

THE RHODESIAN JOURNAL

of

ECONOMICS

The Quarterly Journal of the Rhodesian Economics Society

Editorial Board:

A. M. Hawkins (Editor), M. S. Brooks, M. L. Rule and P. Staub.

ARTICLES

page

<i>Rhodesia: Sanctions, Economics and Politics</i>	P. B. Harris	5
<i>Aspects of the Cabora Bassa Scheme</i>	J. C. Graylin	21
<i>Economic Growth and Community Development</i>	R. G. Howman	25
<i>Wage Structures in Rhodesia</i>	J. A. Scholtz	38
<i>The Rhodesia Freedom From Hunger Campaign</i>	John Lombard	44

Review Article

<i>Evolution of a Money Market</i>	Sir Henry McDowell	52
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Economic Diary		58
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Wage Structure in Rhodesia

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WAGE STRUCTURES IN RHODESIA¹

J. A. SCHOLTZ

Manpower Requirements.

(a) Modern industry requires a rapidly increasing number and a high proportion of technical, professional and managerial personnel.

(b) This is equally true whether ownership is private or public.

(c) This staff is concerned with the functions of planning, organisation, direction, training and research that have become indispensable to modern factory production and to urban communities.

(d) The personnel constituting this group should be continually increasing in size and significance. They require an ever higher degree of formal education and training and substantial resources in the community tend to be devoted to their development.

In a developing country like Rhodesia, which has a small economically active population and a large population still in the subsistence economy, the requirements for personnel to fulfill these functions are proportionally higher than for economically developed countries. The requirements for the near future will be even higher in view of the rapidly increasing population in the subsistence economy for whom employment is to be found.

(a) The exponents of the Marginal Productivity-Theory of wages would state that the wage determined by production would interpret the concept as the theoretical basis for the demand of labour. In labour matters the economic theorists have been proven to stress the "competitive wage" or the "equilibrium wage".

(b) We know, that in a society like ours that there are many factors which influence the determination of wages.

Rehn (Unionism and the Wage Structure in Sweden) states:—

"Wages are much more a function of dynamic, historical and psychological factors, and employer deliberations take place in quite other terms than those of the marginal productivity theory."

Practical experience in the determination of wages shows that there are many factors influencing wages. Lester (Richard A.—A range theory of differentials) maintains that:—

"Any theoretical formulation that allows for multiple motivation and which includes numerous economic, psychological, political, social and institutional factors must necessarily be eclectic and unprecise, devoid of simple solutions and subject to zones of indeterminacy."

¹ Paper read to the Society in March 1968.

Classification of Factors.

In an attempt to explain zones of indeterminacy one must come to two conclusions.

- (i) That wage ranges, regarded by the classists as expressions of instability are in fact normal and the results of a multiple of factors acting on a wage.
- (ii) That the factors influencing wages must work in opposite directions or even to maintain the existing position.

Lester suggests the following classification—

- (a) **Competitive**—these are the factors, generally economic, which in the long-term tend to widen the differentials between wages. Competitive factors generally operate through occupational labour demand and supply.
- (b) **Anti-competitive factors**—these factors are those which operate against the free differentiation of wages occupation by occupation according to occupational and skill demand and supply.

An example of these factors is where a company follows a policy of hiring into the bottom jobs and promoting only from within its own work force. By doing this the company creates the demand and controls the supply for each of its jobs. Instead of wages differentiated occupation by occupation according to occupational demand and supply, wages are determined arbitrarily.

- (c) **Impeditive factors**—The term impeditive is broader than the notions of “frictions” because it includes positive as well as negative factors.

These are often social and institutional factors which have the effect of impeding or restraining changes from taking place.

The Total Wage Structure.

Obviously then where so many variable factors influence the determination of wages and the differentials between wages, it is impossible to study wages without reference to the overall structure.

J. T. Dunlop (The Theory of Wage Determination) says that:—

“Wage Theory must operate with the concept of wage structure—the complex of rates within firms, differentiated by occupation and employee and the complex of interfirm rate structures. The concept of wage structure for the purpose of wage determination is a central concept; the analysis of wage determination will be approached through the wage structure.”

The Wage Structure.

We know from other social sciences that where the attributes and/or achievements of groups of humans are classified in the form of a frequency distribution and where these are plotted in the form of a curve, these give rise to the log-normal shape. If this is taken further and the data plotted on log-probability paper we get a straight line when the data approach the normal curve.

It is well known that the log-normal distribution fulfills the same function where wage distributions are concerned and is of importance for providing a mathematical model for the distribution of incomes of special groups of people.

It has been frequently shown (and I refer specifically to the work of Prof. H. G. Steyn) that for a homogenous population for instance such as the rural population of the Orange Free State the frequency distribution of incomes is adequately described by a log-normal distribution. The distribution of incomes for the free occupations such as farming, accounting, medical practitioners, lawyers etc., all comply to the log-normal distribution and therefore this remains a valuable model for representing the distributions in these cases.

When all these are joined together and added to the wage and salary earning groups, the total income distribution of the earning population no longer conforms to the log-normal distribution. Ever since the days of Pareto economists and statisticians for that matter have struggled with this problem but have found it impossible to represent the income distribution of a total national population by a single mathematical formula.

Dr. Steyn found that by super-imposing the closest fitting normal curve on to the existing curve of income distribution in South Africa, the normal curve fitted the existing curve at the lowest and at the upper ends of the curve. The deviation of the existing curve from the normal curve was confined to the lower-middle ranges, in between £150 and £1,500 p.a.

Between these ranges he found that there were additional or surplus persons present which caused the distribution to deviate from the normal. The interesting feature was that the surplus population between these ranges or the minor component form a truncated normal distribution.

He did this calculation for the years 1951 and 1960 and found that the minor component, the surplus populations, have decreased considerably over the period.

In the free operating professions where the competitive factors have full play in the formation of incomes, we have the income distributions

conform to the log-normal shape. We must therefore at this stage assume that in that part of the total population curve conforming to a normal curve, the competitive factors operative in wage and income determination are freely active.

As regard the minor component, i.e. the truncated normal distribution we must assume that anti-competitive factors are dominant thus preventing the income distribution of this part of the population to conform to the whole.

We know that this section partly or wholly consists of the wage and salary earning population. It is to the section of this population that we therefore have to look for an answer to the problem. We note that in 1951 the minor component consisted of 32% of the economically active population.

The Rhodesian Structures.

In Rhodesia we have the dual wage structure—a separate African wage structure and a separate European wage structure.

We need not go into the historical and other reasons that have brought this about. We shall deal with the African structure first.

The African Wage Structure.

The African structure has a very narrow range. Originally and to a large extent today the African was employed in product-instituted, labour intensive occupations. The competitive factors were absent and the demand was more often quantitative rather than qualitative.

Under such conditions the play of competitive forces of competition of supply and demand for levels of skills demarcated by wage differentials did not operate effectively.

The position is changing in that more and more positions requiring measures of skill are becoming available.

The outlook for the future is however, not so hopeful. Due to the population explosion that has taken place, industry in the near future will be faced with large numbers of new workers flowing into the employment market. It would appear that the supply of labour at this level will for some considerable time outstrip the demand.

The position will have to be met by measures going beyond the normal operation of the labour market.

As such it is a problem calling for investigation and measures beyond the scope of the present discussion.

The European Wage Structure.

The frequency distribution curves for incomes for the years 1953/54 and 1965/66 from the Income Tax Statistics were plotted. As is to be expected when these are plotted on the log-probability scales, the data do not yield a straight line. A rough empirical investigation of the curves would lead one to conclude that the same phenomena present in the case of South Africa, also exist here.

It is hoped at some future date to do the same mathematical analyses on our data as has been done by Prof. Steyn in South Africa. It is also the intention, if possible, to go further and to determine the reasons why these curves deviate from the log-normal shape.

Interim Conclusions.

This however, does not preclude the possibility of drawing some conclusions from the available data in its present form. This can be done especially from the lower and upper regions of the curves where we know the curves are not so much affected by the intrusion of the minor component.

In 1953/54 we had 28.2% of the tax-paying population earning less than £800. In 1965/66 the corresponding group had decreased to 18.1% of the population.

If we now pay attention to the group up to £1,500 where Dr. Steyn found the minor component which disturbed the normal distribution we find that in 1953/54 the group between £800-£1,500 was made up of 38.5% of the population. In 1965/66 this group has decreased to 25.7 per cent.

Taking these two groups in each year together we find that in 1953/54 the population having an income of £1,500 or less was 66.7% of the whole. In 1965/66 however, the corresponding number was only 43.8%.

If we now look a grade higher to see where this population has gone, we find that the group who, in 1953/54 had an income of between £1,501 and £2,500 constituted 23% of our population. In 1965/66 the group with a corresponding income has increased to 39.9%—an increase therefore of 16.9% of the total population.

If we now consider the management or executive group, i.e. the leaders that are so necessary for the development of any country and to whom we referred in our opening statement, we find a change.

The position here has been reversed to what we have found in the lower eschelons. If we take the salary of £3,001 as our datum line we find that in 1952/54 a total of 4.3% of the population earned incomes above £3,001. In 1965/66 the corresponding figure was 3.2%.

If we take £4,001 as our datum line we find the change even larger, i.e. a decrease from 2.8% to 1.5%.

We thus have the position where we have a great upwards movement of incomes in the lower groups and a decreasing movement in the upper categories.

On the other hand the differentials between the unskilled and lower-semi-skilled groups, i.e. the Africans and the Europeans have widened. The Africans are today relatively worse off than they were in 1953/54.

Conclusions.

Clerk Kerr found that:—

“The lesser the degree and the greater the rate of industrialization, the wider will be the occupational differentials and the premium for skill.”

If the differential between the unskilled and skilled has increased due to our rate of industrialization, the differential between skilled and management should also have increased. The decrease in the incomes of the upper echelons is a factor which merits serious consideration.

In developing countries the leadership qualities should be highly remunerated. One must remember that the percentages of these categories that we have shown are based on the European population only. In fact, they supply the leadership qualities for our economic development for the whole population—European and African.

Viewed in this light our position as regards managerial and technical manpower on which our future and the development of this country is to be based is in a precarious position. The salary scales may be depressed due to such anti-competitive factors as policies of internal-promotion. Under competitive conditions the remuneration scales would increase this, creating the incentive to draw personnel with the leadership qualities required. Also it would be the incentive to personnel to increase their technical qualifications in order to compete successfully, for senior positions.

Salisbury.



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