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SKILLS FORMATION IN THE KENYAN INFORMAL ECONOMY

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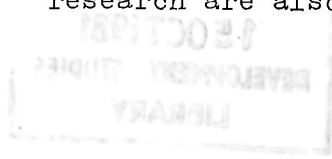
Carlton R. Williams

ABSTRACT

This paper discusses the manpower development potential of skills training occurring outside formal vocational and technical programs in Kenya. It is argued that apprenticeships in independent small-scale manufactures in the informal sector are contributing to unemployment relief and upgrading the skills of young prospective workers.

The results of informal sector surveys conducted in Kenya are reviewed and compared with data collected in other developing market economies concerning the general structural characteristics of informal economies and their patterns of skills formation.

The need for adequate descriptive research into Kenyan informal apprenticeships and some of the potential policy applications of such research are also discussed.



## 1. Introduction

Since publication of EMPLOYMENT, INCOMES AND EQUALITY (ILO, 1972) a three sector model of the Kenyan economy has been accepted as a point of departure in scholarly discussion of national development issues.<sup>1</sup> The ILO noted that employment in the middle or "informal" sector of the economy then represented a substantial portion of urban employment and argued that the informal economy could generate employment at lower capital costs than the formal sector if effectively stimulated. Among the positive features of the informal economy discussed in the report was the "upgrad(ing) of the (Kenyan) labor force through low cost development of practical skills and entrepreneurial talents (p.505)". It is this aspect of the informal economy which may prove to have long-term social and economic value for national development in Kenya.

The ILO argued that official development policy should seek to stimulate the informal sector; but agreement on the best form of official intervention has not yet been reached. How can government or private agencies promote the expansion of the informal sector without "formalizing" it through the imposition of even minimal regulatory policies? One critic of the ILO's policy recommendations has observed that because the informal sector operates in a state approaching "perfect competition" representing "optimal factor mixes and optimal pricing of goods and services" official intervention might alter this factoral mix with negative implications for continued capital efficient growth (Muench, 1978). Other

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1. The three sector model alluded to includes (1) the traditional or subsistence agricultural sector, (2) the modern sector, and (3) a middle sector termed "informal". The informal sector in Kenya has been defined as comprising those small businesses which are not enumerated in official economic statistics. The modal informal sector manufacturing enterprise employs labor intensive production methods and a "middle level" technology. Use of power tools in production is infrequent. Products of the informal sector are intended for consumption by low-income households. In urban areas informal economic activities are frequently concentrated in the so-called "informal settlement areas" though even the casual observer will note that some trade and service activities are carried out outside these high-density, predominantly African residential areas. A review of characteristics of the informal sector as defined in the Kenyan context is provided in the text (pp.9-12). Frank Child (1976) and William J. House (1978a) have attempted to disaggregate the informal sector by distinguishing between truly marginal enterprises and those exhibiting greater efficiency and a firmer commitment by owners and employees to their economic roles. These authors have proposed the term "intermediate" sector to encompass this latter class of businesses. Informal-intermediate manufacturing and repair enterprises have been singled out for discussion in this paper because such firms would appear to offer more serious opportunities for young worker-trainees to acquire marketable skills than either trade and service enterprises or less well organized petty manufactures.

observers have commented that because of the linkages between formal and informal economic activities, stimulation of the former is reflected in the latter. This position would appear confirmed by those researchers who have reported that many of the "raw materials" of petty production in Kenya are the wastage of the formal sector. It has also been argued that improvements in infrastructure benefit both formal and informal sector activities without prejudice. It has also been widely recognized that the informal sector has evolved under frequently hostile conditions. It is likely to survive without official interference.

Formal debate on the development of suitable strategies for intervention to stimulate the informal economy in Kenya assumes a one-way flow of technical and economic assistance designed to induce positive changes in the small enterprise sector. The question of a more balanced and mutually beneficial transfer seems remote. While focusing on how official bodies might stimulate the informal economy scholars and planners have frequently ignored the possibility that some features of the informal economy may suggest solutions to other policy questions. Current discussion of the need to revise school curricula in Kenya is one such case.<sup>2</sup> It is now being suggested that vocational courses be made more available and that increasing the vocational content of primary education might have the greatest beneficial effect. If the content of primary and secondary school programs is to be vocationalized the methods of short-term skills instruction in informal apprenticeships might provide models which can be adapted to the school setting. Alternately, stimulation of skills training in the informal sector may prove to be the least destabilizing form of intervention with high economic and social returns on invested capital. Effective policies for either option cannot be developed without knowledge of how informal sector apprenticeships presently operate.

## 2. Jobs and Training in the Informal Sector in Kenya.

The manufacturing sub-sector of the informal economy can be a major contributor to social capital formation and to employment growth in Kenya. The ILO report on incomes and employment (1972) noted that informal employment was then 25 to 30 per cent of all urban employment in Kenya. The Third Five Year Development Plan (1974) predicted that informal employment would grow at an annual rate of 7.5 per cent during the plan period while modern sector employment would expand at a mean annual rate of 4.45 per cent. Though at present the informal economy employs fewer workers than the modern sector and employs a majority of its workers in trade and services, the manufacturing sub-sector is expanding rapidly (Lee, 1978). It is in the manufacturing sub-sector that many Kenya youth are receiving practical training in short-term informal apprenticeships.

2. Vocationalization of Kenyan school curricula was recommended in the Report of the National Committee on Educational Objectives and Policies (1976). The committee recognized a need "to impart a practical bias at all stages of the education system."

Capital efficient employment in the informal sector has been confirmed by surveys in both rural and urban locations. Research in Nyeri and Kakamega Districts (Inukai and Okelo, 1972; Okelo, 1973) has shown that small urban manufacturing and repair businesses typically employ more workers than their rural counterparts or than merchandising and service enterprises. Okelo found that in Kakamega District workers in manufacture and repair firms were approximately one third of the estimated informal sector labor force. Urban businesses had more workers than those in smaller towns and rural market centers. In a more recent study Child (1976) reported that urban informal manufactures in Kenya employed a mean seven workers per shop. More relevant to the issue of unemployment among Kenyan youth is evidence of an effective, low cost, decentralized system of skills diffusion which is serving an increasing number of primary and secondary school leavers with few practical skills and little or no prior work experience.

From the perspective of the unskilled and inexperienced job-seeker practical training in small workshops offers many attractions. Such training is usually more available and less expensive than enrollment in formal courses. Godfrey (1973) reports that one to two year courses offered at the Kenya Industrial Training Institute and short pre-entry business management courses offered through the Institute for Adult Studies and the Kenya National Chamber of Commerce had relatively small enrollments. Residential technical courses required literacy in English and a demonstration that the candidate could raise shs.2000 initial investment capital. KITI courses cost shs.3000 and admitted eighty new students per class. One to two year courses at Village Polytechnics ranged in costs from shs.40 to shs. 2000 per year. In 1971 however, only 17 per cent of V.P. leavers were self-employed in rural enterprises. A subsequent study by David Court (1972) found that approximately 15 per cent of V.P. leavers were full-time self-employed craftsmen. Twice as many graduates had migrated to larger towns and cities. Fees, education, liquidity and residence requirements exclude the majority of potential small enterprisers.

Training in the informal sector is more generally available and costs less than enrollment in formal technical courses. According to Kenneth King (1975a) apprentices in the informal sector pay between £.5 and £.50 for a complete "course" of on-the-job instruction. Fees paid

to master craftsmen vary considerably and apprentices, themselves, may receive a cash allowance in addition to payment in kind. Child (1976) reported that some apprentices earned up to shs.120 per month. A comparison of the costs of informal apprenticeships with the costs of formal training reveals the relative cost efficiency of informal system. Godfrey reported that in 1970-71, 64 students were trained at the Kenya Industrial Training Institute at a total cost of shs. 730,000, shs.11,406 per student. This figure underestimates real costs because teaching positions subsidized privately were not included in the computations. Assessment of the overall value of such courses must include a consideration of the Kenyan industrial labor market and an analysis of the conditions under which independent small-scale production is carried out. Though the number of new jobs for skilled workers has been sufficient in recent years to absorb the output of formal technical courses the cost-to-benefit ratio of an expanded system would not be attractive. Unless industrial employment expands at a higher annual rate, expanding the present system of formal technical education would not be well motivated.<sup>3</sup> Graduates of formal technical courses who seek to become independent manufacturers often find that their training was not appropriate for the independent small production unit.

Kenya employers have shown a preference for job-seekers who have had on-the-job training over those presenting school certificates and examination based skills ratings (King, 1975b, p.58). Studies of small scale independent industries have revealed that formal industrial or crafts training is not a major source of skills among self-employed craftsmen. Graduate of KITI courses and other organized training programs were consistently underrepresented among groups among whom surveys have been conducted. Child (1976) found that while only 19 self-employed

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3. Child (1976) has argued that modern sector employment growth in Kenya represents a poor return on an annual investment of 15 per cent of national income. In order to keep pace with increases in the labor supply the modern sector would be required to increase its output and capital stock by 15 per cent per annum assuming that labor productivity as a function of mechanization remained constant. Increases in labor productivity would correspond to a higher annual growth requirement in the modern sector if employment growth there was to be sufficient to absorb Kenyan labor.

craftsmen had either KITI or Village Polytechnic training, 59 men, representing 67.8 per cent of the manufacturing and repair sub-sample, acquired their skills through formal employment or through apprenticeships, formal and informal. Only one person in the sample had formal training at a technical school as his only source of skills. Results of the recent survey of the Nairobi informal economy were similar. William House (1978b) reports that among a sub-sample of 285 owners of small manufacture and repair enterprises, prior on-the-job training was the principal means through which owners acquired their skills. Though in Nairobi owners of informal manufactures exhibited education levels second only to traders, graduates of public and private training programs were significantly underrepresented in the sample. Okelo (1973b) reported that among a sample of 158 entrepreneurs in manufacturing and repair businesses in Kakamega District, 89 (56.2 per cent) had been trained on the job. An unspecified fraction of the residual 12.6 per cent (excluding those previously in trade or agriculture) were trained in formal programs. In addition, Inukai and Okelo (1972) note that in the limited number of cases in which a graduate of either KITI or a similar institution had established a workshop, formal technical training was inappropriate for the characteristic infrequency of mechanized production in small manufactures. Having been trained in the use of power tools, graduates found that as owners of independent small businesses, power tools were generally beyond their means to acquire. In Nyeri District circa 1972 two thirds of manufactures used hand tools only; and there was little use of electricity even in urban workshop. Okelo's parallel study in Kakamega District (1973b) yielded similar findings among which was the telling observation that even those workshops along the Kakamega-Kisumu road where electricity was readily available did not employ electric tools.

The apprenticeships systems of the informal sector are more cost efficient than public or privately sponsored technical training courses. The decentralized and autonomous system is also sensitive to the extracurricular obligations of trainees and provides experiences under conditions of production which are reasonable models of what the trainee may expect when he sets up on his own. Small informal sector workshops which employ and train apprentices are contributing not only to relief of unemployment among school leavers and those with little or no training or work experience, they are also contributing to Kenya's



supply of trained manpower,<sup>4</sup> thereby increasing the number of Kenya citizens with skills which are potentially marketable in the labor market of the modern industrial sector or which may provide entree into informal self-employment or wage employment. In view of present trends in school enrollments,<sup>5</sup> economically motivated rural-to-urban migration, and the rate of formal sector employment growth relative to increases in the labor supply,<sup>6</sup> self-employment and informal sector wage employment are likely to continue to expand. Study of apprenticeships in the informal sector can provide information of value to those who will have the responsibility of designing and executing revisions in school curricular intended to make Kenyan education more directly relevant to Kenya's present and future manpower needs.

### 3. Skills Acquisition in the Small Enterprise Sector: A Review of Recent Literature

Specific research on skills diffusion outside formal programs of technical and vocational education has not been extensive. Though it has been widely recognized that skills training is an important aspect of informal sector activity (particularly in the manufacturing sub-sector) the majority of social and economic studies of the informal economy have not examined the subject closely. The ILO incomes and employment cited "low cost development of skills" in the Kenyan informal sector. Child (1976) has shown how enterprisers acquired their skills and has confirmed the presence of an apprenticeship system though it is only outlined in his report. Godfrey (1973) has surveyed formal technical training in Kenya

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4. The graduate of the short-term informal training "course" is not the equivalent of the graduate of formal sponsored industrial courses. Still, the acquisition of even basic skills is a qualitative change with positive implications for the trainees' subsequent economic adaptation.

5. On December 31, 1979, the President of the Republic of Kenya, His Excellency Mr. Daniel arap Moi, eliminated fees for primary education in Kenya. It is to be expected that enrollments will increase.

6. The announcement of the preliminary results from the 1979 Kenya Population Census showing an annual growth rate in excess of 3.9 per cent portends even more serious employment problems over the next 20 years.

and provided valuable comment on costs and enrollments. The most extensive and detailed research on the specific topic of skills formation in the small enterprise sector of developing market economies in sub-Saharan Africa has been that of Archibald Callaway (1964, 1973) in Nigeria, and the work of Kenneth King (1975a, 1975b) concerning training in selected enterprise types in Nairobi. King's descriptions of informal training in Kenya bear few resemblances to forms of training and labor organization reported in a recent study of "cottage industries" in peri-urban Lusaka, Zambia (Jules-Rosette, 1978). There are also important background differences which distinguish the Kenyan (and East African) patterns from those of West Africa.

Labor market conditions in Nigeria described by Gallaway (1964) were similar in many respects to those obtaining in Kenya in the first post-independence decade. In Nigeria's major cities employment growth in the modern sector had been slow relative to increase in the numbers of urban job-seekers. Gallaway's explanation of the dynamics of the Nigeria labor market followed conventional wisdom concerning the employment effects of capital intensive high technology urban development, increasing school enrollments, and the ensuing intense competition for jobs. Only a few primary and secondary school leavers had been placed in modern sector wage employment. An increasing number, however, opted for apprenticeship in indigenously owned and managed small businesses. For the educated job-seeker apprenticeships under Nigerian master craftsmen became an increasingly popular option.

Though Callaway's report was published somewhat before the introduction of "informal sector" terminology into discussion of Kenyan national development descriptions of the Nigeria urban small enterprise sector correspond in many respects to characteristics of the informal sector in Kenya. Nigerian businesses sampled in the study were small production units employing labor intensive methods. Estimates of average profits were not reported; and Callaway mentions only that characteristic return on investment was low, as were capital to labor ratios.

As would later be cited in reference to the Kenyan job market (see for example, Kenneth King, 1975b, chs. 1-3) competition for modern sector employment in Nigeria raised entry thresholds. Job-seekers in Nigeria in 1964 and after needed ever higher educational qualifications to

meet standards set by employers. Job-seekers typically spent more time in the job search and found themselves in competition with more of their fellows than previously. These trends, Callaway argues, were responsible for a "reduction in expectations" among many Nigerian youth, and a broad recognition that academic preparation in itself was sufficient for successful competition in the job market. School leavers in Nigeria during the period of the study had increased their subscriptions to unofficial educational services. Enrollments in correspondence courses rose sharply as former school students attempted to acquire marketable skills. Accordingly, enrollments in apprenticeships in small workshops increased.

The 1964 report observes that whereas unschooled youth were dominant among trainees in traditional crafts (blacksmithing, weaving, batik), school leavers preferred "progressive small firms with expanding markets." These more advanced, quasi-formal firms resemble those that Child (1976) and House (1978a; 1978b) would call "intermediate sector" enterprises in Kenya. There are also correspondences with Friedmann and Sullivan's "family enterprise sector" (1974) which, in their opinion, was "more organized" than the informal sector.

Workgroups in the Nigerian workshops were loosely stratified by skill level. The typical establishment employed apprentices, journeymen and paid laborers in addition to some full and part-time unpaid family workers. The survey revealed that apprenticeships more so than formal employment and formalized skills training were the principal source of owners' skills. Callaway found that 71 per cent of entrepreneurs interviewed between 1963 and 1965 were former apprentices under Nigerian masters. As would be determined from research in Kenya, the manufacturing sub-sector of the Nigerian small enterprise economy trained its own labor. Ninety-six per cent of Nigerian woodworkers and metalworkers were apprentices. Among automobile mechanics 88 per cent had been apprentices.

Terms of instruction for owner-entrepreneurs interviewed ranged from one year to seven years. Three owners of metalwork shops were in training for seven years; and it was estimated that apprenticeships in woodworking and metalcraft were the longest of all occupations represented in the sample. Sixty-six per cent of apprentices paid no fees. For the remainder the modal payment was approximately £. 3. Fees for wood-and metalwork were slightly higher than for other courses. Higher costs

corresponded to longer periods of instruction. Firms having no apprentices were a small minority of manufactures included in the study. They represented only 19 per cent of the sample. The average number of apprentices in the remaining 81 per cent of shops was 4.55. Disaggregation of data from the manufacturing workshops reveals a stronger trend favoring the retention of apprentices in furniture workshops as compared with tinwares manufactures. Among furniture producers those shops employing apprentices (92 per cent) retained an average 5.6 trainees per production unit. Only 76 per cent of tinwares manufactures hired apprentices and the mean number in training per workshop was 4.89.

Terms of instruction for trainees were shorter than those undertaken by their employers when these latter were apprentices. Furniture-makers were in training for an average four years. Trainees in metalwork shops spent three years acquiring their skills. There was also a distinct preference for accepting school-leavers in woodworking shops. Sixty-one per cent of employers considered school-leavers better trainees because they had little difficulty carrying out measurements and related calculations.

Payment in kind, in addition to a cash allowance, was standard practice among employers of apprentice laborer-trainees. Seventy-five per cent of employers in the manufacturing and repair sub-sample provided food; 70 per cent provided clothing or an allowance. Just under half the sample of employers housed their trainees though in many cases such housing was a sleeping place on the shop floor.

The Nigerian apprenticeship system in small manufacturers was explained as an adaption of long-standing forms of traditional craft education. Callaway noted that among the Yoruba and Hausa of Lagos and Ibadan craft instruction was a firmly established aspect of the pre-contact education system. The methods of traditional craft instruction were adapted (with modified content) to the needs of participation in the evolving monetized economy. The mutual rights and obligations of trainees and their employers were highly formalized and the master-apprentice relationship continued to be governed by values based in the traditional social system. Ceremonies marked the trainee's acceptance and his completion of the course of instruction. Though specific estimates of employment generation are lacking in both studies, Callaway observes that the absorption of labor per unit capital was "very high".

Karl Schalder's study of small manufactures in Tanzania (1970) though not specifically designed as a study of skills diffusion provides data from which the importance of such training as well as some of its characteristics can be deduced. The survey of workers in small workshops revealed that 55 per cent of those interviewed had received previous on-the-job training in other small shops. Though many were trained under the supervision of a kinsman (a condition which explains the large number of Nigerian apprentices who paid no fees) a majority of employees in independent wood- and metalworking shops in Dar es Salaam had trained in shops in which they had no kinship ties to their employers. It is likely that variation in the degree of intrafamilial apprenticeship recruitment across different product categories reflected ethnic specialization in the small enterprise sector of urban Tanzania before 1970. Schalder's sample included many workers in tailors' shops. As was the case throughout former-British East Africa, non-Africans enjoyed a historical monopoly in some skilled trades. It is among these elements of the urban population that the term "family enterprises" might be more appropriately applied. Intensive home training in hereditary occupations anticipated expansion of family businesses through the establishment of branches. This would explain Schalder's observation that such home training tended to be more general than that available to non-relatives. Recruitment and training patterns reflected owners' sensitivity to potential competition. Control over access to skills functioned to restrict their distribution to members of specific households in specific communities and was a suitable strategy for the development of a system of linked enterprises. Access to training in furniture and tinwares manufactures was less restricted. It is probable that these two sub-samples included more Tanzanian Africans than the tailoring sub-sample due to changes in demography of the small business sector following Tanzanian independence. Africanization of skilled trades will by now have penetrated those occupations requiring higher capital outlay for tools such that the more open recruitment patterns of wood - and metalwork shops would have become more common. It is just as a process of indigenization of some skilled trades that is so central in Kenneth King's historical analysis of skills diffusion in Kenya (King, 1975b).

In Ghana Keith Hart (1973) examined informal income opportunities in urban areas and found that many job-seekers "denied access by the formal opportunity structure (sought) informal means of increasing their incomes.

Though little information on the dynamics of the informal sector labor market was included, Hart reported that particularism in recruitment was commonplace. Particularism in recruitment, hence to access to skills training in the Nigerian and Ghanaian contexts may be distinguished from recruitment patterns among tailors in Dar es Salaam. As was discussed above, selective recruitment was a form of protection of occupational monopolies against encroachment. The particularism which was so much in evidence in Nigeria and in Hart's study of the informal economy in Ghana should be interpreted as an example of strategies of urban adaptations which have been reported for many developing and urbanizing societies: Janet Abu-Lughod, 1961, Egypt; Aldous, 1962, North Africa; Schwab, 1970, sub-Saharan Africa; Hanna and Hanna, 1971, sub-Saharan Africa, Browing and Feindt, 1971, Monterey Mexico; Oscar Lewis, 1973, Mexico City. Gutkind (1974) noting broad similarities in the adaptive strategies of rural-to-urban migrants in developing urbanizing societies has proposed that migrants' dependence on their kinsmen and friends may be a universal pattern. King (1975b) notes that recruitment of worker-trainees is carried out with a strong local bias in Kenya. These studies suggest that information about informal as well as formal employment opportunities, which is communicated to potential migrants through their network linkages (after J.C. Mitchell, 1969; and J. Boissevain, 1974, chs.1-3) is a key element in migration decisions. Quantitative models of migration patterns do not accommodate these realities with ease (see, for example, Todaro, 1976; and Rempel, 1970, 1971). Apart from recognizing information and assistance in the job search provided to migrant job-seekers through their personal networks Hart notes that the Ghanaian informal economy is a major provider of essential goods and services for low-income household consumption and as an important source of wage earning and entrepreneurial opportunities.

Before proceeding to a discussion of informal skills diffusion in Kenya a brief review of the characteristics of the "informal economy" is in order to establish a background against which informal employment and skills diffusion may be interpreted. The following are frequently used as elements of a definition of the informal sector: (1) scale of operation; (2) labor intensive production; (3) lack of official regulation (unlicensed, and some illegal "businesses" paying no taxes); (4) ease of entry; (5) location and condition of worksite; (6) demographic characteristics of the labor force; (7) degree of stability in employment; (8) semi-monetized factor acquisition.



All proposed definitions of the informal economy would include much of the small enterprise sector but the degree of overlap depends upon the application of other criteria about which there has been no final agreement. William J. House has claimed, for example, that the "informal" economy is really a residual classification containing all private enterprises except large industrial and commercial firms (House, 1978a). Friedmann and Sullivan's "family enterprise sector" (1974) includes those urban businesses employing fewer than 50 workers at a permanent worksite. According to the authors, family enterprises employ 35 to 45 per cent of the urban labor force in developing economies. The authors maintain that these businesses are financed by savings, family income transfer and informal credit schemes. As is claimed for the "informal sector" the family enterprise sector supplied goods and services to a low income market. Workgroups include paid and unpaid family workers. In the case of family labor a potentially beneficial semi-monetized labor input which allows alternative productive allocation of saved wages carries with it the risk of retaining workers whose marginal product is minimal. Friedmann and Sullivan comment that within family firms "available work is spread among the largest possible number of workers (p.393);" and that pressures for family income sharing can be many and strong. In general, the characteristics of the "family enterprise sector" as defined by Friedmann and Sullivan are similar to those assigned to the "informal" sector in other studies. In Kenya, however, surveys indicate that production units are smaller in the informal sector than Friedmann and Sullivan have suggested. Researchers in Kenya have also tended to regard any enterprise having a permanent workplace as part of the formal or modern sector (Westley and Kabagambe, 1978).

In their introduction to THE INFORMAL SECTOR IN KENYA (1978), Westley and Kabagambe define the informal sector as the unregulated sector of the Kenyan economy. They would include all those businesses which are unlicensed, which pay no taxes and which offer little employment security. This latter characteristic was cited earlier by Mazumdar (1969) who also concluded that most of the informal labor force was made up of "secondary workers." According to Mazumdar, household heads should be underrepresented in the informal laborforce. Dependents, though, frequently augmented household income through their informal employment. In Kenya certain of Mazumdar's descriptions need qualification. The proportion of recent migrants in the informal sector labor force is high (Mukui, 1973) as Mazumdar's model predicts. It is noteworthy that

owner-managers of informal enterprises have been identified as urban residents of long standing having been in town for an average 12.9 years for a Nairobi sample (House, 1978b). Adult householders with dependents are numerically dominant among owners of informal sector enterprises in Kenya. In Nyeri District ca. 1972 they were 89.2 per cent of owner-managers. In Kakamega District, married entrepreneurs were 91 per cent of the sample. These findings indicate that many married (male) adults are participants in the informal economy, but as entrepreneurs, not as wage labor. There is some indication that skilled laborers' mean age is typically higher than that of other labor grades. King observes however, that this relationship will vary across product categories.

Employment insecurity in the informal economy cannot be considered apart from the legal and political environment of economic behavior. Child (1976) and House (1978b) have suggested that employment insecurity in the Kenyan informal sector is not attributable to the intention of employers and workers so much as it is a consequence of violating licensing and tax regulations. Periodic enforcement of these regulations by askaris contributes to general insecurity in the urban informal sector in Kenya.

Entry into wage employment or self-employment in the informal/<sup>economy</sup> requires fewer educational qualifications and less initial capital than is the case for formal sector enterprises. Reynolds (1969) has written that the informal sector is a "natural entry point" (primarily trade and services) for urban migrants. Successful entrepreneurship does not depend on formal education. In Nairobi 43.2 per cent of owner-managers had no formal education and among 77 owner-managers interviewed in Child study (1976) mean attained education (measured in time in school) was 2.51 years. The modal interval for this group was between four and five years. Sanzo (N.D.P.) who has applied ratio analysis in a study of small business profitability maintains that there was no statistically significant linear relationship between owners' levels of formal education and profits. In Kakamega, 69 per cent of entrepreneurs in the manufacturing and repair sub-sample claimed to have had no training in preparation for entering their economic roles (Okelo, 1973, Table 9, p.53).



Initial capital requirements for starting a business in the informal sector are low. Child (1976) reported a modal initial investment of K.£. 50 for "intermediate" manufactures. In Nairobi House (1978b) reported a mean initial investment of K.£. 250, with 52 per cent of furniture workshops having been started with between £. 200-1000. The results of two previous rural surveys indicate that initial capital costs are lower outside the cities. Inukai and Okelo in their Nyeri survey (1972) found that just under two thirds of manufacture and repair businesses included in the study were founded with less than shs.1000 initial capital. In Kakamega District, Okelo reports that 55 per cent of manufactures were begun with less than shs.1000. In both rural studies, the majority of businesses were capitalized from owners' savings.

Kenya's informal economy can provide high return on investment and the average incomes of owner-managers and some employees compare favorably with formal sector incomes. Child (1976) states that 75.8 per cent of his sample of "intermediate" sector manufacturers reported "good" to "satisfactory" profits. Sixty-two per cent said their profits were increasing. The reported aggregate return rate on invested capital was 68 per cent (adjusted). Wood - and metalwork shops reported an average return of approximately 450 per cent (unadjusted). Child provides the following earnings breakdown for employees in intermediate manufacturers: skilled workers, range (in shs./month) 100-600, mean 237; semi-skilled workers, range 50-300, mean 153, unskilled workers, range 50-170, mean 104; apprentices, range 0-120, mean, 43. Monthly earnings reported by House for owners of informal sector businesses in Nairobi fell into two levels representing almost 90 per cent of the sample. Forty-four and six-tenths per cent of owners reported incomes of shs.320 per month or less. Another 44.6 per cent said they earned between shs.320 and shs.2400 per month. At least half of House's sample earned twice the official minimum wage. Pay to employees, however, did not compare as favorably with formal sector wages as did owners' earnings. For skilled workers average earnings were only 35.4 per cent of formal sector mean wages. For unskilled workers, informal sector earnings were 30.8 per cent of mean formal sector wages. Skew in the Kenyan income distribution may mean that informal sector wages compare more favorably to modern sector earnings for paid labor. One implication of the clear differential between owners' incomes and wages in the informal sector is that self-employment offers considerable attractions. The income data explain King's

observation that trainees in the informal sector seek to enter self-employment as quickly as possible. Rapid entry into self-employment after a period of traineeship and employment within an informal enterprise might explain rapid attrition not due to official harassment of informal businesses.

Early social research on peri-urban informal settlements and their economic and social organization has provided a background against which the later findings of more economically oriented research may be interpreted. Southall and Gutkind (1957) were among the first social researchers to provide descriptions of economic and social life of informal, peri-urban settlements in East Africa. They found that in Kisenyi and Mulago, just outside Kampala, a considerable portion of the population were active in economic roles not then enumerated in official labor statistics. In Kisenyi "informal" employment was high. It was estimated that 31 per cent of the local workforce were engaged in independent retail trade, frequently on a very small scale. Another 11 per cent were classed "self-employed" persons including cobblers, tailors and a few carpenters. Though Southall and Gutkind took a classical ethnographic approach in their research, certain of their findings predicted some of the conclusions of recent quantitative studies of urban informal economies. Among these was their recommendation that despite "low level(s) of efficiency" the development of indigenous informal enterprises should be encouraged (emphasis added). Kampala's informal economy provided essential goods and services and some which replicated (albeit with less sophistication) some non-essential "luxury" items enjoyed by the non-African urban elite.

The informal economy of peri-urban Kampala was a flexible system of adaptations. Workplaces doubled as residences of proprietors and some of their employees. Muller (1978) reports the same pattern for Lusaka. In Kampala a system of informal credit involving groups of households, and in some cases, groups of businessmen, provided capital which was unavailable from institutional sources. Several case studies illustrate flexibility and opportunism in economic adaptation. Horizontal mobility was high; but it was also noticed that owners of some businesses which had been founded with very little capital but had experienced healthy growth were firmly committed to their occupations. Some workshops in the manufacturing sub-sector were providing practical experience and skills training to young worker-apprentices. These and other characteristics

of the unregulated urban informal economy first reported in an East African context by Southall and Gutkind have been elaborated in the literature on employment and development in Africa over the past 15 years.

In Kenya much research has attempted to test certain assumptions underlying the ILO's policy recommendations concerning capital efficient employment growth. Child in 1976 estimated that the informal sector labor force was approximately 290,000 in 1969. These workers would have been nearly nine per cent of a total Kenyan labor force of 3,300,000, which was expected to grow at an annual rate of 3.57 per cent. According to Child, the capital costs of employment growth in the modern sector of the Kenyan economy had increased by 44.88 per cent between 1967-1976. William House employed ratio analysis in his survey informal businesses in Nairobi (1978b) and reported that in so called "intermediate" sector manufactures, capital to labor ratios averaged £. 182 to one unit labor, or one eleventh the ratio for manufactures in the formal sector in 1977: £.2000:1 unit labor). Capital to output ratios in the informal sector were also lower than for the formal sector. For the modern sector capital to output ratios were estimated between 1:2.5 and 1:1.1. The corresponding ratios for intermediate sector manufactures were: furniture workshops, 1:0.7; tinwares, 1:0.2. In house's judgement the cost implications of formal versus informal sector employment growth were clear:

If we apply (estimates) to the formal sector and consider the relative changes in output and employment from an investment £10,000 in the two sectors, we see that annual output would rise by £6667 in the formal sector. The change in output from the informal sector would be £10,000. In addition, and perhaps more importantly in an economy such as Kenya's with its employment problems, while five new jobs would be created in the formal sector, that same investment in the informal sector would have brought about 55 new employment opportunities.

William J. House, 1978b, p.15.

A recent study by Bernetta Jules-Rosette (1978) attempts to interpret labor organization and recruitment in the small enterprise economy of peri-urban Lusaka, Zambia. Two groups of producers, one composed mainly of members of the Masowe congregation in the town of Korsten producing furniture and other functional items for household consumption and a second group who produced art and craft items for sale in the tourist market. Jules-Rosette identified two styles of labor organization. In the workshops producing functional household items of wood and metal,

workers were ranked in a strict hierarchy. These workshops were labor intensive. There was little use of machine power in production. The few machines used for cutting and shaping tin sheets were operated by hand. During a term of on-the-job training in these functional housewares shops, an apprentice began by performing low status janitorial duties and frequently served as shop messenger. Only gradually was he permitted to assume production tasks. Training began with the assignment of rudimentary tasks: the sorting and storing of raw materials, pre-production preparation of these materials, and assisting those occupying higher positions in the production hierarchy as they required. It was characteristic that each position in the hierarchy corresponded to a specific part of the production process; and that knowledge of the complete sequence of steps in the production of shop output was restricted to senior apprentice-assistants and to owner-managers. Labor organization among artists and craftsmen producing items for sale in the tourist market was more fluid and independent. Here each member of the work group was free to vary his work pattern as required. There was also more evidence of mechanization which allowed the artists to mass produce some items as changes in the market required. Since little information on training in the art workshops was provided by the author a comparison with training procedures among housewares manufactures is not possible. One aspect of apprenticeship in the Masowe shops, however, was in direct contradiction to Shalder's findings concerning differential access to skills as a function of trainees' relationships to owner-managers. In Korsten township Masowe congregationalists dominated petty manufacturing of furniture and tinwares intended for low-income household consumption. Jules-Rosette states that the principal link establishing a web of social relationships among members of this community was its church. The Masowe community, she writes, was a "close-knit" quasicorporate unit within which both kin- and association-based ties were strong. Trainees, therefore, enjoyed kin- and association (church) based ties to their employers. In practice, the kinship idiom was expanded to include many who were in a technical sense, not relatives. Being a relative, or being regarded as a relative of an owner was not related to differences in the quality and scope of training received by apprentices. The training pattern was the same for recruits from the Masowe community as it was for those coming in from outside.

It is likely that Jules-Rosette's findings can only be generalized to other systems with considerable qualification. Data from research conducted in Kenya suggests that local patterns of recruitment into worker-traineeship are somewhat different. Kin recruitment in Kenya informal sector manufactures is less evident than in Korsten. Okelo (1973) reported that only 57 per cent of labor engaged in informal enterprises in Kakamega District were paid, non family workers. In the manufacture and repair enterprise sub-sample 276 of 488 workers were family members. Though they represented a minority of labor in informal manufacture and repair enterprises, paid non-family workers contributed the major share of labor input. Okelo notes that in the majority of enterprises family members were part-time workers contributing about 7 per cent of labor input. Okelo argued that the labor requirements of manufacture and repair businesses forced hiring on the basis of skill rather than relationship. The low incidence of mechanized production suggests, however, that there may be other, as yet undeciphered contributing factors which may explain the hiring patterns in small manufactures. For whatever cause, the recruitment of labor into small workshops in Kakamega and in Nyeri District (Inukai and Okelo, 1972) had a broader social scope than that reported for Korsten (Jules-Rosette, 1978). The divergence in findings concerning recruitment in these studies suggests that the dynamics of the marketing of labor services in the informal sector need closer examination. Child (1976) reports that only 3.4 per cent of businesses included in his survey hired exclusively from within owners' extended families. Within the manufacture and repair sub-sample family workers were only 32.4 per cent of those employed. These findings contradict the prior general definition of the typical informal sector enterprise as a "one-man (business) managed by the owner with the help of family members (Inukai and Okelo, 1972). Evidence from Kenya also suggests that the composition of the informal sector as well as the propensities of owners to hire and train apprentices are variable.

Child (1976) reported that thirty firms (34.5 per cent of his sample) retained apprentices. Among these firms the average number of apprentices was 2.4. Workshops averaged 7.41 workers and Child estimated that the apprentices in training were 12.9 per cent of the total labor force in the firms surveyed. The earlier findings of Inukai and Okelo in Nyeri (1972) and of Okelo in Kakamega (1973) deviate markedly from those of child. In Nyeri District only 51 apprentices were enumerated

out of a total labor force of 1299. In Kakamega District Okelo found only 53 apprentices among 1468 workers in informal sector businesses. The results of these two rural surveys were consistent showing in the case of Nyeri that apprentices were 3.9 per cent and in Kakamega, 3.6 per cent of the informal sector labor force. One explanation for the differences is that the earlier studies were conducted in smaller towns and rural market centers. The Nyeri study, however, indicates a definite trend of urban concentration of informal sector manufactures. The average size of the labor force varied as a function of the size of the center in which the enterprises were operating. Manufacturing firms in rural market centers employed a mean 3.13 workers. In the townships of Othaya, Kiganjo, and Naro Moru the mean number of workers per firm was 3.92. In the urban centers of Nyeri and Karatina, manufactures employed an average 6.05 workers per firm. These surveys indicate that urban manufactures employed more workers than their rural counterparts. Findings of surveys in Nyeri and Kakamega Districts are not completely reliable due to non-random cluster sampling. Keeping in mind this important qualification, the data presented suggest that the composition of the informal labor force varies considerably with location. A Chi-square test for contingency examining the relative shares of workers in manufacturing versus trade and service workers conducted with data from the Nyeri and Kakamega District studies dictated rejection of the hypothesis of independence at the .001 level of confidence. Another element in the dynamics of the informal labor markets of these locations was the labor absorption capacities of shops operating in communities of different size. It is likely that market related concentration of manufactures in urban areas and their greater additional labor requirements are factors in this variation.

In Nyeri District, Inukai and Okelo listed 93 manufacture and repair firms operating in local market centers. Owners of these businesses reported being visited by 372 job-seekers over a one month period. Inukai and Okelo determined that the mean additional labor requirement for a firm operating in a local center in Nyeri was .06 labor units. When labor needs are compared with the number of prospective employees seeking work the resulting ratio of jobs to job-seekers is .015, or one opening per 67 applicants. Firms in rural townships in Nyeri District (N=28) reported being visited by 80 job seekers over one month. These firms had a mean additional labor requirement of .54. Thus there was, in the workshops operating in Naro Moru, Othaya



and Kiganjo, one job per 5.27 applicants, a ratio of .19. Urban firms (N=104) were visited by 441 job seekers in one month. Their additional labor requirement per shop was .6, the highest of the three sub-groups. The jobs-to-applicants ratio in urban areas was 1 opening per 6.42 applicants, or .156. Though it might appear that the employment chances of a jobseeker were better in the rural townships it must be kept in mind that manufactures were concentrated in Nyeri and Karatina, which together accounted for 46.22 per cent of the manufacture and repair sample. If the jobs-to-applicants ratio for each location size class is adjusted to reflect its proportional share of enterprises (based on sample data) the absorptive capacities of enterprises in each location type will be more realistically depicted. By adjusting the ratio in this manner we find that the few rural manufacturing and repair firms having the lowest additional labor requirement of the manufacture and repair sub-group had a jobs-to-applicants ratio of .00102, one opening per 980 applicants. For rural townships the adjusted ratio is .0324, one job per 30.86 applicants. Urban locations, because of their greater number of firms and the higher additional labor needs of these firms, show an adjusted jobs-to-applicants ratio of .11876, one opening per 8.42 job-seekers. If we assume for comparative purposes that a hypothetical job-seeker visits all shops within a given geographic area, his probability for success would be highest in the larger towns and cities.<sup>7</sup> If informal manufactures in Kenya's four largest urban centers have even higher absorptive capacities than their counterparts in smaller cities, rural townships and local market centers, these two variables, geographic concentration and average size of the workshop (number of workers), might explain some of the divergence in findings between the Nyeri/Kakamega studies and Child's survey on the question of the average numbers of apprentices retained in informal sector manufactures.

To date, the most extensive and detailed research on skills formation outside formal courses in Kenya is the work of Kenneth King who observes that a "significant training function" carried out in the informal economy has been overlooked because of official interest in

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7. The aggregate probability of finding an informal sector job either in a local market center, a rural township, or an urban location (using the additive rule of probability) is .152156. A hypothetical job-seeker visiting all possible locations within a given geographic area would have one chance in 6.57 of finding employment. This aggregate probability (p) added to the aggregate probability of not finding an opening (1-p<sub>j</sub>) or .847541 approaches unity: .152156 + .847541 = .999697.

formal programs. Yet, throughout Kenyan history, it has been informal rather than formal programs which have been the chief trainers of skilled manpower. As was the case for Tanzania, and to some degree, Uganda, the ranks of skilled tradesmen were filled by non-Africans. The importation of skilled craftsmen from the Indian sub-continent was necessary in the development of the Colonial mode of production because sufficient numbers of local persons possessing the required skills could not be found. There was little colonial interest in the development of an African artisan class. Over time, however, access to skills has broadened. In urban centers the first informal skills training system in Kenya took shape. Casual workers, the "Kibarua" workers in small Asian and European shops, were gradually permitted or encouraged to learn the skills of the non-African wafundi. It was in this fashion that some skills were "Africanized" at a relatively early date. In the schools an "apprentice and indenture" system supported by Colonial grants for artisan trainees operated between 1911 and the mid 1930's. Even those schools considering themselves principally academic could not refuse the subsidies. After the 1930's technical education in Kenya evolved in a direction "remote from the needs of the small enterpriser (King, 1975b, p.22.)" Formal technical education retained a substantial academic content; and the post school employment histories of many technical school leavers were not very different from those of graduates of academic secondary schools. A few graduates of sponsored technical and vocational courses were to be numbered among the employees of large, capital intensive firms. As we have discussed previously, graduates of such courses are underrepresented in samples of self-employed craftsmen-entrepreneurs interviewed in Kenya.

Whereas Callaway observed a preference for school-leavers among small furniture manufacturers in Nigeria, King reports that in Kenya employers "have resisted the trainee presenting a secondary school certificate and a grade rating from an official examination" (1975b, p.57). Historically, skilled workers had been trained on-the-job in "Asian" and European firms. Wages reflected efficiency and productivity, not workers' examination scores. In general, the direction of formal technical insured that graduates would have a limited employment potential:

..the more formalized and rigorous technical school and apprentice training becomes, the more likely it is to separate (itself) from the needs of the majority of local industries in Kenya, and to predicate (itself) upon the recruitment and wages policy of the government corporations and the most sophisticated international companies.



The prototype of the informal apprenticeship according to King was the training pattern of the small urban "Asian" firm. Among these businesses labor intensity and improvisation and adaptation of materials and tools were the rule. It is these features which characterize informal sector manufacture and repair enterprises which have been studied over the last decade in Kenya.

Whereas Callaway reported long periods of apprenticeship in urban Nigerian businesses, King notes that training in the Kenya informal sector is quite rapid. This in part is due to the practice of teaching skills specific to the production of a particular item. A trainee in the production of jiko's or parafin lamps is not the equivalent of the graduate of a formal metalworks course; yet expansion in both urban and rural markets for informal sector products suggests that even with his few and unrefined skills, the successful trainee can anticipate profitable self-employment. The Nyeri/Kakamega surveys indicate that average training terms in the manufacture and repair sub-sector are approximately one year. In Nyeri terms averaged 11.5 months; in Kakamega, 13.72 months.

Because training is product specific and short term trainees and aspiring entrepreneurs can and do change occupations rapidly. The typical term of skills training in some tinwares product classes is less than one year; and a majority of trainees complete their "courses" in less than six months. There are, consequently, few long term employees in these manufactures. As soon as they have acquired sufficient capital through a term of informal wage employment or casual employment in the modern sector, recent trainees set up their own workshops. If we assume that graduates set-up shop in the location in which they were apprentices, rapid entry into self-employment can mean over competition, market saturation and falling incomes. King, however, claimed that in Kenya in the early 1970's petty manufacturing was undergoing "marked decentralization." This position would not appear to be supported by the results of the Nyeri/Kakamega studies indicating urban concentration of manufacturing. King said that many young men migrated to Nairobi and other major cities and returned home to enter rural self-employment. The surveys of 1972 and 1973 suggest that returnees are more likely to set-up businesses in larger towns rather than in villages or local market centers.

King reported average costs to trainees between K.£.5 - 50. In Nyeri circa 1972, apprentice fees averaged K.£.10.91; in Kakamega in the following year average fees were K. £. 17.50. As was true in the Nigerian apprenticeship system, relatives of owner-managers frequently paid no fees or paid a reduced charge. Urban apprentices paid generally lower fees than those in smaller towns and market centers. In the cities, owner-managers competed to engage this low-cost labor. King predicted that given present school enrollments and a tight modern sector job market in Kenya, the numbers of informal sector apprentices (including many with secondary school certificates) would increase.

#### 4. Conclusions

Research in Kenya has shown that the informal economy can, potentially, contribute significantly to employment growth at relatively low capital costs and that it provides skills training opportunities to many who are prevented from enrolling in formal technical and vocational courses because of lack of sufficient money to pay fees, inability to meet education and liquidity requirements, or those who cannot commit themselves to long-term residential programs.

One consequence of disinterest in the informal economy has been the tendency of scholars to overlook its contribution to manpower development in Kenya. At current rates of population growth, the modern sector of the Kenyan economy will, in future, be required to generate employment at annual rates which at present seem unrealistic.

Skills formation occurring outside formal technical and vocational courses has been identified as a major contributor of skilled manpower in Kenya; and though the skills of the informal sector apprentice are not as developed as those of graduate of formal technical courses, informal training can, given suitable market conditions, open income opportunities for many who will not find modern sector jobs.

The National Committee on Educational Objectives and Policies recommended in their 1976 report that vocational studies in primary and secondary school be increased. The committee did not, however, make specific recommendations on the content and methods of their proposed vocationalization program. Prior studies of vocational education in Kenya have criticized formal technical courses because their enrollments

and output are small relative to their costs, and because course-leavers face overcompetition for a few modern industrial jobs or "waste" their acquired skills in small-scale, unmechanized production in independent workshops, many in the informal sector.

Informal training provides low cost rapid skills access and broadens the economic options of trainees. The system is autonomous, decentralized, and cost efficient and its form of organization is more attuned to the needs and obligations of its clients. Informal apprenticeships, unlike their European counterparts, do not function to restrict entry into skilled trades. Rather, the informal apprenticeship systems operating in Kenya and in other developing market economies have provided training to many of those whose opportunities and options have been limited by structural causes.

The goals of national economic and social development will not be achieved through the dynamism and adaptive facility of the informal economy alone. But, industrialization of a type which will employ sufficient numbers of workers in both rural and urban areas will depend upon the readiness of workers to assume new productive roles. In qualitative terms, a potential employee having even rudimentary skills (such as are transmitted in some informal apprentice courses) is better prepared to enter modern sector industrial employment than the job-seeker who had had no training or prior experience in production. Within the informal economy itself, persons having skills have been shown to be capable of entering self-employment which in some cases generates incomes equal to or higher than modern sector wages.

Informal apprenticeship systems are local developments meeting the needs of a local clientele. Because they are of indigenous origins and because they meet the skills needs of many people who envision productive self-employment, local skills training systems can provide models which may be adapted and applied in the restructuring of the formal education system in Kenya. Of course, it will be necessary to examine informal skills training in depth in order to determine what aspects of its content and methods offer suitable, low-cost models which can be transferred to the school setting.

Research into informal skills training can have another, more immediate benefit. Apprenticeships are presently unregulated, and to date, there are no criteria by which the quality of training can be assessed. Since commercialization of training has been recognized as a present trend, some system of monitoring and/or certification of training could serve as the basis of a system through which the interests of subscribers to informal educational services could be protected. Such a certification or monitoring system could protect trainees from being victimized by magendo employers who collect fees on the pretense of providing training but who allow their responsibilities to lapse to the detriment of their students.

There is also a need to update and extend knowledge of how the informal apprenticeship systems in Kenya operate. King (1975b) has predicted that more school-leavers will subscribe to informal educational services. This prediction can only be tested by analyzing appropriately gathered demographic data on informal sector apprentices. Terms and methods of instruction should also be studied to determine if the trend toward shorter courses has continued or if terms of instruction have stabilized. Future research should focus on enterprise types not included in prior studies. The output of independent petty-production includes more than taa's and joko's; and the skills associated with the production of other products (furniture, and other housewares or specialized goods like bicycle carriers and frame reinforcements) are of a higher order than those involved in the production of very basic household items. These higher order skills should have greater carry-over value and should also generate more income for workers and entrepreneurs.

This writer has proposed to conduct a short-term preliminary descriptive study of apprenticeships in so-called "intermediate" sector furniture and tinwares manufactures in Nakuru, toward development of a plan for an extended research project which, it is hoped, will provide a better understanding of the present system as well as a perspective on its potential contribution to Kenyan manpower development and employment.

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8. See the Report of the National Committee on Educational Objectives and Policies, Nairobi, 1976.

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