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Inflation and Subsistence Wages: Revised Estimates of the Urban Poverty Datum Line in Rhodesia for September, 1976

by

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Poverty datum line (P.D.L.) determinations have been made for urban Rhodesia (Zimbabwe) in 1944, 1958 and 1974.[1] During the period up to the 1970's the economy was characterised by relatively low rates of inflation - around 2 per cent in the last half of the 1960's.[2] However, in the last five years the rate of increase itself has accelerated to an average of 7.3 per cent annually, and like most other economies, has recently reached double figures. All this makes more urgent the need for a regularly revised set of estimates of the P.D.L.

New estimates are necessary for at least four reasons: so that sight is not lost of the rising money level of income required to satisfy unchanged basic minimum consumption needs; to correct against the bias that becomes evident when rising wage rates are compared (illegitimately) with 'dated' P.D.L. levels; to inform employers, unions and workers about the quantitative effects of changed monetary conditions which are an essential consideration in their assessment of wage levels in the economy; and to provide a measured benchmark against which statutory minimum wage determinations might be evaluated during the on-going negotiating or wage-determining process.

Ideally, a completely new P.D.L. ought in theory to be constructed for each year. This would allow for improvements to be made in the method and technique of evaluation, for any recorded changes to be included in respect of the weighting of commodities and services in the measured 'subsistence bundle' and for the prices of all included items to be regularly sampled. It would also explicitly recognise P.D.L.'s for what they are, viz. time-specific, location-bound measures of the price of a particular bundle of commodities required for the subsistence of defined households.

However, various constraints prohibit such an exercise at the present time. P.D.L. studies conducted on a comprehensive scale are expensive. The 1974 urban P.D.L. in Rhodesia, for instance, cost upwards of $6,000.

1. See E. Batson, The Poverty Datum Line in Salisbury, School of Social Science, University of Cape Town, 1945; D.G. Bettison, The Poverty Datum Line in Salisbury, Rhodes-Livingstone Journal, 27, 1960; V.S. Cubitt and R. Riddell, The Urban Poverty Datum Line in Rhodesia, Faculty of Social Studies, UR, 1974.

2. All references to rates of price change are extracted from the latest available series found in CSO, S/907/408, October 1976.

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And this ignores a number of implicit costs. Detailed studies take considerable time. It is thus unusual for such a piece of work to be adequately completed within 6-9 months. Further, personnel may not be readily available to undertake the task. Thus the inauguration of a study may involve protracted delays and lags for both this and other reasons.

If, on the other hand, only a relatively short period has elapsed since the previous study, and no radical shift in consumption patterns could reasonably have been said to have occurred, there would be grounds for revising P.D.L. estimates by means of indexation of the results of previous findings. Such an approach would assume, it must be admitted, not only the veracity of the method of construction of the earlier work and its implied consumption weighting structure, but also that the inflator used for indexation was an adequate surrogate for 'real price effects' which would have occurred to the 'subsistence bundle' in the interim since the last published results.

Clearly, in making such assumptions - as are made for the calculation of results shown in this paper - some imperfections can be expected to be found. But, in the opinion of the author these are likely to be rather small. The benefits of the exercise lie in the results being superior to the situation in which it is necessary to to deal with 'dated results'.

This judgement is made because, firstly, it is believed that a two-year lapse is not a period within which much change is likely to have taken place in the consumption weighting structure and, secondly, because there are grounds for thinking that the urban African Consumer Price Index provides an adquate reflection of the trend of price changes in respect of the chosen 'subsistence bundle' used in the P.D.L.

Evidence of the acceptability of implying short-term stability to the consumption weighting structure, for the sort of purposes required here, can be found in the Central Statistical Office policy of calculating the inter-annual index of urban African consumer prices.[3] The CSO do not revise their weightings annually. They do not undertake annual urban budget studies for such a purpose. Thus the present consumption weighting

3. See CSO, Monthly Digest of Statistics, August, 1976, Notes to Tables, p. 75.

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structure, used for the 1976 African C.P.I., is based on a town-weighted composite index for the four main urban areas (Salisbury, Bulawayo, Umtali and Gwelo). The Salisbury/Bulawayo indices were based on a revision in December, 1970 (these results being founded upon urban budget studies in 1969 and 1968 respectively) while the Umtali/Gwelo indices were based on a revision in June, 1973 (these results being founded upon urban budget studies in 1971 and 1970).

TABLE 1

RELATIVE PRICE CHANGES
AFRICAN CONSUMER PRICE INDEX COMPONENTS
Sept. 1974 - Sept. 1976

Item	% change	Variation from All Items figure	Salisbury Commodity Group Weights
Foodstuffs	22.48	- 2.84%	49.6
Drink and Tobacco	29.99	+ 4.67%	5.1
Clothing & Footwear	13.31	- 12.01%	8.2
Rent, Fuel and Light	41.92	+ 16.60%	16.8
Household Stores	27.45	+ 2.13%	4.4
Transport	35.85	+ 10.53%	7.3
Personal Care & Health	n/a	n/a	1.6
Miscellaneous	13.20	- 13.12%	7.0
All Items	25.32	n/a	100.0

Calculated from C.S.O., S/907/480, October, 1976.

The urban African CPI used to calculate price changes for 1974-76 is based on the commodity group weights shown in the Monthly Digest of Statistics. It is observed that different inflation rates applied to the various groups of commodities for 1974-76 (see Table 1). The All Items index increased by 25.32 percent but there was some variation on both sides of this average, in the case of sub-groups, e.g. for 'Rent, Fuel and Light', which rose by 41.92 percent, and 'Clothing and Footwear' which only rose 13.31 percent. In such a

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case can the All Items index be used as an average indicator? What is the effect of doing so as opposed to adjusting each item in the 'subsistence bundle' used in the P.D.L. by the most relevant index? These questions need to be asked because the commodity weighting structure of the 1974 P.D.L. is not identical to the CSO weights determined for the CPI from urban budget studies (compare here, for example, the Salisbury Commodity Group Weight shown in Table 1 with the relative commodity weights in Table 2). However, it can be shown (using Unit A type household consumption from Table 2 as an example) that the revised P.D.L. estimate based on the All Items index is only slightly lower than that calculated from the P.D.L. estimate derived from separately adjusted components.[4] This result provides reasonable evidence for the use of the All Items CPI trend as an adequate measure of price changes concerning the 'subsistence bundle' contained in the P.D.L.

Accepting the above, it is now possible to adjust the 1974 P.D.L. estimates in order to record them in September, 1976 prices, leaving the quantities of components included therein, and hence the implied level of 'need', unchanged.[5]

THE P.D.L. FOR SALISBURY IN SEPTEMBER, 1976 PRICES

The revised estimates are contained in Table 2. They show data on minimum consumption needs for 12 different household sizes (for details of definition see the Cubitt/Riddell study) across 9 differently assessed components for the Salisbury urban area.

The Salisbury data have been selected because they are the most important in terms of numbers of workers. Note, however, that data for Bulawayo and Ft. Victoria - found in the 1974 study - were little different from the results for Salisbury. It might reasonably be expected then that the same applies in principle for 1976; as indeed for other urban centres.

4. In this case the separate adjustments were made as follows: food as per CPI; clothing as per CPI; fuel and light as per CPI; personal care and health as per All Items index; household goods as per CPI; transport as per CPI; accommodation as per CPI; education as per All Items index; post-employment consumption as per All Items index. The resultant figure was $46.86 compared to the figure of $45.73 for an All Items adjustment.

5. By leaving 'need' unchanged, a 'conservative' bias is introduced.

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TABLE 2

SALISBURY : URBAN POVERTY DATUM LINE
REVISED ESTIMATES
SEPTEMBER, 1976

Unit	No. in Family	Food	Clothing	Food and Lighting	Personal Care and Health	Household Goods	Transport	Accommodation	Education	Post-Employment Consumption	Monthly Total
A	2	18.48	4.21	4.35	1.79	2.79	3.35	8.08	-	2.68	45.73
B	3	21.63	5.33	4.35	2.01	2.98	3.35	8.08	-	2.68	50.41
C	4	28.69	7.03	4.35	2.44	4.02	3.35	9.73	0.90	2.68	63.18
D	4	32.10	7.39	4.35	2.68	4.52	3.35	10.76	1.80	2.68	69.63
E	5	36.12	8.51	4.35	2.88	4.71	3.35	11.72	1.80	2.68	76.12
F	5	42.33	9.09	4.35	2.88	5.21	3.35	11.88	3.43	2.68	85.20
G	6	45.68	10.21	4.35	3.31	5.75	3.35	12.12	4.34	2.68	91.79
H	6	49.40	10.57	4.35	3.31	6.25	3.35	12.12	4.34	2.68	96.37
I	7	53.01	11.69	4.35	3.75	6.44	3.35	12.12	5.24	2.68	102.63
J	7	57.60	12.06	4.35	3.75	6.94	3.35	12.12	5.24	2.68	108.09
K	8	63.41	13.17	4.35	4.19	7.48	3.35	12.12	5.24	2.68	115.99
L	8	66.38	13.76	4.35	4.19	7.98	3.35	12.12	7.77	2.68	122.58

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C	4	28.69	7.03	4.35	2.44	4.02	3.35	9.73	0.90	2.68	63.18
D	4	32.10	7.39	4.35	2.68	4.52	3.35	10.76	1.80	2.68	69.63
E	5	36.12	8.51	4.35	2.88	4.71	3.35	11.72	1.80	2.68	76.12
F	5	42.33	9.09	4.35	2.88	5.21	3.35	11.88	3.43	2.68	85.20
G	6	45.68	10.21	4.35	3.31	5.75	3.35	12.12	4.34	2.68	91.79
H	6	49.40	10.57	4.35	3.31	6.25	3.35	12.12	4.34	2.68	96.37
I	7	53.01	11.69	4.35	3.75	6.44	3.35	12.12	5.24	2.68	102.63
J	7	57.60	12.06	4.35	3.75	6.94	3.35	12.12	5.24	2.68	108.09
K	8	63.41	13.17	4.35	4.19	7.48	3.35	12.12	5.24	2.68	115.99
L	8	66.38	13.76	4.35	4.19	7.98	3.35	12.12	7.77	2.68	122.58

No new estimates of the rural P.D.L., published by Harris and Riddell, have been constructed, but a similar percentage change in magnitude may be assumed for rule-of-thumb purposes.[6]

The revised estimates show that a man and a woman required an income of $45.73 to meet their P.D.L. - assessed minimum consumption needs in September, 1976. This compares with $36.50 in August, 1974. At the top end of the scale recorded here, a family of 6 children would have required an income of $122.58 to meet minimum consumption needs compared to $97.80 two years earlier. The money-price of basic 'subsistence' has thus risen discernibly as a consequence of inflation experienced by African households.

By way of anticipation, it is worth considering briefly the prospective trend over a further 3, 5, and 7 year period - bearing in mind, of course, that no account is made for changes to basic needs which would require re-definition and no allowance is made for any new consumption weighting structure which might be needed. If inflation was to sustain itself at its present annual rate of 10 percent, the Unit A household (man and a woman with no children) would require a minimum monthly income of $59.44, $68.59 and $77.74 by 1979, 1981 and 1983 respectively in order merely to sustain real consumption levels at the P.D.L.-assessed level. Needless to day, the levels must be much higher for larger, indeed more typical households, especially in the light of the fact that (for 1973) 54 percent of urban African families (in Salisbury) were constituted in households of 7 or more persons in size.

It is only obvious that the rate of inflation has massive implications for the basic level of subsistence of African households and more so if that subsistence is not, and possibly will not be found solely from wages.

SOME IMPLICATIONS OF EXISTING CONDITIONS AND PROSPECTIVE TRENDS

Some brief implications of existing conditions and trends may be noted under the headings of wage policy, changing forms of subsistence, social security and the needs for further research.

1. Firstly, it is possible to compare the revised P.D.L. estimates with the existing African non-agricultural cash wage structure to assess the extent to which prevailing wage policies meet costed P.D.L.-assessed needs of different urban household sizes. Latest data on the cash wage

6. See here Chapter IV of R.C. Riddell and P.S. Harris, The Poverty Datum Line as a Wage-Fixing Standard, Mambo Press, Gwelo, 1975.

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distribution, however, are unfortunately only available for June, 1975 (see Table 3). Note that the data exclude non-permanent workers and hence are biased towards the relatively highly paid.

TABLE 3

CASH WAGE DISTRIBUTION
PERMANENT AFRICAN WORKERS
JUNE, 1975
(dollars)

Monthly Cash Wage	Non-agricultural Workers	Percent	Non-agricultural excluding domestic workers	Percent
Under $10	28,790	4.8	7,460	1.5
$10 - $20	120,070	19.9	41,490	8.8
$20 - $30	86,760	14.4	56,710	12.1
$30 - $40	102,610	17.0	96,690	20.7
$40 - $50	94,740	15.6	89,190	19.1
$50 - $70	87,040	14.6	87,040	18.8
$70 - $90	39,020	6.6	39,020	8.4
$90 - $110	26,680	4.4	26,680	5.7
$110 - $130	7,780	1.3	7,780	1.7
$130 - $150	4,440	0.7	4,440	0.9
$150 - $200	4,580	0.8	4,580	1.0
$200 - $250	2,700	0.4	2,700	0.6
$250 - $300	880	0.1	880	0.2
$300 +	2,470	0.4	2,470	0.5
Totals	602,040	100,00	465,660	100.00

Source: CSO, Wage Distribution of African Employees by Industrial Sector for the Month of June, 1975, DL/975/60, November, 1975, (mimeo).

Note:
1. The data on employment omit non-permanent workers, i.e. casual and contract workers who, for the most part, would fall into the lowest wage category.
2. The CSO note that totals are rounded, and hence do not strictly add up.

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Even if adjustment is made to the revised P.D.L. estimates to put them in June, 1975 prices, some conclusions are inescapable. Taking non-agricultural workers as a whole, fully 56.1 percent of 602,040 African workers in 1975 received a monthly cash wage of less than $40. This latter level was just $0.21 above the P.D.L.-assessed level for a man and woman without children for June, 1975.

Of course, payments 'in kind' are important in the case of low-wage groups and especially domestic workers, who in the Rhodesian context receive an estimated 50 percent of all earnings 'in kind'.[7] The monthly cash wage distribution of non-agricultural workers (excluding domestic workers) is also shown in Table 3. In this case 43.1 percent of 465,660 workers received a monthly cash wage below $40 in 1975. Now it is the case that some of these persons are members of the same household. Hence the aggregate of wages received for some households may be greater than that shown by the cash earnings distribution. But because the labour participation rate of women is relatively low (especially in non-agricultural and non-domestic employment), these conditions probably only apply to a relatively small proportion of households. For the most part, workers earning wages below $40 monthly in 1975 were probably the only wage-earners in their respective households. The securement of income to meet minimum consumption needs has thus been significantly dependent on non-wage forms of subsistence. The position still holds, despite rising real wage rates in the urban-industrial complex, a rising labour participation rate for women and the greater proletarianisation of juveniles. It is also likely to remain so under present conditions of high and rising levels of unemployment.

2. Evidence that there exist many households who cannot meet minimum necessary subsistence requirements solely from wages implies dependence on other sources. What are these? Without attempting any empirical quantification, they may be noted as including the following: various 'informal'production, trade and services; rural and urban foraging; hunting; gathering of commodities for consumption or sale; transfers (legal and otherwise); production-for-own-consumption, both in rural and urban areas; and the sale of output derived from the Tribal Trust Lands.

7. CSO Communication to author.

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This is not necessarily an exhaustive listing of non-wage forms of subsistence, however, but it would cover the major components thereof.

Rising rates of inflation affect these sources in various ways. For example, some petty producers may be able to pass on cost increases or else increase their incomes through price hikes because of a relatively monopolistic position. For most, however, relatively competitive conditions probably prevail and, for those earning bare-subsistence incomes, real cuts in necessary consumption may be unavoidable. On the other hand, in so far as petty producers are tied to a market in which outlays derive from the aggregate wage bill of workers, they may experience the same or similar conditions as workers in general. Complexity of conditions does not, however, allow for any simple judgement to be made on this question in the absence of more detailed research. But it does indicate some of the ramifications of wage policy in the capitalist sector on subsistence derived from dependence on other modes of production.

3. Wage policy of the State - expressed through minimum rates of pay established by Industrial Boards and Councils - may also be assessed against the revised P.D.L. estimates. In 1975 there were approximately 173,000 urban-industrial African workers covered by Industrial Boards (on which unions have no representation), whilst another (estimated) 70,000 Africans were covered by Industrial Council Agreements, the latter being established as a consequence of negotiations with unions. However, in that year, no Boards had established a minimum rate (at the lowest level) which was adequate for a family with 2 children. The P.D.L. criterion was still not formally in use in the wage-determining process, although informally some large corporations have made use of it (sometimes only in limited ways). Indeed, in 1974-75, 46 of 56 Boards made adjustments at rates of increase below the then current recorded annual rate of inflation. The average (lowest) minimum rate in the Boards system in 1975 was $34.88 monthly. Minimum wage policy thus has little relevance at this level, at least in respect of ensuring that wages meet costs of subsistence. Indeed, because in the period since 1968 the rates of increase in minimum wages have been slowed down, while the rise in the cost-of-living has not, the policy has come to have less and less import in this regard. Thus, for workers and unions to seek subsistence wages, they must articulate even greater wage demands than before.

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This has to take place also at a time when unemployment and short-time working in industry is growing, with one consequence that the unions face additional difficulty in 'making their case' because employers in general are quick to advance the ideological notion that rising minimum wage rates necessarily cause further unemployment.

4. As minimum subsistence costs rise in money terms, so too does the gap between this level and that provided for under existing social security arrangements for the securement of subsistence in old age. An important reason for this is that the 'standard gratuity' provided in Industrial Board Regulations of conditions of employment is not itself rising fast enough to compensate for two combined effects: firstly, the rate of inflation, which affects the real value of the gratuity as recorded in money values; and secondly the deterioration in the volume and value of output derived from the rural household sector of the economy upon which the aged, for the most part, must depend for subsistence. Note that no statutory pensions exist for Africans in Rhodesia. Even where workers are tied to pensions, the level of benefits of which must at present depend ultimately on wage levels, this process is occurring. In theory, indexation could help meet this problem. But it is less a question of devising a 'technical solution' as much as ensuring the underpinning in legal and socio-political terms.

5. The urban P.D.L. estimates (and revisions made here) are not ideal for other non-urban circumstances, e.g. for the case of mining complexes and various rural districts. Yet only one alternative 'farm-specific' P.D.L. (for 1974) exists. There is thus much scope for further research work on these neglected areas. This of course has been long recognised, at least since the initial formulation of plans to construct the urban P.D.L. in 1973. However, nothing has been done to successfully rectify the imbalance. The Research Advisory Committee, constituted at the University in Salisbury to 'overview' the P.D.L. work, intended to formulate a plan for both a rural (farm) P.D.L. and one based on conditions typical in the mining industry. Both projects have been left in abeyance, if not effectively abandoned.[8]

8. For discussion in this and related matters see D.G. Clarke, The Determination of Subsistence Wages in Rhodesia: Some Aspects of the 1974 Urban Poverty Datum Line in Rhodesia, South African Labour Bulletin, 2, 7, February, 1976.

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However, such studies could potentially be of much use in the formulation of wage policy and in future planning. In particular, these exercises could be greatly improved in their informative value if they were to be combined with income distribution surveys on the lines of the 'Rural Income Distribution Survey in Botswana 1974/75'. Income distribution is a key issue. It will become more so in the future.

CONCLUSION

Under conditions of static prices, it is of central importance to know not only the pattern of income and asset distribution, but also the cost of subsistence of different households under various conditions as well as the ways in which, in existing circumstances, costs of subsistence are in fact being met. Under inflationary conditions, this is a more difficult, but even more urgent task. The present revision to the 1974 P.D.L. bears out such a point. It also highlights once again the need for more comprehensive data and analysis as well as illustrates the extent to which wage structures remain palpably inadequate in the satisfaction of the basic consumption needs of workers forced to be dependent upon them.