are currently imported. In addition existing composition of informal sector is heavily trade oriented which needs to be balanced by encouraging the manufacturing through supportive policies and enabling measures.

Present regulations and procedures need to be simplified. Too many clearances and permits tend to be frustrating and increase vulnerability to harassment by police or members of other similar organisations. Introduction of a one window clearance system for setting up of a small business or workshop may be considered.

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APPENDIX TABLE NO: 1

Mean values of Ask Price Etc by Sector Ls

Sectors	Raw Materials	initial invest.	Ask price	Cost of Elec.
1. Agriculture	2826 (5)	6577 (4)	111320	65 (5)
2. Manufacturing	3861 (301)	10965 (299)	108205	157 (206)
3. Trade	12773 (134)	16254 (268)	89689	128 (181)
4. Petty Trade	927 (89)	420 (215)	3874	77 (11)
5. Services	374 (139)	2329 (175)	26304	137 (35)
6. Repairs	3602 (74)	3830 (114)	53061	95 (57)
7. Auto Repairs	3857 (22)	3321 (104)	25842	100 (22)
8. Transport	1176 (128)	19816 (112)	50188	105 (6)
9. Restaurants	428 (32)	13462 (31)	46893	203 (12)
10. Construction	N.A	500 (5)	101700	N.A

Parenthesis denote actual number of observation.

APPENDIX TABLE NO:2

RESPONSES ON SOURCE OF FUNDING BY SECTOR

(Numbers)

Source of F U N D	Agriculture	Manufacture	Trade	Petty trade	Services	Repair	Auto repairs	Transport	Restaurant	Construction	TOTAL
own saving from work abroad	1	30	27	1	1	4	9	36	8	0	112
own saving from wage employment	2	209	158	102	102	86	77	53	26	5	834
Family saving	0	16	26	43	23	5	0	9	0	0	122
Banks	0	4	1	1	1	3	0	2	0	0	12
loan from rrlating	0	11	20	29	9	9	3	4	0	0	85
Loan from local money lenders	0	6	8	1	0	1	1	6	0	0	23
Saving from this business	0	28	17	10	9	7	13	1	0	0	85
Income from form	0	3	11	6	2	1	1	2	2	0	28
Other	0	3	7	10	8	5	1	2	0	0	36
T O T A L	3	310	275	210	162	121	105	115	31	0	1337

APPENDIX TABLE NO: 3

SUMMARY INFORMATION BY SECTOR

Sectors	Employees		Hours/day Average	Buy Coop % (Nos) Enterprises	Sell Coop % (No) Enterprises	Enterprises % having LT Five customers Per day
	No.	%				
1. Agriculture	0	0	11	10 (1)	10 (1)	50
2. Manufacturing	1193	42.7	9	23 (92)	9 (37)	75
3. Trade	513	18.3	10	5 (22)	1 (6)	17
4. Petty trade	34	1.2	9	2 (5)	2 (4)	10
5. Services	109	3.9	9	0 0	0 0	32
6. Repairs	281	10.0	9	6 (8)	2 (3)	64
7. Auto Repair's	362	12.9	9	4 (5)	2 (2)	70
8. Transport	100	3.6	10	4 (7)	2 (4)	36
9. Restaurauts	182	6.5	10	2 (1)	0 -	0
10. Construction	19	0.7	8	0	0	100

APPENDIX TABLE NO : 4

Sales & Net Income by Education of Respondents & Organization of Enterprise.

Education	No. of Establish-ment	Sales	Net Income	Ask Price
Never	273	902	255	19894
Halwa	200	851	278	35080
Primary	614	1161	338	40643
Intermediate	283	1655	559	69960
Secondary	237	2312	572	130816
Tech.Vocat	14	1332	405	122777
T.V Secondary	36	1657	407	130558
College Unv.	66	2771	633	198241
Others	15	5897	550	103603
Owner	1216	958	288	40431
Partner	155	1676	440	87281
Manager	378	2891	756	123867

APPENDIX TABLE NO : 5

Mean Household Income and Family Size by Respondents' *of Birth and Years of Business Operation*

LS/week

Years of Business Operation	*Birth Place*											
	South		*Kordofan & Darfur*		*Khartoum*		*Rest of Sudan*		*Total*	*F.S*
	Income	*FS*	*Income*	*FS*	*Income*	*FS*	*Income*	*FS*		
0 - 2	*151*		*249*		*587*		*371*		*367*	
	(40)	*4.68*	*(166)*	*5.29*	*(125)*	*7.06*	*(265)*	*6.34*	*(596)*	*6.09*
3 - 5	*349*	*11.92*	*418*		*571*		*456*	*7.22*	*478*	
	(12)		*(71)*	*7.8*	*(100)*	*7.02*	*(156)*		*(339)*	*7.45*
6 - 10	*252*	*6.47*	*239*		*704*	*8.89*	*488*	*7.54*	*479*	*7.54*
	(15)		*(75)*	*6.13*	*(89)*		*(159)*		*(338)*	
11 - 15	*261*	*8.00*	*397*		*640*	*7.41*	*785*	*7.80*	*627*	*7.37*
	(10)		*(38)*	*6.29*	*(32)*		*(76)*		*(156)*	
16 +	*290*	*8.13*	*338*	*9.57*	*427*	*9.06*	*371*		*388*	*8.48*
	(8)		*(42)*		*(130)*		*(142)*	*7.64*	*(322)*	
All	*223*		*302*		*566*		*450*		*437*	
	(85)		*(392)*		*(479)*		*(798)*		*(1751)*	*7.18*
FS	*6.73*		*6.45*		*7.96*		*7.12*			
PERCAPITA LS	*33.1*		*46.7*		*71.1*		*63.2*		*60.8*	

FS Denote Family Size

( ) Parenthesise denote number of observation

APPENDIX TABLE NO : 6

Birth Place of Operators & Employees

	Entrepreneurs		Workers	
	No.	%	No.	%
South	85	4.9	221	7.9
Kardofan Darfur	392	22.3	1012	36.2
Rest of Sudan	798	45.5	923	33.0
Khartoum	476	27.2	641	23.0
	1751	100.0	2793	100.0

Appendix Table No. 7

House Hold Distribution by Sector & Size of Income Group (No's)

LS/week

Sector	0	1-50	51-100	101-200	201-500	501-1000	1001-2000	20001-5000	Over 5000D
Agriculture	1	1	1	0	5	1	2	0	0
Manufacturing	12	29	43	83	111	54	37	21	2
Trade	35	40	56	73	107	57	30	15	3
Petty Trade	6	56	54	56	48	11	5	1	0
Services	8	47	36	51	49	12	5	0	0
Repairs	5	17	30	33	33	11	8	1	0
Auto Repairs	3	8	16	34	33	14	5	0	1
Transport	8	10	26	33	62	29	13	4	4
Restaurants	2	2	4	7	15	9	2	0	
Construction	1	0	0	0	1	3	0	0	
All	81	210	266	370	464	201	107	42	10

Appendix Table No.8

Mean Household Income by Sector & Level of Education of Respondent

LS/ week

Sector	No	Khalwa	Prim	Education Level Inter	Secondary	Tech. Voc.PPR	T.V P.SE	College Univ.	Other	All LS/week
Agriculture	50	N.A	336	387	658	N.A	N.A	1200	N.A	485.7
Manufacturing	531	575	553	688	863	467	594	549	414	596.7
Trade	265	347	368	673	508		347	744	304	475.2
Petty Trade	121	176	214	290	373	40	150	275	N.A	198.7
Services	142	165	227	128	344	N.A	732	1500	113	205.4
Repairs	380	337	208	262	302	533	458	338	N.A	291.0
Auto Repairs	202	283	306	354	932	393	1100	N.A	N.A	382.9
Transport	766	274	389	1463	901	N.A	N.A	669	N.A	714.0
Restaurant	381	324	472	196	897	N.A	N.A	450	N.A	425.0
Construction	N.A	N.A	406	1000	N.A	N.A	N.A	N.A	N.A	525.0
All LS/week	305	333	372	605	595	422	509	640	308	437
No's	(286)	(200)	(614)	(283)	(237)	(14)	(36)	(66)	(15)	(1751)

APPENDIX TABLE NO:9
PREFERENCES BY SECTOR

(Numbers)

PREFERENCES	Agriculture	Manufacturing	Trade	Petty Trade	Services	Repairs	Auto-repairs	Transport	Restaurants.	Construction.
Continue	1	217	184	72	57	62	70	96	25	3
Continue but also start after one	3	32	34	18	18	16	9	20	4	0
Continue but also take wage employment.	0	5	3	2	2	1	0	1	0	0
Give up this and start another business	2	25	58	45	53	13	7	19	5	1
Give up and go to wage employment	1	7	17	27	20	2	0	8	1	0
Give up and move to rural areas	1	17	12	21	4	5	2	6	1	0
Any job but not this one	0	12	17	14	14	2	1	4	1	1
Leave Sudan	3	58	75	29	36	36	21	32	3	0
T O T A L	11	383	400	238	204	137	110	186	40	5
otally satisfied	9	56	46	30	28	45	64	52	63	60
artially atisfied	33	10	9	8	10	12	8	11	10	-
Not satisfied	58	34	45	62	62	43	28	37	27	40
eave Sudan	33	15	19	12	18	26	18	17	8	-

Totally satisfied - Responses (1)
artially satisfied - Responses 2 or 3
ot satisfied - Responses 4 to 8

APPENDIX TABLE NO:10

PERCENTAGE DISTRIBUTION OF ENTERPRISES BY SECTOR AND PROBLEMS

Problem/Sector	Agricultu	Manufactu	Trade	Petty trade	Ser-vice	Repair	Auto rep-	Transport	Restauran	Con-structio
1.Shortage of raw material	73	76	67	49	38	70	63	81	68	100
2.Transport problem	-	1	1	3	-	2	1	2	-	-
3.Lack of accommodation	-	7	4	13	12	6	24	-	-	-
4.Electricity		5	2	-	5	2	2	1	8	-
5.Rise in prices of raw materials	9	5	9	6	4	6	-	3	19	-
6.Lack of Demand	9	4	12	9	13	10	8	10	5	-
7.Harrasment	9	1	3	20	26	4	-	-	-	-
8.Shortage of funds	-	1	2	-	-	-	1	2	-	-
9.Increase in taxes	-	-	-	-	-	-	1	-	-	-
10.License	-	-	-	-	-	-	-	-	-	-
11.Water supply	-	-	-	-	2	-	-	-	-	-
T O T A L	100	100	-	-		-	100	100	-	-

APPENDIX TABLE NO:11

MEAN & MEDIAN VALUES OF AVERAGE RECEIPTS, PROFIT AND WORTH OF ENTERPRISE, MEAN AGE AND YEARS OF SCHOOLING OF ENTERPRENEURS BY OPERATION YEARS OF BUSINESS

Operation		SALES		PROFIT		ASK PRICE		AGE YEARS		Years of School
year	No.	Mean	Med	Mean	Med	Mean	Med	Mean	Med	Mean
All	1751	1438 (4181)	400	402 (1337)	150	62551 (165985)	6000	32	30	5.8
0-2	596	1090 (2854)	300	269 (632)	100	36261 (107021)	1450	26.9	25.0	5.9
3-5	339	1827 (5005)	500	577 (2433)	180	71947 (179109)	12000	30.4	29.00	6.7
6-10	338	1485	500	510 (1353)	177	79542 (196024)	10000	31.8	30.5	6.3
11-15	156	1185 (2059)	400	360 (671)	150	42541 (110979)	5250	34.8	35	5.0
16+	322	1746 (6307)	500	372 (745)	150	93178 (214681)	10000	43.7	43.0	4.2

APPENDIX TABLE NO:12

AVERAGE INITIAL INVESTMENT BY SECTOR AND SIZE GROUP OF INVESTMENT

nitial nvestment	Agric-ulture	Manuf-actur	Trade	Petty trade	Servi ces	Repair	Auto repair	Trans port	Resta urant	Const-ructio
Ls.	mean	mean	mean	mean	mean	mean	mean	mean	mean	mean
0...	.	.00	.	.00	.	.00	.00	.00	.	.
1-100	10.000	54.58	51.21	50.39	28.14	59.39	59.08	44.00	34.50	100.00
01-200	-	162.8	170.00	165.24	100.00	187.25	121.43	161.67	137.32	-
0 -500	-	401.73	367.14	364.83	341.36	373.54	358.33	375.00	483.33	466.67
0 -1000	-	427.48	876.04	783.33	833.33	846.15	905.56	910.00	765.00	1000.0
01-5000	2000.0	2510.0	2834.7	2176.9	3000.0	2312.5	3200.0	3356.3	2966.7	-
0 -10000	-	8463.2	8322.0	6000.0	8000.0	7428.6	7400.0	7505.6	2500.0	-
0 1-50000	12150	27091	28324	14000	26250	22200	28100	24310	22833	-
0001-More	-	86666	84416	-	86666	99999	80000	83750	75000	-
L	6577	10965	16254	419	2329	3797	3290	19641	13462	500.00

APPENDIX TABLE NO : 13

WEEKELY MEAN SALES & NET INCOME BY SIZE

Sales LS/week

NET INCOME SIZE LS	1 - 100			101 - 500			501 - 1000			1001 - 5000			5001 +			T O T A L		
	NO.	AR	AP	NO.	AR	AP	NO.	AR	AP	NO.	AR	AP	NO.	AR	AP	NO.	AR	AP
0 - 50	7	65.7	0	11	225.9	0	0	-	-	11	2307.3	0	0	-	-	29	976.7	0
51 - 100	236	63.9	24.1	379	239	68.1	59	804.4	81.3	25	2071.2	78.4	0	-	-	699	293.1	58.5
101 - 200	0	-	-	349	723.9	197	167	673.9	284.4	199	2154.5	298.5	14	9412.5	375.6	714	1086	247.3
201 - 500	0	-	-	7	233.3	666.7	50	-	673.9	96	2281	835.1	16	9156.3	791.9	165	2493	779
501 - 1000	0	-	-	0	-	-	0	-	-	56	2578.9	1737.1	49	12499	2288.8	105	7207.8	1994.6
1001 - 5000	0	-	-	0	-	-	0	-	-	0	-	-	14	24649.9	10696.4	14	24649.9	10696.4
5001 +	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	243	64	35.1	741	278.6	130.1	272	795.4	311.9	377	2248.7	625	93	13287.9	3008.9	1726	1461.1	408.6

Note = No. (Number of Enterprises).
AR = Sales in an average week.
AP = Net Income (Profit) in an average week.

APPENDIX TABLE NO: 14

EMPLOYEES CHARACTERISTICS BY SECTOR

SECTOR	Mean Hours	Time KHT	Mean Age	Job EXP	Yers of School	Wages Full time	No.of Workers
1.Agriculture	NA	NA	NA	NA	NA	-	-
2.Manufacturing	9	11	25	34	4.62	105	1193
3.Trade	9	11	25	32	5.69	78	513
4.Petty Trade	9	11	22	28	5.65	72	34
5.Services	10	13	28	39	3.57	98	109
6.Repairs	9	13	24	44	5.75	79	281
7.Auto Repairs	9	11	22	36	5.30	70	362
8.Transport	11	7	20	14	4.74	97	100
9.Restaurants	9	9	25	31	3.30	76	182
10.Construction	8	12	28	18	6.32	85	19
T O T A L	9	11	25	34	4.96	87.25	2793

APPENDIX TABLE NO : 15

Mean Values of Average Receipts& Profit by Province of Birth of Respondent & Operation Years of Business

Operation year	South				Kordofan S Darfur				All other except Khartoum				Khartoum			
	N	Average Rcpts	Average profit	Ask price	N	Average Rcpts	Average profit	Ask price	N	Average Rcpts	Average profit	Ask price	N	Average Rcpts	Average profit	Ask price
0-2	40	399	106	15561	166	609	162	14026	265	974	270	42593	125	2198	461	58990
3-5	12	2182	499	125404	71	1141	507	46010	156	1626	635	82420	100	2586	546	67610
6-10	15	791	187	76347	75	617	275	17278	159	1783	590	74963	89	1802	621	140732
11-15	10	696	219	8118	38	893	463	23820	76	1075	305	32873	32	1948	413	98494
16+	8	2123	287	148679	42	1257	226	71909	142	431	389	70890	130	2226	406	12098

Note:

N = Number of observation (enterprises)
Average RCPTS = Weekly sales in LS in an average week
Average Profit = Weekly profit or net income of the enterprise in an average week.
Ask Price = Estimated Worth of the enterprises.

APPENDIX TABLE NO:16

WEEKLY MEAN & MEDIAN PROFIT WORTH OF ENTERPRISE MEAN AGE AND YEARS OF SCHOOLING OF ENTREPRENEUR BY BIRTH PLACE

						LS		YEARS	
BIRTH PLACE		AVE.RECPTS		PROFIT		ASKPRICE		AGE	YRS OF
LACE	No.	Mean	Med	Mean	Med	Mean	Med	Mean	SCHOOL
outh	85	917 (2468)	200	205 (413)	75	53448 (194340)	350	26.2	5.4
Darfur and ordofan	392	804 (2387)	240	282 (827)	100	27592 (121862)	500	27.4	3.6
Khartoum	476	2196 (6508)	650	490 (985)	200	95670 (197957)	25000	35.8	7.5
All other	798	1353 (3021)	500	429 (1726)	150	60938 (156863)	10000	33.4	5.8
T O T A L	1751	1438 (4181)	400	402 (1337)	150	62551 (165985)	6000	32	5.8

) Paranthesis Denote Standard Deviation