

WORLD EMPLOYMENT PROGRAMME
Population and Employment Project

Population and Employment
Working Paper No. 23

ASPIRATION WAGES, MIGRATION AND
FEMALE EMPLOYMENT

by

Guy Standing

These working papers are issued to stimulate discussion and criticism. They should not be quoted without the permission of the author.



INTRODUCTION

This paper is part of a larger study of patterns of labour supply in urban Jamaica where women occupy a much higher proportion of jobs than in many if not most other countries. This is not only true of secondary jobs, since women are employed in a broad range of professional, administrative and technical jobs as well. In accompanying papers the relatively high level of female labour force participation will be examined in detail, but in the present paper the analysis and data are concerned with the related process by which rural migrants, who are predominantly women and seeking work, continue to go to Kingston despite extremely high levels of unemployment there. The study is based on a small survey of urban unemployed, and I would like to thank, in particular, Mr. D. Leslie, Permanent Secretary of the Ministry of Labour, whose co-operation made this and a somewhat larger follow-up survey possible.

G.S.

Like many low-income economies Jamaica is a country which has experienced rapid economic growth in recent years without any corresponding rapid expansion in employment. During the era of "industrialisation-by-invitation" urban unemployment has risen to chronic proportions and in 1973 was estimated to account for 26 per cent of the labour force of the capital of Kingston-St. Andrew.¹ The unemployment has coincided with a high rate of internal migration to the urban areas, notably the capital. As this migration has been predominantly a female phenomenon, the ratio of women to men in Kingston has been extremely high.²

The migration to the city has coincided not only with high urban unemployment but with a very high female labour force participation rate.³ Moreover in the course of the post-1945 period there has been a substitution of female for male labour within the non-agricultural sector of the economy, representing both intra-industry and inter-industry changes.⁴ A full explanation of these developments

¹ Labour Force Survey, October 1973, Department of Statistics, Kingston, 1974. Of course the recorded level of open unemployment is essentially a statistical artifact that only represents one dimension of the 'employment problem'. It is nevertheless an indicator of the under-utilisation of manpower, if only the most conspicuous one.

² K. Tekse, Internal Migration, Department of Statistics, Kingston, 1968.

³ The female labour force participation rate in October 1973 was reported as nearly 59 per cent of women over the age of 14. Labour Force Survey, op. cit., Table I, p.18. The coincidence of continuing migration and a high female activity rate is counter to what Ester Boserup would have predicted. E. Boserup, "Women's Role in Economic Development", 1970, p.200f.

⁴ Excluding agriculture, forestry, fishing and mining the proportion of female employment in Jamaica increased from 44.6 per cent in July 1968 to 49.4 per cent in October 1973. Labour Force Survey, op. cit., Table II. Although the figures provided by the Factory Inspectorate of the Ministry of Labour are somewhat unreliable, within manufacturing industry there has unquestionably been an upward trend in the female proportions of total employment, rising from about 23-24 per cent in the early 1950's to nearly 35 per cent in 1973. Ministry of Labour Annual Reports 1950-1964 and unpublished Annual Reports 1965-1973.

would have to take account of many socio-economic factors, but it will be shown in what follows that the continuing migration and the female-male substitution can be explained, in part at least, by reference to significant differences in their respective levels of expectations and aspirations and in particular to the lower levels of 'aspiration wages' among women and migrants.

To test the proposition that migrants and women tend to have relatively high probabilities of employment because of their relatively low supply prices, a small sample survey of unemployed job-seekers was carried out at the Government Employment Bureau (GEB) in Kingston in August 1974.¹ For one week all the unemployed who registered at the GEB, amounting to about 200 registrants, were asked a series of questions concerning their labour market experience, means of support, family commitments, education, and other personal characteristics.² To assess their aspirations and expectations they were asked what sort of work they would be prepared to accept, how many hours they would be prepared to work per week, and what was the lowest income they would require to do that number of hours of work. With this information the unemployed's 'aspiration wage' was calculated by dividing the required income by the number of hours the individual was prepared to work.

Although national figures on wage rates were not available, the aspiration wage rates were almost certainly not above prevailing rates. The mean aspiration wage for men was 84 cents an hour, and for women 33 cents an hour.³ And,

¹ Of course, by no means all the unemployed register at the GEB, but a large number do so.

² I would like to thank the Ministry of Labour for their co-operation and assistance in this research, especially those officials who helped to organise and carry out the interviews. None of them, of course, are responsible for the interpretation put on the information which is summarised in a complementary paper to this, "Behavioural Traits of Urban Unemployed", 1974.

³ These aspiration wages do not support the suggestion that the unemployed are voluntarily unemployed vis-à-vis the 'modern' sector. For some details of prevailing wages see the Appendix.

as can be seen from Table I, while women had much lower aspiration wages than men, they were also prepared to work more hours. At the same time migrant women had the lowest aspirations of all, expecting or being prepared to accept low wages for long workweeks. The difference in expectations and aspirations between 'migrants' and 'non-migrants' is highlighted in Table II where male and female job-seekers are respectively divided into three groups - those who had been in the city for less than two years, those between two and five years, and those who had been there for longer than that. The figures support the hypothesis that 'migrants' have significantly lower aspiration wages than the other two groups (the difference between the means is statistically significant at the 5 per cent level between 'migrants' and each of the designated non-migrant groups in the case of men and between the migrant and the 'more than five years' group in the case of women). This is further supported by Tables III and IV where for both men and women the null hypothesis that there is no association between migrant status and aspiration wage is rejected.¹

Table I
Hours Prepared to Work by Sex and Age

Age	Male		Female	
	40 hours	41 hours or more	40 hours	41 hours or more
18-25 years	67	33	22	78
26 years +	48	52	0	100

¹ These findings might be contrasted with the unsubstantiated statements made by a number of other observers. Without citing evidence Mouly and Costa asserted "Even in towns the recent immigrants from rural areas still retain some of the traditional attitudes, so that in many cases nothing less than the going rates of wages will compensate in their eyes for a sacrifice of leisure." J. Mouly and E. Costa, Employment Policies in Developing Countries, 1974, p.115.

Table II
Job-seekers by Sex and Migrant Status

	Male			Female		
	Migrant Status					
	2 yrs or less	2-5 yrs	5 yrs or more	2 yrs or less	2-5 yrs	5 yrs or more
W^a (cents)	66.8	93.0	91.3	27.0	31.2	36.4
w^a	23.7	37.6	30.0	8.5	3.6	10.5
Median W^a	62.1	92.1	84.4	25.1	30.9	33.2
H^a	44.6	41.0	43.5	49.0	47.1	46.8
H^a	6.1	2.8	4.6	2.9	2.8	3.7
Median H^a	40.2	40.0	40.1	48.1	48.0	47.2
Median Age (yrs)	23.5	21.5	26.8	20.5	20.0	26.5
Median U (weeks)	34.3	14.0	32.5	36.9	19.1	10.2
Median Ed (grade)	6	5	5	6	7	6
Per cent leave	61.5	62.5	70.8	28.6	37.5	46.2

Note: W^a : mean aspiration wage rate per hour
: standard deviation
 H^a : mean number of hours prepared to work
U : unemployment in weeks
Ed : grade of schooling completed
Leave : proportion prepared to leave the city
to take a job

Table III

Aspiration Wage Rate (per hour) by Migrant Status

MALE

Time lived in city Migrant Status	50 cents or less	51-75 cents	76 cents or more	Total
2 years or less	23.1	61.5	15.4	28.9
2-5 years	12.5	25.0	62.5	17.8
More than 5 years and from birth	0.0	37.5	62.5	53.3
Total	8.9	42.2	48.9	

$\chi^2 = 11.23$ with 4 d.f. significance level = 0.02.
N.H. rejected at 5 per cent level. The null hypothesis is therefore rejected and the alternative hypothesis is supported, that migrants have a lower aspiration wage.

Table IV

Aspiration Wage Rate (per hour) by Migrant Status

FEMALE

Time lived in city Migrant Status	25 cents or less	26-35 cents	36 cents or more	Total
2 years or less	64.3	21.4	14.3	29.2
2-5 years	12.5	75.0	12.5	16.7
More than 5 years and from birth	19.2	38.5	42.3	54.2
Total	31.3	39.6	29.2	

$\chi^2 = 14.06$ 4 d.f. Significance = 0.007.
N.H. rejected at 1 per cent level. Therefore the null hypothesis that there is no difference between the aspiration wage of migrants and others is rejected and the alternative hypothesis accepted, that migrant women have a lower aspiration wage.

To examine the hypothesised relationship somewhat more rigorously a multivariate model can be tested by considering the independent effects of other variables which might affect the individual's offer schedule, notably such personal attributes as age (A), education (ED), marital status (MS), duration of unemployment (D), registered occupation (Occ), and 'family' commitment, such as number of children (C), and age of youngest child (YC).¹ Most of these factors can be expected to influence the individual's need for income, and the greater the need the lower and more flexible the individual's aspiration wage (W^a) is likely to be and, ceteris paribus, the more hours he or she would be prepared to work (H^a). The impact of these various control variables and migrant status on the job-seeker's wage and work aspirations were tested by means of least squares regressions using a mix of quantitative and dummy variables. The full list of dependent and independent variables was as follows:

Dependent variables

- i) H_i^a : maximum hours prepared to work, for each sex
- ii) Y_i^a : minimum acceptable income for the stated number of weekly hours
- iii) W_i^a : aspiration wage, minimum acceptable income divided by the maximum hours, expressed in cents.

¹ This last-mentioned variable will be defined later but the justification for considering these commitment variables is simply that those with young children can be expected to have a greater need for an income and a greater willingness to work. The word 'family' is used guardedly, bearing in mind the loose conjugal relationships in Jamaica, where the majority of adults are unmarried and where about three out of every four children are illegitimate. See M.G. Smith, Family Structure in the West Indies, 1962.

Independent variables

- i) D : weeks unemployed up to 52. Those who had been out of work for more than a year were coded as 52. It is assumed that the downward adjustment for W^a would be completed by the time the person had been unemployed for a year.
- ii) Mig : months the unemployed had been in the city. Those who had lived in the city for more than five years were coded as 60 months. This variable allows for the fact that the migrant becomes progressively acclimatised to urbanised expectations and norms.
- iii) ED : grade of education, 0 for less than grade 6 completed, 1 for more than grade 6.
- iv) A : age in years completed
- v) MS : marital status, 0 for unmarried, 1 for married
- vi) C : 0 if the unemployed had no child under the age of six, 1 if their youngest child was under six years old.
- vii) Occ : occupation for which registered. For men: 0 if the man is seeking a job as a general labourer or "handyman", 1 if he is seeking some other, semi-skilled job. For women: 0 if registered as a domestic, 1 otherwise.

The Results

In the event most of the control (personal or family characteristics) variables proved to have little bearing on the worker's aspirations and expectations. Both marital status and education were completely insignificant as in most cases were the family commitment variables. The regression coefficients and standard errors for the aspiration wage, income, and hours equations for men are given in Table V. The principal determinant of the variance of W^a and the aspiration income Y^a , was the length of time the job-seeker had lived in the city; a recent migrant was prepared to accept a significantly lower income.¹ However migrant status did not seem to be related to the number of hours an unemployed male was prepared to work. Instead age and responsibility for children, which were positively correlated, were both significant in the hours equation, those with children being prepared to work longer, and youth seemingly prepared to work shorter workweeks than others.

Not the least noteworthy feature of the findings for women, which are given in Table VI, was the complete non-significance of the "family commitments" variables. In most studies of female labour force participation (none of them in Jamaica) the presence of one or more young children has been assumed to have a strong negative effect on labour supply, but in Jamaica, where most working class women are unmarried and have illegitimate children, women in that position are often the most desperately in need of an income. It was noticeable that nearly three-quarters of the women in the present sample had children, many of whom were only a few months old.

For women, as with men, migrant status was the most important factor in both the W^a and Y^a equations, and migrant women also seemed prepared to work a greater number of hours. And, whereas the duration of unemployment coefficient was not significant in the equivalent male equation it appeared that

¹ The possibility of a simultaneous relationship between duration of unemployment and aspirations was considered, but was rejected on the basis of two-stage least squares estimates.

Table V

MALES

Independent Variables									
Dependent variable	Constant	l (Mig)	l (Age)	l (D)	Occup.	C	R ²	F	
log W ^a	-0.2909	0.0997 (0.0290)***	0.0613 (0.1527)	-0.0411 (0.0401)	0.0484 (0.0450)	-	0.26	4.46	
log W ^a	-0.2518	0.1073 (0.0286)***	-	-	-	-	0.25	14.03	
log H ^a	1.4680	-	0.1054 (0.0524)**	0.0125 (0.0128)	-	-	0.10	2.46	
log H ^a	1.6007	-	-	0.0163 (0.0127)	-	0.0074 (0.0032)**	0.13	3.11	
log Y ^a	1.1866	0.0995 (0.0287)***	0.1652 (0.1509)	-0.0170 (0.0396)	0.0389 (0.0444)	-	0.26	4.56	
log Y ^a	1.3812	0.1085 (0.0282)***	-	-	-	-	0.26	14.78	

Note: Three asterisks signifies the coefficient is significant at the 1 per cent level of probability, two asterisks that it is significant at the 5 per cent level. R² is coefficient of multiple determination adjusted for degrees of freedom. Variables not included in the equations did not enter the stepwise regression.

Table VI

FEMALES

Dependent variables	Independent Variables							F
	Constant	l (Mig)	l (Age)	l (D)	Occup.	R ²		
log W ^a	-0.7293	0.0698 (0.0300)**	0.0850 (0.1124)	-0.0423 (0.0288)	0.0862 (0.0327)**	0.32	5.04	
log W ^a	-0.6387	0.0936 (0.0309)***	-	-	-	0.17	9.19	
log W ^a	-0.6032	0.0703 (0.0298)**	-	-0.0482 (0.0276)*	0.0867 (0.0325)**	0.31	6.59	
log H ^a	1.5396	-0.0164 (0.0077)**	0.1004 (0.0296)***	0.0154 (0.0075)**	-	0.29	6.07	
log Y ^a	0.8121	0.0554 (0.0272)**	0.1862 (0.1021)	-0.0256 (0.0262)	0.0742 (0.0297)**	0.31	4.93	
log Y ^a	0.7386	0.0609 (0.0266)**	0.2132 (0.0982)**	-	0.0706 (0.0294)**	0.30	6.26	

the longer a woman had been unemployed the longer she was prepared to work. Although this evidence is at best tentative support for such a suggestion this finding might imply a greater adaptive response by women to the experience of unemployment, but in general the effect of unemployment on aspirations and expectations seems much less than the effect of "migrant status".

In sum, the evidence, from both the regressions and the tables cited earlier, strongly support the hypothesis that recent migrants tend to be prepared to work longer and for lower wages than more urbanised workers.

Wages and Labour Commitment

The evidence from this sample of job-seekers suggests that migrants tend to have a lower 'supply' price than more urbanised workers. For that reason alone we might predict that migrants would have a higher probability of employment than other unemployed job-seekers. However, with conventional economic analysis such predictions would not be possible if the aspiration wages of both groups of job-seekers were below the market wage, unless the competitive assumption is made that the existence of surplus labour leads to a reduction in actual wage levels. Such an assumption is usually highly unrealistic, at least in the short run, and it is more realistic to assume that for both job-applicants and potential employers the wage rate is a datum. But in that case the higher probability of employment for migrants could not be predicted if both groups of job-seekers had aspiration wages lower than the market wage.

The difficulty arises from the implicit assumption that the act of hiring represents a clearly defined point of equilibrium between the demand price and the supply price of labour, when in fact it is necessary to distinguish several different aspects of the wage-labour-effort bargain

that are inadequately represented by the conventional demand-supply cross. The multi-dimensional nature of labour supply, which in Jamaica and other industrialising economies is especially relevant and which is typically discussed under the general term of 'commitment', can best be analysed in terms of the stability of employment and the supply of effort on the job. From this perspective three, albeit inter-related, wage concepts can be distinguished. First, the 'aspiration wage' is defined as the wage for which a job-seeker would be prepared to accept employment.¹ In practice the unemployed might take a job for something less than his aspiration wage, but only as a temporary expedient. When there is no system of unemployment compensation and when income support from relatives is uncertain or minimal, most of the unemployed are likely to be 'satisficers' rather than 'maximisers' - i.e. taking the first job they are offered rather than indulging in a period of job searching unemployment - but if that meant employment at some wage below the individual's aspiration wage, at what could be called the unemployed's 'satisficing' wage (W^S), the worker would be seeking alternative employment from the outset. As a result employers paying wages which are lower than the worker's aspiration wage may succeed in getting a sufficient number of job-takers but would tend to do so at the cost of acquiring a highly unstable labour force prone to high rates of labour turnover.

¹ This might be called the worker's subsistence wage, below which the worker could not afford to accept employment without dissaving or, more likely, depleting his stock of goodwill with relatives, friends and neighbours by having to borrow or rely on other forms of support from them. I have refrained from using the term subsistence wage because of the various connotations attached to that concept but the distinctions drawn in this section can be related to that concept if subsistence is divided into three exhaustive elements - a physical reproduction element, a replenishment for work activity element, and a socially determined, or 'norm' element - so that subsistence represents a partly subjective, socially determined index rather than a purely physiological boundary.

A second conceptual distinction ought to be made between the aspiration wage and what could be described as the 'efficiency wage', the wage at which a worker would be prepared to labour with optimal effort and intensity from the employer's point of view. If the wage in a specific job corresponded to the worker's aspiration wage the worker would accept employment but would not necessarily regard the wage as 'equitable'. As such, it would induce a low commitment to labour, reflected in a low exertion of effort on the job and/or a high rate of absenteeism, or widespread pilfering, etc., all of which would have the effect of lowering productivity.¹ Therefore for an employer to secure the required supply of effort he must pay a wage in excess of the job-seeker's aspiration wage. Consequently the optimal efficiency wage (W^e), which is the wage with which the employer is concerned in his hiring and retention decisions, is some multiple of the aspiration wage.² Thus,

$$W^a = (1 + \theta) W^s$$

$$W^e = (1 + \theta) W^a$$

¹ Besides the subjective perception of equity, labour has a cost for the worker in terms of lost nervous and physical energy which has to be replenished, and whereas at a low level of effort or labour intensity, the cost of the energy expended may be less than the wage, at a high level of effort the energy-replenishment cost may exceed the wage or reduce the difference between the wage and replenishment-cost to such an extent that there is no incentive to work.

² Of course, this is a gross oversimplification of a complex relationship. In practice efficiency will tend to be an increasing function of the real wage. There will be a continuum in the relationship between efficiency and the wage, since efficiency will be positively related to the ratio between wage paid and the aspiration wage. This point does not alter the basis of the present discussion, which is that there is a difference between the wage for which a worker will accept a job and the wage for a given level of effort-efficiency.

There is no reason to suppose that the value of θ would be greater for migrants (m) than non-migrant workers (u), so if $W_m^a < W_u^a$ then $W_m^e < W_u^e$. In that case, assuming employers to be rational in the conventional sense, if $W_m^a < W_u^a$ then the migrant's probability of employment would tend to be higher than the non-migrant's even if their respective aspiration wages were both actually below the wage offered by the employer (which may or may not correspond to the average worker's efficiency wage). Similarly, while the substitution of female for male labour may be imperfect in the short run, if women have lower aspiration wages than men and are prepared to work for longer workweeks the substitution process will tend to take place. In Jamaica there are good a priori reasons for expecting the value of θ to be less for women than for men because since they are primarily responsible for the care and maintenance of children, they have the greater need for a steady income; but it is sufficient to assume that the value of θ is the same for men and women. So if male workers have wage aspirations that are over twice as high as female expectations employers will tend to substitute women for men, or job structures may be changed so as to facilitate women's employment, or the relative cheapness of female labour will tend to lead to a relatively rapid expansion of industries in which women constitute a relatively large proportion of total employment.

Migrants and the Urban Unemployed

In the early versions of two sector models of development it was assumed that the transfer of "underemployed" labour from the rural, subsistence or traditional sector to the modern, urban sector would occur smoothly at a constant real wage. Later the model had to be modified to allow for a rise in the modern sector wage rate, which meant that the transfer process would not be smooth. However, even in this

version of the model stability was preserved since the attraction of high urban wage rates had to be discounted by the probability of employment.¹ Todaro concluded from his analysis that as migration was inversely related to the urban unemployment rate "there is no inherent tendency for rural workers.....to continue to pour into urban areas at such a pace that the unemployment rate becomes even more serious merely because the wage paid to those fortunate enough to possess a job in the modern sector is higher than that received by the typical rural worker."² Using the Todaro framework many development economists have deduced that, while unemployment in urban areas cannot be reduced significantly by increasing urban employment opportunities, there is an "equilibrium unemployment rate" at which point migration will be checked.³

A major and unwarranted assumption of this model of migration is that selection for urban jobs is random. But if the probability of employment is greater for a migrant than for someone already in the pool of urban unemployed the unemployment rate would be an inadequate and possibly misleading indicator of the migrant's job prospects. There can

¹ M.P. Todaro, "A Model of Labour Migration and Urban Unemployment in Less Developed Countries", American Economic Review, Vol.59, pp. 138-148; M.P. Todaro, "Income Expectations, Rural-Urban Migration and Employment in Africa", International Labour Review, Vol.104, No.5, November 1971, pp. 387-413.

² M.P. Todaro, "The Urban Employment Problem in Less Developed Countries: An Analysis of Demand and Supply", Yale Economic Essays, Fall 1968.

³ For example, inter alia, A.C. Harberger, "On Measuring the Social Opportunity Cost of Labour", in K. Wohlmuth (ed.), Employment Creation in Developing Societies, 1973, pp. 63-86. Annable also feels there is "an equilibrium level of urban unemployment". J.E. Annable, "Internal Migration and Urban Unemployment in Low Income Countries: A Problem of Simultaneous Equations", Oxford Economic Papers, Vol.24, No.3, 1972, pp. 399-411. R.N. Nelson, T.P. Schultz and R. Slighton, Structural Change in a Developing Economy, 1971, p.75. Some economists draw the conclusion that since the "equilibrium unemployment rate" is lowered by a reduction in the urban-rural wage differential an incomes policy is required to hold wage rates down in urban areas.

be no presumption that the rural migrant has the same aspirations and expectations as the urban worker, nor can it be presumed that an urban worker who has been out of work for a prolonged period has the same probability of employment as someone who has been out of work for a relatively short period. As for this second factor, a considerable amount of sociological research has shown that prolonged unemployment reduced a worker's employability, morale, and capacity for work, while irregular casual employment interspersed with long periods of idleness, which is the experience of a large proportion of urban youth in Jamaica and in many other industrialising economies, tends to unfit young urban workers for stable industrial employment.¹ Evidently research is needed on this phenomenon but it is worth noting Beveridge's conclusion when analysing a similar situation in Britain at the beginning of the twentieth century: "We have always found, as to the artisan, that if he happens to be out of work for three months he is never the same man again. He becomes demoralised."² In Kingston, many of the unemployed have been out of regular employment for a year or more, eking out an existence of "scuffling".³ As a result many cease the active pursuit of employment, become anomic, passively unemployed as far as the urban sector is concerned.⁴ As such their probability of employment is almost bound to decline.

¹ The classic study of the effects on the industrial workers' capacity for work of prolonged unemployment is M. Jahoda, et. al., *Marienthal*, 1972 edition.

² W. Beveridge, *Unemployment, A Problem of Industry 1903-1930*, 1930, p.139. In Beveridge's immortal words, "The 'stern justice' which competition deals out to the inefficient has also the effect of accentuating their inefficiency."

³ C.G. Clarke, *A Social and Geographic Study of Kinston*, University of California Press, 1973.

⁴ An unpublished study of this phenomenon of anomie was carried out by Professor G. Kruijer in Kingston. This question will figure prominently in a forthcoming working paper by the present writer.

The other factor suggesting that the selection process should not be treated as random is the tendency, supported by the findings of the present study, for migrants to have lower aspiration and efficiency wages than more urbanised job-seekers controlling for the individual's duration of unemployment. Not only will migrants' expectations reflect their experience and knowledge of working conditions and wage rates in rural areas but they are also likely to have less knowledge of prevailing wage rates in the urban area and, possibly with fewer income-sharing contacts on whom to rely, a greater need for an income, however small. In effect, not only do migrants move into the "informal" sector where barriers to entry are minimal and from where they can look for high wage formal sector jobs, but they are more prepared to take the low-wage, low status jobs and are, therefore, relatively easily absorbed into the employed labour force.¹

In addition, as has been recognised in several job-search models of migration, for any given level of urban unemployment, migration (M) will be greater the higher the rate of labour turnover and the greater the rate of new job creation, expressed as a proportion of existing jobs. So the job-search model of migration can be reformulated.

First,

$$(1) \quad M = f(\pi(E)_m, W_u/W_r, \sigma^2_{y.u}/\sigma^2_{y.r})$$

where $\pi(E)_m$ is the probability of employment for migrants, W_u is the urban wage rate, W_r is the rural wage rate or the average productivity in the rural area expressed in similar

¹ Furthermore, it is possible that entry to the modern formal sector is more likely for someone employed in a relatively low income job than for someone who is openly unemployed. This is presently pure conjecture, but it is perhaps significant that the unemployed tend to have their contacts among the unemployed, whereas those in employment tend to develop contacts with employed workers who are capable of informing them of job openings. Finally, one of the major features of the migration process is that often a migrant goes to the town when informed of a specific vacancy, thus effectively bypassing the urban unemployed.

units of time, and $\sigma_{y.u}^2$ and $\sigma_{y.r}^2$ are respectively the monthly variance of urban and rural income during the course of a year.¹ The probability of employment for job-seeking migrants in the period after migration is not measured by the urban unemployment rate ($\frac{S-N}{N}$) but by the difference between the aspiration wages of urban and migrant workers (u and m respectively), the rate of labour turnover (T) in the urban area, and the rate of job creation (n), as well as by the urban unemployment rate. In other words,

$$(2) \quad \pi(E)_m = \alpha \left(\frac{w_u^a}{w_m^a} \right) - \beta \left(\frac{S-N}{N} \right) + \gamma (T+n)$$

With a given unemployment rate and set of aspiration wages migration can be expected to increase whenever labour turnover in the urban area increases. And even if the urban-rural wage differential is a determinant of migration it cannot be assumed that reducing that differential by lowering urban wages would significantly reduce urban unemployment, which is the usual assumption.² Curbing urban wage rates would increase job dissatisfaction, effectively reduce labour productivity, and raise labour turnover in urban areas, in which case the number of vacancies would increase and migrants would be able to secure a greater proportion of

¹ In a formal statement of the job-search model both these aspects of rural and urban incomes need to be included. The seasonal and climatic irregularity of rural incomes which force rural producers to resort to periodic borrowing and credit arrangements is likely to be an important factor in the migration decision, and some index of the variability of income streams over, say, a full year should be incorporated into empirical versions of the model.

² See, for example, M. Blaug, "Employment and Unemployment in Ethiopia", International Labour Review, August 1974. The contention here is that, although a reduction in the urban wage rate may in practice reduce unemployment and migration, such a relationship cannot be presumed, even accepting the economic job-search model of migration.

urban wage jobs.¹ So, the reduced wage differential would not necessarily have any significant effect on migration, since not only would $\pi(E)_m$ have been increased but the urban wage would almost certainly continue to be above the migrant's aspiration wage level. In sum, a reduction in wage differentials could actually increase urban unemployment rather than reduce it.

At the micro level, as already argued, the aspiration wage of the individual unemployed job-seeker in the urban labour market for any given occupation-skill-experience level is, by hypothesis, a function of time lived in the city (K) and duration of unemployment (D):

$$(3) \quad W^a = \alpha(K) - \beta(D)$$

$$(4) \quad H^a = \gamma(D) - \delta(K)$$

The probability of employment for the individual job-seeker

$$(5) \quad \pi(E) = \psi(H^a) - \mu(W^a) - \omega(D)$$

Substituting (3) and (4) into (5) gives:

$$(6) \quad \pi(E) = (\omega\gamma + \mu\beta - \omega)(D) - (\psi\delta + \mu\alpha)(K)$$

Since, for a given D, $H_m^a > H_u^a$ and $W_m^a < W_u^a$, then $\pi(E)_m > \pi(E)_u$. And even if W^a is inversely related to the individual's duration of unemployment there is no reason to assume there will be a tendency for the respective probabilities of

¹ Peil found that despite rising unemployment labour turnover in urban areas of Ghana increased after 1960, due in large part to dissatisfaction with wage levels and the search for higher paid jobs. M. Peil, The Ghanaian Factory Worker: Industrial Man in Africa, 1972, p. 64.

employment for migrants and urban unemployed to equalise.¹ In this connection the lack of significance of the regression coefficients for D in the aspiration wage equations reported earlier would mean that the value of β would be minimal, and the lack of significance for the corresponding coefficient in the male H^a equation suggests γ is also very small. If so, the probability of employment for the urban unemployed will remain lower than the migrants'. Moreover, not only do workers become less attractive to employers the longer they have been unemployed, but the workers themselves become less willing and able to actively seek employment, and probably less productive when hired after such prolonged unemployment. This implies that the over-all unemployment rate overstates the deterrent to migration in so far as it does not represent effective job-searching unemployment, and in fact it is possible that after a certain point the deterrent level of unemployment would scarcely change, the incremental surplus being merely reflected in successive increases in passive unemployment among the urban unemployed.

¹ One of the features of several of the job-search models of development developed in the volume edited by Phelps was that as the supply price of labour fell with increased unemployment the demand price rose or remained the same. Particularly in a surplus labour economy there is no justification for such an assumption; it is more realistic to postulate that the demand price for a particular worker will fall during a period of unemployment and to do so at a more rapid rate than the supply price, so that the curve lies below the supply price curve, perhaps cutting the horizontal axis when the supply price approaches asymptotically some 'subsistence' minimum. Cf. E. Phelps, et. al., Micro-economic Foundation of Employment and Inflation Theory, 1970.

Conclusion

Earlier it was noted that women comprise the majority of internal migrants in Jamaica and that in recent years there has been a tendency for a substitution of female labour for male labour within industry. Such substitution reflects the impact of many factors, but the evidence from this study suggests that a major determinant has been the much lower expectations of women, and particularly female migrants, both in terms of their aspiration wages and their 'willingness' to work long workweeks.¹ The fact that many female job-seekers are recent migrants to the city only accentuates the premise for substitution and encourages the growth of those industries which employ a large proportion of female labour, thereby diverting investment from other uses.

With their low wage expectations and a resignation, need or willingness to work relatively long workweeks in low status manual jobs, female and migrant labour may be absorbed into the urban labour force in considerable numbers and may assist in the process of capital accumulation, industrialisation and economic growth. At the same time there is no reason to assume that urban unemployment would stabilise at some "equilibrium rate" at which point net or gross migration would cease.

The job search model of migration has proved an interesting component in the analysis of labour transfer, but where, as in Jamaica, migrants have lower income expectations than urbanised workers the relationships between the urban-rural wage differential, urban unemployment and migration are complicated. Since curbing urban wage rates would probably

¹ One firm visited during the course of this study, a newly established factory, employed 30 women for seven twelve-hour days a week. This was atypical of 'formal sector' firms but many workers in smaller establishments worked over 40 hours a week which was the standard number in the larger companies.

adversely affect productivity and labour turnover it cannot be assumed that a reduction in urban rural wage differentials would reduce migration and urban unemployment; almost certainly wage rates in many urban labour markets are still in the productivity-efficiency increasing stage.¹ The effect of labour turnover on migration has been insufficiently incorporated into the analysis of migration and the suggestion that ways should be found to increase labour turnover because this would increase the employment opportunities of urban youth is hard to reconcile with the likely increase in migration which increased turnover would encourage.² Several studies of migration have recognised the potential significance of labour turnover, but have assumed it to be a constant in their empirical sections.³ This seems unwarranted since turnover is functionally related to both unemployment and wage rates.

Above all, the deterrent effect of urban unemployment is overemphasised, for the probability of employment for potential migrants is not a simple function of the urban unemployment rate. Many of the long term unemployed in the urban areas become passively unemployed, waiting for jobs but not seeking them. As a result their probability of securing employment will be lower than that of migrants. Similarly many of the more educated urban unemployed may withdraw temporarily from the labour force if they cannot secure employment without much difficulty. And if being unemployed for any length of time reduces a worker's

¹ Low wages exacerbate low labour productivity and inefficiency, which leads to capital-labour substitution. The presumption that low wages lead to a substitution of labour for capital is often unfounded, especially as high wages encourage the development of a stable labour force.

² C.S. Nigam and H. Singer, "Labour Turnover and Employment: Some Evidence from Kenya", International Labour Review, Vol.110, No.6, December 1974, pp. 479-94.

³ See, for example, J.F.S. Levi, "Migration from the Land and Urban Unemployment in Sierra Leone", Oxford Bulletin of Economics and Statistics, Vol.35, November 1973, No.4, pp. 309-326.

employability, and thereby his probability of employment the deterrent level of urban unemployment has to be further deflated. Finally, as the study has suggested, recent migrants have relatively low aspiration wage rates. As a result the urban unemployment rate is a poor proxy for the migrant's probability of employment, which is what is important in the job search model of migration. To suggest in those circumstances that there is an 'equilibrium' unemployment rate at which migration would be checked is an expression of hope more than anything else, and an undue attachment to the concept of equilibrium.

Appendix

Modern Sector Wages

The level of the aspiration wage has, of course, to be compared with wages actually paid. While national wage statistics are only irregularly collected in Jamaica it is possible to get some idea of wages prevailing at the time of the survey from reports made by member firms to the Jamaican Employers' Federation. These provide valuable information on normal hours (i.e. excluding overtime hours) and wage rates, but calculations made by using such figures as the JEF were able to provide have to be carefully interpreted. In particular they reflect only the latest reported wage rates, and in some cases these had been superseded by new collective agreements. With this in mind the following averages have to be read as underestimates, rather than overestimates. In calculating averages from the lists of reporting employers, no attempt has been made to weight by size of enterprise, and where wage rates were reported as a range the mean value was used. The figures are therefore extremely 'crude', although they probably give an approximately accurate picture of wage rates paid by leading employers, including some of the multinational companies.

Thus in September 1974 the unweighted average hourly wage rate paid by 64 reporting enterprises to male labourers was 89 cents, with the multinational bauxite companies paying over \$1.50 and several other companies paying similar rates. From a much smaller number of employers female labourers were paid an average of 74 cents an hour, with several paying \$1.10. Female office maids in a sample of 48 enterprises received an average of 62 cents an hour, with several prominent tobacco, chemical and bauxite companies paying over \$1. Even among these companies the

differences were considerable, with some leading (notably foreign) firms paying twice as much as many of the other companies. The calculation of average wages paid to machine operators was complicated by the fact that some firms reported an average rate without stating whether different rates were paid to men and women. However, for a sample of 39 firms the 'male' average hourly rate was 94 cents and for seven top firms reporting separate rates for males and females the female average was \$1.12.¹ In a sample of 31, male cleaners were paid on average about 82 cents an hour, while in a sample of 25 firms female cleaners were paid about 70 cents an hour. Based on 13 returns, male packers were receiving on average \$1.05 an hour, females 81 cents, with one multinational paying women \$1.29. No attempt could be made to compute any sort of aggregate average for these figures, but on the basis of these statistics, partial and possibly unrepresentative as they are, it would appear that the great majority of the unemployed included in the present study - conspicuously among the women - were involuntarily unemployed as far as the modern sector was concerned.

¹ In this case it seems likely that many of the relatively low-paying firms which were used to compute the 'male' average actually employed a large proportion of females. Therefore the only point of significance to emerge from the machine operators' figures is that leading employers were paying them about one dollar an hour.

Population and Employment Project

Working Papers Available

- WEP 2-21/WP.1 Household Savings and Demographic Change
in the Philippines
- by Peter Peek, May 1974.
- WEP 2-21/WP.2 Fertility and Labour Force Participation:
Philippines 1968
- by José Encarnacion, Jr., March 1974.
- WEP 2-21/WP.3 An Analysis of International Variations
in Birth Rates: Preliminary Results
- by Richard Anker, April 1974.
(No longer available; a revised version of
this paper is to be issued as WEP 2-21/WP.16
in this series.)
- WEP 2-21/WP.4 Migration in the Philippines
- by René Wéry, March 1974.
(No longer available.)
- WEP 2-21/WP.5 BACHUE-2: Version I A Population and
Employment Model for the Philippines
- by R. Wéry, G.B. Rodgers and M.D. Hopkins,
July 1974.
(No longer available; will be re-issued
in a revised version.)
- WEP 2-21/WP.6 The Effects of Group Level Variables on
Fertility in a Rural Indian Sample
- by Richard Anker, August 1974.
- WEP 2-21/WP.7 The Economic Analysis of Fertility: A Study
for Brazil
- by Edy Luiz Kogut, September 1974.

- WEP 2-21/WP.8 Patterns of Consumption in the Philippines
with Particular Reference to Demographic
Factors
- by Edita Abella Tan and Gwendolyn R. Tecson,
October 1974.
- WEP 2-21/WP.9 Female Participation in Economic Activity
in Colombia
- by Alejandro Angulo and C.L. de Rodriguez,
January 1975.
- WEP 2-21/WP.10 Production, Employment and Wages in Modern
and Traditional Sectors: Argentine Case
(1950-1970)
- by Javier Villanueva, February 1975.
- WEP 2-21/WP.11 Fertility and Desired Fertility: Longitudinal
Evidence from Thailand
- by G.B. Rodgers, February 1975.
- WEP 2-21/WP.12 Income Inequality in the Philippines:
A Decomposition Analysis
- by Mahar Mangahas, February 1975.
- WEP 2-21/WP.13 Family Composition and Female Employment:
The Case of Chile
- by Peter Peek, May 1975.
- WEP 2-21/WP.14 Population Change and Economic Growth:
A Long-term Econometric Model of the
Japanese Economy
- by Ryoshin Minami and Akira Ono, April 1975.
- WEP 2-21/WP.15 On the Evaluation of Population and
Employment Policy
- by G.B. Rodgers, R. Wéry and M.D.J. Hopkins,
April 1975.

- WEP 2-21/WP.16 An Analysis of Fertility Differentials in
Developing Countries
- by Richard Anker, April 1975.
- WEP 2-21/WP.17 Technological Change in Input-Output
Relationships
- by René Wéry, May 1975.
- WEP 2-21/WP.18 Employment Structure, Income Distribution
and Internal Migration in Brazil
- by Leda Maria Fraenkel, Mario Duayer de
Sanza, Mary Garcia Castro, Giselia Potengy
Grabois, Eugenio Tucci Neto, May 1975.
- WEP 2-21/WP.19 An Analysis of Migration to Greater Khartoum
(Sudan)
- by Amarjit S. Oberai, June 1975.
- WEP 2-21/WP.20 A Structural Overview of BACHUE-Philippines
- by M.J.D. Hopkins, G.B. Rodgers and
R. Wéry, May 1975.
- WEP 2-21/WP.21 The Effects of Household Size, Structure
and Income on Expenditure Patterns
- by Kwang Suk Kim and Dai Young Kim,
May 1975.
- WEP 2-21/WP.22 Labour Force Growth, Utilisation and
Determinants in Singapore
- by Pang Eng Fong, June 1975.
- WEP 2-21/WP.23 Aspiration Wages, Migration and Female
Employment
- by Guy Standing, November 1975.
- WEP 2-21/WP.24 The Determinants of Labour Force Participation
in Yugoslavia
- by Miroslav Rasević, November 1975.