Note Economic Development Research Papers are written as
a basis for discussion in the Makerere Economic
Research Seminar. They are not publications and
are subject to revision.

SALARY STRUCTURE IN UGANDA

INTRODUCTION

This paper forms part of a research project into wages and salaries
in Uganda, their determination and their implications for economic developme-
nt. That in turn is part of larger comparative study of wages and salaries
in a number of African countries. The paper has been hurriedly written, the
object being to air ideas during my short stay in Uganda, and not to present
a completed price of work. Owing to shortage of time, no results have been
produced on wages and the discussion of wages is limited to a saries of
hypotheses at the end of the paper. The statistical computations in the text
have not yet been checked.

THE DETERMINATION OF SALARIES

It is well known that there is a shortage of educated manpower in
many countries of Africa, including Uganda. This shortage puts a market
premium on educated manpower, and helps to produce a highly unequal distribu-
tion of income from employment, which appears to be based largely on educational
qualifications.

Educated manpower is able to earn a scarcity rent, because the
salary which employers are willing to pay is considerably higher than the
salary at which educated people would be willing to work. However, there
is a second explanation of the high earnings of educated manpower. It is
argued that salaries were set in the past at the level necessary to attract
expatriate staff from the colonial power to its colony, and that these have
been taken over, in the name of equality, by local staff. Since the public
sector is the main employer of educated labour, there is no real market price
for its services, determined by demand and supply. Instead, salaries and
determined by the balance of political forces, which favour the vocal and
powerful educated elite.

There is little evidence for preferring one of these explanations
to the other. Circumstartial evidence is available to suggest that salaries
in the private sector exceed those of civil servants with the same education.
This might suggest that the private sector acts as a pace - setter: competitive
bidding by the private sector forces the public sector to pay high salaries.
However, since it employs less than a fifth of educated manpower in Uganda, it
is possible that the private sector takes its cue from the civil service:
firms are willing to pay whatever corresponding civil servants receive plus
an addition to attract staff of high calibre. In these circumstances, a cut
in civil service salaries would probably lead to a corresponding cut in private
sector salaries.

Of course these two explanations may be reinforcing and not
alternative in character, e.g. the shortage of educated manpower strengthens
its bargaining position. Nevertheless, either may be a sufficient condition of
high salaries. An increase in supply relative to demand may not bring down
salaries owing to political pressures, and a weakened bargaining position may
not affect salaries if there is competition for the limited supply of educated
manpower among employers, including the various agencies of government.

The government collects and publishes information on earnings by
race but unfortunately not by level of education.

The public sector is the dominant employer of educated labour in Uganda. In 1963 central government employed 22.0%, local government 13.7% and EACSO 7.5% of the 'high-level' manpower estimated at nearly 29 thousand in a labour force of 222 thousand (see Table 1). This means that the public sector excluding education employed 43.2% of the total. Moreover, education is financed almost entirely from central and local government funds, and teachers' salaries are determined by the central government, although many teachers are employed de jure by 'voluntary agencies', i.e. missions. Thus the public sector pays the salaries of about 82% of high-level manpower, the remaining 18% being in the private sector.

Considerable data are available on salaries in central government services and in education. In local government the situation is complicated by the great variety of scales, which are set by each local authority. No official data have yet been collected on earnings of educated manpower in the private sector. However, it is hoped that some information on earnings, education, race and age in the private sector will be available shortly. For these reasons my analysis will here be confined to the civil service and education.

SALARIES IN THE CIVIL SERVICE

The pattern of civil service salaries in Uganda was set by the Lidbury Commission of 1954.[1] Prior to 1954 there were separate salary scales for Africans, Asians and Europeans engaged in similar work. Salaries were put at the level necessary to attract overseas recruits, and local recruits to the same posts were paid three-fifths of the expatriates' earnings. The argument for discriminating in this way on a racial basis was put by the earlier Holmes Commission of 1948, which pointed to 'the disadvantages of so remunerating any class of Africans as to create a Mandarin caste, divorced in income and interests from their fellows'.[2] With the Africanisation of the civil service the 'three-fifth' rule became the object of much resentment. The Lidbury Commission recognised the difficulty involved in the alternative demanded: "if administrations were to adopt for that part of the service where imported and local officers work side by side a common rate of pay based on what is necessary in present conditions to attract the former ..... they would be laying an unjustifiably heavy burden on their revenues both now and in the future and would be placing themselves in a position from which, once taken up, it would be almost impossible to retreat".[3]

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1.   Report of the Commission on the Civil Services of the East African Territories and the East African High Commission, 1953 - 1954, 1954.

2.   Report of the Commission on the Civil Services of Kenya, Tanganyika, Uganda and Zanzibar, 1947-1948, 1948, 92

3.   Op.cit, p.29

Thus in 1964 the average cash wage earnings of Africans were £114, Asians £624 and Europeans £1570 p.a.; non-Africans as a group earning £863, or 7.6 times the average for Africans. This does not necessarily indicate that race rather than education is the factor explaining earnings. If indeed earnings are determined by education and not by race it is possible to show that the gap in earnings between the educated and the non-educated must be greater than between non-Africans and Africans. A manpower survey for 1961 classifies the labour force by race and by category of education - 'high-level' manpower and others.[1] We also have a classification by race of wages paid in 1961.[2] Hence, by solution of simultaneous equations, we can derive a classification of wages by education, on the assumption that earnings are entirely dependent on education.[3] Whereas on a simple racial division into African and non-African workers, Africans received an average wage of £78 and non-Africans £848 p.a., the estimate of the average earnings of high-level manpower is £1170 and that of the manpower £58 p.a. If indeed education explained the difference, the 'premium on education' amounted to 19 times the 'uneducated' wage.

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1. Guy Hunter, _Education for a Developing Region._ 1963. p.58

2. Uganda Government, _Statistical Abstract,_ 1962.

3. The equations are:

$$10,529x + 4,379y = 12,812,000 \quad (1)$$

$$\text{and} \quad 3,994x + 217,005y = 17,345,000 \quad (2)$$

where x is the average earnings of high level manpower and y the average earnings of other manpower, their coefficients represent the number of non-Africans (equation 1) and Africans (equation 2) in high level and in other occupations respectively, and the constants are the total wage bills, in pounds, of non-Africans (equation 1) and Africans (equation 2) respectively.

Lidbury resolved this dilemma by introducing basic salary scales,
applicable to all staff, and an inducement element, now known as
'overseas addition', to be paid to civil servants recruited from Europe.
Subsequent civil service salary commissions have done no more than
adjust levels of earnings without altering the principle of common
scales and an inducement element. [1]   In 1961 the United Kingdom
government agreed to pay the overseas addition earned by its nationals
in Uganda. [2]   Therefore, unless the British Government regards this
aid as an alternative to other forms of aid for Uganda, basic salaries
alone are a cost to the Uganda Government.

To what extent are Uganda salaries still determined on the
world market, as reflected in the salaries paid to expatriates?   Has
the gap between locals and expatriates widened or narrowed since the
'two thirds' rule was abolished. Table 2. shows the mid-point of the
two scales on which the majority of expatriates are employed, A and G.
We see that in both cases the immediate effect of introducing a common
scale and overseas addition was to more than halve the gap between local
and expatriate earnings.   In 1960, however, overeseas addition was
substantially increased, and since the 1964 adjustment the percentage
difference between local and expatriate scales is almost as great as
it was before 1954.   Relative to Lidbury, considerable progress has
been made in divorcing local salaries from world market rates.   But
local salaries have by no means frozen in money terms.   They have
risen by over 80% since 1953; and by 21% (A. scale) and 15% (G. scale)
since the introduction of a common basic scale in 1954.

What factors determine the structure of salaries within the
civil service?   Since the scale and starting salary to which a
recruit is appointed are fixed rigidly by his educational qualifications,
it is probable that education is an important determinant of salaries
in the civil service as a whole.   Thus an honours graduate is appointed
to the A scale with a starting salary of £798 p.a., someone with a pass
degree or equivalent diploma may either be treated as an honours
graduate or appointed to the G.3 scale starting at £687, a recruit with
an H.S.C. starts on the G.5 scale at £473, the C.S.C. holder is generally
appointed to the E4 scale at £208 and the J.L.C. holder to the E6 scale
at £114.   These entry points are to be compared with the rates paid to
unestablished government employees, of whom no formal educational
qualification is generally required.   Their earnings vary from £90 p.a
for an unskilled worker in Kampala, to £115 for an artisan not trade-
tested, to £162 for a trade-tested artisan (grade 3).   Secondly,
civil service salary scales are incremental and promotion to higher
scales is possible, so that earnings should be directly correlated
with age and experience.

1.   Report of the Commission on the Public Services of the East
        African Territories and the East African High Commission, 1960,
        1960 (The Flemming Report); and Report of the Uganda Civil
        Service Salaries Commission 1963, 1963 (The Ani Report)

2.   Uganda Government, Sessional Paper No.2 of 1961.

The effect of eliminating differences in age-structure is to raise considerably graduate salaries and to lower those of staff with diploma or certificate. This shows even more markedly the financial benefit of formal education.

How have salaries in the civil service moved over time? It is possible to construct an index of salary cost and its components for the administrative, professional, executive and technical grades discussed above (see Table 6). Total expenditure on salaries more than doubled in the period 1956-1964. However, most of this increase was due to an expansion of staff. The index of salary scales, estimated by weighting the mid-point of each scale by numbers employed in 1964, rose by only 14% over the 8 years. The big increase in local salaries had been made by the Lidbury Commission in 1954, when the index rose by 58%.

The upgrading of staff, i.e. relative increase in numbers on the higher scales, affected the average salary very little. All the same, salary per employee, estimated by applying the indices to the 1965 sample data, rose from £891 in 1956 to £1034 in 1964; total salary cost increasing as a proportion of monetary G.D.P. from 2.13% to 3.43%. Although average salary merely kept in line with the Kampala cost of living index, it rose almost twice as rapidly as real G.D.P. per head over the same period. The civil service has been able to protect its standard of living from fluctuations in the Uganda economy.

It is probable that a major upgrading of staff has in fact occurred in recent years, but between clerical, sub-technical and subordinate employees and the more senior staff analysed above. In estimating growth in real G.D.P. the Statistics Division deflates the 'output' of the public services by an index of total employment. [1] On this basis, public services were the 'inflation sector' of the economy in the decade 1954 - 1964. Thus the price index of the sector 'Government' more than doubled and that of 'African Local Government' rose by more than 3.5 times over the decade. [2] It is possible that this method of deflation under-estimates the increase in real output of public services because it neglects any increase in 'output' resulting from the improved qualifications of staff. But while some forms of upgrading are a deliberate policy - decision taken after weighing up the expected improvement in quality of service against the additional salary cost involved, other instances of upgrading are difficult to justify. Thus it is unlikely that the rapid increase in superscale staff, from 187 at end-1959 to 280 at end-1964, was entirely necessary. [3]

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1. Real Growth of the Economy of Uganda 1954-1962, p.26.

2. From information provided by the Statistics Division.

3. The Ani Report of 1963 recommended a cut of 20% in super-scale posts (p.32).

No distinction in basic salaries is made in terms of sex or race, except perhaps for promotion.

The civil service staff lists provide an opportunity for analysing salaries in some detail. They give information on each civil servant in the administrative, professional, executive and technical scales. [1] Unfortunately the analysis by level of education cannot be comprehensive because the staff lists, by excluding those employed on the clerical and sub-technical (E) scale, omit some civil servants with a C.S.C. and all with a J.L.C. only. Nevertheless the 1965 staff list[2] contains some 4,300 entries out of a total establishment (excluding police) in 1965 of 10,700. [3] A 20% sample, with a population of 861, was taken from the 1965 staff list, and the information processed by means of punched cards. [4]

The sample has an average basic salary of £1020 p.a. (see Table 3). This implies that the government spent about £4.4 million on the administrative professional, executive and technical grades of the civil service in 1965. Whereas officers with a degree receive £1427, those recorded as having a certificate or diploma receive £1090 and those for whom no educational qualification above secondary school is stated, £862. It is also possible to classify staff according to the qualifications required in their jobs, since the Establishments Division allocates an educational qualification to each post. [5] The average for those who should have a degree, at £1373, is lower than for actual graduates, presumably because non-graduates holding graduate posts receive lower salaries. Curiously, the posts requiring C.S.C. as the minimum formal education, i.e. £852 as opposed to £889. There are several reasons for this. A much higher proportion of C.S.C. posts are required to hold a diploma or certificate as well. Moreover, since many C.S.C. graduates are on the E scale and therefore do not appear in the staff lists, the sample of C.S.C. graduates shows only the higher-paid among them. Thirdly, H.S.C. is a recent innovation and many of the jobs for which H.S.C. is required (almost entirely in the 'executive officer' class) are filled by 'under-qualified' staff. Consequently it is better to distinguish those H.S.C. and C.S.C. with a diploma or certificate from those without. If this is done, we find a clear distinction between diploma or certificate posts (£994) and others (£821).

There is a marked tendency in the sample for earnings to increase with age (see Table 4). It is possible, therefore, that the average earnings of staff by level of education are influenced by the particular age-structure at each level. Table 5 shows the average earnings of staff by level of education on the assumption that each level has the same age-structure as the total sample.

1. Superscale, A scale, and C and allied scales.

2. Uganda Government, Staff List as at 1st July, 1965.

3. Uganda Government, Composition of the Uganda Public Service as at 31st March 1965. In addition there were 8,100 established police.

4. Since every fifth name was taken, the numbers selected from each Ministry are in proportion to the total numbers in that Ministry, but no other bias is introduced.

5. Composition of the Uganda Public Service as at 31st March, 1965.

In 1962 there were some 3150 housing units [1] allocated
to expatriates and then to local civil servants roughly
in order of seniority, i.e. to a majority of the
professional, administrative, executive and technical
staff.   The so-called 'economic' rents range from £4 to
£78 p.a. and are well below the market rate.[2]   For
purposes of income tax the value of housing provided
is placed at 10% of income, less rent paid.   Civil
servants in the lower grades who are not eligible for
government housing are given preference in securing
accommodation on government housing estates.   These
are heavily subsidised and demand greatly exceeds
supply.   In 1962, 1130 civil servants occupied houses
on these estates.[3]   Free medical and dental facilities
are provided to all civil servants and their families,
and hospital accommodation is subsidised.   It is
possible to retire at 50 on a pension raised by 2% of
salary for every year of service.   The total value
of these and other fringe benefits can only be guessed.
However, a Treasury Instruction of 1963 (in connection
with the secondment of civil servants) gives an estimate
of the value of miscellaneous contributions accruing to
permanent local civil servants in addition to their
basic salaries.   This declines from 45% of basic
salary where it exceeds £945 p.a, ╪If these estimates
are applied to the sample of 4,300 civil servants
analysed above, then average earnings would be £1,465
in 1965 instead of £1,020.   My crude attempt to get
from basic salaries to disposable incomes widens rather
than narrows income disparities.

╪ down to 35% for those earning a basic salary of £104 - 266 p.a.

SALARIES IN EDUCATION

We have seen that the proportion of teachers
in total high-level manpower in Uganda is almost 40%.
Education is a highly 'educated manpower' - intensive
activity.   Consequently the cost of education is
determined largely by the level of salaries paid to
teachers, and they in turn on the level of salaries
paid to educated manpower in general.

The relationship between the cost of education
and teachers' salaries is shown by use of an identity.

Put
S = teachers' salaries
T = teachers
Y = monetary G.D.P.
P = population
E = enrolment of pupils
A = population of school-going age
C = recurrent expenditure on education
N = non-salary expenditure on education
r = salary per teacher expressed in units
of output per head

i.e. $r = \dfrac{S/T}{Y/P}$

Then we have

$$\frac{C}{E} = \frac{S}{T} \cdot \frac{T}{E} + \frac{N}{E}$$

1.   Uganda Government, Report of the Government Housing
Policy Committee, 1962, p.6

2.   But since the open market is minute, the market rate
would itself be affected by a change in government
housing policy.

The Ministry of Agriculture found that it could not recruit sufficient numbers of agricultural assistants. These are appointed after taking a C.S.C. and a two-year diploma course, at a starting salary of £208. The Ministry solved its recruiting problem by introducing a new post, that of assistant agricultural officer, requiring a three-year diploma after C.S.C. and starting at £687 p.a. Doubtless there is pressure on other ministries to follow suit. Even if salary scales are frozen, there is still a danger that ministries, in competing with each other for the limited manpower available, will raise salaries by upgrading staff without there being significant gain in service provided.

I intend to carry out a similar exercise on earnings in central government as a whole and in local government, and to relate this to the economic and functional analysis of central and local government revenue and expenditure which has been prepared by the Statistics Division and will be available shortly. Personal emoluments have been the most rapidly expanding component of public expenditure. It seems that the effect of this increase, given inelastic sources of public revenue, has been to curtail fixed capital formation particularly in local government.

There are two factors which can greatly influence the real value of salaries, neither of which is easily quantified without the use of budget surveys. These are the level of taxation and fringe benefits in the civil service.

In the case of income tax, the number of tax-paying government employees increased only from 3,450 to 3,550 between 1955 and 1963.[1] The rate of tax on their total income was 10% in 1963 and 8% in 1955.[2] The tax net has not been widened nor has the tax rate been much increased. However, since Africans became subject to income tax only in 1961, their real incomes were adversely affected over the period by tax. Although income tax is steeply progressive, personal allowances are high. A civil servant who received a total of £1020 in 1965, being the average basic salary of officers on the G scale and above, would pay about 3% of his income if he were married and had two children, and 10% if single. It cannot be said that income tax does much to equalise the distribution of income between the educated and the uneducated. Nor does the 1966 general 'development contribution,' equal to 5% of income, alter relative incomes.

Civil servants enjoy a great deal of fringe benefits in addition to their salaries, these being a legacy of the old colonial days when the government took a paternalistic responsibility for its expatriate officials. The benefits include subsidised housing, pension rights, free medical services and liberal provision of leave.

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1. Including EACSO.

2. East African Income Tax Department, Annual Report, 1956/7 and 1964/5.

These high salary costs inevitably restrict the expansion of education. Consider the costs of the Unesco targets for education in Africa, formally declared by the Addis Ababa Conference in 1961. [1] This can be done with some precision, as the Second Five - Year Plan made projections of the economy to the very years for which targets were set by Unesco. The Conference envisaged rapid progress to universal primary education and a 23% enrolment ratio in secondary education between 1961 and 1981. Particularly in secondary education the targets far exceed those reached by Uganda in 1965 or envisaged by the Plan for 1971 (see Table 8). Thus in 1965 recurrent expenditure in primary and secondary education alone would have cost 8.4% of monetary G.D.P., instead of the 4.3% recorded. The proportion would fall slightly in 1971 and 1981, provided that the basic assumptions hold good, e.g. child population grows at 2.5% p.a., monetary G.D.P. increases at the rate of more than 7% p.a. projected in the Plan and costs per pupil do not rise above the 1965 levels. Even with the massive inflow of aid hopefully envisaged in the Addis Ababa Report, the targets, however socially desirable, would be economically wasteful of resources in Uganda. Salary structure would have to be radically revised before targets such as these could be considered.

The recurrent cost of education has risen very rapidly over the last decade. Part of the increase is due to the expansion of enrolment; but this is not the full explanation. It would be interesting to discover whether the cost per pupil has risen; and if so, for what reason. To what extent has the increase in teachers' salaries been due to change in the pupil/teacher ratio, change in the salary scales, movement along salary scales, and improved 'quality' of education as reflected in the higher qualifications of teachers?

Data are not directly available on salary costs before 1963, but it is possible to piece together the movement of salaries from statistics of teachers, their qualifications, and salary scales attached to different teaching grades. By use of index numbers it is possible to isolate the effect of increased posts, teacher regrading, and increased salary scales; and then to estimate the combined effect of these factors on salary costs. Owing to lack of data on the age of teachers, it is not possible to estimate the effect of 'salary creep' resulting from the aging of the teaching force, whether positive or negative. It is simply assumed that the average salary for each grade of teacher equalled the midpoint of the relevant salary scale. However, once the indices have been constructed, it is possible to calculate the salary costs in earlier years from the exact salary data for 1965.

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1. E.C.A. and Unesco, Final Report of the Conference of African States on the Development of Education in Africa, Addis Ababa, 1961.

3. Op.cit, p.7.

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and $\dfrac{C}{Y} = \dfrac{C}{E} \cdot \dfrac{E}{A} \cdot \dfrac{A}{P} \cdot \dfrac{P}{Y}$

$\quad = \dfrac{S}{T} \cdot \dfrac{T}{E} \cdot \dfrac{E}{A} \cdot \dfrac{A}{P} \cdot \dfrac{P}{Y} + \dfrac{N}{E} \cdot \dfrac{E}{A} \cdot \dfrac{A}{P} \cdot \dfrac{P}{Y}$

The first term, indicating the salary component of costs, can be rewritten as

$$ r \cdot \dfrac{T}{E} \cdot \dfrac{E}{A} \cdot \dfrac{A}{P} $$

This formula is originally attributable to Arthur Lewis and a version of it has been applied to Uganda by E.R. Rado. [1] It expresses the proportion of G.D.P. devoted to education in terms of the ratio of salary per teacher to output per head, the pupil/teacher ratio, the proportion of children receiving education, the proportion of child population in total population, and the non-salary cost per pupil.

In 1965 'primary and junior secondary' education and 'senior secondary' education together accounted for about 77% of public recurrent expenditure on education in Uganda. [2] These two sectors of education, which I shall refer to as primary and secondary respectively, can be analysed in terms of the formula (see Table 7).

Secondary education, in which teachers are largely university or H.S.C. graduates, involves an average salary per teacher of about £920 per annum. This is 46 times the average output per head. With a pupil/teacher ratio less than 20, the salary per pupil is just under £50. Thus, even though only one child in almost 50 is in secondary school, the expenditure on secondary school teachers amounts to 0.57 of (monetary) G.D.P. The salary per teacher in primary education is much lower, £242 per annum, teachers being largely primary school graduates. Even this salary, however, is twelve times as high as output per head. The pupil/teacher ratio of 35 implies a salary cost per pupil of £684. The enrolment ratio in the aided primary school system is 44%, so that 2.62% of G.D.P. goes to primary school teachers. Thus expenditure on salaries in the two main sectors of education accounted for no less than 3.2% of G.D.P. in 1965, and total recurrent expenditure in these sectors for 4.3%.

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1. W. Arthur Lewis, 'Education and Economic Development', Social and Economic Studies, June 1961; E.R. Rado, An Exercise in the Arithmetick of Educational Planning', E.D.R.P. 68.

2. Second Five - Year Plan, p.144

If all the teachers with a primary education (grades 1
and 2) were replaced by secondary school graduates (grade 3),
the salary per teacher would be £348, instead of £242 in
1965, salary cost per pupil would rise to £9.84 from £6.84,
and total recurrent expenditure on primary education
would be raised by 36%.

Secondly, it might be argued that teachers'
salaries cannot be divorced from the general level of
salaries paid to high-level manpower. Without
considerably more direction of manpower than has existed
in Uganda, teachers' salaries must increase in line with
other salaries if their relative supply is not to
decrease. Consequently, action to cut or restrict the
growth of teachers' salaries can be taken only if it forms
part of a general policy for salaries. To consider this
argument it is necessary to compare teachers' incomes with
other incomes, for instance in the civil service. This
is not easy to do, because it is not obvious which groups
should be compared, and how their scales should be
compared: entry points do not indicate prospects of
promotion, and maxima fail to show whether increments are
automatic, or whether there are efficiency bars and a
limited number of senior posts. Thus Table 11 suggests
that there is very little difference in salary scale
between university graduates in teaching and in the civil
service, whereas Table 12 shows considerable differences
in their actual salaries despite the common entrance level.
It is not surprising that only 15% of secondary school
teachers were African in 1965 whereas 57% of the A and
G grade civil servants were African at the end of 1964.[1]
H.S.C. graduates may do better initially as teachers, but
prospects of promotion in the executive grade of the
civil service are probably greater. The C.S.C. graduate
going into teaching is probably better placed than his
fellow graduate who becomes a clerk but worse off than
the civil servant who has also had 14 years of formal
education. At the primary school graduate level, however,
the grades 1 and 2 teachers (with 8 and 10 years of
formal schooling respectively) both have an advantage
over the clerical assistant who enters the civil service
after 8 years of education (see Table 11).

In comparing earnings in the civil service and
in teaching it is also necessary to consider differences
in fringe benefits. Teachers have pension rights
equivalent to civil servants, but not in respect of
service before 1953; and many receive subsidised housing,
as do civil servants. But they do not receive the
free medical services enjoyed by the civil service. On
the other hand, their effective annual leave is longer.

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1. Quarterly Establishment Return, 31st December 1964;
    and Education Statistics, 1966

Wherever a weighting of series is necessary, the 1965
weights are chosen.   The results of this analysis
are shown in Tables 9 and 10.

Between 1955 and 1965 primary school teachers
increased in number by 79%, but salaries also rose
through an improvement in the qualifications of teachers,
by 15%, and through an increase in the scales themselves,
by 58%.   Thus the average salary per teacher increased by
no less than 82%, from £133 to £242.   The salary per
teacher expressed in terms of output per head rose from
7.7 to 12.1 multiples. If salary scales had not risen
from their 1955 levels, and if the qualifications of
teachers had not improved, then the proportion of G.D.P.
spent on primary teachers' salaries would have risen over
the decade from 1.19% to only 1.44% and not to the 2.62%
actually recorded.   Turning to secondary education
(Table 10) we see that the total increase in salaries was
even more rapid, but that this was largely attributable
to an increase in the teaching force.   The upgrading of
staff (e.g. an increase in the proportion of university
graduates) resulted in a 16% increase in salaries between
1955 and 1960, but after 1960 the average qualification
fell with the rapid expansion of secondary enrolment.
Salary scales rose by 39% over the decade, but this is
lower than the increase in scales of primary school
teachers.   Had salary scales not risen over the period,
the average salary would have been £661 and not £921 in
1965.   Had neither salary scales nor the level of
qualifications altered, expenditure on secondary school
salaries would have risen from 0.17% of G.D.P. in 1955
to 0.39% in 1965 and not to 0.57%.

In summary, the observed many-fold increases
in recurrent expenditure on education over the decade
cannot be attributed simply to an expansion of enrolment.
Particularly at the primary level, but also in secondary
education, both increases in salary scales and improved
qualifications of teachers have pushed up recurrent costs
per pupil.   The economist would criticise these
increases in unit recurrent costs because they result in
a diversion of scarce development resources from other
uses, of which the further expansion of enrolment itself
is one alternative.   However, the educationist might
attempt to justify policies which increase unit costs.
Firstly, it might be claimed that the recruitment of
better qualified staff raises the 'quality' of education
provided. Unfortunately, neither the economist nor the
educationist can give clear-cut answers to such questions
of choice between economic and educational objectives,
except that the decision-makers should be made aware of
the precise nature of the opportunity costs involved in
any decision.   Thus the long-term goal, laid down
in the Plan,[1] to increase steadily the proportion of
primary teachers with a C.S.C. and teacher training, should
be evaluated by estimating the additional recurrent cost
per pupil involved, and hence the opportunity cost in terms
either of additional pupils or of other development goals.

1.   Second Five-Year Plan, p.140

Despite these difficulties of measurement, the possibility exists that an increase in the supply of educated manpower may depress its market price. But an increased supply will involve additional educational expenditure. It would be interesting to measure the additional cost involved in producing 'excess' manpower, even though we cannot measure the ensuing 'benefits'[1]. It is possible to make a rough estimate of the additional educational cost involved in completing localisation and producing a surplus of 25% at each level by the end of the end of the Plan period, 1972 (see Table 13). For each level the projected number of posts in 1972 is multiplied by 1.25, and to this total is added an allowance for wastage, complete localisation and the additional numbers proceeding to the next educational level, less the manpower in 1966. To obtain the increase in enrolments required, an allowance is made for failures. Enrolment is costed at the recurrent expenditure per full course in 1965: marginal cost is assumed to equal average cost. On this basis it would appear that the market could be flooded with a 25% 'surplus' output of educated manpower by 1972 at a recurrent cost over the Plan period equal to 2.24% of monetary G.D.P. This entire exercise of course presumes that the manpower projection contained in the Plan, inevitably based on untested assumptions, are in fact correct.

Such an increase in expenditure might beworthwhile but only if it produced a radical downward revision of salaries. Would salaries be cut ? In a perfectly competitive market for labour, profit maximisation by all parties would tend to equate the new supply and demand, and thus depress the market rate; the fall being greater the more inelastic the demand for educated manpower. In Uganda, however, there are a number of reasons why a fall is unlikely to occur. Firstly, 82% of educated manpower is paid from public funds. Not only is the market manopsonistic in form, but the monopsonist need not attempt to maximise profits. Secondly, the educated elite is a vocal and powerful pressure group in the society, so it would be difficult even for private employers to bring about a cut in salaries. Thirdly, the governing party has in the past made a political pledge not to worsen conditions in the civil service.[2]

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1. Neither the effect on the level of salaries nor the additional social output which must be estimated for cost/benefit analysis.

2. '.... I am able to give once again our solemn promise to guarrantee the present terms of service to all in the Service and will not alter these terms to their disadvantage' (Statement by the Prime Minister, 29th May 1962).

Although it is difficult to compare real earnings in the
two professions, the evidence does indicate that, in
general, teachers are certainly no better off than their
equivalents in the civil service. For this reason, the
salaries of all but the lowest grade of teacher cannot
be cut, or their growth restricted, except as part of
a general policy on the incomes of high-level manpower.

A FREE MARKET SOLUTION?

In theory it should be possible to bring about
a more equitable distribution of income in Uganda by
reducing the scarcity value of educated manpower, i.e.
by increasing the supply relative to the demand. The
manpower projections of the Five-Year Plan, in common
with other manpower plans, merely estimate the additional
requirements of educated manpower given the existing income
structure. In other words, no attempt is made to
estimate demand on the assumption that salary cost will
move in relative terms, nor to adjust supply so that
salaries will indeed vary.[1] Most manpower plans contain
an implicit assumption that demand for educated manpower
is determined by (sectoral) output, and not by price, i.e.
that the price elasticity of demand is insignificant.
It is thought sufficient to measure change in the demand
curve and not movement along the curve. To my knowledge
no attempt has been made in the economic literature to
measure the response of demand for educated manpower to
changes in its cost. However, Arthur Lewis has shown
(with reference to Jamaica) that there are certain sectors
of an economy in which the proportion of educated manpower
employed is highly flexible.[2] These sectors which
include primary school teaching, clerical work, nursing
and retailing, act as a reservoir for the secondary
educated. Unfortunately, Lewis did not investigate whether
the increase in the proportion of secondary educated in
these occupations in Jamaica had been accompanied by
a corresponding reduction in the average earnings of the
secondary educated, or whether relative earnings in these
occupations had risen. Since we do not know the shape
of the demand curves for educated manpower, it is not
possible to say that if supply is increased by an additional
x%, then price will fall by y%. Moreover, in a country
such as Uganda, where the public sector employs no less
than 43% of educated manpower, and publicly - financed
education a further 39%, there is no possibility of a
stable price - elasticity of demand, independent of
political pressures and ad hoc decisions.

1. But the Plan does contain an interesting assumption
   that the ratio of first level to second and third level
   manpower will fall, presumably because of the greater
   difference in local relative salaries than in expatriate
   relative salaries, which were relevant in the past and
   involved a high expatriation cost (p.133).

2. W. Arthur Lewis, 'Secondary Education and Economic
   Structure', Social and Economic Studies, June 1964.

In these circumstances it is likely that the more rapid production of educated manpower would not lower salaries. Instead, with the movement into jobs previously held by less educated people, the average earnings in such occupations may rise. Whereas in the private sector it can be expected that the pursuit of profit will lead to a rough relationship between the value of a job and the earnings attached to it, this need not be the case in the public sector. There is a danger that the current fairly rigid relationship between education and earnings in the civil service will be retained. For instance, the surplus secondary school graduates may well be employed as primary school teachers on the existing scales for grade 3 teachers. If substitution were complete, we have seen that this would raise primary school recurrent expenditure by as much as 36%. The effect of expanded education could well be to raise the qualifications and salaries of staff in some occupations without a corresponding increase in output; so raising the cost of public services including the cost of education itself.

It is true that real earnings can be squeezed more easily than money earnings. Thus a mild inflation would cut real earnings if salary scales could be frozen. It is quite possible that the private sector automatically follows changes in public sector salaries. Nevertheless, firms would be less likely to raise salaries in response to induced inflation than to maintain them in response to a direct cut in civil service salaries. Similarly, an increase in taxation has the advantage of applying to all high incomes and of not discriminating against the civil service alone. But these measures require political determination. Certainly the Plan, in calling for a zero increase in incomes over £600 p.a., and for a 1.0% annual increase in incomes from £210 to £600, makes a step in the right direction. [1] Nevertheless, in the Ugandan situation the prospects of manipulating the salary structure by operating on the supply of educated manpower are slender, and the costs heavy. There exists an alternative method of revising salaries downwards. This is the 'bonding' of students educated at public expense to work for a period of years in any job to which the government directs them. In this way it is possible to cut salary levels for bonded manpower without the danger existing that competing employers will bid up salaries against each other. Such a policy is likely to be politically less difficult than the flooding of the market, and a good deal less expensive.

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1. <u>Second Five-Year Plan</u>, p.149.

FURTHER RESEARCH

The other part of my study is on wages, their
determination and their implications for economic develop-
ment. Information is being collected to test, where
possible, the following hypotheses.

In the last decade, and particularly since 1960,
unskilled wages have risen very rapidly from extremely
low levels.   This increase was not due to a shortage
of labour, since the market for labour was actually
transformed over the decade from a sellers' market to a
buyers' market.   The reason why wages have behaved
contrary to economic theory appears to lie in the action
of the major employer, central government, and in the
recommendations of the minimum wages advisory boards.
However, a study of their reports suggests that they were
merely following the lead of central government.   The
trade union movement in Uganda is still weak and
unorganised.   In particular industries and firms, workers
are well-organised and wages are above the minimum, but
even here the level of minimum wages is important, since
the unions attempt to maintain differentials.

The rapid increase in wage rates has important
economic implications.   There is evidence that the
decline or stagnation in employment in recent years has
been correlated with the rise in wages, both in the
public and the private sector.   There are a priori reasons
to expect that the increase in wages was responsible for
the stagnation of employment relative to output, and tests
are available to establish causation. . There is also
evidence that the labour force has become more stable
in the last decade.   Thus the effect of government
policy has been to create a smaller, more stable and
higher-paid labour force.

A second implication of the increase in wages is
for distribution of income between wage-earners and
peasant farmers.   There is evidence to suggest that the
distribution has shifted towards wage-earners in recent
years, so that a widening inequality has been created.
Moreover, the incidence of taxation tends to increase
this inequality.   It seems plausible that while wage-
earners apply pressure to increase their incomes relative
to the highly-paid salariat, the peasants in turn apply
pressures to maintain their income relative to that of
wage-earners.   The outcome must be either a growing
disparity in incomes or a government subsidy for peasant
producers with harmful effects on government revenue.

Table 1.

High-Level Manpower By Employer 1963

Level	Central Government	EACSO	Local Government	Education	Private Sector	Total
1	630	350	280	580	860	2,700
2	2,050	770	990	1,480	2,360	7,650
3	2,580	660	1,990	7,270	1,000	13,500
Total high-level	5,260	1,780	3,260	9,330	4,220	23,850
Other	47,640		22,940	9,200	118,020	197,800
Total Employment	54,680		26,200	18,530	122,240	221,650
1	23.3	13.0	10.4	21.5	31.8	100.0
2	26.8	10.1	12.9	19.3	30.8	100.0
3	19.1	4.9	14.7	53.9	7.4	100.0
Total high-level	22.1	7.5	13.7	39.1	17.7	100.0
Other	24.1		11.6	4.7	59.7	100.0
Total Employment	24.7		11.8	8.4	55.1	100.0

Sources: Information from Ministry of Economic Development and Planning;
            Annual Enumeration of Employees, 1963.

Notes: 1. Level 1 = University graduates and professional equivalents;
                level 2 = H.S.C. or C.S.C. plus 2 or more years of further
                          training;
                level 3 = C.S.C. or its equivalent.

            2. The data on high-level manpower were pieced together from a
                number of sources, and have been rounded to eliminate
                spurious accurancy.

            3. EACSO numbers an assumed to be one third of EACSO staff in
                East Africa.

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Table 2.

Relation Between Expatriate and Local Earnings in the Civil Service

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A. Scale:	Earnings (£p.a.)		Earnings (-1954= 100)		Earnings (%)
	Local	Expatriate	Local	Expatriate	Expatriate/Local
-1954	724	1207	100	100	167
1954-	1073	1340	148	111	125
1957-	1122	1401	155	116	125
1960-	1295	1835	179	152	142
1964-	1295	2066	179	171	160
G. Scale:					
-1954	628	1047	100	100	167
1954-	1023	1277	163	122	125
1957-	1071	1338	171	128	125
1960-	1179	1692	188	162	144
1964-	1179	1904	188	182	162

Sources: Establishment Instruction, Revision of Terms of Service under the Overseas Service Aid Scheme Agreement 1964;   Annual Estimates of Expenditure; Flemming Report; Lidbury Report

Notes:

1. A cost of living allowance paid before 1957 is included, although not pensionable.

2. The earnings of expatriate officers in 1964 refer to contract staff, who are in the majority. For permanent staff the overseas addition is slightly higher.

3. The G. Scale corresponds to the C. Scale of earlier years, the exact points of comparison being obtained from conversion tables.

4. Earnings refer to the mid-points of the scales.

Table 3

Average Salary in the Civil Service, by Level of Education

	Average basic Salary (£p.a.)	Numbers	
		Sample	Total
Total	1020	861	4305
Education achieved:			
Degree	1321	216	1080
Diploma or Certificate	1090	155	775
None stated	862	490	2450
Education Required:			
Degree	1373	240	1200
HSC	852	105	525
CSC	889	516	2580
HSC and CSC: with diploma	994	221	1105
without diploma	821	400	2000
Total	883	621	3105

Source: 1965 Staff List.

Notes: 1.   Level of education required in each post
is obtained from Composition of the Uganda
Public Service as at 31st March 1965.

Table 4

Average Earnings in the Civil Service, by Age

Age Group	20-4	25-9	30-4	35-9	40-4	45-9	50-4	55-9	60-4	Total
Average Basic Salary (£p.a.)	750	804	915	1083	1194	1182	1430	1477	1850	1020
Average Basic Salary (age-group 20-4=100)	100	107	122	144	159	158	191	197	247	136

Source: 1965 Staff List.

Notes: 1.   Information on age is provided for 745
              of the 861 members of the sample.   A
              discreet veil is drawn over the age of
              all female officers.

Table 5

Average Earnings in the Civil Service, by
Level of Education, Adjusted for Age-Structure

Level of Education:	Basic Salary (£p.a.)	
Education achieved:	Actual age-structure	Uniform age-structure
Degree	1,321	1,418
Diploma	1,090	1,070
None stated	862	862
Education required:		
Degree	1,373	1,556
Diploma	994	943
Other	821	836

Source: 1965 Staff List.

Notes: 1.   Uniform age-structure is that of the
               sample population as a whole.

          2.   'Other' refers to H.S.C. or C.S.C.
               graduates without a diploma or
               certificate.

Table 6

Index of Civil Service Salaries, 1956 - 1964

Index of Salaries	1956	1960	1964
Attributable to:			
Staff numbers	100.0	129.8	184.0
Staff regrading	100.0	99.1	102.2
Salary scales	100.0	105.0	113.6
∴ Total salary cost	100.0	135.1	213.6
∴ Salary Cost			
Total salaries (£000)	£2069	£2,795	£4,420
Average salary (£)	£ 891	£ 928	£1,034
Salary cost/G.D.P.	2.13%	2.52%	3.43%
Index of			
average salary	100.0	104.1	116.1
cost of living	100.0	103	117
real G.D.P. per head	100.0	103.2	108.8

Sources: Annual Estimates of Expenditure; Flemming Report;
Lidbury Report; Annual Report of the Public Service
Commission; Composition of the Uganda Public
Services at 31 December 1964.

Notes: 1. Basic salary of superscale before 1960 is
assumed to bear the same relation to total
expatriate salary as on the A scale.

2. Where the B and C scales are replaced by
by the G scale, conversion tables are used
to maintain comparability.

Table 7

Recurrent Cost of Primary and Secondary Education[1], 1965

	Primary	Secondary	Primary and Secondary
T	16,319	930	
S/T	£242	£921[2]	
Y/P	£20.0	£20.0	
∴ r	12.1	46.1	
E	578,455	17,323	
E/T	35.45	18.62	
E/A[3]	44.74%	2.02%	
A/P[4]	17.13%	11.36%	
∴ S/E	£6.84	£49.45	
N/E	£1.58	£43.25	
∴ C/E	£8.42	£92.70	
S/Y	2.624%	0.568%	3.192%
N/Y	0.606%	0.497%	1.103%
∴ C/Y	3.230%	1.065%	4.295%

Source: Ministry of Education, Education Statistics, 1965, 1966.

Notes: 1.   The table refers to the aided school system only and excludes private schools.

2.   Excluding overseas addition, which is not paid from Uganda sources. If overseas addition were included the figure would be £1115 p.a.

3.   The relevant age-group is assumed to be 7 - 12 for primary and 13 - 18 for secondary education.

4.   The 1959 ratios are assumed to hold in 1965.

Table 8

Cost of UNESCO Educational Targets

	1965/6	1970/1	1980/1
Target E/A[1]:			
Primary	51%	71%	100%
Secondary	9%	15%	23%
A (000):			
6 - 12	1293	1507	1953
13 - 18	858	1000	1295
∴ Target E:			
Primary	659	1070	1953
Secondary	77	150	298
∴ C (£000):			
Primary	5549	9009	16444
Secondary	7138	13905	27625
Plan Y (£000)	150,800	279,700	600,000
∴ C/Y			
Primary	3.68%	3.22%	2.74%
Secondary	4.73%	4.97%	4.60%
Total	8.41%	8.19%	7.34%

Sources: Second Five-Year Plan, 1966-1971, 1966: E.C.A. and UNESCO. op. cit.

Notes: 1. The UNESCO targets are for a six-year primary course and a largely six-year secondary course. Here the enrolment ratios are applied to seven-and six-year course respectively.

2. Child population calculated as for Table 1.

3. Average costs are taken from Table 1 and refer to 1965, i.e. no increase in costs is allowed for.

Table 9

Salary Cost of Primary Education 1955-1965

Index of Salaries Attributable to:	1955	1960	1965
Numbers of teachers	100.0	136.1	179.0
Regrading of teachers	100.0	108.7	115.4
Salary scales	100.0	116.0	157.9
∴ Total salary cost	100.0	171.6	326.9
S/T	100.0	126.1	182.2
S/E	100.0	118.9	150.1
∴ Salary Cost:			
S/T	£133	£167	£242
r	7.7	10.1	12.1
S/E	£4.55	£5.40	£6.84
S/Y	1.189%	1.871%	2.624%
S/T if:			
Salary scales at 1955 level	£133	£145	£153
teachers have 1955 qualifications	£133	£154	£210

Sources: Ministry of Education, Annual Reports, 1955
and 1960; Educational Statistics, 1965;
Uganda Government, Annual Estimates of
Expenditure; Establishment Instruction,
Revised Salaries of Uganda Civil Service, 1954;
Report of the Uganda Teachers' Salaries
Commission, 1961; Ministry of Education
Circular No.39 of 1964.

Table 10

Salary Cost of Secondary Education 1955 – 1965

Index of Salaries attributable to:	1955	1960	1965
Teacher numbers	100.0	125.2	303.9
Teacher regrading	100.0	116.0	105.8
Salary scales	100.0	128.5	139.3
∴ Total salary cost	100.0	186.6	447.9
S/T	100.0	149.0	147.4
S/E	100.0	166.4	148.4
∴ Salary Cost:			
S/T	£625	£931	£921
r	36.1	56.1	46.1
S/E	£33.23	£55.29	£49.45
S/Y	0.172%	0.322%	0.568%
S/T if:			
salary scales at 1955 level	£625	£725	£661
teachers have 1955 qualifications	£625	£803	£871

Sources: as for Table 2.

Notes: 1. 1955 is not strictly comparable with
later years because in 1955 the
'senior secondary' schools contained
some 'junior secondary' pupils and
their teachers.

Table 11

Comparison of Teachers and Civil Servants' Salaries, 1966

Classification	Formal Education Completed		Salary (P. a.)			Incre-ments	Bars
	Level	Years	Mini-mum	Maxi-mum	Mid-point		
Teachers							
Secondary Teacher	Honours Degree	17	798	1752	1272	22	-
Secondary Teacher	Degree	17	738	1572	1155	21	-
Grade 5	HSC + T2	16	612	1080	846	16	-
Grades 3, 4	CSC + T2	14	300	828	564	24	1
Grade 2	JSC + T4	12	189	354	272	13	-
Grade 2	JSC + T2	10	180	354	267	14	-
Grade 1	P6 + T2	8	132	276	204	17	-
Civil Servants							
A	Honours Degree	17	798	1791	1295	19	-
G3 - 1	Degree or Equivalent	17	687	1671	1179	23	-
Executive Officer	HSC	14	473	1671	1072	32	3
Clerk	CSC	12	208	598	403	22	1
Clerical Assistant	JSC	8	114	200	157	11	-

Souces: Estimates of Expenditure, 1965/6; Report of the Uganda
Civil Service Salaries Commission, 1963; Sessional
Paper No.6 of 1963; Composition of the Uganda Civil
Service as at 31st March, 1965.

Notes: 1. Years of formal education are assumed to include years
spent at teacher training colleges. The number of years
thus spent is shown after the letter T in the previous
column.

Table 12

Graduate Earnings by Age and Ministry

(£p.a.)	20-4	25-9	30-4	35-9	40-4	45-9	50-4	55-9	60-4	Total
Ministry of Education	810	926	1057	1210	1193	1170	1490	1700	–	1064
All Ministries	806	959	1342	1703	1625	1421	2038	1917	2350	1321

Source: 1965 Staff List.

Note: There were 470 graduates in the Ministry of Education and 1080 graduates in all Ministries in 1965.