TODARO'S MODEL OF MIGRATION

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The model presented by Lewis has limitations for its applications to less developed countries. The two sector model developed by Lewis cannot be applied in the case of developing countries where the rate or urban unemployment is positive and growing. Michael Todaro has presented a model of internal migration which can explain the situation of migration in presence of urban unemployment. The model given by Todaro seems to be more realistic for developing countries. It can explain the paradox of rural-urban migration in the presence of rising unemployment. The model is based on following assumptions:

1) There are mainly two sectors in an economy: rural and urban. Wages in the urban sector are higher than wages in the rural sector.

2) Migration is positively related to higher urban wages and higher urban employment opportunities.

3) Migration is primarily an economic phenomenon involving rational decision on the part of the migrants.

4) The differential earnings that motivate migration is expected earnings in urban areas rather than actual earnings – Migration takes place if expected urban income is higher than prevailing rural income.

5) Internal migrants maximise the expected gain from migration (expectation plays an important role in the decision to migrate).

6) Migration acts as an equilibrating force, equalizing rural and urban expected incomes.

7) Probability or obtaining urban jobs is inversely related to urban unemployment rates.

On the basis of above assumptions Todaro has developed a model of internal migration.

Explanation of Todaro's Model

Starting from the assumption that migration is an economic phenomenon which for the individual migrant can be quite a rational decision despite the existence of urban unemployment, the Todaro model postulates that migration proceeds in response to urban-rural differences in expected rather than actual earnings. The fundamental premise is that migrants consider various labour market opportunities available to them, as between rural and urban sectors, and choose the one that maximizes "expected" gains from migration. Expected gains are measured by

i. Differences in the real incomes between rural and urban work,

ii. The probability of a new migrant obtaining an urban job.

In essence, Todaro's theory assumes that members of the labour force, both actual and potential compare their expected incomes for a given time horizon in the urban sector (i.e. returns-costs) with prevailing average rural Ys, and migrate if the former exceeds the latter. Taking an example of an average semi-skilled or unskilled rural worker Todaro says that if he has choice between being a farm labourer (or working on his own land) for an average annual Y of say, 50 units, or migrate to the city where worker with his skill or education background can obtain wage employment yielding annual real income of 100 units. The commonly used economic models of migration which place exclusive emphasis on income differential factor as a determinant of the decision to migrate, would indicate clear choice in this situation. Worker should seek higher paid urban job. However, their models of migration were developed in the context of advanced industrial economies, and as such implicitly assumed the existence of fuill or near full employment. In a near full employment environment the decision to migrate can be predicated solely on securing the highest paid job wherever it becomes available. Simple economic theory would then indicate that such migration should lead to a reduction in wage differentials through the interaction of the forces of demand and supply both in areas of emigration and in points of immigration.

Unfortunately this analysis not realistic in the context of institutional and economic framework of the most third world countries. First of all, these countries

are beset by chronic and serious unemployment problem with the result that typical migrant cannot expect to secure highly paid urban job immediately. It is much more likely that upon entering the unban labour market the migrant will either become totally unemployed or will seek casual and part time employment in the urban traditional sector.In making his decision to migrate, the individual must balance the probabilities and risks of being unemployed or underemployed for a considerable period of time against the positive urban-rural real income differential. The fact that a typical migrant can expect to earn twice the annual real income in an urban area than in a rural environment may be of little consequence if the actual likelihood of his securing the higher paying job within say, one-year period is one chance in five (1/5=0.2). Thus, the probability of his being successful in securing the higher paid urban job is 20% and his expected urban income for one-year period is in fact 20 units (0.20 x 100 = 20) and not the 100 units that urban worker in full employment environment would expect to secure. With one period time horizon and probability of success of 20% it would be irrational for the migrant to seek urban job even though the difference between his urban and rural earning capacity is 100%. On the other hand, if probability of success were say 60% so that expected urban income is 60 units, it would be perfectly rational for the migrant with a one period time horizon to try his luck in urban area even though unemployment may be extremely high.

Rather than equalizing the urban-rural wage rate as in a perfectly competitive labour market model, rural-urban migration is this model acts an at equilibrating force which equates rural-urban expected incomes. For example, if average rural income is 60 and urban income is 120, then a 50% unemployment would be necessary before further migration is no longer profitable. To sum up, Todaro migration model has four basic characteristics. -

a)Migration is stimulated primarily by rational economic consideration of relative benefits and costs .

b)Decision to migrate depends on 'expected' rather than actual U-R real wage differential.

c)The probability of obtaining an urban job is inversely related to urban unemployment rate.

d)Migration rates in excess of urban job opportunity growth rate are not only possible but also rational and even likely in face of wide urban-rural expected income differentials.

Diagrammatic Explanation

Figure 8.9 The Harris-Todaro Migration Model
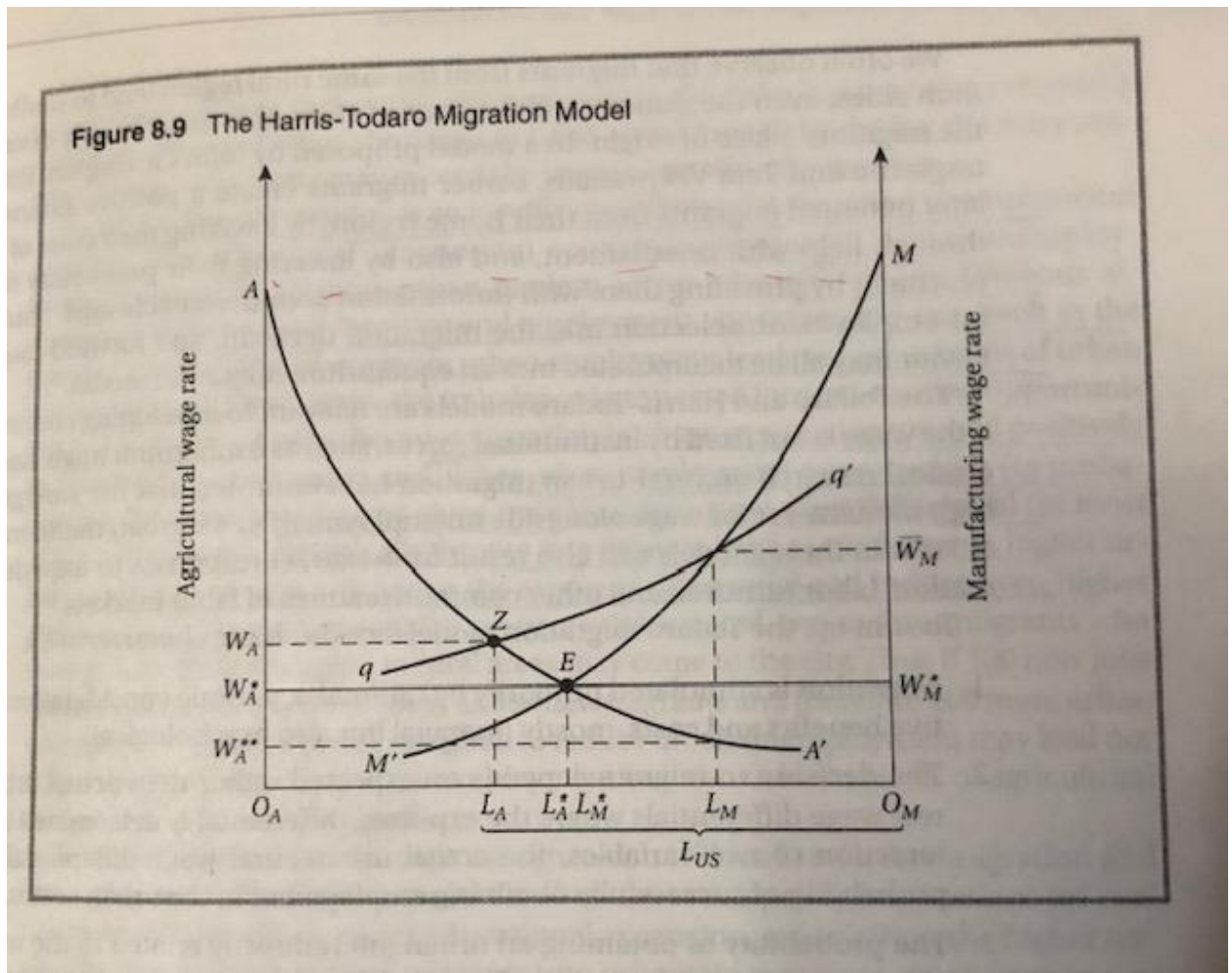
Source: M.P. Todoro and Stephen, C. Smith (2004), "Economic Development", VIIIthedn., Pearson Education, p.341.

Assume two sectors, rural agriculture and urban manufacturing. The demand for labour (MP$_L$ curve) in agriculture is given by negatively sloped line AA'. Labour demand in manufacturing is given by MM' (from right to left). The total labour force is given by line OAOM. In a neoclassical flexible wage, full

employment framework e.g. wage will be established at WA*= WM*; OALA*
in agriculture on OMLM* workers employed in manufacturing so that all
available workers are therefore employed.

But if the WM institutionally determined (inflexible downwards) as assumed
by Todaro at a level $\overline{W}M$, which is at a considerable distance above WA*. If we
assume that there is no unemployment, OMLM workers would get urban jobs
and the rest OALM will have to settle for rural employment at OAWA**
wages(below the free market level of OAWA. So now we have an urban rural
wage gap of $\overline{W}M$ – WA** with WM institutionally fixed). If rural workers
were free to migrate then despite the availability of only OMLM jobs; they are
willing to take in urban job lottery. If their chance (probability) of securing one
of these favoured jobs is expressed by the ratio of employment in
manufacturing, LM, to the total urban labour pool, LUS, the expression –

$$WA = \frac{LM}{LU}(\overline{W}M)$$

Shows the probability of urban jobs success necessary to equate agricultural
income WA with urban expected income $(LM/LUS)(\overline{W}M)$ thus causing a
potential migrant to be indifferent between job locations. The locus of such
points of indifference is given by qq' curve. The new unemployment equilibrium
now occurs at point Z, where urban-rural actual wage gap is $\overline{W}M$ – W'A; OALA
workers are still in agricultural sector and OMLM have modern sector jobs
paying $\overline{W}M$ wages. The rest, OMLA – OMLM, are either unemployed or
engaged in low income informal sector activities. This explains the existence of
urban unemployment and provides economic rationality of continued R to U
migration despite this high unemployment

Criticism

However, Todaro model is not free from criticism. Firstly, the prospective migrant does not precisely know the actual rate of unemployment in urban area for the type of job he is seeking before migration. Secondly, several times a person migrates to urban sector only after being appointed for jobs. In that case, Todaro's model does not seem very relevant. Thirdly, even if it is known that there is some unemployment rate in the urban sector, the exact figure may not be known. Hence, the calculation of the probability becomes a mere guess work and does not serve any real purpose in the matter of decision making. Fourthly, an ordinary migrant does not generally bother about the probability value for a making a decision regarding migration or in most cases does not or cannot calculate the probability value. Lastly, Todaro model shows that for every employment creation in the urban sector there will the intensification of unemployment rate and the possibility of slowing down agricultural output and employment. Todaro has not suggested a fool-proof policy measure for this. In spite of these limitations Todaro's model has introduced a new insight into the study of rural-urban migration behavior which can be made applicable to less developed countries

<u>Notes and References</u>

1. M.P. Todoro and Stephen, C. Smith (2004), "Economic Development", VIIIthedn., Pearson Education, pp.S.336-345.

2. M.L. Jhingan, The Economics of development and Planning, Vrinda Publications, 2011.n

3. faculty.washington.edu/danby/todaro/Todaro.htm

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