RURAL-URBAN DUALISM AND THE CONSUMPTION BEHAVIOUR OF KENYAN HOUSEHOLDS

BY

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A research paper submitted in partial fulfilment of the requirement for the degree of Master of Arts in Economics, Department of Economics, University of Nairobi.

This research paper is my original work and has not been presented for a degree in another University.

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

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A B S T R A C T

The Integrated Rural Survey, 1974-1975 and the Urban Food Purchasing Survey, 1977 are analysed separately to test the hypotheses: first, that urban marginal propensity to consume is lower than the rural marginal propensity to consume, and second, that the urban marginal budget share for non-food is higher than the urban marginal budget share for food, and that the rural marginal budget share for food is higher than the rural marginal budget share for non-food Ideally, especially given a proper data base, the theory that the marginal propensity to consume and the marginal budget share for food are higher for the rural sector than they are for the urban one.

The marginal propensity to consume and the marginal budget share calculated and analysed separately for both urban and rural data in this study, do not argue strongly for the hypothesis, but one fact is strongly supported, that the higher the income, the lower the marginal propensity to consume in total and for food for both sectors. The marginal budget share also declines with rise in income for both sectors. The major deciding factor in the consumption of the households in both sectors is income.

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AMEN.

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CHAPTER 1

INTRODUCTION.

A prominent phenomenon in developing economies is dualism, the rural urban difference being one of its main features. Therefore a disaggregation of the household consumer into the rural-urban dichotomy is quite representative of the demand (consumption) patterns of a developing economy.

The fact of the urban-rural difference has been recognized in Kenya, but as indicated in Chapter 2, the similarities and interactions between the two should not be overlooked. The difference between the rural and urban sectors may, for instance be necessitated by the nature of the urban-environment.

Empirical literature supports the existence of the urban-rural difference in consumer and demographic behaviour and production conditions[1]. The three put together form a complete empirical basis for the rural-urban dichotomy and provide a geographic-specific interpretation of dualism. Available literature however indicates that the former two have not received adequate attention-hence my decision to

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[1] Kelley, Williamson and Cheetham; Dualistic Economic Development. (University of Chicago Press, 1972.)

pick on the first; consumer behaviour within the rural-urban context.

Moreover, there is a need for a criteria for bisecting an economy into analytically and empirically meaningful units. An addition to the empirical justification is that the rural-urban division can allow an explicit examination of Engel-Effects.

There are many reasons why the analysis of household demand is important. Some of the prominent reasons are: first, that Kenya being a developing country, with many aspects of the economy also changing, so does personal demand and so consumption. In particular, commodity composition of personal demand varies with prices and income; it follows then that an economy with a growing per capita income may require a changing balance among its productive sectors and activities. Personal consumption expenditure represents final demand on the productive sector, which in meeting these demands generates wages and profits. Lack of final demand on the productive sector may therefore result in unemployment and excess capacity[2] both of which are chronic problems of the Kenyan economy . Second, to the extent that import and export

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[2] J.Tobin , Essays in Economics: consumption and Econometrics. Vol. 2. Amsterdam, Northholland Publishing Co., 1975.

content of consumer goods varies, a changing pattern of demand may have implications for external trade and international financial management. Thirdly, the government may wish to redistribute income to improve general welfare; a change of redistribution will affect aggregate consumer demand in a way that needs to be anticipated. Fourth, domestic savings need to be mobilised to make feasible growth targets of the Kenyan economy. If savings are taken as a surplus of income over consumption, a proper understanding of consumer demand behaviour implies additional knowledge of the saving behaviour of the economic units and so of the relevant community.

The analysis of the Integrated Rural Survey data (IRS 1) gave a marginal propensity to consume higher for food than for non-food. The aggregate margianl propensity to consume is however lower than would be expected for a rural community. The marginal budget share for food is higher than that for non-food.

The Urban Food Purchasing Survey data (UFPS) gave an aggregate marginal propensity to consume higher than that for(IRS 1) data. The marginal propensity to consume for food was higher than that for non-food. The marginal budget share was also higher for food than for non-food. This does not support the hypothesis that the

marginal budget share for non-food is higher than that for food in the urban sector.

Income is the one factor that strongly influences the results. The detailed analysis of the study is given in Chapter 4. Chapter 2 gives a general description of Kenya as a background into which to fit the analysis. Chapter 3 gives a short literature review on various studies on consumption in development and the consumption of developing economies as seen by different development economists. Chapter 5 gives the conclusion and the policy implications of the study.

CHAPTER 2

KENYA : THE COUNTRY AND ITS DUALISM

A. A General Description of the Country.

Kenya lies on the Eastern Coast of the African land mass, extending 4 degrees on each side of the equator. There are vast stretches of plateau land, interrupted by the Rift Valley that runs through the entire length of the Country from North to South. In the valley are several lakes starting from Lake Turkana in the north to Lake Manyara in the South. Mount Kenya, an extinct volvano, is the highest mountain. Kenya's neighbours are Somali to the North East, Ethiopia to the North, Sudan to the North West, Uganda to the West and Tanzania to the South.

Kenya is endowed with a wide range of physical features affording a wide range of vegetation and changing limitations on the use of land. Land is a scarce resource in Kenya. Out of a total of 582,646[3] square kilometres, only 99,050 or 17% of the land is cultivable, 2.3% of the area or 13,396 square kilometres is covered by water, and 2.2% or 12,950 square kilometres is covered by forests and woodlands. The rest of the land is semi-arid with marginal rainfall. This semi-arid proportion supports a very small proportion of the population. Indeed 80% of the population lives on the 17% of the good agricultural land.

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[3] Africa July, 1981. 10th Anniversary Edition, pp.95-114.

In Kenya altitude governs the climate. Land above 500ft enjoys a temperate climate with fairly good rainfall. Being on the equator however there are no marked seasonal changes. For most parts of the country there are two rainy seasons.[4] On the high ground to the east of the rift, there are long rains from March to May and short rains from November to December. The Coast has a hot humid climate; and the trade winds which blow from the sea most of the year keep the temperature from soaring above 100°F. The hottest months are February and March; July and August are the coolest with a mean temperature of 68.5°F. Temperature in Nairobi varies from a mean maximum of 82°F in February to a minimum of about 52°F in June and July. Nakuru's temperature varies from 85°F to 4°F., Kisumu from 87°F to 6°F[5]. Altitude has even a more dramatic effect on rainfall. Rainfall varies from over 2540 mm a year around Mt. Kenya to less than 254 mm a year in the northern lowlands. Over a greater part of the country the rain falls in distinct seasons. This variation in the rainfall is characterised by a high degree of unreliability with periodic droughts and floods. The influence of variation and the unreliability of the rain is keenly felt in the agricultural sector, the mainstay of

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[4] Kenya: The Country and Economy. IBRD Report, John Hopkins Press, 1962.

[5] Africa, Loc.cit.

the majority of the Kenyan population. The area capable of intensive cropping or grazing without irrigation is limited to a narrow strip along the coast and to the higher altitudes which have higher probability of rainfall - 35 in or more. The greater part of Kenya can support extensive grazing. The potentiality for increasing the cultivated area is limited by the availability of water.

At independence, Kenya inherited a dual system of land tenure and a policy based on racial and ethnic ownership of land. Before independence, the Kenya highlands (white Highlands) were preserved only for European Settlers. The Africans were confined to "native reserves". Most of the land in the highlands was leased for 999 years from the British Crown.[6] The reserves were held under various customary tenures of the ethnic communities that occupied them. The independent government of Kenya adopted a dual land reform policy which consisted of an orderly transfer of land from foreign to indigenous ownership. The programme of adjudication and registration was intensified with the intent of introducing the European forms of land tenure and ownership.

Agriculture is the backbone of the Kenyan economy. It contributes over one third of the country's GDP. It

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[6] Africa, Loc. cit.

accounts for the larger part of the working population and supplies most of Kenya's exports. The essential food stuffs and Agricultural Commodities are grown and/or produced in the country. The most important cash crops are coffee, tea, rice, cotton, pyrethrum, sugar-cane, maize, wheat, sisal and horticultural crops. Maize is a traditional crop and the staple food for the populace.

Kenya is one of the countries with the fastest growing population in the world. Her population of 16 million (1978 census)[7] is mainly rural in composition and only Nairobi and Mombasa are the towns with population above 300,000. The current annual growth rate is 3.5% and the urban growth rate is 7%. Over 90% of the population lives in the rural areas. In some districts there are more than 1000 people to the square mile forming what are among the most densely peopled parts of Africa.[8] The capacity of the land to yield a livelihood does not always match the pattern of population distribution. For instance, in the most thickly peopled areas of Nyanza (Kisii district in particular) and Vihiga in Western province the reluctance of the people to leave the security of their established homes to settle in new areas and the division of land on ethnic tenure systems have restricted

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[7] Kenya Facts and Figures; (Central Bureau of Statistics. Ministry of Economic Planning and Development, 1980.)

[8] Africa, Loc. cit.

mobility to more productive areas which would support them better under present techniques of production. Rapid growth of the urban industrial sector since independence has however, attracted the majority of the urban population especially the young and educated,[9] to seek for more remunerating jobs and better and modern social amenities. The extent of this attraction is shown by the urban population densities.

The Kenyan population is very diverse. Ethnically Kenya is predominantly African in population.[10] The remaining elements of the population comprise Asians, Europeans and Arabs. The African population is divided on linguistic basis. The largest of this is the Bantu group which belongs to the Niger Congo linguistic family. Predominant among this group are the Kikuyu, Kamba, Luhyia, Kisii, Meru, Taita, Kuria and Mijikenda. The remainder of the Kenya African population broadly falls into the other linguistic groupings. The Nilotic are represented by the Luo, Kalenyin, Masai and related groups. While the Kushites are represented by the Somali, Rendile, Boran and such ancient inhabitants as the Ndorobo and Boni.[11]

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[9] M.P. Todaro, Migration and Economic Development: a Review of Theory, Evidence Methodology and Research Practices. Institute for Development Studies, Occassional Paper No. 18, University of Nairobi.

[10] Africa, Loc. cit.

[11] Africa, Loc. cit.

In the sharply contrasting natural conditions Kenya's population is concentrated in the more favoured areas along the Coast, around Lake Victoria and in the plateau lands. The economic activity is largely determined by the natural environment. The traditional basic unit of society in Kenya is the household, which consists of a man (usually the head of the household) and his wife or wives and children. In addition to this family nucleus are the close relatives; the relatives of the husband and those of his wife or wives. These together form what is often referred to as the "extended family". More often than not, it is the extended family and not only the nucleus family that is of concern to the Kenyan head of the household and therefore a prime determinant of his expenditure decisions.

Education is the more important social amenity. It has since independence claimed a lion share of the Kenyan budget. To both the government and the private citizen education is mainly an investment for the creation of manpower skills and as a means for better wage employment and therefore better income.[12] The importance of education as a means to better jobs is shown by the dramatic increase in government expenditure and enrolments in schools and the

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12 B. M. Raju and A. Bigsten, Education in Kenya. Problems and Prospectives for Educational Planning and Administration, and Regional Inequality in Kenya: A Case Study, Nairobi, Heinemann Books (1973) and Gothenburg, Gothenburg University Press (1978) respectively.

sacrifices that parents make in order to send their children to school. In her study M.W. Forrester[13] noted that parents all over Kenya were ready to sell their most valued property, like cattle in order to have their children educated. Bigsten and Collier[14] find that "regular incomes increase rapidly with the level of education attained" and that it is this income which has strong impact on small holder agricultural innovation and therefore smallholder agricultural production and general standard of living, thus highlighting the fact of the parent's rationality in taking their children to school. Despite this, there is widespread illiteracy mainly in the rural areas. The majority of the smallholders have hardly attained a standard VII formal education grade. Of late the government has seen this aspect of the "Wananchi"[15] as constituting a serious social and economic handicap, and therefore has stepped up adult literacy classes all over the country to ensure fuller participation of the entire populace in the economy. Other public services, such as health, infrastructure and communication network have been distributed according to the industrial developmental status.

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[14] A. Bigsten and P. Collier, "Education and Income in Rural Kenya" Institute for Development Studies Working Paper No. 369, University of Nairobi, 1981.

[15] "Wananchi" is a Swahili word often used in reference to the ordinary citizen.

B. Dualism: The Concept and its Nature in Kenya.

The concept of dualism is used as a criteria for bisecting the economy into analytically and empirically meaningful units. A possible division is that presented by Uzawa in which the economy is divided into investment and consumption goods sectors. But this dichotomy is appropriate for industrialized economies and less meaningful in studying the low income economies like Kenya where the focus should be on the relative shift out of agriculture or traditional activity as the economy undergoes structural transformation. In addition to the empirical justification the formulation can allow explicit examination of Engel-effects.

There are many views of dualism - the interpretation of which usually include hypotheses about differences in the determinants of economic and social behaviour as well as hypotheses about differences in parameter values related to a given set of determinants. The existence of dualism has been argued on the basis of differences in social systems,[16] racial and ethnic backgrounds[17], production conditions[18] demographic behaviour, consumer

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[16] J.H. Boeke, Economics and Economic Policy of Dual Societies. (New York: International Secretariat, Institute of Pacific Relations, 1953).

[17] J.S. Furnivall, Colonial Policy and Practice. (Cambridge: Cambridge University Press, 1948).

[18] R.S. Eckaus, "Factor Proportions Problem" in American Economic Review (Vol. 45 Sept. 1955 PP. 539-565).

expenditure and consumer - savings behaviour, and domestic and foreign sectors. The scope of dualism has thus been narrowly limited to behavioural and technological parameter differences between sectors - the notion based mainly on production differences; with little or no hypothesized variation in demand, savings and demographic parameter differences. Jorgenson[19] for instance in his model assumes identical demand and demographic conditions but different production conditions. In a highly criticised paper by Boeke[21] as well as the studies by Baldwin, Eckaus[18] and Higgins[20], dualism is attenuated and eliminated through time as the differentials in parameter values describing sectoral, behavioural and production conditions disappear. Since a complete disappearance is unlikely at any stage of development, "Some degree of dualism exists in virtually every economy in even the most advanced economies and there are sectors which lag behind in which standards of economic and social welfare are correspondingly low". This concept is in contrast with the Fei-Ranis and Jorgenson[22] formulations in which dualism is eliminated when "traditional" production becomes "commercialized".

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[19] D.W. Jorgenson, "The Development of a dual economy": in Economic Journal Vol. 71 June 1961, pp.309-334.

[20] B.J. Higgins, "The Dualistic Theory of Underdeveloped Areas" in Economic Development and Cultural Change (Vol. 4 Jan 1956, . 99-115.

[21] J.H. Boeke and B.J. Higgins, ibid.

[22] D.W. Jorgenson ibid, Fei-Rains Development of the labour Surplus Economy: Theory and Policy. Homewood, Ill. Irwin, 1964.

In this model, dualism is no longer part of economic growth and development when agricultural and industrial production units employ significant amounts of purchased capital goods. The rural-urban differences has been largely ignored; factor flows between the traditional and indigeneous to modern enclave sectors are typically treated with considerable abstraction.[23]

The theory of dualism is based on a supposed difference between a 'modern' industrial developed sector and on the other hand, a 'traditional' 'stagnant' sector. The former is largely foreign and urban oriented, while the latter is largely rural and subsistent. Such a description gives the impression of a sharp dichotomy between the two sectors. In reality, however, there is a great deal of interaction and causal relationship between the urban and rural sectors. A distinction between the "modern" (industrial) mode of production excluding agriculture and the traditional which excludes industry is erroneous because both sectors are closely interrelated.

What then constitute the rural-urban nature of the Kenyan economy? Essentially the difference came up with colonial rule in Kenya. Within the colonial government two sectors were set up.

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[23] Mafege, in Dualism and Rural Development in East Africa (I.D.R. Denmark, 1973): In his paper Mafege strongly criticises models which overlook the contribution made by the so called "traditional" sector to the modern sector. The same arguements are presented in The East Africa Journal (Vol.9 No.2, February 1972).

The "Modern Sector" which took care of the white and Indian Community, and the traditional sector which took care of the indigeneous African population. The African only participated in the modern money exchange economy by the sale of his labour for wage income to meet his cash obligations especially the payment of tax. The division between urban and rural were therefore consciously set up for colonial administration and economic convenience. This structure was inherited by independent Kenya with slight or no alteration at all. What changed was the administrator.

Rural-urban difference has existed in the way in which the public resources have been allocated. Public resource allocation has been in favour of the industrial sector (Urban) while the agricultural (Rural) has been largely ignored. This "urban bias" has been justified by the efficiency arguement of industrial production.[24] The best health,educational,infrastructural and other social amenities are centred in areas of industrial production.

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[24] A. Bigsten, Regional Inequality in Kenya. A case study (Gothenburg University, 1978).

Ann Seidman[25] sees the colonially inherited dual economies as existing in two major ways: Firstly in the existing patterns of resource allocation and secondly in the nature of development strategy which has been adopted. The development strategy exists in oligopolistic or monopolistic import-export firms which reinforce the existing pattern of resource allocation. Seidman's model subdivides the resource allocation pattern of the inherited dual economy into the "export enclave and the hinterland". The export enclave is characterised by the production of few raw materials for export and processing in the factories of less developed countries (LDCs). The expansion of the enclave is determined by the growth of effective demand for these (mainly agricultural) raw materials in the developed countries. Then there is the hinterland in which the majority of the population lives and works in a traditional agrarian economy. The main contribution of this traditional sector being the constant flow of cheap migrant labour to the export enclave. Ann Seidman's institutional structure exists in the export enclave the dominant characteristic of which is provided

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[25] A. Seidman, "Dual Economies of East Africa". East African Journal. April 1970, Vol. VII No. 5 (May 1970), Vol. VII No. 6 June 1970.

by large firms which obtain raw materials exported cheaply in return for very expensive manufactured imports. Ann Seidman sees that a development strategy based on an institutional structure such as this relies on a pattern of investment set up by private enterprise which tends to invest in the "export enclave". This will lead to economic crises associated with over-increasing competition among sellers of raw materials on the world market, growing shortage of local foodstuffs brought about by extensive utilization of land for the export enclave and an accelerated inflation.

Public resource allocation has tended to be in favour of the already advanced (usually urban) sector by the principle of cumulation analysed by Arne Bigsten[26]. In his study Bigsten verifies Nyangira's hypothesis[27] that states that money tends to flow to the most advanced regions which are mainly the urban centres, and that it is mainly economic factors that determine the public resource allocation. This urban bias has also been identified by Ogendo in his study. He observes that "industrial diversification is both qualitatively and quantitatively better only in the main industrial towns such as Nairobi and Mombasa.

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[26] A. Bigsten, Regional Inequality in Kenya. A case study .Op.cit.

[27] N. Nyangira, Relative Modernization and Public Resource Allocation in Kenya. A Comparative Analysis. (East African Literature Bureau, 1975).

It is gradedly poor in rural areas and in some of these are neither manufacturing nor even service industries".[28] The direction of the flow of resources is also reflected in Jennifer Sharpley's study[29] on domestic terms of trade. As table 1 below shows, the terms of trade are in favour of the Industrial Sector (which is mainly urban).

In Kenya as in many LDCs, the rural sector's relative position in the economy in terms of its command of income has tended to lag behind that of the urban sector. This has induced movement of people from the rural to urban areas where they are attracted by potentially better earnings, better access to medical services and other social amenities. This urban bias has prevailed in Kenya because of the nature of Kenya's development strategy since independence. The import substitution strategy means that manufacturing has been favoured at the expense of agriculture; this coupled with the fact that investment projects are easier to implement in urban centres and that foreign (who dominate the manufacturing sector) entrepreneurs normally prefer urban centres and the government which allocates the

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[28] R.B. Ogendo, The location and structure of the manufacturing and service industries in Kenya's Central Provincial Unit (Geography Dept. Paper - University of Nairobi, P.252.

[29] J. Sharpley, Intersectoral Capital Flows and Economic Development Evidence from Kenya (Ph.D Dissertation North Western University, Evanston Illinois U.S.A., June 1976) Also in, Tony Killick, The Kenyan Economy (Nairobi, London, Heinemann Ed. Books, 1980).

TABLE 2: DOMESTIC TERMS OF TRADE INDEX : 1964-1979

Year	Agricultural Price Index (P_1)	Non-Agricultural Price Index (P_2)	Domestic Terms of Trade (P_1/P_2) Index
1964	100.0	100.0	100.0
1965	97.3	105.4	92.3
1966	98.7	108.6	90.0
1967	98.4	109.4	89.9
1968	96.0	109.9	87.3
1969	96.6	109.0	88.6
1970	104.6	110.4	94.8
1971	104.3	118.9	87.8
1972	118.9	125.2	95.0
1973	110.8	115.3	96.2
1974	128.9	142.1	90.9
1975	143.9	165.3	83.3
1976	216.0	178.0	121.4
1977	310.5	205.0	151.5
1978	261.0	175.1	[illegible].0
1979	271.0	186.0	[illegible]6.0

Source: Jennifer Sharpley, Ph.D. Dissertation, 1976 and Central Bank Annual Report, 1980.

resources is itself unbanized, emphasizes the central position of the urban sector. The investment in the manufacturing sector (especially the import substitution industries) have been heavily protected by the Kenya government. This has led to artificially raised prices of local manufactures and a depression in the rural-urban terms of trade.

The general movement of manpower and public resources and investment to urban centres is shown by the growth rate of population in urban centres since independence, as shown in the figures in Table 2 which follows. According to the World Bank Mission " neither external trade policy nor domestic agricultural policy have generally been determined with the interest of the majority of the rural population in mind. " The World Bank Mission refers to the Ndegwa Commission report which indicated that agricultural sector's terms of trade index moved from 100% in 1964 to 87 in 1970.[30]

The rural-urban dichotomy can also be looked at in terms of income distribution. The distribution looked at within the rural urban difference takes on a racial dimension where the Europeans and Asians, the majority of whom stay in the urban areas take a Lion's share of the earned wages from employment (63% for Europeans, 27% for Asians and 1%

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[30] Kenya Into The Second Decade, World Bank publication. (Johns Hopkins, 1975).

TABLE 2:

DISTRIBUTION OF POPULATION IN SOME URBAN CENTRES, 1962, 1969 AND 1979

Urban Centre	Total population in ('000)			Annual Growth rates(per cent)	
	1962	1969	1979	1962/1969	1969/1979
Nairobi	343.5	509.3	827.8	5.8	5.0
Mombasa	179.6	247.1	341.1	4.7	3.3
Kisumu	23.5	32.4	152.6	4.7	16.8
Nakuru	38.2	47.2	92.9	3.3	7.0
Machakos	4.4	6.3	84.3	5.3	29.4
Meru	3.3	4.5	70.4	4.4	31.7
Eldoret	19.6	18.2	50.5	-1.1	10.8
Thika	14.0	18.4	41.3	4.0	8.4
Nyeri	7.9	10.0	35.8	7.9	13.6
Kakamega	3.9	6.2	32.0	6.9	17.8
Kisii	4.5	6.1	30.0	4.2	17.1
Kericho	7.7	10.1	30.0	3.3	9.3
Kitale	9.3	11.6	28.3	-	9.3
Bungoma	1.6	4.4	24.9	15.7	19.1
Busia	-	1.1	24.9	-	37.2
Malindi	5.8	10.8	23.3	9.2	8.0
Nanyuki	10.4	11.6	19.0	1.4	5.1
Total	677.2	955.3	1909.0	5.1	7.2

SOURCE: Economic Survey 1981, Table 3.6, Page 34.

for Africans).[31] In general inequalities have existed between and within rural and urban sectors. In 1967 non-agricultural wage earners, earned an average of K£310. Agricultural workers' earnings rose annually by 2.4% only. In 1971 farmers successfully petitioned President Kenyatta to raise producer milk prices from 2.8 Shs to 3.5 Shs per gallon. These increases were followed by similar rises in case of maize, beef and in the words of Colin Leys[32] "the debt burden of large farmers was apparently to be shifted on to the domestic consumers of farm produce" The majority of domestic consumers, non-farmers themselves are urban wage earners whose incomes could be regarded as low if compared with large farmers. Another means by which income has flown to the rural areas has been by means of remittances by wage earners to their families and relatives in the rural areas. Walter Elkan referring to Mooch's study notes that "some domestic servants remit as much as half of their wages to their rural families and that among many migrant workers, the major purpose of wage employment was the desire to accumulate a surplus that would be invested in the farms"[33] Hence a strong link does exist between urban and rural dwellers. In 1968, 62% of all urban lower and middle income earners had at least one acre of land.[34] G.E. Johnston

[31] Kenya Into The Second Decade, World Bank publication. (Johns Hopkins 1975)

[32] Colin Leys, Underdevelopment in Kenya. The Political Economy of Neocolonialism 1964-1971 (Heinemann Books, 1975) P.11.

[33] W.Elkan, "Is a proletariat emerging in Nairobi?" Economic Development and Cultural Change (Vol. 24 No. 4, July 1976 (p. 704)

[34] W. Elkan, Ibid.

and W.E. Whitelaw[35] made a similar study of wage earners and set up a remittances function. They found a very high interdependence between the urban and rural consumer units' utility. Wage earners especially those in low income brackets remit a high percentage of their incomes to the rural areas. This implies that the welfare of an individual in Kenya may largely depend on the number and closeness of relatives working in the high wage sector (urban sector). The rural urban links should not, therefore, be ignored.

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[35] G.E. Johnston and W.E. Whitelaw, "Urban rural income transfers in Kenya. An estimated remittances function" Economic Development and Cultural Change (Vol. 22 No. 3, April 1974.)

CHAPTER 3

THE CONSUMPTION FUNCTION:

A. Consumption in Economic Growth and Development.

The importance of consumption demand was first brought to the fore by Keynes,[36] as a result of the 1930s depression which he saw as resulting from lack of "effective demand". According to Keynes an economy would not produce at the rate which fully utilizes its manpower and capital resources unless total effective demand for goods and services is enough to purchase the economy's full output capacity; this is what Keynes also calls "full capacity employment output". If private consumption falls short of this full employment output level, then the difference must be made up by non-consumption spending in the form of private investment at home or from abroad and government expenditure. If all these sources of demand fail to attain the full employment output, then the output, employment and the use of industrial capacity will all fall short of their full employment levels. There will be idle capacity in the economy. In his General Theory Keynes indicated that savings is not always an unmixed blessing since saving is not necessarily invested and since investment is determined by business expectations

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[36] J.M. Keynes, The General Theory of Employment, Interest and Money. (New York: Harcourt, Brace and Co., 1936).

and therefore not as stable as consumption demand. To Keynes savings is not necessarily equal to investment and consumption is not strictly present spending or saving future spending.

There is quite a great deal of literature in recognition of the role of consumption demand not only in economic growth but also in economic development. According to Kuznets, changes in the structure of final demand are likely to have an important role - an hypothesis based on the premise that rise in per capita product or technological change (and thus relative price changes) may affect various categories of final demand at different rates[37]. Consistent with this observation, Houthakker and others have developed extensive empirical evidence which shows lower income elasticities of demand for primary than for industrial products.[38] Thus well documented, demand influences have been cited as key explanations to structural change, an important feature in economic growth and development.

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[37] S. Kuznets, Modern Economic Growth. (New Haven Conn.: Yale University Press, 1966).

[38] H.S. Houthakker, "An International Comparison of Household Expenditure Patterns, Commemorating the Centenary of Engel's law and the present state of Consumption Theory" in Econometrica 25 Oct. 1957. P532-557 and Econometrica 29, Oct. 1961, P.705-740.

Kelley[39] has emphasized that demographic factors may systematically attenuate the Engel-effects and in general - any model attempting to confront the issue of growth and structural change must contain meaningful demand specifications consistent with the evidence of Engel effects.

Chenery and Shionoya[40] have argued that changes in intermediate demand may also play a fundamental role. They suggest that the rise of the relative importance of intermediate demand for manufactured goods is due to the relative increase in final demand for manufactured goods. Kelley, Williamson and Chetham[41] recognize the fact that intermediate demand source of industrialization is in fact derived demand emenating from fundamental forces operating in the economy. Support for the view that consumption demand plays an important role in the process of growth and structural change has come mainly from empirical studies establishing the existence of different expenditure and income elasticities for food and non-food goods. It has been agreed that Engel-effects not only cause a shift in the industrial origin of production but also induce higher levels of

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[39] A.C. Kelley, "Demand Patterns, Demographic Change and Economic Growth" Quarterly Journal of Economics (Vol. 83 Feb. 1969).

[40] Chenery, "Patterns of Industrial growth," Y. Shionoya, "Patterns of Industrial Development" in Economic Growth: Japanese. Experience since the Maiji Era, (ed, L. Klein and K. Ohkawa).

[41] Kelley, Williamson and Cheetham, Dualistic Economic Development: Theory and History. (The University of Chicago Press, Chicago and London, 1972).

production and output[42]. Not only do we find an important role for income elasticities of demand but we also find that changes in tastes (shifts in the demand parameters of the demand system) exert an important influence on growth and structural change in the model. Empirical evidence reveals that the assumption of fixed tastes may be inappropriate in a study of growth and structural changes. Using a linear expenditure system, Stone and Brown[43] have indentified substantial changes in tastes between 1900-1960 in England. Parks[44] has found similar results for Sweden between 1861 and 1955. Systematic taste changes were also typical of Japan between 1878 and 1964 according to Kaneda's research[45].

Kelley, Williamson and Cheetham[46], in their study show that an increase in the consumption of urban goods (demonstration effect) gives a positive stimulus to

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[42] H.S. Houthakker, "The Influence of Prices and Income on Household Expenditure" in Bulletin de L'Institute International de Statistique, 1961.

[43] Stone and Brown, "Behavioural and Technical Change in economic models" in Problems in Economic Development (ed. by E.A.G. Robinson London, 1965).

[44] R. Parks, Price Responsiveness of Factor Utilization in Swedish Manufacturing (Report No. 6981, Chicago Centre for Mathematics Business and Economics).

[45] H. Kaneda, "Longrun Changes in Food Consumption Patterns in Japan" 1878-1964 in Food Research Institute Studies Vol. 7, 1968.

[46] Kelley, Williamson and Cheetham, Op.cit. page 190-197.

to industrialization. An increase in subsistence requirements tends to increase per capita consumption of agricultural goods instead. Therefore though Nurkse[47] and others typically focus only on savings behaviour, their conclusion was that demonstration effect inhibits growth, Kelley, Williamson and Cheetham come to the opposite conclusion. Thus indeed, the sensitivity of the economy to shifts in tastes toward urban goods may be as stimulating to structural change in the longrun as alterations in savings parameters, the variable of traditional focus in development literature. Thus demonstration effect commonly a villain in descriptive analysis of growth and development may turn out to be as much a hero as the touted puritan ethic regarding high savings and spending prudence. This fact is also supported by D. Freedman.[48] Thus Keynes' observation that lack of effective demand, domestic or foreign (leading to excess capacity) does inhibit industrialization and therefore economic development, has gained support from many researches in both developed and developing countries.

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[47] R. Nurkse, Problems of Capital Formation in the Underdeveloped Countries. (New York : Oxford University Press, 1953.

[48] D.S. Freedman, "The role of the consumption of Modern durables in Economic Development" in Economic Development and Cultural Change. (Vol. 19, Oct. 1970).

B. A Brief Outline on the Main Competing Hypotheses on the Consumption Function.

(i) Keynes' [49] Absolute Income Hypothesis:

Keynes' consumption function is a macro-function in which he sees a community according to some psychological law dividing some given increase in income proportionally between consumption and saving. The propensities to save and consume both lie between zero and one and by definition both sum up to one. Keynes further speculated that the share of national income that is the average propensity to consume would be found to decline with increases in total income. The decline would reflect either or both of the following: first that as income increases the marginal propensity to consume declines; second that a certain component of consumption expenditure is independent of income. This means that average propensity to consume will be lower for higher incomes even if marginal propensity is constant.

The keynesian consumption function was set up as an explanation for the 1929-1933 depression which followed the first world war. After the second world war,

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[49] J.M. Keynes, The General Theory of Employment, Interest and Money. New York: Harcount, Brace and Company, 1936.

several studies brought evidence against the Keynesian consumption function. Analyses based on prewar U.S.A. data used to interpret the post war U.S.A. data greatly underestimated the post war propensity to consume. Kuznets,[50] however, used time series U.S.A. income data between 1869-1930. This made the Absolute Income Hypothesis measurable. He found a perfectly stable function for the U.S.A., $C = \alpha + \alpha y$ where $\alpha = .87$. Kuznet's Shortrun estimates gave marginal propensity to consume less than average propensity to consume. While longrun estimates gave marginal propensity to consume equal to the average propensity to consume. The latter case constradicts Keynes and leads to a possible conclusion that Keynes' is a shortrun situation.

Brady and Friedman[51] took earlier U.S.A. household budget studies as far back as 1901. They found that any one survey indicates the same kind of keynesian consumption-income relationship, but that the relationship shifts upwards in successive surveys. These findings

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[50] S. Kuznets, National Product Since 1869. (New York: National Bureau of Economic Research, Inc., 1946).

[51] D.S. Brady and R.D. Friedman "Savings and Income Distribution" in Studies in Income and Wealth Vol. 10.

prove the shortrun nature of the Keynesian consumption. The failure of Keynesian function to explain longrun budget data led to three other major theories of consumption. They are the Life Cycle Hypothesis[52] by Ando, Modigliani and Brumberg; the Relative Income Hypothesis[53] by Duesenberry and Milton Friedman's Permanent Income Hypothesis[54]. The main controversy of the theories is centred on the nature and the concept of income that determines consumption demand.

(ii) The Ratchet Model

As early as 1943 Samuelson[55] proposed a ratchet effect. In the ratchet effect model, consumption grows, in the longrun roughly in proportion to income but during

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[52] Ando, A and F. Modigliani ,"The Life Cycle Hypothesis of the Saving: Aggregate Implications and Tests" American Economic Review, March 1963.

[53] J. Duesenberry, Income, Saving, and the Theory of Consumer Behaviour (Cambridge, Mass; Harward University Press 1949).

[54] Friedman, A. Theory of the Consumption Function. (Princeton: Princeton University Press, 1957).

[55] P.A. Samuelson,"Full Employment After the War" in Postwar Economic Problems. E.H. Seymour, editor (NewYork: Mcgraw-Hill 1943).

cyclical interruptions of longrun growth, consumers tend to defend their living standards already attained, so that consumption follows a flatter or lower marginal propensity to consume (MPC). It is this ratchet idea that Modigliani and Duesenberry statistically set out to test.

(iii) Dueseberry's Relative Income Hypothesis.

Duesenberry in his study, refutes Keynes' functional relationship on the arguement that people tend to compare their standard of living with those people living around them. In this arguement the consumer's utility depends not on absolute amounts of consumption but on the relation of those amounts to the consumption of others with whom the consumer puts himself in social competition or under pressure to conform. This phenomenon is attributed to what is referred to as "demonstration effect" by Duesenberry himself. People tend to maintain their standard of living once they have taken it up and therefore incase of a decline in income the savings component is reduced or dissaving takes place.

$$\frac{S_t}{Y_{dt}} = \alpha \frac{Y_{dt}}{Y_d^*} + b \quad \text{or} \quad \frac{C_t}{Y_{dt}} = 1 - \frac{S_t^{56}}{Y_{dt}}$$

$$= 1 - (\alpha \frac{Y_{dt}}{Y_d^*} + b)$$

both savings and consumption functions respectively, of the relative income hypothesis, where

S_t = personal saving in period t

Y_{dt} = disposable personal income in period t

Y_d^* = previous (to period t) peak disposable income, C_t = consumption (personal) in period t)

α = constant $\geq$ 0

b = some constant $\leq$ 0.

If in some period t, for instance, disposable income (Y_{dt}) were to fall below previous peak level (Y_d^*) consumers would defend their consumption by reducing

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[56] Ott, Ott and Yoo, Macroeconomic Theory. (Economic Handbook Series Macgraw Hill inc, 1975) P.65.

savings. $\frac{S_t}{Y_{dt}}$ would fall. If $\frac{Y_{dt}}{Y_d^*}$ rises at a steady rate consumption would adjust itself to the new high level of disposable income, and $\frac{S_t}{Y_d^*}$ would be constant.

Alternatively if income is higher than that in the past then savings will increase. Relative Income Hypothesis has been criticised for ignoring the intertemporal nature of the consumption-saving choice. In the intertemporal analysis the consumer takes into account his future income expectations and his time preferences in balancing consumption now against future consumption (or savings now). The intertemporal nature of the consumer's consumption saving choice is explicit in the permanent and life cycle theories of consumption.

(iv) Permanent Income Hypothesis

Various studies of household consumption behaviour, for instance that of Mack[57], long before the permanent income hypothesis came into the scene, observed that income (some other than measurerable or current income) affect current consumption; that consumers suffering declines

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[57] R.P. Mack, "The Direction of Change in income and the consumption Function" in Review of Economics and Statistics 30 (1948).

in their incomes do not reduce their current standards of living and that those enjoying income gains tend to consume less than previous households which achieved same levels of income. Similar studies by Katona and Mueller[58] and other studies at the U.S. Survey Research Centre indicate that optimistic expectations of future incomes encourage current consumption while pessimistic expectations have the reverse effect. Friedman explicitly attributed the above tendencies in the consumer's choice to his "permanent income". According to Friedman the consumption of a household is proportional to his permanent income; that is the average income it expects to earn over its planning horizon. What determines whether a consumer will consume now or in the future? To Friedman it is the average income over the consuming units planning horizon or period. This income is approximated (according to Friedman) by a weighted average of past and present measured income; where the weights are exponentially declining. What therefore determines whether one will consume now or save now are his present income and present price, his future price and future income; the market rate of interest, his tastes and preferences and his wealth.

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[58] G. Katona and E. Mueller, Consumer Expectations 1936-1956 (Ann Arbor: University of Michigan, Survey Research Centre, Institute for Social Research, 1956).

Friedman's permanent income is future discounted income invested at a rate "r". The income so discounted heavily depends on human capital. The wealth is non-human wealth. Friedman's consumption function is therefore:

$C_p = kY_p = k_r V$ where C_p = permanent consumption Y_p = permanent income and k is a constant which is individual specific and depends on tastes and preferences, rate of interest and wealth. The rate "r" will also tell the return on wealth. Tastes will depend on family age distribution. Friedman also introduced a ratio-non-human to human wealth - on which consumption depends.

The income concept used by Friedman consists of two elements, the transitory and the permanent elements Likewise consumption which is determined by this income also consists of permanent and transitory elements correspondingly. Given these, Friedman then assumes the following: First that the permanent and transitory elements of both income and consumption are uncorrelated that is $\rho_{YpYt} = 0$ and $\rho_{CpCt} = 0$, where Cp = permanent consumption, C_t = transitory consumption, Y_p = permanent income and Y_t = transitory income and ρ is the correlation coefficient; second that the mean values of the transitory elements are equal to zero $UC_t = UY_t = 0$, where U is the

V. The Life Cycle Hypothesis:

This hypothesis takes a look at a person's income and consumption decision over a long time period, so that consumption is a function of discounted present value of an individual's life time income.[59] Accordingly, people tend to disave when they are very young and very old; and accumulate during their active working life. So, Friedman and Modigliani have two ways (permanent income and life cycle hypotheses) of explaining the same phenomenon - why Keynes' use of Absolute or current income is only a shortrun explanation for an economic unit's consumption or saving behaviour. The life cycle hypothesis takes the individual consumer's planning horizon to be his whole life-time. Individuals are assumed to plan no net life-time savings, they transfer to their heirs no less and no more than they inherited. They therefore try to spread their life-time consumable resources evenly over their lives. The life cycle function is:

$$C_o = \alpha Y_o^L + a\ (T - 1)\ Y_o^e + \alpha A_o^{60}$$

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[59] The similarity with permanent income hypothesis is clear, except for the use of the consuming unit's "life time' instead of the "planning horizon" used by Friedman.

[60] Ott, Ott and Yoo, Op cit. page 82.

where C_o = current consumption.

Y_o^L = current non-property income

Y_o^e = expected non-property income

A_o = assets at the beginning of the planning period.

consumption in any year t is assumed to be a linear function of aggregate current non-property income (Y_o^L), average expected annual non-property income (Y_o^e) and Assets (A_o) at the beginning of the period. In this function consumers seek to accumulate enough saving during their earning years to maintain their consumption during their years of retirement. The Modigliani model has the following implications: First, that savings would be zero in a society with stationary population and income. The dissaving of the retired would exactly equal the saving of the workers whose whole purpose is to save for their consumption during their future retired age. Secondly with a dynamic society, with growing population and per capita income, aggregate net saving will be positive. In fact the higher are the rates of growth, the higher the ratio of saving to aggregate income. This is because in a dynamic society the retired of a future generation would exceed those of the present generation making higher saving necessary

than that for the present.[61]

C. Empirical Evidence on the Main Hypotheses: A Review of Various Studies Mainly from Developing Countries.

Duesenberry's Relative Income Hypothesis has been criticised for ignoring the intertemporal nature of the consumption - saving choice of the consumer.[62] The pressures of intertemporal comparison seem more central to other choices, visible and conspicuous against goods and services or work versus leisure. The analysis of this intertemporal nature of the consumers' choice is explicit in the permanent and life cycle hypotheses. Empirical research has therefore tended to centre on the latter two and little on the former.

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[61] M.J. Farell, "The New Theories of the Consumption Function" in Economic Journal, 69 (1959) and F. Modigliani, A. Ando, "The Life Cycle Hypothesis of Saving" in American Economic Review, 53 (1963).

[62] J. Tobin, Essays in Economics: Consumption and Econometrics Vol. 2 (Amsterdam, North Holland Publishing Company).

The Keynesian consumption hypothesis that is most under attack by the permanent/life cycle hypothesis is, firstly that current income is a prime determinant of consumption and second that the average propensity to consumption (a.p.c.) declines as income rises. That marginal propensity to consume(m.p.c.) is less than one and falls as income rises and is less than apc(mpc <1 and mpc < apc). This is what has stimulated research especially after Kuznets[63] found that mpc = apc in the long run.

The most widely researched hypothesis is Friedman's assumption that transitory income and transitory consumption are uncorrelated and second that there is a proportional relationship between the permanent component of the consumption function, i.e. permanent income and permanent consumption.

In 1971, Bentacourt[64] set up a consumption function for Chile. He used Urban and rural data for 1964. The

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63 S. Kuznets, National Product since 1896(New York: National Bureau of Economic Research, inc.,1946)

64 T. Bentacourt , "The Normal Income Hypothesis in Chile" Journal of the American Statistical Association Vol. 65 1971.

Marginal propensity to save for both Urban and rural sectors was found to be 0.08 implying a very high MPC. He tested the permanent income hypothesis against the absolute income hypothesis and found strong support for the former although he rejected with some uncertainty the hypothesis that mpc out of permanent income is constant (proportionality proposition is here doubted).

In 1969, Blyth[65] set up a consumption function for the South pacific islands. He used data for six villages. He found a decreasing marginal propensity to save and an increasing average propensity to save. The marginal propensity to save was found to increase as income increased. This implies a declining marginal propensity to consume as income increased.

In 1976, Gupta[66] set out to compare Keynesian with the Friedmanian function in their ability to explain the Indian household saving behaviour. He used both

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65 C. A. Blyth ,"Primitive South Pacific Economies. Their Consumption Pattern and Propensity to save out of cash income income" The Economic Record, Vol. 44 Sept. 1969.

66. K. Gupta,"on some Determinants of Rural and Urban Household Saving Behaviour" The Economic Record Vol. 46, June 1970. Page 578 - 583.

urban and rural data on Indian households from 1950 to 1963. He found a mps of 0.30 for urban data and 0.03 for rural data. The marginal propensity to save out of transitory income was 0.001 for urban data and 0.03 for the rural data. The marginal propensity to save out of permanent income was 0.38 for urban households and ? 0.02 for rural households. Gupta concluded that while the simple Keynesian function explains rural savings, it is inadequate for explaining urban saving and therefore consumption behaviour. He suggested that permanenet income hypothesis be further explored before it can be incorporated into the saving function for India. He also found that non-labour income earners had higher m.p.s. than wage earners. Joshi [67] also did a similar study to that of Gupta using the same sample data for India. He found that urban household saving is much higher than rural household saving in India. He further found that the household sector saves marginally more than double the saving of business and government sectors in India.

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67 V. H. Joshi, "Saving Behaviour in India" Indian Economic Journal (April-June 1970).

Another saving function was set up for India by Ramanathan[68]. He used 1961 data for India. He found an average propensity to save of 0.11 and a marginal propensity to save of 0.23. He found that current income plays an important role in accounting for variations in saving. At the aggregate level, both S/Y ratio(saving ratio) and the marginal propensity to save increase with the level of income. The study also found that self-employed persons tend to save higher proportions of their incomes than wage employed people.

The inapplicability of the permanent income hypothesis in less developed countries has so far been highlighted especially from studies done in the Indian subcontinent. The main reasons given for this is that less developed economies are largely dominated by a subsistence income; the uncertainity that characterises subsistence income, which is primarily farm income, and the fact that rural farm households have very few assets against which to borrow in case of illiquidity. Moreover capital and financial markets are either imperfect or hardly developed so that lending or borrowing is limited for these households. Transitory income may therfore increase consumption expenditures simply by adding to liquid assets[69]

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[68] R. Ramanathan, "Estimating the permanent Income of a Household, An Application to India data" in Review of Economic and Statistics, Vol.50 September, 1968.

[69] J.S. Flemming, "The consumption Function when Capital markets are Imperfect The Permanent Income Hypothesis Reconsidered" in Oxford Economic Papers, Vol. 25 page 160-172 , 1973.

In a later study Bhalla[70] gave further evidence on the applicability of the permanent Income Hypothesis to less developed economies. He used data obtained in a three year pannel survey conducted by the National Council of Applied Economic Research (NCAER) on 4,118. households in rural India. He wanted to find out whether current Income or permanent income is the relevant determinant of consumption, and secondly whether permanent consumption is proportional to permanent income. He found that the permanent marginal propensity to consume is not different from one for subsistence[71] household. He found that the elasticity between permanent component is less than unity; hence the proposition that permanent consumption is proportional to permanent income is refuted and therefore not applicable to rural India. Non-subsistence households were found to have lower marginal propensity to consume and also a lower consumption elasticity than subsistence ones - thus supporting Keynesian proposition that a.p.c. and mpc decline

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[70] S.S. Bhalla, "Measurement Errors and the permanent Income Hypothesis. Evidence from Rural India" American Economic Review, Vol. 69 June 1979,pp. 295-307.

[71] "Subsistence" households as used here refers the households compelled to consume all their income.

with rise in income.

Musgrove[72] instead applies the permanent income hypothesis to urban South America. He used household budget data collected in 1967-1969 from four principal cities in Columbia, two in Equador and one in Peru. Before giving any results of his study, he admits that the testing of the permanent income hypothesis is difficult because permanent income is largely unobservable and in case of limited data, it becomes even more difficult and the testing of it meaningless in case of no time-series data in particular. Musgrove found an average elasticity of consumption with respect to permanent income clearly less than one and also clearly more than the observed elasticity in the short-run. He found an elasticity of about 0.9 - which leads to a rejection of the proportionality hypothesis (that is consumption is proportional to permanent income). He concluded that an average elasticity with respect to permanent income is compatible with unitary elasticity both at very low incomes (where saving is impossible because of subsistence need) and at very high incomes where the proportionality

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72 P. Musgrove, "Permanent Household Income and Consumption in Urban South America" American Economic Review Vol. 69 No. 3 June 1979. p. 355 ff.

assumption becomes plausible. A non-unitary elasticity such as 0.9 that he found, probably characterises a transition region of saving behavior in countries where many families live close to subsistence[73] but average income is high enough to permit some households to save, Musgrove further concludes.

General lack of data has made similar studies as the above quite difficult and more often quite impracticable for Kenya. Data on household budget surveys is scanty and that which is available quite aggregated. A few studies on Kenya have made use of cross section data assuming a keynesian consumption function.

Massell[74] set up a consumption function in 1969 for the 1963-1964 central province rural data. He found a m.p.s. of 0.18, and a high mpc. Massell and Heyer[75] made another study on expenditure patterns of middle income African Households in Nairobi in the same period. They estimated an expenditures elasticity of 0.483 for total food.

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73 "Subsistence"here refers to that level where the households cannot save-same meaning as that in footnote 68.

74 B.F. Massell ,"Determinants of Household Expenditures in Rural Kenya". I.D.S. Discussion Paper No. 49. University of Nairobi; 1968.

75 B.F. Massell and J. Heyer,"Household Expenditure in nairobi A Statistical Analysis of Consumer Behaviour"Economic Development and Cultural Change Vol. 17 No. 2 Jan 1969

CHAPTER 4

ANALYSIS OF THE CONSUMPTION FUNCTION IN KENYA

A. Data Sources and Description

The major sources of data are the Integrated Rural Survey 1 (IRS 1) and the Urban Food Purchasing Survey, both obtained from the Central Bureau of Statistics Ministry of Finance and Planning, Kenya.

The Integrated Rural Survey 1 (IRS 1) of small scale agricultural households in Kenya was undertaken in 1974 as the first survey supported by the National Integrated Sample survey Programme (NISSP) in 1974. Since then two other rounds of IRS have taken place: IRS II in March 1976 and IRS III in March 1977. In Mid-1977, the IRS 1974 - 1975 Basic Report was published summarising data for some of the more important features of the survey, farm and household income and expenditures.

IRS 1 used a sub-sample of the farm census survey sample 1971/1972 which excluded the traditional pastoral areas, urban areas and former scheduled areas, that had not at that time been subdivided in settlement schemes. Adherence to the definition of former scheduled area does not take account of the government tenure and settlement programme since independence; because while historically such areas could be considered large in nature, that generalization certainly did not apply in 1974. As a

result of this, the IRS coverage of smallholders in 1974 in the Eastern, Coast and Rift Valley provinces are incomplete though all smallholders are included in the sample frame for the remaining Central, Nyanza and Western Provinces.

The IRS 1 sample frame estimated to include 1.48 million smallholdings within the six provinces, ranging from below 0.5 hectares to 8.0 hectares. No holdings above 20 hectares were included and the percentage included with 8.0 hectares and above is only 3.5 per cent.

Casley and Marchant[76] and Smith[76'] have constrasted the figures for the IRS I and IRS II is estimated to include 1.7 million smallholders within the areas designated in the six provinces. The corresponding population for these was put at 10.46 million (79% of the total population).

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D. J. Casley and J. J. Marchant," Smallholder Marketing in Kenya. Presentation of data from the Integrated Rural surveys and Marketing Surveys", 1974-1978 F.A.O. Marketing Development Project. Ministry of Agriculture, Nairobi. 1978.

76' Smith L.D." Low Income Smallholder Marketing and Consumption Patters - Analysis and Improvement Policies and Programmes." Marketing Development Project KEN 75/005. Ministry of Agriculture, Nairobi, 1978.

Farm operating Surplus and Household income Measures:

The IRS data used in this study includes household income. Household income is the totals of income derived from adding farm operating surplus and income derived from non-farm operating surplus, regular employment and casual employment remittances from relatives and other gifts.

The Basic report in presenting this data draws attention to two main limitations in the income figures. Negative livestock valuation changes for farms frequently occured in Eastern Kenya leading in many cases to high negative values for farm operating surplus with consequent effects on income. It is thought that the draught conditions prevailing in this part of the country during the period of the survey, partly explain the situation. The other limitation occurs from negative non-farm operating surplus for some farms. This affects estimates of households' income. It is also due to some farmers not stating fully their non-farm income, a problem often faced in any income survey. Out of 1668 selected respondents only 18 were discarded as non-respondents leaving 1650 households as the population under study. In the extraction of the sample for my analysis the households with less than zero income are excluded. This is because it is most likely that the information given by these households was misreported or for reason of the limitations cited above, incomplete and

unreliable for purposes of the study. The exclusion of 117 households with zero or less than zero income leaves me with 1533 households, in the rural sector eligible for sampling.

There are several reasons why the data from the six provinces cannot be compared on equal basis. As stated in chapter 2, Kenya is endowed with diverse natural and climatic conditions which impose natural inequalities. For instance the lowest rainfall is to be found in the North Eastern province, while the highest rainfall is in the provinces within high altitude areas of Central Province. Those provinces poorly endowed in terms of nature are also very sparsely populated, while those with land of high potential are also the most densely populated. So in effect one would be comparing two different entities[77]. These inequalities, however, as already mentioned in chapter 2, again can be enhanced or diminished by cumulative processes of development deliberately imposed by man. The entire rural sector is therefore far from a homogenous entity. With this in

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77 A. Hazlewood, The Economy of Kenya. The Kenyatta Era. (Oxford University Press, 1979. Hazlewood elaborates much further on this point in Chapter 9 of his book using IRS 1 data.

mind, the consumption pattern can be looked at from a better perspective.

The urban Food Purchasing Survey (U.F.P.S.) was conducted from April to June 1977 in the four major towns of Kenya Nairobi, Mombasa, Kisumu and Nakuru.. Only a a certain part of the Urban consumming population was covered. The households with more than Kshs.2500, were not covered for the following reasons. First because income is extremely skewed and the pattern of consumer behaviour at the upper end of the distribution is quite unlike that at the lower end. For instance, the high income families buy significant amounts of the imported packeted and processed food. Therefore households within upper income group and their servants were excluded. The households of two or more persons not engaged in domestic service or catering and those listed within the national sample outside exlusive high income areas of the Urban Centres under study. 471 households were regarded as survey respondents.

The U.F.P.S. Report highlights the following limitations of the survey data. First, the tendency for the household respondents to report expenditure figures which were far above or below their stated income receipts. The percentage of households in "deficits" was particularly high in Nairobi and Nakuru. Although overall

average expenditures were close to average income a high percentage of households had "deficits" or"surpluses"of significant magnitudes. The report admits that household income is a notoriously difficult statistic to obtain with accuracy. The possibility that many respondents concealed from the enumerator minor sources of income, and a few others may have overstated their income or concealed certain expenditure would not be ignored. For this reason and because the enumerators considered expenditures recorded with care in most cases ,total expenditure can be taken as an alternative estimate of income or proxy for income. It is argued that total expenditure moves closely with income[78].

In the analysis of the U.F.P.S. the unrealiability of the income variable reported was made clear by the nature of the estimates (Marginal propensities to consume) I got when using income in the way I used it in IRS 1 data. The figures were not only numerically very high but the standard errors were too explosively high and all quite insignificant at the 5% level to warrant any attention

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78 B. F. Massell , op. cit. Massell in his study already referrred to, uses total expenditure as a proxy for income for similar reasons.

for purposes of meaningful analysis. It is because of this that I appreciate the use of the figures given to me by Mr. Jan Vandemoortele[79]. He used total expenditure as a proxy for income.

Comparison between rural and Urban sectors is rendered even more difficult. As stated in Chapter 3, differences and inequalities do exist between the urban and rural sectors of Kenya. These inequalities and differences may however be over or underestimated as data difficulties render the giving of its proper magnitudes difficult. For instance estimates of income and consumption for the rural sector are made difficult because they largely consist of own produced items. For example housing on small farms is largely homemade. This makes expenditure on housing component quite cheap for the rural compared to urban housholds which spend heavily on rent. Rent has a weight of 22.9% for low income price index group [80] in urban areas. The cost of living in the

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79 J. Vandemoortele, an ILO Consultant, was at the time of my study a researcher at the Institute for Development Studies University of Nairobi. Incidentally he was also using the U.F.P.S. 1977 data. He agreed to get me estimates I needed (which were more reliable as he got access to the tape containing the original data).

80 A. Hazlewood, op. cit. Chapter 9.

rural areas is quite low though the standard of living there may be very low, as many essential services such as the supply of clean piped water, are not there. Certain expenditures in the urban centres are essential for the nature of work and the urban environment. For instance the transport expenditure incurred by workers in the industrial area of Nairobi (a significant expenditure item for the Nairobi households) is even non-existent for a rural household whose members live and work on their own farm.

B. Hypotheses.

The theory that there is a tendency for low income economic units to spend the greater proportion of their income consumption (Engel's Law) has been extensively researched on and become widely accepted in economics. The rural sector is, in general associated with low income and the urban sector high income. Arne Bigsten[81] gives evidence of the stated inequality. Hence I hope to test the following

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81 A. Bigsten, Regional Inequality and Development:A case study of Kenya. (Gothenburgh University, 1978)

82 A. Bigsten and P. Collier, "Education Innovation and Income in Rural Kenya". I.D.S. Working Paper 369, University of Nairobi.

hypotheses:

1. The rural sector has a higher Marginal propensity to consume (or lower marginal propensity to save) than the urban sector.

2. That the Marginal budget share for non-food is higher than that for food in the urban sector (i.e. that the marginal budget share for food is higher than that for non-food in the rural sector.

C. Model and Method of Study.

A Linear Engel Curve model is used. This is a modification of the Extended Linear System[83](ELES), to take account of data limitations. Household consumer unit decisions are made on a per capita basis:

$$\frac{Ci}{S} = a + b\left(\frac{Y}{S}\right)$$

where C = Total expenditure

Ci = Food or non food expenditure for rural and urban data. For urban data, it represents the eight commodities food, rent, Clothing, manufacturing, education, transport services and other for which estimates are got by Vandemoortele.

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83 C. Lluch, A. A. Powell and R.A. Williams, Patterns in Household Demand and saving (Oxford University Press 1977)

a and b are the parameters to be estimated.

C = Consumption expenditure

Y = household income for both rural and urban households.

S= mean household size for both rural and urban household.

$\frac{Ci}{S}$ = mean per capita consumption expenditure

$\frac{Y}{S}$ = mean per capita income for the rural data, mean per capita total expenditure for the urban data

If household decisions are made on a per capita basis, then the problem that a household faces as a consumer unit is, given some per capita disposable income($\frac{Y}{S}$), how to allocate between food and non-food items and how much to save after satisfying all the expenditure needs. Lack of more detailed data on individual commodities similar to Vandemoortele's restricted my estimates to two agregates, food and non food.

The marginal budget shares of food (BF) and of non-food (BNF) are got using the following methods:

$$BF = bF / \sum_{i=1}^{2} bj = bF/U$$

$$BNF = bNF / \sum_{i=1}^{2} bi = bNF/U$$

Where BF is the marginal budget share of food out of total consumption and BNF is the marginal budget share of non-food out of total consumption expenditure. bF is the marginal propensity to consume out of food and bNF is the marginal propensity to consume out of non-food. The two parameter estimates are what we estimate from the main ELES equation. The sum of the two ($\sum_{i=1}^{2} bi = U$) is equivalent to the aggregate marginal propensity to consume.

D. Assumptions:

(1) The use of the ELES model is made with the assumptions[84] that there is no correlation of errors across consumers (O.L.S.)

(2) That the explanatory variables are non-stochastic or if stochastic independent of errors.

(3) ELES is used in the absence of prices data, with the assumption that all consumers face identical prices. Since estimation is done by groups(provinces and socio-income groups) . the assumption is not likely to be grossly violated)

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84 C.Liuch , A.A.Powell and R. A. Williams. op. cit.

4. That there is no interdependence in the utility of consumer units. Duesenberry's interdependence in utility is ruled out.

5. We assume that each group has the same utility function (homogeneity across consumers in a group) and in addition that all commodities are homogenous (no quality or design differences). These facilitate additivity across consumers and commodities.

E. The Sample.

Out of the 1533 eligible households (IRS 1 households which reported positive incomes), mean values of income and expenditure for one household for each income group (groups were taken as given in the Basic Report except for the zero and less than zero income group) were used. The figures are given in the basic characteristics' table 3 below. Separate regressions were done for each province with a count of seven observations. Then to give an overall rural picture, mean figures of all the provinces were summed up and separate regressions for the total done The estimates are given in tables 4, 5, and 6.

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85 J. S. Duesenberry, Incomes Savings and the Theory of Consumer Behaviour (Cambridge, Mass. Havard University Press, 1949).

TABLE 3 :

BASIC CHARACTERISTICS OF RURAL HOUSEHOLDS (IRS 1, DATA).

Province	Mean H. H. Size	Mean per Capita Income	Mean per Capita H.H. Consumption Expenditure		
			Food	Non Food	Total
Central	6.95	79	120	62	182
		214	203	165	368
		360	189	110	299
		497	207	103	310
		693	191	135	327
		1000	223	210	433
		1772	201	366	1062
Coast	8.04	69	137	44	181
		185	164	18	181
		315	216	59	275
		430	262	71	334
		599	287	66	353
		865	458	226	685
		1532	482	92	578
Rift Valley	7.51	73	108	168	275
		198	105	115	220
		334	94	112	206
		460	90	131	221
		641	108	102	210
		926	113	95	208
		1640	170	352	521
Nyanza	6.58	84	104	37	141
		226	109	25	134
		381	121	18	140
		525	181	90	271
		332	163	74	237
		1057	300	335	636
		1872	279	171	450

TABLE 3: continued

Eastern	6.74	82	157	90	247
		220	130	14	144
		372	154	59	213
		513	294	149	443
		714	200	143	343
		1032	295	186	481
		1827	343	304	648
Western	7.44	74	103	25	128
		200	144	34	178
		337	164	44	208
		465	175	137	312
		647	184	161	346
		935	280	304	584
		1656	347	493	841
Total	6.97	108	167	80	246
		291	187	72	275
		472	220	93	313
		617	265	144	410
		848	247	140	388
		1218	237	259	580
		2090	358	358	715

For the urban estimates, Vandermoortele used the entire sample for the U.F.P.S. of 471 households. He made an arbitrary division into 3 income groups poor (Ksh.0-699), middle (Kshs. 700 - 1399) and rich (Kshs. 1400-2500). Income groups are given in U. F. P. S. report. He then used the ELES model. The figures are as given in tables 7,8,9 and 10.

F. The Results of the Study.

(i) IRS I Estimates.

The estimates of the marginal propensity to consume given in table 4 below are all significantly larger than zero at the five per cent level. The figures are, however, numerically small. The low values in general and for food in particular, reflect the failure to take into account the subsistent[86] nature of the producer - consumer bahaviour of rural households. It is argued that a farming community by nature of its sources of income (largely farm income) which is uncertain relative to urban incomes, will tend to be thriftier. It is also argued that the farming community face higher interest rates than their urban

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[86] "Subsistent" here is used to refer to that which is produced and consumed on the farm.

TABLE 4 :

ESTIMATED VALUES, MPC, MBS OF RURAL HOUSEHOLDS(I R S 1 DATA)

Province	MPC			MBS	
	Food	Non-Food	Total	Food	Non-Food
Central	0.028 (0.000)	0.162 (0.001)	0.190 (0.121)	0.147	0.853
Coast	0.225 (0.002)	0.071 (0.003)	00.326 (0.010)	0.782	0.218
Rift Valley	0.043 (0.000)	0.121 (0.003)	0.164 (0.004)	0.262	0.738
Nyanza	0.112 (0.001)	0.120 (0.004)	0.232 (0.008)	0.483	0.517
Eastern	0.119 (0.001)	0.148 (o.001)	0.267 (0.003)	0.446	0.554
Western	0.153 (0.000)	0.326 (0.011)	0.479 (0.001)	0.319	0.681
Total	0.387 (0.223)	0.155 (0.000)	0.542 (0.001)	0.714	0.286

Note: In brackets are the standard errors.

counterparts[87] and this necessitates higher savings to meet their debts.

A clear tendency of the MPC estimates is that they decline with a rise in income, particularly in the case of food. Aggregate MPC for the rural sector is 0.542. The MPC for food is lower than the MPC for non-food in all the provinces for the whole rural sector except for coast. The MPC for food is however, higher than that for non-food for the whole rural sector total. The marginal budget share for food is lower than that for non-food in all provinces except Coast Province. This contradicts the hypothesis which states that marginal budget share for food is higher than that for non-food in the rural sector.

The R^2 values for the rural sector, Table 5 below, confirm the explanatory power of income for the sector. Except for a few cases like Central Province food expenditure and coast non-food, where the figures

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87 C. Lluch, A.A. Powell and R.A. Williams, op.cit. p. 101. This fact of interest rates is also true in the Kenyan economy where small farmers face an unfavourable credit policy.

TABLE 5: R^2 VALUES, RURAL HOUSEHOLDS IRS 1.

Province	Food	Non-Food	Total
Central	0.079	0.733	0.727
Coast	0.792	0.076	0.513
Rift Valley	0.742	0.480	0.370
Nyanza	0.606	0.192	0.159
Eastern	0.512	0.753	0.681
Western	0.961	1.000	0.967
Total	0.014	0.927	0.531

TABLE 6:

$\frac{1}{\alpha}$ VALUES, RURAL HOUSEHOLDS IRS 1.

Province	Food	Non-Food	Total
Central	172.5	57.2	525.3
Coast	140.9	42.5	183.3
Rift Valley	86.8	80.2	164.1
Nyanza	108.3	30.2	138.5
Eastern	144.1	34.4	177.8
Western	105.8	-29.8	81.5
Total	214.1	39.1	242

are low; income is shown as a major determinant of consumption expenditure.

All the α estimates, Table 6, are positive except for Western non-food (-29.8). They are clearly higher for food than for non-food.

(ii) U.F.P.S. Estimates.

The U.F.P.S. estimates are given in tables 7,8,9 and 10 below. The MPC estimates for all commodities are significant at the 5 per cent level except for education where it is insignificant for the poor middle classes, transport for all the classes and services for the poor and middle classes. Like for the rural data the MPC estimates for all the commodities are numerically quite low.. The aggregate marginal propensities for the three classes are quite high ; 0.930 for the poor, 0.914 for the middle, and 0.533 for the rich. The aggregate marginal propensity to consume for the urban sector is 0.662. The figures are all significant at 5 per cent level.

A significant feature of these estimates is that aggregate MPC and the MPC for food decline with a rise in income. The MPC for food is higher than those for all other commodities,

TABLE 7: URBAN FOOD PURCHASING SURVEY (ELES)-

BASIC CHARACTERISTICS OF THE INCOME GROUP

Income Group	Sample Size	Mean H.H. Size	Mean per capita income	Mean per capita total purchasing	Average Propensity to save	Food	Rent	Clothing	Manufacture	Education	Transport	Services	other
Poor	251	5.28	1256	1566	-5.285	0.514	0.078	0.028	0.127	0.037	0.001	0.070	0.145
Middle	132	5.83	2493	2865	- 4.149	0.407	0.103	0.048	0.127	0.049	0.010	0.106	0.150
Rich	88	6.28	3537	4797	0.137	0.322	0.093	0.040	0.151	0.059	0.124	0.176	0.044
Total	471	5.62	1487	2587	0.065	0.446	0.088	0.036	0.132	0.043	0.027	0.100	0.125

TABLE 8: ESTIMATED VALUES OF THE MARGINAL PROPENSITIES TO CONSUME(U.F.P.S.) ELES

Income group	Food	Rent	Clothing	Manufacture	Education	Transport	Services	Other
Poor	0.314 (0.025)	0.123 (0.014)	0.027 (0.010)	0.173 (0.023)	0.010 (0.010)	0.004 (0.002)	0.102 (0.013)	0.177 (0.037)
Middle	0.232 (0.034)	0.203 (0.024)	0.095 (0.026)	0.096 (0.021)	0.015 (0.012)	0.014 (0.012)	0.053 (0.033)	0.195 (0.037)
Rich	0.107 (0.019)	0.111 (0.011)	0.054 (0.024)	0.079 (0.025)	0.025 (0.008)	0.073 (0.066)	0.115 (0.026)	0.687 (0.064)
Total	0.142 (0.009)	0.050 (0.006)	0.054 (0.008)	0.101 (0.009)	0.031 (0.003)	0.093 (0.016)	0.137 (0.009)	0.056 (0.021)

Note: In brackets are the standard errors.

Source: Refer Text.

TABLE 9: U.F.P.S., R^2 VALUES OF LINEAR ENGEL CURVES.

Income Group	Food	Rent	Clothing	Manufacture	Education	Transport	Services	Other	Consumption function
Poor	0.373	0.235	0.025	0.184	-0.001	0.013	0.207	0.080	0.405
Middle	0.256	0.356	0.065	0.134	0.004	0.004	0.019	0.173	0.437
Rich	0.260	0.001	0.045	0.097	0.936	0.003	0.177	0.002	0.316
Total	0.340	0.133	0.065	0.216	0.142	0.043	0.311	0.013	0.493

Source: Refer Text.

TABLE 10: ESTIMATED VALUES OF MARGINAL BUDGET SHARES (U.F.P.S.)

Income group	Food	Rent	Clothing	Manufacturing	Education	Transport	Services	Other.	M.P.C.
Poor	0.337	0.132	0.029	0.186	0.010	0.005	0.110	0.191	0.930 (0.071)
Middle	0.254	0.222	0.105	0.105	0.017	0.016	0.069	0.213	0.914 (0.090)
Rich	0.200	0.021	0.102	0.149	0.048	0.137	0.215	0.129	0.533 (0.083)
Total	0.214	0.076	0.081	0.152	0.047	0.139	0.207	0.084	0.662 (0.031)

Source: Refer Text.

except for the rich whose rent, services and other have a MPC for non-food higher than that for food. There is a clear indication of the income effect here, that as income rises, not only more of the budget is saved, but less and less is spent on food while more and more gets allocated to other commodities.

The marginal budget share for food is higher than that for all other commodities. This contradicts the hypothesis which states that the marginal budget share for non-food is higher than that for food in the urban sector. The marginal budget share for food declines with rise in income, a tendency which is not clear for the non-food commodities.

The U.F.P.S. R^2 values are generally quite low for all the commodities, but those for food are higher than for the non-food. The $\hat{\alpha}$ figures in table 11, show no clear pattern for the whole sector. The food values are, however, higher than those for the the non-food commodities.

For both IRS 1 and U.F.P.S. data, there is no clear evidence of specific rural urban effects apart from those due to income. This may have been caused by the nature of the data used in this study. More detailed data from a survey conducted simultaneously for the

rural and urban sectors with the same purpose in mind, would have improved the results. The IRS 1 data had much higher incomes reported and the survey was conducted two years earlier than the U.F.P.S. However, since the rural sector is regarded as the sector containing the majority of those at the bottom of the income ladder, the two sets of the data would have yielded better information if more detailed data for the IRS 1 and U.F.P.S. were available

To test the relaibility of the estimates I got by the ELES model, I used LES(Linear Extended System, similar to ELES except for the use of Total expenditure in place of income as explanatory variable). The estimates I got were similar to those by ELES for both urban and rural data. Except for the Coast Province, Marginal budget share estimates for the other five provinces and the entire rural sector are higher for non-food than for the food. Table 11 below shows these results. The U.F.P.S. LES estimates for the data I used are quite similar to those by the ILO Consultant for both ELES and LES. The marginal budget share for food is higher than that for all the towns and for the entire urban sector as table 12 below shows. This contradicts that part of the hypothesis which states that the marginal budget share for non-food is higher than that for food in the urban sector.

TABLE 11: IRS 1 LES ESTIMATES OF MARGINAL BUDGET SHARES

Province	**M B S Food	Non-Food
Central	* 0.042	0.337
Coast	0.659	0.314
Rift Valley	0.452	0.548
Eastern	0.223	0.529
Nyanza	0.411	0.588
Western	0.326	0.996
Total	0.182	0.863

* Estimates on the data 1 used. Households with negative income are still excluded.

** Marginal Budget Shares by LES (Linear Extended System)[89] are actually the marginal propensities to consume out of total consumption expenditure. The figures for food and non-food should add up to 1 if the data used is reliable.

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[89] C. Lluch, A.A. Powell and R.A. Williams, Patterns in Household Demand and Saving. O.U.P., A World Bank Research Publication.

TABLE: 12: U.F.P.S. ESTIMATES(LES) MARGINAL BUDGET SHARES
(on the Aggregate data I used)

Town	Marginal budget Shares	
	Food	Non-Food
Mombasa	0.763	0.237
Nairobi	0.608	0.475
Nakuru	0.126	0.113
Kisumu	1.462	-0.440
Total	0.457	0.208

The ILO Consultant used LES on more detailed data which he could group into socio economic groups for eight different commodities, shown in tables 13 and 14 below. For the IRS 1 data, the MBS (Marginal Budget Share) rises with increase in size of the household implying that larger families consume larger proportions of their expenditure outlay. The negative effect of population growth in savings is noticable here. The aggregate MPC is, however larger for smaller families than for larger ones. This may be an indication of economies of scale.

The marginal budget share for food is higher than for non-food commodities by LES as well. The MBS for food is also higher for non-food for both traditional and educated small holders. The MPC is however, higher for the educated and for skilled agricultural workers. The MBS, except for purchased and total food, is higher for the rich than for the poor for all other commodities. Here again the income effect is noticed. For IRS 1 data the MBS by LES is higher for food than for all non-food commodities, for all socio-economic groups.

For the U.F.P.S., the LES MBS for food is also clearly higher than that for non-food for all socio-economic groups. The aggregate MPC is higher for workers, the unskilled, the poor and the larger families. Here again there is a

TABLE 13: IRS 1 LES ESTIMATES, MBS, AGGREGATE MPC AND R^2 VALUES.
(By Vandemoortele)

Small (< 7) verses large: (7 ≥)member households

		Home Consumption	Purchased Food	Total Food	Clothing	Manufacturing	Miscell. Purchase	Transport	Other	Agg. MPC
MBS	S	0.255	0.219	0.473	0.054	0.014	0.031	0.025	0.402	0.454
	L	0.304	0.764	0.557	0.154	0.076	0.047	0.051	0.100	0.342
R^2	S	0.547	0.440	0.739	0.701	0.076	0.473	0.258	0.594	0.270
	L	0.469	0.546	0.622	0.510	0.412	0.247	0.284	0.190	0.242
				Traditional Versus Smallholders with Formal Education(Min 8yrs)						
MBS	T	0.255	0.206	0.461	0.053	0.015	0.031	0.019	0.421	0.566
	E	0.155	0.472	0.627	0.247	0.015	0.077	0.059	-0.025	0.796
R^2	T	0.549	0.439	0.740	0.234	0.079	0.429	0.246	0.636	0.314
	E	0.365	0.836	0.901	0.603	0.109	0.733	0.625	0.030	0.646

..../continued next page

TABLE 13: continued

		Unskilled versus skilled agricultural workers(3 yrs. mi . in School)							
MBS U	0.061	0.270	0.332	0.375	0.085	0.054	0.103	0.051	0.165
S	-0.003	0.861	0.857	0.061	0.032	0.054	0.055	-0.059	0.813
R^2 U	0.132	0.547	0.712	0.893	0.907	0.781	0.847	0.637	0.006
S	0.000	0.964	0.999	0.982	0.899	0.985	0.981	0.962	0.653
		Smallholders versus Agricultural workers							
MBS S	0.251	0.230	0.481	0.068	0.015	0.034	0.023	0.379	0.565
W	0.099	0.273	0.371	0.346	0.066	0.054	0.094	0.049	0.278
R^2 S	0.531	0.477	0.758	0.240	0.078	0.429	0.240	0.574	0.329
W	0.212	0.570	0.742	0.854	0.793	0.792	0.795	0.539	0.024
		Poor Versus Rich							
MBS P	0.303	0.381	0.684	0.106	0.028	0.044	0.033	0.105	1.085
R	0.313	0.308	0.622	0.126	0.053	0.052	0.055	0.092	0.188
R^2 P	0.534	0.758	0.723	0.433	0.283	0.520	0.213	0.269	0.351
R	0.508	0.657	0.645	0.364	0.230	0.318	0.345	0.149	0.166

TABLE 14: U.F.P.S. LES ESTIMATES, MBS, AGGREGATE MPC AND ADJUSTED R^2.

(By Jan Vandemoortele)

Small (< 5) versus large ($\geq$ 5)member families

		Food	Rent	Clothing	Manufacturing	Education	Transport	Service	Other	Total (MPC)
MBS	S	0.255	0.046	0.167	0.185	0.051	0.004	0.096	0.196	0.535
	L	0.244	0.079	0.050	0.137	0.043	0.264	0.193	-0.011	0.689
R^2	S	0.673	0.095	0.520	0.599	0.417	0.005	0.189	0.500	0.440
	L	0.654	0.292	0.152	0.335	0.192	0.094	0.429	-0.033	0.516
					Workers versus Professionals & Managers					
MBS	W	0.292	0.122	0.054	0.115	0.013	0.150	0.138	0.076	0.744
	P &M	0.236	0.029	0.175	0.197	0.046	0.038	0.106	0.177	0.600
R^2	W	0.643	0.364	0.119	0.284	0.241	0.037	0.212	0.308	0.551
	P&M	0.738	0.044	0.586	0.675	0.336	0.028	0.260	0.297	0.435

TABLE 14: continued

			Unskilled versus skilled workers (max. 3 yrs, in school) (min. of 2 yrs. in Secondary)						
MBS U	0.237	0.059	0.047	0.111	0.047	0.006	0.193	0.300	0.854
S	0.387	0.111	0.035	0.144	0.072	0.259	0.033	0.042	0.554
R^2 U	0.493	0.242	0.063	0.281	0.276	0.021	0.248	0.440	0.541
S	0.754	0.388	0.131	0.584	0.282	0.011	0.094	-0.034	0.293
			Unskilled(max.3yrs.-school) versus skilled Professionals and Managers (min 2yrs Secondary)						
U	0.259	0.104	0.060	0.145	0.072	0.226	0.178	-0.044	0.919
MBS S	0.231	0.003	0.209	0.211	0.046	0.029	0.078	0.193	0.561
U	0.513	0.346	0.524	0.753	0.289	0.323	0.402	-0.033	0.761
R^2 S	0.758	-0.014	0.687	0.721	0.460	0.005	0.201	0.317	0.373
			Poor(Ksh. 8400/= per year) vs Rich (≥ 16,800/= per year)						
MBS P	0.358	0.102	0.027	0.190	0.021	0.003	0.013	0.286	1.051
R	0.237		0.193	0.194	0.052	0.045	0.111	0.158	0.533
R^2 P	0.663		0.054	0.473			0.034	0.446	0.405
R	0.724		0.615	0.561			0.160	0.050	0.316

clear income effect, the tendency for the lower income groups to consume more of their incomes.

CHAPTER 5

CONCLUSION AND POLICY IMPLICATIONS

The results of the study were got from data of two different surveys carried out in two different periods; with a space of about two years. Moreover the surveys were carried out with differnt major aims in mind. Again, the fact that rural and urban sectors may not be comparable for socio-economic and political differences and reasons some of which are given in Chapter 3, may make one to be very cautious when making the conclusion and policy recommendations. These will not, however, prevent one from making comments and conclusions specific to the figures of the analysis.

First the IRS 1 data for the rural sector is of a much higher income group, up to a maximum of Kshs. 12317. The U.F.P.S. is from a much lower income group with a maximum of Kshs. 2500. So apart from the location effect, one would expect a clear income effect where by the Marginal propensity to consume is lower for the I.R.S. 1 data (0.542) than for the U.F.P.S. data (0.662). This was so for the LES and ELES estimates - The effect of the subsistent nature of the consumer-produce behaviour peculiar to the rural community cannot be ignored here, of course. The MPC is lower for the rural sector than that for the urban sector. The marginal budget share for food is higher than that for the non food in the rural sector. The former contradicts the first hypothesis, that MPC is higher in the rural sector than for urban sector, for reasons already stated.

The latter supports the second hypothesis that states that the marginal budget share for food is higher than that for nonfood in the rural sector. The income effect does not seem to dominate here as one would expect a higher marginal budget share for non-food at least for the rich groups in case of the IRS 1 data.

The marginal budget share for food is higher than for non food by both LES and ELES figures for U.F.P.S. This is also true for all rich and poor groups. This contradicts the part of the 2nd hypothesis which states that the marginal budget share is higher for non-food than for food in the urban sector

A clear tendency is the decline of both MPC and MBs for food as income rises. Aggregate MPC also declines with rise in income shown by the estimates for the poor and rich income groups for both I.R.S.1 and U.F.P.S. data. The theory therefore, that there is a tendency for the lower income groups to consume higher proportions of their incomes is, here, supported. The estimates from the data, however, suggest that a level of income has not yet been reached, even for the urban sector to switch from heavy expenditure on food items to that on non-food items. The deciding factor, therefore, is income. It is clear from the analysis of both IRS 1 and U.F.P.S.

data that the theory regarding the income effect on consumption/saving decision making does hold in Kenya. For both IRS 1 and U.F.P.S. data, the MPC and MBS for both food and non-food declined with rise in income. The MBS was higher for food than for non-food for all socio-economic groups and higher for the poor than for the rich for both urban and rural data .

The fact that income is the major determining factor in consumption/ saving decision making of the household is important for the redistribution policy in Kenya. It is clear that a redistribution policy that raises incomes for instance will not only affect the amounts consumed of both food and non-food commodities, but will also lead to a general shift from food consumption expenditure to more consumption expenditure on non-foods. This will also be an indicator to the production sectors to shift the composition of their products or else the country depends on imports, with consequent loss of foreign resources, of course.

The rural sector has been seen as the major beneficiary of the redistribution of income[88]. This is justified by the fact that the majority of the population, many of who have low incomes live in the rural sector. This should also however, take into account

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88 The current development plan, 1979-1983, emphasizes an equitable redistribution of resources and fruits of develop; the major focus being the rural sector.

the fact that there are sections of the urban population who are even poorer than their rural counterparts (consider that many of the shanty dwellers of Kibera and Mathare in Nairobi, for instance are also landless, a fact that does not exist in a typical Kenyan rural community).

It would be prudent of a policy maker to be selective in choosing the beneficiaries of the redistribution policy. It is evident that many sections of the urban community have yet to benefit enough from development resources.

Moreover, the theory that regards the rural sector as an area of lower savings than the urban sector is questionable. As already stated in the analysis, there are reasons why, of necessity, the farming community tends to be thriftier than the urban one. The uncertain nature of their farm yields and so their income; and the fact that the farmer's consumption depends mainly on his own produce means that he has to be thriftier in order not only to meet his future consumption but also other expenditure needs in case of lower yields and incomes. The farmer also faces a much more stringent credit policy. All these then mean that the rural sector, mainly a farming sector, might have more surplus resources for development than the urban one.

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