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EDUCATION, TRAINING, PRODUCTIVITY AND INCOME: A KENYAN CASE-STUDY

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ABSTRACT

In this paper the author looks at the effect of education and training on productivity, as indicated by performance on government trade tests of craft skills in engineering, building, woodwork, electrical and tailoring trades. In January and February 1973, 446 candidates for government trade tests in Nairobi and Kisumu were interviewed, 70 per cent of the candidates during this period; and full job histories were obtained for 185.

Although the sample was small and perhaps not strictly representative, a number of interesting results were obtained. It was found that those who had undergone full-time training courses did worse at all grades of test than those who had not. Similarly, the small significance of schooling in explaining test performance calls into question the tendency to upgrade academic qualifications required for entry into employment or training courses. It was also found that employers tend to reward higher productivity at least in the sense that, especially at grade I level, they anticipate the test results, paying more to those who are going to pass than to those who are going to fail. Further, there does not seem to be an excess supply of skilled and semi-skilled workers: on the contrary, the high returns to movement between jobs suggest that this is still very much a seller's market. Finally, a firm conclusion can be drawn from this survey that this is a relatively inexpensive way of collecting useful information which would be worthwhile repeating on a regular basis with a large coverage.

INTRODUCTION

In the debate about the effect of education and training on productivity[1] the central problem has always been to find a satisfactory measure of productivity. Ideally a researcher would like to devise appropriate tests of his own and administer them scientifically. In the practical absence of this possibility various proxies have been used. For instance, Berg (1) reports on studies in the United States which have used piecework earnings, absentee rates, numbers of accounts lost (in the case of bank clerks) and managers' ratings of present performance and potential as measures of productivity. Chaudhuri (2) has used gross value of yield per acre for the same purpose in Indian agriculture; while in another Indian study Fuller (4) has compared the actual time a man takes to do a job with the norm for that job estimated by management. None of these measures is entirely satisfactory, either because of failure to encompass qualitative as well as quantitative aspects of work or because of reliance on subjective or casual assessment.

One might conclude from this that there really is no alternative to devising and administering a test of one's own. However, before adopting this expensive and difficult procedure it seems worthwhile to look around for a test which is already being given and which might be suitable for this purpose. One such test is the government trade test of craft skills, available in many countries. In January and February 1973, with this purpose in mind, we[2] interviewed 446 candidates for government trade tests in Nairobi and Kisumu, Kenya, covering engineering, building, woodwork, electrical and tailoring trades. We asked them about their education, training, age and ethnic group and, in some cases, job and wage history and social background. Afterwards we checked how they had performed in the tests.

Even this procedure is not without its snags. First, it may be asked, what is the government trade test? It is a test of the craft skills likely to be used in the 'formal' sector of the economy. Indeed since the minimum wages structure in most industries is tied to trade test achievement, the main motive for taking tests is advancement within the sector effectively covered by minimum

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1. For useful surveys of this debate see Little (6) and Dore (3).

2. The interviewers, with the assistance of the author, were Charles Nyongo, Edwin Nyutho and Sam Onuonga.

wage legislation (i.e. not the informal sector).[3] There are three grades of test, grade III being the lowest and easiest and grade I the highest. Anyone with the ten-shilling fee can take his place in the queue to take a grade III test; success in grade III is a precondition of taking grade II, and so on. Unfortunately for our purpose no marks are awarded in the tests; a candidate either passes or fails, so that they cannot be used to measure subtle gradations of skill at each level. Moreover it is skill at an appointed task under examination conditions which is being measured, not necessarily equivalent to productivity on the job.

In deciding to interview trade test candidates, secondly, we may seem to be implying that they are representative of the skilled working population as a whole, or of some sub-group within that population. This is not necessarily the case. The fact that they consist merely of those who happened to present themselves for tests should be borne in mind in interpreting our results. Finally, we interviewed as many candidates as we could over a period of six weeks (without following any particular sampling procedure[4]) but still covered only 446, of whom only 185 gave full job histories. As will emerge, this was too few for many statistical purposes. In any future repetition of this procedure it would probably be worth trading length and depth for number of interviews. Such snags notwithstanding, the dearth of evidence in this field makes our results worth reporting. At the least they may be useful on a pilot basis for further interview-surveys of this kind.

Before the report on the substance of our results on productivity and income, some of the characteristics of the candidates we interviewed are worth noting. Of the 446, only 6 were women, all in the tailoring trades. The largest number, 227, were in the engineering trades (including motor vehicle mechanics, fitters, welders, plumbers, etc.); 70 were in woodworking trades, mostly carpenters; 83 in building (masons, painters and signwriters); 45 electricians; and 21 tailors, dressmakers and shoemakers. The candidates at all levels were concentrated in the 20 to 29 age range, accounting for 64 per cent of the total. Only 26 per cent had attended secondary school, and 19 per cent had little or no schooling; the remainder, at 54 per cent the majority, had stayed on at primary school beyond standard IV. Table 1, classifying those interviewed by age group and educational level, suggests that the level of schooling of trade-test candidates (and of skilled workers

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3. The extent of the expected benefit to successful candidates is shown by the fact that candidates at the lowest grade III would have been willing to pay, on average, 4.7 times the Shs. 10 fee, those at grade II 3.3 times the Shs. 20 fee and those at grade I 2.7 times the Shs. 30 fee. Shs. 8 = U.S. $1.

4. What, after all, were we sampling? As it turned out we interviewed some 70 per cent of the candidates during this period.

in general) has been gradually increasing as educational enrollment has expanded.

Surprisingly few of the candidates had followed a full-time course at any kind of training institution - only 141, or 32 per cent of the total. The range of such institutions attended was wide, from village polytechnics and youth centres at one extreme to the Kenya Polytechnic at the other; 6 per cent of those who had followed courses had reached technician/semi-professional level, 26 per cent skilled level and 68 per cent semi-skilled level. As might be expected, the most important source of finance for training was self or family, used by just over 50 per cent of those with formal training, followed by the government (27 per cent) and employers (23 per cent). As in the case of schooling, a trend over time towards more institutional training and towards higher levels of such training can be detected: 52 per cent of those below the age of 25 had had some kind of institutional training, a proportion which falls steadily as age group rises, to less than 10 per cent for those over 39. Moreover, 16 per cent of those under 25 had been trained at skilled level and above, compared with 2 per cent in the 40-and-over group. Of those interviewed, 62 per cent claimed to have received some on-the-job training, but less than 4 per cent had been involved in the classic "informal-sector" procedure of paying a fee to their employers for this privilege.[5] On the other hand, the sparse coverage of the government's official industrial training scheme is shown by the fact that less than 5 per cent of the candidates had ever been registered as apprentices or indentured learners.

From a smaller group of candidates, the 186 who had entered the job market since 1963, we obtained a full job and wage history, some aspects of which may be of interest at this point.[6] In spite of the apparent rewards to mobility in these occupations, 69 per cent had stayed in a single job since starting work, a proportion varying only slightly with age and length of working life. Most (71 per cent) had experienced some unemployment[7] between leaving school or training institution and starting their first job; 46 per cent claimed to have been unemployed at this stage for six months or

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5. See Kenneth King (5) for more details of this practice.

6. For some examples of individual case-histories see Appendix C.

7. 'Unemployment' in this context does not necessarily mean idleness, but failure to obtain the sort of job that one has been led to expect.

Table 1. Trade test candidates classified by age-group and highest level of schooling.

Highest level of schooling / Age groups	No schooling	Primary I - IV	Primary V and above	Secondary I - II	Secondary III - IV	Total
Below 20	1	2	6	3	5	17
20 - 24	2	9	85	36	33	165
25 - 29	6	17	68	19	11	121
30 - 34	3	7	33	4	2	49
35 - 39	5	9	32	4	1	51
40 and above	7	17	19	0	0	43
Total	24	61	243	66	52	446

more, 26 per cent for sixteen months or more. Subsequently, however, few were troubled by unemployment: only 14, equivalent to about 25 per cent of the number who had had more than one job, suffered more than frictional unemployment (i.e. adding up to six months or more since they had started work). The mean starting salary in the first job was Shs. 271 per month, compared with the minimum wage for an unskilled adult male worker in Nairobi of Shs. 200 in 1964 and Shs. 225 in 1973. Average earnings at the time of the interview were Shs. 435.

EDUCATION, TRAINING AND PRODUCTIVITY

In order to try to disentangle the effects of education and training on performance in the test (our proxy for productivity) it is necessary to split the candidates up into three groups. The three grades of test are different from each other, demanding different qualities for success. In particular, literacy and the ability to think theoretically become more important as the grade of test rises. Thus we look separately at the 274 taking grade III, the 101 taking grade II and the 71 taking grade I, and at the characteristics of those who pass and of those who fail at each level.

The small numbers in each category limit the scope for refined analysis, but we can get an initial impression of the relative importance of various factors by some simple cross-tabulations. Table 2 shows the pass rates of those of differing educational background in the three grades of test.

Table 2. Trade test pass rates by educational background.

	Grade I		Grade II		Grade III	
Highest level reached:	No. of Candidates	Pass Rate	No. of Candidates	Pass Rate	No. of Candidates	Pass Rate
Some secondary school	29	41%	33	27%	56	54%
Upper primary school	34	29%	50	38%	159	60%
Little or no schooling[a]	8	25%	18	22%	59	58%
Total	71	34%	101	32%	274	58%

[a] Primary, Standard IV and below.

On the face of it these results are quite startling. At the lowest (grade III) level, educational background makes little or no difference to performance - if anything those with some secondary education do rather worse than the others! At grade II level, those who have stayed on to the upper standards of primary school appear to have an advantage. But only at grade I level do those with some secondary schooling have the edge over the other groups.[8]

A similar cross-tabulation can be used to illustrate the effect of training on test performance. Table 3 shows the pass rates in the three grades of test for (a) those who have attended a full-time course of training in an institution and (b) those who have had no such training.

Table 3. Trade test pass rates by training background.

	Grade I		Grade II		Grade III	
	No. of Candidates	Pass Rate	No. of Candidates	Pass Rate	No. of Candidates	Pass Rate
Those with full-time institutional training	24	25%	36	17%	81	48%
Those without full-time institutional training	47	38%	65	40%	193	62%
Total	71	34%	101	32%	274	58%

These results are even more striking, showing as they do that those with full-time institutional training do consistently and considerably worse at all levels of test.

It is tempting to jump from these tables to conclusions about the efficiency of education and training, but this would be premature. Two-variable cross-tabulations, by concealing the effects of other variables, may be misleading. Unfortunately since our dependent variable has only two values (pass or fail) it is difficult to use multiple regression analysis in the normal way to isolate the effect of changes in individual

8. Moreover, over half of those with secondary schooling had been to secondary technical/vocational schools. Ironically, this group did worse than those with secondary academic schooling at grades I and II, but better in the more elementary grade III.

variables. However, a technique is available which will enable us to estimate the effects of the levels of a limited number of factors, i.e. transformation of the proportions in a multiway table and fitting constants to the marginal values in the table.[9]

To start with, we need to decide how many characteristics (e.g. education, training, age, tribe, sex, etc.) to include in our multiway table and how many categories for each. The small size of our sub-samples limits our choice in this respect, since the larger the number of cells in our table the greater the likelihood of their being empty. In addition to education and training, the obvious characteristic to be included must be age-group since we have already noted a tendency for level of education and training to vary inversely with age-group. The need to keep the number of cells to a minimum limits the number of categories for each charactristic as follows: for education, the three in Table 2, i.e. little or no schooling, upper primary school, some secondary school; for training, the two in Table 3, i.e. with full-time institutional training and without such training; and for age, three broad groups, 24 and below, 25 to 34 and 35 and above. A multiway table combining these characteristics and categories is given as Appendix A.

Even though our categories are broad, this table at least enables us to compare like with like and hints at ways in which the conclusions emerging from Tables 2 and 3 might have to be modified. Overall, however, such multiway tables are difficult to interpret and for this reason we turn directly to an application of the Maxwell/Everitt technique. This enables us to isolate the effect on trade test results of the level of each of our characteristics, as in Table 4.

The coefficients in Table 4 measure the contribution, ceteris paribus, of membership in each of the education, training and age categories to passing (+) or failing (-) each grade of trade test. The standard errors in almost all cases are too large for us to make anything of the relative size of the coefficients, but the signs are of some interest. The message of Table 3, that those who have received full-time institutional training do worse at all grades of test, is confirmed by the minus signs of the 'with-training' coefficients. The signs of the educational coefficients are also in line with the general impression given by Table 2, that is, educational background makes

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9. See Maxwell and Everitt (7) for a description of this method. My thanks are due to Henry Lucas for drawing this method to my attention and for writing the relevant programme.

Table 4. Trade test performance by education, training and age-group - Coefficients of main effects.

	Grade I	Grade II	Grade III
Education			
Some secondary	0.06	0.00	-0.01
Upper primary	-0.09	0.13	0.04
Little or no schooling	0.02	-0.13	-0.03
Training			
With training	-0.25	-0.18	-0.14
Without training	0.25	0.18	0.14
Age-group			
24 and below	-0.04	0.07	-0.05
25 - 34	0.14	-0.08	0.06
35 and above	-0.10	0.01	-0.02

little or no difference to performance at grade III level and that 'upper primary' leavers have an advantage at grade II level, although the benefit of secondary schooling at grade I level seems rather smaller than had been suggested there. It is difficult to know what to make of the differences in the signs of the coefficients for age-group (which was included mainly for control purposes). At grades I and III there seems to be a U-shaped curve, perhaps suggesting (as a possibility to be investigated with a larger sample) a delayed return to on-the-job training and experience; whereas the inverse pattern for grade II might suggest a quicker pay-off at this level to such learning by doing.

EDUCATION, TRAINING AND INCOME

At this point the question arises as to whether the apparent ineffectiveness of schooling and full-time training in relation to trade-test performance is reflected in the pattern of earnings of skilled workers. The information needed to answer this question is only available for the younger members of our sample, the 186 who entered the job market since 1963. Most of these are in the 24-and-under age group, a fact which should be borne in mind in interpreting and comparing the results.

Since we are now dealing with a numerical dependent variable (salary), we are able to use multiple regression analysis in the normal way. First of all, we lump all 186 candidates together and regress (a) starting salary against number of years schooling, number of years of full-time training, age in years, tribe (Kikuyu or non-Kikuyu) and test performance, and (b) present earnings against number of years schooling, number of years of full-time training, number of years of working experience, number of jobs held, tribe and test performance. The detailed results are reported at Appendix B, equations (1) and (2).

As far as starting salary is concerned, the expected inverse relationship with age shows up and tribe appears to be the most important explanatory variable, but the very poor 'fit' suggests that this is the wrong set of variables for explaining starting salary and that variations in the nature of the first employer and of the first job are likely to be much more important.

The 'present earnings' equation is much more interesting. It suggests that employers in setting earnings of skilled and semi-skilled workers pay very little attention to the amount of schooling and formal training that has been acquired. The high coefficient for 'tribe', suggesting a Shs. 48 monthly premium for Kikuyu over non-Kikuyu, may be largely a matter of location of work since most of the Kikuyus interviewed were working in Nairobi and most of the non-Kikuyus outside Nairobi.

To judge from this equation, the most effective route to higher earnings is through frequent changes in jobs: every change of job might be said to be worth an extra Shs. 100 in monthly earnings, whereas each additional year of work brings an increment of only Shs. 17 per month. Most interesting from our point of view is the recognition which employers give to trade test performance. If we rank those interviewed into six groups, with those who on this occasion passed grade I at the top and those who failed grade III at the bottom, the premium for each group over the one below it amounts to Shs. 75 monthly. Since this is an administered market with minimum wage rates tied to trade test achievement, this is not surprising, but it suggests that it might be worthwhile to analyse each grade of candidates separately to test the sensitivity of earnings to productivity differences within grades.

Appendix B, equations (3), (4) and (5), sets out the results of this exercise, which can be interpreted as follows. In the case of those who were taking grade III tests, a highly heterogeneous group, employers may be discriminating between the more and the less productive to the extent that those who later turn out to have passed the test earn Shs. 40 more a

month than those who turn out to have failed,[10] ceteris paribus. At this level, where the mean monthly earnings are only Shs. 341, tribe (and/or location of job) is an especially important explanatory variable, with number of different jobs held slightly less important than at higher levels. In view of the heterogeneity of the group the low R^2 is not surprising.

At grade II level, where the mean monthly earnings are Shs. 513, there is again some evidence of employers' capacity to discriminate between potential 'successes' and 'failures' to the extent of a Shs. 40 monthly premium.[11] Number of jobs held is much the most important explanatory variable and there is a small and somewhat uncertain premium for schooling. Interestingly, tribe is of little importance at this level.

It is the grade I candidates, with mean monthly earnings of Shs. 644, who provide the clearest evidence of rewards anticipating test results, the premium for the potentially successful being as high as Shs. 273. At this level alone, also, a positive and significant return to full-time training emerges, the return to schooling again being small and uncertain. The rewards for changing jobs are highest of all at this level, the 'annual increment' is fairly high and, as with grade II, tribe is not an important explanatory variable.

CONCLUSIONS

Although our sample is small and its claim to representative status rather dubious, the results seem sufficiently suggestive to make further investigation along similar lines worthwhile. Whether or not we accept test performance as a proxy for productivity, the fact that those who have undergone full-time training courses do worse at all grades of test than those who have not suggests at least that the efficacy of such courses and of the institutions which house them needs to be carefully examined. Similarly the small significance of schooling in explaining test performance must reinforce widespread doubts about the relevance of what is learned in school to the jobs that most people end up doing;[12] it also calls into question the

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10. Although the standard error is high.

11. But again with a high standard error.

12. Which is not necessarily to suggest that the schools are not functional in a wider sense.

tendency to upgrade the academic qualifications required for entry to low-level training courses.

Our results also suggest that in the market for skilled and semi-skilled labour, schooling and training background may not be particularly important determinants of rewards. It is particularly interesting that employers appear to reward higher productivity at least in the sense that, especially at grade I level, they anticipate the test results, paying more to those who are going to pass than to those who are going to fail. In all this an important difference between this and some other labour markets should be noted. There does not seem to be an excess supply of skilled and semi-skilled workers; on the contrary, the high returns to movement between jobs suggest that this is still very much a seller's market. Hence one should be cautious about drawing conclusions from our results for theories such as the screening hypothesis which refer to markets with a surplus of job-applicants (e.g. see Rado, 8, and Dore, 3).

Finally a firm conclusion that can be drawn from our survey is that this is a relatively inexpensive way of collecting useful information. The most sensible procedure in any future investigation would seem to be to increase the size of the sample and reduce the number of questions asked of each person. If the information required were reduced to age, sex, trade, tribe, schooling background, training background, name of current employer, nature and location of job and current monthly earnings, it could be obtained at very little cost from every trade test candidate. The coverage of a larger number on a regular basis would enable distinctions to be drawn between different types of schooling and training, different trades, etc., and might be of quite detailed use for policy purposes. Moreover, Kenya is not the only country which has government trade tests. The widespread use of similar tests in a number of countries on different continents might form the basis for some interesting comparative studies.

APPENDIX A: TRADE TEST PASS RATES BY EDUCATION, TRAINING AND AGE-GROUP

Educational background	Some secondary						Upper primary						Little or no schooling					
Training background	With			Without			With			Without			With			Without		
Age-group	24-	25-34	35+	24-	25-34	35+	24-	25-34	35+	24-	25-34	35+	24-	25-34	35+	24-	25-34	35+
Grade I																		
Number of candidates	5	5	1	10	6	2	2	8	3	1	9	11	0	0	0	1	1	6
Pass Rates	40%	20%	0%	30%	83%	50%	0%	25%	33%	100%	22%	36%	-	-	-	0%	100%	17%
Grade II																		
Number of candidates	9	2	0	14	7	1	6	12	6	2	14	10	1	0	0	1	4	12
Pass Rates	0%	0%	-	43%	43%	0%	50%	17%	17%	50%	43%	60%	0%	-	-	0%	100%	33%
Grade III																		
Number of candidates	16	6	0	23	10	1	32	17	3	46	42	19	6	1	0	6	27	19
Pass Rates	50%	33%	-	61%	60%	0%	44%	59%	33%	59%	74%	63%	50%	100%	-	83%	52%	58%

APPENDIX B: REGRESSION RESULTS

(a) Starting salary in first job

Dependent variable: starting salary (£K)	Constant	Number of years schooling	Number of years full-time training	Age in years	Tribe: Kikuyu (1) Non-Kikuyu (0)	Test performance	R^2	
	8.67	0.60 (0.21)	0.11 (0.42)	-0.11 (0.05)	1.71 (0.99)	0.74 (0.34)	0.11	(1)

(b) Present earnings

Dependent variable: Present earnings (£K)	Constant	Number of years schooling	Number of years full-time training	Number of years working experience	Number of jobs held	Tribe	Test performance	R^2	
All grades	-1.25	0.16 (0.13)	-0.05 (0.59)	0.87 (0.33)	5.02 (0.71)	2.39 (1.36)	3.75 (0.47)	0.48	(2)
Grade III candidates only	6.98	0.11 (0.12)	0.10 (0.97)	0.89 (0.37)	2.07 (0.99)	4.27 (1.61)	2.02 (1.64)	0.21	(3)
Grade II candidates only	6.33	0.72 (0.78)	-1.25 (1.05)	0.86 (0.69)	7.11 (1.05)	-0.64 (2.55)	1.99 (2.77)	0.64	(4)
Grade I candidates only	-15.41	0.96 (1.43)	2.67 (1.36)	3.19 (1.24)	12.68 (2.82)	-0.23 (4.26)	13.65 (4.23)	0.57	(5)

APPENDIX C: CASE-HISTORIES

A purely statistical analysis inevitably fails to convey the diversity of the candidates for trade tests and the full flavour of their experience in the job market. For this purpose a number of individual case-histories is more useful. Of those which follow, some have been chosen for their departure from, some for their conformity with 'normal' experience.

The first two case-histories are examples of the "new breed" of academically qualified young men increasingly presenting themselves for grade III trade tests. The much higher salary earned by the Nairobi carpenter compared with the Gilgil fitter should be noted - and its inverse relationship with the test results.

1. Frederick T. (Kikuyu) was born in Nairobi in 1953 in a relatively prosperous family. His father has a wage-earning job as foreman with a large removals firm and owns a bar. Both parents have been to school, his father up to primary Standard VI and his mother to Standard IV. Frederick reached secondary (academic) school Form IV and obtained the East African Certificate of Education (EACE) in both arts and science subjects. With his father's help he got a job as a carpenter in the same firm soon after leaving school, initially at Shs. 520 monthly and rising by the time of the interview to Shs. 735, plus Shs. 45 in allowances. In addition he is able to earn Shs. 100 a month outside his job. He is studying bookkeeping by correspondence course. This is his first trade test (grade III carpentry) and on this occasion he fails.

2. Frederick A. (Baluhya) was born in 1952 in Kakamega into a relatively educated family. His father is a senior clerk and bookkeeper, and both parents have been to school. Frederick stayed at secondary technical school until Form IV, obtained EACE and also obtained a certificate in general engineering. Five months after finishing his training he got a job as a fitter/turner through a press advertisement with a firm in Gilgil, at a monthly salary of Shs. 170 plus Shs. 30 in allowances. Eight months later, at the time of the interview, the salary is unchanged. He is studying by correspondence for a Builders Certificate in Quantity Surveying. He passes his grade III (fitting) trade test at the first attempt.

The low salaries often paid to semi-skilled workers, particularly to those working outside Nairobi, even if they have had some training (institutional or on-the-job), are illustrated by case-histories 3 and 4.

3. Peter O. (Luo) was born in Siaya district in 1953, the son of a farmer who had stayed at primary school until Standard VI and who, speaking some English, was able to get a job as a cook for a European in Magadi from

1958 onwards. Peter left primary school after Standard IV and spent over two years looking for a regular job in the Kisumu area. A relative working for a transporting firm eventually got him a job in 1967 as a "spanner boy", repairing buses in the firm's workshop, but at a salary of only Shs. 60 per month. This lasted for two years and five months until the company went bankrupt. Peter almost immediately found a similar job with a similar firm owned by a family friend, this time at Shs. 90 per month, and has been working there ever since. He is taking the grade III motor mechanic's test, the first trade test that he has taken, and intends to look for a better job if he passes. On this occasion he fails the test.

4. Samuel K. (Kalenjin) was born in Kericho district in 1953. His father died when he was twelve years old. Samuel, unlike his parents, went to primary school and left after Standard VI. Seventeen months after leaving school he took a nineteen-month tailoring course at a youth training centre and very soon got a job with a local tailor. When interviewed in January 1973, he had only been working for a few weeks, at a monthly salary of Shs. 60 (i.e. well below the legal minimum wage). This is his first attempt at a trade test (grade III tailoring) and it is unsuccessful.

The rewards available to those who change jobs frequently, suggested by our statistical analysis, are illustrated by case-histories 5 and 6.

5. Godfrey M. (Kamba) was born in Machakos district in 1946. His father, although without schooling, did well as a self-employed artisan. Godfrey obtained his KPE certificate (given at the end of eight years of primary education) and had one year of secondary (academic) schooling, leaving in 1964 to look for a wage-earning job. An eighteen-month search ended in Mombasa where a friend informed him of a vacancy for an artisan with the Railways and Harbours Corporation, at a starting salary of Shs. 235. Thus began a sequence of short-lived jobs, interspersed with a period of full-time training, as follows. The job with EARH lasted until April 1968 when Godfrey's monthly salary was Shs. 399; thence to a private engineering firm in Mombasa, also as an artisan, salary Shs. 438; a voluntary change in October 1968 to a job as a "structural steel fabricator" with a steel construction firm at the same salary; in June 1969 a year's break for a general engineering course at the Kenya Industrial Training Institute in Nakuru; then straight into a job as a fitter with another public corporation at a monthly salary of only Shs. 399 plus Shs. 50 in allowances; after a year, in September 1971, a voluntary move to a fitter's job with a private glassworks at Shs. 500 monthly, which lasted only three months; job number six, again as a fitter, with an engineering company, lasted five months, salary at the end being Shs. 550; the next move, to a multinational cement

company, brought a large increase in salary, to Shs. 829, but lasted only three months; at the time of the interview Godfrey was in his fifth month at his eighth job and not entirely certain that he would stay, although he was earning Shs. 1,025 monthly, plus Shs. 400 in allowances. He is following two correspondence courses, in English and draughtsmanship. This is his second attempt at a grade II (general fitting) test and it is unsuccessful.

6. Alfred N. (Kikuyu) was born in Limuru in 1953. His father, who completed primary school, combines farming with petty trading. Alfred reached Form IV in secondary (academic) school and obtained his school certificate in arts and science subjects. He had little difficulty at that time in getting a job as a clerk in the civil service, at a monthly salary of Sha. 400. After eight months he moved to a large motor vehicle company which put him through a motor vehicle technician's sandwich course at the Kenya Polytechnic. This job only lasted a year until the closure of the company in December 1968; by that time Alfred's monthly salary was Shs. 450 plus Shs. 100 in allowances. He moved without difficulty to a job as a technician with a state-owned transport company and continued his course at the Polytechnic. After 2¼ years, by which time he was earning Shs. 700 monthly, Alfred left for a better paid job with a construction company. This paid Shs. 1,500 monthly with free housing, but declared him redundant after sixteen months. This time it took him two months to find another suitable job as a technician/foreman with a private company at a monthly salary of Sns. 1,250, plus Shs. 80 in allowances and the opportunity to earn another Shs. 400 a month outside the job. Having been in his fifth job for over a year at the time of the interview, Alfred is trying hard to get a job with government and is studying for further technical qualifications by correspondence. This is his second attempt at a grade II (motor vehicle mechanic) trade test and it is successful.

Case-history 7 is included as a reminder of the diversity of background from which candidates come. This candidate and four others were at the testing centre "under escort".

7. Joseph M. (Luo) was born in Siaya district in 1944 into a wage-earning family. His father, who has had little schooling, works as a checker on Mombasa docks. Joseph reached secondary (academic) school Form IV and obtained his school certificate in arts and science subjects. It took him sixteen months to find a wage-earning job, but he was lucky enough to get a salesman's post with a large multinational corporation in Mombasa

in May 1966. His salary, initially Shs. 800 monthly, rose in three years to Shs. 1,200 plus Shs. 200 in allowances. In 1969, however, Joseph was arrested and has been in prison since then. While in prison he has learned the craft of tailoring and has come to take a grade III test. He is successful.

Case-histories 8 and 9 are examples of 'typical' grade III candidates, as far as their salaries at the time of the interview are concerned, although they differ in the routes taken to those salaries and in the results of their tests.

8. Duncan M. (Kikuyu) was born in 1950. His father died when he was seven years old and he is now looking after his widowed mother. Neither his father nor his mother had been to school. Duncan completed seven standards of primary school and obtained his KPE certificate. He spent two years looking for a "blue collar" job and finally got one in December 1967 with the help of a relative who "knew the people in charge" at a large public corporation in Nakuru. As a painter, decorating staff houses and offices, he earned Shs. 210 monthly to start with, now earns Shs. 332 and has picked up his skills entirely on the job. This is his first trade test attempt (grade III painting) and it is successful.

9. Michael O. (Luo) was born in Kisumu in 1952 into a relatively high-status family. His father, who completed Standard VIII schooling, is a divisional agricultural officer. Michael reached secondary vocational school Form IV, where he took engineering technology and technical drawing as well as arts and science subjects. He found a job with the help of a relative as a fitter/turner at a large sugar factory near Kisumu, at a starting salary of Shs. 300. Two years later, at the time of the interview, he is earning Shs. 350 and is looking round for a better paid job. This is his first trade test attempt (grade III fitting) and it is unsuccessful.

Case-histories 10 and 11 are earning typical salaries for grade II candidates, although after differing lengths of working life.

10. David N. (Kikuyu) was born in Nakuru district in 1942 into a peasant farming family without schooling. David reached Form II in a secondary (technical) school but did not obtain a Kenya Junior Secondary Education certificate. He passed grade II carpentry while still at school and got a job after three months as maintenance officer with the police at a monthly salary of Shs. 400. He became redundant after fifteen months but soon found another job making and repairing furniture for a bank in Nakuru at Shs. 425 monthly. Again redundancy struck, after sixteen months, but again he had no difficulty in finding another job, this time

as an instructor in carpentry and joinery in a prison. At first he had to accept a slight cut in salary, but by the time of the interview, after four years in the job, he is earning Shs. 525 and is happy in his work. This is his first attempt at the grade II test and he is successful.

11. Benjamin K. (Kikuyu) was born in Nyeri District in 1948 into a wage-earning family. His father has been to school and works as a sweeper for the local council. Benjamin completed primary school, obtaining his KPE certificate and then took a two-year course in carpentry, signwriting and painting at a youth centre. After leaving the centre he was unable to get a wage-earning job for three years. Indeed it was only after passing his grade III trade test in carpentry, at the second attempt, that he secured a job as carpenter with a large Nairobi construction firm in October 1970, by answering a press advertisement. His starting salary was Shs. 413 and his salary at the time of the interview was Shs. 516. This, his first attempt at a grade II test, is unsuccessful.

Case-histories 12 and 13 are examples of typical grade I candidates in terms of earnings, although their trades, backgrounds and performance in the test differ.

12. Simeon G. (Kikuyu) was born in Kiambu District in 1948. His parents have not been to school but his father, now retired, worked at one time as a head man on an estate. Simeon completed his primary schooling and obtained a KPE certificate in 1964, then went directly into a two-year shoemaker's course in a technical school. Nevertheless he had to wait twenty months before finding a wage-earning job as a shoemaker with a multinational company, soon after passing his grade III trade test. The starting salary was Shs. 367 monthly, and when he left after three years he was earning Shs. 470 plus Shs. 30 in allowances and Shs. 100 outside his job. His hopes of finding a better job immediately were not realised, but after six months he started work with another shoe company, initially at Shs. 400 monthly rising to Shs. 530 plus Shs. 100 in allowances by the time of our interview. He passed his grade III and II tests at the first attempt but this time, attempting grade I, he is unsuccessful.

13. Gilbert W. (Kikuyu) was born in Kiambu District in 1946 in a peasant farming family. Neither of his parents has been to school, but Gilbert completed primary school and obtained his KPE. He then did a two-year

course in turning at a technical school, after which he found a job without difficulty as a turner in the tools room of a large construction firm at a starting salary of Shs. 331. Six years later, at the time of the interview, he is earning Shs. 676 a month and is "not sure" whether he is going to remain in his present job. He passed his grade III (1968) and grade II (1970) tests in turning on his first attempts and this, his first attempt at grade I, is also successful.

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