

FACTORS AFFECTING INDUSTRIAL EMPLOYMENT -  
CASE STUDY No.4 (KILEMBE MINES LTD.)

A. Kilembe Mines and their employment policies

1. The Company.

The mines are right at the foothills of the Mountains of the Moon. The existence of Copper in this part of the country has been known for over 60 years. Definite exploratory work on actual ore deposits however, did not begin until 1948. The exploratory survey which included physical layout of the ore and economic feasibility of the entire mining operation was undertaken by Frobisher Limited, a Canadian concern. The mine began production in 1956, the same year that the Western Extension of the Railway reached Kasese - 8 miles from the mine.

The process of Copper making by the Company can be divided in four stages:-

- (1) Rock breaking mainly underground.  
The Copper content in the rock is about 2-2.25%.  
This is about .1-.35% above what is normally regarded the break-even point (1.9%)
- (2) A mill or a concentrator is situated near the East Gate. In this mill, the ore is ground and crushed. It is treated with reagents and then produces a concentrate averaging about 26 to 30% Copper.
- (3) The concentrate is transported by pipes to the Kasese Kiln where it is filtered and dried.
- (4) The mines smelting plant is located at Jinja. On average 6500 tons of concentrates are received monthly at the smelter from Kasese. About 1500 long tons of Copper are being produced every month.

Kilembe mines is largely private owned. It has a Capital of £5,970,000 subscribed by:-

- (a) Kilembe Copper-cobalt Limited --- 70%. This is a Canadian Company, an offshoot of Falconbridge Nickel Ltd.
- (b) Commonwealth Development Corporation --- 20%.
- (c) Uganda Development Corporation ----- 10%.

The Managing agents are Falconbridge of Africa Limited.

2. Recruitment

At the time when I visited the mine, there had been no recruitment of new employees for about three months. The mine was in a period of reorganization,

an exercise which I fear may result in cutting down labour considerably.

Unskilled

Initially, the recruiting officer used to go to Kasese to recruit workers. This was changed to the present system of recruiting at the Mines Police Control Post about two miles from the actual mining area. The men looking for jobs come from both within and without the mining village. It is believed that nearly 2000 people live in the location as dependents; a big fraction of these is unemployed.

The unskilled employees form the largest contingent at the mine and are mostly in grades E and F (see Table 4). Those on the surface do ancillary jobs like sweeping, messenger etc. The largest proportion mainly works underground. Each recruit undergoes a medical examination before he is registered as the Company's employee.

Skilled and semi-skilled

Appointing from the ranks when a place falls vacant is a common practice. Other methods include taking on the people who appear physically at the mine when there is a vacant post and screening written applications and then calling promising applicants for interview. Jobs like those of Accountant Clerk, Radiologist, etc. are usually advertised in the papers.

The Officers directly concerned with interviews and final decision include the Recruiting Officer, the Personnel Manager and Heads of Departments.

3. Tribes

(a) Tribal Composition of Employees Grades E and F

Tribe	Nov. 13, 1962	Feb. 5, 1965		
		Surface	Underground	Total
Bakiga	1498	342	1135	1477
Banyarwanda- Barundi	552	126	393	519
Bakonjo	234	71	86	157
Batoro	627	430	180	610
Banyankore	137	81	69	150
Baganda	52	53	13	66
Acholi	69	50	26	76
Other Ugandans	103	69	42	111
Kenyans	264(Luos 148)	183(Luos 99)	84(Luos 49)	267
Tanganyika	86	49	34	83
Congolese	103	68	28	96
Sudanese	63	34	26	60
Other-non- Ugandans	8	13	12	25
<b>TOTAL</b>	<b>3796</b>	<b>1569</b>	<b>2128</b>	<b>3697</b>

Source: Kilembe Mines Files.

(b) Tribal Composition of Employees 1964 and 1965

Tribe	1964		1965	
	Mining	Smelting	Mining	Smelting
Bakiga	1678	3	1933	2
Batoro	872	2	1316	4
Banyarwanda-Barundi	327	2	368	2
Kenyans	226	134	208	138
Banyankore	197	8	216	10
Others	535	157	710	161
	3835	306	4751	317

Source: Annual responses to Enumeration of Employees, by permission of Kilembe Mines.

- (1) There has been little change in tribal distribution of Group E and F employees between 1962 and 1965 (Table (a) above). For all employees at the mine however, increases by both Bakiga and Batoro in 1965 over 1964 are quite distinct (Table (b) above).
- (2) Despite Kilembe's remoteness from main urban centres in the country, the mine has been able to attract workers from all over Uganda and the neighbouring states.
- (3) The Bakiga form the largest tribe (38.4% of all employees at the mine - 1965). It is believed that at one time in 1950's they formed over 80% of the work force.
- (4) In the E and F groups, most Bakiga work underground. The number of Batoro has been going up noticeably but most of them work on the surface.
- (5) The immigrant element in the composition of the Company's labour force is conspicuous. The largest group of immigrants come from the usual sources namely, Rwanda and Burundi, Sudan, Congo and Kenya.
- (6) The large number of Kenyans at the smelting plant in Jinja also stands out. It is interesting again to note that among the Kenyans at the mine the Luos form over 50%.

4. Rate of Turnover (Grades E & F)

Year	Underground	Surface	Average
	(%)	(%)	(%)
1962	6.85	4.18	5.5
1963*	5.18	2.96	4.1
1964	3.92	2.29	3.1
1965 (8 months)	2.23	2.38	2.3

Source: Kilembe Mines Files.

This contradicts what is published in "Survey of Industrial Production 1963," Table X p.93.

The Labour turnover at Kilembe is not as low as at B.A.T. Uganda (see EDRP No. 75). This is understandable by knowing the nature of work in a mine. However, as figures above show, considerable changes towards labour stability have been taking place.

In addition to the general well known reasons like increase in wages (especially bonus system), job-scarcity in the country, other reasons attributable to changes at Kilembe can be advanced:-

- (a) Houses - the company builds houses for employees and charges a minimal rent.
- (b) Medical services. The Company has a hospital which is reasonably well-staffed.
- (c) Schools. There are 4 schools for employees' children.
- (d) Water services.
- (e) Electricity.
- (f) Road services.
- (g) Recreation facilities, e.g. Play grounds.

Thus with regard to social amenities, Kilembe compares favourably with larger towns in the country.

Since, in the history of the mine, most workers have come from Kigezi, developments there do to a certain extent influence labour stability. The scarcity of land in Kigezi for example has made some Bakiga go out in search of new opportunities. Recently, the drought and famine is given by management as another aid to this effect.

#### 5. Working Hours

The mine has a 48 hour working week, 8 hours a day Monday to Saturday. The mill operates on a three-shift system. Operatives underground work on a two-shift basis.

#### 6. Training

The Company has an elaborate training scheme. There used to be an aptitude testing unit but was recently abandoned. The management contends that since labour is getting more stable the margin will be very small to necessitate aptitude testing. The Company knows its labour and knows how to fit the new comers into the general working pattern. In the high peaks, it is contended that training alone has been costing about £3500 a month.

##### (a) Labourer

Most labourers whether they are going to work on the surface or underground, undergo some form of training after recruitment. There is the surface training school for induction. At this school, workers are taken to the lamp room and are taught how to fetch the lamp, they are taught the Geography of the area, meet Company personalities and learn elementary mining principles regarding regulations and safety.

Those who are going to work underground are taken to the Underground Training School where they spend about a week acquiring experience in lashing, tramming etc.

##### Operatives

These are mainly loco drivers, machine operators and scrapers. The training is mostly of "on the job" type and is carried out in the Underground School. Most electricians who join the Company are those who already know the job.

##### Supervisors

Training is undertaken both on the surface and Underground. The courses put emphasis on supervisory techniques. They are also taught English. The course is designed to upgrade the standards of middle supervisory men (or juniorship boss).

##### Clerks

Clerks of almost all levels attend evening classes. They learn typing, English and elements of book-keeping and accountancy. Courses are provided by Company personnel and are supplemented by those sponsored by the Extra-Mural Department, Makerere.

##### Shift bosses and above.

Courses to this group were initially those sponsored on a tripartite basis by the Company, the Ministry of Labour and Federation of Uganda Employers. The emphasis is on employment and Industrial relations and Management Techniques. Recently, the company employed in its training staff, an Industrial Relations Expert (Mr. Levick) and therefore its no longer necessary to run the course on tripartite basis.

The mines' training programme is undergoing drastic scrutiny and reorganization. The moves seem to be designed to:-

- (i) reduce labour but maintain standards by increasing efficiency. This, it is hoped can be achieved through intensive training programme of Supervisors.  
At the moment, there is one supervisor to every four workers; the plan is to alter the ratio to one supervisor to ten workers. There are about 300 maintenance workers underground, the plan is to reduce this number to 50 shortly.
- (ii) train all levels of work force especially the labourers and the operatives.

Other measures to be introduced include:

- (a) a language laboratory to teach English to workers and Swahili to expatriate officers.
- (b) An Engineering School to cater for the Company's requirements with regard to technical matters.

## B. Capital Equipment, Output, Employment and Wages

### 1. Capital Equipment

The mine is fairly mechanized though not to the extent of mines like that of Katanga. From table 1, the build up of Capital equipment can be divided in two phases:-

#### (a) 1955 - 1960

In this period, there was considerable steady build up of capital. For example, fixed assets over the period increased by 54% (compared to an annual growth of 9%). Employment and Output grew at faster rates than fixed assets (see below).

#### (b) 1960 - 1964

Capital has continued to increase but at a considerably lower rate than the first period. For example, fixed assets have increased by 15% over the period and at annual rate of only 3.6%.

As indicated earlier, the Company is in a process of completely over-hauling the mine structure. The reorganization, apparently has a mechanization bias. In the past, the Company could not undertake such exercise because of lack of funds. Recent explosion in copper prices have improved the Company's financial position to be able to carry out its programme.

### 2. Output

Output (Table 2), except with the short pause in 1961, has increased steadily. In the period 1957 to 1960, sales more than doubled (114%), and output in tons too almost doubled (94%). In both sales and tonnage measures, annual increases in the same period were over 24%. In the 1960-1964 period however, increases were not as fast. For example, using tonnage measures,

the annual rate of growth was as low as 5.5%\*

### 3. Employment

Employment nearly doubled in the period 1955 to 1960 (92%). It is notable too that output (1957-60) increased by about the same amount (94%). Capital Equipment on the other hand increased at a low pace (by 54%, 1955 to 1960). On the Annual basis, employment increased by about 11%, compared to over 24% in output.

In the 1960-1964 phase, both employment and output have continued to increase but at successively lower rates, 5.1% +\*p.a. and 5.5% p.a. respectively.

Productivity in 1957-1960 increased at a slightly higher rate (over 12% p.a.) than employment mainly because output in this period increased faster than employment. Increase in productivity in 1960-1964 phase is pretty low (.4%+\*)

#### Trends in Output, Employment and Average Productivity 1957-1964.

##### Phase i, 1957-1960.

- (i) Using Copper tonnage as output measure
  - Growth in Output 24.8% p.a.
  - Growth in Employment 11.2% p.a.
  - Growth in Average Productivity 12.3% p.a.
- (ii) Using Sales Value as Output measure
  - Growth in Output .. .. 28.8% p.a.
  - " " Employment .. 11.2% p.a.
  - " " Average Productivity 15.9% p.a.

##### Phase ii, 1960-1964.

- (i) Using Copper tonnage as output measure
  - Growth in Output .. .. 5.5% p.a.
  - Growth in Employment .. 5.1% p.a.
  - Growth in Average Productivity .4% p.a.
- (ii) Using Sales Value as Output measure
  - Growth in Output .. .. 16.5% p.a.
  - Growth in Employment .. 5.1% p.a.
  - Growth in Average Productivity 11.0% p.a.

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\* 5.5% is the Copper tonnage measure rate of growth and is probably the more realistic. Because of sudden rise in Copper prices in 1964, the Sales value measure rate is rather high - 16.5% p.a. Sales increased by 69% in 1964 over 1963 compared to an increase of only 13% in Tonnage.

+\* This is the Copper tonnage measure rate.

An exercise in Capital investment per job gives interesting results. For example, up to 1955, it was about £2,800 per job (1870 employees, assets £5.28 million), from 1955 to 1960, it was about £1,650 (1726 additional employees, £2.3 million additional assets); and from 1960 to 1964 only £690 per job (1777 additional employees, £1.2 million additional assets). This is almost a reverse of what we saw at Nytil (EDRP 69).

#### 4. Wages

The Company has a job grading system. The grades are based on a job evaluation exercise which was carried out by a selected Company Committee in 1961. The Committee used a job description approach.

Grade	Job Description	Skill Category
F	Labourer to Tunneller	Unskilled to semi-skilled
E	Clerk to Asst. Chemist	semi-skilled to skilled
D	Asst. Office Supt. to Senior Foreman	skilled to highly skilled
C)		
B)		
A)		Highly skilled

Grades F and E and a part of D are paid on a daily rate (i.e. on a 26 day month). Employees in grades E and F (92% of total) are predominantly unskilled; a large section of their group works underground. These lower grades F to D in turn have sub-grades F, 1-6; E, 7-11; D, 12-14. Increments are almost automatic "at the time and in the scale laid down". Other things which may be taken into account before annual increments or promotions are allowed, include:-

- (a) previous experience
- (b) Employee's ability to write and speak English
- (c) Knowledge of more than one trade skill.

The Trade Union activity among F and E group employees is very considerable. An agreement to last for 26 months, was signed by Management and the Union last September. For the first 12 months, F and E employees will get an increase of Sh. 1.04 per day. In the next 14 months, the increase will only be 56 cents a day. There are of course different pay rates for employees working on the surface and those working underground. In addition, employees in F group who work underground receive a production bonus on a measured basis.



An attendance bonus of Sh.5/- per month formerly paid to F group working in the Mill and Underground was altered last September to an extra-day's pay.

Grades A to C and a part of D are paid on a monthly basis and are employed on contract terms. Among these groups, annual increments and promotions are recommended on criterion of merit. The starting rate is largely determined by educational standards and experience.

Kilembe has been outside the towns covered by the Minimum Wages Advisory Board. Under the new proposed legislation, it would be covered under the Sh.75/- per month Rural Minimum Wage. By this standard the Company's starting wage of Shs. 145/= (Table 4) can be regarded as high. However, when compared to other Companies like B.A.T. Uganda where the place of work is not only clean but the work itself is less manual and less dangerous, labourers and operatives at Kilembe especially those working underground, can be said to be earning very little.

Our analysis of the wage structure at B.A.T. Uganda showed that in 1963, over 98% of the total work force earned over Sh.200/- a month (EDRP 75). At Kilembe in the same period, only 21% of the employees earned Sh.200/- a month. This percentage is about the same in 1965. No major gains (Table 5) have been made recently by the lowly-paid employees as our previous case studies have consistently shown.

A/ Wage Bill

	(£)
1957	348,754
1958	462,380
1959	641,865
1960	734,427
1961	783,000
1962	871,000
1963	924,000
1964	943,000

Source: Kilembe Mines Files.

B/ Trends in Wage Bill, Employment and Average Wage

(i) 1957 - 1960

Growth in Wage Bill	28.2% p.a.
Growth in Employment	11.2% p.a.
Growth in Average Wage	15.3% p.a.

(ii) 1960 -1964

Growth in Wage Bill	6.5% p.a.
Growth in Employment	5.1% p.a.
Growth in Average Wage	1.8% p.a.

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There were fantastic increases in Wages in the late 1950s. Wages increased at a faster rate than employment and productivity. It is difficult to explain rapid wage increases as going to unskilled African workers. One is inclined to attribute more than doubling in the wage bill between 1957 and 1960 to high expatriate salaries. Kilembe at that time was still a closed system and jobs like Assistant Personnel Officer etc. were all European managed. Recent limited attempt to africanize the less technical jobs is proving a successful way of reducing labour costs.

#### D Conclusions

Our previous Case Studies have shown that:-

- (i) at Nytil, employment had been increasing and was expected to continue to do so.
- (ii) at Uganda Breweries, employment had remained stationary in the 60s. It was highly doubted it would increase in the near future.
- (iii) at B.A.T Uganda, employment had been declining over the years.

In the case of Kilembe Mines, employment in a discontinuous manner, has been increasing. It almost doubled (92%) between 1955 and 1960. The growth of employment in the 60s has been noticeably small (22% between 1960 and 1964). The apparent sparing use of labour in these years can be attributed to two factors:-

- (a) the Company's training programmes.
- (b) Relative labour stability.

Future employment prospects appear very gloomy indeed because of the reorganization scheme now underway. The reorganization though mainly designed to improve operational standards of the mine is labour-saving biased. Already, the workforce has been reduced by 300 people and recruitment has virtually stopped.

Thus, it is quite evident that the methods that were being used to save labour which we came across in our previous studies are also in use here, namely

- (1) better organization of the labour force and careful selection methods.
- (2) Training labourers and operatives.
- (3) Training Supervisors and Management.
- (4) Mechanization and improved methods in layout and use of machinery.

The growth of wages in 1960s has nearly kept in line with productivity. The growth of the workforce at the mines however means increased demand for social services. The Company's expenditure on Social Services can be regarded as one of the main reasons that is prompting labour-saving reorganization exercise.

TABLE I

C A P I T A L   E Q U I P M E N T

YEAR	GROSS FIXED ASSETS (£)	ADDITIONS TO FIXED ASSETS (£)
1955	5,281,383	
1956	6,787,497	1,506,114
1957	6,949,139	161,642
1958	7,292,809	343,670
1959	7,866,364	573,555
1960	8,129,488	263,124
1961	8,222,761	93,273
1962	8,478,488	255,727
1963	8,773,064	294,576
1964	9,363,933	590,869

Source: Kilembe Mines Files.

TABLE 2

O U T P U T 1 9 5 7 - 1 9 6 4

YEAR	Blister Copper	Change over previous year	Sales Value	Change over previous year
	(Tons)	(Tons)	(£)	(£)
1957	7467		1,606,563	
1958	10831	3364	2,118,938	512,375
1959	11930	1099	2,838,381	719,443
1960	14515	2585	3,433,718	595,337
1961	13163	-1352	3,025,219	-408,499
1962	15331	2168	3,583,053	557,834
1963	15960	629	3,746,301	163,248
1964	17971	2011	6,334,861	2,588,560

Source: Kilembe Mines Files.

TABLE 3

EMPLOYMENT 1955 - 1965

YEAR	SMELTING (Jinja)	MINING (Kilembe)	TOTAL
1955		1874	1874
1956	59	1983	2042
1957	258	2363	2621
1958	249	2103	2352
1959	333	3272	3605
1960	312	3288	3600
1961	328	3432	3760
1962	317	4154	4471
1963	342	4117	4459
1964	344	4036	4380
1965	349	5028	5377

Source: Annual responses to Enumeration of Employees by permission of Kilembe Mines. Figures are for the month of June.

TABLE 4.

EMPLOYMENT BY WAGE-GROUP END OF JULY 1965

GRADE	NO. OF EMPLOYEES	RANGE
		(Shs. per month)
A	} 161	4000 +
C		4320
B		2120
		2900
		1440
D	297	1430
		570
E	977	565/76
		239/20
F	3918	257/92
		145/60

Source: Kilembe Mines Files.

TABLE 5.

## WAGE STRUCTURE (African Employees)

RANGE (Shs. per month)	Y E A R					
	1960	1961	1962	1963	1964	1965
70 - 79						
80 - 89						
90 - 99	272	370	427	373	1163	
100 - 124	1649	985	1385	661	640	555
125 - 149	521	996	1058	903	401	2258
150 - 174		261	220	407	208	911
175 - 199	166	83		717	144	
200 - 299	266	269	471	498	259	527
300 - 399	119	145		24	68	102
400 - 499	38	51	168	245	182	274
500 - 999	23	35		50	124	98
1000 -1499				1	5	20
1500 -1999					1	2
2000 -2499						2
2500 -2999						1

Source: Annual responses to Enumeration of Employees by permission of Kilembe Mines.

APPENDIX A EDRP 38

F GROUP

<u>GRADE</u>	<u>PAY RATE</u>	<u>NO. OF EMPLOYEES</u>
1	5.60	381
2	6.00	149
3*	6.48 - 6.88	1461
4	7.12 - 7.52	642
5	7.68 - 8.08	433
6	8.16 - 9.36	421
TOTAL		<u>3487</u>

E GROUP

<u>GRADE</u>	<u>PAY RATE</u>	<u>NO. OF EMPLOYEES</u>
7	9.20 - 11.20	165
8	11.60 - 13.60	324
9	14.40 - 16.40	73
10	16.80 - 18.80	286
11	19.20 - 21.20	43
TOTAL		<u>891</u>

These figures exclude the Smelter.

Source: Kilembe Mines Files, January, 1966.

\* New employees in the mining department (i.e. working underground) begin in F.3. The average pay rate for the 4 months, September to December, 1965 were :-

Basic                    Shs. 8/40 a day  
Bonus                    Shs. 1/30 "  
Other allowances Shs. -/46 "

10/16 - This is about Shs. 264/16  
for a 26 day month.



APPENDIX B EDRP 88

KILEMBE-SUPERVISORY POSTS ACCORDING TO RACE

DEPARTMENT	1960			1962			1965		
	EUR.	ASN.	AFR.	EUR.	ASN	AFR.	EUR.	ASN	AFR.
MINING	69	51	8	70	49	107	45	19	162
CONCENTRATOR	10	27	2	11	18	18	6	12	18
TECHNICAL	15	14	5	18	20	16	19	21	33
ENGINEERING	35	61	11	23	56	108	20	36	257
ELECTRICAL	-	-	-	7	15	12	8	15	26
ADMINISTRATION	25	11	15	25	6	99	28	5	99
SMELTER	15	38	7	12	31	38	7	24	54
	168	202	48	166	195	389	133	132	649

Source: Kilembe Mines Files, January, 1966.

\* These are mostly people in grades A-D.

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