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TRAINING FOR SELF-EMPLOYMENT?:
THE PERFORMANCE OF RURAL TRAINING CENTRES IN ZIMBABWE

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Introduction

In common with most other developing countries, youth unemployment in Zimbabwe has reached crisis proportions. While the extent of the problem is not known precisely, it would appear that no more than one-third of the country's school-leavers found jobs in the formal sector of the economy during the late 1980s (See Bennell and Ncube, 1991). Faced with this situation, the Government of Zimbabwe has introduced various policies which collectively seek to improve employment opportunities in the rural areas of the country where seventy percent of the population continue to live.¹ This process of rural development aims not only to raise the productivity and thus household incomes of peasant (smallholder) farmers but also focuses on the employment needs of the forty percent of the rural population who are engaged in numerous non-farm activities.

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Given rapidly escalating levels of unemployment among school-leavers, the Zimbabwean government has been especially concerned to increase substantially self-employment among young people in the rural areas and thereby help to dampen rural-urban migration. One of the key areas of intervention in this respect has been the expanded provision of "appropriate" skills training that the government believes will enable rural youth to become productively self-employed.

In order that education and training is "practical" and "relevant", school curricula, particularly at the secondary level, are currently being vocationalised (Bennell, 1991a). Post-school training institutions have also been established both by government and non-government organisations with the specific objective of training school-leavers for individual or collective self-employment in rural areas. Thirteen youth training centres (YTCs) located throughout the country have spearheaded government efforts to train rural youth since independence in 1980.²

This article presents and discusses the findings of recently completed research which assesses the extent to which these post-school, pre-employment training initiatives have achieved their central objective of promoting self-employment in the rural areas of Zimbabwe. Selected graduates from two YTCs and one privately run rural training centre have been successfully traced. By analysing the post-training experiences of these individuals it is possible to assess the extent to which government training objectives have been realised during the 1980s.

The discussion will be structured as follows. Some historical background is provided in section 1. The next two sections summarise the main institutional features of the two types of rural training provision under investigation and the research methodology employed. The results of the tracer and questionnaire surveys that were conducted are then presented in section 4. We

conclude by exploring some of the policy implications which emerge from this research.

1. Self-Employment in Zimbabwe: The Historical Context.

Settler colonialism in what was then Rhodesia stifled the development of self-employment opportunities for Africans outside of peasant agriculture. In contrast, therefore, with most other African countries, non-farm self-employment in Zimbabwe remains very low. According to the 1986-87 Labour Force Survey, 7.4% of Zimbabwe's economically active population of 3.25 million were self-employed in the rural and urban informal sectors. As can be observed in Table I, the proportions of the labour force employed in the informal sector in other African countries are much higher.

INSERT TABLE I

From the 1920s onwards, the African population was forcibly confined to 'tribal trust lands' that were mainly located in areas of low agricultural potential (see Arrighi, 1970). At the same time, the demand for unskilled wage labour to work in the commercial farms, mines and factories of the developing settler economy expanded rapidly. By the Second World War, the supply of migrant labour from increasingly impoverished rural labour reserves had become a central feature of the Rhodesian economy.

The consequences for self-employment have been of profound importance. Firstly, the migrant labour system and the related underdevelopment of the rural areas discouraged the growth of rural markets for goods and services that could have been produced by self-employed petty-producers. And, with nearly half of the male labour force in wage employment by the mid-1960s, workers spent most of their incomes on relatively cheap wage goods produced by, what were by African standards, large and

sophisticated manufacturing enterprises. Coupled with a relatively good transport system across the country, rural producers were generally unable therefore to compete with these urban-based enterprises.

Secondly, the movement of African labour was strictly controlled by the settler state so that only Africans in wage employment were generally allowed to remain in the urban areas. In particular, punitive legal controls prevented any significant influx of surplus labour to the towns which, in other African countries, had already begun to engage in informal sector activities.

Since Independence, most of the legal constraints on urban residence have been removed and there has occurred rapid rural-urban migration. Nevertheless, large-scale manufacturing enterprises continue to dominate the majority of product markets with the result that the number of market niches which can be exploited by the self-employed in urban areas is still somewhat limited.

Non-farm activities, most notably manufacturing, personal services, building and trading are commonly found in all rural areas in Zimbabwe. However, because of the continued limited size of rural markets, many of these activities are not economically viable with incomes that are usually considerably lower than government-stipulated minimum wages for unskilled workers.

It is against this background that the government in post-independence Zimbabwe has attempted to promote self-employment, particularly in the rural areas of the country.

2. The Case Study Training Institutions.

Youth Training Centres: Thirteen YTCs have been established by government since independence in 1980. Two of the largest of these centres, at Chaminuka (in Mashonaland Central Province) and Phangani (in Matabeleland South Province) were selected as the YTC case study institutions.

The official objectives of the YTCs are: (1) To equip the most disadvantaged rural youth with skills that will enable them to be self-employed in rural areas; (2) To provide a political basis for young people that will enable them to implement the ideas of socialism; and (3) To instill an appreciation and support for cooperative development programmes. YTCs are, therefore, quasi-political organisations and, as such, they are administered by the Ministry of Political Affairs.³ Officially, these objectives remained unchanged during the 1980s.

To be eligible, YTC applicants must have been out of secondary school for at least a year and be between 16-27 years old. The selection of applicants is done at district, provincial and national levels.

When YTCs were originally established in 1980, the intention was to provide ex-combatants in Zimbabwe's war of liberation and other unqualified youth with a strongly practical residential training in basic trades that would equip them for cooperative and individual self-employment in the rural areas. Two year, full-time training courses were developed which, by the mid-1980s, covered the following subject areas: agriculture, carpentry, building, welding, clothing, motor mechanics, fitting and turning, and welding and boiler making.

At the end of this two year training period, successful trainees were awarded the YTC's own certificate of competence. But,

because this qualification was not recognised by the main vocational training examination bodies in the country, it was of little use to those YTC graduates who tried to find wage employment in the formal sector. This was, of course, precisely why a YTC-specific qualification was introduced in the first place but, the refusal of most employers to recognise it, rendered YTC training a distinctly unpopular option among rural youth. As one of the early graduates put it, 'When you produce your certificate to a prospective employer, he looks down on it'

Trainee discontent continued to increase and total enrollments in the early 1920s stagnated at around 1000 a year, far below maximum capacity. The government decided, therefore, to revise comprehensively the YTC curriculum so that students could obtain employer-recognised trade tests set and awarded by the Ministry of Labour.⁴ Although not explicitly stated at the time, this new trade test oriented curriculum which was first introduced in 1984 has fundamentally transformed the training role of the YTCs.

Acceptance of this curriculum has meant that the duration of YTC training in key trades such as carpentry, motor mechanics and fitting and turner has had to be increased to three years so as to allow sufficient time for students to pass all four trade tests. The highest of these trade tests (Grade 1) is the equivalent to a full, four year conventional craft apprenticeship training.⁵ Furthermore, in order to acquire the necessary on the job training experience needed to pass trade tests, the YTC trainee spends two six month periods on industrial attachment with mainly private sector employers.

The other key change that was made in 1984 was that the academic entry requirement for the more technical trades was raised to 3-5 'O' levels.⁶ Despite the nearly tenfold expansion in secondary school enrollments in Zimbabwe since independence⁷, no more than 20% of form four school-leavers from rural schools

obtained five or more 'D' level passes in 1989 (World Bank, 1990). Since the mid 1980s, therefore, the YTCs have been serving a relatively small, academically able clientele whose principal objective is to obtain wage employment in the mainly urban-based formal sector of the economy.

With the introduction of the new YTC curriculum, total enrollments doubled within a year. However, the YTCs have had to contend with chronic shortages of instructors, equipment and materials which, collectively, have resulted in generally low training standards in many of the trades offered. In 1989, for example, fewer than five percent of YTC engineering trainees finished their training with a grade one trade test.

The financial situation of the YTCs had become so acute by the 1989/90 financial year that total enrollments of 2800 were only fifty percent of the estimated maximum student capacity of the centres. Total costs per student averaged approximately Z\$2,000 (US\$800) per annum in 1989 but YTC training continued to be provided by the government free of charge. Compared with in-plant artisan apprenticeship where trainees spend nearly ninety percent of their time working productively on the job, the YTC trainee spends only one-third of his time on industrial attachment. Consequently, the combined direct and income foregone costs per YTC trainee were almost fifty percent higher than apprenticeship in the late 1980s. Not surprisingly, therefore, the internal efficiency of YTC training has been relatively low.

The Chinhoyi Rural Training Centre: The Chinhoyi Rural Training Centre (CRTC) is, in many ways, typical of NGO training activities in Zimbabwe. The centre is funded and run by the Catholic Church, having been established in 1979 to provide training opportunities for unemployed youth living in the Chinhoyi area. With a population of 30,000, Chinhoyi is, by

Zimbabwean standards, a medium sized town situated some 115 kilometers north of the capital, Harare.

CRTC offers artisan-level training in three trades (carpentry, metalworking and motor mechanics) with a total enrollment of around fifty. Trainees gain practical experience by undertaking supervised work for private clients and, in this way, the centre has managed to become completely self-financing. At the end of their two year training, successful trainees are awarded the centre's own certificate of competence. Unlike YTC training, therefore, the management of CRTC has decided (for mainly financial reasons) not to introduce trade tested training courses. Recruiting and retaining good quality instructors has been the centre's biggest problem during the 1980s.

3. Research Methodology

Selected outputs of graduates from the case study institutions who trained in four basic engineering trades, namely fitting and turning and welding at Phangani YTC, metalworking at CRTC, and motor mechanics at both Chaminuka YTC and CRTC were selected for this study. Engineering skills are, for obvious reasons, of critical importance in all sectors of a developing economy, including the rural areas where a wide range of artisanal engineering activities (eg. blacksmithing, motor repairs, welding) are commonly found.

A simple tracer survey methodology was used in order to ascertain the current (in early 1990) whereabouts of all 1985 and 1989 graduates from Chaminuka and Phangani YTCs in the above mentioned engineering trades.⁸ Unfortunately, comprehensive attendance records for these years were not available at CRTC. However, the names of 45 graduates in metalworking and motor mechanics during the period 1980-1989 were compiled by the teaching staff at the centre. This group is not representative of CRTC outputs as a

whole because it comprises of only those individuals who are believed to be working as artisans and other skilled engineering workers. In other words, graduates doing 'training unrelated jobs' such as clerks, gardeners, farmers were mostly excluded. Thus, the sample is probably fairly representative of those graduates from CRTC who have benefited most from this training. Where home addresses were available, individuals were written to directly and requested to complete a short three page questionnaire. This was done in order to obtain basic information on socio-economic background, education and training, career history, current employment, income and the relevance of their training. They were also sent a list of the names of their fellow students with whom they had trained and asked to provide information where any of them might now be contacted. In this way it was possible to trace individuals for whom no contact addresses were available (either home or work).

Out of a total sample population of 170, 151 graduates (91%) were traced with a reasonable degree of confidence (See Table II). One group, the 1985 Phangani YTC fitters and turners, proved to be quite impossible to trace mainly because no home addresses were available that could have provided initial leads. There was no alternative therefore but to exclude this group from the study altogether.

INSERT TABLE II

Nearly two-thirds of respondents satisfactorily completed the postal questionnaire (see table II). This is an exceptionally high response rate which, given the relatively small sample populations, is absolutely essential for research of this kind.

4. Research Findings

The following discussion presents the main findings of the tracer and questionnaire surveys of YTC and CRTC graduates.

Socio-Economic and Educational Backgrounds.

Father's occupation is generally regarded as the key indicator of the socio-economic background of an individual. Unfortunately, not all respondents in this study provided this information¹⁰ but, from those that did, it can be observed in table III that the large majority of them come from peasant and working class families. Only slightly more than 20% of fathers had skilled jobs, most of these being teachers and apprenticed artisans. While this is a disproportionate number given the occupational profile of the labour force as a whole in Zimbabwe, Table III shows that access to training at these rural training centre has been considerably more equitable than among apprentice-trained artisans in similar trades where nearly fifty percent of fathers were in skilled occupations. Nevertheless, it is noticeable that 52,2% of respondents' fathers were in wage employment compared with less than 20% for economically active males as a whole in rural areas in Zimbabwe (Government of Zimbabwe, 1989a).

INSERT TABLE III

YTC recruits have also been selected on the basis of a geographical quota system so as to ensure an equitable distribution of students from among the districts and provinces in Zimbabwe. This is in marked contrast to the selection process for apprentice-trained artisans where a markedly disproportionate number come from the seven main urban centres in the country (See Bennell, 1991b). While CRTC specifically caters for youth in the Chinhoyi area, some 40% of respondents gave their home areas as being in locations at least one hundred kilometers away from the

centre. This is indicative of the enormous demand for vocational training in Zimbabwe.

Trainees with 'O' levels were the exception rather than the rule at the two YTCs and CRTC in the mid 1980s. However, by 1989, trainees at these institutions had, on average, three-four 'O' levels with up to a third of them having five 'O' levels or more (see table IV). This very significant change in trainee qualification profiles has, in large measure, been the direct consequence of the massive expansion secondary school enrollments noted earlier. Post-school training opportunities have increased at a much slower rate with the result that competition for available places has intensified rapidly. In the early 1980s, it would have been unthinkable, for example, that a student with Cambridge School Certificate (i.e. 5 'O' levels or more) would have attended a YTC. Such is the transformation that has occurred in Zimbabwe's education system during the last ten years.

INSERT TABLE IV

A similar, although less marked process of qualification escalation, has occurred among apprentice trained artisans. In 1989, over 100,000 eligible applicants applied for fewer than 1000 apprenticeship places. Unsuccessful apprentice applicants have, therefore, tried to obtain artisan training wherever they can. YTCs, in particular, have become an important destination for school-leavers in this position. But, in general, this alternative, mainly pre-employment vocational training has been regarded by school-leavers and their parents as very much a second best option.

Post-Training Experiences

The tracer survey reveals that only four out of the 151 traced engineering trades graduates from Chaminuka and Phangani YTCs and

INSERT TABLE VII

In their written comments, many questionnaire respondents stated how grateful they were to have received a vocational training that they would otherwise not have had access to. This is especially the case for those with no or few 'O' levels whose employment prospects would have undoubtedly been very grim in the absence of some kind of post-school training.

Most YTC and CRTC engineering graduates were employed in the private sector in early 1990. It is noticeable, however, that compared with apprentice-trained artisans in similar trades, much larger proportions of these graduates, (in particular from Phangani YTC and CRTC) were employed in small to medium enterprises. It would appear, therefore, that the labour market for engineering artisan skills is segmented, at least to some extent with, on the one hand, apprentice-trained artisans taking the lion's share of "good" jobs in the large company sector while, on the other hand, artisans trained at other, 'second best' training centres being concentrated in smaller enterprises (i.e. with fewer than 200 employees).

Training at the case study institutions has considerably improved the incomes of individual trainees over and above what these would have been had they remained untrained. This is particularly the case for the 1989 YTC outputs who, with certified trade tests, have been able to earn at least double the government minimum wage in industry and commerce. However, average incomes among groups of trainees who have no trade tests (i.e. Chaminuka YTC 1985 and CRTC outputs) are considerably lower (See Table VIII).

INSERT TABLE VIII

There is also a strong positive and statistically significant relationship between average incomes and the number of 'O' levels obtained by individual trainees (See Table IX). It seems doubtful, however, that these income differences can be wholly attributed to differences in individual "human capital" as measured by "O" level passes. This is because employers in Zimbabwe are increasingly asking for five "O" levels from applicants for even unskilled jobs so that these qualifications are merely being used for screening purposes. In short, those with the best "O" levels tend to get the best jobs.

INSERT TABLE IX

Perhaps the most significant feature of the pattern of artisan incomes in Zimbabwe, is the very large income differentials between apprentice trained artisans and graduates from the YTCs and training centres such as CRTC. Table VIII shows that this differential was around 5:1 in the mid 1980s and still well over 3:1 in 1989. Human capital theorists would argue that these income differentials simply reflect differences in the aggregate levels of labour productivity between the two groups which, in turn, are directly attributable to the differing amounts of human capital acquired during the training process. Certainly apprenticed artisans in Zimbabwe are better trained with much longer periods on the job than their YTC counterparts. But it does not seem conceivable that these differences in the training process could result in such large income differentials.

The job competition model may, therefore, offer a more plausible explanation. The central proposition of this model is that incomes are attached to jobs rather than people with labour markets being characterised by 'jobs looking for people rather than people looking for jobs' (Thurow, 1976:44). As noted earlier, most apprentice-trained artisans in Zimbabwe are sponsored by and subsequently work for a relatively small group of large companies

who, in terms of net output and employment, dominate key sectors of the economy, particularly in mining and manufacture.¹¹ Companies enjoying this degree of market power have the ability to pay, substantially higher wages. They also frequently use quite specialised production technologies which require equally specialised skills which can normally only be acquired on the job. Consequently, these companies typically incur considerable training costs mainly because their employees can only acquire these skills on the job, often over very long periods of time. It is in their interests, therefore, to minimise job turnover among these trained staff and, in order to do this, companies develop their own career and salary structures which promote job stability. Thus, another possible reason for the much higher incomes of apprenticed artisans is that the jobs which they occupy are part of these company specific 'internal labour markets' (See Doeringer and Priore, 1971).

With limited artisan job opportunities in the large company sector in Zimbabwe, engineering graduates from the YTCs and CRTC have generally found jobs with smaller enterprises which rarely enjoy anything like the same degree of market power as large enterprises nor do they have their own internal labour markets. Consequently, their segment of the artisan labour market is likely to be considerably more competitive with incomes being determined more by the operation of external labour markets as these are conceived by standard neoclassical economic theory.

Needless to say, many graduates from the case study institutions interpret the large differences in incomes between themselves and apprentice trained artisans as simply being due to the exploitative employment practices of their predominantly white employers. A 1989 Phangani YTC fitter and turner graduate neatly summarised this view: 'The problem is that we are only in the industries for cheap labour, we are not paid as other fitters and turners but doing the same job'. Unless, therefore, these

individuals can become apprenticed artisans and thereby break into the high paying segment of the artisan labour market there seems little chance that they can significantly improve their income earning capacity. To date, fewer than 5% of YTC and CRTC graduates have managed to become apprentices which, despite entailing another four years of training, remains the overriding ambition among the large majority of more recent graduates from these institutions.

Although relegated to relatively low paying artisan jobs, it is clear that the private rates of return from training at the YTCs and CRTC have been sufficiently attractive to generate considerable individual demand for this training. The direct costs incurred by trainees are negligible¹² and the opportunity costs in terms of income foregone are also likely to have been very low.

While the necessary time-series income data are not available for a full-blown rates of analysis (ROR) of YTC and CRTC training based on discounted training cost and income flows, a simplified, short-cut method has been frequently used which provides approximate estimates for specific education and training investments.¹³

Using this simplified method yields quite respectable private RORs of 20-25% for the 1989 YTC graduates. However, with total direct training costs of £5000-6000 (US\$2000-2400) per student, the social RORs are much lower: 2.3%, 11.6% and 14.1% for the welding, automotive, and fitting and turning courses respectively. In contrast, the corresponding social RORs for apprentice-trained artisans who completed their training in 1988/89 are between 50-60%. Thus, in terms of overall social welfare impacts, conventional artisan training appears to be considerably more cost-effective than pre-employment artisan training of the kind offered by the YTC (See Bennell, 1991c).

5. Policy Implications

The research findings presented in this article raise serious doubts about the efficiency and effectiveness of both government and NQC post-school rural training institutions in Zimbabwe. Of particular concern is that only a handful of graduates from the case study training institutions have become self-employed. Thus, while considerable attention has been devoted to analysing the 'vocational school fallacy' (See Foster, 1965; Dougherty, 1989), it is equally fallacious to believe, certainly in Zimbabwe, that post-school vocational training is likely to be any more successful in promoting self-employment in the rural areas. What is quite clear is that the prevailing wage and salary structures coupled with the pervasive 'urban-bias' of Zimbabwean society (which is repeatedly manifested in government policies) are such that there are few incentives for young people to remain in rural areas.

Given the much higher social RORs to in-plant apprenticeship training, it would appear that the most cost-effective artisan training strategy would be for the government to provide more incentives for employers, both large and small, to train apprentices over and above their immediate requirements.

The government itself is increasingly aware of the limitations of the present three year, trade test oriented training offered by the YTCs. In fact, the training mandates of these institutions may be comprehensively revised so that, in future, they will provide short training courses for an older clientele who are already relatively well established in rural-based production activities and who require skills upgrading in specific areas.

If indeed this happens, then the overall training objectives will be considerably less ambitious in that there would no longer be any attempt to shape occupational aspirations nor to provide

certified, broad skill artisan training. Training costs per student would also be much lower with the additional possibility of much larger numbers of individuals being trained.

Given the numerous difficulties that the YTCs have encountered in trying to offer high quality artisan training coupled with the post-training experiences of YTC graduates during the 1980s, this may well be a more efficient and effective training strategy. However, determining the likely outcomes of specific training investments remains as problematic as ever.

The poor performance of these rural training institutions in Zimbabwe during the 1980s also highlights the inadequacy of training on its own in generating self-employment. Evidence from other countries and even within Zimbabwe itself (See CINTERFOR, 1970; Bennell, 1991d) shows clearly that 'training for self-employment' is usually only successful when it is provided as part of well designed projects where market opportunities for specific goods and services have been carefully identified and where an integrated package of high quality and timely support services are made available. Training is invariably one of the most critical of these services but, unless post-training support in key areas such as expert advice on production and marketing and the assistance in the provision of key inputs (ie. land, tools, working capital and other forms of credit) are made available, then the skills imparted during the training process are unlikely to be properly utilised.

Another important lesson is that training itself should not be simply confined to the technical skills necessary for the production of specific products or services but should cover all the skills necessary for the successful functioning of the project/enterprise as a whole. Of particular importance are administration and management skills.

The need to identify viable self-employment opportunities for Zimbabwe's youth is more urgent than ever since only a small minority of school-leavers (probably no more than ten percent) will find wage employment during the 1990s. Consequently, most of them will have little choice but to seek self-employment- either as smallholder (peasant) farmers or as petty producers in the rural and urban informal sectors. While training will have an important role to play, the enormous number of people involved will mean that government and other interested organisations will only be able to cater directly for a small proportion of them. Government's primary role must be therefore to create an 'enabling environment' for the development of microenterprises by removing key legal, physical and financial constraints and by generally promoting economic strategies that will expand income-earning opportunities for the low income self-employed.

Table 1: The size of the ^{total} labour force and urban and informal sector labour forces ('000) in selected African countries, mid 1980s.

Country	Total labour force	Urban labour force	Informal sector employment	As % of:	
				urban labour force	total labour force
Benin	1763	661	480	72.6	27.0
Burkina Faso	3270	392	236	60.2	7.2
Burundi	2108	144	65	45.1	2.9
Congo	640	514	153	36.9	23.9
Coted'Ivoire	3608	2332	1539	60.8	42.6
Gabon	465	211	46	21.8	4.8
Ghana	4671	1820	911	38.3	19.5
Guinea	2500	500	306	61.2	12.2
Madagascar	3932	838	190	22.7	4.8
Malawi	2655	578	133	23.0	5.0
Mali	2149	395	130	32.9	6.0
Nigeria	32232	12797	8332	65.1	25.8
Niçar	2743	317	217	68.5	7.9
Rwanda	2681	246	116	47.2	4.8
Senegal	2478	625	283	44.3	11.4
Zaire	10373	4919	3255	66.2	31.3

Source: ILO. (1989). Africa Employment Report 1988. JASPA, Addis Ababa.

Table II: Coverage of YTC and CRTC tracer and questionnaire surveys.

Year finished	Sample size	Traced	Questionnaire
CHAMINUKA YTC: Motor mechanics			
1984	9	8 (89)	4 (44)
1985	13	10 (77)	7 (54)
1989	27	24 (89)	20 (74)
Sub-total	49	42 (86)	31 (63)
PHANGANI YTC:			
1989 Fitters & turners	33	29 (88)	18 (55)
1989 Welders	44	39 (87)	32 (73)
Sub-total	77	68 (88)	48 (62)
CHINHDIYI RTC			
1980-84			
Motor mechanics	9	8 (89)	7 (78)
Metalworking	15	14 (93)	8 (53)
1985-89			
Motor mechanics	9	7 (78)	4 (44)
Metalworking	12	12 (100)	9 (75)
Sub-total	45	41 (91)	28 (62)
Grand total	170	151 (89)	107 (63)

Table III: Occupational background of respondents' fathers.

Father's occupation	YTC & CRTC		APPRENTICED ARTISANS	
	Number	%	Number	%
1. WAGED EMPLOYMENT				
Professional & managerial	0	0.0	1	2.1
Skilled- technical	7	10.1	9	18.7
Skilled- non-technical	7	10.1	13	27.1
Semi- and unskilled	22	31.9	15	31.2
Sub-totals	36	52.5	38	79.1
2. SELF-EMPLOYED				
Businessmen	3	4.3	2	4.2
Builders and rural artisans	8	11.6	0	0.0
Peasant farmers	20	29.0	8	16.7
Others not specified	2	2.9	0	0.0
Sub-totals	33	47.6	10	20.9
Grand totals	69	100.0	48	100.0

Notes: Data for apprenticed artisans comes from a tracer and questionnaire survey of production engineering artisan apprentice outputs in 1985 and 1988. Only African i.e. non-white apprenticed artisans have been included here.

Table IV: Age and 'O' level qualifications of YTC and CRTC intakes

Institution	Year	Age on entry	Percent distrib. 'O' levels		
			0	1-4	5-10
CHAMINUKA YTC	1985	20	100	0	0
	1989	19	0	70	30
PHANGANI YTC	1989	17	0	58	17
CHINHOVI RTC	1980-84	18	100	0	0
	1985-89	19	32	36	32
APPRENTICED	1985	20	13	27	60
ARTISANS	1988	20	4	26	70

Table V: Type of employment among YTC and CRTC outputs, early 1990 (percentages).

Institution & year	Central & local govt.	Para-statal	Private s-m	Private lg.	Self Unemp-loyed	Over-seas	NILF
CHAMINUKA							
1984	25.0	0.0	12.5	12.5	25.0	12.5	0.0
1985	37.5	0.0	25.0	0.0	12.5	37.5	0.0
1989	0.0	4.2	25.0	50.0	0.0	12.5	8.3
PHANGANI							
1989 Fitters	3.4	0.0	58.6	27.6	0.0	10.3	0.0
1989 Welders	7.7	0.0	46.2	10.3	0.0	35.9	0.0
CHINHOYI							
Motor mech.	23.8	0.0	52.4	14.3	0.0	4.8	0.0
Metalworking	4.5	4.5	45.6	22.7	4.5	13.6	4.5
Overall	9.9	1.3	43.0	21.3	2.6	18.5	2.0
Number	15	2	65	32	4	28	3

Notes: NILF is 'not in the labour force' i.e. deceased, housewife, full time education.

Table VI: Respondent ratings of training relevance (percentages)

Institution	Totally irrelevant	Largely irrelevant	Of some relevance	Quite relevant	Very relevant
Chaminuka YTC					
1984&85	14.3	28.6	28.6	28.6	0.0
1989	0.0	10.5	15.8	47.4	26.3
Phangani YTC					
Fitting & turning 1989	0.0	17.6	5.9	47.1	29.4
Welding 1989	10.0	13.3	16.7	40.0	20.0
Chinhoyi RTC					
Motor mech.	0.0	0.0	20.0	60.0	20.0
Metalworking	0.0	16.7	16.7	58.3	8.3

Table VII: Respondent ratings of level of job fulfillment in the light of original job expectations (percentages).

Institution	Completely fulfilled	Poorly fulfilled	Moderately fulfilled	Well fulfilled	Completely fulfilled
Chaminuka YTC					
1984/85	42.9	14.3	42.9	0.0	0.0
1989	15.8	10.5	42.1	21.1	10.5
Phangani YTC					
Fitting & turning 1989	11.8	5.9	47.1	23.5	11.8
Welding 1989	33.3	13.3	20.0	16.7	16.7
Chinhoyi RTC					
Motor mech.	0.0	6.7	27.7	53.3	13.3
Metalworking	25.0	0.0	8.3	50.0	16.7

Table VIII: 1990 average and median gross monthly incomes of YTC, CRTC and apprenticed artisan outputs (Z\$).

Trade & institution	Year	Average	Median
<u>Motor mechanics</u>			
Chaminuka YTC	1984-85	287	259
CRTC	1980-85	343	320
Artisans	1985	1625	1800
Chaminuka YTC	1987	457	401
CRTC	1987	368	320
Artisans	1988	1490	1400
<u>Fitters & turners</u>			
CRTC	1980-85	326	400
Artisans	1985	2175	2180
Phangani YTC	1987	472	480
CRTC	1987	283	250
Artisans	1988	1741	1700

Table IX: Average gross monthly incomes by number of '0' levels passed.

Institution	Year	0	1-4	5-10
Chaminuka YTC	1989	-	442 (315)	514
Phangani YTC	1989	277 (185)	427 (256)	595
CRTC	1985-88	273 (228)	462	420 (280)

Notes: Figures in brackets are unemployment adjusted incomes.

FOOTNOTES

1. The population of Zimbabwe was estimated to be 9.5 million in 1988.

2. This research forms part of a comprehensive study of mechanical engineering training at the professional, technician and artisan levels in Zimbabwe during the 1980s.

3. Prior to 1987, YTCs were the responsibility of the now disbanded Ministry of Youth, Sport and Culture.

4. These trade tests were originally introduced in the early 1980s mainly in order to certify African workers who had acquired considerable skills as artisans, often over very long periods of time, but which had never been formally recognised in terms of status and pay by predominantly white employers.

5. Apprenticeship training in Zimbabwe continues to be based on the traditional (ie. pre-YTS) British system. Craft apprentices are indentured for four years and spend most of their time being trained on the job by their sponsoring employer.

6. The General Certificate of Education (GCE) ordinary level examinations are taken at the end of four years of secondary education. Most students study 6-8 subjects. Cambridge University is still the main examining board but 'localised' 'O' levels will be progressively introduced from 1992 onwards.

7. Secondary school enrollments increased from 74,321 in 1980 to 670,557 in 1990. See World Bank, 1990.

8. Since fewer than ten motor mechanic graduated from Chaminuka YTC in 1985, it was decided to also include 1984 graduates in the tracer and questionnaire surveys.

9. All respondents were promised a summary of the research findings for their training institution in return for their assistance in completing the questionnaire. This certainly helped to boost response rates.

10. In response to the question, 'What is your father's occupation?', about one-quarter of respondents wrote 'deceased' or 'retired'.

11. Approximately 10% of manufacturing enterprises in Zimbabwe accounted for over 30% of total employment in this sector in the mid 1980s. See Government of Zimbabwe, 1989b.

12. YTC training has been completely free. Fees at CRTC were approximately \$75 per annum in 1989.

13. This method is based on the following equation
$$\text{IRR} = \frac{\text{post-training income} - \text{pre-training income}}{\text{total training costs}}$$

Reasonably good estimates can be obtained using this method so long as the post-training period is at least thirty years and the pre- and post-training income differential remains relatively constant. See Psacharopoulos, 1981.

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