A PROFILE OF THE KENYAN LABOR FORCE: RACE, OCCUPATION AND INDUSTRY; ETHNICITY AND SEX DIFFERENTIALS IN THE POSTCOLONIAL PERIOD

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I accept full responsibility for whatever errors that might remain. The focus, exposition, interpretation and conclusions are entirely my own responsibility--and I accept it enthusiastically.

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CHAPTER I

INTRODUCTION: RESEARCH OBJECTIVES SCOPE AND RELEVANCE

The primary motivation for this study is the debate, which has been going on for over a decade now, about the implications of the Kenyan government's economic policies and programs for the occupational distribution of different racial groups in the Kenyan economy. The debate has yielded a number of conflicting propositions, which fall essentially into two generalizations. The first argues that, despite the dominance of foreign private capital in the Kenyan economy, Africans already hold a large proportion of middle and high-level jobs in the country (ILO, 1972; Leys, 1974; Burrows, 1975). The second states that, because of the economic dominance of foreign private capital, Europeans still hold most of the high-level jobs, Asians most of the middle-level jobs and Africans most of the low-level jobs (Stewart, 1976).

These generalizations are based on data which focus largely on the aggregate private versus public sector of the economy. But such a focus is too broad to tell us much about what goes on in more concrete units of economic activity. Moreover, in a developing country, the extent of the aggregated private sector can change literally overnight, by government decision.

This dissertation reexamines the two generalizations using data which focus on a unit of analysis--industry--which is more detailed than the usual public-private sector duality. Two other reasons can be given for focusing on industrial differences in the racial-occupational profile of the Kenyan labor force. First, there has been little sustained study of industrial differences in the said profile. Second, a less aggregated private-public sector dichotomy can be incorporated without difficulty into the proposed focus on industrial differences. Knowing which of the two generalizations is true at the level of industry is important, not for purely forensic reasons, but because it adds significantly to our understanding of the occupational structure of the Kenyan labor force.

But testing the two generalizations is only part of a wider, three-pronged objective, namely: (a) to a large extent using the log-linear technique provided for in the ECTA program, to draw a profile of Kenya's "modern sector" labor force based on the effects of industrial differentiation on the relationship between race (i.e. African, Asian or European) and occupation in 1968 and 1974--and, by inference, during the period 1968-1974; (b) to assess the labor absorption capacities of respective occupations and industries in the economy in the light of a rapidly expanding total labor force in Kenya, and, on the basis of that assessment, to forecast what profile of the employed labor force as a whole is likely to prevail in the economy in the near future; and, (c) to examine the role of ethnic and sex cleavages in the occupational structure in the postcolonial period. The forecasting exercise is more flexible than ECTA analysis in terms of the data format it allows. This enables us to have a slightly longer period, 1968-1976, upon which to base our forecasts.

The relevance of the dissertation to general sociology is emphasized by the fact that, focusing on the occupational distribution of respective groups in Kenya, the study helps to clarify discussion about the pattern of the division of labor in developing countries, which in turn helps to identify new or potential directions in the social stratification process. Furthermore, by outlining trends in the absorption of labor into Kenya's "modern sector," the study contributes to our knowledge of social change in the contemporary world. The points mentioned in this paragraph are explained in greater detail in Chapter XI, the concluding chapter.

The relevance of the study to development policy in Kenya is underscored by the fact that: (a) the recruitment of Africans to middle and high-level occupations remains a top priority for the Kenyan government (see Kenya, Republic of, 1965; 1974; 102-3); and (b) the rapid creation of employment opportunities--rapid labor absorption--is a primary goal of development planners in Kenya, which has an unusually high population growth rate (Kenya, Republic of, 1974: 90-6). This paragraph is expanded upon in Chapters VII and IX.

In addition to this introductory chapter, the dissertation is presented in ten chapters. Chapter II provides the historical background to the research problem. It outlines the growth of Kenya's "modern sector" from its pre-colonial and colonial beginnings. It discusses the major causes and consequences of European and Asian presence in Kenya's labor markets during the colonial and post-colonial periods. It touches upon the differences between the two periods in terms of government policies on and programs for national socio-economic development, focusing on such issues as: direct foreign private investment, land ownership, racial discrimination, education and wage employment. The primary significance of Chapter II is that it highlights the deeply-rooted impact of racial differentiation on Kenya's occupational structure.

The literature review in Chapter III presents the theoretical and empirical background to the research problem. Six leading models of occupational distribution are discussed, namely: capital-labor substitution, discrimination, economic dependency, social class, human capital investment and rural-urban migration. It is found that none of these models can by itself explain the complexities of occupational distribution in Kenya. But, viewed together, they manifest a considerable degree of complementarity and overlap. Discussion of the respective models also helps generate the five hypotheses tested in subsequent chapters.

Chapter IV examines the quality of the data and discusses the variables and techniques used in testing the five hypotheses generated in Chapter III. Hypothesis 1 to 4 are tested by means of: (a) the log-linear technique provided for in the ECTA (Everyman's Contingency Table Analyzer) program; and, (b) rank-order correlation. Hypotheses 1 and 2 are tested in Chapter VI, and hypotheses 3 and 4 in Chapter VII. Hypothesis 5, tested in Chapter VIII, does not call for the application of the log-linear technique. Instead, the available data on the occupational and administrative structure of post-colonial Kenya are examined in the light of the proposition--tracing back to Max Weber (1978:968-73) and supported by an impressive array of empirical work (see, for example, Blau, 1972a; Pugh, et al., 1969; Hummon, et al., 1975; and Stolzenberg, 1978)--that changes in size lead to structural changes in organizations. Because of limited data, the discussion concentrates on Kenya's public administration.

Just as Chapter II represents the historical--and Chapter III the theoretical/empirical--background to the analysis carried out in this dissertation, so does Chapter V represent its statistical foundation. It is here that the observed contingency data later subjected to log-linear analysis are given, in collapsed form, and discussed (Appendix 1 and 2 show the contingency data in the form actually entered into ECTA). Having these data on hand is useful in that, as we interpret our findings, they serve as a check on the cell-distortions which the fitting of ECTA models to observed data is likely on occasion to cause. Such distortions are exemplified by the observation that "fitting unsaturated models gives estimates for elementary cells that have a positive probability but zero observed count" (see Bishop, et al., 1975:45). Chapter V also gives us the basic profile of Kenya's "modern sector" labor force in 1968 and 1974--and, by inference, during the period 1968 to 1974. Subsequent analysis in Chapters VI to X is really just an elaboration of this basic profile.

The view in Chapter IX is that rural-urban imigration in Kenya is but part of a complex process of labor supply and demand. Labor supply trends in Kenya during the period 1968-1976 are weighed against labor absorption trends in respective occupations during the same period in order to determine the extent to which particular segments of the labor force are likely to be absorbed into wage employment in the foreseeable future. This also helps us to forecast the likely level of unemployment during the decade ending in 1986. No hypothesis is tested here, but the analysis helps point out the direction in which the profile of Kenya's labor force is likely to change in the short-term.

Chapter X expands on the view, first expressed in Chapter III, that the problem of elite formation in Africa is usually also the problem of ethnicity. Indeed, this writer is of the opinion that under the prevailing socio-political conditions, ethnicity is a significant factor in "modern sector" occupational distribution in Kenya, particularly in the higher levels of the occupational pyramid. It need not be, and will probably wither away in due course; but to ignore it at the present time is to deny a significant sociological reality. A profile of the Kenyan labor force which does not take ethnicity--and inequalities based on sex--into account no doubt remains incomplete. Moreover, ethnic and sex inequalities in Kenya or other African countries cannot be bridged simply by withholding from public view the data which might point them out. The available data, particularly on ethnic differentiation in Kenya's labor markets, are not comprehensive enough to permit an extensive analysis; but some discussion is possible.

Chapter XI summarizes the main findings of the dissertation. On the basis of these findings, some general inferences are drawn concerning Kenya's occupational structure. It is in this concluding chapter also that the relevance of the study to general sociology is brought into sharp and sustained relief. There are, of course, references and allusions to the sociological significance of this study in several of the earlier chapters, but such references and allusions are minimized to avoid deviating from the main purposes of the respective chapters. Finally, Chapter XI considers the implications of the findings to public policy in Kenya.

CHAPTER II

THE HISTORICAL BACKGROUND

The purpose of this chapter is to give a historical perspective to the main objective of the dissertation, which is: to analyze the interaction of race, occupation and industry in Kenya's "modern sector" during the period 1968 to 1974. The chapter is divided into three parts. The first part briefly traces the coming of the non-African races to what is now Kenya. The second part explores the genesis and growth of the modern sector till independence, and discusses the contribution of the non-Africans (Arabs, Asians and Europeans) to the growth of this modern sector. Part three discusses the attempt by Africans, both before and after independence, to redress by political means the racial imbalances imposed on Kenya's labor markets by colonial authorities and settler interests, and carried over into the post-colonial period by economic dependency and the sheer momentum of events.

For a long time now, race has been a problem-concept for scholars--historians, anthropologists, archaeologists, linguists, etc.--working in Africa. Is the basis for racial classification to be skin pigmentation, linguistic group, continent of origin or concentration, length of stay in Africa, or the respondent's say-so? And what of those whose genealogy includes more than one racial type? Fage (1978:3-33), who has discussed a number of these criteria at some length, leans toward a categorization of racial types by linguistic group, but he does not quite succeed in disposing of skin color. There is, in fact, a fairly high correlation between linguistic group, skin color broadly speaking, and even continent(s) of origin or concentration. The peoples (i.e. ethnic groups) of Africa south of the Sahara--commonly called Black Africa--share at least three broad characteristics: (a) despite sometimes striking variations, they are predominantly dark skinned; (b) the languages they have traditionally spoken are mainly but not entirely clustered around two linguistic families, termed by Greenberg the Nilo-Saharan and the Congo-Kordofanian (see Fage, 1978:23); and, (c) their historically recognized "motherland" or continent of concentration (i.e. where they are most to be found) is the African continent. "Motherland" and area of concentration are but synonyms for environment, which is probably the single most important cause of differentiation among the world's peoples. It is on the basis of the foregoing characteristics that this dissertation distinguishes between Africans and non-Africans in Kenya. Where one parent is African, most people of mixed parentage in Kenya have generally been, and continue to be, treated as African. So have those whose genealogy is largely African; for example, the so-called Swahili people of the coastal areas.

The Coming of the Non-Africans

The emergence of racial differentiation as a factor with direct, long-term effects on the social structure of the area we now call Kenya can be traced back to the founding, around A.D. 700, of a permanent Arab settlement in the Lamu archipelago. Most probably, this settlement was the first "principality of foreigners" (Reusch, 1954:75) anywhere on the east African coast, i.e., the coast running from Kenya through Tanzania to Mozambique. This date marks a watershed in Kenya's economic history not because the relationship between Arab and African only now revealed its long-standing master-slave character, but rather because the Arab, by adopting this part of Africa as a new homeland, began to develop that race-conscious relationship as an integral, on-going part of the social structure of the Kenyan coast.

Over the years, more Arabs and some Persians arrived to settle on the Kenyan coast. In A.D. 976, for example, immigrants from Persia established a military fortress on an island on the Kenyan coast, the nucleus of what gradually grew into the city of Mombasa, presently the second largest in Kenya. This was nine and a quarter centuries before the British founded Nairobi. First within their initial settlements and then spreading to other parts of the coast, and using their military and, following from that, economic power--the latter founded on African slave labor--the Arabs were the first to introduce race as a fundamental criterion and continuing feature of occupational distribution anywhere in Kenya. This two-tier, master-slave occupational structure was little affected by, indeed survived, nearly three centuries of Portuguese supremacy on the east African coast--which stretched from late fifteenth to late eighteenth century. It had to wait for the British--themselves long involved in slave trading on Africa's West coast--to put an end to it.

Kenya became a British colony and acquired its present name only in 1920. Its cartographical definition was not completed until 1926 (Ward and White, 1972:73). However, it had come under the British sphere of influence in 1886, according to a treaty signed in November of that year by Britain and Germany (see Hollingsworth, 1961:140-1), then the dominant European powers in East Africa. In 1888, the Imperial British East African company, a private enterprise, was established to exploit the resources of British East African possessions (present-day Kenya and Uganda) in the name of Britain; but the company, underfinanced and poorly managed, did not prove equal to the task, and was dissolved in 1895. Consequently, on July 1st, 1895, the British government took direct charge of British interests in British East Africa (now Kenya)(see Hollingsworth, 1961: 174-7) and Uganda.

The company had failed, for example, to continue meeting the expenses of administering Uganda during the strife-torn period of the early 1890s. It had also failed to contain the widespread uprising of coastal Africans and Arabs which had begun in February 1895 (see Ogot, 1974:250-1). According to Hollingsworth (1961:175-6), the final crushing of this uprising in April 1896 by forces organized by the British government "definitely marks the end of Arab power on the coast and its replacement by that of Europeans." Yet, Ogot (1974: 251) has observed, as the British Foreign Office declared Kenya's ten-mile wide coastal strip a British protectorate:

> ...an Arab sub-imperialism was re-established by the British to administer the area. This rule by the Omani Arabs in the service of the British was operative up to 1963, and hence much of the history of the coast during the colonial period is the story of the struggle of the other coast peoples--the Twelve Tribes and the Mijikenda--against these agents of British imperialism.

However, viewing the colonial history of Kenya as a whole, Bennett (1963:4; see also Ogot, 1974:256) concludes that after 1896, "... the Arabs' part in the history of Kenya has been slight, particularly as the focus of attention began to shift inland."

The shift of attention toward the hinterland began immediately, spearheaded by the construction of the Uganda Railway. The construction started on the Kenyan coast, at Mombasa, in December 1895. Uganda had come under the British sphere of influence with the signing of another Anglo-German accord, this one in July 1890, and the two main reasons for building the railway were to link Uganda with the sea and thus open it up for greater exploitation by Britain, and to enable Britain to have complete access to and control of the Nile headwaters (see Bennett, 1963:2-4) and thus the entire Nile valley. At this early stage, Kenya inspired little interest in its own right among the British. It was just that it stood, immovable, between the sea and Uganda, at the time a more economically and geopolitically attractive territory, and whose eastern frontier, running roughly North-South, was placed by these same British on the very outskirts of the future site of Nairobi.

The railway brought the non-Africans into the Kenyan hinterland. As its construction proceeded rapidly inland, so did the unexpected economic potential of the Kenyan up-country reveal itself to European colonists and Asian entrepreneurs. For the first time in history, non-Africans began to settle in areas other than the Kenyan coast. It is important to note that most of the workers on the railway line were coolies from India's Punjab province. Practically all of them, however, returned to India after the railway reached Kisumu, on the eastern shore of Lake Victoria, in 1901 (see Bennett,1963:4-5). The Indians who settled in stations and emerging towns along the railway line--and, later, farther afield--were primarily merchants, contractors, financiers and administrators who (or whose predecessors) had begun their gradual and unobtrusive settlement of the Kenyan coast many years (if not centuries) before. In 1498, for instance, Vasco da Gama, then on his first voyage to India, had found that Indian merchants were already established in Kenya's coastal towns of Mombasa and Malindi (Reusch, 1954:228). The Uganda Railway reached the eastern edge of the Rift Valley, at a point about 1.5° south of the equator, in the year 1896. It was at that point and in that year that Nairobi was founded; and among the first building contractors to work there was the Indian, A. M. Jeevanjee, who arrived in 1899 (see Bennett,1963:5).

In July 1899, the headquarters of the Uganda Railway was moved from Mombasa to Nairobi, and in 1907 Nairobi replaced Mombasa as the headquarters of the entire East African Protectorate, i.e. Kenya (see Ogot, 1974:256). On April 1st 1902, moreover, the western border of Kenya had been rolled back from the western periphery of

Nairobi all the way to Lake Victoria (Bennett,1963:6-7) in order to place the Uganda Railway under one administration. The latter two moves had very significant implications for the subsequent history of race relations in Kenya. The replacement of Mombasa by Nairobi as the headquarters of the emerging colony represented a conscious attempt to preempt the spread of Arab, and Islamic, influence into the interior and to ensure European (primarily British), and Christian, supremacy. Without the border expansion of April 1902, the Kenya "White Highlands" would not have been as extensive and might not have attracted as many European settlers as they did. A good deal of the highlands, and about a third of present-day Kenya, would have been part of present-day Uganda. And Kenya's colonial and post-colonial history would not have been as we know it.

European immigration into the Kenyan hinterland began as a trickle in 1896, but by 1904 had become fairly substantial. Lord Delamere, who was to become a leading advocate of European settlement and dominance, arrived to stay in January 1903. Soon he was joined by Galbraith and Berkeley, his brothers-in-law and sons of the Earl of Enninskillen. The presence of these and other titled settlers has led to the observation (see Bennett,1963:11) that "European settlement in Kenya was distinguished by its strong aristocratic flavor; one of Nairobi's hotels became known as 'the House of Lords'." However, among these early settlers were also many non-aristocratic South Africans (both English speaking and Afrikaner), Canadians, New Zealanders, Australians and Englishmen. According to Rothchild (1973:

163), there was not enough aristocratic presence to camouflage the fact that "the social structure was, in reality, largely middle and lower class." But there was enough to fuel, and complicate, the clamoring for white supremacy.

The settlers sought to exclude from the most fertile land, the "White Highlands," and the most promising economic activities not just Africans, but also Indians, Jews, Arabs--and even poor whites. The "White Highlands" were to be the preserve of propertied Europeans; no matter that many of these Europeans became truly propertied only after acquiring African land unilaterally and virtually for free. The "White Highlands" were officially created in September 1903 (see Bennett,1963:13), but their boundaries formally drawn only in 1939 (see Ogot, 1974:273). When, in 1903, the British government--in the person of Joseph Chamberlain, then the Colonial Secretary--offered to resettle in Kenya the Jews forced by the pogroms to flee Russia, a number of European settlers led by Lord Delamere expressed vehement opposition. The Jews, Delamere argued, had no agricultural experience and would be "purely parasitic." He feared that the Jews would introduce a stratum of poor whites in Kenya. Despite his objections, a very small number of Jews apparently came to settle (see Bennett, 1963:12-4).

Ogot (1974:254) elaborates on settler attitudes toward Africans and poor whites as follows:

> Europeans who felt superior to the Africans were unlikely to agree to do manual work in a country inhabited largely by Africans. The natural role of most of them working on

> the land, they felt, should be that of supervisors of African labor. Conscious of their status they hoped that a poor white residuum would not appear, as had happened in South Africa. A class of poor whites, they feared, would pave the way to miscegenation, which in turn would result in a debasement of racial standards. When many undesirable and penniless European characters swarmed into Nairobi from South Africa...[those who] failed to satisfy the court as to their financial resources or past record...were committed to prison at Fort Jesus in Mombasa for six months, followed by deportation to Bombay.

It was not just the Europeans who sought dominance in Kenya. The Indians also sought to have the country Indianized through a policy of unrestricted immigration of Indians. Thus in 1910, A. M. Jeevanjee, the contractor, said: "Let it be opened to us, and in a very few years it will be a second India" (see Ogot, 1974:256; see, also, Frost, 1978:28-36). Later the Aga Khan added his prestige to this campaign for Indianization by suggesting the reservation of East Africa for Indian settlement (Ogot, 1974:256). When the campaign failed--the British government, the European settlers and Africans opposed it--the Indians scaled down their goals and concentrated their efforts on parliamentary and economic equality with Europeans. The struggle between Europeans and Indians, the bulk of the Asian population in Kenya, culminated in a London conference in 1923 involving representatives of the two groups and the British government. The conference produced a historic White Paper which did not satisfy either the Asians or the Europeans. It stated in part (see Rothchild, 1973:67; see also Ogot, 1974:271):

> Primarily, Kenya is an African territory, and His Majesty's Government think it necessary definitely to record their considered opinion that the interests of the African natives must be paramount, and that if, and when those interests and the interests of the immigrant races should conflict, the former should prevail. Obviously, the interests of other communities, European, Indian or Arab must be safeguarded...But in the administration of Kenya His Majesty's Government regard themselves as exercising a trust on behalf of the African population, and they are unable to delegate or share this trust, the object of which may be defined as the protection and advancement of the native races.

While the White Paper foreclosed on paper the creation of a white supremacist society in Kenya along the lines of South Africa and Rhodesia, it did not and was not intended to put an end to European dominance over the economic and political life of the new colony. The Asians gradually and grudgingly accepted the status of second-class citizens, the same status they had enjoyed/persevered for years along the Arab-dominated East Coast. The third-class status of Africans as a whole did not change, either. In fact, the subsequent Carter Report of 1934 negated much of the moral thrust of the White Paper by advocating a dual policy according to which the interests of Africans were to be paramount only in the 'Reserves', while European interests were now to be paramount in the White Highlands and other areas suitable for capitalist exploitation (see Ogot, 1974: 275; see also Table 1, which shows the distribution of respective racial groups during the period since the year 1911).

Denied an effective role in the political process, and denied an equitable access to the main economic resources of the country, Africans began to organize and agitate against colonial rule on a

Table 1: The Racial Distribution of Kenya's Population in Census Years.

	CENSUS YEAR						
	1911	1921	1926	1931	1948	1962	1969
African	--	--	--	--	5,251,120	8,365,942	10,733,202
Non-African:							
Asian	11,787	25,253	29,324	43,623	97,687	176,613	139,037
European	3,175	9,651	12,529	16,812	29,660	55,759	40,593
Arab	9,100	10,102	10,557	12,166	24,174	34,048	27,886
Other	99	627	1,259	1,346	3,325	3,901	1,987
Non-African Total:	24,161	45,633	53,669	73,947	154,846	270,321	209,503
TOTAL	--	--	--	--	5,405,966	8,636,263	10,942,705

Source: Republic of Kenya (1977:12).

larger and larger scale. Increasingly they called for an "Africa for Africans." This agitation culminated in Kenya's political independence on December 12, 1963, only forty-three years after Kenya became officially a colony. Subsequent chapters in this dissertation show that with the coming of independence, Europeans and Asians continued to play an important role in Kenya's economic life. However, with state power no longer as amenable to European demands as it had been in the colonial era, their dominance in the higher levels of the occupational structure and in the commanding heights of the modern sector was now increasingly challenged by growing numbers of upwardly mobile, elitist Africans; and by selective state acquisition of property. Before we go into further detail, let us discuss the genesis and growth of Kenya's modern sector up to independence.

The Genesis and Growth of Kenya's "Modern Sector"

The modern sector in a developing country is, generally speaking, that area of the economy involved in relatively large-scale and specialized production and/or distribution of increasingly non-subsistence goods and services, and in which the goods and services are exchanged primarily for cash. Scanning the evidence with this definition in mind, one notices that by the time of the Anglo-German partition of East Africa in 1886 there were already a few embryonic modern sector enterprises on the East African coast (see, for example, Bennett,1963:4-5; Ward and White, 1972:62-3; Ogot, 1974:255). Arabs controlled a large proportion of these enterprises. However, most of the financing, and professional and managerial know-how, was provided by Indian merchants, who were also involved in wholesale and retail trade.

Indian merchants financed Arab trading and slave-raiding safaris into the East African interior in the second half of the 19th Century (see Ward and White, 1972:62). In doing so, they laid the foundations of the system of banking and money-lending, a crucial ingredient in a "modern" economy, in East Africa. They provided the personnel who managed customs along the East African coast for the Sultan of Zanzibar (Bennett,1963:4), thereby introducing a rudimentary civil service on the coast before the onslaught of colonialism in East Africa. They also laid the foundations of the building and construction industry in Kenya (see Bennett,1963:5). Probably the greatest tribute to the role of Indians in the emergence of the modern sector in Kenya, with its emphasis on money as the medium of exchange, is the fact that in the formative period of 1905 to 1922, the Indian currency, the rupee, rather than the British pound, was accepted by British authorities as the official currency of Kenya (see Were and Wilson, 1968:217; Ward and White, 1972:87). The rupee had probably been <u>the</u> medium of exchange on the coast since the early 19th century, when Indian merchants began to settle in large enough numbers to entrench themselves in the local economy (see, for example, Ogot, 1974:255).

While it can be shown that the origins of modern sector institutions in Kenya trace back to the period before British rule, this writer has found no hard evidence to show that these embryonic institutions hired Africans as voluntary wage labor after the abolition of slavery toward the end of the 19th century. To identify the first clear example of African participation, as forced wage labor, in Kenya's modern sector institutions, one must turn to the construction of the Uganda Railway from Mombasa to Kisumu from December 1895 to 1901. The railway was the great cornerstone of capitalist penetration of the Kenyan interior. Financed by the British government because the Imperial British East Africa Company, a private enterprise, was too weak to do the job, the railway symbolized as well the dramatic arrival of the public sector inland. It thus gave Africans in Kenya their first experience in paid civil service employment, albeit at the lowest occupational level.

The construction of the railway line to Kisumu encouraged Indian and European entrepreneurs to settle on a permanent basis in the Kenyan interior, as we have seen. Most of the Indians were small-scale entrepreneurs, relative to their European counterparts, and were involved mainly in wholesale and retail trading and some money-lending in the urban and market centers along the railway line and, gradually, farther afield. Initially, Europeans were engaged primarily in farming and colonial administration. However, as profits accumulated and new opportunities arose, a number of Indian and European entrepreneurs diversified. The colonial administration likewise expanded. Consequently, more Africans were drawn into wage employment, first by conscription and later voluntarily.

By 1906 (see Wolff, 1974:54-6), British authorities in Kenya and London had decided that Kenya was to be primarily an agricultural country based on European control of the major means of production and distribution; and that besides paying its own way as well as the cost of the Uganda Railway (at that date running entirely within Kenya), its role was to be that of a supplier of agricultural produce and raw materials to the metropolitan economy. To ensure European control of the commanding heights of the economy, a number of decisions were made. First, as we have seen, huge tracts of prime agricultural land were in the course of time reserved exclusively for European farmers. As Wolff (1974:56) has noted:

> The land given to the European settlers was situated in the region of Kenya generally most favorable to agricultural production. The elevation is, with few exceptions, over 4,500 feet above sea level...the areas alienated for European settlement were among those with the highest and most advantageous levels of precipitation. The 35,000 square miles called Kenya Highlands--under 15 percent of Kenya's area--supported over 75 percent of the population--black and white--throughout the period under consideration.

Second, only Europeans were to be allowed to grow such profitable cash crops as coffee and tea; this policy persisted, by and large, till the late 1940s (see Bennett,1963:118). Third, Asians were by design or default confined to commercial activities and occupations in which the richer Europeans had no particular interest. Forgetting his aversion to poor whites, Lord Delamere comments (see Wolff, 1974:95):

> In all new countries the backbone of the country is the small man, the white colonist with small means, but there is no place for him in a country when once the Asiatic is there...

> All the vegetable growing for the towns is done by Indians, all the butchers with one or two exceptions are Indians, all the small country stores are kept by Indians and most of the town shops, all the lower grade clerks are Indians, nearly all the carpentering and building is done by Indians. They thus fill all the occupations which would give employment to the poorer white colonists, especially those arriving new in the country.

Fourth, Africans were to be the source both of cheap labor and, through taxation, a major proportion of the revenue needed to administer the British dependency (see, for example, Ogot, 1974:266-78; and van Zwanenberg, 1975:43-60).

The subsequent pattern of capital investment in colonial and post-colonial Kenya has been greatly influenced by these and related decisions. Table 2 shows, for example, that most of the major companies established in Kenya up to 1935 were European-owned and strongly tied to Britain (see Swainson, 1978:51). Furthermore, many of these companies were established either to handle agricultural products or to supply the needs of European settler-farmers.

The degree of African participation in Kenya's emerging labor markets in the first two decades of this century was limited, in part, by their reluctance to work, even for pay, under the conditions imposed by the newly arrived employers who, as far as they were concerned, were culturally marginal. To this extent, and speaking from the perspective of the employers, it can be said that the "labor force commitment" of Africans was low. But the point is that the new working conditions did not fit into their on-going scheme of things, offered little in return for the amount of time and effort asked, and

Table 2: Major Foreign-Owned Companies Established in Kenya up to 1935

Date	Name of Company	Type of Business	Parent Company and Country of Origin
(a) Agriculture and Estates			
1906	British East African Corporation	Agents, Exporters of Primary Produce	Mitchell Cotts, U.K.
1907	East Africa Tobacco Company	Tobacco trading, tobacco and Cigarette Manufacture (1934)	British American Tobacco, U.K.
1924	African Highlands Produce Company	Tea	James Finlay, U.K.
1924	Kenya Tea Company	Tea and Coffee	Brooke Bond, U.K.
1931	Anglo-French Sisal Company	Sisal Plantations	British/French
1932	East African Tanning and Extract Co.	Wattle Bark and Extract	Natal Tanning and Extract, South Africa Forestal Land and Timber, U.K.
1936	E.A. Sisal Estates, Ltd.	Sisal Production	Mitchell Cotts, U.K.
(b) Trading			
1920	Bird and Company, (Africa) Ltd.	Merchants, Transporters, Shipping, Freight, Warehousing	Bird and Co., U.K.
1920	Gibson and Company	Agents, Exporters of Primary Produce	Gibson and Co., U.K.
1924	Gailey and Roberts	Import and Distribution of Agricultural Machinery, etc.	United Africa Company U.K. (Unilever after 1937)
1934	Holland Africa Line	Shipping and Warehousing	Netherlands

Table 2 (Continued)

Date	Name of Company	Type of Business	Parent Company and Country of Origin
(c) Manufacturing and Minerals			
1911	Magadi Soda Company, Ltd.	Extraction of Soda	E. African Syndicate (taken over by I.C.I. in 1923), U.K.
1920	East African Breweries	Beer	Ind Coope, U.K.
1922	East African Power and Lighting Company	Electricity	Power Securities, Balfour Beatty Co., U.K.
1933	East African Portland Cement	Cement Clinker Grinding	Associated Portland Cement, U.K.
1935	Leibig	Meat Processing	Leibig, U.K.

Source: Registrar-General of Companies, as reported by Swainson (1978:51).

even less solace against the acute sense of anomie that such commitment was sure to engender. Above all, force, which labor recruiters were wont to resort to during those early years, was anathema to Africans. Indeed, it has been argued that where labor recruiters were cognizant of local values and sensitivities, they usually had much success. Dilley (1966:213), for example, argues that while there were labor shortages in Kenya well into the 1930s, these were probably due as much to African reluctance as to the excessive demand for cheap African labor and unacceptable recruiting methods:

> The shortage has not been due entirely to native unwillingness, for supply has been constantly, at times rapidly, increasing since 1903. Development has required much labor, and the number of natives offering themselves has proved insufficient. In addition, friction and discontent have flared up at intervals.

We have seen that, in general, Africans were expected to perform the most menial jobs. The educational program designed for them for most of the colonial period was intended to deviate little from this expectation. An official report from Nairobi (for the period 1914-15), for instance, envisages the role of educated African labor in Kenya as follows (see Furley and Watson, 1978:92):

> All agree on the desirability of African natives taking their places as trained men in those branches of the Civil Service which are exclusively filled by Natives in the West African Colonies, in hospitals, dispensaries, laboratories, telegraph work indoors and outdoors, tree nurseries and fruit plantations, carpenters' shops, mason yards and smiths.

By 1935, the colonial government in Kenya had established 5 secondary schools exclusively for European and Indian students, and was aiding 4 Goan secondary schools. Most of these schools offered courses only up to the Cambridge School Certificate. However, the Prince of Wales secondary school offered courses up to the Higher School Certificate (Furley and Watson, 1978:179). In contrast, there was not one government-run secondary school for Africans in Kenya at the time--schools being racially segregated for the most part--despite a substantial African contribution to the tax revenue (see Rothchild, 1973: 88-90); and despite increasing African demand for secondary education, demand based on the realization that such education at the time held the promise of the greatest occupational mobility, however limited the range of permissible occupations.

Maseno too! Kabaa High established 1925!! Kisii Govt

Cambridge School Certificate courses were not introduced into an African secondary school (Alliance High School) until 1940. And by 1947 only Alliance and Mangu High Schools taught Africans up to Cambridge School Certificate in Kenya (see Furley and Watson, 1978: 243-6). Prior to 1940, Kenyan Africans intending to sit for the Cambridge School Certificate had to transfer to Makerere, in Uganda, which had begun to administer the relevant exams in 1933 to students of all races from all over East Africa. Much later, in 1954, Makerere began awarding university degrees (see Furley and Watson, 1978:307). The first Kenyan African was admitted to Makerere in 1927 (Furley and Watson, 1978:194).

Accepting students--for the Cambridge School Certificate and a number of professional and technical courses--from all over East Africa, Makerere was inevitably highly competitive and, moreover, could not be counted upon to graduate enough Kenyan Africans to match the non-African output of the five government secondary schools in Kenya at the time. In terms of numbers alone, therefore, higher status occupations requiring a minimum of Cambridge or Higher School Certificate were for a long time more likely to be filled by Europeans or Asians than by Africans.

Despite the addition in the mid 1940s of Alliance and Mangu High Schools to those already administering the Cambridge School Certificate, the advantages of Europeans and Asians over their African counterparts were just then beginning to be accentuated on two new fronts. First, because of an increasingly large number of Africans with the Cambridge School Certificate, employers could no longer point to the school certificate qualifications of their European and Asian employees as the sole or main reason for hiring, retaining or promoting them instead of Africans. However, having initially enjoyed a virtual monopoly in the higher level and middle level occupations respectively, Europeans and Asians could now turn to their greater seniority and experience on the job as justification for their continued preponderance in those occupations. The issue of experience was to remain a source of much controversy even after independence, the perception of many Africans (and occasionally Asians) being that as their length of service increased, so did the required length of service, keeping just out of reach.

Second, as a relatively large number of European students, a smaller number of Asians, and hardly any Africans acquired university degrees and higher professional qualifications, they began to form a stratum, at the higher levels of the occupational hierarchy, which eliminated at least some of the previous mobility prospects of school certificate holders. By 1938, Kenya's colonial government had already started to grant bursaries on an annual basis to qualified European students from Kenya for university education in Britain (see Ogot, 1973:278-9). This was, of course, before Alliance High School started offering courses leading to the Cambridge School Certificate, and before the colonial government took charge of African secondary school education.

By the late 1950s, more and more Africans were beginning significantly to break through these educational and employment barriers, despite lingering settler opposition. The change in the educational achievements of Africans had been long in the making, and was now sustained by the belated efforts of Kenya's colonial government and the Colonial Office in Britain. These efforts included the granting of bursaries to Africans for university study. Assistance, in the form of university admissions and scholarships, also came from the United States, the Soviet Union, India and other countries (see Furley and Watson, 1978:315-27).

As we have said, the educational environment did not change overnight. And as usual, the number of pioneers was small. The foundations of western education for Africans in Kenya had been laid in the first decade and a half of this century by Christian missionaries and by Africans (in Nyanza and the then Fort Hall district of central province) intent on remaining independent of missionary control (see Furley and Watson, 1978:79-80). Among the pioneering students was Mbiyu Koinange--son of Senior Chief Koinange and, though now in political oblivion (having lost an election in late 1979), long a close confidante of President Kenyatta--who left in 1927 to study in the United States and returned in 1938 with an M.A. in education from Columbia University (Rosberg and Nottingham, 1966:179; Furley and Watson, 1978:251).

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Jomo Kenyatta himself lived in Britain from 1931 to 1946 (Rosberg and Nottingham, 1966:141-215) representing the grievances of his ethnic organization, Kikuyu Central Association, taking university courses and writing his famous book 'Facing Mount Kenya'. By the early 1950s, Kenya had produced its first African lawyer in the person of Argwings Kodhek (see Ogot, 1974:290), who became a cabinet minister in independent Kenya. In 1954, Mwai Kibaki graduated with a B.A. from Makerere University College in Uganda (see The Weekly Review, March 14, 1977:7), thus becoming one of the first thirteen degree recipients from Makerere (see Furley and Watson, 1978:307). He proceeded to London School of Economics for a degree in public finance. Subsequently he became Minister for Finance and Economic Planning under President Kenyatta. In late 1978 he was appointed Kenya's Vice President by the new President, Daniel Arap Moi--himself a teacher for many years.

Sure! That's a good point!

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To cap it all, a multiracial university college--the Royal College, Nairobi (now University of Nairobi)--was launched in Kenya in June 1961 to offer degree and professional courses in such fields as engineering, commerce, architecture, veterinary science, public administration and the social sciences. The Royal College had started as a non-degree institution, the Royal Technical College, in 1956. In 1962/63, the eve of Kenya's independence, 115 Africans, 104 Asians, 23 Europeans and 4 Arabs were enrolled at the college (see Furley and Watson, 1978:255 and 326). The Kenya Polytechnic was also inaugurated in 1961 in response to the continuing need for non-degree personnel in engineering, commerce and other fields.

The foregoing discussion highlights a fact which Africans in colonial Kenya increasingly grasped: that the primary explanation for the initial establishment of European control of the major means of production and distribution--and hence European dominance in Kenya's occupational structure--was political, and only indirectly economic, power and influence of the European colonist and entrepreneur; power and influence here meaning direct and indirect control of the decision-making process of the colonial administration and of its instruments of coercion (see, for example, Gertzel, 1970:2). Colonial rule itself had been established and was now sustained largely by means of superior armaments, particularly the gun. Now, it might be argued that superior armaments imply superior economic power. But even if this were in every case true, to conclude that economic power was the primary explanation for European dominance in colonial

Kenya's occupational structure would be to identify a cause third removed. The focus on political power does not, of course, conflict with the proposition that the colonization of Kenya was motivated primarily by the quest for economic and strategic gain. The point, however, is that Kenyan Africans increasingly realized that political control of the state was a necessary, if not sufficient, condition for the elimination of European control of the economy as a whole.

Political Control as a Means of Economic Redress

African response to European control of the political and economic life of colonial Kenya passed through three fairly distinct periods. Running from the first decade of this century, when effective British rule was established, to the eve of the Mau Mau uprising, which started in 1952, the first period was characterized by African preoccupation with "self-improvement" activities. Among these activities were: (a) the construction and running of a number of independent schools, necessitated by the general neglect of African education by the colonial government, and the wish by some Africans to remain independent of Christian missionaries; (b) working for pay or engaging in petty trade in order, for example, to enable their children to gain a measure of western education or learn a trade--types of human capital investment whose rewards they increasingly appreciated; and, (c) involvement in welfare and other organizations formed to further their interests and express their grievances against specific excesses of colonial rule.

It was during this period that the foundations of genuine nationalist movements were laid. However, to the extent that political activities were permitted, they were restricted by law to the district level. The ban on nationwide African nationalist parties was not officially lifted until 1960. By excluding trade unions from this ban, however, the colonial government left an opening which enabled African trade unionists, such as Tom Mboya, to pursue politics by less than "other means" at a critical point in Kenya's political history. In 1952 the colonial government allowed the formation of an African dominated national trade union, the Kenya Federation of Labor (see Leys, 1975:54-6); but this is jumping the gun a little. !

Keep on jumping Dr Yambo

When the first inter-ethnic nationalist movement, the Kenya African Union (KAU), was established in October 1944, the colonial government moved quickly to scale down the shadow, if not the substance, of the movement's objectives. In November of 1944 the government had KAU renamed KASU (Kenya African Study Union), which "implied that its chief purpose was to instruct the people on public affairs, a kind of debating society" (see Ogot, 1974:286). However, in February 1946 KASU reverted to its old name of KAU; and in June 1947, Jomo Kenyatta became KAU's president. Despite the revival of the old name, however, KAU had no clear program of bringing an end to colonial rule. Because of this, the more radical elements within KAU were, by November 1951, demanding that Kenya's political independence be a stated goal of KAU (see Kaggia, 1975:81). The main discovery during this period was that self-improvement endeavors, unaccompanied by

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effective political power, did not and could not go far enough. But how to gain political power when parliamentary action was preempted by the banning of national political parties until 1960? In Central Province, in particular, one suggested answer was: armed resistance.

Armed confrontation was the dominant feature of the second period--which lasted from 1952 to 1956 (see Rosberg and Nottingham, 1966:277-94)--although a lot of important political work was also carried out under the guise of trade unionism, as was suggested above. The Mau Mau uprising was a revolt against British rule in general, and its land tenure policy in particular. Kaggia (1975:112), once a member of Mau Mau, argues that Mau Mau "was an organization formed by KAU militants who had lost faith in constitutional methods of fighting for independence." Mau Mau as a movement died before its stated and implied goals were met, but it did induce and in some instances accelerate the reforms which led up to independence in 1963. The irony is that while the Mau Mau uprising was, according to Kaggia, motivated by the real or perceived futility of a peaceful expression of anti-colonial grievances, its military defeat by the end of 1956 had the unintended (unintended by the Mau Mau leaders) consequence of reaffirming the "wisdom" of fighting political battles, even anti-colonial ones, by constitutional, peaceful means.

The third period, 1957 to 1963, was one of intensive political bargaining and frequent electioneering. In 1949, Kwame Nkrumah of Ghana had advised his people: "Seek ye first the political kingdom, and all things will be added unto you..." (see Fitch and Oppenheimer, 1966:25). In the late 1950s in Kenya, the idea that the "political kingdom" might--and the expectation that it actually would--be won by Africans in the not too distant future was one which began to gain wide currency. With the memory of a thwarted armed uprising still fresh, and the threat of intra-African dissension (including secession) very real, most African leaders knew that when independence finally came, it would be because they had agreed to negotiate with and make concessions to each other and to non-African interest groups. But they were willing to do so only in such a way as would ensure African control of the state apparatus. In fact, most of the political bargaining during this period revolved around the place of race, ethnicity and private property in a politically independent Kenya.

In 1960, two national political parties were formed: Kenya African National Union (KANU) and Kenya African Democratic Union (KADU) (see Rosberg and Nottingham, 1966:318). The main objective of either party was an independent Kenya ruled by Africans. KANU was for a strong centralized government. KADU leaders such as Ngala, Muliro and Arap Moi, fearing that such a government would be at the mercy of the larger ethnic groups, preferred a decentralized government with considerable regional autonomy. European settlers and colonial authorities eagerly supported KADU on this and several other issues. There was particular fear that a KANU government would nationalize non-African owned land and other property, not to say without proper compensation, and that it would then redistribute this property unequally among Kenya's ethnic groups (see Rothchild, 1973:122-38). point

The broad political and economic structures of an independent Kenya were negotiated at the Lancaster House conferences, in 1960 and 1962, and at a final conference, also in London, in September and October 1963 (Rothchild, 1973:120-1). The main negotiators were, of course, KANU, KADU, the British government and the Kenya Coalition, which represented European settler interests. The independence constitution which they agreed on was a patchwork of compromises, safeguards and guarantees. Independence came on December 12, 1963, with KANU as the ruling party and Kenyatta the Prime Minister and then, a year later, President. But what happened after independence?

As it turned out, the Kenyatta administration adhered to the constitutional promises and compromises made in London to a degree which at least temporarily reassured, not to say surprised, even the most doubting Thomas as to its intentions regarding the privileged non-Africans; but which greatly disappointed those who--like former Mau Mau and their many sympethizers--had expected a radical and immediate departure from colonial ways. Far from severing the dependent economic relationship with Britain and other metropolitan capitalist powers, the administration seemed bent on strengthening it. But if this was true, it was also true that the administration used its newly-acquired control of the instruments of state to initiate changes, of varying degrees of significance, in the economy as a whole. These changes were both of a short-term and long-term nature.

In the area of employment, for instance, the government embarked on a fairly vigorous program of Kenyanizing, usually meaning

Africanizing, the higher levels of the occupational structure. For this purpose, the Kenyanization of Personnel Bureau was established in late 1967 (see International Labor Office, 1972:564). From then on, expatriates seeking to work in Kenya were required to obtain work permits, and these were increasingly given (at least in theory) only to those with skills which Kenyans did not yet have. A somewhat more focused, and more diversified, system of formal skill-generation--i.e. system of formal education and training--was gradually developed in the country. Last but not least, the government's role as employer began to expand and diversify. In the area of commerce, a selective allocation of trade licenses gradually made it possible for Africans to be an important feature of self-employment in the "modern sector" proper, and for some of these entrepreneurs to become significant employers of wage labor in their own right.

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To summarize, this chapter helps to show that many post-colonial decisions, trends and priorities in Kenya represent the continuation of or reaction against the decisions, trends and priorities of the colonial past. Without knowledge of this history, it would be difficult to understand the motivation of Kenya's policy of Africanizing high and middle level jobs, for example. Without it, moreover, it would be rather more difficult to explain how and why it is that in this corner of Black Africa, as in Zimbabwe, race should play a role in the socio-economic structure much greater than one would normally expect to find in other African countries--greater than one finds even in such neighboring countries as Uganda, Sudan, Ethiopia, Somalia and Tanzania--and much greater than the presence of transnational corporations as such would account for. In later chapters, we will discuss in greater detail changes in the occupational distribution and recruitment advantage of respective racial groups in the post-colonial period (see Chapters V to VIII). There will also be some discussion of how ethnicity and the sex variable have affected the allocation of scarce resources after independence (see Chapter X).

CHAPTER III

THE THEORETICAL AND EMPIRICAL BACKGROUND: SIX MODELS OF OCCUPATIONAL DISTRIBUTION

Discussion of the theoretical and empirical literature in this chapter focuses on six major "models" of occupational distribution applicable, in one version or another, to the Kenyan situation. In the course of the discussion, five hypotheses are generated. These hypotheses are tested in a number of subsequent chapters. However, the purpose of the discussion is not narrowly to generate testable hypotheses, but to provide a necessary theoretical/empirical background to the dissertation as a whole. Here, then, are the six "models."

Capital-Labor Substitution

In the theoretical literature, this broad capital-labor substitution model of occupational distribution is usually represented by one of two, more sharply-defined perspectives: the Marxist and the Neoclassical. As theoretically formulated, neither perspective (or submodel) deals directly with the impact of physical capital (i.e. machinery, tools and other assets) utilization patterns on the occupational distribution of racial strata of the labor force. Instead, discussion usually focuses on the impact of capital utilization patterns and technical change on aggregate labor size. However, the theory does not preclude the empirical, or theoretical, disaggregation of such a focus into a concern with occupational or inter-industry differences in capital-labor ratios (for example, see Braverman, 1974:208-244) by racial group.

The Marxist (1938:643) perspective typically treats the relationship between physical capital utilization patterns and aggregate employment in terms of inverse proportions. As "total capital" increases, the demand for labor declines. The Neoclassical approach to occupational distribution emphasizes the point that the linkage between capital use and employment must be seen in terms of the production function. The production function, or principle of substitution, represents the notion that "a given level of output can be produced in alternative ways using various combinations of the productive factors", namely, labor and capital (Fleisher, 1970:121; see also, Williamson, 1971; Morawetz, 1974; and Cline, 1975). The main difference between this approach and the Marxist one is that the Neoclassical perspective rejects the argument that the demand for labor invariably declines as "total capital" increases.

Despite this difference, Marxists and Neoclassical economists share the view that, broadly speaking, the prevailing combination of the productive forces in a given industry is a function of the type of product, or economic activity, in which the industry specializes. Some industries, such as mining and quarrying, tend to be more capital-intensive, and so hire fewer employees, than others, such as retail and wholesale trade. This view is borne out empirically by Mueller, et. al. (1969:24-29), among others. But some writers have found that in different cases, very similar types of production equipment involve very different proportions of the work force (Ranis, 1973; Pack, 1972); and that capital-intensive techniques can generate employment (Buckingham, 1961:109-119). However, given that Pack (1972) and others find these differences despite a similarity of equipment, it is clear that they mean intra-industry, not inter-industry, differences. And so their finding only refines, rather than undermines, the view shared by Marxists and Neoclassical economists.

But whatever the combination of capital and labor, there is a limit to the size and occupational distribution of the work-force required in any industry. As Fleisher (1970:126) states, the limit to the overall size of the labor force is reached, in the short run (with the supply of capital held constant), when the marginal cost of labor, the wage rate, equals the marginal revenue produced by labor (the difficulty of computing the marginal productivity of research scientists or engineers and other professionals has, of course, been amply discussed by Cain, et al., 1973:27-28; and Parsons and Smelser, 1956:154; for alternative measurements, see Caplow, 1954: 175; and Nadiri, 1970:1137-77).

There is also a limit--hinted at in the above paragraph and echoed in the research focus of the present study--to the types of occupations to be found in an industry, or the percentage distribution of the work-force among those occupations. This limit is set by the type of economic activity in which a given industry specializes.

The relationship between capital and labor in Africa has been examined in some detail by Arrighi (1970), who argues that foreign investors in Tropical Africa are biased in favor of capital-intensive enterprises. He attributes this bias to four factors: (a) Technological constraints: different projects may require different levels of capital intensity, even within the same industry (Arrighi, 1970:227; see also, Pack, 1972); but, frequently, there is no significant alternative to capital-intensive techniques. (b) Managerial constraints: managerial techniques, evolved in the metropolitan countries in a capital-intensive environment, are often exported intact to the "periphery", which is expected to adapt to them (Arrighi, 1970:227-8). Managerial constraints therefore reinforce the capital-intensive tendencies of technological constraints. (c) Great financial reserves: given the two constraints, the final barrier to investment in capital-intensive equipment would appear to be its great financial cost to the investor. However, Arrighi (1970:228) argues that the great financial reserves of the transnationals enable them to overcome this barrier. (d) The "qualitative characteristics" of the African labor force (Arrighi, 1970:228).

Given that technological constraints affect major foreign and local investors alike, Arrighi (1970:228) is suggesting that technological constraints, economic dependency (see also, ILO, 1972:137) and the quality of the African labor force have led to a preference for capital-intensive techniques of production and management by major foreign and local investors.

Focusing on the relationship between capital use and the characteristics of African labor, Arrighi (1970:229) argues further that African labor markets in which unskilled and skilled labor predominate tend to be associated with labor-intensive techniques, while labor markets in which semiskilled and high-level workforce predominate tend to be associated with capital-intensive techniques. But the question remains: is the employed labor force in Africa concentrated in semiskilled and high-level occupations, given the prevailing environment of economic dependency and technological constraints; or in unskilled and skilled occupations, given the pattern of human capital investment discussed below? (see Rempel and House, 1978:24-7).

Before this question is answered, it is important to recognize that the pattern of capital-labor substitution is not a matter of either/or: either capital-intensive or labor-intensive techniques. Rather, what we find is a continuum--from the most capital-intensive (i.e. least labor-intensive) techniques to the least capital-intensive (most labor-intensive). If Arrighi's hypothesis were to be restated in terms of this continuum, it would suggest that the most capital-intensive industries show the greatest preference for semiskilled and high-level personnel. This restated version is adopted as Hypothesis 1 of the present study, which reads: the greater the degree of capital intensity in an industry, the greater the likelihood of finding Africans, Asians and Europeans respectively in semiskilled and high-level occupations rather than unskilled and skilled occupations.

A corollary to hypothesis 1, also inspired by Arrighi, states that the recruitment advantage of Europeans over Africans or Asians in high-level occupations rises with the level of capital intensity in respective industries. The recruitment advantage of one group over another is defined here in terms of differences in lambda effects (explained in the next chapter). The sum of all lambda effects (not just the larger ones) pertaining to one group minus the sum pertaining to another group give us the recruitment advantage of the former. The two groups need not be in the same industry though the problems examined often, if not usually, require that they be. Hypothesis 1 and its corollary are tested in Chapter VI.

Discrimination

Till now, most of the outstanding theoretical discussion of labor market discrimination has taken place outside Africa, particularly in the United States (for example, Becker, 1957; Caplow, 1964; Thurow, 1969; and Doeringer and Piore, 1970). This observation does not, of course, deny the fact that, in the meantime, theoretically significant, empirically oriented research has been going on in Africa and elsewhere; with Becker's (1957:77) definition of market discrimination--i.e. the relative overrepresentation of members of a particular group (racial, religious, etc.) in particular occupations--serving implicitly or explicitly as a starting point.

Empirical work on market discrimination in Africa has paid substantial attention to race; and racial discrimination in the labor market has been treated as an integral part of economic dependency or, in the case of South Africa, political domination by a racial minority. Kassalow (1968:54-5), for example, has observed:

> Nowhere else in the developing world is the race and culture barrier between propertied groups, on the one hand, and the working classes, on the other, so critical a factor.
>
> European and American capital penetration has been as extensive outside Africa as within it. But it is primarily in Africa that one finds, until now anyway, a relatively small native business class. Most big business involves European ownerships, and usually management, and a native labor force.

In addition to management positions, skilled crafts in such enterprises as building, maintenance and transportation have also tended to be the preserve of Europeans or Indians (Kassalow, 1968: 57). This occupational stratification by race is reinforced by a wage and salary structure that favors high-level occupations, as usual.

Two versions of racial discrimination can be identified in African labor markets: legalized discrimination, as in South Africa and, before independence in mid-April 1980, Zimbabwe; and dependency-based discrimination, as in practically all of post-colonial Africa (see Pfefferman, 1968:57-80).

Concerning South Africa, Johnstone (1976:57-60) argues from a neoMarxist perspective that parliamentary legislation reserving certain unskilled, skilled and managerial occupations to white South Africans was the result of agitation earlier this century by white workers fearful that their "structural insecurity"--arising from their proletarianization and the "ultra-exploitability" of indentured and disenfranchised nonwhite labor--might lead to their losing jobs to nonwhites, largely Blacks and "coloreds".

Sheila van der Horst's (1964:24) study, citing a 1954 survey, indicates that a small proportion of Africans has nevertheless been able to secure employment as skilled workers (see also Doxey, 1961: 115). But she emphasizes that upward occupational mobility is racially patterned by law and social attitudes which forbid promoting or hiring Africans to positions of authority over whites or people of mixed races--the "coloreds"; and forbids "coloreds" from having authority over whites (1964:24).

In the ex-colonial states of Africa, the pattern of racial discrimination is far less rigid, varying as it does according to the extent of European and, frequently, Asian presence--itself a function of the colonial past and the degree of foreign physical and financial capital investment in, and human capital investments and gains of, particular African countries.

Using data from the early sixties, Pfefferman (1968:67), for example, concludes that the dominance of expatriates in Senegalese industry was, at least then, a function of technical factors as well as "the Africanization policy of the firms." He adds (1968:75):

> In most medium-sized plants of French-speaking Africa (under 500 employees) attempts to train Africans meet the active or, at best, the passive resistance of expatriate foremen. The local top management itself is more often than not half-hearted in organizing training schemes. Its aim often seems to be to prove to the government that Africanization is bound to fail.

Arrighi (1970), on the other hand, argues that political independence in Africa more than implies that Africans have not been entirely shut out of white-collar and executive positions. Independence has brought about a "phenomenal" growth in education and high-paying employment for Africans (Arrighi, 1970:223). This growth has been realized through: (a) extensive Africanization of the burgeoning state bureaucracies; and (b) the increasing recruitment, by expatriate firms, of Africans to clerical as well as "middle commercial posts, and some managerial posts, especially in personnel management and public relations" (Arrighi, 1970:234). But if Africanization has been so realized, it has also been limited by the fact that production, engineering, and other technical and higher executive posts "are still mainly in expatriate hands, though in a few instances Africans have been recruited to nominal directorships" (Arrighi, 1970:234).

Expanding on Arrighi's remarks, Stewart (1976:84) argues that though 90 percent of the civil service in Kenya had been Kenyanized by 1967, non-Kenyans still occupied most of the dominant positions in the army, education and business. She insists that almost ten years after independence "the pyramid of privilege, with Europeans at the top and Africans at the bottom, still looks much as it did in 1963" (Stewart, 1976:84). She attributes this status quo to three broad factors: (a) shortfalls in Kenya's human capital investment in the context of, (b) an expanding economy which demands increasing numbers of high-level personnel, and (c) economic dependency accompanied by the greater availability of foreign technical assistance (Stewart, 1976:84).

The foregoing theoretical and empirical discussion of racial discrimination in the "labor market" suggests the following broad hypothesis: that in any Tropical African country (e.g. Kenya), the likelihood of finding Africans in high-level occupations in particular industries is inversely related to the degree of "dependency-based" discrimination in those industries--i.e. to the extent of economic dependency and human capital shortfalls in particular industries. Being so broad, the hypothesis can be split into two more sharply-defined hypotheses without any loss to the original focus. Thus, hypothesis 2 focuses on the impact of economic dependency on occupational distribution by race (see the section on Economic Dependency of this chapter); while hypothesis 3 relates the same distribution to human capital investment (see the section on Human Capital Investment of this chapter).

Economic Dependency

The theory of economic dependency traces its roots to Marx's (1973:138-52) theory of capitalist development, and Hobson's (1965) and Lenin's (1939) theories of imperialism. But the three contemporary architects of the dependency theory are Baran (1957), Fanon (1968) and Frank (1970).

Baran's theory of dependency has been a major foundation in its own right for many of the subsequent dependency theories, and continues to have great appeal. It states that though "a number" of countries in the underdeveloped world are now politically independent, with native political leaders holding high office:

> There is hardly any need to stress that such independence and autonomy are little more than sham as long as the countries in question remain economic appendages of the advanced capitalist countries and as long as their governments depend for survival on the pleasure of their foreign patrons (Baran, 1957:14).

In addition to ensuring metropolitan control over the "development of underdevelopment" process in the dependent state, dependency and its gradualist ideology, it is hypothesized, ensure that leading positions in existing or emerging labor markets of dependent states are held by persons from the "core" countries, mainly Western Europe and North America (Woddis, 1967:71; Stewart, 1976).

The empirical literature on the impact of economic dependency on occupational distribution in Africa is closely related to the literature on racial discrimination, already discussed. To avoid duplicating that broader discussion of discrimination, let us briefly focus our attention now on the transnational corporation.

A study by La Palombara and Blank (1976:56) suggests that expatriate control of transnational corporations is not unique to developing countries. In Italy, for example, expatriate executives were strongly of the opinion that subsidiaries of transnational corporations ought to be managed by expatriates from the parent company. Indeed, expatriate control was the norm in transnational companies operating in Italy (itself, ironically, the home-base of other transnationals) and, to varying extents, other countries as well--Canada being something of an exception. As one expatriate explained it: "only those of the parent company's nationality will look at the local situation through the eyes of the parent" (La Palombara and Blank, 1976:56).

Prasad and Shetty (1976:107-22; see also Kolde, 1974:168) support this observation, adding that many American-based transnationals are strongly inclined to recruit executives from the parent company. They argue that assignment to overseas subsidiaries involves only members of the transnational corporation or, when that is not possible, employees of other American companies. But, they add, there is a shift already toward a greater recruitment of local executives, due to four main factors: increasing availability of host-country nationals with the required qualifications; the comparative-cost advantage of recruiting host-country nationals; pressure, including legislation, by host countries to induce the transnationals to recruit host-country nationals; and the (newly) perceived advantages to the subsidiary, and the parent company, of long-term commitment by local executives (Prasad and Shetty, 1976:109). Despite this shift, however, there is still a perception in many dependent countries that local talent may already be "less scarce than many multinationals claim" (La Palombara and Blank, 1977:10).

The available data do not indicate the precise magnitude of foreign private investment by industry in the Kenyan economy, and so direct measurement of economic dependency by industry in Kenya is not easy. In fact, it is difficult enough to obtain reliable data on aggregate foreign private investment in African countries. The usual solution has been to substitute another dichotomy, really a continuum--aggregate private versus public sector investment--for the more precise one, namely, foreign private versus local private and/or public investment. With reference to Kenya, for example, the major studies relating European presence in high-level occupations to economic dependency have relied heavily on data focusing on aggregated private versus public sectors (see ILO, 1972; Burrows, 1975; Stewart, 1976). This equating of private sector investment with foreign private sector investment seems to be justified--particularly when we consider the 1960s and earlier periods--by the fact African businessmen have been an insignificant, though gradually ascendant, factor in the private sector for a good part of the post-independence period, not to mention the colonial period (see Marris and Somerset, 1971:1-13).

Thus, if for no other reason than to partially replicate these studies--as a way of testing hypothesis 2--it is legitimate to treat the extent of public sector ownership in respective industries in Kenya as an index of economic independence in that industry, as the present study does. Considering the extent of public sector employment as a proxy index of economic independence within an industry, and relating this index to particular groups in Kenya, we can summarize the main arguments in dependency theory and research on tropical Africa in the following hypothesis. Hypothesis 2: the likelihood of finding Africans in high-level occupations in a particular industry is positively related to the extent of public sector employment in that industry. While testing this hypothesis, the "recruitment advantage" of each group over the other two is also considered (see also hypothesis 4).

Social Class

According to social class theory, the supply, and demand, of labor into the various occupational categories of contemporary class societies is conditioned by the basic "class situation" of the prospective recruits; in other words, by their relation to the means of production (Parkin, 1971:23-28; Shivji, 1976; see review by Bendix and Lipset, 1966) As Marx (1973:68) himself has remarked, the stages of development in the division of labor are "just so many different forms of ownership"; that is, just so many different types of employers.

However, while able to show that a duality exists between the owners of capital and the owners of labor-power--and that the three basic "class situations" in class societies are represented by the two categories plus the "landed class"--Marx's theory of "pure form" class seems unable adequately to explain how it happens, and the theory recognizes that it does in fact happen, that even within the same class, such as the proletariat, class members can be assigned to such a great variety of jobs and occupations, and that there are some occupations for which some members will apply, successfully or not, and others will not. Moreover, in recognizing that great diversity in occupational distribution can and does occur within the same class, Marx compromises his own conception of "pure form" class, or, alternatively, shows that the theory is nothing more than an ideal-typical representation. But there is another possibility: that while writing the third volume of "Capital," Marx's conception of class was beginning to change, rather drastically. To his own question about what makes wage-laborers, capitalists and landlords the three great social classes, he answers (Marx, 1966:5-6), and one assumes he is serious:

> At first glance--the identity of revenues and sources of revenue. There are three great social groups whose members, the individuals forming them, live on wages, profit, and ground-rent respectively, on the realization of their labour-power, their capital, and their landed property.
> However, from this standpoint, physicians and officials, e.g., would also constitute two classes, for they belong to two distinct social groups, the members of each of these groups receiving their revenue from one and the same source. The same would also be true of the infinite fragmentation of interest and rank into which the division of social labour splits labourers as well as capitalists and landlords--the latter, e.g., into owners of vineyards, farm owners, owners of forests, mine owners, and owners of fisheries.

While this perspective seems to contradict much of the rest of Marx's writing, it highlights the methodological problems encountered when applying Marx's theory to a detailed analysis of socio-economic interactions in contemporary societies. Shivji's (1976) forceful argument for a class analysis of African economies, with particular reference to Tanzania, encounters similar difficulties. Like Marx, he ends up implying that a "pure form" class perspective is not adequate to the task of analyzing detailed patterns of labor supply. Like Marx, he seems to drift unwittingly toward a "stratification" perspective, without denying the crucial role of ownership, or abandoning the term "class."

The empirical elaboration and verification of Marx's theory of class has been the object of a number of studies. The theory, such as it is, has even received backhanded recognition from those who see a persistence of classes where Marx suggested that they would be disappearing--in Soviet-type societies (see Djilas, 1957).

Parkin (1971:62-69) has elaborated on Marx's theory by pointing out that in Britain and most of western Europe, unlike the United States, the educational system begins fairly early to teach students from 'low status' families "to narrow their social horizons." The selectivity built into the educational system channels a minority, children from privileged families, toward "intensive educational treatment in high-quality schools," while the majority, from "low-status" families, "are instructed in certain practical skills and elementary knowledge in less prestigious institutions" (Parkin, 1971: 62). The consequence of this kind of education is that "low-status" and "high-status" graduates become noncompeting groups, as members of each status-category compete only among themselves in largely segregated labor markets which reflect and reinforce their "class" backgrounds (Parkin, 1971:62-63).

Westergaard and Resler (1975:298) also dispute the notion that one's position in the British class hierarchy is irreversibly set at birth. Capitalism, they argue, permits "a fair degree of fluidity of circulation." But this circulation, though fluid, is not "free," since, as they readily admit (1975:299):

> Inequality of condition sets marked limits to individual opportunities and risks of ascent and descent. People are a good deal more likely to stay at roughly the same level as their fathers than they would be if there were 'perfect mobility'. That is true especially of those fortunate enough to be born at or near the top of the scale.

As for persons whose scholastic achievements prompt aspirations to occupations not characteristically associated with their 'low status' class background, there are other barriers to be surmounted. Many professions (such as medicine and law) and skilled manual trades endeavor to regulate the rate of entry into their respective professions and trades "by imposing stiff entrance qualifications and insisting on long and extensive periods of training" and apprenticeship (Parkin, 1971:21; see also Odenyo, 1979:36-8). A major effect of such barriers is to further restrict access to these skills to members of the "privileged class" who can afford the expenses and the concomitant deferment of income.

However, it ought to be mentioned, perhaps, that certain "equal opportunity" measures have been enacted in various market economies around the world which go some distance in relieving the financial, if not other, pressures on a few members of the "underprivileged class" who thus gain a chance to undergo training or apprenticeship in desired fields. But even after a successful completion of such training or apprenticeship, the "underprivileged" may find yet another hurdle to jump: the lack of an "Old Boys" network--which has been so instrumental in placing members of the privileged class--to help make the competition for jobs an equal one.

The significance of 'Old Boys' networks in securing jobs for the privileged becomes more apparent when one remembers that at the other end of the network is an array or web of employers who not only share the class background and interests of the "privileged" job-seekers, but are very often their very own parents, relatives or family friends.

When we relate the above discussion to the employment situation in Kenya, several points emerge. For example, to the extent that social classes exist or have existed in Kenya, the discussion in Chapter II suggests that there has been a strong correlation between race and social class, particularly during the colonial era. In the post-colonial period, however, the process of Africanizing middle and high level occupations, and of increasing state acquisition or control of selected enterprises, has had the effect of blurring this previously strong correlation. But the Africans in high level occupations do not as yet constitute a propertied class. Few of them own substantial property, and those who do are usually little more than middlemen for foreign (mainly European) or transnational business. The original basis of their present economic power was and is, with few exceptions, more political than economic.

It follows from this that the social class model by itself is not very useful in explaining detailed or even broadly defined occupational distribution in contemporary Kenya. If our aim is to study how socio-economic status affects and is affected by occupational distribution in Kenya, it is more productive to focus on elite formation rather than class formation, and on social strata in general rather than social classes. In contemporary African countries--and Kenya is no exception--the problem of elite formation is usually also the problem of ethnicity. Indeed, it can be generalized that the competition for elite positions and privileges--accompanied by the attempt by those already in the national elite stratum to allocate scarce national resources to kith and kin--inevitably breeds ethnic rivalries and discrimination in Africa. This generalization serves as the basis of the discussion, in Chapter X below, of the role of ethnicity in Kenya's occupational structure.

Human Capital Investment

A significant presence of expatriates in any developing country--especially in management and the professions--inevitably raises questions not only about the country's economic independence but also about deficiencies in its human capital investment patterns.

Following Fisher's (cited by Barnum and Sabot, 1976:13) definition of capital as anything yielding income over a period of time--and income as the product of capital--"human capital" can be characterized as any human capability or resource that yields income over time. Thurow (1970:1), for example, defines human capital as "an individual's productive skills, talents, and knowledge" measured according to the value of goods and services produced by the individual (see also Jakubauska and Palomba, 1973:16-7). According to the theory of human capital investment, it is the quality of the individual's human capital investment that determines whether or not the individual meets the qualification criteria established by the prospective employer. Thus, the theory downplays the impact of discrimination on both the demand and supply sides of the labor market (see Bibb and Form, 1977:978).

Becker's (1964:153) version of human capital investment, which seems to emphasize investment through "formal" channels, and earnings through labor market participation--even while acknowledging migration as an aspect of such investment--has been reflected in human capital research focusing on education and training (see Thurow, 1970; ARTEP, 1975:31). But this focus has also been the subject of much controversy. The main controversy, concerning the validity of defining an occupation by the level of education or training attained or required, has been resolved largely in favor of the argument that it is not valid to do so (see Blaug et. al., 1967: 263, for an account of this controversy). Nevertheless, certain occupations will and do require very specific kinds of formal education and training. This is true even if those investing in such education can, by virtue of that education or despite it, perform other functions equally well (see Page, 1967:109).

Regardless of how one measures human capital investment, a number of studies (see Hall, 1977; Rempel and House, 1978:27; Burrows, 1975:12) have suggested that if Africans made the required human capital investment, their employability would rise and European dominance in specific occupations in Kenya, for instance, would diminish or disappear altogether, in defiance of the hypothesized dependency-based racial discrimination. This suggests the hypothesis that the likelihood of recruiting Africans rather than Asians or Europeans to high-level occupations varies directly with the extent to which the human capital investment of Africans equals or exceeds that of either of the other groups.

The literature review suggests that human capital investment has been measured either by level of formal education and training or by level of returns (i.e. earnings) on human capital investment. Measuring human capital investment in terms of returns is preferred in this study for three reasons. First, the most comprehensive contingency tables available show the yearly distribution of the Kenyan labor force by only four variables--race, citizenship, occupation and industry. Distribution by sex is given only at the margins. In other words, these tables do not include distribution by level of formal education. Second, no alternative sources publish data on the distribution of the Kenyan labor force by education or training in a way compatible with the available four-way contingency tables. Third, even if included in the contingency tables, level of formal education or training as a measure of human capital investment would still ignore several important variables. It would ignore the fact that a substantial proportion of human capital investment is accounted for by such variables as years of service, on-the-job training and even migration--which, incidentally, are nearly impossible to reduce to a single quantity, for statistical purposes, other than in terms of the earnings which they all enable the individual concerned to generate. It would also ignore the fact that a significant number of employees may hold jobs not directly related to their formal education.

While data on years of service, on-the-job training and migration--like data on formal education and training--are not available in a form compatible with the contingency tables alluded to above, there are sufficient data on earnings (see Kenya, Republic of, 1972, 1976 and 1977) to enable us at the very least to estimate the returns on human capital investment of particular groups. And since earnings reflect the combined returns on the various forms of human capital investment, including formal education, having data on earnings makes it unnecessary to seek data on individual forms of human capital investment. However, earnings remain a crude summary measure of human capital investment, incorporating as they do a number of intervening variables, including discrimination. When comparing the returns on human capital investment of two different persons or groups, it is difficult to determine how much of the variance is due to actual differences in human capital investment, how much to income discrimination, how much to union bargaining, and how much to the employer's ability to pay (as when comparison involves private and public sectors, or large and small enterprises). Despite this weakness, however, level of earnings remains superior to level of formal education and training as a measure of human capital investment, particularly if we control for the intervening variables. In any case, there are no viable alternatives to these two measures.

Using this crude measure, we can restate the above hypothesis as follows: Hypothesis 3: the greater the human capital advantage of Africans over Asians or Europeans in high-level occupations, the greater their recruitment advantage over either group. For comparison, the dissertation also examines the relative advantage enjoyed by Asians and Europeans respectively.

A fourth hypothesis can be subsumed under one or both of the following models: the human capital investment model, and the economic dependency model. The hypothesis is inspired by Kibaki (1978:11-4), who, in a paper delivered at a conference on '*The Kenya We Want*,' argued in part that placing "local managers in visible positions in local industries is easier than filling middle level positions." He also suggested that the public sector has responded more readily than the private sector to government policy or directives on greater recruitment of locals, usually meaning Africans, to the higher levels of the occupational pyramid. Does this mean that greater government participation in an industry actually narrows the gap between high and middle level occupations in terms of the likely recruitment of local personnel? This question is addressed in Hypothesis 4, which states that: the lower the level of public sector involvement in an industry in Kenya, the greater the likelihood of finding Africans in high level rather than middle level occupations.

From the economic dependency model alone, we can derive yet another hypothesis. This hypothesis (hypothesis 5) is suggested, for example, by Rempel and House (1978:72), who argue:

> As expatriates, in both government and the private sector, were replaced by Kenyans in the post-independence period, it has been common practice to pay them the same salary as the expatriate each replaced. The effect of such Kenyanization has been to generate significant increases in income for some Kenyans without changing the occupational or industrial wage structure.

Hypothesis 5 states: to the extent that Africans now hold high-level occupations in Kenya, they have merely taken over occupations formerly held by Europeans and Asians. That is to say, there has been little change in the occupational/administrative structure inherited from the British.

Rural-Urban Migration

The rural-urban migration model presented below is not used in this study to generate hypotheses. Its primary function here is to serve as a background to the process of occupational distribution in general, and more specifically to the pattern of employment and unemployment observed and forecast for Kenya in Chapter IX below.

There are two broad foci in labor migration theory. With respect to advanced industrial societies, the main concern of labor migration theory is with the response (supply) of labor and the "managerial" strata to: (a) inter (or intra) urban and inter (or intra) regional relocation of industries; and, (b) shifting employment possibilities from "old-technology" to "new-technology" industries. In developing countries, where residential patterns are still predominantly rural and labor markets predominantly urban-based, the main concern is with the movement of labor from rural and peasant agricultural settings to urban (and "modern sector") centers as well as large-scale agriculture, and mining sites.

Theoretical (and empirical) explanations for rural-urban migration include the following: (a) increasing scarcity of agricultural land in the rural areas, due to rapid population growth, necessitating a search for new sources of employment and income (Edwards, 1974:12; Stolnitz,1974:242; ILO, 1972:45); (b) rising levels of education in the rural areas which make wage-employment more attractive than subsistence farming to an increasing number of rural youth (Bruton, 1974:77; ILO, 1972:47); (c) marked differences in wages and job-creation rates between the "traditional" and "modern" sectors (Bruton, 1974:77; Edwards and Todaro, 1974:317), which reinforce (b); (d) the presence of friends and relatives at or near the employment centers (Rempel, 1976:18-20); and (e) the "bright lights" of, and greater accessibility of social amenities in, the towns (Kassalow, 1968:52).

The fact that many of the migrants who arrive in the towns remain unemployed and outside the labor market for long periods of time would suggest, according to migration theory, that the rate of rural-urban migration in most developing countries far exceeds the rate of job-creation in the "modern sector" (see Barnett, 1974:248). Empirical evidence corroborates this view, as we shall presently see. Furthermore, the education-age profiles of most migrants suggest that these migrants would be initially qualified to supply their labor mostly to markets for unskilled and semiskilled labor (Barnett, 1974:248).

Another focus of labor migration theory is the transnational movement of blue-collar labor and professional, executive and related types of personnel. In the case of blue-collar labor, such movement usually resembles that of rural-urban migrants. But the need to escape interethnic or civil wars, drought and famine is also a factor in some of the movement of personnel across national borders.

In the case of professional and executive-type personnel, such movement also resembles rural-urban migration, but can also involve issues of economic dependence, discussed earlier. It might also reflect the fact that the developing country involved has not been able--especially in the years just after independence--to train its own local people to occupy many of the highly technical positions (see ILO, 1972). In addition, professional and other members of the occupational elite might be compelled to cross national borders to get away from the same social upheavals that affect the rest of the population. In fact, they are often the first to do so.

It is important to emphasize that rural-urban migration involves both push and pull factors. In developing countries, landlessness may be one of these push factors (Rempel, 1976:13). Gwyer (1974:106) defines a landless person as one whose contribution to farm production on his own or father's holding is zero, and who has no legitimate claim on any viable piece of land.

In many small-scale and large-scale farming, the types of crops cultivated (or cultivatable) and techniques applied may well be the main factors pushing labor away from the farm, retaining it on the land, or even pulling additional labor toward agriculture. In terms of employment possibilities, there are two broad types of crops or farming techniques: the first type has an even level of labor demand throughout the year (e.g. tea growing and livestock farming); and the second registers seasonal fluctuations throughout the year (e.g. coffee and corn farming)(see Gwyer, 1974:106).

If, in the first type: (a) family labor just meets the demand, there will be no "push" of family members toward the urban labor markets, or "pull" of extra labor; (b) family labor exceeds the demand, some family members will be pushed outward; and (c) family labor does not meet the demand, the supply of labor to urban labor markets will diminish, as some nonfamily labor is channeled or "pulled" toward full-time farm employment. If, in the second type, family labor meets the demand only at peak points, some family members may be "pushed" outward toward more stable employment, in order to avoid the underemployment which accompanies the low periods; and, consequently, nonfamily casual labor will be "pulled" toward the farm during the peak periods, when extra help is temporarily needed (Gwyer, 1974:106). The problem with Gwyer's scheme is that it assumes that migration is an exceedingly rational undertaking. It assumes that there are always jobs in the urban areas to take care of excess labor from the family farm; and that there are no other significant factors pulling family labor toward the urban labor markets.

The discussion above suggests that while none of the six models is a complete explanatory tool in itself, each accounts for important facets of the occupational distribution process. Even more important, the models display a clear pattern of complementarity vis-a-vis each other; they also overlap quite considerably. The rural-urban migration model, for example, complements the human capital investment model; and both complement the social class model (to the extent it actually considers stratification), which complements the economic dependency model. The discrimination model complements both the social class and dependency models. Finally, the capital-labor substitution model complements the dependency model, which overlaps each of the other models to a greater or lesser degree. In short, each model overlaps (at least partially) the models which complement it. Aware of this complementarity and overlap, this writer argues that, among the six models, the economic dependency model offers the most comprehensive--if not always correct--explanation of occupational distribution in Kenya. A modified version of this model informs much of the discussion in this dissertation. Let us now discuss the research design.

CHAPTER IV

RESEARCH DESIGN

Data and Variables

The data used in much of this study pertain to Kenya's "modern sector" employment in 1968 and 1974 (see Kenya, Republic of, 1972 and 1976; see also 1977). The years 1968 and 1974 were chosen because when the study began they were respectively the earliest and the most recent dates having contingency data on Kenya comprehensive enough to suit the purposes of this dissertation. The cited data sources present a cross-tabulation of employment by race, citizenship, occupation and industry for each of the two years. In terms of the racial variable, the labor force is divided into three broad groups: African, Asian and European (i.e. white). It is not clear from these sources if Arabs in Kenya are included among Africans or Asians, or if they have been excluded from the contingency tables altogether. The citizenship variable is not considered in this study.

The occupational classification according to which the data are given--and which is adopted in this study--represents a selective adoption of the major (one-digit) and minor (two-digit) occupational groups suggested by the ILO (1969:25-33). This gives us eleven occupational groups. Instead of the major group "Administrative and Managerial Workers," we now have the following groups: (1) top level administrators and general managers; and (2) salaried directors.

Instead of the major group "Professionals, Technical and Related Workers", we have: (3) professionals; (4) technicians, works managers, workshop foremen and semiprofessionals; and (5) other middle level executive and managerial personnel. Instead of the major group "Clerical and Related Workers", we have: (6) secretaries, stenographers and typists; and (7) general clerks, book-keepers, cashiers and book-keeping clerks. The Kenyan equivalent of the major group "Sales Workers" is: (8) shop assistants, technical sales representatives, brokers, auctioneers and salesmen. Other major groups are not shown separately in the Kenyan data, except as: (9) skilled workers; (10) semiskilled workers; and (11) unskilled workers. In the present study, occupational groups 1 and 2 are merged into one group: top level executives and directors, because that is the way the 1968 data are given.

Industrial classification in Kenya is a replication, at the major-division (i.e. one-digit) level, of the one suggested by the United Nations (1968:26). This gives us the following industrial divisions: (1) agriculture and forestry; (2) mining and quarrying; (3) manufacturing; (4) electricity and water; (5) building and construction; (6) wholesale and retail trade, restaurants and hotels; (7) transportation and communication; (8) financing, insurance, real estate and business services; (9) community, social and personal services. Because the data for the year 1968 do not distinguish between industrial groups 6 and 8, this study also combines them under the title commerce, giving us only eight industrial groups.

It is worth repeating that the data used here refer only to Kenya's "modern sector", which is defined as: "the entire urban sector, the entire public sector, large scale farms and other large scale enterprises such as sawmills and mines, located outside towns" (see Kenya, Republic of, 1976:ii). Casual employees, unpaid family workers and unpaid directors are therefore not included in the ECTA analysis.

For the purposes of hypothesis testing, "high-level occupations" are defined as the first three occupational groups in the Kenyan classification. Similarly, "semiskilled occupations" are represented by the tenth occupational group, namely: semiskilled workers.

Finally, the cross-tabulated data analyzed here are, despite their various shortcomings (discussed in Kenya, Republic of, 1972: iii-iv; and 1976: ii-iii), the most comprehensive and reliable vis-a-vis the subject at hand.

Analytical Techniques

To a large extent, the data described are analyzed using the log-linear technique provided for in the ECTA (Everyman's Contingency Table Analyzer) program. This technique allows one "to fit various models to a cross-tabulation and to generate measures of how well the model fits the observed data" (Stolzenberg and D'Amico, 1977:939). The models so fitted are hierarchical ones, and are programmed to have marginal totals equal to those in the actual cross-classified data. On the basis of these models, the ECTA program also calculates estimated lambda effects for each model fitted. "Effect" here refers to the pattern of association--measured in terms of estimated lambdas (themselves given as logarithms of cell probabilities)--which emerges when we fit a particular model, say the four-way interaction model, to the observed contingency data after we have fitted a hierarchically prior model, say the three-way interaction model. The estimated lambdas presented in Tables 6 to 8 below, for example, actually represent the deviation of the effects of the cells in the respective tables from the average effect of all cells at the lower level of interaction--namely, the race-occupation-industry interaction. In other words, they represent the deviation of the effects of respective cells from zero. Lambda as such is a measure of the association between and among variables. It is used here, as has been suggested, to indicate the likelihood of finding members of a particular racial group in particular industrial and occupational groups in Kenya's "modern sector" in 1968 and 1974--and, by inference, for the period 1968-1974.

To obtain the essential estimated lambda effects in the present study, model I is fitted to the observed data. This is the fully-saturated model. It incorporates all possible univariate distributions, two-way relationships and three-way interactions, as well as the four-way interaction involving the variables race, year, occupation and industry. In order to fit this model, each cell-observation in the original cross-classified tables is increased by a value of .5, because some of the cell frequencies are either too small or actually zero.

In view of the quasi-theoretical arguments made earlier for a focus on industrial variation in the relationship between race and occupation, it is useful to find out if this variation is significant enough in terms of magnitude to give statistical support to the said arguments. To establish the magnitude of such variation--i.e. the proportion of the total variance in the relationship between race and occupation that is explained by industrial differences--two other models (II and III) are fitted to the observed data and the chi-square statistic of model II divided by that of model III. The results are shown in Table 5.

Model III includes all univariate distributions and two-way relationships, except the relationship between race and occupation. It also includes all three-way interactions except the race-occupation-industry and the race-occupation-year interactions which contain the two-way relationship which the model excludes. The four-way interaction is excluded as well because it contains the same pair-wise relationship. The chi-square statistic for model III is the amount of association which remains in the observed data after we fit model III; it therefore represents the total variance in the relationship between race and occupation.

Model II excludes all interactions involving the three-way interaction of race, occupation and industry, namely, the race-occupation-industry interaction and the four-way interaction. The model includes the following associations, however: all univariate distributions, all two-way relationships, and the remaining triple interactions. The chi-square statistic for this model is the amount of association that remains in the observed data after we fit model II, and therefore represents the extent to which the relationship between race and occupation varies by industrial category only.

This study also takes a passing look at the combined impact of industrial and year differences on the relationship between race and occupation; in other words, it examines, very briefly, the

proportion of the total variance in the race-occupation relationship that is explained by both year and industrial differences.
For this reason, model IV is introduced. It assumes that the two-way relationship between race and occupation is constant across both year and industrial categories. The difference between model III and IV is that the latter includes the race-occupation relationship while the former does not. Model IV excludes: (a) the variable year from the triple interaction of race, occupation and year; (b) the industrial variable from the triple interaction of race, occupation and industry; and, (c) the year and industrial variables from the four-way interaction. The chi-square statistic for model IV therefore represents the amount of the race-occupation relationship that varies by both industry and year (treated here as a variable).

Testing hypotheses 1 to 4 entails calculating the rank-order correlation of relevant pairs of ranked variables (as explained in Chapters VI and VII). Every hypothesis prompts the double ranking of the eight industrial categories according to the distribution of each of the pair of variables whose relationship it predicts. When there are no tied rankings in the rank-order of either of a pair of variables, Kendall's tau-a is used to measure the magnitude of the correlation; and when there are tied rankings in either rank-order, tau-b is used instead (see Blalock, 1979:436-8).

One variable in each of hypotheses 1 to 4--which are tested in Chapters VI and VII--ranks all eight industries according to the likelihood of finding a particular racial group in specified occupations and industries--that is to say, according to the relevant estimated lambdas for a particular group--or according to the likelihood of finding one group rather than another in given occupations and industries. The second variable in hypothesis 1 ranks eight industries according to their respective degrees of capital intensity--in other words, according to their respective incremental capital versus labor ratios (ICLR). The ICLR for any industry during the years 1968 and 1974 is obtained by adding the value of the industry's gross fixed capital formation at current (1968 and 1974) prices and dividing by the size of the labor force recruited in the industry during the same years (1968 and 1974) (see Table 10, columns 3 and 4). The second variable in hypotheses 2 and 4 ranks all industries in terms of the average proportion of public sector employment to total employment in each industry (see Table 10, columns 1 and 2). The second variable in hypothesis 3 ranks all industries according to the estimated relative returns on human capital investment for Africans in high-level occupations (see Table 15).

Since hypothesis 3 correlates human capital advantage with recruitment advantage, it is essential to standardize the returns on human capital investment for respective racial groups to allow for intergroup comparisons. We can do so by computing in percentage terms an index of returns on human capital investment (IR) for any racial group in high-level occupations in a particular industry in Kenya, using the following formula:

$$IR = (P/N)100$$

where P is the number of the group which falls within the target income bracket--i.e. the highest income bracket in Kenya within which members of that group, or a realistic reference group, are to be found. Note that contingency tables usually present earnings in terms of income brackets; and N is tee total sum of all groups in high-level occupations in all industries. No standardizes the returns for respective groups across all industries.

The IR formula can be applied to the Kenyan data only if we estimate P. This is so because usable data on earnings are available in two fairly compressed contingency tables--which show wage employment distribution by race, sex and income groups (see, Kenya, Republic of, 1972:129; and 1976:100), and wage employment distribution by industry and income groups (see, for example, Kenya, Republic of, 1977:301). Using the first two sources, we can estimate P for, say, Africans in high-level occupations in a given industry by way of a procedures which assumes that $\hat{P}$ in any industry is proportionate to Africans' overall share of the total number of persons in the top income bracket in all industries. In other words, in any given industry:

$$\hat{P} = (A/T)V$$

where A is the number of Africans (or Asians or Europeans) in the highest income bracket in all industries.

T is the number of all persons, regardless of race, in the highest income bracket in all industries.

V is the number of all persons, regardless of race, in high-level jobs in a particular industry.

In terms of $\hat{P}$, therefore, we find that:

$$IR = \{[(A/T)V]/N\}100$$

Testing hypothesis 5 (see Chapter VIII) does not involve log-linear analysis. Instead, the deductive method is used to establish the extent of continuity and change in Kenya's occupational structure in the post-colonial period. Because the available data are limited, the discussion concentrates on Kenya's public administration. The analysis in Chapter X also involves the deductive method. In Chapter IX labor absorption trends in Kenya are established by means of simple projections. Rates of growth in a past period are projected to a future year, on the assumption that the trend will persist until that year. For further elaboration of the analytical techniques used and variables examined in this dissertation, see the chapters in which the respective hypotheses or trends are analyzed.

CHAPTER V

DISTRIBUTION OF THE LABOR FORCE BY RACE, OCCUPATION AND INDUSTRY, 1968-1974

In discussing the historical genesis of Kenya's "modern sector" (see Chapter II), we saw that race exerted a strong influence on the occupational stratification of Kenya's labor force during the colonial era, and that this influence did not end with the coming of independence in 1963. For virtually all of the colonial period, Kenyan Africans were confined to the lowest ranks of the occupational hierarchy--with teaching and clerical jobs the highest they could hold. Europeans controlled not only the colonial administration but also the "commanding heights" of the economy, a fact which enabled them to reserve to themselves most of the high level and a good proportion of the middle level jobs in the country. Asians on their part were concentrated in middle level jobs.

This racial pattern of labor force distribution was by no means unique to Kenya, however. Kassalow (1968:54-5; see also Motani, 1977), as we saw earlier, has generalized that in Africa most big business "involves European ownerships, and usually management, and a native labor force." More important, the pattern in Kenya began to change, however subtly or cosmetically, in the latter half of the 1950s, as it became increasingly apparent that Kenya was headed for political independence. By 1968, five years after independence, Africans held just under a third of the high-level jobs which only a few years previously had been almost entirely out of their reach. Thus, out of a total of 15,547 high level jobs--i.e. top level administrators and general managers, salaried directors and professionals--4,953 (or 31.9 percent) were held by Africans in 1968 (see Table 3). And in 1974, African share of high-level jobs was up substantially, to 55.0 percent of the total--or 10,345 out of 18,823 jobs (see Table 4).

However, Africans in high-level jobs represented only 1.2 percent of all Africans employed in the modern sector in 1968, and only 1.9 percent in 1974. In contrast, 35.6 percent of all Europeans and 19.0 percent of all Asians in Kenya's modern sector held high-level jobs in 1968. In 1974 these percentages were up to 56.5 percent for Europeans and 23.4 percent for Asians. However, Europeans and Asians combined represented only 9.3 percent of the total modern sector labor force in 1968, and only 4.2 in 1974. During this period, Kenya's modern sector labor force as a whole was growing at a rate of about 4.4 percent per year (for a projection of 1984 labor force distribution by race and occupation, see the discussion toward the end of Chapter IX below).

Generally speaking, Kenya's modern sector labor force continues to be overwhelmingly African, and overwhelmingly in blue-collar jobs. However, while Europeans and Asians continue to be heavily concentrated in white-collar jobs, Europeans no longer monopolize high-level jobs as they did in colonial days. In fact, Africans are already in an outright majority in high-level occupations, and their ratio seems to be growing. But this growing numerical strength of Africans in the said occupations is not by itself sufficient proof

Table 3: Percentage Distribution of Kenya's "Modern Sector" Labor Force by Race, Occupational Level and Industry in 1968

Occupational Level	Agriculture	Mining	Manufact-uring	Electricity	Construc-tion	Commerce	Transpor-tation	Services	All Industries
	INDUSTRY AND RACE								
	Africans								
High Level	.3	.1	.3	.5	.5	3.7	.4	2.5	1.2
Middle Executive	1.7	2.7	4.3	9.6	4.2	5.1	5.3	8.1	4.5
Secretarial	1.6	3.0	4.9	9.7	2.1	25.3	14.8	13.8	8.8
Sales	0.0	.2	1.1	.8	.2	6.2	.3	.4	.8
Blue Collar	96.3	94.2	89.3	79.4	93.0	59.8	79.2	75.2	84.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139,282	1,848	53,544	3,057	21,806	27,694	39,631	136,177	423,039
	Asians								
High Level	17.2	20.0	17.4	5.4	16.3	20.0	4.3	23.6	19.0
Middle Executive	43.8	44.3	28.5	71.9	32.3	22.3	20.0	29.5	27.2
Secretarial	21.7	25.0	13.6	16.2	9.6	42.1	49.5	33.9	33.0
Sales	.3	.7	3.9	.5	.4	10.6	2.1	1.2	5.3
Blue Collar	16.9	10.0	36.6	5.9	41.4	5.1	24.1	11.8	15.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	644	140	7,318	185	1,655	10,876	3,487	4,944	29,249
	Europeans								
High Level	38.3	50.7	33.2	36.8	45.6	36.7	29.2	36.9	35.6
Middle Executive	49.1	42.7	52.1	52.3	47.9	38.4	24.4	46.2	41.8
Secretarial	3.0	6.7	9.4	9.8	5.0	19.7	27.9	12.2	14.6
Sales	0.0	0.0	1.5	.5	.2	4.3	1.4	.3	1.4
Blue Collar	9.6	0.0	3.7	.5	1.3	.9	17.1	4.5	5.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	1,201	75	1,950	193	480	2,721	2,205	5,395	14,220

Source: Calculated from Kenya, Republic of (1972:77;79-82).
Note: 1. Totals may not add up to 100 due to rounding.
2. Teachers not included in Services.

Table 4: Percentage Distribution of Kenya's "Modern Sector" Labor Force by Race, Occupation and Industry in 1974

Occupational Level	Agriculture	Mining	Manufact-uring	Electricity	Construc-tion	Commerce	Transpor-tation	Services	All Industries
					Africans				
High Level	.8	.7	.5	.6	.6	1.3	.6	4.0	1.9
Middle Executive	1.2	3.3	4.8	11.0	4.0	5.4	5.2	6.5	4.3
Secretarial	4.6	5.1	6.5	13.2	5.9	20.1	19.6	12.8	10.2
Sales	.0	1.0	1.4	.8	.1	5.6	1.8	.3	1.0
Blue Collar	93.4	89.8	86.8	74.5	89.4	67.6	72.8	76.4	82.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	183,320	2,431	82,468	3,214	28,275	63,463	42,177	178,624	583,972
					Asians				
High Level	30.4	26.3	24.7	26.4	23.3	23.2	11.2	28.9	23.4
Middle Executive	44.4	47.5	37.9	54.2	41.3	28.9	26.1	30.6	32.5
Secretarial	13.4	7.6	14.0	15.3	10.6	29.4	49.9	22.4	24.8
Sales	.6	2.5	6.0	1.4	.4	12.0	3.2	1.2	7.1
Blue Collar	11.2	16.1	17.4	2.8	24.5	6.5	9.6	16.9	12.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	313	118	4,313	72	1,354	7,618	1,681	2,489	17,958
					Europeans				
High Level	61.3	68.1	57.7	58.4	45.3	61.7	44.3	54.4	56.5
Middle Executive	34.9	30.4	35.4	36.4	43.4	27.1	44.1	22.9	30.5
Secretarial	2.4	0.0	5.0	1.3	1.9	9.1	7.2	11.9	7.9
Sales	.0	1.4	.6	.0	.2	1.1	.6	.1	.6
Blue Collar	1.4	0.0	1.3	3.9	9.2	1.0	3.8	10.7	4.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	662	69	1,116	77	479	2,393	657	2,119	7,572

Source: Calculated from Republic of Kenya (1976:52-5).

Note:
1. Totals may not add up to 100 due to rounding.
2. Teachers not included in services.
3. In this table and in Table 3, blue collar jobs are defined as all miscellaneous unskilled, semiskilled and skilled jobs; the secretarial occupational level includes clerical jobs; sales includes both shop assistants and sales representatives.
4. Most of the zero percentage distributions are obtained because the relevant cells are too small--not blank.

that Africans now control all the commanding heights of the Kenyan economy. Effective control presupposes ownership; and many enterprises in Kenya are still owned by non-Kenyans or non-Africans. Moreover, it is fairly easy for foreign-owned firms in Kenya to recruit Africans to high-level occupations while denying them the power seriously to alter the character or goals of such firms. Still, there has been a slowly growing public sector involvement in the commanding heights of the Kenyan economy since independence, and this has tended to strengthen the hand of the top civil servants vis-a-vis their private sector counterparts--whether African or non-African--not to say the rest of the Kenyan society. Despite, or perhaps besides, the usual scenario of private enterprise influencing or manipulating the government for its own profit, it is possible under certain circumstances to view private enterprise as just another institution whose actions are circumscribed by the decisions of the top civil servants acting in the name of the state.

If we define the Kenyan elite as those who hold high-level occupations in the private or public sectors, we can argue that the pattern of occupational distribution and redistribution in the post-independence era had, by 1974, established Africans as the numerically dominant group within the elite stratum; a stratum further segmented not only by race, as we have seen, but also by ethnic group (as we shall see later), income differentials, nationality, sex and/or type of economic activity (i.e. profession, job title or industry). By the same token, if we define the sub-elite stratum as the rest of the white collar workers, and the non-elite as all blue collar workers, we can infer from Tables 3 and 4 that while Africans were still the dominant racial group in the non-elite social stratum during the period 1968 to 1974, there was also to be found in this stratum a small number of Europeans and Asians.

Looking at labor force distributions by industry in 1968 or 1974, we find that over 50 percent of all Africans were to be found in just two industrial groups: agriculture and services. Similarly, over 50 percent of all Asians were concentrated in commerce and manufacturing; and more than half of all Europeans were to be found in commerce and services. Focusing on high-level jobs, we find that 68.7 percent of all Africans holding such jobs in 1968 were to be found in just one industrial group, services. In 1974, this percentage was slightly up to 69.1. There are no concentrations of this magnitude among Asians or Europeans, which means that members of the latter groups holding high-level jobs were rather more evenly spread across the eight industrial groups. Nevertheless, a plurality of Asians holding high-level jobs in both 1968 and 1974 was to be found in commerce. And the distribution of Europeans in high-level occupations showed a plurality in services in 1968, and commerce in 1974.

With these distributions in mind, it is legitimate to ask if the basic relationship between race and occupation varies--by industry alone; and by industry and year--significantly enough in terms of magnitude to give statistical support to the quasi-theoretical reasons, discussed earlier, for a focus on the interaction of race, occupation and industry over time.

Table 5 seeks to answer this question by showing the percentage proportion of the race-occupation relationship which varies by industry alone, and by industry and year. It also shows the chi-square statistics needed to determine those proportions. The chi-square statistics are obtained when models II, III and IV are fitted to the observed data, as explained in Chapter IV. Briefly, the chi-square statistic for model III is the amount of association which remains after model III is fitted. In other words, the chi-square statistic for model III stands for the total variance in the relationship between race and occupation.

Following the same reasoning, the chi-square statistic for model II stands for the extent to which the race-occupation relationship varies by industrial category alone. The chi-square statistic for model IV represents the amount of the race-occupation relationship that varies by both industry and year. Table 5 shows that industry and year combined explain 6.12 percent of the total variance in the race-occupation relationship. Industrial differences alone account for 4.56 percent of the total variation in the said relationship; in an earlier study focusing on the year 1973, the percentage of this variation attributable to industrial differences was found to be 8.6 (see Yambo, 1979:16).

These percentages are low in magnitude. They suggest that the impact of industry, or industry and year, on the race-occupation relationship is not statistically significant. However, one's estimation of this impact is enhanced somewhat by the fact the percentages refer

Table 5: Chi-square Statistics, Degrees of Freedom and Ratios of Chi-squares for Computing the Impact of Industrial and Combined Industrial and Year Differences on the Race-Occupation Relationship in Kenya's "Modern Sector", 1968 and 1974.

Types of Association Included in Model	Chi-square Statistic	Degrees of Freedom
1. Model II: all univariate distributions, race-industry, race-year, race-occupation, occupation-year, occupation-industry, year-industry, race-occupation-year, race-year-industry, year-occupation-industry.	8,250.76	252
2. Model III: all univariate distributions, race-industry, race-year, occupation-year, occupation-industry, year-industry, race-year-industry, year-occupation-industry.	180,888.92	288
3. Model IV: all univariate distributions, race-industry, race-year, occupation-year, occupation-industry, year-industry, race-occupation, race-year-industry, year-occupation-industry.	11,064.96	270

Ratios* of chi-squares:

(a) Model IV/Model III = 6.12%

(b) Model II/Model III = 4.56%

Source: Calculated from Kenya, Republic of (1972:79-82; 1976:52-5).

*Ratio in (a) is the proportion of the total variance between race and occupation explained by both industrial and year differences; and ratio in (b) is the proportion explained by industrial differences only (for an example of this approach, see Stolzenberg and D'Amico, 1977).

to population rather than sample data. Despite the low level of statistical significance, one finds that the impact of industrial variation is strong enough to cause a theoretically and historically significant variation in the two-way relationship between race and occupation (see the discussion earlier in, and in the rest of, the present chapter).

Bearing in mind the actual labor force distributions discussed earlier in the chapter, we can proceed to draw a parallel profile of Kenya's "modern sector" labor force during the same period. This profile focuses on the likelihood of finding particular racial groups in particular occupations and industries, and is obtained by fitting ECTA models to the observed data. Given the log-linear basis of ECTA models, the procedure of averaging two-way associations across the contingency tables and the fact that fitting ECTA models requires that we add a value (in the present case, 0.5) to all cells in order to eliminate zero observations, the profile so drawn is useful only as a broad outline. Bishop et al. (1975:45) have observed that "models with only the higher-order terms removed are useful in describing the gross structure of an array. Such models describe the general trends and hence can be regarded as 'smoothing' devices." The structural distortions which ECTA thus introduces into such a profile can be monitored by comparing the pattern of lambda effects with the pattern of the observed data.

The estimated lambdas obtained when we use ECTA to calculate the relationship between race and occupation averaged across the contingency tables (for 1968 and 1974) suggest that during the period 1968-1974, there was a greater than average likelihood of finding Africans in the following occupations (relevant lambda effects are shown in parenthesis): unskilled (3.36), semiskilled (1.95), skilled (1.30) and clerical (.57). Asians enjoyed a greater than average likelihood of being found as: sales (.33), clerks (.43), secretaries (.34), middle executives (.18), technicians (.23) and top level executives and administrators (.37). Europeans, on the other hand, were most likely to be found as secretaries (.53), middle executives (1.01), technicians (.69), professionals (1.99) and top level executives and administrators (1.76). On the basis of these "smoothed" patterns alone, it might be argued that there has been little change in Kenya's occupational structure since colonial days; but the observed data indicate that this is not the entire picture. Indeed, when we introduce the variable industry into the race-occupation association, we find a much greater occupational dispersion of the respective racial groups, just as the observed data suggest. But even as the three-way log-linear interaction reveals greater occupational dispersion, it causes some cell-distortions, as already indicated. Generally speaking, the interaction tends to exaggerate the impact of the mining industry, the smallest (in terms of labor force size) of the eight, and to constrict that of the largest industry, services.

Given these constraints, Table 6 shows the occupational distribution of Africans when we introduce the variable industry. We notice, for instance, that Africans are likely to be found in high-level

Table 6: Lambda Effects Representing the Impact of Industrial Differentiation on the Race (African)--Occupation Relationship in Kenya's "Modern Sector" in 1968 and 1974.

	OCCUPATION									
INDUSTRY	Unskilled	Semiskilled	Skilled	Sales	Clerical	Secretarial	Other Middle Executive	Technician	Professionals	Top Level Executives and Directors
Agriculture	.80	-.43				-.20	-.49		.68	-.31
Mining		.59	.53		-.20	.36		-.28	-.41**	-.66
Manufacturing	.25		.17				-.15			-.47
Electricity	-.84	.17	.50		.24	-.23	.42	-.16	-.55	.40
Construction		.24							.35	-.65
Commerce	.19									.27
Transportation		-.20	-.41		-.25	.17		.43		.19
Services	-.50	-.39	-.50		-.19	-.19	.18	.28	.16	1.23

Source: Computed from Republic of Kenya (1972:79-82; 1976:52-5). See appendix 1 and 2 below.

Notes:
1. The full occupational and industrial titles are given in Chapter IV above.
2. Smaller lambda effects, .14 and below, are not shown; plus and minus signs are ignored in determining such size.
3. The twin asterisks mean that the relevant cell has zero frequency in 1968.
4. 1968 and 1974 represent the fourth variable, year.

occupations (as professions or top level executives and administrators) in a number of industries, particularly services, commerce, construction, electricity and agriculture. They also enjoy a greater than average likelihood of being in middle level occupations in services, transportation and electricity. Table 7 shows that Asians holding blue-collar jobs are most likely to be found in the following industries: construction, commerce, manufacturing, transportation and services. As top level executives and directors, and as professionals, Asians are most likely to be found in services, construction, electricity, manufacturing, and mining. From Table 8 we conclude, inter alia, that Europeans, when holding blue collar jobs, are likely to be found in agriculture, commerce, transportation and services. As professionals or top level personnel, they are likely to be found in all industries except services. This exception is most probably due to the cell-distortions already indicated.

On the basis of these findings we can, in a general sense, confirm the observations made earlier with respect to the actual contingency data for the years 1968 and 1974. While the overwhelming majority of Africans remains in blue-collar jobs, there is already a considerable number of Africans in middle level and high-level jobs. In addition, Asians and Europeans are not confined to executive, professional and other white collar jobs. A number of them, albeit a very small number, is likely to be found in miscellaneous unskilled, semiskilled and skilled jobs in Kenya's modern sector. Finally, it can be pointed out that there is no logical contradiction in the fact

Table 7: Lambda Effects Representing the Impact of Industrial Differentiation on the Race (Asian)--Occupation Relationship in Kenya's "Modern Sector" in 1968 and 1974.

	OCCUPATION									
INDUSTRY	Unskilled	Semiskilled	Skilled	Sales	Clerical	Secretarial	Other Middle Executive	Technicians	Professionals	Top Level Executives and Directors
Agriculture	-1.73	.34		.48		.23		.30		
Mining	- .51*	-.82*	.23	-.30		.34	.38	.20		.54
Manufacturing	.54		.19			-.49	-.17	-.27		.31
Electricity	*	-.68*	-.16	-.16	.15	.27	.23	.34	.48	-.58**
Construction	-.42	.56	.44	-.44				-.16	-.22	.47
Commerce	.82		-.16			-.34	-.16			-.25
Transportation	.49	.28	-.23					-.21	-.38	
Services	.67		-.39	.29	-.19		-.20		.27	-.42

Source: Same as Table 6.

Notes:
1. Notes 1, 2 and 4 under Table 6 apply here.
2. A single asterisk means that the cell had zero frequency in 1974, or both 1968 and 1974.
3. Twin asterisks mean that the cell identified had zero frequency in 1968.

Table 8: Lambda Effects Representing the Impact of Industrial Differentiation on the Race (European)--Occupation Relationship in Kenya's "Modern Sector" in 1968 and 1974.

	OCCUPATION									
INDUSTRY	Unskilled	Semiskilled	Skilled	Sales	Clerical	Secretarial	Other Middle Executive	Technicians	Professionals	Top Level Executives and Directors
Agriculture	.93			-.50*	-.25		.39	-.17	-.70	.26
Mining	.37*	.23*	-.76*	.40**	.28*	-.70*	-.41		.40	
Manufacturing	-.79*		-.36			.44	.32	.21	.28	.16
Electricity	.71**	.52**	-.34*	*	-.38*		-.65	-.18		.19
Construction	.47**	-.79*	-.35	.47				.24		.19
Commerce	-1.01*		.29	-.15		.43	.27	.23	.18	
Transportation	-.51**	*	.64			-.24		-.23	.33	
Services	-.17	.29	.89	-.21	.38	.22		-.19	-.43	-.81

Source: Same as Table 6.
Note: Notes under Table 7 apply here.

that members of a particular racial group <u>can</u> be found at both ends of the occupational spectrum in a particular industry.

CHAPTER VI

THE IMPACT OF CAPITAL INTENSITY AND ECONOMIC DEPENDENCY ON LABOR FORCE DISTRIBUTION

The impact of capital intensity on the distribution of the labor force across occupations and categories of employers in Tropical Africa has been examined in some detail by Arrighi (1970), as we saw in Chapter III. He suggests that foreign investors in Tropical Africa tend to favor capital-intensive techniques of production or management because: (a) there frequently is no significant alternative to such techniques; (b) managerial techniques imported from metropolitan, and economically dominant, countries usually emphasize capital-intensity; (c) their great financial strength vis-a-vis local investors enables them to eliminate cost, which is usually quite considerable, as a barrier to capital-intensive techniques; and (d) the "qualitative characteristics" of the African labor force make such techniques necessary.

Arrighi does not deny the existence in Africa of labor-intensive work situations or labor markets in which there is a preponderance of skilled and unskilled labor (see Arrighi, 1970:229). Nor does he insist--though at times he seems to imply it--that the pattern of capital-labor substitution is a matter of either/or: either capital-intensive or labor-intensive techniques. However, he seems to contradict himself when he states that the employed labor force in Tropical Africa, presumably the portion employed by the transnationals, is concentrated in semiskilled and high-level occupations. His reason for such concentration is that it is easier in the long-run for transnationals, who favor capital-intensive techniques, to satisfy their demand for semiskilled and high-level personnel than for skilled and unskilled labor. The question is: why is it possible for other categories of employers--those, presumably local employers, who have adopted labor-intensive techniques--to recruit skilled and unskilled labor, when the transnationals find it so difficult? The answer does not, it would seem, lie in the inadequate supply of such labor, or the inability of transnationals to compete successfully for those available, but rather in the preference of transnationals for a different type of labor--a preference necessitated by the capital-intensive bias which Arrighi himself attributes to them.

Considering that Arrighi's paper, originally written in 1967, was based on data pertaining only to the immediate post-independence period in Tropical African countries, testing his proposition now, using data from more recent years and from one particular country (Kenya), can only have the objective of establishing whether or not the general patterns he observed can be found in Kenya in more recent years, not of exactly replicating his study. And as we focus on the more recent period, 1968-1974, in Kenya, it is important to note that there have been fairly dramatic quantitative and qualitative changes in the human capital investment patterns of Kenyans since independence. It is also worth noting that the public sector has been assuming an increasingly significant role in the Kenyan economy, even as foreign companies continue to find Kenya an "attractive" place to invest (see Chapters VII and VIII below for further analysis of human capital investment and public sector involvement in Kenya).

With the passage of time, it has become obvious that even in economic dependencies, it is frequently necessary to pay attention both to those sectors of the economy in which foreign investors predominate or play a significant role, and those in which the state has the upper hand. Arrighi paid much more attention to the impact of the foreign private investor than to that of the public sector in Africa. In this chapter we look at the effects of both types of investor, as has already been indicated, taking into account the fact that the broad industrial groups studied are likely to incorporate a measure of both private and public sectors (the former usually including, if not in fact dominated by, foreign investors), but also that one of these sectors is likely to be dominant in any given industry. In other words, the extent of public sector involvement in a given industry is likely to be inversely related to that of direct foreign private investment, and of the private sector in general.

The foregoing arguments, like the more detailed discussion in Chapter III, lead to hypotheses 1 and 2, which are tested in this chapter. Let us start with hypothesis 1 which, to recapitulate, states that as the degree of capital intensity rises from one industry to another during the period under study (1968-1974), so does the likelihood of finding Africans, Asians and Europeans respectively in semi-skilled and high-level occupations rather than skilled and unskilled ones. To test the hypothesis, we compute the rank-order correlation coefficient (Kendall's tau) of the two variables isolated in the hypothesis. Prior to doing so, we rank the eight industrial groups twice, in terms of: (a) the likelihood of finding them in high-level and semiskilled rather than skilled and unskilled occupations (this likelihood is based on the difference, for respective races, between the lambda effects pertaining to the respective pairs of occupational categories in each industry); and, (b) the average level of capital intensity for the period. Tables 9 and 10 give the data and rankings necessary for testing the hypothesis.

The corollary to hypothesis 1 states that the recruitment advantage of Europeans over Africans or Asians in high-level occupations varied positively with the level of capital intensity across the eight industrial groups during the period 1968-1974. The recruitment advantage of one racial group over another in high-level occupations is the sum of all lambda effects, not just the larger ones, scored by the first group--in such occupations and in the given industry--minus the sum scored by the second. The corollary is tested along the same lines as hypothesis 1. For comparison, the respective recruitment advantages of Africans and Asians in high-level occupations are also considered. Tables 10 and 11 give the data and rankings necessary for testing the corollary.

Table 9 shows that the likelihood of finding members of any racial group in high-level and semiskilled rather than skilled and unskilled occupations does indeed vary from one industrial category to

Table 9: Industrial Rank-Orders Based on the Likelihood of Finding Respective Racial Groups in High-Level and Semiskilled Rather than Skilled and Unskilled Occupations, 1968 and 1974.

	RACE, LIKELIHOOD AND INDUSTRIAL RANK					
	1	2	3	4	5	6
INDUSTRY	Africans	Rank	Asians	Rank	Europeans	Rank
Agriculture	- .74	6	1.22	1	- .48	6
Mining	-1.20	7	.04	3	1.17	1
Manufacturing	-1.29	8	.15	2	1.14	2
Electricity	.30	3	-1.01	7	.71	3
Construction	- .15	5	1.39	8	-1.21	7
Commerce	.03	4	-.66	5	.61	4
Transportation	.58	2	-.72	6	.14	5
Services	2.46	1	-.45	4	-2.06	8

Source: computed from Republic of Kenya (1972: 79-82; 1976: 52-5).

Note:
1. "Likelihood" is shown under respective groups in terms of estimated lambdas.
2. All estimated lambdas, not just the larger ones, are used in ranking.
3. "Skilled occupations" used here to mean all non-executive occupations from miscellaneous skilled labor to secretarial workers, and therefore includes sales and clerical occupations.

Table 10: Industrial Rank-Orders Based on the Extent of Public Sector Employment and the Ratio of Incremental Capital to Labor (ICLR) in Kenya's "Modern Sector," 1968 and 1974.

	1	2	3	4
Industry	Public Sector Employment in %	Rank	Value of ICLR in £	Rank
Agriculture	14.3	6	71.6	8
Mining	11.8	7	608.3	2
Manufacturing	18.7	5	244.6	4
Electricity	75.9	1	1217.8	1
Construction	37.9	4	139.0	6
Commerce	5.8	8	166.1	5
Transportation	65.8	3	533.1	3
Services	69.7	2	138.2	7

Sources: 1. For Column 1, Republic of Kenya (1972:49-52; 1976:11-4).
2. For Column 3, Republic of Kenya (1972:49-52; 1975:44; 1976:11-4; 1977:48).

Note: 1. Casual labor is included in the figures in Column 1.
2. The value of ICLR is computed according to this formula:

$$ICLR = (C/L)100$$

where C is the value of fixed capital formation in a given industry for the two years, 1968 and 1974, at current (1968 and 1974) prices.
and L is the sum of the labor force recruited in the same industry in the two years, 1968 and 1974.

Table 11: Industrial Rank-Orders Based on the Recruitment Advantage of Respective Racial Groups in High-Level Occupations in Kenya's "Modern Sector," 1968 and 1974.

	AFRICAN RECRUITMENT ADVANTAGE				ASIAN RECRUITMENT ADVANTAGE				EUROPEAN RECRUITMENT ADVANTAGE			
	1	2	3	4	5	6	7	8	9	10	11	12
INDUSTRY	Over Asians	Rank	Over Europeans	Rank	Over Africans	Rank	Over Europeans	Rank	Over Africans	Rank	Over Asians	Rank
Agriculture	.30	4	.81	1	-.30	5	.51	2	-.81	8	-.51	7
Mining	-1.62	8	-1.60	8	1.62	1	.02	4	1.60	1	-.02	5
Manufacturing	-.78	7	-1.05	7	.78	2	-.27	5	1.05	2	.27	4
Electricity	-.05	5	-.41	6	.05	4	-.36	6	.41	3	.36	3
Construction	-.55	6	-.36	5	.55	3	.19	3	.36	4	-.19	6
Commerce	.43	3	-.03	4	-.43	6	-.46	7	.03	5	.46	2
Transportation	.72	2	-.01	3	-.72	7	-.73	8	.01	6	.73	1
Services	1.54	1	.15	2	-1.54	8	1.09	1	-.15	7	-1.09	8

Source: Computed from Republic of Kenya (1972:79-82; 1976:52-5).

Note: The ranked values in the table are estimated lambda. The recruitment advantage of one group over another is obtained by subtracting the estimated lambda of the second group from that of the first.

another. However, when we correlate this variation with the level of capital intensity, we obtain a Kendall's tau-a value of zero for Africans, which means that for Africans, the extent of capital intensity in an industry has nothing to do with whether they are recruited to high-level and semiskilled occupations or skilled and unskilled occupations in that industry. The correlation coefficient for Asians has a value of -.22, which suggests a mild inverse variation. In other words, as the level of capital intensity rises, Asians are more likely to be found in skilled and unskilled rather than high-level and semiskilled occupations. A positive correlation coefficient, tau-a = .44, for Europeans suggests that as the degree of capital intensity rises, Europeans are increasingly likely to be found in high-level and semiskilled rather than skilled and unskilled occupations. On the basis of these results, it is concluded that hypothesis 1 is only partially supported by the data.

Concerning the corollary to hypothesis 1, which focuses on high-level occupations, Table 12 tells us that the recruitment advantage of Europeans over their African or Asian counterparts was positively correlated with the level of capital intensity during the period. While the correlation was higher when comparing Europeans with Africans (Kendall's tau-a of .44) than when comparing Europeans with Asians (Kendall's tau-a of .39), it was, in either case, mildly strong. Incidentally, Asians also enjoyed some recruitment advantage over Africans in the more capital intensive industries.

Table 12: Kendall's tau-a Coefficients Obtained by Correlating Capital Intensity (ICLR) with the Recruitment Advantage of Respective Racial Groups in High-Level Occupations in Kenya's "Modern Sector," 1968 and 1974.

	Africans	Asians	Europeans
Africans		.22	.44
Asians	-.22		.39
Europeans	-.44	-.39	

Source: Computed from Tables 10 and 11 above.
Note: In this table, as in Tables 13 and 16, the tau-a coefficient representing the recruitment advantage of one racial group over another can be identified by going down the column for the first group until we come to the row for the second group.

The mildly positive correlation between European recruitment advantage and capital intensity means that we fail to reject the corollary to hypothesis 1. Turning our attention from the strength and direction of correlations to recruitment advantage alone (see Table 11), we find that: (a) Africans in high level occupations enjoyed recruitment advantage over Asians in services, transportation, commerce and agriculture; and over Europeans only in services and agriculture; (b) Asians in the same occupations enjoyed recruitment advantage over their European counterparts in services, agriculture, construction and mining.

The general conclusion to be drawn from the foregoing hypothesis-testing is that in 1968-1974 the more capital intensive industries tended to prefer European recruits to either Africans or Asians in high level occupations. They also tended to prefer Asian recruits to Africans in those occupations. In other words, African high-level personnel tended to be concentrated in the less capital-intensive industries, particularly services.

Let us now consider hypothesis 2, which as we saw states that the likelihood of finding Africans in high level occupations in a particular industry is positively correlated with the extent of public sector employment in that industry. The extent of public sector employment serves here as a proxy for the level of economic independence--i.e. absence of foreign private control--in a particular industry. To test this hypothesis, we compute the magnitude and direction of the correlation between two industrial rank-orders based on the average level of public sector employment in each industry in 1968-1974 and the lambda effects representing the likelihood of finding Africans in high-level occupations in respective industries. The correlation between the recruitment advantage of Africans over Asians or Europeans and the extent of public sector employment is also considered to give additional depth to subsequent generalizations about the profile of Kenya's "modern sector" labor force.

While members of each of the three racial groups are to be found in high-level occupations in each of the eight industrial groups, the findings show that members of any given racial group enjoy a greater or less than average likelihood of holding high-level jobs depending on the type of industry which employs them. The findings also show that such likelihood varies with the degree of public sector participation in respective industries. For Africans, this variation is positive (Kendall's tau-a = .22). For Asians and Europeans, the variation is inverse, and shows a Kendall's tau-a value of -.11 for either group. In other words, the greater the degree of public sector involvement in an industry, the greater the chance for Africans, but not Asians or Europeans, to be in high-level occupations in that industry. This conclusion concurs with hypothesis 2, even if the relevant correlations are weak.

Correlating the recruitment advantages (relative chances) of respective groups (see Table 13) with the level of public sector involvement in respective industries, we find that as the role of the public sector grows, so does the recruitment advantage of Africans over Europeans (Kendall's tau-a = .11) or Asians (.22) in high level occupations. Likewise, the recruitment advantage of Asians over Europeans shows slight growth (.06). None of the three correlation coefficients

Table 13: Kendall's tau-a Coefficients Obtained by Correlating the Extent of Public Sector Employment with the Recruitment Advantage of Respective Racial Groups in High-Level Employment in Kenya's "Modern Sector," 1968 and 1974.

	Africans	Asians	Europeans
Africans		-.22	-.11
Asians	.22		-.06
Europeans	.11	.06	

Source: Computed from Tables 10 and 11 above.

cited in this paragraph is particularly strong, but the direction of the correlations is clear. The correlations imply that the likelihood of finding Europeans in high-level occupations improves as the level of direct foreign private investment increases.

In summary, it can be stated briefly that the levels of capital intensity and economic dependency do vary from one industrial type to another, and that the effects of this variation on respective racial and occupational groups in Kenya's "modern sector" economy, are not uniform. The percentage of Europeans or Asians in high-level rather than lower level occupations remains disproportionate to the respective share of Europeans or Asians of the total modern sector labor force in Kenya, as we saw in the previous chapter. But strong public sector involvement in some industries has already turned the tide and elevated the recruitment chances of Africans, and Asians, above those of Europeans in high-level occupations in those industries. On the other hand, the higher the level of capital-intensity, the greater the recruitment chances of Europeans and Asians over Africans in high-level occupations. Asians, it would seem, have the best of both worlds. And yet, when the range of occupations available to Africans in 1968-1974 is compared to that in colonial times, we find that Africans--albeit only a small proportion of all Africans--have broken through the erstwhile occupational "color bar" with a rapidity and to an extent which, in hindsight and in usual historical reckoning, are undeniably the more remarkable. What is more, this rapid if unfinished breakthrough has occurred in a country "notorious" for its philosophy of deliberate change. It might be argued, however --indeed has been argued--that only the elite have achieved such a breakthrough. But the reverse is the more correct. Those who have broken through the color bar have, by that act, become the African elite of Kenya. Political clout has not been the only means by which the color bar has been torn down. Other factors have played a crucial part. Among these is the rapidly changing human capital investment pattern of Africans, to which we now briefly turn.

*CHAPTER VII

THE IMPACT OF HUMAN CAPITAL INVESTMENT

The main purpose of this chapter is to test hypotheses 3 and 4. These two hypotheses derive from the human capital investment model of occupational distribution, which was discussed at greater length in Chapter III, and which is only summarized here. Central to this model is the definition of human capital as a person's "productive skills, talents, and knowledge" measured by the value of goods and services produced by that person (see Thurow, 1970:1; also Jakubauska and Palomba, 1973:16-7). On the basis of this definition, human capital investment is treated here as the act or, better still, process of acquiring the productive skills, talents and knowledge required in the particular type or types of occupation which an individual or prospective employer may have in mind.

According to the human capital investment model, it is the quality of a person's capabilities that determines whether or not that person gets hired to the job he or she applies for. The model minimizes the role of discrimination in recruitment (see Bibb and Form, 1977:978). Following Becker's (1964) lead, the model also has tended to emphasize human capital investment through such formal channels as schools, mainly on-the-job training and the expertise which accrues through years of service.

Incidentally, the very informality or unstructured nature of informal bases of human capital investment has been a source of much controversy in many newly-independent countries intent upon an efficient, and yet quick, substitution of local experts for expatriate ones--often from the former colonizing country. Those seeking to maintain the status quo usually argue, with some justification, that certain types of expertise simply cannot be acquired in a hurry, and require many years of on-the-job preparation, even after years of formal education and training; before such expertise is acquired by local personnel, it is necessary to retain the European expatriates who have it (see Burrows, 1975). Those who seek to do away with the status quo usually argue, again with some justification, that while such expertise may indeed presuppose years of on-the-job experience, local personnel cannot begin to accumulate the requisite years of experience until they are hired to displace the expatriates, or at least to understudy them.

It is much easier to codify (for the purposes of analysis) human capital investment defined narrowly in terms of formal criteria, rather than broadly in terms of both formal and informal criteria. And yet, despite the controversy which they tend to generate, informal modes of skill acquisition are an essential part of human capital investment and ought to be included in any comprehensive definition of it. A convenient way of including informal factors in such a definition is to measure human capital investment in terms of a proxy--income. The use of this proxy is inspired by Fisher (cited by Barnum and Sabot, 1976:13) who defined capital--and, by inference, human capital--as anything that yields income over a period of time, and income as a product of capital. In other words, as a person's human capital produces goods and services for the benefit of the employer or consumer, it generates income for that person. The reader is referred to Chapter III above for three additional reasons for using income as proxy for human capital investment.

Income is not a perfect or ideal summary measure of human capital investment. Income differences attributed to differences in human capital investment may in fact be due to racial or sex discrimination, union bargaining, or the employer's (or industry's) ability to pay. Still, it remains superior to level of formal education and training as an indicator of overall human capital investment by any given individual. Furthermore, viable alternatives to these two indicators are yet to evolve.

As an extension of and solution to the debate over the role of expatriates in the Kenyan economy, some studies (see Rempel and House, 1978:27; Burrows, 1975:12) have suggested that if Kenyans made the required human capital investment, their employability would improve and European dominance in specific occupations would wane. Hypothesis 3 is based on that suggestion, and states that as the human capital advantage of Africans over Asians or Europeans in high-level occupations has increased during the period under study, so has the recruitment advantage of Africans over Asians or Europeans in the same occupations. The human capital advantage of one racial group over another in high level occupations is obtained in this study by subtracting the IR (see Table 14) of the second group from that of the first.

Table 14: Industrial Rank-Orders Based on the Indices of Returns on Human Capital Investment (IR) for Respective Racial Groups in High-Level Occupations in Kenya's "Modern Sector," 1968 and 1974.

	Indices of Returns and Rank					
	1	2	3	4	5	6
INDUSTRY	IR for Africans	Rank	IR for Asians	Rank	IR for Europeans	Rank
Agriculture	1.55	2	.19	6	1.03	5
Mining	.01	8	.05	7	.10	8
Manufacturing	.48	4	2.17	2	1.54	3
Electricity	.03	7	.03	8	.14	7
Construction	.23	6	.54	4	.52	6
Commerce	1.44	3	3.66	1	2.95	2
Transportation	.31	5	.32	5	1.11	4
Services	8.23	1	1.76	3	3.74	1

Source: Computed from Republic of Kenya (1972:79-82; 1976:52-5).

Note: As was explained toward the end of Chapter IV,

$$IR = \{[(A/T)V]/N\}100$$

where A = the number of Africans, Asians or Europeans, in the highest income bracket in all industries.
T = the number of all persons in the highest income bracket in all industries.
V = the number of all persons in high-level jobs in a particular industry.
$(A/T)V = \hat{P}$ = the estimated number of a given racial group in high-level occupations in a particular industry.
N = the sum of all groups in high-level occupations in all industries.

This particular level of human capital advantage refers to differences in the proportions (of any two racial groups in high level occupations to total high level employment) which were to be found within the highest income bracket in Kenya during the period 1968 to 1974. Recruitment advantage is measured as before.

The human capital advantage of respective racial groups in high level occupations are given in Table 15, which shows, for example, that Africans enjoy human capital advantage over Asians and Europeans only in two industrial categories: services and agriculture. In other words, when returns on human capital investment, i.e. income, are used to measure human capital investment, we find that Africans in high level occupations surpass Asians or Europeans in similar occupations only in the two industrial categories identified. In electricity, high-level Africans equal high-level Asians in human capital investment. We also find that the human capital investment of Europeans surpasses that of Asians in services, agriculture, transportation, electricity and mining. Asians in turn surpass Europeans in commerce and manufacturing and construction.

By correlating the human capital advantage and recruitment advantage of each racial group over each of the other two in high-level occupations--that is to say, correlating rank-orders in columns 2, 4, 6, 8, 10 and 12 in Table 15 with respective columns in Table 11--we obtain the correlation coefficients given in Table 16. This table shows that as the human capital investment of Africans in high level occupations surpasses that of Asians or Europeans across the eight industrial

Table 15: Industrial Rank-Orders Based on the Human Capital Advantage of Respective Racial Groups in High-Level Occupations in Kenya's "Modern Sector," 1968 and 1974.

	AFRICAN HUMAN CAPITAL ADVANTAGE				ASIAN HUMAN CAPITAL ADVANTAGE				EUROPEAN HUMAN CAPITAL ADVANTAGE			
	1	2	3	4	5	6	7	8	9	10	11	12
INDUSTRY	Over Asians	Rank	Over Europeans	Rank	Over Africans	Rank	Over Europeans	Rank	Over Africans	Rank	Over Asians	Rank
Agriculture	1.36	2	.52	2	-1.36	7	-.84	7	-.52	7	.84	2
Mining	-.04	5	-.09	3	.04	4	-.05	4	.09	6	.05	5
Manufacturing	-1.69	7	-1.06	7	1.69	2	.63	2	1.06	2	-.63	7
Electricity	.00	3	-.11	4	.00	6	-.11	5	.11	5	.11	4
Construction	-.31	6	-.29	5	.31	3	.02	3	.29	4	-.02	6
Commerce	-2.22	8	-1.51	8	2.22	1	.71	1	1.51	1	-.71	8
Transportation	-.01	4	-.80	6	.01	5	-.79	6	.80	3	.79	3
Services	6.47	1	4.49	1	-6.47	8	-1.98	8	-4.49	8	1.98	1

Source: Derived from Table 14 above.

Table 16: Kendall's tau-a Coefficients obtained by Correlating the Human Capital Advantage with the Recruitment Advantage of Respective Racial Groups in High-Level Occupations in Kenya's "Modern Sector," 1968 and 1974.

	Africans	Asians	Europeans
Africans		.28	.11
Asians	.28		-.28
Europeans	.11	-.28	

Source: Computed from Tables 15 and 11 above.
Note: This table is read in the same way as Tables 12 and 13 above.

categories, so does their recruitment advantage. Hypothesis 3 is therefore supported. We note also that as the human capital advantage of Africans increases, their recruitment advantage over Europeans increases slightly more than it does over Asians; but neither correlation coefficient is particularly strong. We note, furthermore, that there is a negative correlation (-.28) between the human capital advantage and recruitment advantage of Asians over Europeans (and Europeans over Asians) in high-level occupations. This means that in some industries, further human capital advantage of either group over the other becomes unnecessary, as it does not offer an additional competitive edge to either group.

The main implication of the negative correlation coefficients for the total economy is that, beyond a certain point and given the available stock of high-level human capital in Kenya, it may not matter in some industries whether high-level positions are filled by Asians or Europeans. The reason is that finding members of either group with the required level of expertise would pose no particular difficulty. Conversely, as the human capital advantage of Asians over Europeans (or vice-versa) declines, we arrive at a point below which, naturally, the recruitment advantage that either group may enjoy over the other cannot be explained in terms of superior human capital investment. In such cases we must explore contending explanations--such as patterns of ownership, family and business connections, and discrimination based on nationality or race.

Unlike hypothesis 3, hypothesis 4 focuses on the problem of recruiting Africans to middle-level as opposed to high-level jobs. It states that the lower the level of public sector involvement across the eight industrial categories in Kenya, the greater the likelihood of finding Africans in high-level rather than middle-level occupations. To test this hypothesis, we correlate the salient variables represented by the rank-orders in Table 10, Column 2 and Table 17, columns 2, 4 and 6 respectively. But what we obtain is a correlation coefficient (Kendall's tau-a) of zero. Given this correlation coefficient, we conclude that though it has been easier to recruit Africans to middle-level than to high-level occupations in five of the eight broadly defined industrial categories, this cannot be attributed statistically to the level of public or private sector involvement in those industries.

Using a similar technique to explore the situation of Asians and Europeans in Kenya's labor markets, we find that: (a) as the

Table 17: Industrial Rank-Orders Based on the Likelihood of Finding Respective Racial Groups in High-Level Rather than Middle-Level Occupations in Kenya's "Modern Sector," 1968 and 1974.

	RACE, LIKELIHOOD AND RANK					
	1	2	3	4	5	6
INDUSTRY	Africans	Rank	Asians	Rank	Europeans	Rank
Agriculture	1.00	1	-.33	7	-.66	7
Mining	-.82	8	-.03	4	.86	2
Manufacturing	-.52	7	.61	1	-.09	4
Electricity	-.41	6	-.67	8	1.09	1
Construction	-.26	4	.47	2	-.20	5
Commerce	.36	3	-.03	4	-.34	6
Transportation	-.27	5	-.17	6	.43	3
Services	.93	2	.14	3	-1.07	8

Source: Computed from Republic of Kenya (1972:79-82; 1976:52-5).

Note: "Likelihood" is given in terms of estimated lambda in columns 1, 3 and 5.

level of public sector involvement in Kenya's industries rises, the likelihood of finding Asians in high-level rather than middle level occupations in Kenya declines (Kendall's tau-b = -.14)--in other words, it becomes easier for Asians to find employment in the latter type of occupations; and, (b) the lower the level of public sector involvement in an industry, the easier it is for Europeans to find employment in middle rather than high-level occupations (Kendall's tau-a = .11) in that industry. But regardless of how public sector involvement separately affects each racial group, a look at the relative recruitment chances of the respective racial groups in middle level occupations alone reveals that the greater the degree of public sector involvement in an industry, the greater the recruitment advantage of Africans over Asians (Kendall's tau-a = .28) and Europeans (.5). The greater also the recruitment advantage of Asians over Europeans (.22) in those occupations. On the other hand, when we correlate capital intensity with recruitment advantage in middle-level occupations, we find that greater capital intensity leads to increased recruitment advantage of Asians over both Africans (.06) and Europeans (.11), and Africans over Europeans (.39). All figures in parenthesis are Kendall's tau-a.

By way of conclusion, a few words about the implications, for the labor force profile, of the relationships established in this chapter. Improvements in the human capital investment of Africans in high level occupations, relative to that of Asians or Europeans and across industrial categories, do have some positive effect on their relative representation in those occupations; and, by inference, on the relative position of Africans as a group in the occupational structure of Kenya's modern sector. If this trend persists, we are likely to witness a continued decline in the dominant role of Europeans in Kenya's high-level occupations, as Burrows (1975) and Rempel and House (1978) suggested. But, in view of the findings in the previous chapter, this decline will likely be tempered by the extent of capital intensity and economic dependency, including dependency-based discrimination (this is implied, for example, in Nzomo, 1978:139), within respective industries. And, whatever, the extent of the decline, it will still be easier to find Africans in middle-level rather than high-level occupations, a fact no doubt buttressed by the roughly pyramidal shape of large-scale occupational hierarchies. There are indications, nevertheless, that Kibaki's (1978) hypothesis might still be confirmable, but only if we focus on highly specific middle-level jobs vis-a-vis high-level occupations in general. The data examined did not reach such a level of specification. Finally, industries with a high level of public sector involvement tend to recruit more Asians to middle-level than to high-level jobs. For Africans, however, the level of public sector involvement in an industry does not have a similar or inverse tendency.

CHAPTER VIII

CONTINUITY AND CHANGE IN THE OCCUPATIONAL/ADMINISTRATIVE STRUCTURE OF THE STATE BUREAUCRACY

The literature on administrative structure and occupational mobility in post colonial Kenya broadly subscribes to the view that there has been considerable continuity, and little change, in the occupational/administrative structure of the state bureaucracy in Kenya since independence in 1963 (discussion of this literature follows in the section entitled "The Case for Structural Continuity," below). Africans who now hold high and middle-level jobs in Kenya's public or private sector have, the literature adds, merely taken over the jobs which Europeans and Asians had previously monopolized. This view implies either: (a) that the number of high and middle level jobs in post colonial Kenya has remained static at the level obtaining in 1963; or, (b) that whatever new jobs have been created after independence have first been held by Europeans or Asians. The discussion in the section entitled "The Case for Structural Change" in this chapter attempts to demonstrate that neither scenario (a) nor (b) above fits the objective reality. That discussion is based on the finding--of which supporters of the static view were patently little aware--that changes in organizational size (e.g. increases in job openings within the organization or administration) cause or suggest changes in organizational structure. Because of limited data, this chapter concentrates on Kenya's public administration.

The Case for Structural Continuity

In a book originally published in 1961, Fanon (1968) emerges as one of the earliest proponents of the view that the occupational/administrative structures of the colonial era persist in post-colonial Africa. The native bourgeoisie which takes over the instruments of state in a newly-independent African country, he argues, limits its goals to stepping "into the shoes of the former European settlement (sic): doctors, barristers, traders, commercial travelers, general agents, and transport agents. It considers that the dignity of the country and its own welfare require that it should occupy all these posts" (see Fanon, 1968:151). Gertzel (1975:186), who sees a similar pattern in Kenya, argues that:

> ...the most important aspect of administrative developments is that there has been very little structural change since independence. There was a short-lived and unenthusiastic move to the decentralized administration required by the majimbo constitution that introduced regionalism in 1963; but in December 1964, the Kenyan Government was able constitutionally to abandon that posture and returned to a centralized, unitary state in which they restored the field administration to the same position as the former colonial Provincial Administration with exactly the same title and structure. They also progressively restored to it all the functions that had been transferred to other governmental bodies during the period of reform in 1963.

Gertzel obviously focuses her attention on only one aspect of public administration in Kenya--the vertical extension of state (as distinct from parastatal) power from the President's office down to the provinces, districts, divisions and locations in Kenya; in other words on the provincial administration. In doing so she gets and projects a constricted picture of Kenya's public administration as a whole. If the provincial administration represents but one branch of the entire public administration, the ministries (headed by cabinet ministers), with their respective deployments of hierarchically organized headquarters and field staff, represent another, larger and more complex "branch." In fact, in hierarchical terms, the seven Provincial Commisioners who serve as the President's top representatives in the respective provincial administrative structures are--as they have always been--subordinate to cabinet ministers and even Permanent Secretaries, top civil servants in the respective ministries. Even in terms of administrative and political power and influence--for example, power to affect budget allocations and the flow of other scarce resources--Provincial Commissioners are in most respects subordinate to senior cabinet ministers, and in many respects to all ministers. Their primary function is not to initiate but rather to implement decisions made at the center by the President or the cabinet as a whole, particularly in the realm of law and order.

Even if it is true that the provincial administration has retained its basic colonial structure, it is misleading, as the foregoing discussion suggests, to conclude that the entire public administration has therefore also remained the same. One must examine changes in the number and structures of the ministries as well. Furthermore, one must examine the important role which parastatals (statutory boards, state controlled industries, and so forth) increasingly play in the horizontal and vertical evolution of the Kenyan bureaucracy (see the discussion in the section entitled "The Case for Structural Change," below). Changes in the organizational structure of the rest of the public administration are simply not dependent on changes in the organizational set-up of the provincial administration.

Bienen's work (1974) echoes some of the views examined above. He views the civil service in post colonial Kenya as a legacy of colonialism. However, he considers the similarity between the two periods as resting primarily on the fact that the provincial administration has remained strong and highly centralized--deriving its authority directly from the highest office in the land. He asserts that the provincial administration has maintained its "structural dominance" (Bienen, 1974:37) over other branches of the civil service in the provinces, but is more willing than Gertzel to see the Kenyan civil service structure as involving more than just the provincial administration (see Bienen, 1974:32-3, 39-40). For example, he emphasizes that Provincial Commissioners do not as a rule participate in policy formulation at the center in Nairobi (Bienen, 1974:38; see also Jackson, 1970:321). And he points out that at least some of the ministries do have direct representatives, and a measure of autonomy, in the provinces. One can add that the respective ministries are distinct administrative structures vis-a-vis the provincial administration, and even each other.

The civil service as a whole, Bienen argues further, has experienced considerable "growth in size"--at least in terms of personnel recruitment--since independence (Bienen, 1974:32-4). Between 1955 and 1965, for instance, the civil service grew from about 45,000 to about 63,000 civil servants. Ninety-two percent of these were Kenyan citizens, mainly Africans. By 1969, the number had risen to 77,000 persons, 95 percent of whom were citizens (Bienen, 1974:32). What is conspicuously lacking in Bienen's work is an explicit linkage between this growth in size and changes in the organizational structure (i.e. division of labor) of the civil service since independence. The one occurs but the other does not.

Rempel and House (1978:72-3) imply that the colonial administrative structure has persisted by way of the "inherited colonial wage structure." The relative wages commanded by different skill categories of labor in colonial Kenya, they argue, "were defined more by what was needed to attract expatriates from abroad than by local market conditions." With the coming of political independence in 1963, Kenyans began to replace expatriates in both the public and private sectors of the economy. However, "it has become common practice to pay them the same salary as the expatriate each replaced." This pattern of Kenyanization, they point out, has ensured the continued existence of the colonial occupational and industrial wage structure--and, by inference, the colonial administrative structure. Moreover, despite the program of Kenyanization, the economy maintains its "reliance on expatriates"--a fact which helps perpetuate the inherited wage and, implicitly, administrative structure.

If Rempel and House are silent on the issue of structural change in post-colonial Kenya, the report of the International Labor Office, ILO, (1972), is quite explicit. Concurring with Gertzel, the report states:

> ...in many respects economic growth has largely continued on lines set by the earlier colonial structure. Posts have been Africanized and there has been great expansion; but the structures which led to and have sustained inequality still remain...and important parts of the economy are still controlled by expatriate interests (ILO, 1972:100).

The statement is clear but, in terms of the discussion in the section entitled "The Case for Structural Change" below, partly contradictory. Inequality persists and important parts of the economy remain in expatriate hands, but this has not pre-empted structural change within the public administration. Indeed, some of the structural change which this writer believes has occurred may well represent a bureaucratic response to the persistent inequality and expatriate dominance in important segments of the economy.

In summary, the case for continuity is weakened by lack of precision about exactly what colonial administrative structures have survived into the post-colonial period, and by inadequate awareness of exactly what constitues structural change. Gertzel compares only the provincial administrative structures of the two periods, but surprisingly concludes that the entire structure of the colonial bureaucracy has remained intact. Bienen, the ILO and Rempel and House agree that the public and/or private administrative structures of post-colonial Kenya are largely a carry-over from the colonial period, but add that these structures have experienced considerable personnel expansion. Finally, only Gertzel treats the overall civil service in Kenya as a monolith symbolized and overwhelmed by the provincial administration. Bienen comes close to her position only to the extent that he attributes "structural dominance" to the provincial administration.

The Case for Structural Change

The discussion in this section is based primarily on a deductive re-evaluation of the broadly held view, discussed above, that though Kenya's public service has demonstrated what is variously termed "growth," "great expansion" and "growth in size" since independence, it has in fact undergone little or no structural change. To facilitate the re-evaluation--and in view of the fact that growth in size and structural persistence are given above as the main trends--this section starts with a review of the theoretical and empirical literature which has sought to establish a causal link precisely between size and structural change in formal organizations in general.

But first, a definition: the administrative structure of a formal organization can be defined as the vertical and horizontal division of labor within the organization--that is to say, the arrangement of tasks performed in specified "departments" by particular job or occupational ranks of individuals within the organization. Blau (1972a:185), for example, states that the "differentiation of a formal organization into components in terms of several dimensions--spatial, occupational, hierarchical, functional--is considered to constitute the core of its structure." He elaborates (Blau, 1972a:189; see also Dewar and Hage, 1978:111):

> A structural component is either a distinct official status (for example, employment interviewer or first-line supervisor), or a subunit in the organization (for example, one branch or one division). The term differentiation refers specifically to the number of structural components that are formally distinguished in terms of any one criterion. The empirical measures used are number of branches, number of occupational positions (division of labor), number of hierarchical levels, number of divisions, and number of sections within branches or divisions.

There are, then, a number of levels at which structural change in organizations can legitimately be discussed. This offers a flexibility in structural analysis which is particularly useful where we have incomplete data on the more detailed measures of structural differentiation (such as number of job titles) or even the less detailed ones (such as number of branches or departments).

Having said that, we can add the point that hypothesis 5--which states that Africans now in high and middle level occupations have merely taken over jobs formerly held by Europeans and Asians--has a corollary (just implied) which is even more significant sociologically, namely: that there has been little or no change in the administrative structure of the public service in Kenya since independence. To demonstrate that Africans in post-colonial Kenya have not merely taken over high and middle level jobs formerly held by Europeans, we need only show that there has been an increase in the number of high and middle level jobs since independence, and that this increase is not accounted for by an initial recruitment of non-Africans. On the other hand, to show that the public service <u>has</u> undergone structural change since independence, it is useful to start with the premise that changes in organizational size lead to changes in organizational structure, and vice versa.

The literature linking size with structure in organizations can be traced to Weber (1978:968-9), who argued that:

> ...the basis of bureaucratization has always been a certain development of administrative tasks, both quantitative and qualitative...[the] first such basis of bureaucratization has been the quantitative extension of administrative tasks. In politics, the big state and the mass party are the classic field of bureaucratization.

Following in this tradition, Pugh et. al. (1969:91) identify organizational size--i.e. the logarithm of the number of employees--as one of seven "primary concepts of organizational context" which explain a good proportion of changes in organizational structures. The other contexts are organizational origin and history, ownership and control, charter, technology, location, and dependence on other organizations (a somewhat parallel set of "institutions" is suggested by Jacobs, 1966:15-6; 1971:12-21). On the basis of their empirical analysis, Pugh et al. (1969:112) conclude that:

> ...size causes structuring through its effects on intervening variables such as the frequency of decision and social control. An increased scale of operation increases the frequency of recurrent events and the repetition of decisions which are then standardized and formalized ... Once the number of positions and people grows beyond control by personal interaction, the organization must be more explicitly structured.

Blau (1972a) constructs a deductive theory of structural differentiation in formal organizations which corroborates the Weberian proposition. On the basis of empirical findings, he concludes that increasing size "generates structural differentiation in organizations along various dimensions at decelerating rates" (Blau, 1972a:190; see also Blau and Schoenherr, 1971). Blau and Schoenherr (1971:56) also operationally define organizational size in terms of the "number of employees." Echoing Weber, they argue that the size of employment security agencies, which they studied, has "pervasive effects on their organizational characteristics," and that (see Blau and Schoenherr, 1971:56):

> The most prominent influence of large size is that it gives rise to the differentiation of the formal structure in various respects. The larger an agency is, the greater the number of local offices under its jurisdiction, the number of official job titles indicative of division of labor, the number of hierarchical levels in the authority structure, the number of major divisions under top management, and the number of sections per division. All these associations are pronounced, and the consistency of the pattern is impressive.

Child (1973:171) basically supports this characterization of large organizations. However, he adds that "a comparison of structure-size regressions across different industries has indicated that a knowledge of other variables, for which industry is undoubtedly acting as a proxy, can also add to the predictability of organization structure" (see Child, 1973:176). Size, in other words, is a significant but not the only influence on structural differentiation.

A different position is taken by Dewar and Hage (1978:111) who argue that "the scope of an organization's task," rather than the organization's size, is the greatest determinant of structural differentiation, particularly on the horizontal plane. But then they confuse matters by noting that their findings "support only the inference of a moderate causal connection between either size or task scope" and horizontal or vertical differentiation (Dewar and Hage, 1978:111).

Size affects either form of differentiation only in the long-run, they argue. In the short-run, the linkage between size and structural change is:

> ...much less clear precisely because fairly large increases in size must occur before a new level is added...The shorter [the time interval], the less likely it is that many organizations will have sufficient growth to warrant new levels (Dewar and Hage, 1978:116).

Be that as it may, and whatever the stated organization goals, the actual scope of an organization's task is highly correlated with the organization's size and the extent of its physical and financial resources. This observation is based on the premise that what we can do (actual as opposed to stated or intended task scope) is circumscribed by the available human, physical and financial capital. Incidentally, Pugh et al. (1969:98) find a high correlation (r = .78) between an organization's size (number of employees) and the value of its net assets. It would seem contradictory to dismiss size but accept task scope as a factor in structuring. As if to bring this particular debate to a close, Blau (1972b:3) conceptually defines organizational size as the "scope of an organization and its responsibilities."

The longitudinal approach to organizational change which Dewar and Hage (1978:116) attempt theoretically had earlier been subjected to limited empirical testing by Holdaway and Blowers (1971), Hendershot and James (1972), Meyer (1972:434-41) and Hummon et. al. (1975). Hummon et. al. (1975:813) argue that conclusions from studies such as

Blau's (1972a), which focus on a cross-section of organizations "must be viewed as statements of covariation rather than temporal development." To this Kimberley (1976:580) adds the speculation that "what is important for the size-structure configuration at any particular time is where it has been in the past. In other words, was the organization in a state of decline, stability or rapid growth? In their own longitudinal study, Hummon et al. (1975:822) reach conclusions which partly support but also modify Blau's (1972a) generalizations. First, they find that size does generate structural differentiation, but "increasing differentiation also generates increasing size and these are more important in the dynamics of bureaucracies." Second, they conclude that structural differentiation does lead to the enlargement of the administrative component of an organization, "but it also enlarges the productive component."

In summary, the empirical and theoretical studies reviewed in this section suggest a strong relationship between organizational size and such indicators of organizational structure as number of job titles, number of major divisions under top management, number of sections per division, and the vertical span. Most of the studies have a cross-sectional perspective and portray the relationship between size and structure as one in which size causes structuring. However, Hummon et al. (1975) and Kimberley (1976) suggest that structural differentiation may in turn cause changes in size. For the purposes of the present chapter, it does not matter whether the relationship is one of covariation, or one in which size causes structuring, or vice-versa. The important point is that size is found to be strongly related to structural differentiation (see Stolzenberg, 1978:815), even in the longitudinal study. According to Kimberley (1976:571), however, size is usually defined "in terms too global" to yield satisfactory results. He would prefer, depending on the focus of any given research, the disaggregation of size into such conceptually distinct dimensions as the physical capacity of an organization, the number of people "available" to an organization, the volume of organizational input or output, and the discretionary resources of an organization (Kimberley, 1976:587-8). But, even according to him, many researchers would still be able legitimately to use the number of people employed as the operational definition of organizational size. And, more importantly, the finding that size (as number of people employed) causes structuring would in many cases still hold.

That Kenya's public service has undergone structural change since independence can be inferred, as was indicated earlier, from a deductive re-evaluation (within the size-structure matrix) of the literature discussed in the section entitled "The Case for Structural Continuity," above. The case for structural change can also be demonstrated empirically by applying the size-structure matrix to the available data.

Let us start with a brief re-examination of the literature in the section entitled "The Case for Structural Continuity." In terms of the size-structure framework, studies which suggest the persistence of the colonial administrative structure undermine their own case on three major counts. First, they ignore the fact that there has been a substantial expansion in parastatal institutions and personnel--an integral component of public administration--as well as the civil service proper (i.e. "central government"). Second, they fail to recognize that the "growth in size" or "great expansion" which they all acknowledge either has led to structural change--as partially evidenced by the increase in the number of parastatal institutions in the country (of which more below)--or is itself the result of structural change. Third, they are generally vague about what constitutes structural change. In the case of Gertzel (1975), structural change--examined strictly in the context of the "civil service"--seems to be narrowly defined as movement from a centralized to a decentralized or "regionalized" administration, with a possible injection of political party supervision and the cosmetic renaming of some old job titles.

If we accept the proposition that size causes structuring, and vice-versa, we simply cannot support the inference (see, for example, ILO, 1972:100; Bienen, 1974:32-4) that an administrative entity which experiences "considerable growth in size"--with obvious additions to its stock of job titles and to its vertical or horizontal span-- does not undergo at least some structural change. Moreover, given that the number of high and middle-level jobs in the public service has increased significantly since independence--filled mostly by Africans (see Bienen, 1974:32)--it can be surmised that many if not most Kenyan Africans now holding such jobs were appointed not to replace Europeans and Asians but to fill newly-created positions. On the basis of this deductive reasoning, we find little support for hypothesis 5 and its corollary.

The decision to reject hypothesis 5 and its corollary gets additional support from the work of Hyden (1970). His conclusions benefit from: (a) his view of public administration as including "not only activities of central and local government executive branches, but also independent boards established by Parliament, public corproa-tions, and certain agencies and committees of a specialized nature formed for the purposes of aiding government policy formation and implementation" (Hyden, 1970:3-4); and, (b) his awareness of the linkage between size and structure, seen in his suggestion that the larger the public administration--a term he frequently uses interchangeably with the term civil service--"the greater the extent of departmentalization and specialization of tasks" within it (Hyden, 1970:10).

Hyden points out further that though Kenya's civil service experienced the greatest personnel expansion between 1945 and 1955, it has also shown considerable expansion since independence in 1963: growing from 14,000 in 1945 to 45,000 in 1955 to 63,000 in 1965 to 72,000 in 1968 and 77,000 in 1969 (see Hyden, 1975:7-8). According to him (Hyden, 1970:8-9 and 11), this expansion first of all coincides with and reflects the government's attempt to manage "the larger changes and development occuring in society and the economy." Second, it is motivated by the rising demand for more and better agricultural, educational and medical services. Third, it is the result of the "empire-building propensities or work-load grievances of personnel" within the public service. Fourth, this "Proliferation of ministries and departments" in Kenya arises from pressure on the government to reward "key supporters or members of the ruling party." In short, the need for and recruitment of more personnel has led to new organizational structures, and the creation of new public institutions--and job titles--has led to the recruitment of more personnel.

Hyden does not see this proliferation of ministries and departments--i.e. increasing structural differentiation--as something that should not be expected given the highly centralized character of Kenya's public service. Unlike Gertzel (1975) and, to some extent, Bienen (1974), he does not consider Kenya's colonial legacy to be too rigid or too pervasive to allow important changes in the structure of the public service (Hyden, 1970:7). And there have been changes.

In 1969, for example, Kenya's state bureaucracy included over 80 statutory boards, many of them created only since 1963 (Hyden, 1970: 16). Hyden (1970:16-7) points out further that most of these boards were structural extensions of the central government, which exercised general control through responsible ministries. Adding to the impact of these statutory boards on the structure of the state bureaucracy (the public service) is the existence of over twenty public corporations in Kenya to date, most of them established after 1963. Table 18 gives a partial list of these state-controlled corporations. By indicating, wherever possible, the year respective corporations were established, the table shows that structural change is an on-going process. It also shows that a significant proportion of this structural change is accounted for by central government's acquisition of controlling shares in already existing private enterprises. Many high and middle-level

Table 18: A Partial List of State-Controlled Corporations in Kenya in 1978.

Corporation	Year Established	Comment
Agricultural Development Corporation	1965	
Industrial and Commercial Development Corporation (ICDC)	1965	Originally established in 1954 as Industrial Development Corporation
Kenya National Trading Corporation	March 1965	Wholly owned by ICDC
Kenya Tourist Development Corporation	1965	
Kenya National Properties		Wholly owned by ICDC
Kenya Commercial Bank	December 1970	Successor to National and Grindleys Bank
Kenya National Capital Corporation	1978	
National Housing Corporation	1967	Successor to Central Housing Board (1953)
Kenya Industrial Estates	1967	Wholly owned by ICDC
Kenya National Assurance	1965	
Kenya Bureau of Standards	1973	
Industrial Development Bank	1973	
Kenya External Telecommunications Company	mid 1970s	Established in 1964 as East African External Telecommunications
Kenya Meat Commission	1950	
Kenya Posts and Telecommunications Corporation	December 1977	Successor to East African Posts and Telecommunications
Kenya Railways	March 1978	Originally East African Railways
Kenya Airways	mid 1970s	Originally East African Airways
Kenya Film Corporation		Wholly owned by ICDC
Kenatco Transport Co. Ltd.		ICDC controls 96.5 percent
African Diatomite Industries		Wholly owned by ICDC
General Motors Kenya Ltd.	mid 1970s	ICDC controls 51 percent
Kenya Mining Industries		ICDC controls 51 percent
Kenya Fishing Industries		ICDC controls 67.3 percent
Fluorspar Company of Kenya		ICDC controls 51 percent
Kenya Wine Agencies		ICDC controls 75 percent
Somerset Africa Limited		ICDC controls 57 percent

Sources: 1. Ghai and McAuslan (1970:274-5)
2. The Weekly Review (1978:19 and 22)

Note: Where "year established" remains undetermined, the column remains blank.

jobs in such enterprises have subsequently been Africanized; and to that extent it can be said that some--by no means all--Africans continue to owe their high and middle level positions to the departure of Europeans and Asians.

In view of the preceding discussion, it is fair to argue that the greater the number of parastatals (statutory boards, state-controlled corporations, etc.) under a given ministry, the greater the extent of structural differentiation within that ministry. By the same token, the greater the number of ministries in Kenya at any given time, the greater the extent of structural differentiation within the public service as a whole. Because there is a basic structure to which any ministry conforms--for example, a minister, one or more assistant ministers, a Permanent Secretary and some field offices--any additional ministry means at least a duplication of this basic structure; in other words, an extension of the horizontal span of the public service. The number of ministries in Kenya at present is greater than at the time of independence, though most of the increase is naturally due to the fragmentation of existing ministerial tasks. In June 1963, Kenya had 15 ministries, including the Prime Minister's office. This number rose to 20 in 1967 and 1971, to 22 in October 1978 and 24 in November 1979. The Prime Minister's office was transformed into the President's office in December 1964, as we saw much earlier. The question here is not whether or not the number of ministries in Kenya exceeds the optimal, but rather if this number has increased over time. The evidence gives additional empirical support to the proposition that Kenya's public administration has undergone significant change in its organizational structure. In general, hypothesis 5--which states that there has been little change in the organizational structure--does not find much support.

In conclusion, it can be said that many prominent and prestigious positions in Kenya carry the same titles as they did during the colonial era. This is partly due to a certain universalism of job-titles; and to that extent cannot be blamed on Kenyan administration's "aversion" to change. Nevertheless, the persistence of those job-titles has tended to create the impression, among many well-meaning people in Kenya and elsewhere, that the entire organizational structure of the Kenyan state bureaucracy has remained the same as it was in colonial days. Under that facade of sameness, however, important changes have in fact been taking place, as we have seen. The danger, admittedly benign, in treating the impression as though it were true is that in some African countries (e.g. Tanzania and Zambia) it has tended to prompt solutions which proved to be more cosmetic than substantive. For example, it has tended to suggest that the mere changing of job-titles--e.g. from Provincial and District Commissioners to Regional and Area Commissioners--constitutes significant structural change within the relevant bureaucracy. Meanwhile, significant changes occur almost unnoticed--unnoticed because they are poorly visualized by those who seek to "capture" them.

It can be argued as a general rule that however significant, changes in the organizational structure of state and other bureaucracies alone do not imply or lead to economic development (this point is suggested by Jacobs, 1971:188-9). According to Jacobs' (1971:12) institutionalist perspective, for example, there must be "qualitative change in all the crucial focuses of the social order, if development is to be achieved in anyone crucial focus of that social order, such as in the economy." He argues (1971:12-21; see also Jacobs, 1966:15-6), in other words, that qualitative change must occur in all of seven social institutions--i.e. "key focuses of a social order when organized into particular patterns and structures"--as a necessary and sufficient condition for development. The seven "institutions" are given as: (a) authority, (b) economy, (c) occupation, (d) stratification, (e) kinship and descent, (f) religion, and (g) an integrated and stable social order and legitimate change, or "society's values." Other writers--for example, Frank (1970) and Leys (1974)--have, of course, argued that the main precondition for economic development is that the "commanding heights" of the economy (i.e. major means of production and distribution) be qualitatively changed. In a word, that economic dependency be terminated.

But the question in this chapter is not whether or not economic dependency has been terminated and development launched--important as the question may be. The purpose is more modest; namely, to determine if significant structural changes have occurred in the Kenyan state bureaucracy since independence. Much of the literature reviewed clearly implies that structural change in complex organizations in a developing country is not precluded by the dominance of Western capitalist institutions in such a country. After all, large-scale formal organizations in Western countries are themselves subject to frequent structural change, as the evidence reviewed overwhelmingly shows.

CHAPTER IX

RURAL-URBAN MIGRATION, LABOR ABSORPTION PATTERNS AND FORECASTS

Rural-Urban Migration as a Channel for Labor Force Distribution in Kenya

Like most developing countries, Kenya has both a rapidly growing and predominantly rural population. According to the preliminary results of the 1979 census, for instance, the population has grown in the last ten years at the rate of 3.4 percent per year, from 10,943,000 to 15,322,000 people. Twelve and six-tenths percent of Kenyans now reside in twenty-four urban areas of 10,000 people or more each (see The Standard, November 27, 1971:1). A great majority of the population is still involved in subsistence activities. Of those engaged in "modern sector" wage employment, a little more than half are to be found in urban areas. Significantly, however, the urban share of modern sector wage employment has declined, from 57.2 percent (computed from Kenya, Republic of, 1972:72-7) of the total in 1969 to 51.1 percent in 1976 (computed from Kenya, Republic of, 1978:51). Despite this decline, however, urban wage employment continues to exert a tremendous "pull" on many prospective recruits, particularly the educated--not least because wage employment in general promises a steady if not always sufficiently high income, and because urban employment in particular offers a wider range of career opportunities to the upwardly mobile than does rural employment. This dialectical connection between rural existence--or rural poverty--and real or imagined urban opportunities is an essential explanation for rural-urban migration in most developing countries, not just Kenya. Increasing population pressures on subsistence farming only propel more people toward wage employment.

The rural-urban migration model of occupational distribution is not by itself a complete explanation for the labor market participation patterns of given strata of Kenya's or any other country's labor force. In fact, as its name indicates, its main focus in developing countries is the accelerating aggregate movement of people from rural, "traditional" settings to urban areas. But, as we have seen, most of those who nowadays migrate from rural, subsistence settings do so in search of wage employment. Furthermore, whereas such migration has for many years now been dominated by young adults just entering the labor force, rapidly expanding educational opportunities in countries such as Kenya ensure that an increasing number of these migrants now have at least some formal education and training.

Recognizing that the migrants display increasingly diverse, and rising levels of, formal training and skills, the migration model--at least in its more comprehensive form--proceeds to identify the amounts and types of labor likely to be demanded by particular employers or at particular industrial locations across a given country. Conversely, it identifies the types of jobs likely to be sought by people with particular types of human capital investment. By doing so, it is able to predict what types and proportions of labor are least or most likely to benefit from migration to urban and other areas of wage employment.

The foregoing discussion indicates that the migration model has been applied in research more frequently than has explicitly been acknowledged. The reason is that it is so easily subsumed under, merged with or overshadowed by such other models as human capital investment, dual economies, and capital-labor substitution. The purpose of the remainder of this chapter is not strictly or directly to monitor rural-urban migration. Rather, it is, first, to determine what kinds of jobs and employers (i.e. industries) job-seekers have been ending up with after they enter the labor force, and what broad categories of labor they represent in the first place. Second, on the basis of that determination, to forecast how occupational distribution and level of unemployment are likely to change in the short-run. However, by estimating the number of people in the labor force or entering the labor force for the first time, under respective occupational groupings in 1968 and 1976, and--as a way of measuring labor absorption rates during the period--relating the results to the estimates of modern and informal sector employment (i.e. to the rates of job-creation) affecting respective occupational strata during the same period, the next section of the chapter indirectly or implicitly also monitors the broad outline of rural-urban migration and nonmigration of rural dwellers.

Labor Absorption Patterns and Forecasts

For the purposes of analyzing and forecasting labor absorption patterns in Kenya, the most recent period for which we have relevant data is, as already indicated, 1968 to 1976. Despite this, however, the data necessary for grasping the precise dimensions of unemployment in Kenya are not yet fully available. Under these conditions, the choice for the researcher is whether to wait until we have accurate, detailed and complete data sets, while unemployment probably gets worse; or to proceed with the available data, using them where necessary as the basis for more aggregated estimates. The present author prefers the second option, believing that a rough or tentative estimate of unemployment is preferable to no estimate at all. Furthermore, the author is not aware of any studies which approach the Kenyan unemployment problem in exactly the same way as attempted in this chapter. Naturally, the author considers the approach worthy of exploration. However, basing the forecasts on estimated distributions necessarily means that the results must be treated with due caution.

In order to forecast the pattern of labor absorption in a year beyond 1976, we first compute the compound annual rate of change in the recruitment of respective occupational or labor force strata during the period 1968 to 1976 and then assume that this rate of change will hold until the year for which the forecast is to be made, namely 1986. A ten year forecast seems quite tolerable since, as Deuten and Valentine (1978:310) argue, "for planning most types of capital expenditures, projections for five to ten years are usually sufficient and these can be made with reasonable accuracy in real terms." Beyond ten years, forecasts become less and less dependable.

Computing the compound annual rates of change for respective occupational strata during 1968-1976 is conducted in two stages. First, we focus only on new labor force entrants and examine how the level of labor force entry relates to the extent of job-creation in respective occupational categories during the period. Second, we focus on the entire labor force, estimating average annual rates and magnitudes of change in the employment and unemployment of particular labor force strata. At the end of this section, we also make forecasts on the relationship between race and occupation in 1984, on the basis of data for 1968 and 1974.

Table 19 shows the increase, over 1968 figures, in the number of modern sector jobs created, by occupation and industry, in the year 1976. Compound annual increases during the eight-year period are also given in percentages for respective columns and rows. The table shows that teachers, both trained and untrained, enjoyed the greatest percentage increase in job openings since 1968, with an annual increase of 11.8 percent. The next greatest increase in percentage terms was in secretarial job openings, which registered a 7.3 percent annual rate. Sixty-two and nine-tenths percent of the new secretarial jobs were generated in just two industries, services and commerce. In absolute numerical terms, the unskilled occupational category showed

Table 19: The Occupational and Industrial Distribution of "Modern Sector" Jobs Available in Kenya in 1976 in Excess of 1968 Figures.

OCCUPATION	INDUSTRY										
1	2	3	4	5	6	7	8	9	10	11	12
	Agricul-ture	Mining	Manufact-uring	Construc-tion	Elec-tricity	Commerce	Transpor-tation	Services	Total Increase	Percentage Increase	Annual Percentage Increase
Unskilled	23,840	584	29,242	199	937	22,819	-4,533	91,018	164,106	65.2	6.5
Semiskilled & Skilled	-6,305	-72	-9,660	3,691	943	2,781	-408	-42,254	-51,284	-46.1	-7.4
Sales	-62	2	154	-44	-26	789	512	-139	1,186	24.0	2.7
Clerical	2,246	31	3,640	1,717	373	6,224	3,872	-163	17,940	42.5	4.5
Secretarial	339	19	591	312	104	1,551	471	1,560	4,947	75.3	7.3
Teaching	---	---	---	---	---	---	---	59,462	59,462	144.6	11.8
Technicians	-415	-77	3,175	310	195	351	-1,546	730	2,723	14.7	1.9
Middle Executive	-39	20	1,347	381	98	1,853	1,370	-2,639	2,391	15.6	1.8
Professional	691	52	495	519	55	1,126	244	-788	2,394	38.6	4.2
Toplevel Executive	-332	-8	-58	52	20	-1,017	141	3,343	2,141	22.9	2.6
Total Increase	19,963	551	28,926	7,137	2,699	36,477	123	110,130	206,006		4.4
Percentage Increase	14.1	26.7	46.1	29.8	78.6	88.3	0.3	58.7	40.6		
Annual Percentage Increase	1.7	3.0	4.8	3.3	7.5	8.2	0.03	5.9	4.4		

Source: Computed from Kenya, Republic of (1972:77-82; 1978:52-60).

the greatest increase--having risen by 164,106 new jobs since 1968, or by a 6.5 percent annual rate. Most of the increase in unskilled jobs occurred in four industries: services, manufacturing, agriculture and commerce. Significantly, commerce recruited nearly as many unskilled labor as agriculture, which has usually been portrayed as the main employer of unskilled labor in developing countries.

Of the ten occupational categories examined, only the combined category of miscellaneous skilled and semiskilled jobs showed a decline, with the sharpest decline occurring, incidentally, in services, manufacturing and agriculture--the same industries accounting for most of the increase in unskilled jobs. The decline in semiskilled and skilled jobs was probably due in large measure to the reclassification of some of these jobs as unskilled. Only one of the ten occupational categories grew at a higher annual rate than that of overall labor force entry (shown in Table 20). Generally speaking, the annual rate of job creation during the period was 5 percentage points lower than the annual rate of overall labor force entry.

In an economy with "full employment," a 4.4 percent annual growth in wage employment would be more than sufficient. In Kenya, however, there is no full employment and unemployment is not confined to new labor force entrants. It also affects persons who have been in the labor force for some time. Unemployment in Kenya is not measured in terms of those "actively" seeking employment during a particular period, as in the United States. Consequently, we would need a much higher rate of job creation in Kenya to satisfy the rapidly growing demand in the short-run, and in the long run. Among the eight industries examined, services registered the greatest absolute increase in the number of jobs created, followed by manufacturing and agriculture. Services also had the sharpest numerical increase in the number of new "top level" as well as secretarial jobs, but the sharpest decline in professional and middle level executive jobs. Commerce had the sharpest absolute decline in the number of "top level" jobs, but the greatest increase in professional, middle executive and clerical jobs.

Table 20 and 21 are more aggregated than Table 19. Ignoring industrial variation, they focus respectively on levels of labor force entry and "modern sector" job creation by broad occupational group during 1968-1976. These tables help to estimate what the recruitment chances of particular strata of labor force entrants would be in a given period if we did not have simultaneously to provide employment for still unemployed labor force entrants from a previous period of years. Though Table 21 is a condensed version of Table 19, it is necessary to give the data in that condensed form to permit comparisons with the data in Table 20. Table 20, and likewise Table 21, stratifies three labor force categories by level of formal education and training.

The first category, entitled higher school and university level, encompasses that portion of the labor force which holds, or (in Table 20) is most likely to hold, jobs which increasingly presuppose higher school or university level education and training. Such jobs fall under the following occupational groups: top level administrators and general managers, salaried directors, professionals, middle level

Table 20: Estimated Distribution of New Labor Force Entrants by Labor Force Stratum in Kenya's "Modern Sector" in 1968/69 and 1975/76.

1 Labor Force Strata by Completed Educational or Training Level	2 1968/69 Entrants	3 1975/76 Entrants	4 Col.3-Col.2 Increase Since 1968/69	5 Percentage Increase Per Annum Since 1968
Primary School or Less	183,911	211,021	27,110	2.0
Secondary School	20,080	56,590	36,518	16.0
University and Higher School	461	3,524	3,063	33.7
Total	204,452	271,133	66,691	4.1

Sources: 1. For data in columns 2 and 3, first row, see Kenya, Republic of (1977:16 and 221) and Raju (1973:38-40). Standard 7 repeaters in 1969 from the class of 1968 are estimated at 21,000.

2. For data in columns 2 and 3, second row, see Kenya, Republic of (1977:220-1, 224-5). The formulae used to derive these data are given in appendix 3.

3. For data in columns 2 and 3, third row, see Kenya, Republic of (1977:224-8). See appendix 3 for the relevant formulae.

Table 21: Estimated Distribution by Labor Force Stratum of New "Modern Sector" Jobs Created in Kenya Between 1968 and 1976.

1 Labor Force Strata by Educational or Training Level	2 Number of Jobs Available in 1968	3 New Jobs in 1976 (i.e. over the 1968 figures)	4 Increase Per Annum Since 1968	5 Percentage Increase per Year Since 1968
Primary School or Less	307,012	138,669	17,334	4.8
Secondary School	147,713	49,377	6,172	3.7
University and Higher School	52,580	17,960	2,245	3.7
Total	507,305	206,006	25,751	4.4

Sources: 1. For data on column 2, all rows, see Kenya, Republic of (1972:79-82)

2. For data on column 3, all rows, see Kenya, Republic of (1978:52-60).

Note: The total in column 2 (calculated from Kenya, Republic of, 1972:79-82) is 326 short of the total given in page 77 of the same source.

The present table assumes that: 1. Those in the "Primary School or Less" stratum are most likely to be found in unskilled and semiskilled jobs. 2. Those in the "Secondary School" stratum are most likely to be found in the following jobs: miscellaneous skilled, secretarial, sales, primary school teaching (trained and untrained). 3. Those in the "University or Higher School" stratum are most likely to be found in these jobs: secondary school teaching (trained and untrained), technical school teaching (trained and untrained), teaching in teacher training colleges, middle level executive, technicians, professionals and top level management. 4. Some higher school graduates may be recruited to sales or clerical jobs, and some secondary school graduates may end up in the top stratum, but that these deviations from the "norm" cancel each other out in the present table. 5. The number of new jobs in respective cells in column 3 above is obtained after implicitly making up for job losses due to death and retirement, and to the redundancy of human capital and/or work techniques.

executives, and trained and untrained teachers in secondary and higher schools and teacher training colleges. The second labor force category, entitled secondary school level, includes those who hold, or are most likely to hold, jobs which increasingly presuppose secondary level education. Such jobs fall under the following occupational groups: trained and untrained primary school teachers, clerical, sales, secretarial and miscellaneous skilled occupations. The third and final labor force category is entitled primary school level or less. It includes persons 15 years of age and over who have never attended formal schools or whose formal education and training has not gone beyond the level of Certificate of Primary Education (CPE), or its equivalents. The jobs which they hold, or are most likely to hold, increasingly fall under the two occupational categories of unskilled and semiskilled.

Table 20 estimates that the total number of new labor force entrants grew at the rate of 4.1 percent per year--from 204,452 people in 1968/69 to 271,133 in 1975/76. On the other hand, the total number of new "modern sector" jobs created between 1968 and 1976 was 206,006, which represented a compound growth rate of 4.4 percent per annum during the period, as Table 21 shows. Comparing the two totals reveals that all new "modern sector" jobs created since 1968 covered only 76 percent of all new labor force entrants in just 1975/76. This means that after implicitly making up for the rate of attrition--in the number of people employed--due to the retirement or death of a fraction of those already employed, or due to layoffs brought about by the redundancy of specific categories of human capital or work techniques, the modern sector generated only about 76 new jobs between 1968 and 1976 for every 100 new labor force entrants in just 1975/76. In other words, even if all labor force entrants from previous years had already been employed, about 24 out of every 100 new labor force entrants in 1975/76 would still have had to seek employment or self-employment in the informal sector, or remain unemployed in 1976.

Using 1976 as the new base year, and extending the annual rates of change observed for the period 1968/69 to 1975/76 (see Tables 20 and 21) to the year 1986 (see Table 22), one notices that the number of new paid jobs created in the "modern sector" between 1976 and 1986 will cover only 55.7 percent of all new labor force entrants during that period. That is to say, about 253,000 persons joining the labor force until 1986 will still have to seek employment in the informal sector, or remain unemployed. Focusing on specific labor force strata, we find that among those with primary education or less, there will be 86.4 new jobs for every 100 new labor force entrants. On the other hand, within the highest labor force stratum--the one presuming completed higher school or university level education and training--there will be only 40.6 new jobs for every 100 new members.

As a whole, these various trends yield the generalization that the rate at which wage employment is being created in Kenya's "modern sector" is not rapid enough to promise an adequate number of "modern sector" employment opportunities for those just entering the labor force who have no adequate means of subsistence, let alone those still unemployed from previous years. If these trends do not shift, it ~~emans~~ means that an increasing number of people will remain either unemployed or in the informal sector--as subsistence farmers, self-employed professionals or artisans, and family workers--where, for the

Table 22: Projected Number of All New Labor Force Entrants and Level of "Modern Sector" Job Creation by Labor Force Strata in 1985/86, Based on Growth Rates for the Period 1968/69 to 1975/76.

1	2	3	4
Labor Force Strata by Educational or Training Level *	1975/76 Entrants; (Number of New Jobs Since 1968 in Parenthesis)	Percentage Increase Per Annum	Projected 1985/86 Entrants: (New Jobs Since 1976** in Parenthesis)
Primary School or Less	211,021 (138,669)	2.0 (4.8)	257,000 (222,000)
Secondary School	56,590 (49,377)	16.0 (3.7)	250,000 (71,000)
University of NRB Higher School	3,524 (17,960)	33.7 (3.7)	64,000 (26,000)
Totals	271,133 (206,006)		571,000 (318,000)

Source: Derived from Tables 20 and 21 above.

*The three labor force strata are defined in notes under Table 21.

**Rounded to the nearest thousand.

most part, wages are either lower or less regular. Because of this general wage differential between the formal and informal sectors, it can be concluded that as formal (i.e. modern) sector employment becomes provessively a smaller proportion of total employment, wage labor as a whole becomes even more conspicuously a "labor aristocracy" vis-a-vis the peasantry and the unemployed.

In order to determine the full extent of labor absorption and unemployment in Kenya, we must now turn our attention briefly to data which estimate overall labor force size and overall modern sector and informal sector employment. Table 23 gives us such estimates for the year 1969 and 1976, and calculates annual rates of change pertaining to the entire labor force as well as respective labor force strata. It shows, for example, that total unemployment in Kenya rose from 456,145 persons (or 8.4 percent of the total labor force) in 1969 to 1,041,005 persons (or 14.4 percent of the total labor force) in 1976--an increase of 584,860 persons. This rise in unemployment occurred despite the fact that total formal and informal sector employment increased by over 1.25 million persons during the period 1969-1976. Total "modern sector" wage employment as such increased at an annual rate of 4.3 percent. However, this increase was largely due to a 5.3 percent annual growth in unskilled and semiskilled jobs (i.e. jobs presupposing primary school or less level of education or training). Moreover, it did not much alter the fact that the informal sector, which includes all forms of nonwage labor, still accounted for the overwhelming proporation of all available employment in the Kenyan economy in 1976.

Table 23: Estimated Growth Rates in "Modern Sector" Employment, Self-Employment and Unemployment by Labor Force Stratum in Kenya, 1969 and 1976.

1	2	3	4	5	6	
Labor Force Strata by Level of Education of Training	Size of Labor Force Strata ***	Number in "Modern Sector" Employment	Number in Self-Employment	Total Employed Columns 3 + 4	Total Unemployment(-) or Surplus Employment(+) Column 2 minus Column 5	Column 6 ÷ Column 2 in Percentage
i. Year 1969:						
Primary School or Less	5,065,551	309,544	4,139,551	4,449,095	-616,456	-12.2
Secondary School	287,060	161,376*	234,584	395,960	108,900**	37.9
University or Higher School	37,082	60,328	30,303	90,631	53,549**	144.4
TOTAL	5,401,393	531,248	4,414,000	4,945,248	-456,145	-8.4
ii. Year 1976:						
Primary School or Less	6,401,334 (3.4)	445,492* (5.3)	5,160,730 (3.2)	5,606,222 (3.4)	-795,112 (3.7)	-12.4
Secondary School	731,638 (14.3)	196,901* (2.9)	292,453 (3.2)	489,354 (3.1)	-242,284 (-248.9)	-33.1
University or Higher School	112,631 (17.2)	71,244* (2.4)	37,778 (3.2)	109,022 (2.7)	-3,609 (-218.4)	- 3.2
COLUMN TOTAl	7,245,603 4.3)	713,637 (4.3)	5,490,961 (3.2)	6,204,598 (3.3)	-1,041,005 (12.5)	-14.4

*Figures adjusted to obtain totals consistent with those given in Kenya, Republic of (1972:77; and 1978:50).

**Figures suggest that the supply of jobs exceeds the "ideal or destimated demand.

***Membership in any of the three labor force strata in 1969 is determined in this table, and in the relevant discussion, not in terms of the highest formal certification attained (e.g. certificate of primary education, secondary school certificate, higher school certificate, university degree, or their equivalents) but simply in terms of the highest level of education (i.e. stand or form) reported in the 1969 census (see Kenya, Republic of, 1977:16).

Table 23: Estimated Growth Rates in "Modern Sector" Employment, Self-Employment and Unemployment by Labor Force Stratum in Kenya, 1969 and 1976.

1 Labor Force Strata by Level of Education of Training	2 Size of Labor Force Strata ***	3 Number in "Modern Sector" Employment	4 Number in Self-Employment	5 Total Employed Columns 3 + 4	6 Total Unemployment(-) or Surplus Employment(+) Column 2 minus Column 5	Column 6 ÷ Column 2 in Percentage
i. Year 1969:						
Primary School or Less	5,065,551	309,544	4,139,551	4,449,095	-616,456	-12.2
Secondary School	287,060	161,376*	234,584	395,960	108,900**	37.9
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TOTAL	5,401,393	531,248	4,414,000	4,945,248	-456,145	-8.4
ii. Year 1976:						
Primary School or Less	6,401,334 (3.4)	445,492* (5.3)	5,160,730 (3.2)	5,606,222 (3.4)	-795,112 (3.7)	-12.4
Secondary School	731,638 (14.3)	196,901* (2.9)	292,453 (3.2)	489,354 (3.1)	-242,284 (-248.9)	-33.1
University or Higher School	112,631 (17.2)	71,244* (2.4)	37,778 (3.2)	109,022 (2.7)	-3,609 (-218.4)	- 3.2
COLUMN TOTAL	7,245,603 4.3)	713,637 (4.3)	5,490,961 (3.2)	6,204,598 (3.3)	-1,041,005 (12.5)	-14.4

*Figures adjusted to obtain totals consistent with those given in Kenya, Republic of (1972:77; and 1978:50).

**Figures suggest that the supply of jobs exceeds the "ideal or destimated demand.

***Membership in any of the three labor force strata in 1969 is determined in this table, and in the relevant discussion, not in terms of the highest formal certification attained (e.g. certificate of primary education, secondary school certificate, higher school certificate, university degree, or their equivalents) but simply in terms of the highest level of education (i.e. stand or form) reported in the 1969 census (see Kenya, Republic of, 1977:16).

Sources:
1. For data in column 3, all rows, in 1969, see Kenya, Republic of (1972:77).
2. For data in column 3, all rows, in 1976, see Kenya, Republic of (1978:50).
3. The total for column 4, for year 1969, is computed from Table 15 in Burrows (1975:146). It is then assumed that the ratio of self-employed in each labor force stratum in 1969 to all self-employed in 1969 is equal to the ratio of respective rows to the total in column 2 in 1969.
4. The number of self-employed in respective labor force strata in 1976 (see column 4 above) represents an annual growth rate of 3.2 percent since 1969; this growth rate is a projection based on the 1969-1971 trend (See Burrows, 1975:146).
5. Size of labor force strata in 1969 (column 2) is computed from the census data in Table 19a in Kenya, Republic of (1977:16) and excludes all persons 14 years and younger, as well as the estimated 0.25 million persons who are 65 years or older (and who would otherwise, it is assumed, be distributed across the three labor force strata in proportion to the respective sizes of those strata vis-a-vis the relevant total). One percent of those in the labor force whose level of education is given as none or not stated (See Kenya, Republic of, 1977:16)--i.e. 36,411 persons--is assumed to have secondary school or better, and is distributed accordingly, with only 1,000 going to the "University or Higher School" stratum.

Note that:
1. Notes under Table 21 apply here.
2. Figures in parenthesis represent percent growth rates per annum for respective cells since 1969. The growth rate for the first row of column 2 is assumed to equal the annual growth rate of the national population. The growth rate for the second row in column 2 is computed from the number of all school certificate candidates in 1969 and 1976 (see Kenya, Republic of, 1977:224). The school certificate candidates and final year degree candidates in 1968/69 and 1975/76 (see Kenya, Republic of, 1977:224 and 227-8). The growth rates in columns 3, 5 and 6 are calculated from the figures shown in the table. The sizes and rates in column 4 are extrapolated as shown in source 4 above.

Extending the annual rates given in columns 2, 3 and 4 of Table 23 to the year 1986, we are able to predict the level of total employment and unemployment of respective labor force strata in that year (see Table 24). In 1986, 29.8 percent of the total labor force--or 3,656,000 people--will be unemployed in Kenya. That unemployment will be greater among secondary school graduates than primary school leavers and the uneducated labor force entrants in 1986 reflects, in part, the current fact that (a) most jobs are created in the unskilled category of jobs (see Table 19); and, (b) the latter segments of the labor force are more likely to remain in the "traditional sector" as self-employed labor--largely as subsistence farmers. It is very likely, however, that as the general level of education rises steeply--even as unemployment becomes more acute--there will be tremendous social and political pressure to recruit people into (and on job-seekers to accept) jobs for which only a few years ago, or even now, they would have been considered overqualified.

As a significant number of university and higher school graduates bump an equally significant number of secondary school graduates into lower status jobs or unemployment, and as the latter bump significant numbers of primary school leavers and those without formal education into unemployment, it is those with the least amounts of human capital investment who are likely in fact to experience the greatest level of unemployment in relative and absolute terms in 1986 and beyond. Thus, assumptions linking credentials and low-status jobs may soon have to change. "Modern sector" employment might

Table 24: Projected Levels of "Modern Sector" Employment, Self-Employment and Unemployment by Labor Force Stratum in Kenya in 1986.

1 Labor Force Strata by Level of Education of Training	2 Size of Labor Force Strata	3 Number in Modern Sector Employment	4 Number in Self-Employment	5 Total Employed Columns 3 + 4	6 Total Unemployed Columns 2 - 5	7 Percentage Unemployed Columns 6 over 2
Primary School or Less	8,943,000	747,000	7,072,000	7,818,000	1,125,000	12.6
Secondary School	2,735,000	262,000	401,000	663,000	2,122,000	76.2
University or Higher School	551,000	90,000	52,000	142,000	409,000	74.3
COLUMN TOTALS	12,279,000	1,099,000	7,525,000	8,623,000	3,656,000	29.8

Source: Projections based on compound growth rates given in Table 23. The figures are rounded to the nearest thousand.

Note that: 1. Notes under Table 21 apply here as well.

2. The three labor force strata identified in column 1 above are defined in notes under Table 21.

Table 25: Projected Level of Wage Employment by Industry in 1986.

1	2	3	4	5
Industry	Number in Wage Employment in 1976	Compound Growth Rate per Annum in Percentages Since 1968	Projected Wage Employment in 1986*	Increase Over 1976 Figures
Agriculture	161,090	1.7	191,000	29,910
Mining	2,614	3.0	4,000	1,386
Manufacturing	91,738	4.8	147,000	55,262
Construction	31,078	3.3	43,000	11,922
Electricity	6,134	7.5	13,000	6,866
Commerce	77,768	8.2	171,000	93,232
Transportation	45,446	0.03	46,000	554
Services	297,769	5.9	528,000	230,231
TOTAL	713,637**	4.4	1,143,000**	429,363**

Sources: 1. Data for column 2 are obtained from Kenya, Republic of (1978:52-60).

2. Percentages in column 3 are obtained from the last row of Table 19 above.

*Rounded to the nearest thousand.

**Column total.

ease the situation if such employment could be made to expand more rapidly. However, according to the projection, the proportion of "modern sector" wage employment to total employment will have risen from 11.5 percent in 1976 to 12.7 percent in 1986, an increase of only 1.2 percentage points. Also, assuming present trends, the size of "modern sector" wage employment will top the one million mark for the first time only in 1985. Table 26 below suggests that this mark is reached several years sooner if we base our projections on the annual growth rate for 1968-1974.

Table 25 estimates how "modern sector" employment opportunities will be distributed across eight industrial categories in 1986. Nearly half--i.e. 46.2 percent, or a jump of 4.5 percentage points since 1976--of total "modern sector" employment in Kenya will be found in just one industrial category, services (i.e. community, social and personal services.). Services will also show the greatest absolute increase over the 1976 figures, followed in descending order by commerce, manufacturing, agriculture and construction. The other three industries will not show much absolute growth in employment. In terms of the percentage share of total "modern sector" employment, agriculture will remain second to services, though it will have declined from a 22.6 percent share in 1976 to 16.7 percent in 1986. Commerce will have risen from fourth place in 1976, with a 10.9 percent share, to third in 1986, with a 15.0 percent share. Manufacturing will have dropped from third place to fourth, with its percentage share nevertheless holding at 12.9.

In addition to the foregoing forecasts, it is worthwhile to predict how the race-occupation relationship will differ in 1984, based on the trends observed for the years 1968 and 1974. Comparing the data given in Table 26 with the pattern obtained in 1974 (see Chapter V above), we find that the number of Africans in high-level jobs will have more than trebled between 1974 and 1984, if the 1968-1974 trends persist. African share of high-level jobs--i.e. top level administrators, general managers, salaried directors and professionals--in the "modern sector" will have risen from 18,823 jobs in 1974 to 84.3 percent (or 36,000 out of 42,711 jobs) in 1984. Asian and European share, on the other hand, will be 7.9 and 7.8 percent respectively in 1984.

Considering the highest job category alone--i.e. top level administrators, general managers and salaried directors--we find that there will be 21,000 Africans (or 89.4 percent of the total) in such jobs in 1984. In contrast, there will be only 1,143 (or 4.9 percent) Asians and 1,348 (or 5.7 percent) Europeans. This will be a significant change from 1974 when Africans held 55.3 percent of such jobs; with Asians and Europeans accounting for 25.4 and 19.2 percent respectively. Another significant change, incidentally, will be the fact that blue-collar jobs--miscellaneous skilled, semiskilled and unskilled--will represent a lower figure of 55.0 percent of all "modern sector" jobs in 1984, compared to 69.2 percent in 1974. About 55.6 percent of Africans in the "modern sector" will be in blue-collar jobs in 1984, compared to 5.6 and 0.6 percent of Asians and Europeans respectively. On the other end of the occupational ladder, Africans in

Table 26: Projected Distribution of Kenya's "Modern Sector" Labor Force by Race and Occupation in 1984.

Occupation and Race	Distribution at Base Year, 1974	Annual Growth Rate in Percentage	Projected Distribution in 1984
1. AFRICAN:			
Toplevel Executive and Director	5,658	13.8	21,000
Professional	4,687	12.2	15,000
Technician	9,423	5.7	16,000
Other Middle Executive	15,514	4.1	23,000
Teachers	88,984	15.7	383,000
Secretarial	8,426	23.7	71,000
Clerical	51,290	6.8	99,000
Sales	6,126	11.9	19,000
Skilled and Semi-skilled	161,954	7.2	325,000
Unskilled Labor	320,894	4.2	484,000
African Total	672,956		1,456,000
2. ASIAN:			
Toplevel Executive and Director	2,603	- 7.9	1,143
Professional	1,595	3.5	2,250
Technician	2,791	- 4.4	1,780
Other Middle Executive	3,037	- 5.7	1,689
Teachers	1,990	- 4.7	1,230
Secretarial	1,662	- 6.1	886
Clerical	2,786	-14.7	568
Sales	1,268	3.0	1,704
Skilled and Semi-skilled	2,001	-11.3	603
Unskilled Labor	215	-11.0	67
Asian Total	19,944		11,920

Table 26: (Continued)

Occupation and Race	Distribution at Base Year, 1974	Annual Growth Rate in Percentage	Projected Distribution in 1984
3. EUROPEAN:			
Toplevel Executive and Director	1,965	- 3.7	1,348
Professional	2,315	- 1.6	1,970
Technician	1,162	-21.4	105
Other Middle Executive	1,144	- 8.8	455
Teachers	1,075	- 7.3	504
Secretarial	433	-19.6	49
Clerical	165	-14.6	34
Sales	42	-19.1	5
Skilled and Semi-skilled	303	-21.7	26
Unskilled Labor	43	-29.5	1
European Total	8,647		4,497
GRAND TOTAL	701,547		1,472,417

Source: Kenya, Republic of (1974:51).

high-level jobs will represent only 2.5 percent of all Africans in the "modern sector", while their Asian and European counterparts represent 28.5 and 75.6 percent of their respective racial groups in 1984. And yet Asians and Europeans combined will represent only 1.1 percent of the total "modern sector" labor force in Kenya in 1984, as opposed to 4.1 percent in 1974.

Summary

The foregoing discussion shows that if the 1969-1976 trends continue until 1986, total unemployment will be much worse than it was in 1976, both in absolute numbers and in percentage terms even as wage and self-employment show moderate growth in size (see Table 24). The rise in employment will, according to the projections, be felt most severely by secondary school graduates. However, given the limited capacity of the Kenyan economy to generate "modern sector" employment, a rapidly increasing number of people with at least secondary school certificates is likely in the decade ending in 1986 to help inflate the minimum credentials demanded even by employers of unskilled and semiskilled labor--and lower the expectations of secondary school and other graduates--to such an extent as to render "modern sector" employment increasingly unlikely for those with primary school credentials or less. The level of unemployment for those with primary school credentials or less is therefore likely to be higher in 1986 than the projections indicate. Assumptions linking academic or training credentials to low-status jobs, such as were used in our projections, may soon have to change.

Again assuming that 1969-1976 trends persist, a good deal of rural-urban migration in Kenya during the period 1976-1986 will be ill-advised, if the goal of migration is wage-employment in the "modern sector". As we saw earlier in the chapter, the urban share of total "modern sector" wage employment declined from 57.2 percent in 1969 to 51.1 percent in 1976. At that rate, it is likely to be down to 43.6 percent in 1986; unless, of course, the urban area creeps in a significant way into some of the areas presently designated as rural. In other words, unless urban sprawl slows or reverses the loss of "modern sector" jobs to rural areas, the majority of such jobs--largely of the unskilled and semiskilled variety--will be found in rural areas during the forecast period. Those seeking such jobs probably will be the least likely to benefit form migration to urban areas.

Projections on the linkage between race and occupation, based on trends during the period 1968 to 1974, suggest that all of the ten occupational categories will be characterized in 1984 by an overwhelmingly African labor force. Even when we focus on the highest job category--top level administrators, general managers and salaried directors--the projection is that 89.4 percent of such jobs will be held by Africans in 1984. In addition, Africans will hold 78.0 percent of all professional jobs and 90.6 percent of all middle-level jobs available in Kenya's "modern sector" in 1984. The finding that blue-collar share of "modern sector" jobs will have declined from 69.2 percent in 1974 to 55.0 percent in 1984 is a further reason to surmise that unemployment among those with primary school credentials or less is likely to be greater in 1986 than the projections suggest.

Finally, much of the discussion in this chapter is based on fairly rough estimates which, as more data become available, will clearly need refining. Consequently, most of the forecasts and conclusions arrived at in this chapter are fairly tentative. Another point is worth mentioning as well. Using data from two different years to establish--as in this chapter--rates of change for the period which the years demarcate assumes that data from the two years reflect the general pattern of change in the relevant variables during the period. But this is not necessarily so. In other words, a nine-year projection based on growth rates between say, 1965 and 1975 can be very different from a ten-year projection based on growth rates between 1966 and 1974. In fact, each "base" period--for example, 1966 to 1974--can be seen as a separate assumption on the basis of which we make predictions. As the assumptions change, so do the predictions we are able to make. In Table 19, for example, the total number of skilled and semiskilled jobs is seen to have declined at a rate of 7.4 percent per year from 1968 to 1976. In Table 26, however, these same jobs are seen to have increased at a rate of 7.2 percent per year for Africans (who hold most of them) from 1968 to 1974. For all races, such jobs increased at 6.6 percent per annum between 1968 and 1974. As far as the present chapter is concerned, only the availability of data determined whether predictions made in Tables 19 and 26, to mention but two, were based on data for the years 1968 and 1976, or 1968 and 1974. In the future, as data become more available, it may be more rewarding to take the average of several years at either end of the period on which we seek to base our predictions.

CHAPTER X

ETHNICITY AND SEX INEQUALITY IN THE OCCUPATIONAL STRUCTURE

Ethnicity

Besides the debate on race, the most politically charged issue in Kenya today is the real and preceived existence of ethnic inequities in the allocation of scarce resources: employment, land, loans, trading licenses, schools, health care, housing, etc. The present chapter attempts to shed some light on this issue by focusing on how ethnicity--i.e. ethnic distinctiveness--has affected the occupational structure of Kenya's "modern sector" in the period since independence. In addition, the chapter briefly discusses the changing fortunes of women in the occupational structure. Admittedly, a focus on ethnicity and sex inequality in the occupational structure represents a diversion from the main relationships examined in this study, but it is a diversion which expands on those relationships. Ethnicity becomes a problem not simply because ethnically distinct groups must share the same scarce resources, but because (and when) this distinctiveness is exploited for unequal gain.

The problem for the researcher in Kenya is that much of the necessary data on resource allocation by ethnic group have not been made available, because the authorities concerned consider them to be either too politically sensitive or simply irrelevant. However, after 1978, there has been some movement toward rectifying the situation. Thus, 1979 marked the first time in Kenya's history that the names of all those accepted as first-year students at both the University of Nairobi and Kenyatta University ~~College~~--both state institutions--were published in the newspapers. This permitted a fairly detailed public monitoring of university enrollment on the basis of such criteria as region, ethnic group, sex and even religion. In the same year some housing allocations in Nairobi were announced in a similar manner. But only time will tell how firm or extensive these and related changes were meant to be. Besides, the opportunity to monitor is no substitue for equity.

It is proper to ask: what is an ethnic group? The answer can be found in Skinner's (1975:131) characterization of ethnic groups as:

> ...sociocultural entities which, while inhabiting the same state, country, or economic area, consider themselves biologically, culturally, linguistically, or socially distinct from each other and most often view their relations in actual or potential antagonistic terms.

Relating this definition to African situations, we find that in many cases of interethnic social interaction, in which a lingua franca is spoken, the indicators of a person's ethnic identity observable on first encounter by members of the in-group, and probably out-groups as well, may well be that person's: (a) share of ideal-typical, often subtle, physical traits attributed to a particular ethnic group; and, (b) accent, which usually betrays the person's "mother tongue" to the keen ear. Where the individual's physical traits are too diffuse to pigeonhole, as happens often enough (see, for example, Parsons, 1975: 57), his/her surname will often suggest the answer. And if that is not enough, the person's "home area"--when known--may be a solution. This is because ethnic groups in Kenya, and elsewhere in Africa, tend to be associated with particular rural areas.

Where there is no lingua franca, or one exists but is not widely spoken--and where, consequently, there is relatively more _intra_ than _inter_ ethnic communication--language (i.e. the "mother tongue") becomes the single most important indicator of a person's ethnic group. In fact, we can make the almost tautological generalization that in such situations--in Kenya or other parts of Africa--a person's "mother tongue" is a sufficient indicator of his or her ethnic group. This will remain true as long as individuals have a "mother tongue" and each "mother tongue" is associated historically with a distinctive ethnic group. Still, note must be taken of Kasfir's (1976:34-5) two rejoinders--however infrequent the cases may be: (a) that an accepted ethnic group in Africa may at times be composed of members who speak "mutually unintelligible" languages; and, (b) that in some instances in Africa, "the ethnic aggregate is identified before or during the process of establishing a standard language for the group." It is clear from the foregoing discussion that whatever criterion or criteria one uses to determine a person's ethnic group, one must have at least some knowledge of the basic characteristics of likely ethnic groups in the country concerned. But in gaining such knowledge one runs the risk of stereotyping individuals.

According to Mazrui (1975:215), post-colonial African states have tended to adopt an ethnocratic system of government--that is to say, a system "based on either ethnic exclusivity, or ethnic division of labor, or quantified ethnic balance." Mazrui, of course, overdramatizes the role of ethnicity in African governments. Government decisions are not based exclusively on ethnic considerations, as Mazrui implies. But ethnicity plays a significant role, and to the extent that it does, particularly in job-allocation, Mazrui identifies three of the four basic typologies of ethnic clustering one finds in African countries. One might add, however, that ethnic division of labor is a form of ethnic exclusivity. But Mazrui's own conception of ethnic exclusivity is interpreted here to refer to a state the citizens of which belong to the one and only ethnic group in existence--an uncommon case in Africa. The fourth typology refers to a labor market or overall state bureaucracy characterized by the structural dominance of one ethnic group over others.

As far as Kenya is concerned, the colonial and post-colonial evidence reveals merely the attempt to realize--not the existence of--"a quantified ethnic balance". The result has in most instances fallen short of the ideal. In the post-colonial era there is evidence both of Kikuyu dominance--not monopoly--in many areas, and of political alliances (sweetened with a privileged sharing of scarce resources) between Kikuyu leaders and an occasionally changing array of leaders of other ethnic groups. But with the passing away of President Kenyatta, there is widespread perception in Kenya at the moment that a movement toward greater ethnic equity has at last begun. In other words, toward a greater emphasis on merit. Table 30 suggests, however, that the perception might have grasped what statistical trends do not yet reveal.

eh?

Take care Yambo Bah! to that Don't be a chicken

Before we discuss some of this evidence, it is useful to examine the respective sizes of Kenya's ethnic groups. Table 27 gives

Table 27: Distribution of the Kenyan African Population by Ethnic Group in Census Year 1969

Ethnic Group	Number	Percentage
Kikuyu	2,201,632	20.62
Luo	1,521,595	14.25
Luhya	1,453,302	13.61
Kamba	1,197,712	11.22
Kalenjin:	1,190,203	11.15
i. Kipsigis	471,459	4.42
ii. Nandi	261,969	2.45
iii. Tugen	130,249	1.22
iv. Elgeyo	110,908	1.04
v. Pokot	93,437	0.88
vi. Marakwet	79,713	0.75
vii. Sabaot	42,468	0.40
Kisii	701,679	6.57
Meru	554,256	5.19
Mijikenda	520,520	4.88
Somali	253,040	2.37
Turkana	203,177	1.90
Masai	154,906	1.45
Embu	117,969	1.10
Taita	108,494	1.02
All Other Groups	498,594	4.67
TOTAL*	10,677,079	100.00

*Excludes the individual distributions of subgroups i-vii as these comprise the subtotal for Kalenjin as a whole.

Source: Kenya, Republic of (1978:14)

Bullshit stuff.

figures from the 1969 census, the latest available. Relevant figures from the 1979 census will probably not be published before the last quarter of 1980. We notice that the largest ethnic group, the Kikuyu, is ~~just under~~ 21 percent of the total Kenyan African population. The second largest group, the Luo, is a little over 14 percent of the total. The Kalenjin group is comprised of seven subgroups and represents just over 11 percent of the total Kenyan African population, making it the fifth group with over 10 percent of the total Kenyan African population. It is thus false to talk of minority ethnic groups as though any one or two, or even three, groups amount to more than half of the Kenyan African population. At best, the Kikuyu are a plurality, not a majority. ! I never knew now you do.

WE KNOW THAT JAMBO IS A LUO, AND HAS A GRUDGE AGAINST KUKIS

silly

Kikuyu's should not rule Kenya again

Compare & contrast

You have shown individual bias here

This is VERY CRUDE TO SAY THE LEAST.

The linkage between ethnicity and occupational distribution in colonial Kenya was a reflection both of deliberate (including coercive) action by colonial administrators and settlers and the differential inclinations of Kenya's ethnic groups to seek wage employment outside their "home areas," especially in the earlier days of colonialism. For example, colonial authorities in Kenya (see Bienen, 1974:141) and other parts of Africa (see, for example, Mazrui, 1975:36-9) had a tendency to recruit members of the colonial armed force, as well as the police force, from a restricted number of ethnic groups. For one reason or another, these groups then tended to be underrepresented in those jobs in the colonial bureaucracy which were open to Africans.

In colonial Kenya, recruits to the armed forces and the police tended to come from the Akamba and the Kalenjin. Recruits to the colonial civil service, on the other hand, tended to come from among the Kikuyu, Luo and Luhya--but the Kamba had a significant presence here as well. Among Africans in wage employment in general, the Kikuyu, the Luo and the Luhya were probably the most widely distributed in the country. Members of the other ethnic groups tended to remain closer to their "home areas." It is also significant that members of the Kikuyu group were more predisposed than persons belonging to other ethnic groups to engage in small-time entrepreneurship in Kenya. This was partly due to the fact that the alienation of huge portions of their "home area" to European settlement had left insufficient room for trannsgenerational population expansion and for long-term subsistence agriculture. Luo and Luhya entrepreneurs (affected less by European settlement in their "home areas") preferred to cross the border into Uganda.

This Kikuyu involvement in entrepreneurial activity was to prove a boon for those concerned: (a) during the Mau Mau emergency, when there was large-scale, but far from total, dismissal of members of the Kikuyu, Embu and Meru groups working in settler farms in the White Highlands, the civil service and other areas of wage employment; and, (b) after independence, as we shall see momentarily. Bienen (1974:31) points out, for instance, that the proportion of Kikuyu, Embu and Meru in the total labor force (presumably employed labor force) in Nairobi declined from 47 percent to 22 percent between 1953 and 1956--the period of the Mau Mau emergency. Meanwhile the combined proportion of Luo, Luhya and Kisii increased from 27 percent to 38 percent, and that of Kamba from 18 to 28 percent. After the emergency, the proportion of Kikuyu, Embu and Meru began to rise again. By 1962, 44 percent of all employed African males in Nairobi were Kikuyu, Embu and Meru. In contrast, the proportion of Luo, Luhya and Kisii males in Nairobi was 33 percent; and that of Kamba, 17 percent. What has not been quantified is the kinds of jobs the returning Kikuyu, Embu and Meru now held.

WAS THE TYPES OF [illegible] LUO [illegible] & LUHYA [illegible] (QUAN)TIFIED

Whatever such figures may tell us, there was a strong perception--among Luhya, Kamba, Kalenjin and other self-described and so-called minority ethnic groups (Bienen, 1974:133, for example, uses this term)--during the 1950s and well into the post-colonial period that the Kikuyu and Luo were over-represented in those areas of the Kenyan economy in which the colonial regime had allowed Africans to participate. During the period just before Kenya became independent, there was in fact considerable fear that, unless checked, the two ethnic groups were poised to disappear with the spoils of uhuru. The perception was so strong that many leaders of the smaller ethnic groups formed a political party, Kenya African Democratic Union (KADU), in 1960 to attempt, it turned out unsuccessfully, to prevent KANU (Kenya African National Union)--which was dominated by Luo and Kikuyu leaders, and whose leadership Jomo Kenyatta was to assume upon his release from detention in August 1961--from becoming the ruling party at the time of Kenya's independence.

Within a year after independence in 1963, there was a grand reconciliation between the two parties. KADU was dissolved and, for a while, there was only KANU. But the process of "Kikuyunization" had begun in the civil service and officer ranks of the armed forces, and the dissolution of KADU did not discourage it. Bienen's (1974: 133-7) observation of this process is worth quoting at some length, because the pattern it reveals helps us to compare perception with reality:

> It was not surprising that Kikuyu became the focus of discontent in Kenya because of Kikuyu domination of critical Cabinet posts and the top of the Government itself. The inner core of the Cabinet has been Kikuyu but the extent of Kikuyu domination of the country may have been exaggerated.
>
> An early study of the Kenyan elite...based on a Who's Who of income, position, elected or appointed office, shows a disproportionate number of Kikuyu, especially in the Civil Service. But it also shows a disproportionately large number of Luhya and minority tribal (sic) representation too.
>
> While Kikuyu appointments were frequently made to the Civil Service, there is no evidence that Kikuyus have been vastly overrepresented in it if their educational advantages are taken into account.
>
> It is difficult to know if Kikuyu dominance of the Civil Service has grown. Certainly non-Kikuyu think it has and Government has made its Staff List a restricted document so that MPs can no longer note on the floor of the National Assembly the large number of Kikuyu names in the ranks of the Civil Service. The Kenyatta Government has been committed to the game of tribal representation both in the higher Civil Service and in the Cabinet...Every tribe (sic) with better than 2 percent of the population has had a Minister or Junior Minister.

Tables 28 and 29 give the ethnic and racial distribution of leading officials in Kenya's central government in the years 1969 and 1972 respectively (see Nellis, 1974:13-5). They show that Kikuyu representation among such officials actually increased--from 30.3 percent of the total to 41.4 percent--during the period. But the relative representation of a number of ethnic groups also increased, if not as dramatically or from as large a base. Among the groups enjoying

Table 28: Distribution of Leading Central Government Officials in Kenya by Ethnic Group or Region and Race, 1969

Ethnic Group	President and Cabinet	Assistant Ministers	Permanent Secretaries (i.e. PS)	Deputy PS & Under Secretaries	Provincial Commissioners (i.e. PC)	Deputy PC and District Commissioners	Other Posts	Total	N
Kikuyu	33.3	15.6	36.8	35.7	57.1	27.6	33.3	30.3	53
Kalenjin	4.8	12.5	10.5	0.0	28.6	14.9	4.8	9.7	17
Luhya	9.5	15.6	5.3	17.8	0.0	12.8	9.5	12.0	21
Luo	9.5	9.4	26.3	3.6	0.0	14.9	4.8	10.8	19
Kamba	9.5	9.4	21.0	10.7	0.0	12.8	28.6	13.7	24
Coast*	4.8	9.4	0.0	0.0	0.0	0.0	0.0	2.3	4
Taita	4.8	0.0	0.0	0.0	0.0	2.1	0.0	1.1	2
Kisii	9.5	3.1	0.0	3.6	14.3	2.1	0.0	3.4	6
Embu/Meru	9.5	0.0	0.0	7.1	0.0	0.0	0.0	2.3	4
Somali	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.5	1
Masai	0.0	9.4	0.0	0.0	0.0	2.1	0.0	2.3	4
Unknown or Not Stated	0.0	12.5	0.0	14.3	0.0	10.6	4.8	8.0	14
Non-African	4.8	0.0	0.0	7.1	0.0	0.0	14.2	3.4	6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
N	21	32	19	28	7	47	21		175

*Coastal groups included here are: Mijikenda, Pokomo/Riverine, Swahili/Shirazi, Bajun and Boni/Sanye (see Nellis, 1974:10).

Source: Nellis (1974:12-5)

Table 29: Distribution of Leading Central Government Officials in Kenya by Ethnic Group or Region and Race, 1972

Ethnic Group	President and Cabinet	Assistant Ministers	Permanent Secretaries (i.e. PS)	Deputy PS & Under Secretaries	Provincial Commissioners (i.e. PC)	Deputy PC and District Commissioners	Other Posts	Total	N
Kikuyu	33.3	17.1	45.0	75.0	50.0	34.1	50.0	41.4	72
Kalenjin	9.5	20.0	10.0	3.1	25.0	4.5	7.1	9.8	17
Luhya	9.5	22.9	10.0	0.0	0.0	11.4	7.1	10.3	18
Luo	9.5	8.6	20.0	0.0	0.0	13.4	0.0	8.6	15
Kamba	9.5	2.9	0.0	3.1	0.0	4.6	14.3	4.6	8
Coast*	4.8	5.7	0.0	3.1	0.0	4.6	0.0	3.4	6
Taita	4.8	0.0	5.0	0.0	0.0	6.8	0.0	2.9	5
Kisii	9.5	2.9	5.0	0.0	12.5	2.3	0.0	3.4	6
Embu/Meru	9.5	8.6	0.0	0.0	0.0	0.0	0.0	2.9	5
Somali	0.0	5.7	5.0	0.0	0.0	0.0	0.0	1.7	3
Masai	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.6	1
Unknown or Not Stated	0.0	2.9	0.0	15.6	12.5	18.2	21.4	10.3	18
Non-African	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
N	21	35	20	32	8	44	14		174

*For a definition of "coast," see Table 28 above.

Source: Nellis (1974:12-5)

increased representation were: Kalenjin (very slightly), coastal people in general, Taita, Embu/Meru, and Somali. The Kamba experienced the greatest relative decline, followed by Luo, Taita, Masai and Luhya. Comparing the percentage representation of Kikuyu in these central government positions in 1972 with their percentage proportion of the total Kenyan African population in 1969 (see Table 27 above), we find that the former is approximately twice as great as the latter.

But the higher civil service positions are not the only locus of ethnic inequality in Kenya's occupational structure. Perhaps a greater source of ethnic inequality was the preferential appointment of Kikuyu officials to top positions in many parastatal organizations during Kenyatta's fifteen-year administration. Among the parastatals headed by members of the Kikuyu group during most of this period were: the Industrial and Commercial Development Corporation (ICDC), the Kenya Commercial Bank, the Central Bank, the Kenya Ports Authority, the East African Power and Lighting Company and the Kenya National Trading Corporation (KNTC). Some of these parastatals, particularly ICDC and KNTC, played a pivotal role in the development of the "entrepreneurial class" in Kenya. This role was nurtured by their power to award loans and licenses needed by potential or on-going entrepreneurs to start or expand their businesses. Marris and Somerset (1971:71) point out that of the total ICDC loans awarded until April 1966, members of the Kikuyu group received 64 percent of the loans for industrial enterprises and 44 percent of the loans for commercial ventures. The respective percentages for Luo were 12 and 11 percent; for Luhya, 8 and

9 percent; for Kamba, 4 and 13 percent; for Kalenjin, zero and 3 percent; for Kisii and Somali, 2 and 6 percent.

The economic and social institutions that Kenyatta "built" have remained largely in place. Moi's succession in late 1978 was never meant to augur a revolution. It was intended to preserve the political and economic status quo. And yet within this framework, some movement away from the perceived excesses of the Kenyatta era was expected to take place. The question is: is such movement already observable? The answer is yes, with the important rejoinder that it is too early to see firm trends in a quantitative sense. In his appointment of Kenyans to top positions in the civil service and parastatals, President Moi has been widely perceived by Kenya's opinion-makers to go out of his way to find capable and talented personnel from ethnic groups which were previously underrepresented, believing that talent and merit are not the preserve of any one ethnic group. The President himself belongs to a small branch of the Kalenjin group, which encourages that perception.

However, when one focuses on the ethnic background of cabinet members, assistant ministers and permanent secretaries in 1969, 1972 and 1979 (see Table 30), one notices that the proportion of Kikuyu in those posts has steadily risen, from 26.4 percent in 1969 to 28.9 percent in 1972 to 31.7 percent in 1979--one year after Moi succeeded Kenyatta. Meanwhile, the proportion of Kalenjin in such posts has declined from 14.5 percent in 1972 to 13.9 percent in 1979. Likewise, the number of Luo and Luhya in these posts declined from 11.8 and 15.8 percent respectively in 1972 to 6.9 and 9.9 percent respectively in

Table 30: Distribution of Top Government Officials* by Ethnic Group or Region and Race in 1969, 1972 and 1979

Ethnic Group	Year		
	1969	1972	1979
Kikuyu	19(26.39)	22(28.95)	32(31.68)
Kalenjin	7(9.72)	11(14.47)	14(13.86)
Luhya	8(11.11)	12(15.79)	10(9.90)
Luo	10(13.89)	9(11.84)	7(6.93)
Kamba	9(12.50)	3(3.95)	6(5.94)
Coastal group**	4(5.56)	3(3.95)	7(6.93)
Taita	1(1.39)	2(2.63)	2(1.98)
Kisii	3(4.17)	4(5.26)	2(1.98)
Embu/Meru	2(2.78)	5(6.58)	3(2.97)
Somali	1(1.39)	3(3.95)	4(3.96)
Masai	3(4.17)	1(1.32)	4(3.96)
Unknown or Uncertain	4(5.56)	1(1.32)	9(8.91)
Non-African	1(1.39)	0(0.00)	1(0.99)
Total	72(100.00)	76(100.00)	101(100.00)

*Top Government Officials refer here to the President cabinet ministers, assistant ministers and Permanent Secretaries.

**For a definition of this group, see Table 28 above.

Source: 1. Data for 1969 and 1972 derived from Nellis (1974:12-3)

2. Data for 1979 derived from Kenya, Republic of (1979:1-13)

Note: Figures in parenthesis are percentage distributions. Percentages may not add up to 100.00 due to rounding.

1979. In fact, the only other ethnic groups which have experienced a relative increase as a result of Moi's appointments are the Kamba and coastal Kenyans. What these figures conceal, however, is the politically significant fact that, in addition to the Presidency, the "key" ministers--defense, commerce, agriculture, foreign affairs, economic planning and attorney general--are now less concentrated in any one region or ethnic group than they used to be in the heydey of Kenyatta's presidency.

To sum up, the evidence suggests that important ethnic cleavages do exist in Kenya's occupational structure. Because of the limited nature of the data, however, it is difficult to draw a detailed profile of Kenya's occupational structure in terms of the ethnic variable. It might be argued that studying ethnic cleavages only publicizes and aggravates distinctions which are best swept under the rug. But the point is that while it does not invariably overwhelm people's daily lives, ethnic inequality is very often a matter of public discussion, and ethnic discrimination a source of political tension. People are concerned about how scarce resources, including employment, are allocated. In terms of interethnic competition, there are two main, and highly correlated, criteria for determining the overall fairness of resource allocation: (a) allocation by province or district; and, (b) allocation by ethnic group. Concern for broad ethnic equality is just as strong as, often stronger than, concern for racial justice. Public officials (and scholars) who argue that popular perceptions of ethnic inequality--perceptions usually inflamed by the decisions of those very officials, and the pronouncements of politicians in general--

are either irrelevant or illusory only ensure that such perceptions will not go away. Why they refuse to go away, and how they can be more effectively addressed, then of course become a proper subject of study. If the intent is to eliminate ethnic discrimination and consequent tensions, as fact and as subject of study, then one must allocate national resources accordingly. For a student of the emergent Kenyan society, the first step in that direction is to study past and current ethnic imbalances, particularly to the extent that these result from government decisions.

Sex Inequality

There continues to be considerable public indifference to the low level of women's participation in Kenya's labor markets. Both the indifference and the low level of involvement are partly due to the cultural norms and values of most ethnic groups in Kenya. According to these norms and values, a woman's place is still in the home, and the family farm. The fact that women in "traditional" settings did most of the essential work in the community has not been considered worthy of full replication in the "modern sector". Instead, while the women persevere the drudgery of housework and subsistence farming, the men migrate--and are expected to migrate--in large numbers to "hunt" for and hold paid jobs in urban and other labor markets. It is the old Veblenian syndrome updated (see Veblen, 1924). But the distinctions are not that clearcut. Some women already work in the modern sector (see Table 31). And a lot of men--in fact, a great majority of them--continue to be involved in subsistence farming in the rural areas. Besides, the drudgery of the "modern" workplace is well-documented (see, for example, Blauner, 1964; Zweig, 1961; Rosow, 1974); it is not all fun and pay.

Table 31: Distribution of Wage Employment by Occupation and Sex in Kenya's "Modern Sector" in 1968, 1974 and 1977

Occupation	1968			1974			1977		
	Male	Female	Female as % of Total	Male	Female	Female as % of Total	Male	Female	Female as % of Total
Unskilled	224,983 (49.3)	26,861 (52.1)	10.7	282,903 (46.3)	38,249 (42.0)	11.9	367,793 (59.4)	57,339 (48.9)	13.5
Skilled and Semiskilled	107,275 (23.5)	3,950 (7.7)	3.6	155,540 (25.5)	8,718 (9.6)	5.3	61,508 (9.9)	2,221 (1.9)	3.5
Sales	4,426 (1.0)	509 (1.0)	10.3	6,595 (1.1)	841 (0.9)	11.3	6,393 (1.0)	755 (0.6)	10.6
Clerical	39,492 (8.7)	2,738 (5.3)	6.5	49,202 (8.1)	5,039 (5.5)	9.3	56,241 (9.1)	6,552 (5.6)	10.4
Secretarial	1,815 (0.4)	4,753 (9.2)	72.4	1,226 (0.2)	9,295 (10.2)	88.3	1,195 (0.2)	10,517 (9.0)	89.8
Teaching	33,071 (7.3)	8,378 (16.3)	20.2	69,551 (11.4)	22,498 (24.7)	24.4	69,456 (11.2)	35,884 (30.6)	34.1
Technicians, works managers, foremen, etc.	16,713 (3.7)	1,786 (3.5)	9.7	17,583 (2.9)	2,112 (2.3)	10.7	20,895 (3.4)	784 (0.7)	3.6
Middle Executive	14,311 (3.1)	1,023 (2.0)	6.7	12,416 (2.0)	960 (1.1)	7.2	16,679 (2.7)	1,450 (1.2)	8.0
Professionals	5,259 (1.2)	948 (1.8)	15.3	7,555 (1.2)	1,042 (1.1)	12.1	7,490 (1.2)	1,353 (1.2)	15.3
Top Management	8,763 (1.9)	577 (1.1)	6.2	7,829 (1.3)	2,397 (2.6)	23.4	11,298 (1.8)	483 (0.4)	4.1
TOTAL	456,108 (100.0)*	51,523 (100.0)	10.1	610,400 (100.0)	91,151 (100.0)	13.0	618,938 (100.0)*	117,338 (100.0)*	19.0

*Percentage totals do not add up due to rounding
Source: Kenya, Republic of (1972:77; 1976:51; 1978:268).
Note: Figures in parenthesis are percentage cell distributions.

117 336
736,876

Two additional reasons can be offered for the underrepresentation of women in Kenya's occupational structure. First, beginning with the construction of the "Uganda Railway" at the turn of the century, and continuing into the postcolonial period, employers in Kenya's "modern sector" have greatly preferred to recruit male rather than female workers. The colonial origin of this discrimination against women is consistent with the practice then prevalent in Europe--which provided the inspiration, if not most of the employers, for Kenya's budding labor markets--and shows that African customs are not entirely to blame for the said sex discrimination (see, for example, Boserup, 1970:53-64). Second, the more limited human capital investment opportunities for women vis-a-vis men in Kenya has made it that much more difficult, particularly in the higher echelons of the occupational structure, for the former to match the numbers of the latter. Male-female variations in human capital investment are themselves largely a function of discrimination.

Table 31 shows that while still low, the proportion of women to total wage employment had risen from 10.1 percent in 1968 to 19.0 percent in 1977. In other words, their number grew at a compound rate of 9.6 percent per year. At this rate, the number of women in the "modern sector" will not equal that of men until the year A.D. 2007, at the earliest, or 27 years from now. Looking at respective columns for men and women, we notice that while men are concentrated in unskilled, semiskilled, skilled, clerical and teaching jobs, women tend to be concentrated in unskilled, teaching and secretarial jobs. In fact, the secretarial occupation has increasingly become a woman's preserve. And women now hold over a third of the teaching jobs available in Kenya. Still focusing on respective columns, we observe that the percentage proportions of women in professional jobs--relative to all employed women--were nearly equal to those of men in each of the three years examined. Women's representation in other occupations--particularly in unskilled, and miscellaneous semiskilled and skilled occupations--reveals greater fluctuations or differences. The precipitous decline, between 1974 and 1977, in the number of women in top management remains a puzzle, but might be due to poor reporting. Most of these top women are listed as salaried directors in 1974, with 2,208 of them appearing in just one industry, services (see Kenya, Republic of, 1976:55).

Using these trends to make generalizations about the changing status of the Kenyan woman in the occupational structure is encumbered by the fact that the data do not distinguish women by citizenship. It is quite possible that significant numbers of women in secretarial, executive and professional jobs remain non-citizen. But it is also probable that these numbers have been declining in time, particularly in the public sector. One tentative generalization we can make is that it will be at least another generation before the employment opportunities of women equal those of men in Kenya's "modern sector" as a whole. Another is that, as attitudes change and more women graduate from institutions of higher learning, women's representation in the higher rungs of the bureaucratic ladder will become increasingly significant.

CHAPTER XI

SUMMARY AND CONCLUSION

This concluding chapter brings together under one heading, summaries of findings scattered throughout the earlier chapters. The purpose of this reiteration is to emphasize the fact that the findings are indeed interconnected, and to make it easier for the reader to find them. The chapter also relates the findings to public policy questions, mainly on employment in general and on the Africanization of high and middle-level occupations in Kenya. In addition, it relates the findings to general sociology.

Historical evidence shows that during the colonial era racial differentiation had a strong impact on the occupational stratification of Kenya's labor force. For virtually all of the colonial period, Kenyan Africans were confined to the lowest ranks of the occupational hierarchy. Teaching and clerical jobs were the highest they could hold. Europeans controlled not only the colonial administration but also the "commanding heights" of the economy. This fact enabled them to reserve to themselves most of the high level and a good proportion of the middle level jobs in the country. Asians on their part were concentrated in middle level jobs.

This racial pattern of labor force distribution did not come to an end in 1963, when Kenya became independent. However, it had began to change, with little fanfare, in the latter half of the 1950s, as it became increasingly apparent that Kenya was headed for political independence under African leadership. By 1968, five years after independence, Africans held just under a third of the high-level jobs which only a few years previously had been almost entirely out of their reach. Out of a total of 15,547 high-level jobs--i.e. top level administrators and general managers, salaried directors and professionals--4,953 (or 31.9 percent) were held by Africans in 1968. In 1974, African share of high-level jobs was up substantially, to 55.0 percent of the total--or 10,345 out of 18,823 jobs. A good deal of this increase was due to the government's policy of rapid Africanization.

However, Africans in high-level jobs represented only 1.2 percent of all Africans employed in the "modern sector" in 1968, and only 1.9 percent in 1974. In contrast, 35.6 percent of all Europeans and 19.0 percent of all Asians in Kenya's "modern sector" held high-level jobs in 1968, and 56.5 percent and 23.4 percent respectively in 1974. Nevertheless, Europeans and Asians combined represented only 9.3 percent of the total "modern sector" labor force in 1968, and only 4.2 percent in 1974--during which period Kenya's "modern sector" labor force as a whole was growing at a rate of about 4.4 percent per year.

Generally speaking, Kenya's "modern sector" labor force continues to be overwhelmingly African, and overwhelmingly in blue-collar jobs. However, while Europeans and Asians continue to be heavily concentrated in white-collar jobs, Europeans no longer monopolize high-level jobs as they did in colonial days. In fact, Africans are already in an outright majority in high-level jobs, and their ratio apparently grows. But this growing numerical strength of Africans in high-level jobs is not by itself sufficient proof that Africans now control all the "commanding heights" of the Kenyan economy. As was argued earlier, effective control presupposes ownership; and many enterprises in Kenya are still owned by non-Kenyans or non-Africans. Moreover, it is fairly easy for foreign-owned firms to recruit Africans to high-level occupations while denying them the power seriously to alter the character or goals of such firms. Still, there has been a slowly growing public sector involvement in the commanding heights of the Kenyan economy since independence, and this has tended to strengthen the hand of top civil servants vis-a-vis their private sector counterparts--whether African or non-African--not to say the rest of the Kenyan society. Despite, or perhaps besides, the usual scenario of foreign or local private enterprise influencing or manipulating the government for its own gain--and despite the loyalty of African executives to their private sector employers--it is possible under specific circumstances to consider private enterprise as just another institution whose actions are broadly circumscribed by the decisions of self-serving or even nationalistic top civil servants acting in the name of the state (for another view, see, Kraus et al., 1979:136-7).

If we define the Kenyan elite as those who hold high-level jobs in either private or public sector, we find that the pattern of occupational distribution and redistribution in the post-colonial era had, by 1974, established Africans as the numerically dominant group within the elite stratum. This stratum was, and is, segmented not only by race, but also by ethnic group, income, nationality, sex and type of economic activity (i.e. profession, job title or industry). By the same token, if we define the sub-elite stratum as the rest of the white-collar workers, and the non-elite as all blue-collar workers, we can infer from Tables 3 and 4 that Africans were still the dominant racial group in the non-elite social stratum during the period 1968 to 1974. However, there was also to be found in this stratum a small number of Europeans and Asians.

Looking at the labor force profile in terms of industrial distributions in 1968 and 1974, we find that over 50 percent of all Africans were to be found in just two industrial groups: agriculture and services. Similarly, over 50 percent of all Asians were concentrated in commerce and manufacturing; and more than half of all Europeans were to be found in commerce and services. In 1976, services alone accounted for 41.7 percent of all modern sector employment (services and agriculture accounted for 64.3 percent). Focusing on high-level jobs, we find that 68.7 percent of all Africans holding such jobs in 1968 were to be found in just one industrial group, services. In 1974, this percentage was slightly up to 69.1. There are no concentrations of this magnitude among Asians or Europeans, which means that members of the latter groups holding high-level jobs were rather more evenly spread across the eight industrial groups. Nevertheless, a plurality of Asians holding high-level jobs in both 1968 and 1974 was to be found in commerce. And the distribution of Europeans in high-level jobs showed a plurality in services in 1968, and commerce in 1974. (Data on occupational and industrial distribution by race have not been published for the period after 1974.)

The growing status of "services" as the main provider of modern sector employment suggests of course that even as "preindustrial" susbistence activity remains the pervasive feature of the Kenyan economy, the country's modern sector has rapidly acquired a "postindustrial" character, *without first going through an industrial revolution*--i.e. an intermediate period, historically typified by factory work, during which "manufacturing" is the predominant employer. Indeed, if the chief feature of "postindustrial" labor markets around the world is the preeminence of the "service industries," then Kenya's "modern sector" is *even more definitely postindustrial than employment in* "services" alone indicates. In other words, if we combine the two industrial categories of "services" and "commerce" into one, the "service industries," we notice that in 1976 this combined category accounted for 52.6 percent of all modern sector employment. "Agriculture" accounted for only 22.6 percent, and "manufacturing" for 12.9 percent.

Given the prevailing and emerging international patterns of physical and financial capital investment, the industrial revolution is one revolution that most developing countries need not look forward to, or fear--one revolution they are likely to experience, or have experienced, only vicariously. In other words, it is possible that the industrial revolution as a direct experience has been permanently bypassed by most developing countries--or has simply remained unattainable. If this assessment is correct, then the underlying reason for it must be only partly the fact of economic dependency: the increasingly "postindustrial" institutions of the West, rapidly "losing" the appropriate technology, are not likely to export much of an industrial revolution to most of the countries which may rely on them for "industrialization." In other words, besides the dependency constraint, there is a technological one. Dramatic technological innovations of the second half of the twentieth century have so radically altered optimal ways of mass producing, distributing and consuming goods and services--and likewise altered the kinds, quality and quantity of those goods and services--that they have preempted or made redundant a possible late-twentieth century industrial revolution in most developing countries, even the least economically dependent ones.

Furthermore, there are too many people involved in subsistence activity and too many countries in the world today--in contrast to 19th and early 20th century Europe and North America--to allow more than a handful of underdeveloped countries, under the best circumstances, to achieve the levels of "industrialization" and "industrial employment" necessary for an industrial revolution in the classical sense. For the few developing countries which may yet have an industrial revolution, the leap to the "postindustrial" stage--if already, partially realized--may in reality be a detour, if simultaneously a premonition, imposed upon them by the unprecedented and paradoxical circumstances of the late twentieth century. Whether or not Kenya will be one of these few in the long-run, only time will tell. In the short-run, however, this appears unlikely.

The labor force profile just drawn is also discerned when we use ECTA for a log-linear analysis of the interaction of race, occupation and industry during the period 1968 to 1974. We notice, for instance, that in addition to being in unskilled and miscellaneous skilled and semiskilled jobs, Africans were likely to be found in high-level occupations--as professionals or toplevel executives and adminstrators--in a number of industries, particularly services, commerce, construction, electricity and agriculture. Africans also enjoyed a greater than average likelihood of being in middle level occupations in services, transportation and electricity. Asians holding blue-collar jobs were most likely to be found in construction, commerce, manufacturing, transportation and services. As toplevel personnel and professionals, they were most likely to be found in services, construction, electricity, manufacturing and mining. On the other hand, when Europeans held blue-collar jobs, they were most likely to be found in agriculture, commerce, transportation and services. As professionals or toplevel personnel, Europeans were likely to be found in all industries except services. This exception was probably due to cell-distortions resulting from fitting ECTA models to be observed contingency data.

Other dimensions of the labor force profile are revealed in Chapters VI to VIII, where the five hypotheses are tested. For example, in testing hypothesis 1 (stated on page 43 above), we find that while the likelihood of finding Africans in high-level and semiskilled rather than skilled and unskilled occupations varies from one industrial category to another, this variation is neither positively nor negatively related to the level of capital intensity in respective industries. For Asians, there is a mildly negative correlation between the two variables. This means that as the level of capital intensity rises across broad industrial categories, so does the likelihood of finding Asians in skilled and unskilled rather than high-level and semiskilled jobs. For Europeans, there is a mildly strong positive correlation between the same two variables. This suggests that as the degree of capital intensity rises across industrial categories, Europeans are increasingly likely to be found in high-level and semiskilled rather than skilled and unskilled occupations. On the basis of these results, it is concluded that hypothesis 1 is only partially supported by the data.

The level of capital intensity is also positively correlated with the recruitment advantage of Europeans over their African or Asian counterparts in high-level occupations. In either case, the correlation is mildly strong. Asians also enjoy some recruitment advantage over Africans in high-level occupations in the more capital intensive industries. In other words, during the period 1968-1974, Africans in high-level occupations tended to be concentrated in the less capital-intensive industries, particularly services.

This study also shows that the likelihood of finding respective racial groups in high-level occupations varies across the eight industrial categories according to the level of public sector involvement--used here as proxy for economic independence--in the respective industries. For Asians and Europeans, the correlation between the two variables is inverse and low. For Africans, the correlation is positive, but not much stronger. These results show, in other words, that the greater the degree of public sector involvement in an industry, vis-a-vis other industries, the greater the chance for Africans, but not Asians or Europeans, to be in high-level occupations in that industry. This conclusion concurs with hypothesis 2 (see page 51 above).

Correlating the recruitment advantage of respective racial groups in high-level occupations with the level of public sector involvement in respective industries, we find that as public sector involvement increases, so does the recruitment advantage of Africans over Europeans or Asians. Likewise, the recruitment advantage of Asians over Europeans also rises. However, none of the correlation coefficients is particularly strong (see Table 13). From these findings, we can infer that the likelihood of finding Europeans in high-level occupations increases with the level of direct foreign private investment.

Concerning human capital investment and recruitment to high-level occupations, this study finds, inter alia, that as the human capital investment of Africans in high-level occupations exceeds that of Europeans or Asians across the eight industrial categories, so does their recruitment advantage over Europeans or Asians. Hypothesis 3 (see page 61 above) is therefore supported. We note also that there is a negative though mild correlation between the human capital advantage and recruitment advantage of Asians over Europeans--and Europeans over Asians--in high-level occupations. This suggests that beyond a certain point and given the available stock of high-level human capital in Kenya, it may not matter in some industries whether high-level positions are filled by Asians or Europeans. The reason is that finding members of either group with the required level of expertise would pose no particular difficulty. Conversely, as the human capital advantage of Asians over Europeans (or vice-versa) declines, we arrive at a point below which, naturally, the recruitment advantage that either group may enjoy over the other cannot be explained in terms of superior human capital investment. In such cases we must explore contending explanations--such as patterns of ownership, family and business connections, and discrimination based on nationality or race.

Concerning human capital investment and recruitment to middle-level occupations, the study finds that it has been easier to recruit Africans to middle-level than to high-level occupations in five of the eight industrial categories--mining, manufacturing, electricity, transportation and construction (see Table 17). When we correlate the level of public sector involvement with the likelihood of finding Africans in high-level rather than middle-level occupations across the eight industrial categories, we obtain a correlation coefficient of zero. We thus conclude that though it has been easier to recruit Africans to middle-level than to high-level jobs in the five industries--and to high-level than to middle-level jobs in the other three industries--neither of these trends can be attributed statistically to the level of public or private sector involvement in those industries. Hypothesis 4 (stated on page 61 above) is not supported by the evidence.

Generally speaking, increases in the human capital investment of Africans in high-level occupations, relative to that of Asians or Europeans and across the eight industrial categories, do have a positive impact on Africans' relative representation in those occupations. By inference, they also have a positive effect on the relative position of Africans as a group in the occupational structure of Kenya's "modern sector." In other words--assuming that this trend persists--we are likely to witness a continued decline in the dominant role of Europeans in Kenya's high-level occupations, as Burrows (1975) and Rempel and House (1978) suggested. But this trend will likely be tempered by the extent of capital intensity and economic dependency, including dependency-based discrimination, within respective industries. And, whatever the extent of the decline, it will still be easier to find Africans in middle-level rather than high-level occupations, a fact no doubt buttressed by the usually pyramidal shape of large-scale occupational hierarchies.

On the question of continuity and change in the occupational/administrative structure in Kenya, the position taken in this dissertation is that studies which suggest the persistence of the colonial bureaucratic structure undermine their case on three related counts. First, they ignore the fact that there has been a substantial expansion in parastatal institutions and personnel, as well as the civil service proper. Second, they fail to recognize that the "growth in size" or "great expansion" which they all acknowledge either has led to structural change, or is itself the result of structural change. Third, they are generally vague about what constitutes structural change in organizations.

If we accept the proposition that changes in an organization's size cause changes in its structure, we simply cannot support the inference that an administrative entity which experiences "considerable growth in size"--with obvious additions to its stock of job titles and to its vertical or horizontal span--does not at the same time undergo at least some structural change. Moreover, given that the number of high and middle-level jobs in the public service has increased significantly since independence--filled mostly by Africans (see Bienen, 1974: 32)--it can be surmised that many if not most Kenyan Africans now holding such jobs were appointed to fill newly-created positions, not to replace Europeans and Asians. This deductive reasoning does not find support for hypothesis 5 or its corollary (stated on page 62 above). Granted, however, a significant amount of the structural change attributed to Kenya's public administration has been the consequence of central government's acquisition of controlling shares in already existing private, usually foreign-owned, enterprises. To the extent that many high and middle-level jobs in such enterprises have subsequently been Africanized, it can be argued that some--by no means all--Africans continue to owe their positions to the departure of Europeans and Asians.

Granted, also, many prominent and prestigious positions in Kenya carry the same titles as they did during the colonial era. This is partly due to a certain universalism of job titles, which is reflected at the very top by the fact that most heads of state around the world--from Cuba westward to Senegal--nowadays assume the title of President. The persistence of those job titles in Kenya has nevertheless tended to create the impression, among many well-meaning people in the country and elsewhere, that the entire organizational structure of the Kenyan state has remained the same as it was in colonial days. Under this facade of sameness, however, important changes have in fact taken place.

Turning our attention to prevailing and expected patterns of labor absorption (see Chapter IX), we can make the prediction that in 1986 the number of new paid jobs created in the "modern sector" between 1976 and 1986 will cover only 55.7 percent of all new labor force entrants during the period 1976-1986. That is to say, about 253,000 persons joining the labor force until 1986 will still have to seek employment in the informal sector, or remain unemployed. Focusing on specific labor force strata identified earlier, we find that among those with primary educaction or less, there will be about 86.4 new jobs for every 100 new members in 1986. On the other hand, within the labor force stratum presuming completed higher school or university level education and training there will be only 40.6 new jobs for every 100 new members.

As for the full extent of labor absorption and unemployment in Kenya during the period 1969-1976, Table 23 estimates that total unemployment in Kenya rose from 456,145 persons (or 8.4 percent of the total labor force) in 1969 to 1,041,005 persons (or 14.4 percent of the total labor force) in 1976--an increase of 584,860 persons. This rise in unemployment occurred despite the fact that total formal and informal sector employment increased by over 1.25 million persons during the period 1969-1976. Total "modern sector" wage employment as such increased at an annual rate of 4.3 percent. However, this increase was due in large part of a 5.3 percent annual growth in unskilled and semiskilled jobs. Moreover, it did not much alter the fact that the informal sector, which includes all forms of nonwage labor, still accounted for the overwhelming proportion of all available employment in the Kenyan economy in 1976.

Extending the trends above the year 1986, we can predict that 29.8 percent of the total labor force in Kenya--or 3,656,000 people--

will be unemployed in 1986. The proportion of modern sector wage employment to toal employment will rise from 11.5 percent in 1976 to 12.7 percent in 1986, an increase of only 1.2 percentage points. Also, assuming that present trends continue, the size of modern sector wage employment will top the one million mark for the first time only in 1985. In 1986, nearly half (i.e. 46.2 percent) of the total modern sector employment in Kenya will be found in just one industrial category, services. Services will also show the greatest absolute increase, followed in descending order by commerce, manufacturing, agriculture and construction. In terms of percentage share of total modern sector employment, agriculture will remain second to services, though it will have declined from a 22.6 percent share in 1976 to 16.7 percent in 1986.

In general, total unemployment will be much worse in 1986 than it was in 1976, even though wage and self-employment will show moderate growth in size (see Table 24). The rise in unemployment will, according to the projections, be felt most severely by secondary school graduates. In fact, unemployment among secondary school graduates is already a national problem. However, given the limited capacity of Kenya's labor markets to generate "modern sector" employment, a rapidly increasing number of people with at least secondary school certificates is likely in the decade ending in 1986 to help inflate the minimum credentials demanded even by employers of unskilled and semiskilled labor--and deflate the expectations of secondary school and other graduates--to such an extent as to render "modern sector" employment increasingly unlikely for those with primary school credentials or less. The level of unemployment for those with primary school credentials or less is therefore likely to be higher in 1986 than the projections indicate. This likelihood is enhanced by the prospect of a declining number of blue-collar jobs during the period ending in 1984.

Predictions about the linkage between race and occupation, based on trends during the period 1968 to 1974, suggest that all of the ten occupational categories will be characterized in 1984 by an overwhelming African presence. 89.4 percent of all toplevel administrators, general managers and salaried directors combined will be African in 1984. In addition, Africans will hold 78.0 percent of all professional jobs and 90.6 percent of all middle-income jobs available in Kenya's "modern sector" in 1984.

A good deal of rural-urban migration in Kenya during 1976-1986 will be ill-advised, if the purpose of migration is to obtain wage employment. Urban share of total modern sector employment declined from 57.2 percent in 1969 to 51.1 percent in 1976, and is likely to drop to 43.6 percent in 1986. The majority of modern sector jobs--largely of the unskilled and semiskilled variety--will be found in the rural areas during the forecast period. Those seeking such jobs probably will be the least likely to benefit from migration to urban areas. However, the advisability of moving or not moving to urban areas will be complicated by the fact that a number of "centers" designated in 1969 as rural--i.e. having less than 2,000 residents--may well achieve the status of urban centers, as densities in population and physical and financial capital increase. In this regard we notice, for example, that while only eleven urban centers in Kenya had over 10,000 people in 1969, this number had technically risen to 24 in 1979. Among the thirteen additional "centers" are Webuye (now a town of 18,000) and Busia (now a town of 25,000) which had less than 2,000 persons each in 1969, and were as late as 1979 still categorized as rural areas. Webuye is now the site of probably the largest papermill factory in Africa.

The evidence discussed in Chapter X suggests that ethnic cleavages are a significant part of Kenya's occupational structure, at least in the higher echelons of the public service. Likewise, the role of ethnicity in the allocation of scarce resources has had an important impact on people's perceptions of equity in the country. The goal, obviously, is to establish ethnic equality and so render ethnic background inconsequential in the recruitment process and in the distribution of the national wealth. It is argued here, however, that in order to do so there must be a conscious attempt to avoid the mistakes of the past. Allocations must be made on merit. It serves no purpose to urge the public to adopt a national outlook when decisions made at the centers of power point frequently to ethnic favoritism. With the succession of President Moi, there are indications that the attack on ethnic discrimination may now become more strenuous and successful. The challenge is to do this without vindictiveness, and with due respect for the talent of individuals--regardless of the past. This will require patience and time. It is important that there be no ineligibility by association--that we remember the relevant past but not repeat it.

Concerning sex inequalities, one observes that the attitudes which have confined girls and women to the home, as opposed to the labor market, have also, until lately, denied them equal access to education and training and thus rendered them less mobile socially and geographically. The proportion of women in wage employment to the total was 10.1 percent in 1968 and 19.0 percent in 1977, a compound increase of 9.6 percent per annum during the period. At that rate, the number of women in modern sector employment will not equal that of men until the year A.D. 2007 at the earliest, or 27 years from now. This pace can, of course, be accelerated if the government takes the lead by reforming its own recruitment policy, whereby men are generally given preferential treatment, and by encouraging more girls and women to go to school and take courses on their preferred fields of endeavor. But the most effective action would be a more rapid expansion of employment opportunities in the modern sector. The available employment opportunities in the modern sector are so scarce, relative to the available labor, that even the most equitable redistribution of them would have little effect on the overall unemployment and underemployment of men or women. Such expansion should not serve merely to bloat existing bureaucracies. It must be concentrated in areas, such as agriculture and manufacturing, which are most likely to generate significant national wealth, and thus lay the foundations both for long-run growth in employment, if not for an industrial revolution, and for a healthy evolution of "postindustrial" institutions.

With the research findings thus summarized, the next task is to situate the research, and the findings, in broader sociological perspective. In other words, we are now faced with the question: what is the relevance of this study to sociology in general? And, of course, this question raises another: what is sociology? We must answer the second question in order to answer the first. Theodorson and Theodorson (1979:401) conceive of sociology as:

> The scientific study of human social behavior. Sociology studies the processes and patterns of individual and group interaction, the forms of organization of social groups, the relationships among them, and group influences on individual behavior. Although sociology includes the study of all forms of social interaction and interrelationships, it has focused on the understanding of group or other collective factors in human behavior. Traditionally particular emphasis has been placed on the study of society, so that in fact some writers have referred to sociology as the science of society. However, sociological research may deal with any social system, including the small group, or any aspect of social organization or social behavior...

This general view of sociology is shared by Bottomore (1972:25), who adds that the "basic conception, or directing idea, of sociology is... that of <u>social structure</u>: the systematic interrelation of forms of behavior or action in particular societies...[and this is] inseparable from the study of economic and political institutions." The two quotes emphasize the fact that while the proper subject of sociology is society broadly defined, the main focus of sociological studies has been on the interaction among or between its "parts," and on the changes which such interaction engenders (see also Jacobs, 1971:12-21; 1966:15-6). It follows from this that general sociology is preoccupied with two broad and related problems: social stratification and social change.

Within this general focus, theories and models have evolved to address more specified phenomena. Modernization theory, for example, is a branch of social change theory. It usually concentrates on how "traditional" societies in the "periphery" can or have begun to acquire the norms and social structures associated with the metropolitan countries of the West. (Jacobs, 1971:9 argues that modernization can originate from within the periphery, from without, or both--not always from the West). On the other hand, dependency theory--a branch of both social change and stratification theories--in its basic formulation insists that the existing economic relationship between countries at the "center" and those in the "periphery" is one that stunts all meaningful socio-economic development in the latter and, by the same token, explains their underdevelopment and the basic economic cleavages within them. Expressed that way, dependency theory of course overdramatizes the totality of the experience of the periphery in its dealings with the metropolis, particularly since the watershed year of 1973. But that is another matter. It's not another matter/give emphirical reasons.

It has been pointed out that the preoccupation of general sociology is with social stratification and change. The two criteria commonly used in drawing the boundaries of social strata--occupation and income (particularly the former)--are amply discussed in this study. The study tells us, for example, that the percentage of Europeans and Asians in high-level rather than lower level occupations remains disproportionate to their respective representations in the total modern sector labor force in Kenya. Nevertheless, we notice that strong government action in the public sector and increasing public sector involvement in the economy as a whole can and have helped turn the tide and elevate the recruitment chances of Africans, as well as Asians, above those of Europeans in high-level occupations. Thus, if it is true that broad social strata in the colonial era were neatly demarcated along racial lines, this is increasingly not the case. Besides direct government intervention, improvements in the human capital investment of Africans have also played a crucial role in their occupational--and hence social--mobility over time, across generations and vis-a-vis the other racial groups.

The rapid increase in the population of Kenya has also had an impact on Kenya's social structure and on the change patterns of this structure. More and more people remain unemployed and underemployed as growth in labor force size far outstrips the rate at which the economy generates employment. And, we argued earlier, as "modern sector" employment becomes progressively a smaller proportion of total employment in Kenya, wage labor as a whole--with its relatively higher income--becomes even more conspicuously a "labor aristocracy" compared to the peasantry, the unemployed and the underemployed. Despite the government's stated policy of rapid employment-generation, the study tells us that the unemployment situation will get worse rather than better in the period up to 1986.

The evidence discussed in this study supports the first of two propositions presented on page 1 above. That is to say, it supports the general proposition that despite the dominance of foreign private capital in the Kenyan economy, Africans already hold a large proportion of middle and high-level jobs in the country. In fact, by 1974 they were holding most of such jobs. Race continues to be an important element in the profile of Kenya's labor force. But ethnicity and sex differentials are perhaps more problematical.

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APPENDIX

Table A1: The 1968 Cell Distribution of Kenya's "Modern Sector" Labor Force As Actually Used in the ECTA Analysis*

INDUSTRY AND RACE	OCCUPATION										
	Unskilled	Semiskilled	Skilled	Sales	Clerical	Secretarial	Middle Executive	Technicians	Professional	Top Level Executive	TOTAL
A. AFRICAN:											
Agriculture	122,992.5	5,504.5	5,592.5	60.5	2,131.5	103.5	622.5	1,798.5	121.5	359.5	139,287.0
Mining	1,079.5	328.5	333.5	3.5	54.5	1.5	3.5	46.5	.5	1.5	1,853.0
Manufacturing	22,691.5	12,474.5	12,676.5	609.5	2,358.5	288.5	358.5	1,924.5	66.5	100.5	53,549.0
Electricity	1,179.5	620.5	629.5	24.5	286.5	11.5	51.5	242.5	12.5	3.5	3,062.0
Construction	13,799.5	3,218.5	3,269.5	36.5	405.5	45.5	88.5	837.5	89.5	20.5	21,811.0
Commerce	11,197.5	2,662.5	2,705.5	1,712.5	6,360.5	645.5	788.5	611.5	34.5	980.5	27,699.0
Transportation	20,975.5	5,172.5	5,256.5	127.5	5,471.5	382.5	425.5	1,669.5	72.5	82.5	39,636.0
Services	57,422.5	23,316.5	22,676.5	583.5	17,179.5	1,656.5	5,656.5	5,326.5	1,967.5	1,396.5	136,182.0
TOTAL	251,338.0	52,298.0	53,140.0	3,158.0	34,248.0	3,135.0	7,995.0	12,457.0	2,365.0	2,945.0	423,079.0
B. ASIAN:											
Agriculture	1.5	54.5	54.5	2.5	122.5	18.5	126.5	156.5	13.5	98.5	649.0
Mining	2.5	6.5	6.5	1.5	32.5	3.5	10.5	52.5	2.5	26.5	145.0
Manufacturing	160.5	1,250.5	1,271.5	288.5	744.5	252.5	592.5	1,490.5	138.5	1,133.5	7,323.0
Electricity	2.5	4.5	5.5	1.5	19.5	11.5	21.5	112.5	10.5	.5	190.0
Construction	10.5	355.5	340.5	7.5	115.5	44.5	71.5	464.5	73.5	196.5	1,660.0
Commerce	85.5	232.5	236.5	1,155.5	3,695.5	889.5	1,261.5	1,163.5	138.5	2,032.5	10,891.0
Transportation	83.5	376.5	383.5	72.5	1,457.5	269.5	276.5	420.5	44.5	107.5	3,492.0
Services	81.5	249.5	254.5	69.5	1,021.5	654.5	887.5	571.5	868.5	300.5	4,959.0
TOTAL	428.0	2,510.0	2,553.0	1,599.0	7,209.0	2,144.0	3,248.0	4,432.0	1,290.0	3,896.0	29,309.0

C. EUROPEAN:

Agriculture	85.5	15.5	15.5	.5	10.5	26.5	476.5	114.5	59.5	401.5	1,206.0
Mining	.5	.5	.5	.5	5.5	.5	3.5	29.5	12.5	26.5	80.0
Manufacturing	3.5	35.5	35.5	30.5	37.5	146.5	489.5	527.5	259.5	389.5	1,955.0
Electricity	.5	.5	1.5	1.5	3.5	16.5	25.5	76.5	64.5	7.5	198.0
Construction	.5	3.5	3.5	1.5	11.5	13.5	44.5	186.5	120.5	99.5	485.0
Commerce	1.5	11.5	12.5	118.5	111.5	425.5	779.5	266.5	138.5	860.5	2,726.0
Transportation	.5	186.5	190.5	30.5	474.5	142.5	280.5	259.5	480.5	164.5	2,210.0
Services	7.5	116.5	118.5	16.5	130.5	529.5	2,003.5	487.5	1,428.5	561.5	5,400.0
TOTAL	100.0	370.0	378.0	200.0	785.0	1,301.0	4,103.0	1,948.0	2,564.0	2,511.0	14,260.0

Source: Kenya, Republic of, 1972-79-82

*A value of 0.5 has been added to each cell, as explained in the text.

Table A2: The 1974 Cell Distribution of Kenya's "Modern Sector" Labor Force As Actually Used in the ECTA Analysis.*

INDUSTRY AND RACE	OCCUPATION										
A. AFRICAN:	Unskilled	Semiskilled	Skilled	Sales	Clerical	Secretarial	Middle Executive	Technicians	Professional	Top Level Executives	TOTAL
Agriculture	148,998.5	12,775.5	9,500.5	73.5	7,889.5	463.5	987.5	1,135.5	1,305.5	195.5	183,325.0
Mining	1,426.5	436.5	322.5	25.5	104.5	19.5	31.5	50.5	13.5	5.5	2,436.0
Manufacturing	34,327.5	20,681.5	16,599.5	1,136.5	4,429.5	902.5	1,118.5	2,833.5	236.5	207.5	82,473.0
Electricity	883.5	873.5	637.5	27.5	358.5	65.5	96.5	257.5	17.5	1.5	3,219.0
Construction	14,380.5	5,414.5	5,483.5	34.5	1,413.5	252.5	254.5	863.5	136.5	46.5	28,280.0
Commerce	25,197.5	12,731.5	4,997.5	3,440.5	10,583.5	2,147.5	1,966.5	1,486.5	371.5	445.5	63,368.0
Transportation	14,379.5	10,050.5	6,284.5	739.5	7,226.5	1,059.5	1,098.5	1,101.5	83.5	158.5	42,182.0
Services	81,304.5	26,674.5	28,498.5	552.5	19,288.5	3,519.5	3,873.5	7,789.5	2,526.5	4,601.5	178,629.0
TOTAL	320,898.0	89,638.0	72,324.0	6,030.0	51,294.0	8,430.0	9,427.0	15,518.0	4,691.0	5,662.0	583,912.0
B. ASIAN:											
Agriculture	1.5	15.5	19.5	2.5	25.5	17.5	60.5	79.5	41.5	54.5	318.0
Mining	.5	.5	19.5	3.5	6.5	3.5	12.5	44.5	12.5	19.5	123.0
Manufacturing	37.5	148.5	564.5	259.5	377.5	227.5	568.5	1,067.5	333.5	733.5	4,318.0
Electricity	.5	.5	2.5	1.5	7.5	4.5	5.5	34.5	19.5	.5	77.0
Construction	22.5	32.5	278.5	5.5	79.5	64.5	128.5	431.5	91.5	224.5	1,359.0
Commerce	78.5	156.5	263.5	913.5	1,299.5	944.5	1,496.5	704.5	506.5	989.5	7,353.0
Transportation	10.5	52.5	100.5	54.5	634.5	204.5	262.5	177.5	44.5	144.5	1,686.0
Services	67.5	93.5	260.5	31.5	359.5	199.5	260.5	501.5	549.5	170.5	2,494.0
TOTAL	219.0	500.0	1,509.0	1,272.0	2,790.0	1,666.0	2,795.0	3,041.0	1,599.0	2,337.0	17,728.0

C. EUROPEAN:

Agriculture	1.5	2.5	6.5	.5	7.5	9.5	136.5	95.5	107.5	299.5	667.0
Mining	.5	.5	.5	1.5	.5	.5	4.5	17.5	32.5	15.5	74.0
Manufacturing	.5	3.5	11.5	7.5	7.5	49.5	129.5	266.5	303.5	341.5	1,121.0
Electricity	1.5	2.5	.5	.5	.5	1.5	2.5	26.5	44.5	1.5	82.0
Construction	24.5	.5	20.5	1.5	1.5	8.5	36.5	172.5	102.5	115.5	484.0
Commerce	.5	2.5	22.5	26.5	23.5	194.5	433.5	215.5	619.5	859.5	2,398.0
Transportation	8.5	.5	17.5	4.5	12.5	35.5	210.5	80.5	107.5	184.5	662.0
Services	9.5	5.5	213.5	3.5	115.5	137.5	212.5	273.5	1,001.5	151.5	2,124.0
TOTAL	47.0	18	293.0	46	169.0	437.0	1,166.0	1,148.0	2,319.0	1,969.0	7,612.0

Source: Kenya, Republic of, 1976:52-5

*A value of 0.5 has been added to each cell because of the existence of zero frequencies, as explained in the text.

APPENDIX 3: Formulae for Estimating the Magnitude of Labor Force Entry by Labor Force Stratum in Kenya's "Modern Sector" in 1969 and 1976.

a) To obtain the estimate of the number of entrants into the "Primary School or Less" stratum in 1969, we compute:

$$P_1 = .99x_1/5 + (x_2-x_3-x_4) + 5(.99x_1/5 + x_5)/100$$

$$= 1.05(.99x_1/5 + x_5)$$

where x_1 = 452,064 = number of persons 15-19 years old listed in the 1969 census as belonging to the "none or not stated" level of education (see Kenya, Republic of, 1977:16).

$.99x_1/5$ = 89,508 = 99 percent of those in x_1 who were 15 years old in 1969. The remaining one percent is assumed to be attending school. It is assumed, further, that 20 percent of those in the 15-19 year bracket in 1969 were 15 years old.

x_2 = 146,784 = certificate of primary education (CPE) candidates in Kenya at the end of 1968 (see Ministry of Education (Kenya), 1976:27).

x_3 = 21,000 = the number of 1968 CPE candidates repeating the final year of primary education in 1969 (see Raju, 1973: 38-40).

x_4 = 40,139 = 1968 CPE candidates entering secondary school in 1969 (see Raju, 1973:38-40).

$5(.99x_1/5+x_5)/100$ = 8,758 = 5 percent of $.99x_1/5+x_5$, which is the estimate of secondary school dropouts who joined this labor force stratum in 1969.

$$x_5 = x_2 - x_3 - x_4$$

b) To obtain the estimate of the number of entrants into the "Primary School or Less" Stratum in 1976, we compute:

$$P_2 = x_1 + (x_2-x_3-x_4) + 5\ [x_1 + (x_2-x_3-x_4)]/100$$

$$= 1.05(x_1+x_5)$$

where x_1 = 103,830 = estimated number of 15-year persons whose level of education was "none or not stated" in 1976. This estimate represents a 16 percent growth--in the category represented by $.99x_1/5$ in equation P_1 above) since 1969.

x_2 = 227,439 = CPE candidates at the end of year 1975 (see Kenya, Republic of, 1977:221).

x_3 = 35,463 = 1975 CPE candidates who repeated the final year of primary education in 1976 (see Ministry of Education (Kenya), 1976:31).

x_4 = 94,834 = 1975 CPE candidates who went to secondary school in 1976 (see Kenya, Republic of, 1977:222).

$x_5 = x_2 - x_3 - x_4$

$5[x_1+(x_2-x_3-x_4)]/100$ = 10,049 = 5 percent of $x_1 + x_5$, which is the estimate of secondary school dropouts who joined this labor force stratum in 1976.

c) To obtain the estimate of the number of entrants into the "secondary school" stratum in 1969, we compute:

$$S_1 = (x_1+x_2-x_3) + x_4 + x_5 + x_6 + x_7 + 0.5[(x_1+x_2-x_3) + x_4+x_5+x_6+x_7]/100$$

$$= 1.005x_8$$

where x_1 = 17,247 = number of all candidates for the secondary school certificate at the end of 1968 (see Kenya, Republic of, 1977:224).

x_2 = 483 = number of students who failed to obtain the Higher School certificate in 1968 exams (see Kenya, Republic of, 1977:224).

x_3 = 2,068 = number of students entering Higher School in 1969 (see Kenya, Republic of, 1970:135).

x_4 = 489 = estimated number of secretarial trainees graduating at or near the end of 1968. This estimate is based on the assumption that the Kenya polytechnic produced only 9 percent of all such trainees in Kenya in the late Sixties (the estimate is actually based on 1969 figures, since the number of secretarial trainees at the polytechnic is not given for the year 1968)(see Kenya, Republic of, 1977:225).

x_5 = 587 = estimated number of students graduating or dropping out of the Kenya Polytechnic at or near the end of 1968 [x_5 = (total less school certificate enrollment in 1968)/3] (see Kenya, Republic of, 1970:138; three years are assumed to be the 'normal' duration of Polytechnic training).

x_6 = 275 = estimated number of new nurses and midwives registered at or near the end of 1968 and actually living in Kenya in 1969 (estimate based on Kenya, Republic of, 1977:229).

x_7 = 2,967 = estimated number of P_1 to P_3 teachers and half of special education teachers graduating around the end of 1968 (see note at the end of this section c).

$0.5[(x_1+x_2-x_3)+x_4+x_5+x_6+x_7]/100$ = 100 = 0.5 percent of the estimated number of entrants. This percentage represents dropouts from Higher School or equivalent who entered the "secondary school" stratum in 1969.

$x_8 = (x_1+x_2-x_3) + x_4 + x_5 + x_6 + x_7$

NOTE: The ratio of x_7 to total teacher training enrollment in 1968 is assumed to be equal to the ratio prevailing in 1975 (see Tables 214 and 216 in Kenya, Republic of, 1977:220-1).

d) To obtain the estimate of the number of entrants into the "secondary school" stratum in 1976, we compute:

$$S_2 = (x_1+x_2-x_3) + x_4 + x_5 + x_6 + x_7 + 0.5[(x_1+x_2-x_3)+x_4+x_5+x_6+x_7]/100$$

$$= 1.005x_8$$

where x_1 = 47,926 = number of all candidates for the secondary school certificate in 1975 (see Kenya, Republic of, 1977:224).

x_2 = 655 = number of students who failed to obtain the Higher School certificate in 1975 examinations (see Kenya, Republic of, 1977:224).

x_3 = 5,208 = number of students entering Higher School in 1976 (see Kenya, Republic of, 1977:222).

x_4 = 4,720 = estimated number of secretarial trainees graduating at or near the end of 1975. This estimate is based on the assumption that the Kenya Polytechnic produced only 2.5 percent of all such trainees in Kenya at or near the end of 1975 (see Kenya, Republic of, 1977:225).

x_5 = 582 = estimated number of students graduating or dropping out of both Kenya and Mombasa Polytechnics at or near the end of 1975[x_5 = (total polytechnic enrollment in 1975 - school certificate and secretarial enrollment)/3] (see Kenya, Republic of, 1977:225).

x_6 = 3,540 = estimated number of new nurses and midwives registered at or near the end of 1975 and actually living in Kenya in 1976 (estimate based on Kenya, Republic of, 1977: 229).

x_7 = 4,093 = number of P_1 to P_3 teachers and half of special education teachers (i.e. 18) graduating at or near the end of 1975 (computed from Kenya, Republic of, 1977:221).

$0.5[(x_1+x_2-x_3) + x_4 + x_5 + x_6 + x_7]/100$ = 282 = 0.5 percent of the estimated number of entrants, which represents dropouts from Higher School or equivalent who entered the "secondary school" stratum in 1976.

$$x_8 = (x_1+x_2-x_3) + x_4 + x_5 + x_6 + x_7$$

e) To obtain the estimate of the number of entrants into the "University and Higher School" stratum in 1969, we compute:

$$U_1 = (x_1-x_2-x_3) + x_4 + x_5 + 1\ [(x_1-x_2-x_3) + x_4 + x_5]/100$$

$$= 1.01x_6$$

where x_1 = 1,197 = number of students who graduated from Higher School at the end of 1968 examinations (see Kenya, Republic of, 1977: 224).

x_2 = 616 + 98 = number of Kenyan degree students entering the University of Nairobi (i.e. 616) plus Kenyan students entering outside universities (i.e. 1,197 - 616 - 483 = 98) in 1969 (see Kenya, Republic of, 1977:227-8).

x_3 = 483 = number of students who failed to obtain the Higher School certificate at the end of 1968. These are presumed to have entered the "secondary school" stratum in 1969 (computed from Kenya, Republic of, 1977:224).

x_4 = 104 = number of all new S_1 teachers and half (i.e. 18) of special education teachers graduating at the end of 1968 (see note below).

x_5 = 352 = number of all new Kenyan graduates in early 1969 (half the number is from the University of Nairobi, and the other half is the estimate of new Kenyan graduates from all universities outside Kenya (for data on Nairobi, see Kenya, Republic of, 1977:227-8).

$1[x_1-x_2-x_3) + x_4 + x_5]/100 = 5$ = the 1 percent which represents university dropouts in 1969.

NOTE: The ratio of x_4 to total teacher training enrollment in 1968 is assumed to be equal to the ratio prevailing in 1975 (see tables 214 and 216 in Kenya, Republic of, 1977:220-1).

f) To obtain the estimate of the number of entrants into the "University and Higher School" stratum in 1976, we compute.

$$U_2 = (x_1-x_2-x_3) + x_4 + x_5 + 1[(x_1-x_2-x_3) + x_4 + x_5]/100$$

$$= 1.01x_6$$

where x_1 = 4,089 = number of Higher School Certificate candidates (private candidates not included) in 1975 (see Kenya, Republic of, 1977:224).

x_2 = 1,318 + 659 = number of Kenyan first year degree students at the University of Nairobi (i.e. 1,318) plus those entering Kenyatta University college and universities abroad (estimated at half of 1,318) in 1976 (see Kenya, Republic of, 1977:227-8).

x_3 = 655 = number of students who failed to obtain the Higher School Certificate at the end of 1975. These are presumed to have joined the "secondary school" stratum in 1976 (computed from Kenya, Republic of, 1977:224).

x_4 = 143 = the sum of new S_1 teachers and half (i.e. 18) of special education teachers graduating at or near the end of 1975 (see Kenya, Republic of, 1977:221).

x_5 = 1,889 = number of all Kenyan graduates in early 1976 derived from Kenya, Republic of, 1977:227-8). Two thirds of the number is actually from the University of Nairobi, the other third is the estimated number of Kenyans graduating from abroad and from Kenyatta University College.

$1[(x_1-x_2-x_3) + x_4 + x_5]/100 = 35$ = the 1 percent which represents estimated university dropouts in 1976.

$$x_6 = (x_1-x_2-x_3) + x_4 + x_5$$

VITA

Mauri Onyalo Yambo was born in Nairobi in 1947. He did his undergraduate work at the University of Dar Es Salaam, which formally awarded him a B.A. (Honors) in Sociology and Political Science in December, 1972. He then moved to the University of Nairobi for graduate studies in sociology, and was formally awarded an M.A. in that field in July 1975.

From August 1974 to March 1980 he was a recipient of the AFGRAD fellowship. This enabled him to work on his doctoral degree in industrial sociology at the University of Illinois at Urbana-Champaign. This dissertation is a result of that effort.

Yambo's publications to-date are confined to the literary field. He has published two books of poetry: "Flame Hands" and "Man Without Blood."