

Institute of Development Management

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[Botswana, Lesotho & Swaziland]

IMPACT OF JULY 1977 MINIMUM WAGE
CHANGES IN BOTSWANA
by
KRYSTYNA SZAWELSKI, MSc.
IDM RESEARCH PAPER NO. 5.
OCTOBER 1978

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Foreword

A study of the effects of changes in minimum wages was undertaken in Botswana by the Institute of Development Management during the months March to August, 1978.

The study was carried out at the request of the five national wages Councils following their joint recommendation in April 1977, that a single minimum wage of 20 thebe per hour applicable through the industries covered by these five Wages Councils.

The increases in the minimum rates which became effective on July 1, 1977 were from 10 thebe per hour in Wholesale/Retail Distribution; 10.6 thebe in Hotel, Catering and Entertainment, and 14 thebe per hour in Manufacturing Services and Repair; Garage, Motor Trade and Road Transport; and Building, Construction, Exploration, Quarrying (with higher minima for skilled trades in construction).

The Councils wished to learn of any ascertainable effects of the changes before undertaking the next review especially with a substantial rise in the minimum wage in some sectors.

The study based on a survey conducted in March 1977, focused primarily on the income, employment, sales, prices, productivity and other economic effects as viewed by a representative sample of private establishments in each of the sectors currently covered by the minimum wage regulations. It was beyond the scope of the study to undertake a national sample of employees who were affected by the changes in the minimum wage.

The study was carried by Ms. Krystyna Szawelski, MSc of the London School of Economics, with the assistance of Mr. Michael Moyo, M.A., of the IDM staff, under the coordination of James G. Campbell of the IDM and the guidance of a Steering Committee composed of:-

James G. Campbell ^x	IDM, Gaborone (Chairman)
J. M. Charumbira	Central Statistics Office, Botswana
Michael Hubbard	University College of Botswana
John Hunter	IDM, Gaborone
Michael Lipton ^x	Ministry of Finance and Development Planning, Botswana
Nelson Moyo	University College of Botswana
Anthony Williams ^x	Central Statistics Office, Botswana
Peter Olsen ^x	Department of Labour
A. P. Moapare	Department of Labour

^x Were able to attend all or most meetings.

The Institute of Development Management wishes to express appreciation to the Ministry of Finance and Development Planning of Botswana which bore the major share of the costs of the study; of the valuable advice contributed by the members of the Steering Committee; to the Central Statistical Office, Mr. Anthony Williams and his colleagues for their assistance in constructing the sample design and providing other technical aid; and particularly to Ms. Szawelski for her capable and untiring efforts in bringing the survey and its analysis to a successful conclusion.

The conclusions drawn from this Study are the responsibility of the author and do not necessarily reflect the views of individual members of the Committee or the organizations they represent, although comments have been received from several members of the Steering Committee which were useful in preparing the final draft.

George V. Haythorne
DIRECTOR

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A Short Summary

The IDM was requested by the Wages Council to examine the effects on employment, output and productivity of the July 1977 changes in the minimum wage which established a uniform minimum at 20t an hour (and 10t an hour for watchmen). The previous minimum had ranged from 10 to 14 thebe an hour for unskilled workers excluding watchmen who had no legal minimum.

A national survey was undertaken based on a sample of around 250 firms for the five sectors covered by the minimum wage regulations, namely Wholesale & Retail Distribution; Manufacturing; Service & Repair; Hotel/Catering & Entertainment; Building, Construction, Exploration & Quarrying; Garage and Road Transport. While subject to limitations arising from the existence of a variety of factors in addition to the minimum wage which influenced employment changes since July 1977 a number of conclusions can be drawn from the survey.

1. Has there been any change in the level of employment following the introduction of the new orders? Has employment gone up or down or remained static?

Overall employment appears to show no adverse picture and has grown by 1% since July 1977 compared to a decline of 7% during the previous year. There is however some variation among sector, rural/urban area, skill level and size of firm. The impact of minimum wages on employment needs to be evaluated in the context of a variety of factors influencing the level of employment during the period under review such as the foot and mouth outbreak in October/November 1977, and border incidents near Zimbabwe.

Wholesale/Retail which had an increase of 10t per hour in the minimum wage shows a fall in employment of 3% since 1977 which is faster than the fall during the previous year. Some of this might be attributed to other factors mentioned above.

Hotel/Entertainment shows only a small fall in employment since 1977 but no change compared to the previous year.

Manufacturing shows an increase in employment although slower than during the previous year. Factors such as infrastructure, transportation costs, economies of scale, market size and management performance appear to be more significant in influencing employment than the changes in the minimum wage.

Transport shows increase in employment since 1977 although at a slower rate than during the previous year.

Construction employment has gone up since 1977 in partial recovery from the recession in the previous year. Construction firms while initially employing unskilled workers at the minimum level tend to soon pay workers above minimum wage levels. The variability of

public tendering is a more significant factor than minimum wage changes.

Garage employment has shown the fastest increase.

2. Rural area firms show a fall in employment of 3% since 1977 compared with a 26% employment rise for urban areas. Rural small area firms show a faster fall in employment than rural large area firms. Excluding the villages likely to be affected by Zimbabwe border tensions and Palapye (where one firm distorted the figures) suggests that rural area firms show an increase rather than a fall in employment even though employment growth is still less than urban areas.
3. Unskilled workers and night watchmen show a small fall in employment compared with increases for other types of worker since 1977. Female unskilled employment has fallen while females in other categories of labour have increased.
4. The large "over 50 employees" firms have shown large employment increases since 1977 compared with an insignificant rise for smaller firms.
5. Employer's subjective views on the impact of the minimum wage suggest that "decrease in sales is an important factor underlying declines in employment in addition of increase in wage rates". A low response was elicited by firms in response to the question "Did you discharge any employees because it no longer paid you to employ them at the new minimum?" although the impact of minimum wage changes might manifest itself via the non-replacement of workers who have voluntarily terminated and redundancies rather than through dismissals.
6. The survey evidence on changes in the length of the working week suggests that an overall reduction in hours worked per week has occurred and is focused on Wholesale/Retail and Manufacturing. Unskilled females show a larger fall in the working week when compared with other types of worker. The decline in hours worked may reflect a reduction in the demand for labour in view of minimum wage pressure or a desire to work shorter hours on the part of employees. Night Watchmen have experienced a decline in the working week but only a slight fall is evident in the proportion working in excess of 60 hours a week.
7. A decline in the proportion of employees earning below 20 thebe an hour since July 1977 at a faster rate than between 1976 and 1977 and a shift to the 21-23 range is evident. Some of this will reflect upward wage drift in line with inflation. Wholesale/Retail Manufacturing and Hotel/Entertainment show the largest decline in those earning below 20 thebe. Construction shows no change in those working below 20 thebe an hour but only 11% of employees are earning below the minimum compared to an overall figure of 21% for all sectors. Garage and Transport show declines in the proportion earning below 20 thebe and a shift to higher wage ranges.

8. The above figures relating to wage rates exclude payments in kind and hence tend to understate the position. There has been a rapid increase in the number of employees covered by payments in kind and in the value of such payments which suggests that an even greater increase in the proportion of people earning above 20 thebe an hour has taken place.
9. A reduction in output has been experienced by the majority of firms since 1977 and is concentrated on Wholesale/Retail and Hotel/Entertainment.
10. A large number of firms, the majority in Wholesale/Retail, raised their prices and 24% of all firms attributed the price rise to minimum wage factors. Manufacturing shows the largest proportion of firms raising prices due to the minimum wage.
11. The survey responses indicate that few significant changes in productivity have taken place as a result of the 1977 wage changes.
12. Little substitution of machinery for labour has taken place. There is evidence of substitution of managerial/professional categories for unskilled labour.
13. A large proportion of firms considered the minimum wage to be about right. A larger number of small firms considered the minimum as too high in comparison to the attitude of the over 50 firms.
14. The dominant reaction to an increase in the minimum wage to 22 thebe an hour is to discharge employees. Only 23% of all smaller firms, mostly in Wholesale/Retail and Hotel/Entertainment gave this reaction. A significant proportion of firms would absorb the wage increase in reduced profits and then raise prices. Similar reactions to an increase to 24 thebe is evident except that a larger number of firms would raise prices before reducing their profits.
15. A large proportion of firms representing 86% of the sample heard of the minimum wage orders, largely via a visit from the Labour Department.

CHAPTER 1

LIKELY EFFECTS OF MINIMUM WAGE REGULATION

1. TERMS OF REFERENCE

The IDM was requested by the Wages Councils to undertake a study of the effects of the July 1977 changes in the minimum wages orders whereby a uniform minimum wage was established at 20t an hour for employees in the industrial sectors covered by the orders. The terms of reference which were agreed between the IDM, the Ministry of Finance and Development Planning and the Ministry of Home Affairs are as follows: -

- (a) To assess any changes in the level of employment following the introduction of the new orders and as a result of those orders, i.e. has employment gone down? or up or remained static? Have any such changes involved changing levels of production, changing labour/output ratios, or both?
- (b) To assess any change in the composition of employment as a result of the new orders, e.g. by sex, age, or experience?
- (c) To assess any change in the condition of employment, such as hours worked, overtime, shift work, piece work?
- (d) To assess any change in the employment of particular categories of employee e.g. unskilled, watchman, skilled etc.?
- (e) To assess whether the impact has been felt equally across all industries covered or whether one or more industries or sectors have been affected differently e.g. retail, hotels, construction?
- (f) To assess any differential impact according to geographical areas (i.e. urban/rural).
- (g) To assess whether the minimum wage has become the market rate or whether people are being paid substantially above/below the minimum?
- (h) To assess the extent to which the minimum wage orders are being effectively enforced.
- (i) The new orders specify one rate across and within industries. Has there been any affect on wage levels of skilled employees? Have the new orders facilitated transferability of labour?

II. BACKGROUND AND THEORETICAL CONSIDERATIONS OF MINIMA WAGE EFFECTS

1. Minimum Wage Determination of July 1977

- 1.1 The Wages Councils in their 1977 review of minimum wage legislation recommended that a uniform minimum wage effective from July 1977 be established at 20t an hour covering the following sectors of the economy:-
- Wholesale and Retail Distribution;
 - Manufacturing, Service and Repair;
 - Hotel, Catering and Entertainment;
 - Building Construction, Exploration and Quarrying and
 - Garage, Motor Trade and Road Transport.
- 1.2 According to the Report of the Wages Councils in June 1977 the basic concepts underlying the establishment of a uniform minimum wage at the agreed level were:-
- i) the established rate should be justifiable on economic grounds: namely, it should represent a fair return for work by an unskilled and largely inexperienced worker and at the same time constitute a reasonable cost item which does not have a disincentive effect on industrial, commercial or other enterprises.
 - ii) the agreed rate should be acceptable socially and sufficient to ensure a basic level of livelihood in accordance with recognised poverty datum lines.
- 1.3 With regard to night watchmen, for which no previous minimum existed, it was recommended to establish a rate at 10t an hour with a limit of 60 hours of work for a six day week at the standard rate. This was considered to be a starting point from which such employees might subsequently be raised to the minimum prevailing for other workers.
- 1.4 The Wages Councils Orders established a uniform minimum wage superseding the differential minima graded according to sector and skill level in construction which had been established during the previous minimum wage orders dating from 1974. Table 1 below shows the 1974 and 1977 orders and percentage increases by sector and skill level. It is evident that the sectors experiencing the largest absolute and proportional increases in the minimum wage are wholesale/retail and hotel, catering and entertainment; these being the sectors with the lowest initial rates.

Minimum Wage Changes by Sector

<u>Sector</u>	<u>July 1974</u>	<u>July 1977</u>
	<u>MW Per Hour</u>	<u>MW Per Hour</u>
Wholesale/Retail	10t	20t
Manufacturing Service and Repair	14t	20t
Hotel, Catering and Entertainment	10.6t	20t
Garage, Motor Trader Transport	14t	20t
Building and Construction Trades unskilled	14t	20t
Semi-skilled (tractor drivers)	20t	-
Lorry Drivers	23t	-
Lorry Drivers (extra heavy)	57t	-
Tradesmen	41t	-
Plant Operators	57t	-
Supervisory Tradesmen	77t	-

1.5 The 43 per cent overall increase in the minimum wage from the 14t an hour prevailing before July 1977 to the 20t established thereafter more or less kept pace with increases in the cost of living. Between March 1974 and March 1979 the cost of living index for the low income groups increased by approximately 40 per cent. Between March 1977 and July 1978 the increase has been around 12 per cent.

2. Expected Impact of Changes in The Minimum Wage

The expected consequences of changes in the minimum wage in terms of their repercussions on employment, productivity, prices and output, are discussed in this section. It should be stressed that although valuable insights may be obtained from a priori reasoning about the behaviour of theoretical models, there are dangers in applying in practice conclusions based on these simplified models and in using such conclusions as a basis for policy prescriptions. Firstly, insufficient light may be thrown on relationships which may be important in the 'real' world and secondly, even if the model is sufficiently close to reality it may give us information only on the direction and not the magni-

tude of the anticipated effects. The effects of higher wages will depend very much on the particular conditions of the economy, industry, or establishment concerned - whether the economy is expanding or contracting; whether wages are a small or large percentage of total costs, profits are rising or declining, the demand for the product is more or less elastic, a shortage or surplus of labour, competition from overseas is strong or weak, etc. The section below attempts to identify the a priori circumstances in which particular effects can be expected to manifest themselves. Other factors individually or collectively may and frequently do have, in a given situation, a greater impact either positively or negatively on employment, costs, prices, output and productivity than a change in the minimum wage.

2.1 Expected Consequences for Employment

- a) The effects of higher wages on employment are among the most important factors to be considered when changing minimum wage rates, particularly in an economy like that of Botswana with much under employed labour and a rapidly growing labour force. The anticipated employment effects in a particular industry (as opposed to the economy wide effects) are considered here.
- b) The fixing of a mW which is above the going wage of certain categories of labour has the immediate effect of raising the cost of an input element of production. On a priori grounds one might expect a decline in employment to follow as the result of one or more of the following adjustments:
 - i. A wage increase changes the optimum price output relationship in the direction of a higher price and smaller output (if all other prices rise by a smaller amount). Since employment is a function of output it might reasonably be expected to decline. The speed with which price adjustments will follow is determined by the degree of competition in the product market and by the speed at which prices of other goods are changing.
 - ii. A wage increase raises the cost of labour relative to other inputs which are substitutable for labour and encourages the greater employment of such substitutes e.g. capital.
 - iii. A wage increase may result in an increase of managerial inputs in relation to labour for the purposes of increasing the productivity of labour with a given capital stock. Some of the increase in the price of

labour might in this case be offset by an increase in efficiency, but a given output could now be produced with the smaller work force.

- iv. Firms which were marginal prior to the wage increase may find it impossible to adjust in any of the above ways and therefore go out of operation. Some of their output might be distributed among surviving firms in Botswana but it is unlikely that all their employees would be absorbed (unless economies of scale are non-existent).
 - v. On the other hand, positive employment effects might be expected to follow to the extent that a wage increase serves as a stimulus to increased effort on the part of the worker thereby contributing to increased output and reducing the impact of any cost increase per unit of output.
- c) At one extreme the employment effects might be fairly marked where a firm is relatively small and insecure and operating on narrow profit margins and is selling its product (and/or buying its inputs) in highly competitive markets limiting its ability to shift the incidence of a wage increase to customers or suppliers through prices. The cost structure will affect a firm's elasticity of demand for labour; a cost structure where labour costs are a relatively large proportion of total production costs and piece rates are a prevalent method of payment is likely to make for an elastic labour demand. Similarly an unorganized firm not restricted by the provisions of a labour enforcement and one that is relatively mobile will have marked employment effects.

Management may take account of institutional factors such as unions labour availability and mobility in a specific labour market etc. The nature of the product market and the market for supplies will also influence management decisions. Firms in a strong position in product and supplier markets may shift some of the incidence of wage increase forwards to customers or backwards to suppliers.

Sales efforts might be increased to achieve operations approaching plant capacity. The cost structure will affect a firm's adjustment to a wage change; if labour costs are a relatively small proportion of total production costs the employment effects of a wage increase are likely to be less marked. The extent to which technical limitations limit variation in a firm's capital - labour ratio will affect a firm's adjustment to response. A firm that is part of a dynamically growing industry where expansions in the labour force occur regularly and the maintenance of a reli-

able labour force is an important competitive factor will, other things remaining equal, experience minimal employment effects. The mobility of a firm in terms of sunk investments in addition to market, material and transportation ties to the locality is a further factor influencing a firm's elasticity of demand for labour.

- e) There may be weak links in the causal chain running from increased wages to a reduction in the demand for labour. If a firm is in an industry which is not growing and has a relatively low investment in capital per worker, the retention of a reliable work force is not an important factor. On the other hand management may not be solely influenced by short run profit maximization but may attach importance to the reputation of their firm or convenience.
- e) The impact of higher wages may be felt in terms of reduction in hours worked rather than a reduction in employment per se. This might lead one to expect according to a priori reasoning, a reduction in demand for labour, either in terms of a decline in the numbers of employees or in terms of a fall in the number of hours worked. These effects would be more marked in the following circumstances:
 - i) for sectors which experience a large increase in the minimum wage both in nominal terms and in actual terms i.e. where a large number of the initial work force are earning below the new minimum wage
 - ii) for categories of labour where the marginal value of labour is relatively low i.e. the unskilled, night watchmen
 - iii) for a uniform minimum wage which is set at a level appropriate to higher urban living costs and to urban contributions to output, the expected rural employment effect will be more adverse.
 - vi) for a uniform minimum wage set at a level appropriate to peak seasons, the expected employment impact in slack seasons will be more adverse.

2.2 Expected Impact on Costs, Prices and Output

- a) If productivity is unchanged, and other factors are constant, a given wage increase will increase costs of production. The significance of the increase will depend on the proportion of labour costs to total costs of production. Higher production

costs usually result in higher prices eventually in situations where profits are at minimum levels and cannot be squeezed; but monopolists and firms administering prices in an imperfectly competitive situation may not always raise prices to a level consistent with profit maximization.

- b) If producers cannot, or do not, increase prices to compensate for higher costs of production there is likely to be some curtailment in the volume of production or its rate of growth, since some production that was worthwhile at the previously lower level of costs is likely no longer to be so at the new higher level. Even if prices rise to compensate producers in full for higher costs there is likely to be some curb on the rate of growth of output in so far as higher prices reduce the quantities that consumers can afford to buy and that are therefore worthwhile to produce. The extent to which prices rise will depend in part also on the elasticity of demand for consumer goods and on the degree of competition in the market.

2.3 Productivity and Management Impact

- a) The effects of a wage increase on costs and prices may be offset partially or wholly, by an increase in labour productivity. This is likely to occur via an impact on management and/or on labour.
- b) Higher wages tend to be associated with high productivity in some firms and low wages with low productivity in others. However, this is not conclusive evidence of any cause and effect relationship between higher wages and higher productivity. High wage, high productivity firms may employ more capital per worker and have other market advantages which increase revenues or profits per worker irrespective of the relative skill or efficiency of their work forces.

i) Impact on Management

In a similar way to the incentive effect on higher wages on the substitution of capital for labour, to the extent that higher wages raise the price of operative labour as compared with managerial and supervisory labour, entrepreneurs are given an incentive to substitute some of the latter for the former. In this way better training, planning, supervision and control of the now costlier operative workers is likely to be achieved. In the context of the Botswana economy this implies the substitution of scarce resource - skilled labour - for an abundant resource - unskilled labour - which has been rendered artificially dear by a minimum wage increase. To the extent that management was not previously at full capacity this might be achieved without additional monetary costs but more often the higher costs resulting

from increased managerial inputs will have to be offset by higher productivity if the wage increases are not to lead to higher costs of production.

ii) Impact on Workers

Higher wages may strengthen the physical capacity and willingness of workers to improve productivity. Higher wages will improve productivity by enhancing the physical capacity of workers in so far as physical capacity is impaired by poverty and if higher wages are spent partially in ways that make for better health, including nutrition. As regards the former proposition, higher wages may bring about improved physical capacity but may not necessarily be the most efficient way of achieving this result. Furthermore, the potentially beneficial effects of higher wages may be lost unless a policy of raising wages is accompanied by measures in public health and sanitation. How far will higher wages make for improved nutrition? Expenditure on food usually increases when incomes increase in a smaller proportion. However higher expenditure on food does not necessarily make for better nutrition and if employment opportunities are restricted as a result family meals will have to be shared with a larger number of dependents.

- c) Higher wages may have beneficial effects on the willingness to work as well as on the capacity of workers to improve performance through a reduction in absenteeism, which is a major source of low productivity, and through a reduction in labour turnover. In most circumstances, however, it is likely that management will have to deploy appropriate measures and provide incentives if productivity gains are to be realized. Furthermore, the potentially beneficial impact on physical capacity may be lost unless there are counterpart policies in public health. It seems likely that higher wages may in certain circumstances lead to higher productivity by increasing both the physical capacity of workers and their willingness to improve effort and performance needed for a higher level of output.

2.4 Impact of Actual Wage Levels

- a) Minimum wage fixing is expected to affect wages actually paid in two ways. First, the wages of those covered by minimum wage legislation are raised to levels necessary to comply with the legal requirement; the extent of the change depending on the effectiveness of enforcement and on the size of the minimum wage in relation to wages previously paid in the sectors covered. There is also an indirect

effect of the wages on workers whose wages are already above the minimum. Resistance to compression of differentials may be strong, particularly in circumstances where the workers concerned are organized. There is a tendency, at all levels, therefore, to keep demands for wage increase at least commensurate with minimum wage increases in order to maintain existing differentials. These indirect effects will depend on the strength or weakness of the forces making for the preservation of existing differentials including market forces, the role of collective bargaining, and traditional views as to what are appropriate differentials for different types of work.

- b) In economies such as Botswana, where the government employ a large proportion of the labour force, private enterprise will be sensitive to the structure in addition to the level of wages set by the government. In Botswana the higher government minimum wage leads to pressure on private sector wage levels. The effects of minimum wage fixing on wages actually paid are also likely to be dependent on the objectives of minimum wage fixing i.e. on whether it is intended that minimum wage fixing be used as an instrument for raising exceptionally low wages towards the general level or as an instrument for raising the general level itself. The relationship between minimum wages and actual wage rates is complex, but in conditions where there are strong forces encouraging the preservation of existing differentials, the total effect of changes in the minimum wage is likely to be greater than might be expected from an assessment of its nominal coverage.

III. MACRO-ECONOMIC EFFECTS

1. Level of Employment in the Economy

- 1.1 The macro economic effects of a wage increase are difficult to establish empirically. A priori, one would expect a higher wage bill to lead to more not less employment in a situation of Keynesian unemployment where there exists surplus capacity that can be brought into employment by action to raise aggregate demand. If planned saving in the economy exceeds the willingness to invest, a deficiency of demand will lead to a low level of production income and consequently unemployment. In such a situation unemployment will be reduced where the payment of a higher wage bill will increase aggregate demand. If there is spare capacity abroad, the Keynesian employment benefits of a higher wage bill may leak into import increases, especially in a customs area like the South African Customs Union Area which make such leakages likely.
- 1.2 The impact of a wage change on aggregate demand therefore depends on the redistributive effects of the wage increase and on the propensity to spend of the various income groups that are affected. Lower income

groups demonstrate higher marginal propensities to consume i.e. a tendency to spend a higher proportion of their increased income on consumption items. Therefore a given rise in the wage bill (i.e. via an increase in minimum wages) will have larger secondary or multiplier effects in increasing aggregate demand than an equivalent increase for higher income groups. To the extent that additional consumer imports are sucked in to the economy, these multiplier effects will be reduced; however, lower income groups, particularly in the rural areas, will likely import fewer consumer items than higher income groups.

- 1.3 The typical situation may not be so much one deficiency of aggregate demand but more likely one of shortages of goods and inflationary pressures. Although there exists a situation of surplus of unskilled labour this is not the same as an overall surplus of productive resources that is characteristic of a deficiency of aggregate demand.

In the context of the Botswana economy most of the macro-effects will be exported to RSA since imports exceed exports (65% of GDP vs 45%) and Botswana is dependant for 80% of its imports from RSA. This is not to imply however, that increased effective demand does not have an important stimulating effect on employment.

2. Impact of Foot and Mouth Disease

A factor (probably swamping any Keynesian effects of a minimum wage change) which is likely to affect the level of aggregate demand and employment in the economy during the period under review in this paper is the outbreak of the foot and mouth disease in Oct./Nov. 1977. The impact on the economy initially is via a reduction in cattle sales to the domestic market and for export on which owners are dependent to finance their consumption of goods and services and subsequently via multiplier or secondary effects to reduce in aggregate demand and employment in other sectors of the economy. The impact in terms of a reduction in total incomes in the economy via lost sales has been estimated as P6 million over the months of November 1977 - March 1978; over the period November - December 1977 there were no sales compared with a total of P3 million over the same period in 1976 whereas the months of January - March registered a decline of P3 million in total income to the economy via lost sales from a level of P10 million over the same months the previous year. With regard to exports the year ban on beef exports to the EEC from November/December 1977 to the same period in 1978 is estimated to produce a loss of P14 million on exports. From the balance of payments viewpoint, however, the loss of beef export sales might be partly offset by reduced demand for the affected areas unless farmers respond to the government credit scheme of a P50 loan per beast and some purchasing power is thereby restored. The balance of payments would be adversely affected in these circumstances as some of the normal demand for exports by farmers would be maintained while offsetting exports would be drastically reduced.

3. Other Factors

3.1 The particular circumstances of the heavy urban organized construction industry in the modern sector should be noted here as an example where exogeneous factors operate to influence the level of employment so greatly that it is almost wholly insensitive to changes in the minimum wage.

Almost all modern sector operators pay well above the minimum wage level in order to retain a reliable workforce. The decline in real GDP in recent years reflected a reduction in construction output in real terms in view of delays in getting the copper - nickel mine at Selebi-Phikwe into full scale production, world recession, and reduction in demand from the Accelerated Rural Development Program. The variability of tendering is a more significant factor underlying changes in construction employment than changes in the minimum wage. The majority of construction firms (around 9% in our sample of small firms) appear to be paying at or above the minimum wage levels and the larger firms continue to pay higher rates to skilled and semi-skilled workers. If minimum wage legislation was enforced on small or semi-informal rural or peri urban builders or repairers where demand for labour is much less influenced by foreign and cyclical factors and actual wages are far lower, there may be more sensitivity to minimum wage changes.

3.2 The world recession is likely to be a further factor influencing changes in the level of aggregate demand and employment in Botswana. Political factors in terms of Rhodesian border tensions are likely to have significantly influenced employment changes in the north eastern villages of Tutume, Sebina and Ramokgwebana. The difficulty of obtaining imports from Rhodesia as political tensions increased has led to a reduction in effective demand and therefore employment in this area.

3.3 Factors such as transportation costs, land values, cost and availability of power, market possibilities, management are important in influencing changes in the level of employment. Manufacturing sector employment in particular is more sensitive to these kinds of considerations than to minimum wage changes considered in isolation.

4. Supply of Capital

4.1 Wage increases may affect the rate of investment to the extent that higher wages are paid for out of profits, (there are no offsetting increases in productivity) assuming that workers spend the full amount of their wages on consumer goods and all profits are reinvested. The investment would be reduced by the full amount of any wage increase, assuming no decline in employment (i.e. the wage bill risen by the same proportion as the wage rate).

As regards the former, higher wages are not always paid for out of profits. The incidence of a wage increase may be shifted to consumers in the form of higher prices; to workers who lose jobs or fail to get them if the demand for labour is elastic or may be covered by improved productivity or by increases in output. However, to the extent that higher prices reduce demand for goods and consequently for the capital needed to make them and employment falls, investment may not be maintained. If higher wages are paid for out of profits this may not necessarily be at the expense of domestic investment but at the expense of conspicuous consumption or private bank accounts overseas.

4.2 The majority of investment takes place in the modern sector in developing countries where money wages constitute a much larger proportion of the income of that sector than of total national income. Effects of wage increases on the supply of capital from overseas have also to be taken into account. The main sources of investment are foreign investors, local private investors, and government development programmes. Increases in wages may discourage potential foreign investors, reduce the extent to which local investors can plough back profits, and reduce the means available to government for financing investment projects.

4.3 It is a fact, however, that wage levels in developing countries are generally much lower than in more developed economies. Therefore, modest adjustments in wage rates are less likely to constitute a deterrent to investment. Although it is widely recognised that investment in physical capital is not a sufficient condition for rapid economic growth and needs to be accompanied by attention to investment in "human" capital, to the extent that higher wages divert resources from investment to consumption this will be inimical to economic growth in circumstances in which a shortage of capital is the dominant constraint. In the context of Botswana the multi-national development industries which are prevalent in the modern sector are unlikely to be sensitive to minimum wage changes. The political climate prevailing in Southern Africa is likely to be a more dominant consideration in so far as foreign investors tend to assess investment opportunities on a regional basis in periphery economies.

5. Expected Impact on the Distribution of Income

To the extent that higher wages reduce employment opportunities in the sectors covered by the wage regulations, part of the increased incomes of workers who were previously at sub-minimum wage levels is offset by the loss in income of other workers who lose jobs or fail to get jobs in these sectors. Such transfers are likely to worsen the distribution of income. However, to the extent that higher wages increase employment opportunities through generating increased production and stimulating effective demand then such transfers are likely to improve the distribution of income.

To the extent that the incidence of higher wages is passed on to profits they are likely to make for greater equality of income distribution. The extent to which profits can be squeezed is dependent on the degree of competition in the product market.

To the extent that the cost of higher wages is passed on to consumers in the form of higher prices, the effects on income distribution will depend on whether consumers of the product in question are on average better or worse off than the wage earners concerned.

CHAPTER II

THE WAGES AND PRODUCTIVITY SURVEY

I. INTRODUCTION

1. The above discussion of the various theoretical arguments and implications of economic models suggest a number of conclusions which need to be empirically verified or tested with respect to any particular change in minimum wages. Theoretical arguments can lead one to conclude that increases in the minimum wage can have i) a "significant" negative employment effect under certain conditions ii) a "non-significant" or non-existent negative employment impact under certain specified conditions and iii) a positive employment effect under other circumstances.
2. Governments have as an objective that wages should rise as rapidly as circumstances in the economy permit but are apprehensive about the consequences of "excessive" wage increases for employment, rural-urban migration, inflation etc. In the light of Botswana's national objectives of rapid economic growth and social justice (which includes an equitable distribution of income) and the resources available for achieving these objectives it is essential to determine as accurately as possible the "room" for wage increases - to determine the level to which wages should rise and the speed of increase. In order to facilitate sound policy decisions on wage questions, more needs to be known regarding the effects wage increases have in particular circumstances.
3. As an attempt to throw further light on the question of minimum wages in Botswana and particularly the actual effect of the most recent changes in minimum wages an empirical analysis was undertaken eliciting information that was acquired through a survey questionnaire of a sample of employers.

II. BACKGROUND TO THE SURVEY

1. A sample of firms was selected from the Enterprises and Establishments Register held by the Central Statistics Office. For each of the five sectors covered by the Wages Councils the number of firms operating in each locality were identified. A sample of firms was selected for the urban areas and some major villages, whilst all firms in a sample of smaller villages were included (the details of the sample design are in Appendix I). The following data was collected:
 - wages, labour employment data by skill level, sector and geographical region for the months of March 1976, 1977 and 1978
 - employment data according to skill level, sector and geographical region on a month by month basis for 1976, 1977 and 1978. Changes

in employment and reasons i.e. dismissals, redundancies, voluntary terminations

- value of payments in kind, type and number of employees covered for 1976, 1977 and 1978
- total wages bill on a monthly basis for 1976, 1977
- confirmation on conditions of employment relating to payment of piece rates and overtime
- data on productivity, substitution of capital for labour, output and prices
- data relating to attitude of firms regarding factors influencing their employment changes, interpretation of the level of minimum wage and attitude to increases in the level of the minimum wage.

2. The above data can be used to test the following hypotheses relating to the expected employment and other effects of the minimum wage regulations outlined in the section above. The overall employment impact which one could expect on a priori grounds to be positive or negative. Have any changes in employment been brought about through changes in the level of output, substitution of capital for labour or substitution of managerial inputs for other factors of production?

One would expect employment effects, according to a priori reasoning, to be concentrated on the following:

- a) these sectors experiencing the largest formal increase in the minimum wage i.e. Wholesale/Retail, Hotel/Entertainment
- b) those sectors experiencing the largest actual increase in the minimum wage i.e. where the initial work force prior to July 1977 included a large proportion of workers below the new minimum wage
- c) differential impact according to urban/rural. On a priori grounds one would expect a uniform minimum wage to have a different impact on rural employment and costs of substitutes for labour
- d) impact according to season. The expected theoretical effects of uniform minimum wage applicable to all times of the year i.e. a reduction in slack season employment (whose contribution to output is less than that of peak season labour).
- e) differential impact on size of firm. The expected effects on the largest firms i.e. those employing more than 50 workers are less marked than those on the smaller firms in view of the wider profit margins, stronger position in both product and supplier markets, etc.

Table 1

NUMBER AND PROPORTION OF PERSONS EMPLOYED BY SECTOR^x

Sector	No. of firms	March 1976		March 1977		March 1978		% Changes in Employment	
		No.	%	No.	%	No.	%	1976-77	1977-78
W/Retail	97	692	45	683	48	665	46	- 1	- 3
Manuf.	19	365	24	346	24	354	25	- 5	+ 2
Constr.	5	208	14	127	9	133	9	- 39	+ 5
Hotel/E.	2	54	4	53	4	52	4	- 2	- 2
Transport	6	105	7	110	8	11	8	+ 5	+ 1.6
Garage	6	98	6	99	7	117	8	+ 1	+ 18
TOTAL	135	1522		1418		1431		- 7	+ 0.9

^xFor the 135 firms giving figures for 1976, 1977 and 1978.

Table 2

EMPLOYMENT BY SKILL LEVEL AND SEX

Skill Level	March 1976		March 1977		March 1978		% Change in Employment		
	No.	%	No.	%	No.	%	1976-77	1977-78	
Professional/Managerial	m	84	6	57	4	60	4	- 32	+ 5
	f	12	1	14	1	16	1	+ 17	+14
Sub Total		96	6	71	5	76	5	- 26	+ 7
Skilled	m	133	9	135	9	146	10	+ 2	+ 8
	f	20	1	19	1	19	1	- 5	-
Sub Total		153	10	154	11	165	12	+ 1	+ 7
Semi-skilled	m	188	12	196	14	190	13	+ 4	- 3
	f	62	4	51	4	55	4	- 18	+ 8
Sub Total		250	16	247	17	245	17	- 1	- 1
Unskilled	m	601	39	518	36	536	37	- 14	+ 3
	f	314	21	319	22	297	21	- 2	- 7
Sub Total		915	60	837	58	833	58	- 9	- 1
Clerical	m	31	2	34	2	37	3	+10	+ 9
	f	25	2	26	2	28	2	+ 8	+ 8
Sub Total		56	4	60	4	65	5	+ 7	+ 8
Watchmen		52	3	49	4	47	3	-	- 4
TOTAL		1522		1 418		1431		- 7	+0.9

- f) effects on employment of particular categories of worker. On a priori grounds one would expect a more significant impact on those categories of labour where marginal value productivity is relatively low i.e. the unskilled, night watchmen, and female labour
- g) The effects on productivity, prices, output, capital-labour substitution as discussed in earlier sections.

III. SIZE AND DISTRIBUTION OF EMPLOYMENT

1. Level and Distribution of Employment by Sector

Table 1 showing a breakdown of employment by sector ⁽¹⁾ reveals that the largest employer is the Wholesale/Retail sector accounting for 46% of total employment and 72% of firms. Hotel/Entertainment, on the other hand, represents only 4% of total employment for the 'under 50' firms and only 1% of firms in the sample.

The distribution of employment has remained roughly constant over the years with the exception of construction which has decreased its share of employment in the sample from 14% in 1976 to 9% in 1977 and 1978.

2. Employment by Skill Level

Table 2 reveals that unskilled labour accounts for the largest share of employment - 58% of employment in the 135 firms sample of 'under 50's' giving figures for 1976, 1977 and 1978. Clerical employees by contrast account for only 3% of total employment. Employment shares have remained more or less constant over the 3 years with the exception of female unskilled labour which has declined from around 37% of unskilled employment in 1977 to 34% in 1978.

3. Employment by Urban/Rural

Table 3 showing the distribution of employment by urban area, rural "large" villages and rural "small" villages for both the over 50 and under 50 firms (all in the urban area with the exception of Palapye in the rural "large" area) reveals the following features:-

- Urban area firms account for approximately 85% of employment in the sample of firms giving figures for 3 years with Gaborone representing the largest share of total employment. It should be noted that these figures refer to the sample response and are therefore not a true reflection of the population of firms.
- Rural "large" villages represent about 10% of total employment.
- Rural "small" villages account for 3% of total employment.
- Rural urban employment shares have remained roughly constant over the years 1976, 1977 and 1978.

(1) The following analysis is based on the 135 firms with less than 50 employees each who gave information for the years 1976, 1977 and 1978.

Table 3

PROPORTION OF PERSONS EMPLOYED BY
GEOGRAPHICAL REGION

Geographical Region	March 1976	March 1977	March 1978	% Changes in Employment**	
	%	%	%	1976- 1977	1977-1978
A. <u>URBAN</u>					
Gaborone	62	61	67	- 2.8	+ 33
Francistown	17	17	15	+ 0.2	+ 8
Selebe-Phikwe	4	5	4	+ 25	+ 15
Lobatse	3	3	2	-	- 1
Sub-Total	85.5	85	88.3	- 0.9	+ 26
B. <u>RURAL LARGE VILLAGES</u>					
Mochudi	1	1	0.8	- 2.8	- 8
Maun	1	1	0.9	+ 3	-
Palapye	5	4	3	- 5	- 10
Serowe	4	4	4	+ 3	+ 5
Kanye	0.8	1	0.7	+ 16	-
Sub-Total	11.5	12	9.3	-	- 3
Sub-Total excluding Palapye	7	8	6	+ 4	+ 2
C. <u>SMALL VILLAGES</u>					
Excluding N.E. border villages *	3	3	2.4	+ 2	- 3
TOTAL	100	100	100	- 0.7	+ 21.9

* Excluding Palapye and North East border villages.

** Percentages calculated from figures on numbers employed.

3. Employment by Season

Table 4 showing a breakdown of employment by sector over the periods July-September, October - December and January - March 1976, 1977 and 1978 reveals that Wholesale/Retail and the Manufacturing sectors show a more adverse employment situation during the January - March period than October-December. The July - September period (immediately after the minimum wage changes) shows a greater employment decline between 1977 and 1978 than the other two periods. A pattern of recession followed by recovery and by a downturn in the January - March months appears to be evident for the majority of sectors (with the exception of Garage).

IV. CHANGES IN EMPLOYMENT 1976-1977 AND 1977-78

1. Changes by Sector

- 1.1 Table 1 reveals that the Wholesale/Retail sector experienced the largest, albeit small, decline in employment in both proportional and absolute terms between March 1977 to March 1978 i.e. a decline of 3% compared to an overall growth in employment of less than 1%. The decline in employment is concentrated on Wholesale/Retail when 1977 - 78 changes in employment are compared with those of 1976 - 77. Other sectors, with the exception of Hotel/Entertainment, which reveals no change, register an improvement in the employment situation.
- 1.2 Hotel/Entertainment has registered the second largest decline in employment between 1977 and 1978 in proportional terms although in absolute terms and in comparison to the 1976 - 1977 employment growth the change has been insignificant. However, the sample size of firms considered here is extremely small (only 2 firms which gave figures for 3 years) and it is likely that the Hotel/Entertainment sector as a whole experienced some decline in employment between 1977 and 1978 as a result of the foot and mouth outbreak and subsequent hunting ban (and possible minimum wage impact).
- 1.3 The Construction sector experienced a sharp decline in employment between 1976 and 1977 of almost 40% followed by an improvement between 1977 and 1978 of 5% employment growth. The construction sector appears to be almost wholly (in the formal sector at least) unaffected by the minimum wage. Around 88% of employers in our sample construction firms with less than 50 employees were paying above the minimum wage in 1977 and a significant proportion of the large firms with over 50 employees. The percentage increase in the minimum wage was much lower for construction unskilled workers (from 14t to 20t) than for Wholesale/Retail and Hotel/Entertainment employees and although a uniform rate of 20t replaced the differential minimum for other construction workers it appears that the majority of construction firms continue to adhere to the 1974 minimum wage regulations as regards the payment of mini-

Table 4

PROPORTION OF PERSONS EMPLOYED BY SECTOR
AND SEASON

SECTOR	1975-76	1976-77	1977-78	% Change in Employ	
				1976-77	1977-78
				1975-76	1976-77
	%	%	%	%	%
<u>Wholesale/Retail</u>					
July-September	33	33	32	- 5	- 6
October-December	33	33	35	- 1	+ 10
January-March	34	34	33	- 4	- 2
Sub-Total				- 4	- 2
<u>Manufacturing</u>					
July-September	32	35	33	+ 14	- 4
October-December	34	33	35	- 0.3	+ 10
January-March	34	32	32	- 2	- 1
Sub-Total				+ 4	+ 3
<u>Construction</u>					
October-December	33	30	33	+ 0.3	+ 10
January-March	35	24	32	+ 2	+ 1
Sub-Total				- 29	- 26
<u>Hotel/Entertainment</u>					
July-September	31	30	29	+ 8	- 8
October-December	34	37	35	+ 22	- 13
January-March	34	33	36	+ 7	+ 13
Sub-Total				+ 12	- 6
<u>Transport</u>					
July-September	32	33	33	+ 12	- 3
October-December	33	33	33	+ 11	- 5
January-March	34	34	34	+ 8	- 5
Sub-Total				+ 10	- 4
<u>Garage</u>					
July-September	33	32	31	+ 4	+ 19
October-December	34	34	34	+ 9	+ 1
January-March	34	34	35	+ 8	+ 24
Sub-Total				+ 7	+ 21
TOTAL				- 3	- 2

imum wage to semi-skilled employees. Employment in the construction sector appears to be more sensitive to the volume of government tendering than to minimum wage developments. The employment decline in 1976-77 appears to have been largely a reflection of the recession in the industry arising from delays in getting the copper-nickel mine into full scale production and a reduction in demand associated with the termination of the Accelerated Rural Development Programme.

- 1.4 With the exception of Wholesale/Retail and Hotel/Entertainment other sectors have experienced employment growth rather than declines since 1977 although Transport displays a slower growth rate than between 1976-1977. Construction and Garage employment appears to be growing at a faster rate since 1977 when compared with 1976-1977; the former shows a 5% growth compared to a decline of 39% between 1976 and 1977 while the latter shows an 18% growth rate compared with a 1% growth between 1976 and 1977. The increase in construction employment is likely to reflect a rise in the volume of government tendering after the recession of the previous year rather than minimizing changes.
- 1.5 To conclude, therefore, in the smaller firms in existence in 1976 and 1977 as well as 1978, overall employment growth has registered an upturn in 1977-78 after a decline between 1976 and 1977; declines in employment between 1977 and 1978 are focused on Wholesale/Retail and Hotel/Entertainment employment with falls of 3% and 2% respectively. Other sectors register employment growth, Garage and Construction show the fastest rates of growth compared to 1976 and 1977. It is noteworthy that these are the very sectors with a large proportion of unskilled workers being paid between 10t and 14t an hour in 1977 and with high labour/capital ratio. They are sectors which are likely to be most affected as regards actual wage rates by a rise in the minimum wage rate. Although the declines in Wholesale/Retail and Hotel/Entertainment are small they compare to an overall employment growth of 1% between 1977 and 1978. Furthermore, in assessing the effects of higher wages on employment, it is the functional not the historical relationship between the two which is the significant one. The relevant basis for assessment is not a comparison of employment before and after a wage increase but a comparison of actual employment after a wage increase and the amount of employment there would have been otherwise in so far as this can be ascertained.

Table 1 relating to employment changes by sector is based on firms which were in existence over the 3 years 1976, 1977 and 1978. It does not take into account firms which were forced out of business. A priori, one would expect that firms which were marginal prior to the wage increase may find it difficult to adjust to an increase in the cost of labour via a reduction in output or substitution of capital and/or managerial inputs for labour and may therefore go out of operation. An analysis of the trend of companies in liquidation over the last 3 years reveals an increasing trend

since 1977 (9 bankruptcies for the period January-July 1977 compared to 12 for the enter year 1977) largely focused on the Wholesale/Retail sector. However, mismanagement is cited as the cause of failure in the majority of cases rather than the direct effect of the increase in the minimum wage.

TABLE 5
CHANGES IN BANKRUPTCIES

<u>Sector</u>	<u>1976</u> Year	<u>1977</u> Year	<u>1978</u> Jan. - July
Wholesale/Retail	3	6	7
Manufacturing	1	1	2
Construction	1	3	
Transport & Garage		1	
TOTAL	7	12	9

2. Employment Changes by Skill Level and Sex

2.1 Table 2 reveals that unskilled workers and semi-skilled workers registered a decline in employment of 1% each between 1977 and 1978 compared with an increase in the proportion of skilled persons and employees in the professional/managerial category of 7% each and clerical persons of 8%. However, the fall in unskilled and semi-skilled workers is small in both absolute and in proportional terms. Compared with 1976-1977 changes, semi-skilled employment shows no change whereas unskilled employment shows an improvement in terms of a much slower rate of decline. However, hours of work fell at a faster rate for unskilled workers (see below) than for other groups. Changes in hours of work should be considered in addition to changes in number of employees when assessing the employment situation.

2.2 While overall unskilled employment has registered a significantly smaller decline between 1977 and 1978 compared with that of 1976-1977, female unskilled employment shows an adverse picture. The number and proportion of female unskilled workers declined at a faster rate both in comparison to female employment in other skill categories, where increases in the number of female workers are evident, and when compared with the situation between 1976 and 1977. (Female unskilled employment registered a 2% fall in 1976 and 1977 compared with a decline of 7% between 1977 and 1978). Therefore, the overall decline in unskilled labour between 1977 and 1978, while significantly less than the previous year, appears to be focused on female unskilled labour.

2.3 Female semi-skilled labour on the other hand, has registered an increase of 8% between 1977 and 1978 compared with an 18% decline over the previous period (although only 11 in absolute terms). Professional/Managerial females rose by 14% between 1977 and 1978 representing a smaller percentage increase than between 1976 and 1977 but only a slight increase in absolute terms. Similarly clerical employment showed little significant change. Overall, there appears to be a decline in female employment of 3% between 1977 and 1978 which is focused on the unskilled category (compared with a decrease of 1% between 1976-1977).

3. Changes in Employment by Rural/Urban Areas

Table 3 showing a breakdown of employment by Urban/Rural areas (including over 50 firms) indicates that rural areas are adversely affected with respect to employment growth compared with urban firms and when one compares the 1977-78 situation with that prevailing in 1976-77. Political factors and the foot and mouth disease are significant. Rural area firms registered a 3% decline compared with a 26% employment growth for urban areas. The more favourable urban employment picture is likely to reflect competitive factors such as better infrastructure compared to rural areas.

Rural small villages show an improved employment growth picture when compared with rural large village firms for the 1976-1977 changes; however, both declined by 3% in the 1977-1978 changes. Ramokgwebana and Sebina register the largest falls in employment among the rural small village firms which might reflect political border tensions. For example by excluding Tutume, Sebina and Ramokgwebana, the villages most likely to be affected by political events, the direction of employment change is reversed: rural small village firms display employment growth of 14% rather than a decline of 3% between 1977 and 1978. Similarly for rural large village firms the exclusion of Palapye, where one firm experienced a marked employment decline and this tends to distort the figures, shows a growth of 2% since 1977. Although this represents a change of direction, from a minus 3% to a plus 2%, the growth remains unfavourable in comparison to urban areas.

The outbreak of foot and mouth disease is an important factor in addition to possible minimum wage impact explaining to some extent the relatively adverse employment growth situation of rural area firms.

4. Changes in Employment by Season

Table 6 gives a breakdown of employment by season for the under 50 firms and reveals a trend of recession and recovery. The period July-September (1977-1978 column), immediately after the minimum wage changes, shows a decline in employment. This is followed by a recovery in the months of October-December and a recession in the period January-March. (When the foot and mouth outbreak was at its peak).

Table 6

4a

NUMBER AND PROPORTION OF PERSONS EMPLOYED BY SEASON

All Areas	75-1976		76-1977		77-1978		% Changes in Employment	
							<u>1976-77</u> 1975-76 %	<u>1977-78</u> 1976-77 %
July	1002	(11%) ^x	1037	(12%) ^x	976	(11%) ^x	3	- 6
August	1013	(11%)	1044	(12%)	978	(11%)	3	- 6
September	1017	(11%)	1015	(11%)	952	(11%)	2	- 6
October	1032	(11%)	1022	(11%)	1014	(11%)	- 1	- 1
November	1041	(11%)	971	(11%)	1012	(11%)	- 7	4
December	1038	(11%)	972	(11%)	994	(11%)	- 6	3
January	1049	(11%)	970	(11%)	974	(11%)	- 8	4
February	1048	(11%)	958	(11%)	978	(11%)	- 9	2
March	1054	(11%)	962	(11%)	997	(11%)	- 9	4

^x % of man months of employment for the period.

Table 7 isolates the impact on employment of the foot and mouth disease. The period November-March 1977-1978 reveals a more adverse employment situation than the period July-October for rural areas - a decline of 7% is evident for rural "large" villages during November-March 1977-1978 (compared with a rise of 1% for the period July-October) and a decline of 1% for rural "small" villages for November-March (as compared with no change during July-October). Urban area firms, on the other hand, display an overall improvement with 6% growth during November-March compared with a decline of 2% during July-October. The villages which are most adversely affected are Maun amongst the rural large villages and the small villages of Tutume, Sebina and Ramokwebana.

V. STRUCTURE OF WAGE RATES

1. Distribution of Employment by Wage Rate and Sector

- 1.1 Table 8 shows the distribution of employment by wage rates and sector and the proportion of persons earning below, around and above the present minimum wage in the years 1976, 1977 and 1978 for the 135 'under 50' firms which were in existence in all 3 years. What is the relationship between the minimum wage and wages actually paid? Does the wage structure appear strongly resistant to change or has the minimum wage exerted substantial influence on wages actually paid; both wage rates below the minimum and on the wage rates of other workers already above the minimum?
- 1.2 With regard to the direct effect of minimum wages, there appears to have been a large shift in the overall proportion of persons earning above the minimum wage since 1977 than between 1976 and 1977. The number of employees earning below 20t an hour has fallen by around 37% between March 1977 and March 1978 compared to a decline of 28% in the same months of 1976 and 1977. A shift to the 21 - 23t range of 23% between 1977 and 1978 seems evident. Some of this is to be expected via wage drift in line with inflation but may also represent a shift for some employees previously earning below 20t an hour.
- 1.3 An indirect effect of the minimum wage in terms of an increase in the wage rates of workers already above the minimum is to be expected in certain circumstances. Resistance to compression of differentials may be strong and lead to a tendency at all levels to maintain demands for wage increases commensurate with minimum wage increases so as to preserve existing differentials. If raising minimum wages shows a tendency to elevate all wages then one might conclude that minimum wage fixing is an effective instrument, not only for raising minimum wages but for fixing the general level of wages.

Table 7

PROPORTION OF PERSONS EMPLOYED BY AREA AND SEASON

% OF PERSONS EMPLOYED

Area/Season	1976 Jul.-Oct. Aver.	1976-77 Nov.-Mar. Aver.	1977 Jul.-Oct. Aver.	1977-78 Nov.-Mar. Aver.	Jul.-Oct. ^x (1)	Nov.-Mar. ^{xx} (1)
<u>URBAN</u>						
Gaborone	32	30	30	31	- 7	+ 5
Francistown	19	20	19	22	0.3	+ 10
Selebi-Phikwe	4	4	4	4	+ 15	+ 1
Lobatse	4	5	4	4	+ 15	-
Sub-Total	59	58	58	61	- 2	+ 6
<u>RURAL LARGE VILLAGES</u>						
Mochudi	3	3	3	2	- 8	- 14
Maun	5	5	5	3	+ 4	- 39
Palapye	3	3	3	3	+ 11	- 2
Serowe	20	20	20	20	-	2
Kanye	2	2	1	2	- 4	- 2
Sub-Total	33	33	33	30	+ .9	- 7
<u>SMALL VILLAGES</u>						
Sub-Total	9	9	9	9	-	- 1

(1) Percentage changes calculated from number of persons employed.

x Changes from July-Oct. 1976 to 1977.

xx: Changes from Nov.-March 1976-77 to 1977-78.

Table 8

EMPLOYMENT (EXCLUDING NIGHT WATCHMEN) BY WAGE RATE AND SECTOR*

Sector	March 1976					March 1977					March 1978				
	% persons earning					% persons earning					% persons earning				
	<u>Below</u> MW**	<u>Around</u> 18-20	<u>Around</u> 21-23	<u>Above</u> 24-30	31+	<u>Below</u> MW**	<u>Around</u> 18-20	<u>Around</u> 21-23	<u>Above</u> 24-30	31+	<u>Below</u> MW	<u>Around</u> 18-20	<u>Around</u> 21-23	<u>Above</u> 24-30	31+
W/Retail	49	15	13	15	23	37	13	15	20	29	22	11	18	22	38
Manuf.	50	14	8	2	41	32	7	19	11	38	21	14	17	6	56
Constr.	38	2	-	-	62	12	-	-	1	87	11	8	3	-	86
Hotel/E.	72	4	-	8	21	98	-	-	-	2	64	-	2	2	30
Transport	21	3	13	1	65	21	3	11	2	66	16	-	14	3	68
Garage	38	10	-	4	57	13	8	2	6	79	8	8	20	4	68
TOTAL	46	11	8	9	36	33	9	13	14	41	21	10	16	12	52

* For the 135 firms giving 3 year figures.

** Minimum wage level of July 1977 - 20t/hr.

The survey shows that other wage rates appear to have been raised since 1977. Minimum wage pressure may have been a factor as the increase since 1977 is faster than between 1976 and 1977. An increase of 27% in the proportion of persons earning above 31t has occurred since 1977 compared with an increase of 14% between 1976 and 1977.

- 1.4 Has there been any differential impact, in terms of the relationship between the minimum wage and wages actually paid, according to sector? With regard to the direct effect of minimum wages on the wage rates of those previously earning below minimum wage rates, the Wholesale/Retail sector shows the largest fall - of 41% since 1977 - in the proportion of employees earning below the minimum wage compared with a figure of 36% for all sectors. A shift of 22% to the 21 - 23t range is evident but this is less than the increase between 1976 and 1977 implying either some cutback in employment or a shift to a higher wage bracket.

Hotel/Entertainment shows a large decline in proportional terms of 35% in those earning below 20t an hour, in comparison with other sectors since 1977 but this represents only a slight increase compared with the previous year since the absolute numbers are small. The shift appears to be to the 24 - 30t range in addition to 21 - 23t.

Manufacturing is the other sector on which the decline in the proportion of persons below 20t an hour is focused - a decline of 32% since 1977 is evident - the shift appears to be to the 18 - 20t rate however rather than 21 - 23t. Compared with 1976 - 1977 there seems to be less decline in the proportion of workers earning below the minimum wage level.

Construction has shown virtually no change in the proportion of employees earning below 20t an hour since 1977. A significant decline of 68% is evident between 1976 and 1977. The proportion of small construction firms earning below 20t at present is well below the average of 21% for all sectors.

- 1.5 With regard to the indirect effect of minimum wages on the wage rates of those already above the minimum, the Hotel/Entertainment and Manufacturing sectors appear to have demonstrated the largest impact. The former shows an increase in the proportion of employees earning between 24 - 30 thebe since 1977 compared with a decline in the previous year while there is a trebling in the number of workers earning above the 30t range since 1977 compared with a substantial decline between 1976 and 1977. However the Manufacturing shows a significant increase in those earning above 31t, 47%, compared with a 7% decrease between 1976 and 1977. Wholesale/Retail displays a large rise of 31% in those earning above 31t compared with other sectors but little change in the rate of increase when compared with 1976 - 1977.

1.6 To what extent is there any differential impact in terms of the relationship between the minimum wage and wage rates actually paid according to skill level? Table 9 shows a decline of 35% in unskilled employment below the minimum wage between 1977 and 1978 compared with a fall of 60% for skilled workers. In absolute terms, however, unskilled employment below 20t an hour fell substantially (by around 134) compared with the fall for skilled workers (of 6). The shift in unskilled employment appears to be the 21 - 23t range in total but there are substantial variations in the direction of change by sex. The overall increase in this wage category is much lower than that registered between 1976 and 1977 implying some cut-back in employment or some shift to a higher wage bracket.

1.7 Is there any differential impact on the wage rates of other workers already earning above minimum wage rates?

Table 9 shows that semi-skilled workers show the largest increases in the proportion of those earning in the 24 - 30t and above wage ranges compared to other categories of labour and to 1976 - 77. The proportion of semi-skilled in the 24 - 30t category has registered an increase of 39% between 1977 and 1978 compared with declines for other skilled categories (with the exception of clerical which shows a 100% increase but an insignificant rise in absolute terms of 2) and compared with 1976 - 1977 when the increase was 19%. Unskilled workers have shown the largest increase of 51% in the proportion earning above 31t an hour compared with other sectors and when compared with 1976 - 1977.

1.8 Female unskilled employment shows the largest decline in sub-minimum wage employment compared with female labour in other skill categories implying a greater direct effect of minimum wage legislation. The proportion of unskilled females earning below the minimum wage fell by 54% between 1977 and 1978 compared with a decline of 7% during 1976 and 1977. A shift to the 21 - 23t wage category of 64% is evident. The decline in unskilled employment since 1977 is focused on females and has worsened when compared with 1976 - 1977. Unskilled males on the other hand has shown a smaller decline in employment since 1977 when compared with 1976 - 1977. Semi-skilled females have also registered a significant decline in the below 20t category but compared with 1976 the decline is at a slower rate therefore one cannot conclude that minimum wage fixing has exerted substantial pressure on wages actually paid to below minimum wage workers in this category.

As regards the effect of minimum wage fixing in raising the general level of wages female workers show large increases in wage rates in the 24 - 30t and above 31t ranges compared with males. Semi-skilled and skilled females display the largest increases compared with unskilled and other skill categories and when compared with the 1976 - 1977 changes implying that resistance to compression of differentials is stronger for these categories.

Table 9

CHANGES IN EMPLOYMENT BY WAGE RATE AND SKILL LEVEL

Skill Level	Below MW	1976 - 77				1977 - 78				
		18-20	21-23	24-30	31+	Below MW	18-20	21-23	24-30	31+
Prof/M.	+ 40%	-	-	- 40%	+ 19%	+ 43%	-	+ 100%	100%	+ 18%
Managerial/F	+ 300%	-	-	- 100%	+ 75%	- 88%	-	+ 100%	-	- 7%
Sub-Total	+ 114%	-	-	- 43%	+ 19%	+ 67%	-	+ 100%	- 75%	+ 12%
Skilled M	- 33%	- 6	-	+ 50%	+ 15%	- 60%	- 100%	+ 100%	- 87%	+ 5%
F	- 100%	-100%	-	-	+ 44%	-	-	-	+ 100%	+ 160%
Sub-Total	+ 41%	- 70%	-	+ 55%	+ 2%	- 60%	- 100%	+ 100%	- 75%	+ 21%
Semi-skilled M	- 13%	- 52%	+ 114%	+ 47%	+ 11%	- 34%	+ 54%	-	+ 16%	- 7%
F	- 74%	-	+ 54%	- 33%	- 67%	- 44%	+ 300%	+ 35%	+ 113%	+ 300%
Sub-Total	- 38%	- 50%	+ 75%	+ 19%	+ 3%	- 36%	+ 71%	- 20%	+ 39%	-
Unskilled M	- 40%	- 35%	+ 67%	+ 59%	- 2%	- 23%	+ 69%	+ 1%	23%	51%
F	- 7%	+ 24%	- 21%	- 13%	+ 59%	- 54%	+ 41%	+ 64%	+ 40%	32%
Sub-Total	- 29%	- 15%	+ 48%	+ 3%	+ 18%	- 35%	+ 14%	+ 22%	2%	51%
Clerical M	-	-	- 100%	- 100%	+ 19%	-	-	+ 100%	-	14%
F	- 50%	-100%	+ 100%	-	22%	100%	-	- 100%	+ 100%	13%
Sub-Total	- 50%	-100%	+ 200%	- 100%	-	100%	-	-	+ 100%	5%
TOTAL	- 29%	- 25%	+ 54%	+ 22%	+ 2%	- 37%	+ 18%	+ 23%	- 2%	25%

- 1.9 It should be noted, however, that although there is evidence of a substantial shift in employment above 20t and a decline of 37% earning below, there remains a significant proportion continuing to earn below the minimum wage - representing around 21% of all employees. (See Table 8). This is concentrated on Hotel/Entertainment with 64% of its employees earning below the minimum wage, the Wholesale/Retail sector 22% and Manufacturing 21% below the minimum wage. Construction shows only 11% of smaller firm employees earning below the minimum wage and the largest proportion (86%) earning above 31t an hour.
- 1.10 These figures compare wage rates paid in cash but do not include payments in kind which are allowed under existing wage regulations. To the extent that payments in kind have increased in importance between 1976 - 1977 and 1977 - 1978 according to this survey (see Changes in Payments in Kind page 35) the figures on the proportion of employees below the minimum wage are overstated. This applies particularly to Wholesale/Retail and Hotel/Entertainment where payments in kind are relatively important.
- 1.11 It is important to consider changes in the proportion of employees earning below 23t an hour in addition to earnings changes in employment below 20t an hour in order to isolate (a) falls in employment with resultant shifts in the proportion earning in the 21 - 23t range due to enforcement of the minimum wage and (b) a decline in the employment of those earning below the minimum wage which does not result in any shift towards a higher wage scale. It should be stressed that this argument assumes that a decline in employment below the minimum wage which results in a shift up the income scale operates to push workers to the next immediate wage category i.e. 21 - 23t an hour. While this is likely to be reasonable in the majority of cases the possibility of a decline in sub-minimum wage employment resulting in shifts to an above 23t category should not be ruled out. The following argument assumes that a decline in sub-minimum wage employment will result from dismissals etc. in view of minimum wage pressure and not shift to a higher wage bracket or that a shift will occur to the 21 - 23t wage range arising from better minimum wage enforcement.
- 1.12 An examination of the overall picture reveals a decline of 20% between 1977 and 1978 in the proportion of employees earning below 20t compared with a fall of 18% between 1976 and 1977. In real terms, however, given an increase in the cost of living of 13% between 1977 - 1978 there appears to have been little change so comparisons of 20% to 18% may not be meaningful. In absolute terms however the change between 1977 and 1978 is slightly smaller than between 1976 and 1977. Compared with the decline below 20t however which is 37% (and around 166 in absolute terms) the decline below 23t is much smaller implying some evidence of a decline in below minimum wage employ-

ment without any corresponding shift to the 21 - 23t range (representing around 40 employees in absolute terms).

1.13 Turning to an analysis of the changes by sector Wholesale/Retail shows a faster decline (of 24%) in employment below 23t when i) compared with other sectors - the decline is faster in absolute terms and in percentage terms with the exception of Hotel/Entertainment and Manufacturing (but the latter shows an absolute decline which is only 40% of that of Wholesale/Retail) and ii) compared with 1976 - 1977 with a decline below 20t. This implies that the 41% fall in the proportion of Wholesale/Retail employees earning below the minimum wage might not be wholly a reflection of more effective minimum wage enforcement. There is evidence of some decline in employment of 8% (of 18 in absolute terms) which has not shifted to the higher 21 - 23t wage.

1.14 Hotel/Entertainment reveals a) a faster decline in employment below 23t in proportional terms than other sectors although a smaller absolute decline than Wholesale/Retail and Manufacturing b) 35% decline in the proportion earning below 23t between 1977 and 1978 compared to an increase between 1976 and 1977. However the absolute decline in those below 20t is only slightly greater than the fall in the below 23t range and therefore cannot conclude that the decline in employment below the minimum wage represents the laying off of workers rather than a shift up the income scale.

1.14 In summary one can conclude that the Wholesale/Retail sector which experienced the largest percentage increase in the minimum wage in addition to a large actual increase (i.e. it had 37% of its initial work force prior to July 1977 earning below minimum wage): has displayed i) the largest decline in the proportion of employees earning below 23t when compared to other sectors and with 1976 - 1977 and ii) a faster decline in those earning below 20t than those in the below 23t category. This implies some reduction in employment below minimum wage which has not shifted to a higher wage bracket.

2. Distribution of Employment by Wage Rate and Skill Level

2.1 Table 9 shows the distribution of employment by wage rate and skill level for the under 50 firms over the years 1976, 1977 and 1978. Unskilled employment registered a decline of 35% in the below minimum wage category between 1977 and 1978 compared with a 60% fall for skilled workers. In absolute terms, however, unskilled employment below 20t an hour fell substantially (by around 135) while the fall for skilled workers was relatively insignificant (6).

2.2 Does the decline in below minimum wage employment of unskilled workers represent enforcement of the new minimum wage with a consequent shift to a higher wage bracket or does it represent a decline in employment without any accompanying shift up the income scale?

- 2.3 To isolate these separate effects it is important to consider whether unskilled employment below the 23t wage range is falling
- i) at a faster rate than employment in other income groups and
 - ii) at a faster rate than it did between 1976 and 1977
 - iii) faster than the fall below 20t.

With regard to i) unskilled employment below 23t has fallen at a slower rate in percentage terms than employees in the professional/managerial, skilled and clerical categories, but there is evidence of a significant larger absolute decline (of over 100 employees).

- 2.4 With regard to ii) unskilled employment below 23t has registered a large percentage decline but only a small fall in absolute terms. However, female unskilled employment shows a large decline between 1977 and 1978 in those earning below 23t compared to a slight increase between 1976 and 1977 and a large fall in both absolute and proportional terms than females in other skill categories. Female employment below 20t fell by 57% (in absolute terms 82) while employment below 23t fell by 28% (in absolute terms 57) implying that some decline in sub-minimum wage employment, focused on females, has occurred which has not resulted in any corresponding shift to a higher wage bracket (representing a decline of around 16%).
- 2.5 Skilled female employment above 23t an hour shows an increase of 150% between 1977 and 1978 and semi-skilled employment an increase of 7%. Unskilled female employment below 23t on the other hand shows a fall of 27% implying that there is some evidence of substitution of skilled, and to a lesser extent semi-skilled, female employment for unskilled.
- 2.6 It should be noted that the unskilled category shows the largest proportion of persons earning below the minimum wage in March 1978 i.e. 30% compared with only 3% for skilled labour (and in absolute terms 240). This figure represents a decline from 45% in 1977 and 59% in 1976 but is still significant and compares with a figure of 21% for all skill levels.

3. Distribution of Employment by Wage Rate and Size of Firm

- 3.1 There appears to be some positive correlation between the distribution of employment according to wage rate and the size of firm. The over 50 firms reveal a larger proportion of employees earning above the minimum wage than do smaller firms; 62% compared with 42% for firms with less than 10 employees.

- 3.2 Medium sized firms with 21 - 30 employees show the largest proportion of employees earning sub-minimum wage rates; 25% compared with an overall of 17% for all firms. However these firms register the largest decline of 48% between 1977 and 1978 in the proportion of persons earning less than 20¢ an hour which is faster than the fall for other firms and in comparison with 1976 - 1977 (when an increase is registered). Other small firms those with between 11 - 20 employees and the less 10 employee firms have also registered significant declines in sub-minimum wage employment in comparison to other sized firms and at a faster rate than 1976 - 1977.
- 3.3 These changes might imply a shift in employment from smaller to larger firms since the minimum wage rise which may have the larger term effect of increasing the proportion of national activity in the more capital intensive i.e. more rapidly labour-replacing firms.

4. Changes In Total Wages Bill

- 4.1 Table 10 shows that the wages bill for all sectors has increased by 16% between 1977 and 1978. Compared with an average increase of 12% in the cost of living over this period, the real wages bill shows some increase. The largest increase of 24% is revealed in the Wholesale/Retail sector whereas Garage, Transport and Hotel/Entertainment show declines in the wages bill since 1977. Since wage rates have risen the latter suggests that either a decline in output or some substitution of capital for labour has taken place. The survey data relating to changes in output appears to provide supporting evidence for the former effect since these sectors, particularly Hotel/Entertainment, are characterized by a large proportion of firms which curtailed their output since July 1977.
- 4.2 The overall rise in the wages bill appears greater in the period immediately after the minimum wage increase i.e. July - September (increase of 21% between 1977 and 1978) than in the months of October - December. The period January - March represents a much smaller increase of 5% than in previous months. The less rapid increase in the wages bill from October to March might be a reflection of cutback in output which appears to have occurred. The Wholesale/Retail sector shows only an 8% increase in the wages bill in the period January - March 1977 - 1978 compared with an increase of 30% between October and December and a slightly higher increase of 33% between July and September.

5. Changes in Payments In Kind

- 5.1 Table 11 shows a substantial increase of 34% in the proportion of employees covered by payments in kind between 1977 and 1978 (comparison with 1976 - 1977 changes cannot be made in view of the lack of information). Both skilled and unskilled employees show the same increase

Table 10

CHANGES IN TOTAL WAGES BILL BY SECTOR AND SEASON^x

Sector	% Wages Bill 1976-1977 ^{xx}			% Wages Bill 1977-78 ^{xx}			% Change $\frac{1977-78}{1976-77}$ ^{xxx}			Total
	Jul-Sept	Oct-Dec	Jan-Mar	Jul-Sept	Oct-Dec	Jan-Mar	Jul-Sept	Oct-Dec	Jan-Mar	
W/Retail	30	31	39	34	34	33	+ 33	+ 30	+ 8	+ 24
Manuf.	32	34	34	30	31	39	+ 15	+ 13	+ 60	+ 21
Constr.	26	27	47	33	32	35	+ 35	+ 29	- 13	+ 15
Garage	29	31	40	30	30	30	- 8	- 13	- 47	- 10
Transport	32	33	35	33	33	34	- 71	- 73	- 73	- 72
Hotel/Entertainment	35	35	30	33	33	34	- 50	- 49	- 27	- 42
TOTAL	30	31	38	33	33	34	+ 21	+ 17	+ 5	+ 16

x For all firms.

xx Percentage of Wage Bill for the period.

xxx Percentages calculated on absolute figures for seasonal changes from 1976 to 1977 and 1977 to 78.

Table 11

PAYMENTS IN KIND

		1977				1978				% change 1977 - 1978			
		Food	Housing	Other	Total	Food	Housing	Other	Total	Food	Housing	Other	Total
<u>Employees</u>													
Skilled	No.	60	34	12	106	68	52	21	141	+ 13	+ 53	+ 75	+ 33
	%	57	32	11	100	48	37	15	100				
Unskilled	No.	373	36	122	531	474	88	149	711	+ 27	+144	+ 22	+ 24
	%	70	7	23	100	67	12	21	100				
TOTAL		433	70	134	637	542	140	170	852	+ 25	+100	+ 27	+ 45
<u>Value of Payments</u> (Pulaper month)													
Skilled	Value	875	2856	147	3878	1645	3192	77	5014	+ 88	+ 12	- 48	+ 29
	%	23	74	4	100	33	64	4	100				
Unskilled	Value	638	2154	53	2845	6681	1590	2295	10566	+947	- 26	+4230	+271
	%	22	76	2	100	63	15	22	100				
TOTAL		1513	5010	200	6,723	8326	4782	2372	15,580	+450	- 5	+1086	+132

in coverage of payments in kind. The large increase since 1977 suggests that the figure of employees earning below the minimum wage might be an overestimate since the legal minimum allows for the inclusion of payments in kind. As regards type of payment, housing shows the largest increase in terms of coverage of employees, largely the unskilled category which has more than doubled the number of employees enjoying this form of payment.

- 5.2 The value of payments in kind has increased significantly since 1977. The overall increase has been of the order of 132% to P.15 580 while the value of food provision has increased more than fourfold. While the number of unskilled employees covered by payments in kind have increased by the same proportion as skilled, the former have experienced a much greater rise in the value of payments. The value of unskilled payments has trebled to P10 566 (largely focused on food provision), whereas the increase for skilled employees has been 19%.

VI. CONDITIONS OF EMPLOYMENT

1. Changes in Hours Worked Per Week by Sector

Table 12 giving a sectoral breakdown of employees by hours worked per week for the "under 50" firms indicates a trend towards a shorter working week over the last 3 years which has become more pronounced since the 1977 minimum wage changes came into effect. The number of employees working less than 40 hours a week rose by 14% between 1977 - 1978 and those working 46 - 50 hours by 8% whereas there has been a decline in employment of those working 46 - 50 hours by 17% and those working more than 50 hours of 1%. (See Table 13). Compared to 1976 - 1977 there has been a larger shift in the direction of 41 - 45 hours a week away from the 46 - 50 hours a week category. The reduction in the working week, might reflect a reduction in the demand for labour by employers in response to the higher cost of labour or factors operating on the supply side i.e. a desire to work shorter hours on the part of employees in the light of their increased income.

- 1.2 To what extent has the decline in the working week been focused on those sectors experiencing the largest increases, in both formal and actual terms, in the minimum wage?

Wholesale/Retail experienced one of the largest formal increases in the minimum wage (of 100%) and a large actual increase since 37% of its initial workforce prior to the minimum wage orders earning below 20 thebe an hour. Table 13 shows that the Wholesale/Retail Sector appears to have also registered the largest cutback in hours worked relative to other sectors in proportional terms (and in absolute terms with Manufacturing). Compared with 1976 - 1977 the cutback in hours of work has been larger than other sectors in proportional terms - an increase of 31% in the proportion

Table 12

EMPLOYMENT OF PERSONS (EXCLUDING NIGHT WATCHMEN) BY HOURS WORKED AND SECTOR

Sector/Hours Worked	<u>1976</u>				<u>1977</u>				<u>1978</u>			
	% employees working				% employees working				% employees working			
	Below 40	41-45	46-50	51+	Below 40	41-45	46-50	51+	Below 40	41-45	46-50	51+
W/Retail	9	47	29	15	10	43	32	15	13	43	28	16
Manuf.	35	65	-	-	37	63	-	-	42	58	-	-
Constr.	2	92	7	1	3	85	11	1	3	96	-	1
Hotel/E	20	2	4	74	23	-	2	75	21	-	4	75
Transport	-	30	27	43	-	26	26	47	-	53	19	29
Garage	28	63	1	8	45	45	1	8	33	58	1	8
TOTAL	15	56	17	13	18	50	19	14	20	52	15	13

CHANGES IN EMPLOYMENT (EXCL NW) BY HRS WORKED PER WEEK AND SECTOR

	<u>1976 - 77</u>				<u>1977-78</u>			
	Below 40	41 - 45	46 - 50	51+	Below 40	41 - 45	46 - 50	51+
W/Retail	+ 15%	- 7%	+12%	- 2%	+31%	- 4%	- 16%	-
Manuf	+ 3%	- 8%	-	-	+18%	-4%	-	-
Constr	+ 33%	- 44%	-	-	-	+ 21%	-100%	-
Hotel/E	+ 9%	-100%	-50%	-3%	-8%	-8	+100%	-
Transport	-	-	+13%	+23%	-	+217%	+11%	-3%
Garage	+65%	-28%	-	-	-24%	+33%	-	-
Total	+13%	-17%	+11%	+2%	+14%	+8%	-17%	-1%

of employees working below 40 hours a week compared with a much smaller increase of 15% between 1976 and 1977. In absolute terms the increase in the below 40 category between 1977 and 1978 has been slightly smaller when compared with 1976 - 1977 than the increase for manufacturing.

Manufacturing experienced a large "actual" increase in the minimum wage (32% of its initial workforce was below the minimum wage level in July 1977) although the formal increase was smaller than that for Wholesale/Retail and Hotel/Entertainment. It is the only other sector in addition to Wholesale/Retail to experience an increase in the proportion of employees working below 40 hours a week. (Transport, Garage and Construction show a shift to 41 - 45 hours category). The proportion working below 40 has increased by 18% between 1977 and 78 but in absolute terms the increase has been of the same order as that for Wholesale/Retail. The shift appears to have been away from the 41 - 45 hours category rather than from the 46 - 50 category evident for Wholesale/Retail. This implies a shorter average working week than for Wholesale/Retail.

Hotel/Entertainment a sector experiencing 100% formal increase in the minimum wage and the largest actual increase (since 98% of its initial workforce was in the below minimum wage category before July 1977) does not appear to have displayed any significant change in the length of the working week.

Construction, Transport and Garage reveal an increase in the proportion working between 41 - 45 hours a week and a shift away from 46 - 50 hours implying a longer average working week than the other sectors.

- 1.3 In summary, the trend towards a shorter working week appears to have accentuated since the minimum wage orders came into effect. The decline appears to be focused on Wholesale/Retail and Manufacturing which both experienced large "actual" increases in the minimum wage and in the case of Wholesale/Retail, a large formal increase. There is evidence of a cutback in the working week for Construction, Transport and Garage but this has manifested itself in a shift towards the 41 - 45 hour average working week rather than towards the below 40 week as in the case of Wholesale/Retail and Manufacturing. Hotel/Entertainment, one of the sectors "hardest hit" in terms of large increases in the minimum wage, appears to be unaffected in terms of changes in the working week.

2. Changes in Hours Worked by Skill Level

- 2.1 To what extent has the decline in the working week been concentrated on the lowest income groups?

Table 14 showing the distribution of employment by hours worked per week and skill level reveals that the largest cutback in hours worked has affected (in absolute although not proportional terms) workers in the unskilled category. This also appears to be the case when a comparison of 1977 - 1978 with 1976 - 1977 changes (Table 15) is made. The unskilled category shows a large absolute increase in the number of persons working below 45 hours (largely between 41 - 45 hours) between 1977 - 1978 in comparison to the 1976 - 1977 change than do the professional/managerial, skilled, semi-skilled and clerical skill levels. The shift has been towards the below 45 hours category and away from 46 - 50 and to a lesser extent 50+ hours.

2.2 With regard to changes in the working week for other skill categories skilled persons show the largest percentage increase in those working below 40 hours - an increase of 86% between 1977 and 1978 - and the largest percentage increase when compared with 1976 - 1977. However, the absolute increase is less than that for unskilled workers. Semi-skilled workers appear to have undergone a lengthening of the working week.

2.3 To what extent has there been a differential impact with regard to the apparent cutback in the working week according to sex?

The largest cutback in the number of hours worked a week has been of unskilled workers (in absolute terms). An increase of 47% between 1977 and 1978 in the proportion of unskilled females working less than 40 hours is evident while those working between 41 - 45 hours a week increased by 21%. The shift appears to have largely moved away from the 51+ hours week. Male unskilled workers working below 40 hours on the other hand increased by 23% between 1977 and 1978. In absolute terms the reduction in the male working week has been greater.

In comparison with 1976 - 1977 female unskilled labour has experienced a more rapid reduction in the working week in proportional and in absolute terms.

2.4 In summary, the decline in the working week appears to have been concentrated on the lowest income group, namely the unskilled, particularly females. These are the groups most likely to have experienced an actual wage increase when the formal minimum was raised in that a large proportion of workers were earning far below the minimum wage. Around 70% of the decline has been largely in the 41 - 45 hours category, the remainder in the below 40 category and the shift has been largely from the 46 - 50 hour week. Female workers appear to have focused largely in this respect.

Table 14

Employment of Persons by Hours Worked and Skill Level

Skill Level	<u>1976</u>				<u>1977</u>				<u>1978</u>			
	% employees working				% employees working				% employees working			
	Below 40	41-45	46-50	51+	Below 40	41-45	46-50	51+	Below 40	41-45	46-50	51+
Professional/ Managerial	13	49	25	12	34	40	18	8	11	55	20	13
Skilled	17	61	18	4	21	50	17	12	35	48	6	12
Semi-Skilled	16	63	11	11	17	61	11	11	18	58	12	12
Unskilled	14	54	17	15	16	47	21	16	18	50	17	14
Clerical	21	49	28	2	21	49	30	-	26	49	23	2
TOTAL	15	56	17	13	18	50	19	14	20	52	15	13

Table 15

CHANGES IN EMPLOYMENT BY HOURS WORKED + SKILL LEVEL

Skill Level	<u>1976 - 1977 % change</u>				<u>1977 - 1978 % change</u>			
	Hours worked per week							
	<u>Below 40 hours a week</u>	41 - 45	45 - 50	+ 50	Below 40	41 - 45	46 - 50	51+
PROFFESIONAL MANAGERIAL	+266%	+18%	-	-	- 73%	+18%	-	+38%
SKILLED	32%	-14%	-	240%	+ 86%	- 7%	- 62%	+ 6%
SEMI-SKILLED	4%	- 5%	-3%	7%	- 15%	-24%	-10%	- 16%
UNSKILLED	-2%	-24%	9%	-8%	+ 29%	+21%	-10%	- 1%
CLERICAL	-	+ 3%	+12%	- 100%	+ 31%	+3%	- 21%	+ 100%
TOTAL	+13%	-17%	+11%	+ 2%	+ 14%	+8%	-17	- 1%

3. Hours Worked and Wage Rates

Some correlation appears to exist between hours worked and wage rates. Those persons working more than 50 hours a week, a substantial proportion, 51%, are earning below 20 thebe. On the other hand, of those working less than 40 hours a week only 6% fall in the below 20 thebe category. Since 1977, although the proportion of employees earning below 20 thebe and working less than 40 hours has fallen at a faster rate than those working in excess of 50 hours, in comparison to the 1976 - 1977 change those working longer hours have improved their position regarding wage rates more markedly than those working a shorter week.

4. Piece Rates

The direct question "Did the now minimum wage cause you to increase or decrease, the number of your work force which is employed on an incentive payment system" elicited only a small response when posed to the 220 "under 50" firms. Around 9% of employees were engaged on a piece work basis in March 1978 and this proportion has increased from 8% in 1977 and 7% in 1976. Since July 1977 there has been a 14% rise in the number of people engaged on a piece work basis which has been almost wholly concentrated on the Wholesale/Retail sector. Any shift towards the adoption of piece rates appears to have been focused on one of the sectors experiencing a large increase in the minimum wage. Wholesale/Retail shows the largest proportion of employees engaged on a piece work basis accounting for 15% of total employment. This represents an increase of 16% between 1977 and 1978.

5. Overtime Rates

Only 5% of under 50 firms stated that they increased employment in response to the direct question "As a result of the increase in minimum wage rates have you increased the number of new and/or temporary employees to avoid overtime rates"?

The Wholesale/Retail sector, in view of its significant size in the sample, accounted for the largest number of firms responding but in relation to size of sector, Hotel/Entertainment accounted for the largest proportion of firms responding - 14% of firms in the sector compared with the 5% response rate for all firms. Construction firms did not employ any additional workers.

The resultant increase in full time and part time employment represents only 1% each of total employment in the sample of under 50 firms. However, the Hotel/Entertainment sector appears to have been significantly affected relative to other sectors; an increase of full time and part time employees is evident representing respectively 8% and 15% of Hotel/Entertainment employment.

VII. NIGHT WATCHMEN

1. Night watchmen received a legal minimum wage for the first time in 1977 and account for 3% of total employment in the sample of under 50 firms. It should be noted that (although the absolute numbers are fairly small) between 1977 and 1978 there has been a 4% decline in employment which is faster than the decline for labour in other skill categories (1% fall for semi-skilled and skilled).
2. An examination of the distribution of employment by wage rates reveals a decline in the proportion of watchmen earning below 11 thebe an hour of 41% between 1977 and 1978 (in absolute terms 9) compared with no change between 1976 and 1977. Night watchmen in the 12 - 14 thebe category on the other hand, have risen by 75% (in absolute terms only 3 however).
3. It is pertinent to note that although there is some evidence of a shift up the income scale since the minimum wage regulations were established in July 1977, night watchmen appear to be a disadvantaged group as regards the level of wage rates. Around 28% are still earning below the minimum which is higher than the overall figure of 21% for watchmen at other skill levels. Night watchmen appear relatively better off than they were in 1977 when 45% were earning below the present minimum but the substantial figure at present below the minimum wage might suggest a lack of effective enforcement. However, the inclusion of payment in kind reduces the figure of 45% below the minimum wage, the argument of ineffective enforcement has limited applications. The Wages Councils agreed to recommend a separate minimum for night watchmen which is much lower than that set for workers at other skill levels.
4. It is interesting to note that night watchmen appear adversely affected with regard to wage rates for labour at other skill categories; over 70% of night watchmen are currently earning below 20 thebe an hour. This proportion has remained constant over the last 2 years and only slightly declined from 76% in 1976.
5. Are there any significant sectoral differences with respect to the distribution of minimum wage employment by wage rates?

Wholesale/Retail shows the largest percentage fall in minimum wage earning below 11 thebe an hour of 44% which is faster than the decline for other sectors and faster than the fall of 18% between 1976 and 1977. (In absolute terms the decline of 44% represents only 6 night watchmen). In spite of the apparent improvement in the wage structure of minimum wage in this sector, Wholesale/Retail shows the largest proportion still earning below 11 thebe i.e. 48% of employees which is substantially higher than the overall figure of 28% for all sectors. A comparison based on the minimum wage for other categories of labour reveals that 96% of Wholesale/Retail night watchmen are at present earning below 20 thebe an hour.

Table 16

Employment of Night Watchmen By Wage Category and Sector

Sector	1976							1977							1978						
	0-8	9-11	12-14	15-17	18-20	21-23	24+	0-8	9-11	12-14	15-17	18-20	21-23	24+	0-8	9-11	12-14	15-17	18-20	21-23	24+
W/Retail	39	25	11	11	14	-	-	32	32	14	11	11	-	-	20	28	28	12	8	4	7
Manuf.	17	17	-	-	33	-	33	13	13	-	-	-	-	74	14	-	-	-	-	-	86
Constr.	-	-	-	43	-	-	57	-	-	-	-	33	-	67	-	-	-	-	33	-	67
Hotel/E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Transport	-	-	-	-	-	33	67	-	-	-	-	-	33	67	-	-	-	-	-	33	67
Garage	-	50	-	50	-	-	-	-	33	-	33	-	-	-	-	-	-	50	50	-	-
TOTAL	25	21	6	17	8	6	17	20	24	18	10	18	4	26	13	15	15	13	15	4	26

Employment of Night Watchmen By Hours Worked and Sector

Sector/Hours Worked Per Week	<u>1976</u>					<u>1977</u>					<u>1978</u>				
	% employees working					% employees working					% employees working				
	Below 40	41-45	46-70	71-80	80+	Below 40	41-45	46-70	71-80	80+	Below 40	41-45	46-70	71-80	80+
W/Retail	-	4	44	32	20	-	4	46	31	19	-	-	50	33	17
Manuf.	-	50	25	-	25	-	-	83	-	17	-	-	80	-	20
Constr.	-	-	57	43	-	-	-	67	33	-	-	-	67	33	-
Hotel/E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Transport	-	100	-	-	-	-	100	-	-	-	-	100	-	-	-
Garage	-	25	-	-	75	-	25	-	-	75	-	50	-	-	50
TOTAL	-	16	37	26	21	-	11	47	22	20	-	14	45	23	18

There appears to be some correlation between size of firm and wage rates. The over 50 firms reveal no night watchmen earning below 11 thebe an hour and a 100% earning above the minimum wage of 20 thebe set for other employees. The small "under 10 employees" firms show the largest proportion - around 40% - of night watchmen earning below 11 thebe and around 75% earning below the 20 thebe minimum wage for other employees.

6. An examination of changes in the hours worked per week suggests that there has been some, albeit small, reduction in the working week. This is reflected in a decline in the proportion of minimum wage working 46 - 70 hours a week of 5% and an increase of 20% in those working between 41 - 45 hours. In absolute terms, however, the change is very small and is significant only in that it represents a change of direction in relation to 1976 - 1977 when an increase in the length of the working week is apparent.
7. The minimum wage regulations specified a minimum of 60 hours a week for night watchmen at the standard rate of pay. This has led to only a slight decline in the proportion working in excess of 60 hours a week. The average working week for minimum wage appears long in comparison to that for other types of worker; 53% work more than 60 hours a week and 40% in excess of 70 hours a week.
8. Some direct correlation between hours worked a week and wage rates is evident. Of those night watchmen working between 71 - 80 hours a week around 77% were earning below 11 thebe an hour while of those working between 46 - 70 hours a week only 10% were at subminimum wage rates.

VIII. OUTPUT

1. Minimum wage legislation is likely to reduce output or at least its rate of growth to the extent that producers cannot or do not raise prices or substitute capital for labour to compensate for higher costs of production (which are not absorbed in profits). Production that was previously worthwhile is no longer likely to be so at the new higher level of costs. In response to the question, "Has the value of your output or sales, increased or decreased?" the majority of the under 50 firms replying experienced a fall in output or in the value of sales since July 1977 (58% of firms which answered the question). The decline in output is concentrated in Wholesale/Retail and Hotel/Entertainment, the sectors experiencing a 100% increase in the minimum wage but also the sectors most adversely affected by foot and mouth and Zimbabwe border problems.
2. The largest absolute number of firms curtailing their output is focused on Wholesale/Retail but Hotel/Entertainment shows the largest proportion of firms - 71% - suffering a cutback in output. To the extent that higher costs of production resulting from higher wages which are not absorbed in profits or transferred to prices the decline in output might be attributable to the minimum wage. There is evidence to support this view for the Wholesale/Retail sector where the largest number of firms reduced their output and experienced the largest reduction in employment below the

minimum wage. However, the foot and mouth disease is a significant development which would have had an adverse impact on output from November 1977.

The Construction sector shows the largest proportion of firms which increased their output since 1977; over half of the under 50 firms gave this reaction compared to 28% for all sectors.

IX. PRICES

1. Higher costs, arising from an increase in wage rates, will usually result in higher prices in situations where profits cannot be further squeezed. Table 18 shows that 33% of the under 50 firms stated that they raised their prices since July 1977. The overwhelming majority in absolute numbers were in Wholesale/Retail. Manufacturing and Construction had the largest proportion of its firms answering in the affirmative to the question - 56% and 55% - of firms. The overwhelming number of firms (over 70%) which increased their prices claimed to do so because of higher costs of production arising from the minimum wage. Manufacturing features as the sector with the largest percentage of its firms (48%) attributing price increases to the minimum wage. More frequently firms raised prices by 6 - 10%; only a small number raised prices by more than 20% which suggests that higher costs of production arising from increased wages were not entirely passed on in higher prices. Some curtailment in output is therefore likely to have occurred (this is partially borne out by the answers to the question discussed in previous section).

X. PRODUCTIVITY

1. Only 26% of the under 50 firms answered in the affirmative to the direct question "Have you done anything since July 1977 to demand higher productivity" whereas 43% of firms replied to the contrary. According to sector, the largest percentage of firms demanding an increase in productivity are found in the Garage and Manufacturing sectors. The absolute numbers are fairly small however; the overwhelming bulk of firms answering 'yes' to this question are to be found in the Wholesale/Retail sector (i.e. 38 in comparison to only 4 for the Garage sector).

It should be stressed that a positive answer to the above question does not necessarily imply that an increase in productivity was obtained.

2. It should be noted that the effect of higher wages on productivity may manifest itself either through an impact on management or through an impact on workers. One source of low worker productivity is absenteeism which on a priori reasoning one might expect to decline as a result of higher wages. In reply to the question regarding changes in absenteeism, however, 83% of firms claim to have experienced "no change". Wholesale/Retail shows the largest percentage of firms - 86% - which replied "no change" followed by the Manufacturing and Garage sectors. Only 6% of firms, focused almost wholly on the Wholesale/Retail sector (and one in Construction) claim to have experienced a decline in absenteeism since July 1977.

Table 18

Proportion of Firms Increasing Prices Since July 1977

Sector	% of all firms affected			% increase in prices				
	Due to MW %	Other Reasons %	Total %	0-5 % firms	6-10 % firms	11-20 % firms	21+ % firms	Total % firms
W/Retail	19	10	29	5	(6)	6	4	21
Constr.	33	22	56	33	11	11	-	56
Manuf.	48	6	55	3	23	16	-	42
Hotel, E	-	14	14	-	-	-	-	-
Garage	40	-	40	20	20	-	-	40
Transport	8	-	8	8	-	-	-	8
TOTAL	24	9	33	7	9	7	3	25

3. The lack of significant impact on worker productivity might be a reflection of the fact that even if higher wages improve physical capacity to work (assuming that this is impaired by poverty and that higher wages are partially spent in ways that make for better nutrition) the willingness to work might remain unaffected. The willingness to improve work performance might be more responsive to changes in methods of wage payment e.g. the adoption of profit self-management schemes than to wage levels. This argument has particular application in the context of the July 1977 minimum wage orders when assessing the magnitude of the change in the level of the minimum wage. In real terms, in relation to the 40% increase in the rate of inflation between March 1974 and March 1977 the 43% increase in the minimum wage does not appear to have been very significant.

XI. CAPITAL - LABOUR SUBSTITUTION

1. A wage increase raises the cost of labour relative to other inputs e.g. capital which are substitutable for labour and may therefore encourage employment of capital. The survey suggests little evidence of such substitution of capital for labour since July 1977. Only 26% of all firms claimed to have purchased machinery since July 1977. The overall reduction in employment arising from the purchase of machinery appears to be relatively insignificant, representing only 0.1% of total employment in the sample. This is focused entirely on Wholesale/Retail. The lack of substitution of capital for labour might reflect the short time period involved; the availability and cost of borrowing finance are factors which might lengthen the period required for the purchase of machinery.
2. The emphasis appears to be rather on the purchase of machinery for reasons of expansion etc. which gives rise to an increased requirement for complementary labour inputs - an increase in employment.

XII. MANAGEMENT IMPACT

Minimum wage legislation may have repercussions on management in so far as management is considered as an input which is to some degree substitutable for labour. To the extent that higher wages raise the price of operative labour relative to managerial and supervisory labour firms are given an incentive to substitute some of the former for the latter to attain more effective training supervision and control of the now higher price operative labour. There is some evidence to suggest that substitution may have taken place. With regard to the smaller "under 50" firms the number of professional/managerial and skilled employees has increased i) by a significant proportion relative to semi-skilled and unskilled labour which have registered declines since July 1977 and ii) faster rate than between 1976 and 1977.

To the extent that managerial and supervisory employees were not previously at full capacity, substitution might be achieved without any increase in money costs. Since managerial and supervisory labour is a scarce resource in most developing countries including Botswana, an increase in productivity will have to arise from greater employment of such labour if higher wages are not to result in higher costs of production.

XIII. EMPLOYERS INTERPRETATION OF MINIMUM WAGE IMPACT

1. Impact of Minimum Wage on Employment

1.1 Dismissals due to Minimum Wage

In response to the direct question "Did you discharge any employees because it no longer paid you to employ them at the new minimum"? the overall employment reduction claimed by firms appears small representing less than 1% of total employment in the sample of under 50 firms. This is focused on Wholesale/Retail firms and Manufacturing. A nil response was elicited from firms in the other sectors. With regard to skill level, the focus is largely on unskilled. According to the survey 2% of unskilled employees in the Wholesale/Retail sector were claimed to be discharged for minimum wage reasons. To the extent that the employment impact of minimum wage changes is manifest via non-replacement of workers who have voluntarily terminated, retired, etc. dismissals may tend to understate the reduction in employment.

1.2 Reasons for Decreases in Employment

Table 19 shows the proportion of employees discharged for reasons of voluntary termination, dismissal and redundancy according to sector over the years 1976, 1977 and 1978. It is evident that the proportion of voluntary terminations has increased between 1977 - 1978. This is usually followed by replacement of workers and therefore constitutes a gross, not a net, reduction in employment. Non-replacement of voluntary terminations might occur to the extent that the need to engage a new untrained worker at a significantly higher minimum wage has a disincentive effect on firms. The increase in voluntary terminations between 1977 and 1978 is of a small order of magnitude, (1%) however, and appears insignificant when compared with the relatively large increase (45%) between 1976 and 1977. It is interesting to note however, that voluntary terminations represent the largest share of discharged employees; this share has increased since 1977 while dismissals have declined in relative importance in terms of their share of discharged employees. This may be a reflection of employer bias in response in terms of an increasing unwillingness to admit to dismissing workers.

1.3 The proportion of redundancies has increased slightly between 1977 and 1978 but at a much slower rate than between 1976 and 1978. In terms of importance relative to other reasons for discharging employees redundancies have increased their share of discharged employees.

1.4 Turning to an analysis of reasons for decreases in employment on a sectoral basis Table 19 suggests that the largest proportion of voluntary terminations is in Wholesale/Retail and Hotel/Entertainment sectors. These are high turnover sectors; therefore the concentration of voluntary terminations on these sectors is to be expected. Between 1977 and 1978

Table 19
REASONS FOR DECREASES IN EMPLOYMENT BY SKILL-LEVEL

No. & Proportion of Employees
Affected

SKILL LEVEL	<u>July 75 - March 76</u>						<u>July 76 - March 77</u>						<u>July 77 - March 78</u>						<u>Other</u>											
	V.T.		D.		R.		V.T.		D.		R.		V.T.		D.		R.		75-76		76-77		77-78							
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%						
Professional/Man.M																														
Skilled	2	2					1	1			1	1	7	7	10	10	1	1					7	3	3					
Semi-skilled	8		1	1			8	4	1	1	18	9	5	3	1	1			1	1	2	1	2	1						
Unskilled							57	11	76	15	7	1	57	11	56	11	26	5			2	1	0.2	22	4					
Clerical	3		1	3			5	13					1	29																
Night Watchmen					1	4			1	3	1	3	2	6	2	6	1	3												
TOTAL				4		1	71	8	78	9	27	36	72	8	69	8	28	3	13	1	3	0.1	27	3						

V.T. = Voluntary Termination

D. = Dismissal

R. = Redundancy

there has been relatively little increase in the proportion of voluntary terminations in these sectors; voluntary terminations have assumed greater relative importance in the Construction sector. Dismissals have assumed diminishing importance in the Manufacturing sector while the proportion of persons discharged for this reason has increased in Wholesale/Retail. Redundancies in the Manufacturing sector have exhibited a threefold increase (although in absolute terms the increase was only 9 employees) which is significant relative to the changes in other sectors and when compared with 1976 - 1977.

- 1.5 Analysing the picture by skill level reveals a bias in the proportion of employees discharged towards the unskilled; 79% of all voluntary terminations; 80% of all dismissals and 93% of all redundancies are focused on unskilled employees. The skilled category on the other hand, accounts for only 10% of voluntary terminations, 14% of dismissals and 4% of all redundancies. This bias is to be expected since firms endeavour to retain the skills they have trained. To isolate any possible minimum wage impact it is important to consider whether this bias has increased since 1977. With regard to employees discharged for voluntary reasons of dismissal there appears to be no increase in bias towards the unskilled since 1977; the proportion of unskilled voluntary terminations has remained constant while the skilled category shows an increase. The period July 1976 - March 1977 reveals a large increase of 69% in unskilled voluntary terminations and little change with regard to other skill levels.
- 1.6 The importance of dismissals as a reason for decreases in unskilled employment appears to have diminished compared with other skill categories and compared with the 1976 - 1977 change. Unskilled dismissals fell by 25% between 1977 and 1978 compared with an increase for skilled workers and compared with a large rise of almost 70% between 1976 and 1977.
- 1.7 While the overall level of redundancies appears to have increased by 4% since 1977, after a significant rise during 1976 - 1977, redundancies for unskilled workers appear to have exhibited almost a threefold increase (from 7 to 26) since 1977 (focused most probably in Manufacturing see previous para.). While semi skilled redundancies have declined by 100% (from 18 to no redundancies) the bias in redundancies towards the unskilled appears to have increased markedly since 1977. The impact of higher wages is more likely to manifest itself in an increase in redundancies rather than decreases in employment for reasons of dismissal or voluntary termination; the former are likely to reflect efficiency factors while the latter are normally followed by replacement. However, to the extent that the need to start an untrained worker at a higher wage has a disincentive impact there may be a non-replacement of unskilled voluntary terminations which add to any redundancy effect of minimum wage legislation.

2. Factors Influencing Changes in Employment

2.1 Increases in Employment

Only a small proportion of the under 50 firms (11% of the 220 in the sample) replied in answer to this question, the majority being in the Wholesale/Retail sector. "Increase in sales" was stated as the major factor influencing employment increases by the majority (38%) of firms, albeit only 4% of the sample! "Increases in productivity" appeared to be significant (25% of firms responding quoted this as a factor) particularly in the Hotel/Entertainment sector for the few firms (14%) which replied to the question. "More labour available" was overall as significant as the productivity factor which appears to be reasonable in view of the existence of surplus labour in the economy. The Construction sector firms which replied to the question quoted "increase in sales" as the dominant factor underlying increases in employment.

2.2 Decreases in Employment

A larger, albeit fairly small, proportion of the "under 50" firms (20%) responded to this question. The overwhelming factor underlying decreases in employment is stated as being "decreases in sales" by 40% of the firms which responded and is likely to reflect the impact, in terms of a reduction in effective demand in the economy of the foot and mouth outbreak. The Wholesale/Retail sector which was adversely affected by the outbreak shows the largest proportion of firms quoting this as a factor.

"Increase in wage rates" appears to be quoted as the factor of secondary importance to "decrease in sales" for 20% of firms responding to the question. The majority of firms quoting "increase in wage rates" (90%) are in Wholesale/Retail which, as has been noted earlier, experienced one of the largest increases in the minimum wage. However, the number of firms in this sector which quoted wage rates as a factor is fairly small, representing only 5% of Wholesale/Retail firms.

Price control is a third significant factor making for decreases in employment according to 10% of the firms replying to the question. These are focused on the Wholesale/Retail sector but only account for 3% of firms.

3. Interpretation of the Level of The Minimum Wage

In response to the question "Do you consider the minimum wage to be "too low", "too high" or "about right", the majority, representing 49% of all firms (both 'under' and 'over' 50) replied that the minimum wage was "about right"; the principal reason being quoted as "adequate relative to the cost of living".

21% of all firms considered the minimum wage to be too low, largely for inflation reasons, whereas 17% of firms in the sample had the attitude that the minimum wage was too high. Low productivity was quoted as the major reason for this attitude.

Some correlation appears to exist between attitude to the minimum wage and the size of firm. Almost 70% of the 'over 50' firms considered the minimum wage to be "about right" and only 5% "too low". The overwhelming bulk of smaller firms considered the wage to be about right; 47% of the firms less than 10 employees and 57% of those with 11 - 20 employees. A significant proportion of the smaller firms replied "too high"; 21% of the "less than 10 employees" firms and 33% of those with 11 - 20 workers. Of all firms replying "too high" the overwhelming proportion - 68% - had less than 10 employees.

An examination of the correlation between attitude to the minimum wage and payment below/above reveals that of the firms replying that they considered the minimum wage to be "too low" around 90% actually had some employees below the minimum wage and 4% had a significant proportion (more than 75%) of their work force at sub-minimum wage levels. Of the Hotel/Entertainment firms replying "too low", 14% had more than 75% of their employees below the minimum wage, and the comparable figure for Wholesale/Retail is 5%.

4. Attitude to an Increase in the Level of the Minimum Wage

4.1 Increase to 22 Thebe an Hour

- a) 72% of the under 50 firms replied to this question. The most frequent response, 30% of the firms which responded, to the question asking firms reactions to an increase in the minimum wage to 22 thebe an hour appears to be to discharge employees. These firms represent around 21% of all firms in the sample of under 50 firms. The Wholesale/Retail and Hotel/Entertainment sectors which had the largest minimum wage increases show a larger than average proportion of firms giving this response i.e. 24% of Wholesale/Retail firms and 23% of Hotel/Entertainment firms. The Construction sector has no firms giving this response which appears to provide further evidence for the view that employment in this sector is almost wholly insensitive to changes in minimum wage levels and firms would rather raise prices to compensate for increased costs.
- b) The second most important reaction to an increase to 22 thebe an hour appears to be that firms absorb the higher costs in reduced profits. 20% of firms replying to the question produced this response. In relation to the total sample, however, only 14% of firms are concerned.
- c) "Raise prices" is the next significant response; 18% of firms replying to the question gave this reaction. (Representing 13% of all firms). In relation to the number of firms, a larger than average proportion of Construction firms gave this reaction (22% of the total).
- d) "Reduction in hours", "increase in skilled labour" were quoted by around 5% of firms (to each reaction) as being of primary importance in their response to a wage increase.

4.2 Increase to 24 Thebe an Hour

- a) Similar overall reactions to an increase in the minimum wage to 24 thebe an hour are evident except that a larger proportion of firms would raise prices before absorbing the increase in reduced profits. This suggests that at the 24 thebe level profits would be squeezed to a maximum.
- b) A slightly larger proportion of firms claim they would "discharge employees" when faced with a 24 thebe minimum rather than a 22 thebe minimum wage, representing 23% of firms in the sample. Hotel/Entertainment shows the largest proportion of firms (43% of firms in this sector compared with only 14% to a 22 thebe increase) which give this response. A further 30% of Hotel/Entertainment firms would cut back on hours worked a week whereas no firms gave this reaction to a suggested 22 thebe wage increase. A similar proportion of Wholesale/Retail firms would discharge employees (25% for both increases). The Construction sector shows a significant proportion of firms (11%) which would reduce the length of the working week although "raising prices" and "expanding training programmes" appear of equal importance.

5. Proportion of Firms Hearing of Minimum Wage

An overwhelming proportion of firms heard of the minimum wage orders of July 1977; 86% of the sample under 50 firms. The predominant method of obtaining this information appears to have been a visit from a Labour Department Inspector with a copy of the Orders. 57% of all firms in the under 50 sample gave this reaction while a further 11% heard of the regulations by radio. It should be stressed, however, that a large proportion of firms hearing of the minimum wage does not necessarily imply effective enforcement. Data relating to the distribution of wage rates suggests that a significant proportion of firms continue to pay below the legal minimum wage, although it should be noted that payments in kind are excluded, therefore the figure relating to the proportion of persons earning sub-minimum wage rates is overstated.

IMPACT OF JULY 1977 MINIMUM WAGE CHANGES IN BOTSWANA

XIV. SUMMERY AND CONCLUSIONS

The IDM was requested by the Wages Councils to examine the effects of the July 1977 changes in the minimum wage which established a uniform minimum at 20t an hour (and 10t an hour for watchmen). The previous minimum ranged from 10t to 14t an hour for unskilled workers, except watchmen, who had no legal minimum. A national survey was undertaken, based on a sample of around 250 firms in each of the five sectors covered by the minimum wage regulations, namely Wholesale and Retail Distribution; Manufacturing, Service and Repair; Hotel, Catering and Entertainment; Building Construction, Exploration and Quarrying; Garage, Motor Trade and Road Transport.

The survey sought to test a number of propositions, suggested by a priori reasoning, about the impact of minimum wage changes on, inter alia, employment, prices, output and productivity. One might expect any changes in employment in terms of a reduction in the number of workers and/or lower hours worked per week to be focused:

- a) on those sectors experiencing the largest formal increase in the minimum wage and where workers were initially lowest paid i.e. Wholesale/Retail and Hotel/Entertainment;
- b) on categories of work where the marginal value is low e.g. that performed by unskilled watchmen;
- c) on rural areas given a uniform minimum wage and differences in living costs and capacities to contribute to output in urban and rural areas;
- d) on slack season employment given a uniform minimum wage; and
- e) on smaller firms with less secure market positions and narrowest profit margins.

The principal conclusions reached from the survey are:-

1. The impact of minimum wages on employment must be evaluated in the context of a variety of factors influencing the levels of demand and employment in the Botswana economy during the period under review. The foot and mouth outbreak in October/November 1977, modest recovery from recession and disturbing border incidents near Zimbabwe are other factors which have influenced employment changes since July 1977. There are also factors, internal to each sector and establishment which affect employment. The Construction sector, for example, appears to have been wholly insensitive to the 1977 rise in the minimum wage. Most Construction firms while initially employing unskilled workers at the mini-

mum level, tend to pay most employees above minimum wage levels. The variability of public tendering is a significant factor underlying changes in Construction employment. Similarly in the Manufacturing sector employment is more responsive to factors such as infrastructure, transportation costs, economies of scale, market size and management performance than to minimum wage changes.

2. While specific attribution is not possible, overall employment in partial recovery from recession, grew in the firms which were investigated and which were in existence in all three years. There is, however, some variation among sectors.
 - i) Wholesale/Retail which had an increase of 10¢ an hour in the minimum wage, experienced a 3% employment decline from 1977 to 1978 compared with a 1% decline between 1976 and 1977. Some of this decline might be attributed to other factors mentioned above in addition to minimum wage changes.
 - ii) Hotel/Entertainment experienced a decline of 2% but this is small in absolute terms and there is no change when compared with 1976 to 1977. The smallness of the decline might be due to the exclusion in the sample of regions such as the North West where employment declines have occurred.
3. Employers subjective views relating to the impact of minimum wage suggest that "decreases in sales" is an important factor underlying declines in employment in addition to "increase in wage rates". 40% of the firms responding to the question cited the former as the major factor. "Decrease in sales" is likely to reflect the impact, via a reduction in demand, of special factors such as foot and mouth disease referred to earlier. The likely influence of other factors, in addition to possible minimum wage impact, might be confirmed by the significant low response elicited by firms in response to the direct question "Did you discharge any employees because it no longer paid you to employ them at the new minimum?" The overall reduction claimed by firms represents less than 1% of total employment in the sample of smaller firms.
4. The response to a question asking employers to cite reasons for decreases in employment suggests that redundancies have increased in relative importance since 1977 and appear to be focused on unskilled workers in the Manufacturing sector. The impact of higher wages is more likely to manifest itself via an increase in the rate of redundancies rather than in a higher rate of dismissals and voluntary terminations since the former are likely to reflect efficiency factors while the latter are normally followed by replacement.
5. Employers response to a question asking for factors influencing increases in employment suggests that "increase in sales" is the predominant factor cited by the majority of the firms answering the question (albeit only 4% of

the sample). Minimum wage changes might be a causal factor to the extent that higher wages create additional purchasing power and consequently an increase in effective demand. In the Botswana context some employment benefits of a higher wage bill are likely at present to leak into import increases particularly in a customs area like that of the South African Customs Union.

6. The lowest wage-earning groups i.e. the unskilled and watchmen display a more unfavourable employment situation than employees in other skill categories. Although overall unskilled employment registered only a small decline of 1% since 1977, when compared with other skill categories they are relatively worse off. Other categories of workers registered increases in employment of around 7 - 8% since 1977. However, the unskilled category was even in a more adverse relationship when one compares changes in employment between 1976 and 1977 (declining by 9%) before the 1977 changes in the minimum wage.
7.
 - i) The decline in female unskilled employment accounting for the overall modest decrease in unskilled employment since 1977 fell by 7% compared with a 2% decline between 1976 and 1977 and in comparison with female employment in other skill categories where increases in the employment of females are evident.
 - ii) Watchmen employment has declined at a faster rate of 4% than between 1976 and 1977. It should be noted, however, that the absolute numbers involved are fairly small.
8. Rural area firms, where the contribution of employees to output is possibly lower, registered a 3% decline in employment since 1977 compared with a 26% employment growth for urban areas (and even with the exclusion of the largest urban firm an overall 10% growth rate is evident). Compared with 1976 - 1977, overall rural area employment displays a rapid decline. Rural small village firms appear more unfavourably affected in comparison to rural large village firms. When one excludes the villages of Tutume, Sebina and Ramokwabena, which were affected by political border tensions, the direction of employment change is reversed. Rural small area firms display employment growth, albeit small in comparison to 1976 and 1977 and to urban area growth. The exclusion of Palapye, where one firm tends to distort the figures, results in a 2% employment growth in rural large area firms.
9. The larger over 50 firms do not appear to be adversely affected since they registered significant employment growth between 1977 and 1978 compared with a 1% growth for the small firms.
10. Although overall employment has registered some growth since 1977, any impact of the minimum wage is likely to manifest itself partly via the employment of those earning below the minimum prior to the July 1977 changes. The survey shows a fall in employment below the 20t an hour wage category of 37% since 1977 which is faster than the decline below 23t of 20%. This might imply that some decline in sub-minimum wage employment has

occurred which has not shifted to a higher income scale i.e. 21 - 23t an hour as a result of minimum wage enforcement. This assumes that the decline in sub-minimum wage employment has not shifted to an above 21 - 23t wage category which though reasonable may not necessarily be the case. To the extent that this assumption holds, the decline in sub-minimum wage employment is around 9%, representing around 40 employees in the sample. This decline arising from dismissals etc. in view of possible minimum wage pressure (and also foot and mouth and other factors) is focused on Wholesale/Retail which shows a faster fall in sub-minimum wage employment when compared with 1976 - 1977 and with changes in other sectors. The fall of 42% in those earning below 20t an hour might not be wholly a reflection of more effective minimum wage enforcement; some decline in employment (of around 19 employees) which may not have shifted to a higher wage bracket, appears likely to have occurred. The employment decline of 3% since 1977 in Wholesale/Retail, referred to earlier, might be focused on those earning below 20 thebe an hour prior to July 1977.

11. While no employees who received increased wages due to the higher minimum were interviewed, employees might have benefitted in that the minimum wage changes have exerted an influence on wages actually paid both on wage rates below the minimum and on the wage rates of other workers already above the minimum. A decline in the proportion of employees earning below 20t an hour of 37% since 1977 which is at a faster rate than between 1976 - 1977 and a shift to the 21 - 23t range of 22% (around 130 employees) is evident. Some of this will reflect upward wage drift in line with inflation but it seems reasonable to conclude that some is attributable to enforcement of the higher minimum wage. The increase in wage rates appears to be focused on the Wholesale/Retail sector. In real terms, however, it appears that overall wages have declined.
12. The minimum wage changes appear to have had an indirect effect via an increase in the wage rates of workers already above the minimum. An increase of 16% in the proportion of persons earning above 30t has occurred since 1977 which is faster than the increase between 1976 and 1977. This indirect effect appears to be focused on Hotel/Entertainment, Wholesale/Retail and Manufacturing which experienced large increases in the minimum wage either in formal and/or in actual terms i.e. a large proportion of the initial workforce was earning below 20t an hour prior to July 1977. Resistance to compression of differentials appears to be strong. There is a tendency at all levels to maintain demands for wage increases commensurate with minimum wage increase in order to preserve existing differentials. One might conclude that minimum wage fixing is an effective instrument not only for raising exceptionally low wages towards the general level but for elevating the general level of wages although some upward drift is to be expected in time with inflation.
13. Any impact of higher wages may manifest itself via a reduction in hours worked rather than a fall in employment per se. The survey shows a reduction in the length of the working week which is focused on the sectors experiencing

the largest minimum wage increase. Wholesale/Retail and Manufacturing experienced the largest increases in the proportion of employees working below 40 hours a week when compared with other sectors and with the decline between 1976 and 1977. The decline in hours worked may reflect a reduction in the demand for labour in view of minimum wage or other pressures on a firm or it may reflect factors operating on the supply side i.e. a desire to work shorter hours on the part of employees in view of their increased income levels.

- i) The decline in the working week is focused on skilled male workers with an increase of 108% working less than 40 hours between 1977 and 1978; clerical male workers with 50% and unskilled females with 47% (representing shifts from the 46 - 50 and above 50 hours a week categories). These declines are faster than during 1976 - 1977.
 - ii) Watchmen have experienced a decline in the working week but working hours remain significantly longer than for other categories of workers. Only a slight decrease in the proportion working in excess of 60 hours a week is evident and 53% of watchmen continue to work in excess of these hours.
14. The survey suggests that the employment declines which appear to have occurred in the Wholesale/Retail and Hotel/Entertainment sectors and are focused on unskilled, females and watchmen might have been brought about via a reduction in output and substitution of managerial inputs for labour rather than via the substitution of machinery for labour. The reduction in output experienced by the majority of firms since 1977 has been concentrated on Wholesale/Retail and Hotel/Entertainment and may reflect the impact of the foot and mouth outbreak in addition to any possible minimum wage effects. Substitution of managerial inputs for labour appears to have occurred in so far as professional/managerial and skilled employees have increased at a faster rate when compared with the declines manifest for semi-skilled and unskilled labour.
15. Some of the incidence of the wage increase which has not been transferred to workers in the form of lost jobs, or contributed to more jobs through increased demand and higher productivity appears to have been shifted to consumers in the form of higher prices. While only a third of the firms reported increased prices, two thirds of these mainly in Wholesale/Retail, attributed the price increase to minimum wage factors.
16. Productivity improvements are not easily measured. From the responses obtained it appears that few significant changes occurred brought about by either the employees or workers. This may reflect in part the fact that improved work performance is more responsive to changes in methods of wage payment than to wage levels e.g. the adoption of profit-sharing plans and piece rates.

17. Employer's interpretations of the minimum wage rate suggest that a large proportion of firms (49%) considers the minimum wage to be "about right" in relation to the cost of living. A correlation between attitude to minimum wage and size of firm is evident. A larger proportion of the smaller firms tend to regard the minimum as too high in comparison to the attitude of the over 50 firms.
18. The most frequent response to an increase in the minimum wage to 22t an hour is to discharge employees; 23% of firms, largely in Wholesale/Retail and Hotel/Entertainment, gave this reaction. A significant proportion of firms would absorb the increase in reduced profits and then transfer the incidence of the wage increase to consumers in the form of higher prices. An increase to 24t an hour appears to affect firms more adversely to the extent that profits would be squeezed at this level. A larger proportion of firms would shift the incidence of the wage increase to consumers in the form of higher prices rather than absorb the increases in reduced profits. The most common reaction as in the case of a 22t minimum wage appears to be "discharge employees".
19. A large proportion of firms, 86% of the sample of under 50 firms, appeared to have heard of the minimum wage order of July 1977, largely via a visit from the Labour Department.
20. The survey suggests that although overall employment shows some growth, employment in the sectors which experienced the largest increases in the minimum wage, namely, Wholesale/Retail and Hotel/Entertainment has been adversely affected relative to other sectors. Although the magnitude of the changes is relatively small, evidence on changes in hours worked is partially consistent with these results. One of the largest cutbacks in hours worked occurred in the case of unskilled workers, particularly females. Rural area firms reveal a decline in employment compared with employment growth for urban area firms. Taking into account political factors influencing the Zimbabwean border villages the direction of employment change for rural area firms is reversed and rural area firms show some, albeit relatively small growth.

APPENDIX I

SAMPLING PROCEDURES ADOPTED FOR SURVEY OF WAGES AND PRODUCTIVITY

The basis for sample selection for the survey was the CSO's Register of Establishments and Enterprises. Of the approximately 4000 entries in the Register about 2250 were relevant for the purposes of the survey - i.e. were classified to industries covered by the Regulation of Wages and Conditions of Employment Act. The CSO's Register is classified according to the (adopted) International Standard Industrial Classification (ISIC). The industries covered by the Act relate to the Botswana ISIC as follows:

Building, Construction, Exploration & Quarrying Industries	205	Quarrying
	5	Construction
	805	Exploration
Manufacturing, Service and Repair Trades	3	Manufacturing
	902	Repair services (part)
Wholesale and Retail Distributive Trades	6	(except 603, 606) Wholesale, retail, "restuarants," etc.
Hotel, Catering and Entertainment Trades	603	Hotels
	901	Recreational services
Garage, Motor Trade and Road Transport	606	Motor vehicle dealers
	701	Road transport
	710	Taxis
	902	Repair services (part)

Companies on the CSO's Register classified to the above industries were analysed according to the number of companies within each location, by industry. (In most cases the location related to postal address which was often not a good indicator of the physical location of an establishment, which caused problems for the enumerators.)

It was decided to employ twelve enumerators for two weeks for the enumeration. On the basis of six interviews involving small companies, or three involving large companies, per enumerator per day the sample size was determined as follows:

Small Establishments (excluding Ghanzi/Maun/Chobe

12 enumerators for one week covering 360 companies
 4 " " one week " 120 "
480

Large Establishments (> 50 employees)

4 enumerators for one week covering 60 companies

Ghanzi/Maun/Chobe

4 enumerators for one week covering 40 companies

The 480 small companies outside of Ghanzi/Maun/Chobe were selected proportionately between urban areas (270), large villages (140) and small villages (70), the proportions being determined by the relative number of such companies in each type of location. For the purposes of this exercise Botswana was divided between the "South" and "Central/North-East" Districts. Of companies selected in the large village sample, 70 were in the South and 70 in Central/North-East; of the small village sample 20 were in the South and 50 in the Central/North-East. The proportions again depended upon the relative number of companies in each area.

All companies employing more than fifty persons were included; Chobe District and Ghanzi were excluded on cost-effective grounds and forty companies were selected in Maun and the surrounding villages.

The following table shows the number of companies by regions within urban, large village and small village areas. Wholesale, retail, etc. companies are shown in parentheses for urban and large village areas.

Region/Area	Urban	Large Villages	Small Villages
South	841 (470)	259 (222)	77
Central/North-East	438 (259)	259 (200)	203
Ngami land	-	90 (84)	6
Chobe	-	21 (20)	-
Ghanzi	-	25 (19)	28
TOTAL	1279 (729)	654 (545)	314 (nearly all wholesale, retail, etc.)

The distribution and number of companies by industries within the different types of locations was such that for urban areas all industries were sampled, whilst for the selected large villages only wholesale, retail and restaurants were sampled (all other companies being covered 100%), and for selected small villages all companies were to be covered. The selection of large and small villages was random with probability of selection depending upon the number of companies in each village.

Urban Areas

All towns were included in the survey as were all companies employing more than 50 persons.

All other companies were sampled in the same proportion (22%) within each town. Of the 275 companies selected more than 50% were engaged in wholesale/retail activities.

Large Villages

Central/North-East: Two of Mahalapye, Palapye and Serowe plus one of Bobonong, Tonota and Mmadinare were considered to be representative. Serowe, Palapye and Mmadinare were selected randomly.

South: Ramotswa and Molepolole were included in the pilot exercise; therefore Kanye, Moshupa and Mochudi were all selected.

For the large villages, all companies employing more than 50 persons were selected together with all other companies not engaged in wholesale and retail activities; a sample of those who were engaged in these activities was taken, the size of the sample in each village being determined by the residual number of "places" left in the sample for each region.

Small Villages

The following villages were selected randomly:

Central/North-East: Sebina, Tsetsebjwe, Machaneng, Tutume, Kgagodi, Ramokgwebana, Mojabana.

South: Mathubudukwane, Pitsane, Sikwane.

Enumerators were instructed to interview all companies located in each village. According to the CSO's Register all but a handful of the companies in these villages were engaged in wholesale and retail activities.

Number of Companies selected by Location

(Companies employing more than 50 persons shown in parentheses).

Southern/Kgatleng/Kweneng/South-East (Total = 300, of which 24 employed more than 50 persons)

<u>Urban</u>		<u>Large Villages</u>		<u>Small Villages</u>	
Gaborone	164 (18)	Kanye	31	Mathubudukwane	2
Lobatse	43 (6)	Moshupa	11	Pitsane	16
	<u>207 (24)</u>	Mochudi	28	Sikwane	5
			<u>70</u>		<u>23</u>

Central/North-East (Total = 241, of which 26 employed more than 50 persons.)

<u>Urban</u>		<u>Large Villages</u>		<u>Small Villages</u>	
Francistown	89 (15)	Serowe	42 (2)	Sebina	11
Selebi-Phikwe	23 (5)	Mmadinare	12	Tsetsebjwe	3
	<u>112 (20)</u>	Palapye	22 (4)	Kgagodi	3
			<u>76 (6)</u>	Tutume	16
				Ramokwabana	13
				Moijabana	3
				Mchaneng	-4
					<u>53</u>

Ngamiland (Total = 43, of which 2 employed more than 50 persons)

	<u>Large Village</u>		<u>Small Villages</u>	
	Maun	40 (2)	Sehitwa	2
			Toteng	1
				<u>3</u>

All Selected Areas (Total = 584, of which 52 employed more than 50 persons)

<u>Urban</u>		<u>Large Villages</u>		<u>Small Villages</u>	
319 (44)		186 (8)		79	

The lists (plus replacements) were given to the enumerators. Questionnaires for the large companies were posted prior to interviewing.

The sampling should have permitted the derivation of good estimates of national magnitudes. However, the enumerators experienced difficulty in locating many companies; other companies were not able to, or would not, complete what was a long and complicated questionnaire; and the enumerators did not match the six interviews per day indicated by the pilot test. Taken together these factors resulted in a poor response rate, far below the anticipated total of nearly 600 (250 companies cooperated, but only 150 provided complete information). In addition, the enumerators interviewed companies not included in the sample (and often not even on the Register) in order to increase the response rate. As a result it was decided that the data from the survey should not be grossed up - because of the poor number of respondents and because of doubts regarding representativeness. Part of the enumerators' difficulties must be attributed to the CSO's Register being used for a purpose for which it was not designed, which at that time listed companies according to their postal addresses. A location code subsequently introduced is based upon actual physical location and the use of the Register for future surveys should be facilitated.

CENTRAL STATISTICS OFFICE.

August, 1978.

NUMBERS EMPLOYED REPORTED IN WAGES STUDY COMPARED WITH EMPLOYMENT ESTIMATES
FROM AUGUST, 1977 EMPLOYMENT SURVEY

(Figures in parentheses show % of wages study response to estimated employment)

COMPANIES EMPLOYING INDUSTRY	August 1977 Employment Survey Ests.			Wages Study		
	≥ 50	< 50	TOTAL	≥ 50	< 50	TOTAL
Building, construction, exploration and quarrying	6 100	1 270	7 370	1 201 (20)	129 (10)	1 330 (18)
Manufacturing, service and repair	2 690	1 810	4 500	542 (20)	346 (19)	888 (20)
Wholesale and retail	1 580	6 680	8 260	412 (26)	684 (10)	1 096 (13)
Garage, motor trade and road transport	350	1 100	1 450	177 (51)	205 (19)	382 (26)
TOTAL (above industries only)	11 550	11 370	22 920	2 638 (23)	1 404 (12)	4 042 (18)

OBSERVATIONS: 18% of all employees in the relevant industries covered; better coverage of ≥ 50 companies (23% c.f. 12%). Poor response from < 50 companies in construction, etc.; wholesale and retail; and hotel, etc.

About 50% of employment in these industries provided by ≥ 50 companies.

CENTRAL STATISTICS OFFICE,

20/10/78.

APPENDIX II

SURVEY OF WAGES AND PRODUCTIVITY IN BOTSWANA

Conducted by the Institute of Development Management

Gaborone

Purpose

The Wages Councils are trying to find out the effect of the 1977 Regulations (effective July 1, 1977) of Wages and Conditions of Employment Act. The firms to be surveyed have been chosen by a random sample. Information that you give will remain strictly confidential (for example, it cannot be disclosed to, or used by any tax or law authority). When we publish the results we shall ensure that no particular firm can be identified.

The results of this survey will help the Wages Councils in arriving at recommendations for any changes in Wages Orders for 1978. We would greatly appreciate a timely response.

Please not later than: in order to have an accurate statistical report.

Name of Company

Position of Respondent

Business Activity

e.g. retail butcher,

steel, furniture

1. What was your total cost of production or operation (including any interest on money or borrowings) in your latest available fiscal years?)

2. What was your total salary and wages bill for the same year as in 1?

3. Please list your employees by sex, skill level, hours and days worked per week for March 1977, March 1978 and March 1976

MARCH 1978

Skill Level	Sex	Monthly Wage rate	No. hrs worked per wk.	No. of days worked per week

MARCH 1977

Skill Level	Sex	Monthly Wage Rate	No. hrs Worked per wk.	No. of Days worked per week

MARCH 1976

Skill Level	Sex	Monthly wage rate	No. hrs Worked	No. of Days worked per week

Part II. Factors affecting wages rates, productivity, and employment:

- 4. What number, if any, of your work force was employed on any form of incentive payment system e.g. piece work, task work, bonus schemes, profit sharing?

March 1976

March 1977

March 1978

- 5. Did the new minimum wage cause you to increase or decrease the number of your work force which is employed on incentive payment system?

Decrease Increase

If increase, by how many _____?

If decrease, by how many _____?

- 6. Do you pay of your employees in kind (e.g. food, housing) and if yes, what do you estimate the value of these payments?

MARCH 1978

<u>Skill Level</u>	<u>No. of employees</u>	<u>Value of payments</u>
--------------------	-------------------------	--------------------------

Food

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Housing

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Other

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

MARCH 1977

Skilled Level No. of employees Value of payments

Food

Housing

Other

MARCH 1976

Skill Level No. of employees Value of payments

Food

Housing

Other

10. How would you list in order of importance the following factors which have influenced changes in employment of your establishment between August 1977 and March 1978,

A. Increases in employment:

List in order of importance 1, 2, 3, 4, 5, 6

- (1) Increase in sales or contracts
- (2) Workers got more efficient so it paid to engage more
- (3) Workers got more efficient so more were needed
- (4) Increase in profits
- (5) More labour of a suitable type was available
- (6) Other (please specify)

B. Decrease in employment

List in order of importance 1, 2, 3, 4, 5, 6, 7

- (1) Decreases in sales
- (2) Workers got less efficient so it paid to engage less
- (3) Workers got more efficient so less were needed
- (4) Problems with supervision and control
- (5) Increase in wages rates
- (6) Increase in supply or material cost
(including rates on power and water)
- (7) Price control
- (8) Other (please specify)

11. As a result of the increase in the minimum wage rates, have you increased the number of new/and or temporary employees to avoid overtime rates?

YES NO

(check one)

12. If yes, by what number have you increased employment?

Full time position Part time

13. Have you cut down the hours of work by employees?

YES NO

(check one)

If yes, please indicate reasons

14. Since the minimum wage orders came into effect have your workers been (a) more likely to stay away from work (b) less likely (c) no change

15. Has the value of your output or sales increased decreased

since your latest available fiscal year?

16. Did you discharge any employees when the new minimum wage of \$20/hr came into effect on July 1, 1977 because it didn't pay you to employ them at the new minimum?

Skill level	Male	Female
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

17. Did you discharge any watchmen when the new minimum wage of \$10/hr came into effect in July 1, 1977? Number: _____

YES NO

18. Did your establishment purchase new machinery since July 1977

YES NO

(check one)

19. If yes, please indicate the reasons

20. If yes, to Q 18 did you hire new employees to operate the machinery? Number

21. Did you fire any employees because of new machinery?

Number _____

22. Did you increase the number of skilled employees over unskilled employees affected by the minimum wages?

YES NO

If yes, by how many? _____

23. Have you done anything since July 1977 to demand higher productivity?

YES NO

If yes, what? _____
and why? _____

24. Did your establishment raise your product prices since July 1977?

YES NO

If yes, by how much? _____ (percentage)

25. Do you consider that the present minimum wage is (a) too high
b) too low c) about right

Reason _____

26. The minimum wage for an hour is now 20t per hour. Which of the following changes would you make if this was to increase to a) 22t per hour b) 24t per hour

Please list one or more in order of importance
1, 2, 3, 4, etc

a) 22t per hour ^x b) 24t per hour ^x

- | | | |
|---|--------------------------|--------------------------|
| 1) Absorb the increase in reduced profits | <input type="checkbox"/> | <input type="checkbox"/> |
| 2) Reduce your output | <input type="checkbox"/> | <input type="checkbox"/> |
| 3) Buy machinery to replace workers | <input type="checkbox"/> | <input type="checkbox"/> |
| 4) raise your product prices | <input type="checkbox"/> | <input type="checkbox"/> |
| 5) Discharge employees | <input type="checkbox"/> | <input type="checkbox"/> |
| 6) Reduce the number of hours worked by employees | <input type="checkbox"/> | <input type="checkbox"/> |
| 7) Engage more skilled persons | <input type="checkbox"/> | <input type="checkbox"/> |
| 8) Expand your training programmes | <input type="checkbox"/> | <input type="checkbox"/> |
| 9) Other | <input type="checkbox"/> | <input type="checkbox"/> |

27. Did you hear of the minimum wage regulations?

YES

NO

If yes, how? _____

NOTE: This is a copy of the questionnaire used for firms employing less than 50 employees. Larger firms (over 50 employees) were asked the same questions but the format for responses to some of the questions were different.



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