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SKILL REQUIREMENTS FOR  
INDUSTRIAL DEVELOPMENT IN ZIMBABWE -  
THE PROSPECTIVE ROLE OF WOMEN \*

prepared by the  
Regional and Country Studies Branch  
Industrial Policy and Perspectives Division

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## PREFACE

This study was prepared by UNIDO on request by the Government of Zimbabwe. The aim of the study is to serve as a background paper for the "National Symposium on Human Resources for Zimbabwe's Industrial Development: The Role of Women" held in Kadoma, Zimbabwe in June 1989. Constituting a follow-up to the UNIDO study "Human Resources in Zimbabwe's Industrial Development - the Current and Prospective Contribution of Women",<sup>2/</sup> the paper attempts to very briefly identify major emerging skill requirements and gaps in the Zimbabwean industry with regard to women and to assess to what extent the current education and vocational training systems may have to be adjusted to the new needs for training.

From the outset it was clear that the paper would be very limited in its scope and was intended primarily to generate a first awareness of the key trends and issues pertaining to an enhancement of women in various skill categories within the industrial sector. It is also intended to stimulate more detailed forward-looking analyses both on emerging skill requirements and on the scope for adjusting the education and training capacities towards meeting the changing needs.

The study attempts to highlight the following concerns:

- Which skill categories are now considered particularly scarce in Zimbabwe's industry and which new skill requirements seem to emerge in the medium-term perspective?
- Which function and skill areas seem to be particularly relevant for an increased participation of women?
- What constraints are there to an increased participation of women?
- Besides various functions in manufacturing industry and in various support services, what areas can be distinguished as particularly promising for an increased participation of women in the country's industrialization process?
- How adequate are present training capacities and educational facilities? and
- How could emerging gaps in the human resources development be bridged?

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<sup>\*/</sup> Department for Programme and Project Development.

Interviews were carried out with managers of Zimbabwean companies of various sizes and active in various industrial branches. The interviews covered expected development of industry, skills missing today and expected to be missing in the medium term perspective, functions and skills important for an increased female participation, existing obstacles for increasing such participation and employers' attitudes towards promoting women. A list of ministries, institutions and companies visited is given in Annex 1. The questionnaire is given in Annex 2.

This study is prepared by UNIDO's Regional and Country Studies Branch on the basis of consultants' reports by Ms. Rita Aronsson and Ms. Kristina Lundquist of AMU, Sweden and in close co-ordination with the Unit for the Integration of Women into Industrial Development. Empirical material for the study was collected by the consultants during a two-week mission to Zimbabwe during April 1989. The field study was carried out in co-operation with the Ministry of Community and Development, Department of Women's Affairs.

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## 1. EMPLOYMENT PATTERNS IN ZIMBABWEAN INDUSTRY TODAY

The manufacturing sector plays a crucial role in the national economy and is a main contributor towards national value added. It is one of the largest employers of labour, providing 12 per cent of total formal employment (second to agriculture providing 26 per cent).

It is a critical source of Government revenue through direct and indirect tax receipts. It is also a major exporter contributing more than one-third of total exports. But the sector also accounts for most of Zimbabwe's imports.

Food processing, textiles and clothing, chemicals and metal products account for more than one half of the sector's total value of production. Metal products dominate in terms of firms, net output, export and capital stock. Other sectors are tobacco, textiles, clothing, wood, paper, non-metallic mineral products and transport equipment.

Out of the manufacturing turnover of Z\$ 3.2 billion, private and unincorporated enterprises account for 86 per cent, while parastatals in food processing and textiles account for 10 per cent and public firms (mainly in metals) account for 4 per cent. There is a predominance of private ownership. Depending on the definition of foreign ownership most estimates put the percentage owned by foreigners between 25 and 55. There is, however, a decreasing tendency in this respect.

In 1986, manufacturing contributed 30 per cent of GDP, far more than the traditional sector, agriculture, that contributed 11 per cent during the same period.<sup>1/</sup> However, the rate of growth since 1980 has been faster in both agriculture and services, and the latter sector is the largest in the country in terms of share in GDP. In structural terms this means that manufacturing in Zimbabwe, like elsewhere, is becoming increasingly dependent on external functions provided by the services sector such as banking, insurance, transportation, engineering and other consultant services etc. Thus, in considering the human resources requirement of industry today, the service sector must also be taken into account.

Although the share of manufacturing in total GDP declined between 1980 and 1984, it has been rising since then and UNIDO is forecasting a continuing increase in 1988 and 1989.<sup>2/</sup>

The Harare region accounts for 46 per cent of manufacturing employment, the Bulawayo region for 28 per cent and the Kwe-Kwe-Redcliffe region for 5 per cent. In other words, these three regions account for 79 per cent of overall manufacturing employment.

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<sup>1/</sup> World Development Report 1988. The World Bank, Washington D.C., 1988.

<sup>2/</sup> Industry and Development. Global Report 1988/89. UNIDO, Vienna, 1988.

In terms of industrial technology the country has a fairly developed chemical, metallurgical and engineering base, but this is not sufficiently diversified to meet the technological requirements neither of the country nor its export markets. Industrial research and development in the country is weak and does not cater to the various needs of the manufacturing sector.

As of 1987 the adult population (above 15 years of age) of Zimbabwe totalled about 4.3 million people. A little less than 25 per cent of the adult population is inactive consisting of homemakers, students, income recipients and others neither working or seeking work in the labour market, nor are they engaged in communal farming. The remaining adults (75 per cent) constitute the labour force and amount to 3.3 million people. Altogether over one million people are engaged in the formal sector.

According to the 1986/87 labour force survey, 16 per cent of the labour force, excluding communal farmers, were unemployed. A little more than 5 out of 10 persons in the labour force, or 1.8 million people, are communal farmers. They cannot readily be classified in terms of employed/unemployed; rather they are underemployed during the slack season.

Out of the 1.2 million people employed in the industrial sector some 200,000 are women. Approximately 175,000 people are working in manufacturing and form about 28 per cent of all employed in the industrial sector. Of these some 12,000 are women.

Private and public service sector (finance, insurance, distribution, restaurants, education, health, private domestic, public service and others) employ 470,000 people of which 110,000 are women. Thus, the service sector now provides most of the job opportunities for Zimbabwe's women.

Table 1 shows the present and expected future structure of employment assumed in the National Plan. The sex distribution of the above variables is given in Table 2.

The existing reserve of people potentially available for employment consists of those presently unemployed and other adults not in the labour force. The latter number about 1 million now of which half a million are students and 400,000 are so-called inactive homemakers. The rest are presumably in hospitals or other institutions.

The unemployed number 0.3 million. The rate of unemployment does not vary much by sex: 7 per cent for males and 8 per cent for females.<sup>3/</sup> However, 15 per cent of the age group 15 to 24 are currently unemployed. When we add the facts that the urban unemployment rate is 18 per cent and that

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3/ The unemployment rate for women may be artificially low if a substantial number of women are classified as not now in the labour force because they are not actively seeking employment and this is so because they have either given up hope of finding a job or they consider it useless because of prevailing sexist attitudes. The actual situation is not clear to us.

12 per cent of those with the highest level of education are now without a job, the picture of a relatively young and well educated person living in an urban area emerges as the typically unemployed Zimbabwean today in the formal sector.

Table 1: Employees by economic activity, 1984-1990  
(Wage earners only)

Branch	thousand persons			Annual increase 1985-90 per cent
	1984	1985	1990	
1. Agriculture and forestry	262	260	290	2.2
2. Mining and quarrying	56	56	65	3.0
3. Manufacturing	167	167	190	2.4
4. Electricity and water	7	7	8	2.7
5. Construction	45	45	52	2.9
6. Finance, insurance and real estate	16	16	18	2.4
7. Distribution, hotels and restaurants	80	83	99	3.6
8. Transport and communication	50	50	61	4.1
9. Public administration	88	88	100	2.6
10. Education	82	82	97	3.4
11. Health	19	19	23	3.9
12. Domestic services	99	99	99	0.0
13. Other services	55	55	65	3.4
Total	1,026	1,029	1,173	2.7

Source: First Five-Year National Development Plan, 1986-1990, Table XII,  
p. 19.

Table 2: Employment by sex  
(as percentages of total)

	Men	Women
Formal sector	47	8
Informal sector	0.7	5
Unemployed	9	5
Farming	24	20
Economically inactive	20	53
Total	100	100

Source: Central Statistical Office, Statistical Yearbook of Zimbabwe 1985,  
p. 44.



## 2. PRESENTLY LACKING SKILLS

Recent data on the skills breakdown of the industrial labour force are not available. The latest are those from the National Manpower Survey in 1981. It showed that while manufacturing had 19.9 per cent of total employment, it had only 9.3 per cent of all professionals. But it had above-average proportions of skilled and semi-skilled workers (21.8 per cent and 25.6 per cent respectively). As regards unskilled workers, 19.0 per cent were employed in manufacturing.<sup>4/</sup>

Due to the above-mentioned lack of recent statistics, the present analysis relies on a set of interviews with managing directors or personnel managers from a number of Zimbabwean companies of various sizes and branches of manufacturing. It was reported that an adequate amount of truly qualified people in middle management and top management level was lacking in most sectors. The same was reported for engineers in general. One reason is the lack of hard currency for purchasing required production and laboratory equipment. Without this equipment such staff can neither be trained nor employed.

The lack of hard currency is also affecting the transportation within the country through shortage of trucks, cars and trains and spare parts. All people interviewed said it is a great obstacle for development in all areas, both functional and geographical.

Besides lacking engineers and middle and top management level personnel, most of the companies reported that they were lacking people on the administrative side with computer competence for accounting, stock taking etc.

Other frequently mentioned lacking skills are:

- in the food sector: millers and bakers;
- in the chemical sector: industrial chemists and laboratory assistants;
- in the mechanical sector: tool-makers, fitters, turners and electricians;
- in the metal sector: various skills in foundry operations; and
- in the engineering consultancy sector: designers and draftsmen.

Moreover, according to the Central Statistical Office in 1985 there were:

- some 20,000 vacancies among professionals (engineers, architects, aircraft officers, life scientists and teachers);
- some 500 vacancies among workers;

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<sup>4/</sup> Zimbabwe, Industrial Development Review Series, op. cit., p. 45.

- some 1,700 vacancies in general production work; and
- some 800 vacancies in clerical positions.

The above picture of skill requirements and vacancies does not square well with that of the typical unemployed Zimbabwean given in the previous section. It could thus be deduced that either the relatively good basic education offered in urban areas does not meet the requirements of industry, or that industry is not able to attract/employ young, skilled people.

Some facts speak for the latter hypothesis. First, professionals are relatively less employed in manufacturing than in other sectors of the economy. Normally this would be expected to be the reverse. Second, it certainly cannot be excluded that the present orientation of the Zimbabwean educational system needs to be complemented by vocational training and on-the-job training in order to make young graduates from the formal school system attractive to industry.

It might also be so that both situations apply simultaneously. Further investigation of this issue may be warranted to examine if the situation could be remedied through fiscal and other policy measures.

### 3. LACKING SKILLS EMERGING IN THE MEDIUM-TERM PERSPECTIVE

The current Five-Year National Development Plan 1986-1990 concentrates on economic growth; employment creation, rural development, and enlarging the distribution and tourism sectors.

In 1989 the Government adopted a plan to attract investment. A one-step investment centre, acceding to the convention of the Multilateral Investment Guarantee Agency would be established making more foreign exchange available for investment. A revamped exchange control system dealing with dividend remittances and the use of blocked and surplus funds would be other supporting measures. There are also to be more rational and market oriented income and price policies including collective bargaining.

The new investment code and investment procedures are expected to result in increased investment and would thus have a bearing on new skill demands in the medium-term perspective. A number of new jobs may be created both in tourism and in supporting manufacturing branches such as furniture making, various capital goods industries, etc. and in various service industries. New firms may emerge, such as in the field of raw materials processing. Today a great deal of the country's raw materials are exported in their primary form and are partially imported back in their secondary form. Prospects for domestic processing would thus seem to exist.

It is also expected that the pharmaceutical, the mechanical engineering and the chemical industries would benefit from the new investment code in terms of heightened interest on the part of foreign investors.

The foreseen demand for skills in these industries is as follows:

- in the pharmaceutical industry:  
chemists  
laboratory assistants  
clinical researchers;
- in the mechanical engineering industry:  
designers  
production managers  
quality controllers  
production planners;
- in the chemical industry:  
processing plant lay-out designers  
production managers  
laboratory workers  
product controllers  
raw material controllers  
product development engineers.

However, it must be noted that as long as the present problem with lack of equipment, material and other tools required for production persists, the demand for these new or additional skills will remain latent. Furthermore, at present there are not enough Zimbabweans with the necessary competence.

Besides the demand for the above-mentioned skills, the increased investment activity is also expected to generate new jobs both in the government and the private sector in

- computerized data processing and storing;
- word processing;
- accounting, budgeting, wages and invoice payment;
- technical documentation systems; and
- personnel records.

These jobs will require above all information system skills that previously were in short supply in Zimbabwe. They will, of course, also require a commensurate increase in mainframe, mini and mainframe computers and associated software. This in turn will create a vastly expanding demand for software engineers and maintenance personnel, all highly skilled persons.

Other areas where development is expected are:

- textile;
- clothing;
- agriculture; and
- horticulture.

Especially in an expanding textile and clothing industry there will be additional demand for textile designers and production managers.

#### 4. FUNCTIONAL AND SKILL AREAS RELEVANT FOR INCREASED FEMALE PARTICIPATION

Many of the above-mentioned emerging skill areas as well as existing activities offer good or even excellent opportunities for Zimbabwean women. Many of the new skills have no inherent biases against a certain gender. Moreover, the apparent lack of attractiveness of manufacturing jobs, a basic positive attitude towards women, the fairly high educational level among young urban inhabitants, the concentration of manufacturing to urban areas, all combine to create good possibilities for women, especially if they are first given certain supporting training. This does not exclude top level jobs in manufacturing.

There are also many entrepreneurial areas relevant for women such as handicrafts at the artisan level.

In 1988 the taxation system was changed in favour of married women who up until then had been discriminated against as far as taxes on earnings were concerned. After the change married women got approximately 40 per cent more money net after taxation. The new taxation system will probably encourage more women to seek employment in various fields.

A number of company managers interviewed claimed that they would rather hire a woman in various middle management positions than a man. The reasons given for this were that women have a softer attitude and are less prestigious than men. It was also stated that women have to work "twice as hard as men" in order to reach the same position. This positive attitude or inclination notwithstanding, few women in Zimbabwe occupy managerial positions in industry. Most employers said that the reason for them not having women in the companies on various positions was in fact lack of female applicants for the jobs.

The specific skill areas where an increased female participation appears feasible are much the same as those already mentioned in the previous section of this report, that is:

- various computerization work in the administrative sector, such as:
  - computerized data processing and storing
  - word processing
  - accounting, budgeting, wages and invoice payments
  - technical documentation systems
  - personnel records;
- various skills in the food sector, such as:
  - bakers
  - millers
  - packaging;
- various skills in the chemical sector, such as:
  - industrial chemists
  - laboratory assistants;

- various skills in the mechanical engineering sector, such as:
  - tool and die makers
  - electricians
  - fitters
  - turners;
- various skills in the engineering consultancy sector, such as:
  - designers
  - draftsmen;
- various emerging skills in the pharmaceutical sector, such as:
  - chemists
  - laboratory assistants
  - clinical researchers;
- various emerging skills in the mechanical engineering sector, such as:
  - designers
  - production managers
  - quality controllers
  - production planners;
- various emerging skills in the chemical sector, such as:
  - processing plant lay-out
  - designers
  - production managers
  - laboratory workers
  - product controllers
  - raw material controllers
  - product development engineers; and
- various emerging skills in the textile and clothing sector, such as:
  - textile designer
  - production managers.

Table 3 shows presently lacking as well as emerging skills by industrial branch, singling out those skill areas that appear to be especially relevant for women.

## 5. CONSTRAINTS TO INCREASED FEMALE PARTICIPATION

Due to tradition and culture in Zimbabwe, women's contribution towards industry, trade and commerce has been insignificant. Textile and clothing are the only sectors where women today outnumber men (albeit only on lower skill levels). But after Independence the Government would not perpetuate the negative cultural and traditional attitudes that for generations had kept women in a secondary position. Thus, the Ministry of Community and Co-operation Development and Women's Affairs was established in 1981 in order to accelerate the advancement of women in all areas of the society.

Table 3: List of needs of presently and emerging lacking skills

Sector	Occupation	Presently lacking skill	Emerging lacking skill	Relevant for female participation
Administrative	Data processing and storing	X	X	X
	Word processing	X	X	X
	Accounting, budget	X	X	X
	Wages and invoice payment			
	Technical documentation	X	X	
	Personnel records	X	X	
Food industry	Bakers	X		X
	Millers	X		X
	Packaging	X	X	
Chemical industry	Processing plant lay-out designers	X	X	
	Production managers	X	X	
	Laboratory workers	X	X	
	Product controllers	X	X	
	Raw material controllers	X	X	
	Product development engineers	X	X	
	Industrial chemists	X	X	X
Mechanical industry	Designers	X	X	
	Draftsmen	X	X	X
	Production managers	X	X	
	Quality controllers	X	X	
	Tool and die makers	X	X	
	Production planners	X	X	
	Electricians	X	X	
	Fitters	X		
Turners	X			
Pharmaceutical industry	Chemists	X	X	
	Laboratory assistants	X	X	
	Clinical researchers	X	X	
Foundry industry	Founders	X		
	Pattern makers	X		
Textile industry	Textile designers	X	X	
	Production managers	X	X	
Infrastructure	Architects	X	X	
	Telecommunications engineers	X	X	
	Transportation planners	X	X	
Engineering consultancy	Designers	X	X	X
	Draftsmen	X	X	X

Yet, deeply rooted traditions, attitudes and valuations restrain women from choosing education and jobs within the areas traditionally being considered belonging to the men. Up till very recently the prevailing practice has been to employ women in occupations that were considered appropriate for females such as non-formal work in the rural areas, domestic work and in the health services. Today few women are familiar with the representative organizations of the labour market, current collective agreement conditions of services and employment and current labour legislation. Moreover, very few women are used to working in skilled positions on an equal basis with men. For unskilled jobs again, few companies are in actual practice interested in hiring women when they can get men due to, among other things, maternity leave that now amounts to 90 days at 60 per cent pay. Even such mundane things as lack of toilet facilities for women were reported by some companies as an obstacle to hiring women. Thus, in spite of efforts to improve the position of women in industry, trade and commerce, women have not yet made much advancement in this area.

The practical non-existence of part-time work is also an obstacle for women entering the labour market since they are still responsible for nutrition and taking care of children. Although information can be obtained from different institutes e.g. CZI (the Confederation of Zimbabwe), ZNCC (Zimbabwe National Chamber of Commerce), SEDCO (Small Enterprises Development Co-operation) and ZWBP (Zimbabwe Women Business Promotion) in practical terms, women still lack knowledge about opportunities within trade and commerce. Finally, women seem not to be applying for a number of actual vacancies because of still prevailing attitudes and biases against them both on the homefront and among employers.

In particular there is a lack of skilled women in those industrial fields where overall labour demand is great due to the fact that very few women today attend other than commercial courses. To solve the problem, suggestions are made to enact affirmative legislation in favour of women. Experience from other countries suggest that such a legislation would motivate a large number of women to enhance their education. Again that is not all that is required, given the higher drop-out rate for female students. Existing educational and training systems appear poorly adopted to the unique needs of women. Pedagogics and methodology must be adapted so as to cater more appropriately for female students.

Presently there are not many women, especially in middle and top level management positions, within the Zimbabwean industry. More women ought to be promoted to all positions in business enterprises. This would also generate a positive demonstration effect on other women. Now the (perceived) lack of suitable examples acts as a constraint to women aspiring to higher (management) positions.

This vicious circle needs to be broken, even if it will require a certain amount of affirmative action to begin with. The demonstration effect would also be enhanced if information would be available showing where women are placed in industry, trade and commerce with respect to management positions.

## 6. STRUCTURE OF THE PRESENT EDUCATIONAL SYSTEM

Zimbabwe has made great strides in the field of education since Independence. In 1980 education was made free and the earlier inequities in the provision of education services between rural and urban areas, between men and women have been reduced considerably. Primary education enrolment increased from 819,128 to 2,044,487 between 1979 and 1983. The figures for secondary education are even more striking. Enrolment increased from 66,215 to 316,438, a rise of 378 per cent between 1979 and 1983.<sup>5/</sup>

Table 4 summarizes the higher education position. The largest group in terms of enrolment, including part-time students, is that of the technical colleges. The second largest group is teacher training, as might be expected from the rapid expansion of primary and secondary education. The University of Zimbabwe with its total of 3,314 students, had 2,656 full-time undergraduates. Of these, the largest student groups were in commercial and law (700) followed by social studies (520). Engineering (180) and science (220) attracted relatively few students. However, specific industrial skills were more in evidence at the technical colleges where the engineering disciplines drew nearly 2,000 students, to which could be added another 700 or so studying printing, science and technology, or mathematics and science.

The education begins with an informal pre-school phase attended by 3 to 6 years old children. Then the formal education system starts with a seven-year primary cycle divided into infant (grades 1 and 2) and junior (grades 3 to 7). There is automatic promotion within the primary school and the school is compulsory. The secondary system consists of a four year programme. The first two years result in ZIC (the Zimbabwe Junior Certificate). At the end of four years students sit for the GCE (General Certificate of Education) "O"-level examinations. These can be followed by two years of upper secondary education which result in GCE "A"-level examinations.

The Curriculum Development Unit (CDU) within the Ministry of Education has been working on the development of academic and practical curricula that are uniquely suited to Zimbabwe's multicultural needs and to the development of the country's manpower skills.

The apprenticeship system saw its peak intake in 1982, when a total of 1,848 apprentices were taken on. Of these 391 (21 per cent) were for electrical training and 797 (43 per cent) for mechanical training. The reduced levels of economic activity meant that the total number of apprentices taken on (which include those for non-manufacturing training such as building and hairdressing) fell to 999 in 1984, of which 254 were for electrical training and 436 for mechanical. On the other hand, 1984 also saw the high number of 801 apprentices graduating, of whom 197 had received electrical, and 304 had received mechanical training.<sup>6/</sup>

<sup>5/</sup> Zimbabwe, Industrial Development Review Series, op. cit., p. 45.

<sup>6/</sup> Ministry of Labour, Manpower Planning and Social Welfare, Annual Review of Manpower, 1984.



Table 4: Enrolment in higher education, 1975-1983

	1975	1976	1977	1978	1979	1980	1981	1982	1983
Agricultural colleges	159	155	164	133	171	173	169	530	528
Teachers' training colleges	2,932	2,861	2,985	2,982	3,082	2,824	3,484	4,873	6,481
Technical colleges <sup>1/</sup>	4,033	4,472	3,852	3,694	3,663	3,469	6,048	6,962	7,791
University of Zimbabwe	1,355	1,506	1,617	1,798	1,481	1,873	2,525	3,091	3,314

Source: Central Statistical Office. Statistical Yearbook of Zimbabwe 1985, Table 5.8, p. 67.

1/ Includes part-time students. Figures are as of the beginning of the academic year which starts in January, except for the agricultural colleges (September) and the University of Zimbabwe (March).

The concept of "Education with Production" is being applied right across the curricula both in primary and secondary schools in order to offer every student the opportunity of developing skills and talents which will be of service to themselves and to the community.

At the tertiary level, the University of Zimbabwe offers three and four year degree courses as well as a number of post-graduate diplomas, masters degrees and doctoral programmes. The following centres also offer courses at the tertiary level:

- teacher training colleges
- polytechnic
- technical colleges
- agricultural colleges.

Table 5: Projected primary school enrolments, 1986-1990

Grade	1986	1987	1988	1989	1990
1	350,209	372,839	392,000	402,000	410,000
2	312,171	317,353	338,165	355,544	364,614
3	313,809	302,645	307,515	327,682	344,522
4	317,963	304,653	291,144	295,829	315,230
5	332,821	309,556	292,467	270,439	283,996
6	341,653	325,551	299,960	283,400	270,834
7	289,714	329,757	324,289	298,760	282,267
Special	2,027	2,268	2,227	2,327	2,427
Total	2,260,367	2,264,662	2,247,767	2,245,041	2,273,890

Table 6: Projected secondary school enrolments, 1986-1990

Form	1986	1987	1988	1989	1990	1991
1	169,566	207,072	263,806	259,431	239,008	225,813
2	141,469	153,578	203,759	259,585	255,280	235,184
3	125,945	136,085	146,206	193,978	247,125	243,027
4	96,671	116,234	123,942	143,721	190,681	242,924
L/6	6,516	6,560	9,182	9,791	11,534	15,064
U/6	5,335	5,865	4,972	6,960	7,422	8,606
Special	339	442	389	389	389	389
Total	545,841	625,836	752,256	873,855	951,259	971,007

Source: First Five-Year National Development Plan, 1986-1990.

## 7. PLANNED HUMAN RESOURCES DEVELOPMENT

Human resources development plays a decisive role in the creation and development of a scientific and technological capability. In this aspect, Zimbabwe has not yet achieved a satisfactory level, but is in the process of building up such capabilities. Science and technical subjects have been made compulsory at the secondary school level. A programme leading to a bachelor's degree in technology has been introduced at Harare Polytechnic and Bulawayo Technical College. In addition, the secondary school curriculum will be broadened to include a wide range of technical and vocational subjects that are oriented towards manpower requirements of the production system. The planned development for these various branches of the educational system is outlined below.

### Non-formal education

Non-formal education deals with organized educational activity outside the school system.

Non-formal courses are usually commercial ones, in the following areas:

- bookkeeping;
- accountancy;
- service for customers;
- salesmanship;
- buying; and
- women's leadership.

Education plays a vital role in determining employment opportunities for a large proportion of the Zimbabwe labour force. This is especially true for young persons who lack job experience required in the labour market.

In spite of the fact that age, i.e. experience (as witnessed by high unemployment rates among the youth) clearly influences employment opportunities, education is also considered important in the modern sector where employment is more secure. In the traditional or informal sector education does not play such a decisive role. The majority of the population with no education is engaged in the traditional sector and informal sectors of the economy. They are mostly unable to find jobs in the modern sector.

However, in the past five years job opportunities in the modern sector have become scarce even to those with higher levels of education. Most recent estimates indicate that the highest proportion of those without jobs are "0"-level graduates.

A little over 14 per cent of the youth labour force are seeking jobs and almost three-quarters of them are secondary school certificate holders. It is not known what additional non-formal education they may or may not have.

### Formal education

The expansion that has occurred in education has not paid sufficient attention to the question of relevance of the education system to the requirements of the society. To rectify the situation, curricula, in particular those for secondary school level, will now be diversified and made more relevant to the needs of social and economic institutions. This will be done through the introduction of a new content and structure of education that emphasizes acquisition of a variety of useful technical and vocational skills. Other measures intended to improve the quality of education include the development and provision of additional and appropriate equipment and materials.

At the same time non-formal education will be expanded and the necessary facilities will be improved to ensure attainment of the objective of education for all.

### Teachers' colleges

Student teachers' enrolment intended to be increased by 34 per cent over the Plan period to cater for the continuing expansion in student registration at the primary and secondary levels. This will also reduce the proportion of untrained teachers in service.

The teacher training programme in Zimbabwe colleges will be reduced from four to three years in order to increase the speed at which new teachers can take up teaching jobs.

Table 7: Projected enrolment in teachers' colleges, 1987 to 1990

	1987	1988	1989	1990	1991
<b>Primary school teachers</b>					
Mkoba	1,454	1,366	1,382	1,425	1,430
Mutare	1,407	1,490	1,493	1,505	1,527
Seke	1,407	1,328	1,359	1,365	1,450
UCE	1,538	1,559	1,581	1,597	1,650
Bendolfi	785	862	880	885	920
Morgenster	828	956	954	970	970
Nyadiri	600	782	830	852	870
Masvingo	311	661	1,031	1,431	1,470
Sub-total	8,330	9,004	9,510	10,030	10,287
<b>Secondary school teachers</b>					
Belvedere	2,081	2,097	2,100	2,100	2,135
Gweru	1,674	1,613	1,643	1,700	1,705
Hillside	1,339	1,458	1,462	1,504	1,530
Mutare	224	425	575	735	800
Chinhoyi	0	0	400	800	1,200
CUBA	400	604	1,004	1,004	1,004
Sub-total	5,718	6,197	7,184	7,843	8,374
Grand total	14,048	15,201	16,694	17,873	19,661

Source: The first Five-Year National Development Plan.

Vocational training centres

The Government plans to build additional vocational training centres that will incorporate trade testing facilities intended to upgrade the skills of presently semi-skilled persons. The total output of the centres is expected to increase by more than six-fold over the Plan period.

Initially, training was provided only to persons who were already employed in the trade in which the training was required. Now training will be offered to four year secondary school leavers who will be trained to be self-reliant for subsequent employment.

Table 8: Projected enrolment in vocational and technical training centres

	1986	1987	1988	1989	1990
Masasa and Westgate	610	4,174	4,426	4,626	4,620

Source: The first Five-Year National Development Plan.

Youth training centres

The Ministry of Youth, Sport and Culture has 14 centres that offer training in a variety of disciplines ranging from the arts to technical fields. From 1987, most courses will take three years to complete.

Table 9: Enrolment by course

	1987	1989	1990
Building	330	272	309
Carpentry	230	238	177
Food and nutrition	53	90	82
Clothing	97	91	102
Sheet metalwork	38	57	48
Fitting	21	39	24
Motor mechanics	20	38	24
Bookkeeping	112	64	100
Agriculture	56	77	112
Music	6	..	10
Fine arts	3	..	10
Weaving	8	..	10
Leatherwork	11	25	24
Total	985	991	1,032

Source: The first Five-Year National Development Plan.

Technical colleges

The annual growth rate of enrolment in technical colleges between 1986 and 1990 is projected to be about 9 per cent. However, total output will grow at 11 per cent per annum if the projected decrease in dropout rates materializes (see Table 10).<sup>7/</sup> How the actual situation materializes needs to be closely monitored and, if necessary, counter measures must be taken swiftly.

Table 10: Projected student enrolment and output  
of technical colleges, 1986-1990

	1986	1987	1988	1989	1990
Harare enrolment	2,790	3,239	3,854	4,206	4,707
Output	1,819	2,060	2,399	2,601	2,934
Bulawayo enrolment	6,290	6,344	6,512	6,582	6,682
Output	4,254	4,257	4,354	4,366	4,366
Gweru enrolment	897	1,554	1,938	2,634	2,970
Output	557	1,004	1,488	1,989	2,709
Kwekwe enrolment	1,240	1,248	1,278	1,278	1,278
Output	993	993	1,016	1,016	1,016
Masvingo enrolment	2,465	2,455	2,465	2,465	2,465
Output	1,605	1,605	1,605	1,605	1,605
Mutare enrolment	862	1,134	1,267	1,650	2,111
Output	614	852	1,125	1,524	2,000
Kushinga enrolment	302	490	550	640	730
Output	149	221	260	298	456
Total enrolment	14,848	16,474	17,864	19,455	20,943
Dropout rate	.33	.33	.31	.31	.28
Total output	9,991	10,992	12,247	13,399	15,086

Source: The first Five-Year National Development Plan; UNIDO secretariat calculations.

Technical training centres

There are four technical training centres in Zimbabwe, three in the area of energy and one in forestry. Those in the area of energy are administered by the Zimbabwe Electricity Supply Authority (ZESA). The personnel trained at these centres will hold senior management positions in the energy sector in the near future, thus reducing dependence of the sector on expatriate technicians.

<sup>7/</sup> UNIDO Secretariat calculations based on Table 10.

University of Zimbabwe

In response to human resources development requirements, the University of Zimbabwe has introduced new degree courses and consequently student enrolment is expected to double over the period 1987-1991. In order to meet the teacher requirements of the new structure and content of education, the Bachelor of Education (technical) and the Bachelor of Education (science) degrees were introduced. These programmes will produce teachers in fields such as civil engineering, physics and mathematics.

Table 11: Projected student enrolment at University of Zimbabwe

	1987	1988	1989	1990	1991
Agriculture	289	312	337	325	370
Arts	1,052	1,121	1,233	1,451	1,621
Commerce and law	1,317	1,433	1,562	1,388	1,450
Education	678	916	1,053	1,927	1,020
Engineering	389	485	558	630	693
Medicine	546	624	649	670	690
Science	499	630	794	1,298	1,455
Social studies	1,022	1,248	1,372	1,413	1,546
Veterinary science	90	104	121	153	167
Total	5,882	6,873	7,679	9,255	9,012

Source: The first Five-Year National Development Plan.

From the industry's point of view, the projected increase in science enrolment (three-fold) is noteworthy. Enrolment in engineering is also expected to nearly double from 1987 to 1991.

The public sector

The Government plans to continue to provide civil servants with the necessary knowledge and skills and stress correct attitudes to enable them to execute their responsibilities efficiently. In this connection, the Government will upgrade existing training centres and construct new ones in order to accommodate the necessary training.

**8. SKILL REQUIREMENTS VERSUS EDUCATIONAL OUTPUT**

Having secondary and further education obviously is an advantage for both men and women. On the other hand, being a woman appears to be a strong handicap in finding employment, irrespective of the level of education. Men without schooling have almost as high a rate of employment as women with secondary and tertiary education.

All sectors of the economy are short of personnel with scientific and technological know-how, particularly those who can manage research and development establishments as well as those who can teach science subjects at the secondary and university levels. One of the serious problems faced by the University of Zimbabwe in expanding its turn-out of science and technology graduates is the lack of laboratory material. This is difficult to obtain because of the shortage of foreign exchange.

Technical colleges are responsible for the training of technicians. These face a shortage of teaching staff because the remuneration package does not attract skilled professionals.

At present science and practical subjects are emphasized in secondary schools in order to provide the students with a sound base for technological training.

There are large skill gaps between job requirements and available skills in the case of both men and women in specialized commercial areas such as:

- data processing and other computer-related activities;
- modern accounting;
- financial control;
- marketing; and
- foreign trade.

In the manufacturing industry 98 per cent of the workers are male. Females are mostly represented in the textile, clothing and leather industries. The level of female employment in technical areas is very low corresponding well to the low enrolment of females in technical colleges. The shortage is especially acute in:

- automotive engineering;
- chemical engineering;
- civil engineering;
- electrical engineering;
- mechanical engineering; and
- technical engineering.

At Harare Polytechnic the distribution among male and female students is the following:

automotive engineering	218 male students
civil engineering	245 male students 23 female students



electrical engineering	230 male students 5 female students
science technology	342 male students 52 female students.

As noted before, the participation of females is low at middle management levels and even fewer women are employed at decision-making and higher skill levels. Furthermore, the present education system in Zimbabwe seems not sufficiently geared towards addressing this imbalance between objective job requirements and actual human resources.

## 9. TRAINING AND OTHER HUMAN RESOURCES FACILITIES NECESSARY TO BRIDGE EMERGING GAPS BETWEEN INDUSTRY REQUIREMENTS AND AVAILABLE/FORTHCOMING SKILLS

More than one-fifth of all central government expenditures goes to education, a larger share than in most other countries in the world. The question is how the effects of this expenditure can be optimised.

Expansion of the secondary school system has made possible the admission of all those who qualify to enter secondary school. There is, however, wastage in the form of those who complete secondary education but (are likely to) remain unemployed mainly because of lack of growth in employment opportunities and also because holders of school certificates generally lack adequate training in practical subjects. There is therefore a need to adjust the balance between primary and secondary education and between secondary and vocational education. This would bring secondary education into harmony with the manpower requirements of the economy and the society.

Indeed, efforts are now being made to develop curricula that are more responsive to the country's intellectual, political, economic manpower and cultural needs. Standardization of curricula will be introduced at all levels of school system in accordance with national criteria. Still, it is necessary to intensify the advancement of manpower resources so that they will be in line with the requirements of industry and society.

According to the National Development Plan 1986-1990, the Government will:

- expand existing institutional training infrastructure and create new institutions to cater to growing needs;
- promote, develop and co-ordinate management training in order to bring it into harmony with other training in the country and to make the private sector more sensitive to the nation's goals;
- ensure greater co-ordination of technical education between the secondary and the tertiary level;
- increasingly control, co-ordinate and monitor private commercial colleges in order to achieve standardization and to make them more relevant to the society;

- aim at maximizing the use of resources and avoiding duplication in public sector training through greater co-ordination;<sup>8/</sup>
- establish the National Vocational Training Centre in Harare as the focal point for training of skilled manpower - the centre will develop training modules and curricula and will also provide teaching materials;
- strengthen the seven technical colleges to enable them to provide more facilities for vocational training;
- extend the manpower development programmes to cover areas outside the urban zones where most of the informal economic activities are undertaken; and
- establish the Zimbabwe Manpower Development Fund:
  - to finance the training and employment of apprentices in specified industries e.g. building, electrical, mechanical, automotive, printing, aircraft and hairdressing;
  - to finance the cost of any scheme for manpower development or other vocational education training through a levy imposed on certain employers; and
  - to account for apprentices' bonding contributions.

#### Training levy

A 1 per cent vocational education and training levy was introduced at the end of 1982 and became effective 1 January 1983. This new levy replaced the former Apprenticeship Training Fund and Mandata (Manpower Development Fund) levies. According to this new scheme, every employer with a wage bill of Z\$ 2,000 or more per annum is liable for payment of the levy except employers of domestic workers in private households and employers who are specifically exempted.

The levy is intended to be used for paying for certain items such as wages for apprentices attending college courses, pension contributions, medical aid, travelling expenses, examination fees, tuition fees, and hostel fees; expenses for skilled workers attending courses at the Government vocational training centres including wages, travelling expenses, and tuition fees; rebates to employers of cost for approved training such as apprenticeship training, industrial attachment, and management training; grants to employers based on the number of instructors who are Zimbabweans or non-Zimbabweans provided that the Ministry is satisfied that:

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<sup>8/</sup> Of special importance is the co-operation between the Ministry of Labour, Manpower Planning and Social Welfare and the Ministry of Education in developing programmes that will enable those leaving school (either graduates or drop-outs) to acquire skills.

- the training is complementary or equivalent to training schemes within the national manpower programmes. or
- the training is provided in special areas for which the state has no adequate facilities.

The levy will also pay for the hire of trainers and instructors and meeting any other costs involved in the establishment and maintenance of any scheme for manpower development.

### Bonding apprenticeship

Modern apprenticeship programmes are a combination of on-the-job training supervised by skilled workers and related supplementary classroom instructions that teach apprentices the theoretical aspects of the trade. Since 4 July 1982 every registered apprentice in Zimbabwe is bonded to remain working in his trade for an employer in Zimbabwe for a period equal to the period of his apprenticeship. Today the apprenticeship process has been formalized to involve employers, trade unions, government, vocational and technical schools and individuals who want to learn a skilled craft.

### On-the-job training

The purpose of on-the-job training is to provide an opportunity for trainees who have satisfactorily completed basic training and partly specialized training, to gain relevant work experience within different units of a company.

On-the-job training has its origin in the apprenticeship training system, where individuals learn a trade as they work alongside a craftsman. Each job is divided into skill levels that are progressive in nature, tied to promotion possibilities and required levels of study and task completion. Supervisors are assigned trainees and guide their trainees through the job skill requirements. The idea is that the employee is providing some labour to the organization while he is learning the job. Continued in-service training and skill upgrading should always be part of the overall manpower development programme.

### Institutional training

Institutional, formal training facilities complete with classrooms, instructional aids and teachers are common today. Participating in training programmes that use these facilities and a formal approach to learning the job may be combined with part-time training on-the-job. The trainee may attend formal classes for part of the day or for one to two days a week. The length of such a training programme may vary from very short courses to many months of instruction, depending upon the technical nature of the job for which the employee is being trained.

### General requirements

In a changing society new jobs emerge and existing ones are modified. New or modified jobs frequently create demands for training. Thus, the success of a nation's industrialization programme entails the training of an increasing number of skilled craftsmen and technicians.

The establishment of a human resources development system requires the integration of the national education and training programmes with the vocational guidance, employment services and manpower forecasting services. This minimizes overlapping and facilitates movement from one job to another, both vertically and horizontally, to meet the human resources requirements of the economy. At the same time the aspirations of the individual will be met for employment in an occupation suited to his or her abilities and from which he or she can obtain the greatest satisfaction.

Different training programmes are important in order to enhance and improve performance on the job for both men and women. However, the education programme planned should always be strongly attached to a real demand of the labour market. In deciding both what courses to offer and their content, so-called market signals are now considered to give the best guidance. Thus, a general requirement of all education programmes designed to meet industry demands is the establishment and maintenance of an adequate information system that transmits these market signals to the planning authorities. Depending on the institutional set-up, the market signals can consist of wage and salary movements, vacancy announcements, location and expansion plans etc.

In-plant training programmes are highly essential. These have to be handled professionally and with a good pedagogical layout and suitable training material. Otherwise the effort and costs are spent in vain and - which is more important - the technicians and engineers will not be fully competent to plan and control the production and maintenance within the company.

## 10. BRIDGING THE GAPS IN THE CURRENT EDUCATIONAL SYSTEM THROUGH SHORT-TERM SPECIALIZED TRAINING PROGRAMMES FOR WOMEN

As was noted above, the current educational system needs to be adapted to meeting the needs for generating the particular skills which are essential for industrial development and for women's increased participation. While these changes of the system are being conceived and implemented it is of course important not to lose opportunities by only waiting for these changes to be effected. Hence, it is recommended that a series of specialized training programmes be carried out in the short- and medium-term. These could enable a timely response to current skill needs and could thus soon enhance women's participation in these industrial activities.

According to the current and emerging gaps between industry requirements and forthcoming skills the following proposals for training programmes can be made:

### (a) Training programme in chemical engineering

Objectives: The objectives of this training are to convey basic knowledge in connecting techniques for work in chemical industry and to develop industrial chemical processes and design, construction, operation, maintenance and repair of chemical plants.

Duration: 40 weeks.

(b) Training programme in food processing

Millers

Objectives: The objective of this training is to train workers in the techniques of grinding, blending and otherwise process grains, spices and related foodstuffs for human consumption.

Duration: 40 weeks.

Bakers

Objectives: The objective of this training is to train workers in making bread, cake, biscuits, pastries and in operating grinding, pressing, mixing and other machines.

Duration: 40 weeks.

(c) Training programme in computerization

In the area of computerization, work should begin with a system analysis to identify information processing needs. For management information systems, the following needs can be anticipated:

- computerized data processing and storing;
- accounting, budgeting, wages and invoice payments;
- personnel records, operations planning, scheduling;
- technical documentation systems;
- inventory management; and
- word processing.

The most decisive factor for successful computerization is access to an adequate supply of trained and experienced personnel. Therefore an important component of a computerization is a programme to provide appropriate training for programmers, operators and maintenance technicians.

(d) Training programmes in electrical engineering

Basic course in electro-telecommunications

Objectives: The objective of this training is to convey basic knowledge of connecting techniques for work in the telecommunications industry.

Duration: 14 weeks.

Course for automatic control and regulating engineering

Objectives: The objective of this training is to convey knowledge and skills concerning the installation, repair and servicing of control and regulating equipment and installations.

On completion of this course, persons aged 20 and over and satisfying existing stipulations concerning vocational practice can apply for a limited qualification certificate for a particular kind of electrical contracting work.

Duration: 34 weeks.

Course for electricians

Objectives: The objective of this training is to convey knowledge and skills relating to work on the installation, repair and maintenance of high voltage facilities.

On completion of the course, participants aged 20 or over and satisfying the job experience requirements may apply for limited qualification certificate for a particular type of electrical contracting work.

Duration: 34 weeks.

Telecommunications maintenance course

Objectives: This training is intended to provide knowledge and skills in the connection, testing, location of faults and measurement of equipment and installations in the telecommunications industry.

On completion of this course, persons aged 20 or over and satisfying the job experience requirements may apply for limited qualification for a particular type of electrical contracting.

Duration: 34 weeks.

(e) Training programmes in mechanical engineering

Basic course for workshop mechanics

Objectives: The purpose of this course is to equip the participant with basic knowledge and skills relating to bench work, machine work and measurements.

Duration: 10 weeks.

Fitters and maintenance workers

Objectives: The purpose of this training is to convey the knowledge and skills required for the independent discharge of duties concerned with the disassembly and reassembly of various composite engineering products.

Duration: 24 weeks.

Basic welding course

Objectives: The objective of this training is to convey basic knowledge and skills in bench work measurement, MMA welding, gas cutting and sheet metal fabrication.

Duration: 10 weeks.

Course for welding and fabrication

Objectives: The objective of this training is to equip the participant with the knowledge and skill required concerning various methods of fabrication and joining in the fabrication of various items of sheet metal and section materials.

Duration: 38 weeks.

(f) Management training

Objectives: Management training should be conducted in a series of courses and modules, interspersed by periods of actual management entailing experimentation with new approaches. The overall objective is to render managers more effective by increasing their technical/professional skills; interpersonal skills; and managerial/administrative skills.

## II. CONCLUDING OBSERVATIONS

The above brief overview indicates that the current and prospective skill requirements for Zimbabwe's continued industrial development constitute both a major challenge to and an opportunity for women's participation. The issue is how to best utilize this opportunity and encounter the challenges. This in turn requires that the full attention of all concerned decision-makers is given to the issue and that a range of measures be conceived.

The first problem that needs to be tackled is the basic attitude in the society regarding increased participation of women in a number of functions and skills in industrial development which traditionally have been carried out by men or which are generally new. Although most of the company managers and other officials interviewed expressed a positive attitude towards an increased role of women in various positions in industry, also in non-traditional activities, it is clear that much remains to be done to create a full support to the desired development. Also among women themselves certain hesitation prevails to embark on new types of activities and positions. Both awareness-creating programmes and the utilization of demonstration effects of pioneering women may be useful in this context.

The second issue concerns education and training which obviously constitute the most important vehicles for increasing women's participation in Zimbabwe's industrialization process and concomitantly for providing the required general skill base for this process. Both long-term and short-term activities in the educational and training systems are required to ensure that these objectives are met and that the responsiveness of the systems to changing skill demand is increased.

To further build up the country's human resource development capacities and to be able to carry out a range of specialized training programmes within the next few years for women requires considerable investment - a necessary investment but with a long gestation period. Moreover, this investment will require a certain portion of foreign exchange to purchase up-to-date equipment and foreign expertise. It is therefore of the greatest importance to carry out detailed cost calculations, to ensure appropriateness and direct application of the generated skills and to mobilise finance. To this end, public sector training capacities may need to be supplemented by company operated training by voluntary initiatives and by international co-operation. The scope for utilizing more systematically international commercial co-operation and multilateral and bilateral co-operation needs to be fully explored.

A third area of attention are measures affecting relative wage and salary structures may contribute to the observed mismatch between industry requirements and available skill supplies. Certain changes in Government policies, for example affirmative action favouring female employment, may also be necessary in order to achieve a more balanced use of the country's total human resources while meeting industry's growing demand for skilled workers, technicians, administrators and managers.



Furthermore, a number of specific measures can be suggested to increase female participation in the workforce such as:

- enacting affirmative legislation in favour of women on the labour market;
- incentives for employers to provide part-time work;
- incentives for the establishment of day-care centres;
- introducing a quota system in certain educational and vocational training programmes;
- emphasizing non-traditional female professions in career exhibitions in the secondary school;
- create role models for women through a media show (series) presenting Zimbabwean women in various roles in industry;
- designing of special courses for women in techniques for negotiating;
- establishing a women's polytechnic college;
- supervision and management courses for women already in lower level positions in industry in order to tap the "female talent reserve" in urban areas and to create a demonstration effect;
- vocational training for young, theoretically well-educated women for jobs in industrial branches now experiencing labour shortages;
- a long-term plan for motivating and activating females in rural areas for jobs in the tourism, agricultural and horticultural sectors.

In conclusion it can be said that the importance and the complexity of enhancing women's participation in Zimbabwe's industrial development within the overall framework of ensuring the availability of a solid human resource base for industry in the years to come necessitate full attention by the policy-makers and all other agents concerned with development. More analytical and empirical work is important in this context.

## ANNEX 1

## LIST OF PERSONS CONSULTED

<u>Name of ministry, institution or company</u>	<u>Name of person</u>
Ministry of Community Development and Women's Affairs	Mr. S. Dikito Ms. N. Chikwinya Ms. Chianze
Zimbabwe Institute of Development Studies	Mr. E.M. Jassat
Central Statistical Office	Mr. H. Siringwani Mr. R.K. Shamu Mr. Muzamenhamo
Ministry of Youth, Sports and Culture	Mr. Tawoneyi
SIDA	Ms. E. Loftman
Windmill Co.	Mr. Rosewell Mushapaidze
Futurama Furniture	Mr. Sussmann
Hunyani Carton & Print	Mr. Engelbrecht
Human Resources Ltd.	Mr. D. E. Harrison
Metcast Foundry	Mr. Woods
Blue Ribbon	Ms. Weston
Department of Skill and Training	Mr. Motwka
Ranch House College	Ms. Kate Ramushu
Bain Manufacturing Co.	Mr. D.C.R. Collocott
Ministry of Labour, Manpower and Planning and Social Welfare	Ms. M. Mallow
RTO Engineering	Ms. Wildling
Ministry of Industry and Technology	Dr. C.C. Takundwa
WRS	Mr. Schwartz
Mashonaland Holdings Ltd.	Mr. A.K. Nicholson

Ministry of Finance	Ms. D. Mutongwasi
Ministry of Community and Development	Mr. Mayo
F. Issels & Son Ltd.	Mr. J.C. McGinn
Hunyani Carton & Print	Mr. S. Jackson
Ministry of Education	Mr. Musiawe
Polytechnic Harare	Mr. Mandimika
Chamber of Commerce	Mr. Wonder Z. Maisiri
Windmill Co.	Mr. Rosewell Mushapaidze

## ANNEX 2

## QUESTIONS PUT TO THE INTERVIEWEES

1. What will be the development of the industry in the medium-term perspective?
2. Which skills are missing today?
3. Which skills will be needed in the medium-term perspective.
4. Which functions and skills are important for an increased female participation?
5. Which obstacles exist for an increased female participation?
6. Have you got training programmes of your own?
7. Do you promote women to higher positions by aid of your training programmes?
8. How do you recruit people (by competence or geographically)?