

# **UNEMPLOYMENT IN THE EDUCATED LABOUR MARKET**

Dissertation submitted to the Jawaharlal Nehru University  
in partial fulfilment of the requirements  
for the award of the Degree of

**MASTER OF PHILOSOPHY**

By

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1990



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Certified that this dissertation entitled, "Unemployment in the Educated Labour Market" submitted by Mr. Sanjay Mohaty in fulfilment of eight credits out of the total requirements of twenty-four credits for the degree of Master of Philosophy of the University is a bonafide work to the best of my knowledge. It is certified that the same has not been previously submitted for any other degree of this or any other university. The dissertation may be placed before the examiners for evaluation and consideration.

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To

RONO RIA AND BAPTI

## ACKNOWLEDGEMENTS

I wish to record my gratitude to those persons who have been associated with the development and preparation of this dissertation.

Professor Tapas Majumdar for his unstinting support, invaluable guidance and his stimulating suggestions on many theoretical and methodological points.

My thanks are also due to Moti, Debabrata, Kamlesh and Kamlakant for their friendship, help and cooperation in matters academic and non-academic.

The entire manuscript was expertly and cheerfully typed by Ms. Charanjeet Kaur Johar.

*Ajay. Mohanty.*

## PREFACE

Although the linkages between education and employment are complex and is often analysed with simplistic notions of causality, recent research results have yielded new insights about the nature of these linkages. An educational system in any society both reflects and adapts itself to the political and economic circumstances of that society.

"Education serves the economy" has been the common slogan in many Less Developed Countries (LDCs). National requirements for trained manpower call for specified educational outputs. And, economic and educational planners have worked to develop their proposals to meet such manpower needs.

This may appear to be a happy relationship : The country calls, and the education system answers. In fact, the relationship is far from a happy one, in many LDCs, educated people (especially the youth labour force) are without work and jobs that need doing are without hands.

There has developed, inspite of large educational investment, a serious discrepancy between the requirements

of commerce and industry for labour and the products of the educational system. One single interesting exception is that of governments in LDCs themselves, where requirements for clerical and other staff are usually oversupplied.

Chapter One of this dissertation introduces us to the concept of a labour market in LDCs. It analyses the nature, types and identifies some causes of the problem of unemployment among the educated in LDCs. The dualistic nature of labour markets in LDCs is highlighted.

Chapter Two traces the complex relationship between the education system and the economy. This Chapter reviews the theoretical underpinnings for studying education's role in the labour market. It extensively analyses the neo-classical theory of labour markets and its later refinements. The segmented labour market theories and their relationship with the neo-classical theory is also traced. The Chapter ends with the discussion on the themes from the recent literature on higher education and markets for educated labour in LDCs.

Chapter Three is an empirical survey on the relationship between the education system and the economy in India. Ever since the seminal piece of work by Blaug, et.

al. in 1969, research in the economics of education in India has focused on the nature and the problem of educated unemployment. This Chapter surveys numerous studies undertaken by individuals and groups to study the problem of educated unemployment in India.

The final Chapter deals with the solutions to the problem of educated unemployment by taking into account the findings presented in the preceding chapters.

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## CHAPTER I

## TYPES OF UNEMPLOYMENT FOR EDUCATED YOUTH

### INTRODUCTION

Whatever the political ideology of a government, the employment of educated youth from schools and colleges is considered an essential element of national development. The several purposes of education have received differing emphasis over time. Both as a consequence and a cause of the development of human capital theory, the weight given to the economic dimension of education has grown. Education has widely come to be seen as an aid to the national economic objectives as determined by the State. This has been the case in educational debates in both less developed countries (LDCs) and those developed countries where large number of young and educated people are unemployed.

The relationship between education and employment are many and cannot all be covered in one entry. Chapter 1 introduces us to the concept and nature of the unemployment problems for educated youth in the labour market. It briefly reviews some causes of educated unemployment and finally draws attention to the various debates on the relationship between education and employment that were popular in the mid-70's.

## CONCEPT OF A LABOUR MARKET

Labour market refers to the "complex of economic and social factors involved in the process through which employers recruit workers and workers seek employment.<sup>1</sup> In other words, it refers to a network of transactions in manpower as an economic agent of production at different levels. The commodity offered in the labour market is human labour and in all the civilised societies which guarantee free movement of their individuals, the labour market situation is determined by market forces viz., demand for labour and supply of labour.

The labour market is one of the most important set-up in an economic system, for the consequences of forces operating within it determine the economic well-being of millions of workers. Indirectly, these forces have a profound impact on the economic health of the total population.

The main function of the labour market thus, is to match workers and jobs in a manner that ensures required quantity and quality of labour supply.<sup>2</sup> The functioning of the labour market depends upon the efficiency with which allocation of jobs among various industries, regions and occupation takes place. This is analysed through the nature of occupational, industrial and

regional wage differentials existing in the market, and the nature and patterns of mobility and migration. The information channels about the job vacancies and availability of workers play a vital role in bringing the supply and demand for labour into equilibrium.

Another characteristic of a labour market that is of importance, is its classification. The labour market may be divided into a number of sub-markets, for example, regional and sectoral markets, urban and rural markets, markets for specific trades, skills and categories of persons. These sub-markets influence each other; they also influence the national labour market and in turn get influenced by policies affecting the national labour market.

Some of the important factors which influence the labour markets are wage rate, demographic trends, quantum and composition of labour force, level of educational training and skill distribution of working population by age, sex, education, industry and occupation, labour mobility, trade union activities and government labour policy.

## LABOUR MARKETS IN LDCs

Labour markets in most LDCs are dualistic in nature. A dual labour market, in which the wage rate in one sector of the economy exceeds the marginal product of labour in another, has been a prominent feature in some development models, that deal with the structural transformation of labour force during the process of economic development.<sup>2</sup> There have been two main variants of the model which may be termed "traditional sector dualism" and "modern sector dualism". In the former, dualism occurs because the supply price of labour force from the traditional sector exceeds its marginal product in agriculture. In the latter, the source of dualism is an institutionally determined industrial wage that exceeds labour's supply price.

The supply price of labour in traditional sector dualism is usually determined by the average product of labour in income-sharing rural households (Lewis, 1954) or by subsistence wage payments established by landlords (Fei and Ranis, 1961). Either way, it is assumed that labour's supply price exceeds its marginal product, which in turn is often viewed as equal to zero in the early stages of development because the labour force is excessively large in relation to



complementary factors of production.<sup>4</sup> Because the industrial wage is determined by labour's supply price, the transfer of labour from agriculture to industry is thought to improve resource allocation (the industrial wage being greater than labour's foregone marginal product) but is not seen as a possible cause of excess supply of labour to urban areas (the industrial wage being equal to labour's supply price).

The emergence of high rates of urban unemployment, however, cast considerable doubt on the empirical plausibility of a theory based on market-clearing wages. Accordingly, unemployment was made the focal point of modern sector dualism by assuming that equilibrium in the labour market is secured by a quantity adjustment - a change in the rate of unemployment - rather than a price adjustment. The exact mechanism precluding wage-rate adjustment is often not specified, but reference is usually made to public legislation, trade unions, or the hiring practices of modern sector firms and also the public sector. Equilibrium in this situation is characterized by labour's supply price from the traditional sector being equal to the expected industrial wage rate, which is assumed equal to the product of the actual wage rate and the probability

of employment (Harris and Todaro, 1970). Because the probability of employment is assumed to be a function of the rate of unemployment, the rate of employment, rather than the fixed wage rate, becomes the equilibrating mechanism in the labour market.

Although Lewis's two sector model did not so intend it, the capitalist sector in his model has, in practice, become identified with industry or the urban sector, while the non-capitalist sector has become identified with agriculture or the rural sector.

Many developed plans have been presumably premised with objectives of transferring resources out of agriculture to the industrial urban sector and achieving a marked decline in the relative size of the agricultural labour force. An early belief of development planning was that the process of industrialisation could provide a substantial growth of employment opportunities in the modern urban sector. And yet, one of the most perplexing - and serious - problems now confronting many developing nations is their growing level of urban unemployment and underemployment in the modern industrial sector. Perplexing - because levels of unemployment and underemployment have risen despite a rise in the rate of investment

and an expansion in output. Serious - because it is concentrated among educated youth and this intensifies social resentment and political unrest.

Unemployment, underemployment, low productivity employment and the working poor are all aspects of the employment problem. A number of studies have shown broad dimensions of the problem : industrial employment has lagged behind growth in industrial output, behind growth of the urban population, and even behind the general growth rate of population. Only a portion of the annual increase in the urban labour force has been absorbed in the urban organized sector.

In many developing countries, despite creditable rates in aggregate growth, it is not uncommon for the rate of open unemployment in major urban areas to be as high as 15 to 20 per cent. Even worse, the rates of urban unemployment in the age-group 15-24 (most of whom are educated and first time entrants to the working labour force) are generally about double the rates of unemployment among the urban labour force as a whole.<sup>5</sup>

## UNEMPLOYMENT IN THE LABOUR MARKET OF LDCs

The concept of unemployment (and its cousin, underemployment) has been extensively debated in the literature on developing countries. It has been pointed out that measures of unemployment are more appropriate for developed countries, where the payment and condition of employment are generally subject to contractual agreements and labour legislation and where social security provides financial support for the unemployed. In developing countries, however, a smaller percentage of the labour force is engaged in wage employment, the majority being self-employed or unpaid family members, and social security systems remain correspondingly underdeveloped (ILO, 1974 and 1977).

On the other hand, the insignificance of wage employment and the large number of workers remaining in low-productivity agriculture and services, have led some analysts to emphasize the rate of underemployment as an additional or more appropriate measure for developing countries. We will, however, concern ourselves with only open unemployment.

At least three justifications for examining the problem of unemployment can be named. They concern production, income and status.<sup>6</sup>

Unemployment (and underemployment) means a loss of output for the society as a whole. In poor countries, full-employment of all resources, including labour, seems desirable for its output-raising effects. Second, unemployment causes loss of income to the unemployed. In LDCs where unemployment compensation is rudimentary or non-existent, the loss of incomes means physical deprivation of a very cruel kind. The third reason for concern, that of loss of status caused by unemployment, has been characterised as "the frustration of job seekers unable to obtain the type of work or the remuneration which they think is reasonable or which their education (or training) has led them to expect."<sup>7</sup> Feeling of loss of status or of a sense of personal uselessness might be characterized as "psychological" and thus beyond economic analysis. they are nevertheless quite real, as many involuntary unemployed persons can testify from personal experience.

#### **MEASUREMENT OF EMPLOYMENT AND UNEMPLOYMENT**

Only by understanding how statistics about employment and unemployment are collected can one adequately interpret them and the labour market processes they describe.<sup>8</sup> Labour force activity can be classified according to industry, occupation and employment category.

The last has a particularly strong implication for LDCs. Any member of the labour force falls into one of the following category: employer, employee, self-employed, unpaid family worker or unemployed.

Measurement of employment and unemployment usually originates in household surveys or, less frequently in registration at employment offices. In the survey, a random sample of households asked what activities occupied its members during a previous time period, usually a week. Fig.1.1 shows the possible responses.

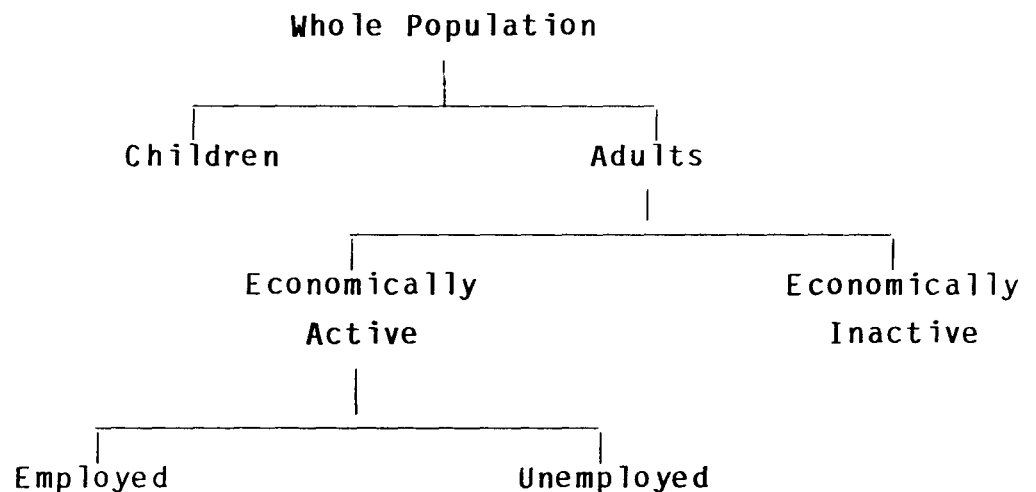


Fig. 1.1

First, the number and ages of everyone in the household are determined. Then the adults are divided into two groups. "Economically active" includes

those working or looking for work; economically inactive includes full-time students, who do not also work, housewives, retired persons and individuals who have dropped out of the labour force. Those who are economically active constitute the "labour force". To be considered openly unemployed, a person must have actively sought work. Note that those who did not work are divided into those who sought but did not find work and, therefore, are part of the labour force, and those who are economically inactive.

The principal weakness of the measurement of unemployment is that, there is no objective way of determining whether one who is actively seeking work is seeking with a realistic expectation - that is, the kind of work for which he is qualified and likely to be remunerated. This point is familiar to those who have kept up with the interminable debate over the last 30 odd years about the question of how best to measure unemployment in many LDCs.

Moreover, persistently high rates of unemployment are likely to cause people to stop looking for work. A certain amount of "visible unemployment" may, therefore, be attended with a much larger volume of "invisible unemployment" which is virtually impossible to measure.

If this were not bad enough, we have the further problem of "visible and invisible underemployment", in the sense of employed people who would like to work longer hours in order to earn more, whether they actually seek a job with longer hours or not. This problem of part-time work is a pervasive phenomenon in LDCs, largely because of the absence of unemployed compensation scheme.

#### **TYPES OF UNEMPLOYMENT**

Unemployment in an economy may be frictional structural, demand deficient, involuntary or technological.

In the first place, there must be, in a free and dynamic society, a certain amount of unemployment that can be called "frictional". Hundreds of thousands of workers are constantly moving in and out of the labour force. For example, many students enter and leave the labour force once or even several times a year. Some persons work only part of a year (agricultural labourers in India, for example). Further, large numbers of workers voluntarily quit their jobs every month, not to leave the labour force but to seek alternative (and better) jobs. In a reasonably progressive economy, these kinds of frictional unemployment is always present.



Many adherents of the causal classification have treated "structural" and "technological" unemployment as synonymous. But it is advisable to separate them, for treating them as one hinders clarity of thinking and the formulation of remedial strategy.

At an abstract level, structural unemployment is the qualitative mismatch of the demand for labour and the supply of labour. Technological unemployment arises from labour displacement associated with mechanisation and automation.

Several reasons have been postulated for the causes of structural unemployment. One oft mentioned argument is that structural unemployment arises due to a change in the industrial sector which makes some skills obsolete thereby changing the composition of final demand. A variant of the hypothesis states that certain industrial shifts result in a change in types of employment, notably, reducing self-employment and family work. Thus, in industrialised economies, the long-term shift out of agriculture and decline in self-employment and small family businesses have reduced family employment opportunities. Another type of structural unemployment occurs when there is a mismatch of skills. The main claim of structural unemployment theory is

that due to the change in skill structure in the economy, there is bound to be unemployment if the labour force lacks these new skills. This skilled/unskilled unemployment has been used to explain youth unemployment in the U.S. labour market.

Structural unemployment has also been attributed to demographic shifts in the economy. In many industrialised economies, a popular view is that the "full employment" level of unemployment and the "natural rate of unemployment" have risen because the demographic structure of the labour force has changed, with a high proportion of groups with relatively high unemployment rates entirely the labour force. Some of these groups who have high unemployment rates are women and youth and also a growth in the number of elderly workers.

Some economists have attributed unemployment to "labour cost structuralism". This hypothesis has two variants -

- a) Unions have raised wages so that less labour is now hired, and that
- b) institutional rigidities have raised total labour costs and the costs of

some workers relative to others. Some of these so-called rigidities are minimum wage laws, governmental interference in the labour market, etc.

To other notion of unemployment that is generally debated upon, is voluntary unemployment. While conceptualising voluntary unemployment (VE, henceforth) many elements that are related to behavioural characteristics of the labour force are taken into account.

One characteristic that is supposed to distinguish VE from involuntary unemployment is whether the job-seeker is looking for "suitable" work; by which it is meant a job corresponding to a person's skill. A commonly used method is to compare the schooling of the unemployed with that of the employed in general. This approach has caused problems, notably in LDCs, where the unemployed sometimes have higher levels of schooling than the employed. The argument runs somewhat like this : Since education raises productivity, more highly educated workers will be preferred to less educated workers, but as the facts do not suggest that such displacement has occurred the observed unemployment must be at least partially voluntary.

Such reasoning has been applied to unemployment in LDCs by neo-classical reviews of the labour market : "higher unemployment rates among the educated than the uneducated workers are found throughout the LDC... school-leavers are faced with the choice of 'queueing' for a job in a preferred occupation or of accepting a less preferred job. For some workers expected income will be higher in unemployment than in relatively low wage employment" (Sabot and Berry, 1978). This line of reasoning assumes school-leavers have such a choice!<sup>9</sup> That in turn presumes that the more educated can displace the less educated and that less preferred or low-paying jobs are available.

VE can also be the result of unrealistic (or excessive) wage aspirations. The contention here is that, any worker, who is only willing to work for a wage or income above a level he could reasonably expect should be classified as voluntarily unemployed.<sup>10</sup>

Another characteristic supposed to distinguish the voluntary unemployed is a preference for work of short duration. Once again, there are ambiguities. If those seeking employment with short work weeks or casual work schedules are to be regarded as voluntary unemployed, it means making comparisons with the hours and days worked by the employed, raising the problem of

appropriate criteria. If reference is made to the average work week in the economy, any change in that average would arbitrarily transfer some job seekers from being involuntarily to voluntarily employed, or vice versa. This would be absurd.

Some observers have claimed that many unemployed, e.g., married women, students indulging in career experimentation - have only weak labour force attachment, being casual or "secondary" workers prone to drop out of economically activity and typically dependent on the income of 'primary' labour force participants. It has been argued that much of the labour force participation of these groups is voluntary, that unemployment only influences the 'timings' of their participation and that the unemployment rate overstates the reliable labour supply.

Of those persons unemployed at any given time, it is usually quite impossible to determine which particular ones are frictionally or structurally unemployed, and which (if any) are without jobs simply because there is an inadequate demand for the products which labour can produce. A particular undereducated, unskilled, and inexperienced youth may appear to be structurally unemployed; yet even in a relatively slack period there

may be millions of just like him who are at work. When the aggregate demand for labour picks up, he may well be hired. No one can say which specific workers at any given time are frictionally or structurally unemployed because of inadequate demand, though experience tells us that there are always some of each.

Finally, we have another type of unemployment called technological unemployment. Technological unemployment arises from labour displacement associated with mechanisation and automation. It is really linked to demand-deficient unemployment and may or may not be associated with increased structural unemployment. But it is also important to keep technological unemployment conceptually distinct from demand-deficient unemployment, the latter being mainly a cyclical phenomenon that can be ameliorated by fiscal and monetary policies, or by public investment. If unemployment growth were mainly technologically induced, stimulating effective demand or investment might raise unemployment if more labour-saving innovations were introduced. If it were more of a cyclical nature, such policies should reduce unemployment; or at least raise employment.<sup>11</sup>

## EDUCATED UNEMPLOYMENT

It has become a truism to say that unemployment is unequally distributed over the labour force. The unemployment of the educated youth (age-group 16-25) is a much emphasized and particularly important part of the wider problem of general unemployment. In Asia, the problem groups are usually university and secondary school students; in Africa mainly primary and secondary school leavers. Their importance often springs from their position as an articulate and politically conscious group, with the ability to mobilize public opinion and government opposition.

At first sight one may wonder whether any special explanations of unemployment of the educated is required. Since unemployment is widespread in many labour markets of the world, it is hardly surprising that the unemployed include some educated persons along with the uneducated.<sup>12</sup> But this approach is too simple since it fails to explain why unemployment usually differs among groups with different levels of education. In Ceylon, for example, this difference is mainly structural as distinct from the usual supply and demand argument. A substantial portion of the educated labour force aspire to white-collar jobs in response to a wage and

and income structure that favours these jobs. Myrdal (1968) in a wide ranging discussion of political and social traditions in Asia, emphasizes the non-economic factors that discourage workers from taking manual jobs. This is perhaps the clearest statement of the viewpoint which places most emphasis on white-collar attitudes.<sup>13</sup>

In contrast, Blaug (1973) stresses economic rationality in job seeking as the main explanation of unemployment among the educated. This, as Blaug argues, is less the result of a gap between total labour supply and demand than the result of an adjustment lag in the period before the unemployed educated take jobs. In Blaug's words, "if the labour market is poorly organised, or if employers are rightly or wrongly unwilling to hire young workers, so that in the best of circumstances it takes a graduate several months to find suitable work, the rate of educated unemployment is almost bound to be higher than that of open unemployment. In that case, educated people are unemployed not because they are educated but because they are young and inexperienced" (Blaug, 1973).<sup>14</sup> For Blaug the relevant consideration to take into account in LDCs is not the rate of open unemployment but rather the waiting period before entering a job, or the average duration of unemployment.



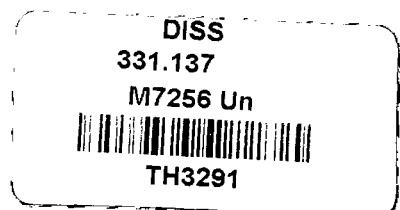
## THE CAUSES OF EDUCATED UNEMPLOYMENT

Educated unemployment is caused by a number of economic demographic, educational and attitudinal factors which are reviewed briefly below.

The most dominant cause of educated unemployment seems to be, the stagnation in economic growth. Studies of OECD nations have shown that low aggregate demand and sluggish economic growth have contributed to educated unemployment, although they have failed to explain why the lack of jobs has affected the younger educated more than the adults. Two different explanations have sometimes been used to explain the above-mentioned phenomenon.

According to the first, the wages of the younger educated lot has risen too fast by comparison with the wages of adult workers, thus pricing them out of the market. The second explanation stresses the very effective protection enjoyed by many adult workers against dismissal. Because of high severance pay, action, and collective bargaining, the greater part of the adult labour force (25 and above age-group) can be considered as a quasi-fixed production factor, thus letting the burden of the adjustment to the diminishing

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demand for labour fall on the "additional" worker, or in other words, the recent entrants to the labour force who are educated and young.

Population growth also contributes to educated unemployment. Population affects labour supply in an economy. As a result of the post-war baby boom and the increasing propensity of young women to seek work, the annual increase in the number of job seekers in nine EEC nations is estimated 8 lakhs in 1980 as against 3 lakhs between 1960 and 1970. Observers are quick to point out that countries with the lowest unemployment rates (West Germany, Sweden and Switzerland) are also those least affected by post-war baby boom.<sup>15</sup>

In developing countries population has been growing at a rate faster than the rate of employment. This means that more people are coming into the labour force and becoming unemployed. There is also a disparity in the age structure of the population in developed and developing economies. Developing countries of 1960 had more than 60 per cent of their population below the age of twenty-five compared with less than 50 per cent for the developed countries in 1900. Such a young population can be expected to have at least two economic consequences. First, the dependency

ratio<sup>16</sup> will be larger. Second, the new entrants to the labour market (mostly the educated) for skilled jobs will outnumber those in the older age brackets by an ever larger margin. So unless the expansion of jobs is faster, the new entrants to the labour market have a higher probability of being unemployed.<sup>17</sup>

The point made above takes an added significance when it is related to the rapid growth of educational facilities in developing countries. Studies done by Kaser (1966), World Bank (1960) show that primary education in developing countries, has been expanding more rapidly but from a lower base than in the developed countries, whereas secondary education has been growing at the same rate but from a higher base.

Clearly, the rapid expansion of education in the developing countries must be reflected in an increased number of educated entrants to the labour market. It follows that not only are first-time entrants to the labour market much more numerous than those withdrawing from the market, but also they have received more formal education. Now, more educated entrants to the labour market will expect jobs similar to those held by comparatively educated workers in the recent

past. So it is not surprising that many LDCs are experiencing high rates of educated unemployment.

High rates of urban unemployment in LDCs is attributed to rural migrants who flock to the city for better employment prospects.

Various theories on rural-urban migration have stimulated considerable empirical activity, both econometric and descriptive. Recent surveys of the rapidly expanding literature provide a fairly clear view of the determinants and consequences of migration and of the characteristics of the migrants (Carynnyk-Sinclair, 1974; Todaro, 1976; Brigg, 1973; Yap, 1977; and, Connell and others, 1976).

Field studies and econometric exercises point consistently to the importance of the economic motive in the decision to migrate. The field studies, for example, invariably report that migrants cite the possibility of higher incomes or better jobs as the primary reason for migration. And, in the econometric exercises income or wage differentials usually emerge as the most important explanatory variables in the estimated functions. Some studies, for example, Barnum and Sabot (1977), have demonstrated the importance

of the expectation of employment as a separate explanatory variable in the manner predicted by the Harris-Todaro theory. The field studies have also demonstrated conclusively the marked concentration of migrants within certain population groups. Migrants are usually under thirty years of age, and are better educated than non-migrants. This available evidence points out that it is this group who add to the unemployment problem in urban labour markets.<sup>18</sup>

The hiring practices of public sector undertakings in the LDCs have also been cited as a reason for educated unemployment.

In most developing countries of public enterprises make up a significant proportion of wage employment. Since public sector employment is also relatively skill-intensive, the public sector is often the dominant employer of educated labour.<sup>19</sup> The significance of this point is that public pay scales are generally thought to be unresponsive to changes in labour market conditions, in a competitive labour market, rigid wages results in unemployment.

Perhaps the most conclusive evidence that the rigidity of public sector pay scales has distorted the market

for educated labour is found in the job preference of the unemployed.

**Table 1**

**Job Preference by Level of Education for  
Unemployed Urban Males Aged 15-24 with No  
Previous Work Experience, Sri Lanka, 1968**

Level of Education	Any	Unskilled	Clerical	Other	Total
Below Standard 5	59	30	4	7	100
Below Standard 8	14	5	54	28	100

**Source : Richards (1973)**

Table 1 above shows that while almost 60 per cent of those in Sri Lanka with less than standard 5 education were prepared to accept any job, the majority of those with more than standard 8 (O-level) education expressed a preference for clerical jobs. Apart from the attraction of high wages, the public sector also offers job security and regular salary increases.<sup>20</sup> This helps to explain why even those who had already experienced long spells of unemployment were still willing to wait to get a government job.

The rigidity of public sector pay scales and the stability of job preference emerge as the most likely explanation of high rates of unemployment among educated workers. The rapid expansion in educational output has not elicited the appropriate response in public pay scales, and, with the slow rate of adjustment in job expectations, the result has been unemployment. Since the public sector determines both the supply of educated workers (through its educational policy) and the demand for them (through its role as an employer), the solution to the problem of educated unemployment is within the immediate sphere of policy influence.

**"INADEQUATE EMPLOYMENT", "COUPLING, DECOUPLING"  
AND "COMPETITION FOR DISPLACEMENT"**

During the 1970s there was a large supply of college graduates, accompanied by general uncertainty about economic development. One of the most dramatic effect of this was a rapid spread of a very negative attitude towards higher education expansion and a surprisingly irrational debate on the changing relationship between education and employment.

Three catch phrases became very popular : 'inadequate employment of graduates', 'coupling' or

'decoupling' of education and the employment system and, 'competition for displacement' on the part of college-trained manpower and others.

The term 'inadequate employment has been frequently used to describe the fate of graduates who cannot obtain the jobs of the kind traditionally held by the university graduates. Also often used is the term 'academic proletariat', which in the early 1970s predicted a more sinister fate for these educated youths. This expression contradicted arguments and findings according to which the substitution process in intermediate positions seemed to be more frequent than an extreme discrepancy between the additional jobs for graduates on the one hand, and the traditional positions they could expect on the other.

As Sanyal (1987) points out, the expression inadequate employment is based on the assumption that there are clear-cut, permanent elements of appropriateness in the relation between education and employment. Second, it assumes that more or less all graduates in the past held 'adequate' positions. Third, it assumes that the educated in general want to find a privileged position. Fourth, it takes for granted the traditionally



strong impact of education on the job held and on the status generally thought to be desirable although the same persons frequently take an opposite view when using other phrases mentioned above. The argument also has been addressed to youths, claiming that they would harm themselves if they enrolled in colleges for higher education.

Obviously, these four suppositions are based on the exaggerated contrast between the traditional and the possible new positions of the educated youths. The strongest criticism against these assumptions is that it fails to take into account the dynamics in the development of jobs, and they ignore the fact that there are many jobs now which are quite demanding in terms of reasonable utilization of skills acquired at institutions of education.

The phrases 'coupling' and 'decoupling' became popular during the mid-1970s in the political debates, especially in some developed economies (Sanyal, 1987, pp.131-32), on the trends and policies regarding the relationship between the education and employment system in general. 'Coupling' refers to a system in which education is geared completely to the qualification

requirements of the employment system, and socio-economic status is determined by educational achievement.

The political debates in which these phrases were used was related to the academic controversies in the early 1970s on the question of the extent to which development in the employment system leads to corresponding changes in education or leaves room for alternative educational policies. It was also questioned whether requirements for education could be determined by analysing the development of the economy and the occupations.

The phrase 'decoupling' was used first of all in connection with the aims of learning, usually with negative overtones. Employers representatives, for example, accused the proponents of educational reform of having 'decoupled' education from the needs of the economy.

Subsequently 'decoupling' was usually referred to as a positive goal, implying that the literate youth ought not necessarily expect rewards for their educational achievements and employers ought not to rely on education in their recruitment and policy. Many employers and policy framers thought that in this way the problems of the labour market for the educated unemployed could

be solved, either through easier absorption of the educated youth or due to a decline in aspirations due to the uncertainty of reward. Many educators hoped that this would free education from the pressures of selection and at the same time increase public support for education beyond the occupational requirements.

The debate on 'coupling', 'decoupling' showed the difficulties people had in understanding the correlation between education and occupations, turning into a situation of utter dependence or complete independence. The demand to 'couple' education and to 'de-couple' in terms of status distribution indicates indifference towards education policy which favours equal opportunity. Education beyond economic needs was considered desirable, and rewards for educational achievements seemed, according to these views, unnecessary. This debate shows how the strong reliance of the public sector (in LDCs) on educational credentials is often seen as completely overshadowing the developments of higher education and the labour market of graduates and educated youths.<sup>20</sup>

'Competition for displacement' is a misleading phrase, in so far as realities are concerned. If the occupation structure and the relationship between the educational level and occupational rank remained constant,

a college graduate taking a position normally held by a non-graduate would in all likelihood have obtained more or less the same position had the expansion of the education not taken place. The major difference would be evident in a higher educational level, but probably not in fewer job prospects. Thus, displacement as a consequence of educational expansion would only take place within one generation if the weight of credentials grew in general. This could not be attributed to the rationale of the employment system but would be forced by the growing supply of more educated persons.

## NOTES

1. Area Manpower Guide Book, U.S. Department of Labour, 1957, p. XXVII.
2. T.S. Papola, "Economics of Labour Market" in B.B. Singh (ed), Labour Research in India, Popular, Bombay (1970), p. 170.
3. See Bertrand and Squire (1980).
4. The condition of a zero marginal product of labour on family farms have since been shown to be implausible (Sen, 1966). The argument here, however, requires only that labour's marginal product be less than its supply price and not that it be zero.
5. See Edwards, Employment in Developing Nations, p. 13.
6. These approaches are suggested though not in these terms by A.K. Sen, Employment, Technology and Development, Oxford University Press, New York, 1975.
7. I.L.O., Employment, Income and Equality : A Strategy for increasing productive employment in Kenya, Geneva, 1972, p. 1.
3. Definition of unemployment varies among countries. Measurement of unemployment and employment and the problems associated with it are dealt in:
  - a) G. Myrdal, Asian Drama, Part V, Appendix 6 (1968).
  - b) R. Jolly et.al. (ed), Third World Employment, 1973.

- c) E. Kritz and J. Ramos, "The Measurement of Urban Underemployment", I.L.R. (Jan-Feb), 1976.
  - d) D. Turnham, Employment Policy in Developing Countries, (O.E.C.D., 1971).
  - e) R. Krishna, "Unemployment in India", EPW, March 3, 1973.
9. Asserted by Mark Blaug (1969) in Blaug, et. al., The Causes of Graduate Unemployment in India, Allen Lane, London.
  10. A.C. Pigou, The Theory of Unemployment, London, MacMillan, 1933.
  11. For a discussion on various concepts of unemployment refer to Guy Standing's articles in International Labour Review, 1981, 1983 and 1984.
  12. Matching Employment Opportunities and Expectations : A programme of action for Ceylon, ILO, Geneva, 1971.
  13. Foster (1970) takes an opposite view, Foster argues that a preference for white-collar work is realistic, taking into account actual prospects in the labour market and not typical prejudices.
  14. Blaug in Education and the Employment Problem in Developing Countries, ILO, Geneva, 1973, p.10.
  15. J.P. Jallade, Youth Unemployment and Education in George Psacharopolous (ed) Economics of Education : Research and Studies, Pergamon Press, 1987, pp.167-168.
  16. The dependency ratio shows the number of dependents (those under 15 or over 65) per member of the population of working age (15 to 65).
  17. For a survey of employment policies in developing countries, see Squire (1980).
  18. See Peek and Antolinez (1976).

19. Blaug (1973, pp.31-32) suggests that in developing countries "anything from one-thirds of all manpower with secondary education or above is employed in the public sector".
20. Richards, P.J. (1973) "Job Mobility and Unemployment in the Ceylon Urban Labour Market", Oxford Bulletin of Economics and Statistics, Vol.35, no.1 (Feb.), pp.49-59.
21. For a provocative discussion on "credentialism", see Ronald Dore, The Diploma Disease : Education, Qualification and Development, London, George Allen and Unwin Ltd., 1976.

## CHAPTER II



## THE ROLE OF EDUCATION IN EMPLOYMENT/UNEMPLOYMENT

### INTRODUCTION

The role of education in employment/unemployment depends ultimately on how we view the functioning of the economy and its labour market.

This Chapter reviews the theoretical underpinnings for studying education's role in the labour market. What do different theories tell us about education's effect on employment and income? On unemployment? On labour market segmentation?

In the most general terms, labour market theories are explanations of how wages are determined and workers allocated to different jobs. They provide explanations of why one group of workers, such as skilled workers, earns more than another group, such as the unskilled. They also provide a basis for our understanding of such labour market problems as discrimination, poverty, unemployment, and suggest policies that could alleviate them. That there are a number of theories of labour market reflect the complexity of the labour market and the different theoretical and political perspectives used as the starting point of their analysis.<sup>1</sup>

Consequently, a number of conflicting interpretations and conceptualizations of the labour market and how it operates have been developed. One particularly important area of dispute is the relationship between education and labour market behaviour. This arises primarily because of the crucial role education plays in the current neo-classical theory of the labour market.

### **EARLY THEORIES OF THE LABOUR MARKET**

The classical theorists of the eighteenth and early nineteenth centuries were concerned primarily with the question of distribution. How should the output of the economy be divided between the factors of production? To answer this question, it was necessary to explain how wages were determined. The cornerstone of the classical theory of distribution was the wage fund theory.<sup>2</sup> The wage fund represented that part of the current year's output that is used by employers (landlords and capitalists) to buy labour necessary for production in the following year. The size of the wage fund that is available for wages depends upon how much of total output is consumed by employers, that is, the level of profits and rent. The wage rate that existed in the economy at any one moment in time, therefore, could be found by simply dividing the available wage-fund by the number of workers employed,

the latter being uniquely determined by the size of the population. Some classical economists linked the wage fund theory to Malthusian population theory<sup>3</sup> and argued that the level of wages established in this way must, in the long run, be at the subsistence level.

While the classical economists were primarily concerned with the problem of distribution they did not ignore the structure of the labour market. Adam Smith, for example, provided a number of explanations of why some workers earned more than others, including the "agreeableness" or "disagreeableness" of the work, the tenure of the job and regularity of employment, and the cost of acquiring the skills necessary to undertake the job. Smith argues in "The Wealth of Nations" that education could be viewed as an investment in future earnings capacity which must "replace to him the whole expense of his education, with at least ordinary profits of an equally valuable capital" (Book I, Chapter 10). Other classical economists such as John Stuart Mill disputed Smith's theory of wage relativities and argued instead that the labour market was composed of non-competing groups of workers. Those in the most desirable (both high-wage and more agreeable) jobs are in these occupations as much because of their social background as because of their education and skills. Wages in

the skilled jobs are higher because social barriers restrict entry into these jobs, not because there are barriers based on a lack of education.

### **THE NEO-CLASSICAL THEORY OF THE LABOUR MARKET**

The current neo-classical theory of the labour market represents the mainstream approach to labour market analysis. This theory had its origins in the work of early neo-classical theory economists such as Alfred Marshall and John Bates Clark during the late nineteenth century. Whereas the classical economists had concerned themselves with distribution, neo-classical economists focused on the processes through which the economy allocates its scarce resources between their possible uses.<sup>4</sup> Attention was directed, in particular, to how a free market system could achieve an efficient or optimal allocation of resources, and to the economic behaviour of individual agents in this process.

The concept of a "market" for a particular good is something of a theoretical abstraction which enables economists to analyse exchange between those people or firms who wish to buy the good, and those who wish to supply it. In the labour market this exchange

relationship is between firms who wish to employ labour to produce output, and workers who are prepared to work at the going wage rate. The interaction of the demand for and the supply of labour within a competitive labour market will determine an equilibrium wage rate and level of employment. Any wage above this value will result in competition amongst workers for jobs which will push the level of wages back down to the equilibrium, whereas competition amongst firms will bid up the wage if it is set below the equilibrium.

In the labour market the implications of this approach for the demand for labour are described in the marginal productivity theory, as developed by John Bates Clark (1899). Assuming that firms operate in a competitive labour market and face an inelastic and homogeneous supply of labour at the going wage rate, firms will maximise their profits if they employ labour upto the point where the wage equals the value of the marginal product. The latter term represents the value of additional output produced by the last person employed which, given a fixed supply of capital for the firm, will decline as more people are employed. The marginal productivity theory thus provides an explanation of labour demand. It suggests that the number of workers a firm will employ and the wage they will be paid depends, among other things, on the productivity of those workers.

On the supply side of the labour market the only thing at issue is how much labour (e.g., hours per day) an individual worker would be prepared to supply at a particular wage. The individual makes this decision on the basis of the satisfaction or "utility" derived from the consumption of market goods and leisure (that is, non-market activity), subject to constraints on the amount of expenditure that is possible and the time available. Neo-classical economists were thus concerned with the question of how the supply of labour changed with changes in the wage rate. Differences in labour quality were to all intents and purposes ignored, and education was treated as one of the many goods available for consumption. The impact of education on future earnings potential and the relationship between education and occupational choice is not touched upon.

In the early orthodox theory of labour market, labour was treated as a homogeneous entity, and so economists spoke of the marginal product of labour as if all non-hours of work were the same. During the late 1950s and early 1960s the current neo-classical theory of the labour market emerged with the development of the human capital theory.<sup>5</sup> In human capital theory, what is demanded and supplied in the labour market is not homogeneous labour but worker characteristics. The human capital theory assumes that peoples productive

capability, or the value of their work in the production structure is determined by the amount they 'invested' in income-producing human capital investments. Some of these are in better health, schooling and training. Thus, the concept focuses on individual worker decisions and choices among investment in productive capacities and on individual employer decisions to hire certain combinations of capacities which the employer combines with other inputs in production at the prevailing prices for various productive capacities.

Education is no longer seen as a consumption good but as a form of investment. By forgoing current consumption whilst undertaking further schooling an individual is able to increase his or her earnings potential upon entry into the labour market. This results because of the positive impact of education on productivity.

Since there is a close relationship between particular educational programmes and the type of occupation a person can go into, the human capital theory also provides a model of occupational choice. Occupations that offer high wages will, other things equal, encourage people to invest in particular educational programmes associated with them. Choosing the quantity and type of education to be undertaken, therefore, involves simultaneously making an occupational choice.

In its explanations of and solutions for unemployment, orthodox theory draws on the concept of labour both as homogeneous man-hour and as human capital (worker characteristics), and in both cases the theory assumes that there are general laws that apply equally to all individuals in the labour market. Thus, whether it is a man-hour of work or a year of schooling, the market mechanism treats (prices) these inputs similarly across the entire labour market in that economy : it is assumed that in a competitive equilibrium, the market for man-hours of work or for various investment in 'skills' will 'clear'; if it does not, this means that, in some sense, the market is not in competitive equilibrium - distortions exists, and if they can be eliminated, "full-employment" can be achieved.

The implications of neo-classical theory for a full-employment strategy should be clear : unemployment is caused by distortions in the economy; eliminate these distortions and achieve full-employment. As for the relationship between education and unemployment, orthodox theory in its strictest form would have to blame unemployment on those who are unemployed! That is, given the existence of unemployment in an economy because of distortions in the market, which are beyond the control of the individual worker, each potential employee



would be faced by a series of human capital investment decisions. If they made the right investment decisions, they would enter the ranks of the usually employed, and if they made the wrong decisions, they would enter the ranks of the often unemployed. The unemployed, then, are those who have not invested in the 'right' set of characteristics, including the right amount or kind of schooling, which would give them a high probability of getting employment.

Thus, distortions create unemployment. On that there is agreement. But there is apparently considerable disagreement in orthodox theory on the reasons for individuals investing in ways which may maintain or increase rather than reduce their chances to be unemployed. On the one hand, in many less developed economies, ILO studies<sup>6</sup> indicate that there are institutions (state schools) which are distortions in themselves, producing a product which is not suitable as an input in a modern capitalist production process. On the other, Blaug (1973) argues that individuals are not misguided in their investment (they are indeed maximising expected wages), but at the prevailing wages the system cannot employ all of those who wish to get high-paying jobs.

There are other reasons given for misinvestment:

(a) inefficient information system, (b) disequilibria in the economy caused by new kinds of technologies, which leave large groups of workers unemployed because they are not trained to do the new kind of work. Both of these allegedly put students in the position of incorrectly assessing the value of investment skills. Once having made the investment, the student either finds himself without a job, or in the second case, finds work but a few years later is unemployed because the kind of jobs for which he is trained have become obsolete.

According to the orthodox theory, one policy available to reduce educated unemployment is to reduce the wages of the educated, particularly in the high-wage public sector. Even if this does not increase employment, because of rigidities in the labour market, it is argued that the long-run effect of wage reduction will be to decrease the supply of educated labour, since the return to investment in education will decline. Similarly, if the cost of schooling is raised and the individual or his family is made to bear the increased proportion of the total cost of schooling, this will tend to lessen the supply of educated labour relative to demand.

## THEORIES OF SEGMENTED LABOUR MARKET

**History:** The present form of the segmented labour market theories (SLM, henceforth), began in the 1960's. It was a time for social reform connected with the "war on poverty", focus on the economic participation of minority groups and dissatisfaction with the pace and direction of reforms in these areas.

SLM theories developed as a reaction against the alleged inability of neoclassical economics to adequately explain why some groups of workers do badly in the labour market. SLM theories attack the - a) method, b) the theory, and c) the collection of predictions and substantive hypothesis of neoclassical theory.

**Issues Raised:** The major issues raised by SLM theories is threefold : (a) empirical, (b) theoretical, and (c) policy related.

First, the SLM empirical argument is that facts describing the outcomes and processes in the labour market are not reported accurately and not interpreted correctly. Second, SLM theories question the very basis of neoclassical theories. Third, SLM theories are mainly policy oriented, hence they advocate major changes in the economic system.

There are two types of facts that contribute to controversy between SLM theories and neo-classical theories. At one end there are those findings that indicate some sort of hardship or distress like high unemployment rates and widespread poverty. At another end controversy rages around those facts that reflect, unresolved and inadequately treated problems.

Listed below are few topics that have raised controversy.

**a) Poverty:** Poverty is by far the most important social problem motivating the SLM theorists to attack neo-classical paradigms. Poverty especially in affluent societies inspite of political commitment to a full-employment and anti-poverty programmes. This controversy has given birth to the dual labour market of Piore (Piore, 1970).

**b) Persistence of income inequality:** Neo-classical theorists had predicted that with rising educational attainment of the populace, efficiency in the economy would improve (this follows from the simple human capital model of skill creation). With the narrowing of skill differentials, income inequality would reduce. However, studies by Lester Thurrow and others found that "narrowing of educational attaining variance was not followed by income equality" (Thurrow, 1972).

**c) Failure of educational and training programmes:** SLM theorists argue that human capital theory has failed to deliver their promised cure of poverty. Its proponents, question in particular, the validity of the view that "supply side" policies, such as those which attempt to reduce inequalities in the provision of education and training programmes, can alleviate the problems faced by the disadvantaged in the labour market (Lucas, 1972; Gordon, 1972; Christopher Jencks, 1972; Gintis, 1971). They, similarly, reject the view that labour market outcomes, such as the wage a person receives, emerge from individual worker choice about the amount of education to be undertaken. The SLM theories postulate that education is only a screening device of a set of attitudes and traits that employees find attractive (Thurrow, 1971 and 1975; Spence, 1973). These theories focus on the way labour market institutions have developed over the years to restrict the option open to certain workers, especially those in minority groups.

**d) Discrimination in the labour market:** The large and persisting differential in earnings and wages between white and black American workers, between males and females, and other groups - even when productivity indicators are apparently equal - has posed the biggest

challenge to neo-classical theories. As Arrow comments "since racial discrimination has survived for a long time, we must assume that the model (human capital) must have some limitation" (Arrow, 1973).

**e) Levels, trends and structure of unemployment:**

Thurrow (Thurrow, 1975) says that unemployment is the most important deviant observation that cannot be explained by a simple marginal productivity theory.

Gordon (Gordon, 1972) claims that SLM theories are particularly appropriate for explaining the recent outward shift in the philips curve which was associated with greater inequality in the incidents of unemployment among different demographic groups in the population.

The forgoing list of empirical generalisation about outcomes of the working of the labour market covers, the main bill of particulars in the SLM indictment. Let us now turn to the theories of how the labour market operates.

**THE JOB COMPETITION MODEL**

According to the job competition model, productivity is an attribute of jobs not people.<sup>7</sup> The number and type of job slots are technologically determined. The workers skills (i.e., their human capital) and

their wage offers are irrelevant in determining the number and type of job positions actually filled. Wages are, in fact, claimed to be rigid, and queue of workers at fixed wages constitute the supply of labour. The chief criterion which the employers use in selecting workers for jobs is their trainability and adaptability. Those workers who possess background characteristics, such as race, sex education, age and previous experience, which employers feel reduce training costs, go to the head of the queue and receive the best jobs. Thus, employment and unemployment depends on the capacity of the modern sector to absorb labour into full-time modern jobs.

In this model, education plays an ambiguous role, on the one hand, educated labour is more trainable and, therefore, is higher up in the queue to get the full-time permanent jobs associated with the modern, capital-intensive sector. On the other hand, increasing the average level of schooling has little effect on the number of jobs available or the productivity of workers in modern jobs, since employment in the modern sector depends largely on capital investment and technology, not on the education of workers or workers employed, and productivity is a function of the job, not of the characteristics of workers. Hence, education has

distributional consequences (who will be employed and unemployed) but does not increase growth.

Furthermore, in the job competition model, increases in the quantity of workers with schooling does not affect the wage levels of educated labour. In the orthodox neo-classical model, inflexible wages, and, indeed, unemployment (the failure of the market to lower wages and clear the market for labour) must be explained by government interference through minimum-wage laws and the recognition of unions as having collective bargaining rights. This is regarded as an external distortion in the workings of the labour market. But the job competition model views inflexible wages as a function of the way capitalists run labour markets : by identifying certain wages with certain technology or job characteristics, the employer is relatively fixed in what he is willing to pay to get certain work done and the number of workers he is willing to employ. Therefore, unemployment is a function of capitalist decisions, and changing skill characteristics of the labour force will do little to change the wage structure or the number of people employed in the modern sector.



## DUAL LABOUR MARKET THEORIES

The two economists most often associated with the dual labour market theory are Doeringer and Piore (1971).

Doeringer and Piore<sup>8</sup> define a primary labour market as one composed of jobs in large firms and/or unionized jobs, which tend to be better jobs - higher paying, better working conditions and more stable jobs. The secondary labour market, which roughly overlaps large sections of the external labour market, contains the low-paid jobs that are held by workers who are discriminated against and have unstable working patterns. The discussion of the dual labour market tends to be taxonomic. Some of the theoretical ideas are similar to those mentioned above in the connection with Thurrow and Lucas - the demand determined allocation of jobs, the key role of on-the-job training, employer discrimination and the downgrading of observable human capital characteristics as determined of wage levels.<sup>9</sup> Quite distinct, on the other hand, is the attention Doeringer and Piore (1971), Harrison (1972) and other "dualists" give to the roles of the workers attitudes, motivations, and work habits and the way these interact with "community" variables such as the welfare system and illegal activities.

## THE RADICAL THEORY OF SEGMENTATION

The radical theories are associated with the names of Wachter (1974); Edwards, Reich and Gordon (1975); Bowles and Gintis (1975) and Franklin and Resnick (1973).

Radical theories of labour market segmentation express a more explicit critique of capitalism. They acknowledge their ties to marxian dialectical analysis, and emphasize class conflicts. Radical theories are similar to dual labour market theories in drawing upon sociological analysis of institutional changes but the radicals give more emphasis to historically - rooted, class-based motivations of behaviour by employers and workers.

The primary unit of analysis is no longer the individual and his free choices, but rather groups and social classes who face objectively different labour market conditions that systematically condition their tastes, and restrict their range of effective choices. The behaviour of these groups or classes then condition the subsequent development of technology and job structures.

Radical theories differs with the job competition model on the issue of the supply of labour affecting

the level of wages and productivity. Radical theorists believe that it is through the existence of a reserve army of the unemployed (a queue) that workers wage demands are kept low and that productivity is increased. So the capitalists and managers have a vested interest, in having a pool of unemployed workers in the economy at all levels of skills, in order to control workers demand and play different groups of workers off against each other for employment security and a share of the wage bill. Employment/unemployment in this theory, is not primarily a technological problem (economic growth), nor a problem of human capital characteristics of workers, even though these are important variables, but primarily a political issue dependent on the political power of worker organizations relative to capitalists and managers rather than profits.<sup>10</sup> (S.A. Marglin, 1974 and Edwards, Reich and Gordon, 1975)

The problem of educated unemployment in this model is an extension to a growing white-collar portion of labour, of methods used by employers to keep a cheap unskilled labour force under control. As soon as white-collar workers and technicians begin to feel that they can extract different working conditions from the capitalist/managerial class than those under which factory and

unskilled workers function, the number of graduates trained to do white-collar work is greatly expanded relative to the number of jobs available. Technicians and bureaucrats are no longer assured of white-collar work, nor of any job security at all. Under those circumstances, we should expect that the demands of that group of workers and their potential power should decline (Braverman, 1975; Chapter 15).

Thus, employment policy in a segmentation model focuses on the nature of the labour markets rather than the characteristics of workers in those markets. If the educated are becoming *un*employed, segmentation theory would concentrate on analysing the changing nature of the jobs held by the secondary and university graduates rather than the nature of their education or the mismatch of education and jobs.

SLM theory argues that the analyses of labour markets should focus on government incomes and employment policies because the state is a powerful force in affecting employment and earnings of workers in the labour market.

#### **RELATION OF NEO-CLASSICAL THEORIES OF UNEMPLOYMENT TO SLM THEORIES**

Many case studies have shown, that some groups in the labour force experience unemployment that tends

to be of a single long duration. This issue is primarily important as a source of understanding why the level of unemployment is relatively high in various groups. Consider three orthodox hypotheses about unemployment - two of which overlap SLM hypotheses.

**a) Alternative source of income**

The neo-classical model of the allocation of one's time to various activities is based on the idea of budget constraints (income effects) and, opportunity costs (price effects). The first factor suggests that those whose wealth status is low, cannot afford long - or many - spells of unemployment. On the other hand, unemployment is cheaper for those with low earnings abilities. By these terms alone, the sign of the human capital effect on unemployment is ambiguous. However, non-labour sources of support available during unemployment clearly lowers the cost of unemployment. Thus, young people and other so-called "secondary workers" in families with a primary earner, often can rely on other members of the family for support. Unemployment insurance and public assistance receive a good deal of comment in their connection by both neo-classical economists (Feldstein, 1973) and SLM economists (Piore, 1970;

Gordon, 1972). It is further recognised that the income from these latter source is generally conditional upon being without work, so work is, in a sense, "taxed" by these programmes. The SLM spokesmen have also emphasized, "illegitimate" sources of income along with welfare assistance, are claimed to be particularly relevant alternative to "regular" employment earnings in central city ghetto areas (Gordon, 1972; Harrison, 1972, Chap.5; Bluestone, 1970).

Similarly, the new neo-classical models of crime also emphasize alternative earnings as an influence (Becker, 1968).

#### **b) Labour as a quasi-fixed factor of production**

A simple but influential model of differential employment by skill class was advanced by Walter. Y. Oi (1962) and G. Becker (1964). The model assumes that (i) higher skill classes have more on-the-job training and/or they are more complementary (relative to skilled labour) to fixed, physical-capital factors of production (the latter point was developed extensively by Sherwin Rosen (1968); (ii) there are overhead costs of recruiting, placing, and laying-off workers - costs that are often positively related to the wage levels of the skill

groups; (iii) the firm and worker are uncertain about the timing and duration of the phases of the business cycle. Under these assumptions, in a recession, firms will tend to lay-off the less skilled workers, who are relatively more valuable because of their capital complementarity and on-the-job training (which would be lost to the firm if the laid-off skilled workers were to take jobs elsewhere).

Two further considerations are needed, however, to provide a more complete explanation of the higher unemployment rates for the lower skilled groups. One is that, there must be some reason why the wage-rate of the lower-skill group does not fall to the point where they compete on a cost basis with the higher-skill group. There seem to be several sources of such relatively rigid "floors" - union rates, bureaucratic inflexibility in large firms, minimum wage laws, "social minimum" reservation wages and the alternative income support available from unemployment insurance and welfare. Orthodox economists have frequently attributed unemployment, especially for "marginal workers", to government wage fixing (Stigler, 1946; Feldstein, 1973; and Friedman, 1972).

A second reason why lower skill groups may have higher unemployment and greater job instability, links a neo-classical argument about transaction costs

and imperfect competition to the SLM hypothesis about internal markets. A neo-classical argument is as follows:

In large firms, particularly, the fringe benefits and overhead costs tied to an employee have increased over time because of union pressures, tax laws, and preferences of workers and employers. These increases are both cause and effect of the large amount of firm-specific on-the-job training. High transaction costs of hiring and allocating the workforce make turnover expensive, and fringe benefits serve to reduce turnover. The result is stable employment tenure along with generous fringe benefits. A strong union may obtain high wages on added benefit for those "lucky" or "favoured" workers who happen to get hired in these "good jobs". If there is no favouritism, employers will hire more productive workers for these jobs.<sup>11</sup>

In summary, it would be consistent with neo-classical theory for bureaucratic firms that have firm-specific training, high overhead labour costs, and somewhat rigid wages to create a strata of high-paying stable jobs<sup>12</sup> (Rees, 1973; Harris, 1975).



### c) Job search models

Neo-classical models of job search and unemployment (Phelps, 1970) attempt to provide a link between micro economics and the prevailing macro theory of unemployment and serve, incidentally to deal with some of the issues raised by SLM economists. Consider the following simple version of the new theories. Changes in aggregate demand induce uncertainty about expected wages. Assume workers will be slower (relative to employers) to adjust to inflation and deflation - offering "more" labour (for example, overtime) during the inflationary upswing (because the higher money wage appears as a higher real wage than it really is) and offering "less" labour (unemployment in some cases) during a deflationary downswing (because the lower money wage appears as a lower real wage than it really is).

The job search models are used to analyse and rationalize the behaviour of unemployed workers.<sup>13</sup> The definition of unemployment implies that there is some active job search by the person without a job, and the job search model begins with the quasi-tautology

that search continues as long as the marginal benefits of further search exceed the marginal cost. As noted above, the costs are affected by the workers alternative income, including unemployment insurance, which mainly determined the costs of search. The direct costs - such as unemployment agency fees, travel costs - are largely unmeasured, but are, perhaps, small.

Unfortunately, little information is available about the determinants of efficient job search. A crucial assumption is that a job search is more efficient when the worker is unemployed and can "specialize" in search actively. This assumption has been questioned, and the scanty empirical evidence does not support it (Tobin, 1972; Mattila, 1974). Unemployed workers, not only forgo earnings, but being unemployed may emit unfavourable signals about their unemployability.

Casual observation suggests that the benefits of job search and job trial are greater for young workers than for older workers. The latter know more about their skills and preferences. By the same token employers usually know more about older workers, so there may be less variability in job offers. Since young people have lower opportunity costs of unemployment, the job search models predict higher employment for them.

Many of the points seem reasonable, but the problems in estimating the job search models are severe. The data requirements include information about the distribution of wage offers available to the searching worker and whether job offers that are "sampled" must be chosen or rejected on a once-and-for-all basis, and whether two or more chances are available. The worker "efficiency" in job search, expected future wages, opportunity costs, attitude towards risk, and subjective discount rate are all more or less unobservable.<sup>14</sup>

#### **THEMES FROM THE RECENT LITERATURE ON HIGHER EDUCATION AND MARKETS FOR EDUCATED LABOUR IN LDC'S**

During the 1960's and 1970's, much of the empirical work in the economics of education focused on estimating rates of return to incremental amounts of education, since rate-of-return estimates were needed as an input into decisions regarding public-sector spending on education.<sup>15</sup> The usual starting point for this kind of work was to collect information on income levels of individuals with different levels of education. Since there is a systematic tendency for individual incomes to vary with age as well as with schooling, the information was often summarized in the form of earnings functions, that is, estimates of projected time paths of earnings for individuals

with different levels of schooling. The predicted income differentials could then be compared with estimates of the incremental costs of schooling to obtain rate of return estimates.<sup>16</sup>

In interpreting this type of empirical work, there is one important complication that must be considered. Individuals differ in many other ways as well, not just in age and years of schooling. This may create problems for empirical work. Some innate individual characteristics like, basic intelligence, persistence, organization ability are both likely to make a person valuable to his employer and also make him successful at school, and this will be reflected in his higher earnings. This introduces a spurious element in any schooling - earnings correlation. Secondly, these innate abilities can only be measured very imperfectly. Therefore, the prospects for getting more precise estimates of the separate education-earnings link by statistically correcting for the influence of these factors do not seem very promising, and attempts along these lines in work in the mid 1970s yielded ambiguous results.<sup>17</sup>

## THE SIGNALLING/SCREENING APPROACH

One alternative to the human capital approach was the signalling/screening model of Arrow, Spence and Stiglitz. The screening/signalling hypothesis propounded the theory that the primary function of higher education is to act as a screen or signalling device.<sup>18</sup> It helps employers identify those individuals who have characteristics that are likely to make them productive workers; or equivalently, it enables workers to make this known to employers. In this framework, the reason why educated workers earn more than those with less schooling is not that they have acquired specific productive skills. Instead, they earn more because they are more productive to begin with : their educational qualifications simply serve as a signal telling employers that they have these characteristics.

At the first glance, the signalling hypothesis has a plausible ring to it. It gives a central role to the grading and evaluation function of higher education. In contrast, the human capital approach downplays this function by emphasizing the amount of time spent getting educated, rather than a students grades or diploma, as the main predictor of earning.

These two approaches also imply very different views concerning the social productivity of education.

Consider for example, the simple case of "pure signalling". In this model, all individuals are supposed to supply the same kind of labour. (Equivalently, the assumption can be stated by saying that worker's productivity is determined by a single relevant characteristic). However, individuals differ in the sense that they have been born with different ability : Different individuals can be thought of as having different amounts of efficiency units of labour. To make matters simple, suppose there are only two kinds of people, the "bright" (B) and the "slow" (S), with the Bs being more productive than the Ss in whatever job they do, whether or not they have received an advanced education. Suppose further (consistent with the fundamental assumption underlying the signalling approach) that employers cannot directly observe whether a person belongs to the Bs or the Ss, and that it is difficult and costly to tell which is which, even after a person has been employed. Assuming first that no individual gets educated, employers will not know whether a job applicant is a B or an S, so they offer the same wage to everyone.

In other words, everybody is paid a wage that is equal to the average productivity of the Bs and Ss, which implies that the Bs are paid less than their marginal productivity, while the Ss are paid more than theirs.<sup>19</sup>

Suppose now, we open up the possibility for individuals to invest time, effort, and money in getting educated (or obtaining a degree). It is then possible that it might pay a B-type person to get a higher degree certificate, if possession of this qualification convinces the employers that the individual belongs to the B group : He can then demand and obtain a high wage offer.<sup>20</sup>

Now consider a "screening equilibrium" in which resources are being used on an educational system that performs this type of signalling function, and contrast this with the case where education produces skills which increases the productivity of the individuals being educated. In the latter case, education is socially productive : The resources being spent on it will raise aggregate consumption and potential social welfare in the future. In the signalling equilibrium on the other hand, the spending on education represents, a complete waste from a social point of view. Even those who get a college degree, say, will earn a higher income,

they will earn it at the expense of those without a degree whose income will fall. From the viewpoint of society as a whole, there is no pay-off, society would be better off if the education system were closed down.<sup>21</sup>

An interesting observation here is that it is possible to interpret the waste that is inherent in this signalling activity as yet another case of unproductive rent-seeking, a concept that has figured prominently in the development literature recently.<sup>22</sup> The higher productivity of talented individuals can be interpreted as a pure rent on their differential ability. However, without educational qualifications to signal their high ability, these individuals will not be able to collect the rents for themselves; the rents will accrue to society at large. But if they do spend resources on signalling, they will be able to collect their rent.

The idea that a system of signalling (that would indicate who is better or who is worse as a prospective employee) is costly, is important.

The question is who bears the cost; Arrow and the Filter theorists have rightly pointed out that



it is in the interest of the employer to make the education system, i.e., society at large to bear the cost. However, as the experience of many third world countries show, it is this signalling of differential talent (through the system of exams and evaluations) that is most suspect so far as the performance of the education system is concerned. Not surprisingly, therefore, there is no important employer (in India for example) be it the government, the public sector or the private sector who would trust the achievements certified by the universities to be a criterion for selection.

To say that the system of signalling is costly is stating the obvious, but to say that it is necessarily wasteful may not be realistic. This is because, society (or the employer) will have to select a way of linking the right person to the right job in any case. Blomqvist and others argue that if signalling did not exist the differential rent that now accrues to the individual who are differentiated favourably would have accrued to society itself. This is a clear fallacy, because society has no way other than through a signalling system to choose a right person for the right job. And without that, the question of the society keeping the differential rent to itself does not arise.

Signalling is costly, but, the right kind of signalling is a necessary information cost for efficiency, the point is again, who bears the cost?

The proposition that signalling allows the employee getting a higher earning to pocket the differential rent is again only part of the story. The rent that accrues because of the better man being chosen for a given job goes partly to the employer, and through the employer to society.

There is much in the signalling/screening approach that is of relevance to education policy in LDCs, especially the demand side for skilled labour, even though the formal work on this approach has not so far been directed specifically at LDC problems.

Towards the end of the 1960's, it became more difficult to disregard a new phenomenon that tended to cast doubt on the wisdom of continuing expansion of the higher education system in many countries : educated unemployment was becoming a major problem.<sup>23</sup> In conventional micro economic analysis, open unemployment of a factor of production will arise only when, for some reason, the market price of the factor is sticky and fails to adjust in response to excess supply. What the evidence in the late 1960s and early 1970s was suggesting, therefore, was that there were strong rigidities in the market for educated labour in LDCs. This problem, of course, had nothing to do with the question

whether education is best interpreted as a form of capital formation or a signalling/information device. In either case, stickiness in the wages of educated labour would create unemployment.

There are mainly two lines of inquiry that have involved the problems of wage rigidity, and their implications for policy. The first line accepts the rigid wages as exogenously given, and analyses the consequences of the economy as a whole. The second line of approach is found in labour economics and it deals with the structure of labour contracts under imperfect information, risk aversion, and transaction costs. Most of the work in these areas have potential relevance to the issues that arise in the market for educated labour in LDCs.

#### **STICKY WAGES AND GRADUATE UNEMPLOYMENT**

The literature that has dealt with the effects of exogenously given wage rigidities has typically used general equilibrium methods, and has generally postulated that education corresponds to simple human capital accumulation.

In one set of models, it has been assumed that the effects of the rigidity in the wages of educated

labour is to generate open unemployment. The equilibria postulated in these models are similar to that in the Harris-Todaro (1970) model of rural-urban migration : students will be attracted to the education system as long as the expected earnings of educated workers (taking into account the probability of unemployment) are high enough to justify the cost of getting educated.<sup>24</sup> Attention in these models is focused principally on two issues, that of subsidies to the private cost of education, and, the effects of a policy of deliberate job creation for graduates.

As far as subsidies are concerned, these models suggest, that, to reduce graduate unemployment the government should not give subsidies to higher education. The effect of subsidies is to lower the cost of education which means a larger influx of supply of educated labour. With saturated demand, a larger supply of educated labour will only mean, more unemployment in this group.

When it comes to the effects of a policy of deliberate job creation for graduates, the intuition is little less immediate than in the subsidy case. At first sight, the existence of graduate unemployment suggests that job creation should be a good idea, since there is a pool of unemployed graduates whose time

has zero opportunity cost. However, in the analytically similar cases of rural-urban migration, the result from the Harris-Todaro model tell us that we must be careful. In the Harris-Todaro model, if the government creates jobs for the urban unemployed, it creates a disequilibrium since there is an increase in the average income of all urban workers taken together. In response to this equilibrium, there will be migration of agricultural workers to the cities until the average urban earnings have once more fallen to the level of the rural wage rate. In the new equilibrium, we will have more urban unemployment than we had to start with, and there will be a fall in rural output.

The logic in the case of graduate unemployment is similar. Job creation for unemployed graduates will raise the expected earnings of graduates, and this will raise the number of people seeking education, this further aggravates the total unemployment problem.

#### **STICKY WAGES AND CREDENTIALISM**

In an equilibrium where wages are rigid and there is unemployment of educated labour, part of the earnings of employed educated workers is a rent : The wage is higher than the private opportunity cost of

being educated. Thus, one can think of it as a rent-seeking equilibrium, where the unemployed are thought of as engaged in competing for the rent-bearing jobs. However, the characterisation of equilibrium in rent-seeking models is very sensitive to the way it is assumed (explicitly or implicitly) that the rent-bearing assets or jobs are allocated.<sup>25</sup>

The "job-ladder" or "bumping model" developed by Gary Fields (1974) and Bhagwati and Srinivasan (1977) is one version of the rigid-wage model in which rent-seekers are not unemployed, but instead work in jobs for which they are overqualified. These models can be extended to analyse the much discussed phenomenon that goes under the name of "credentialism".<sup>26</sup>

Looked at from the viewpoint of the rent-seeking literature, the essential feature of these models is that even though there is rent-seeking because the wage-rates are above the private opportunity costs of acquiring the necessary educational qualifications, there is no unemployment. Those who are unsuccessful in obtaining a job for which they are qualified instead end up working in a job that could be filled by somebody less qualified. In equilibrium, the education activity expands until the average earnings of all educated

people (including those working in jobs for which they are overqualified) are just high enough to offset the private opportunity cost of becoming educated.

The extension of this model to incorporate the phenomenon of credentialism can be established by adding to it what Bhagwati and Srinivasan (1977) refer to as the "fairness in hiring" principle. Credentialism refers to a situation where there are several levels of jobs with rigid wages, and several levels of education, and where preference for hiring in a particular job is always given to the applicant with higher educational qualification. As the educational system expands, and provided wages remain rigid, this leads to a gradual process in which workers with increasingly sophisticated educational qualifications crowd out those with less advanced credentials in successively less complex and less well-paid jobs.

The analysis of the effects on economic efficiency, and of possible policies to reduce the waste inherent in this type of credentialism, is similar to that in the simpler rent-seeking models with educated unemployment.

## UNCERTAINTY, IMPLICIT CONTRACTS AND COSTLY MONITORING

Just as for the signalling/information models, there is much that sounds plausible in the analysis and conclusions of the models that are based on labour market rigidities and rent-seeking. However, one somewhat unsatisfactory aspect is that there is usually no explanation why these rigidities exist. This issue is of particular interest since in the recent literature on labour markets in industrialized countries, increasing attention has been paid to the possibility that what used to be considered non-competitive inefficient rigidities, are in fact efficient. Contractual devices (implicit or explicit) that arise in response to factors such as uncertainty and risk aversion, transaction costs, and high costs of monitoring workers performance.<sup>27</sup>

A key insight from this literature is that these types of long-term contracts may tend to involve less fluctuation in wages than one would expect in an auction market in which random fluctuations in supply and demand conditions would produce large fluctuation in wages. Similarly, depending on the preferences of workers and firms the best contract ex-ante may be one in which wages remain stable, but workers agree



(implicitly or explicitly) to temporary lay-offs (rather than wage cuts) in periods of low labour demand, with the contract giving the firm the obligation to rehire its laid-off workers when demand improves. We might thus, observe a market with stable wages and spells of unemployment, but it would be wrong to interpret this unemployment as being due to an involuntary excess supply of labour; instead, it should be interpreted as a pattern that results ex-post from a contract that represents the best way to share the costs associated with uncertainty and fluctuations in demand for the firm's products. Note also a policy implication. Trying to cut unemployment by reducing labour market rigidities is not in this case an efficient policy. This is because what appears to be rigid wages in this case should more accurately be interpreted a stable wages, consistent with an efficient division of risk between employers and workers.

How relevant are these considerations to the case of rigidities in the labour market for educated labour in LDCs? Many economists, like Blomqvist (1982, 1985, and 1986) argue that they are relevant to a substantial extent. They can be used to explain why wages of educated labour (both in government and private firms) remain

stable or rise according to well-defined schedules of pay increment, once a worker has been employed in a particular job. As Blomqvist notes "it is clearly not realistic to expect governments or firms in LDCs to react to the unemployment problem of recent graduates by allowing wages of already employed educated workers to vary from month to month in accordance with fluctuating supply/demand conditions in the overall market for educated labour" (Blomqvist, 1986, Vol.21, pp.161-180).

#### **Policy Implications and Future Research Areas on the Relationship between Education and Labour Market**

One somewhat discouraging conclusion has to do with the complexity of the subject of education and labour market policies. We have learned that in addition to producing simple human capital in the form of specific productive skills, education can also be an unproductive competition for the rents on individuals innate ability; or a sorting device that is productive in improving the way individuals are matched with jobs; or worst of all, a little bit of all three. We have also learned that the apparent inflexibility of wages for educated labour should not necessarily be interpreted as simple manifestations of the monopoly power of labour

unions or misguided minimum wage legislations : stable wages can also be interpreted as efficient institutional devices for redistributing the burden of risk and uncertainty, and for encouraging the formation of firm-specific human capital that comes about when workers remain in the same job for long periods of time.

In this era of uncertainty, what are the priorities for research?

One area that needs more attention is the signalling/screening approach. If the signalling/screening approach is more applicable to the system of higher education, and, serves both a sorting function and a skill-producing function, one important question for research is to quantify the relative importance of these roles.

With respect to the functioning of the labour markets, the only way to sort out the issue of non-competitive wage rigidities vs. efficient contracts would involve micro-level studies of labour markets.

Another aspect that ought to be looked into, is governmental interference in the labour market in

LDCs. Being the largest employer in most LDCs, the government's labour market policies has tremendous repercussions in the rest of the economy.

## NOTES

1. Edward Kalachek (1969), "The Youth Labour Market", Institute of Labour & Industrial Relations, University of Michigan, Wayne State University, U.S.A.
2. The wage fund theory is attributed to Adam Smith. See Adam Smith, "The Wealth of Nations"; Edwin Cannan, ed. (Methuen, London, 1961).
3. Malthus, Robert, "An Essay on the Principle of Population", 1st ed., MacMillan Reprint, 1909.
4. The Works of Alfred Marshall and John Bates Clark saw the introduction of a framework for analysing economic problems which still remains the cornerstone of current economic analysis. The framework was called the "marginal analysis".
5. The origins of the human capital theory can be traced back to the works of T. Schultz and G.S. Becker - the two foremost exponents of this theory. See T.W. Schultz (1961) "Investment in Human Capital. (A.E.R. 51 : pp.1-17) and G.S. Becker (1962) "Investment in Human Capital : A Theoretical Analysis". J. Polit Econ. 70 (5, Part 2), pp.9-49.
6. See the ILO Report on Colombia International Labour Office, "The Colombia Employment Programme", Geneva, ILO, 1971.
7. The job competition model has evolved from a "queue theory" that Thurrow had proposed earlier (Thurrow, 1969). The idea of a "queue" or vestibule in the labour market has appeared earlier. See, for example, M. Reder (1955; 1964; 1969).

8. Doeringer, F.B. and M.V. Piore, "Internal Labour Markets and Manpower Analysis", Heath Lexington, Massachusetts.
9. For a detail survey of SLM theories refer to G.G. Cain (1976), "The Challenge of SLM Theories to Orthodox Theories : A Survey", J. Econ. Lit.: 14 : pp.1215-57.
10. Technology is viewed as an endogenous variables in radical theories, it is "allegedly" manipulated by employers to further class interest rather than profits. See S.A. Marglin (1974) and Gordon, Reich & Edwards (1975).
11. Empirical work has found it difficult to measure all the productivity traits (Leonard, W. Weiss, 1971).
12. See Jeffrey, E. Harris (1975) for a more extended rationalization, on neo-classical terms of internal (within firm) labour markets.
13. For a preliminary survey of job search theory, see Lippman, S. and McCall, J. (1976) "The Economics of Job search", Economic Inquiry.  
  
Also see Stigler, G. (1962), "Information in the Labour Market" Journal of Political Economy. An empirical survey of job search theory is given in Barnes, W.F. (1975) "Job Search Models, the Duration of Unemployment and the asking Price of Labour", Journal of Human Resources.
15. One may question the importance of discount rates, given the short duration of most spells of unemployment. Of course, when "job-search" means "career choice" the discount rate is important.
16. For an elementary exposition of the principles involved in this type of calculation, see Psacharopoulos and Woodhall (1985), Chp.3.
17. See Blaug's work in this regard. Blaug (1976), Section 5. Blaug's conclusion at that time

was that "After ten years of work on earnings functions, all we have is a dim light at the end of the tunnel...."

18. See Arrow (1973); Spence (1973); Stiglitz (1975). Spence (1981) contains a very readable and concise summary of several versions of the signalling/screening hypothesis.
19. Let  $\underline{b}$  be the (lifetime) productivity of a B-type individual, and  $\underline{s} < \underline{b}$  the productivity of an S-type of person; let the share of B-type persons in the population be  $\underline{p}$ . Then the expected productivity  $\underline{W}^e$  of a randomly selected person is -

$$\underline{W}^e = \underline{p} \times \underline{b} + (1-\underline{p})\underline{s}$$

Competition among employees would force them to pay  $\underline{W}^e$  to all workers, since (by assumption) they cannot distinguish between B and S-type workers. We have, by construction,

$$\underline{b} > \underline{W}^e > \underline{s}$$

20. Let  $\underline{e}$  be the cost to a B-type worker of getting educated, and suppose  $\underline{b} - \underline{s} > \underline{e} > \underline{b} - \underline{W}^e$ . In this case we have two possible equilibria, one in which all B workers get educated, and B and S workers are paid  $\underline{b}$  and  $\underline{s}$  respectively, and one equilibrium in which no one gets educated, with everybody being paid the wage  $\underline{W}^e$ . For further discussion, see Blomqvist Ake, G. (1982) and Blomqvist & Sharif, M. (1986).
21. Note that output per capita in this case is  $\underline{W}$  whether or not anybody gets educated. In the equilibrium where all B-persons get educated, consumption is reduced because some of society's output is spent on education.
22. See, for example, Krueger (1974); Bhagwati (1982); Blomqvist and Mohammad (1986). For a collection of essays on rent-seeking concept in other contexts, see Buchanan, Tollison, and Tullock (1980).
23. An early analysis of this phenomenon for the case in India, is contained in Blaug et.al. (1969).

24. Models of this kind have been used by Chauduri and Khan (1984); Blomqvist (1982); Bhagwati and Hamada (1974).
25. See Blomqvist and Mohammad (1986).
26. A provocative discussion of the credentialism phenomenon from a non-economists point of view is contained in the book of Dore (1976).
27. For a survey of the literature, see Rosen (1986).



## CHAPTER III

## THE MARKET FOR EDUCATED LABOUR IN INDIA

### INTRODUCTION

The labour market for the educated has attracted attention and formed the focus of many studies, especially from the fifties when unemployment of the educated showed an increase. There are many studies, both at the macro and the micro level, which address the question of employment and unemployment pattern of the educated in India. The aim of this Chapter is to summarise and synthesize the evidence from the studies on education and labour market in India.

More specifically the aim of the Chapter is -

- 1) to provide an empirical picture of employment and unemployment of the educated in India; and
- 2) to highlight the salient features of the conclusions arrived at by the studies on the theme of employment and unemployment of the educated in India.

## LABOUR MARKET IN INDIA

Studies on the labour market generally centre around the themes of (i) labour supply; (ii) labour demand; and (iii) wages (Singh and Papola, 1975). Given the persisting tendency of excess supply in the labour market, many a time the studies on supply of labour tend to focus on unemployment in general. Studies have shown that chronic labour surplus is a characteristic of regions with a low level of economic development.

More of the studies on demand for labour are for specific industries at micro level or for specific categories of manpower at macro level. The demand projections are in general for the highly educated categories of manpower and there too mainly for the professional and technical categories.

Studies on wage differentials form another aspect of labour research in India. These studies show that surplus labour, low wage levels and low levels of economic development are interlinked in the Indian labour market. Studies on labour mobility (Johri, 1978) showed that unskilled workers move across industries and skilled workers within industries.

Productivity, collective bargaining, labour relations, rural-urban migration, duality of urban labour markets have been the focus of economists in recent studies on the Indian labour market. Economists have found an inter-connection between employment opportunities and productivity on the one hand and problems of migration and duality on the other (Banerjee, 1985).

#### **LABOUR MARKET FOR THE EDUCATED**

Labour market research as such is yet to mature in India. Singh and Papola (1975) comment that "research in labour economics has grown neither at a warranted rate nor always of high quality."

The labour market for the educated has received less attention even within the area of labour research. Studies in the field of economics of education has centred around either estimating rates of return or making manpower projections. Studies by Harberger (1965), Nallagounden (1967), Kothari (1967), Husain (1967), Blaug, et.al. (1969), Chaudhury and Rao (1970), Paul (1972), and Tilak (1987), showed positive returns to investment in education, which is greater than the market rate of interest.<sup>1</sup> Earnings and earning differentials

form the core of the analysis of rates of return to education. Earnings reflect employment of an individual. However, studies<sup>2</sup> on rates of return were not directly addressed to the question of employment or unemployment of the educated.

Manpower projections exercises were more directly related to the labour market situation in India. This formed a major part of the studies on labour market analysis for the educated in India. Manpower projections at the national level (Burgess, et.al., 1968) is one of the major comprehensive works in this area.

The major drawback of these manpower projections in India was that it was centred around high-level manpower. These studies, therefore, only look at part of the labour market process. The other major area touched upon by the labour market studies is on unemployment and employment of the educated.

#### **SOURCES OF LABOUR MARKET INFORMATION FOR EMPLOYMENT AND UNEMPLOYMENT IN INDIA**

Statistics on labour market information in India can be divided into three groups, viz.,

- I. Statistics relating to the size and structure of the labour force.
- II. Statistics relating to the hours of work, wages, industrial relations and productivity.
- III. Educational statistics relating to persons passing out technical and professional courses including general university education.

We are here only concerned with the first source of information.

#### **STATISTICS RELATING TO THE SIZE AND STRUCTURE OF LABOUR FORCE**

The main sources of data on size and structure of labour force are:

- i) Decennial population Census conducted by Registrar General of India.
- ii) Sample Surveys conducted by the National Sample Survey Organisation (NSSO) on employment and unemployment.
- iii) Employment Market Information (EMI) - Programme of the Directorate General of Employment and Training (DGE&T) and National Employment Service (NE.S) also of DGE&T.

iv) **Other Sources:**

- a) Economic Census and follow-up surveys of the unorganised segments conducted by the Central Statistical Organisation (CSO).
- b) Degree-Holders and Technical Personnel (DHTP) - Survey of the Council of Scientific and Industrial Research (CSIR).
- c) Annual Survey of industries conducted by CSO.
- d) Employment data as a by-product of labour administration.

**i) Population Census**

India has now more than a hundred years old uninterrupted tradition of population Census undertaken every ten years. It may not be an exaggeration to say that Census is the most important source of information on the employment status of the population and the distribution of those employed by occupation and industry. The village and tehsil level information is published in primary Census abstract.

At the district, city, State and all-India level Census provides information on workers in much more detail by cross-classifying them by age, sex, education, occupation, industry and class of worker (i.e., employer, employee, etc.). Information is tabulated separately with rural-urban break-up.

Although the Census are being conducted on an all-India basis since 1872, it has not been possible to compare these data with the data made available from other sources because of the differences in the concepts and definitions used. In 1981, the dichotomy of worker/non-worker of 1961 and 1971 was discarded and instead trichotomy as main worker, marginal worker and non-worker was adopted.<sup>3</sup> This, to a great extent, makes the data comparable with 1961 Census and 1971 Census. In 1961 Census an attempt was made to collect and compile data on unemployment. In the 1981 Census a new item 'seeking/available for work' was included. This provided data on unemployment. The results of the 1981 Census exercise have been tabulated by age, sex and educational qualifications. A table on non-workers has also been published by cross-classifying them by age and main activity (e.g., student, household worker, old age pensioners, etc.)



## ii) NSSO Surveys on Employment/Unemployment

NSSO has a long tradition of conducting surveys on employment and unemployment at periodic intervals beginning in the early fifties. On the basis of recommendation of an "Expert Committee on Unemployment" in 1981, a stable conceptual framework has been adopted in the current NSSO quinquennial surveys on unemployment and employment. So far, four quinquennial surveys have been conducted using this stable framework of 1968. These surveys are, the 27th round (1972-73), 32nd round (1977-78), 38th round (1983-84) and the 43rd round (1987-88).

Data on employment and unemployment brought out by the NSSO is fairly reliable. With the availability of data by three approaches, viz., usual status, weekly status, and daily status,<sup>4</sup> it is possible to work out the incidence of underemployment. It also provides distribution of workers by educational level, industry and occupation codes and nature of work.

A serious limitation of NSSO data is that results are available only at the State level and upwards, and as such, cannot be used for planning at district, block/village level.

Another major difficulty with NSSO data on unemployment is that it is not possible to develop a time series based on this data. Since concepts used have changed between different rounds, and thus data are not comparable.

### iii) DGE&T

The Directorate General of Employment and Training (DGE&T) has been collecting statistics on the level of employment and likely vacancies to occur for the organised sector of the economy under its Employment Market Information (EMI) programme. The programme covers - (a) all establishments in the public sector (except defence), and (b) non-agricultural establishments in private sector : employing 25 or more people on a compulsory basis and establishments having 10-24 workers on a voluntary basis. The EMI data do not cover self-employed, part-time employees, agricultural and allied occupations in the private sectors, household establishments, establishments employing less than 10 workers in the private sector and defence forces.

Employment data are collected and classified according to standard industrial classification based

on international standard classification of occupations adopted by ILO in 1958.

From 1966 onwards the DGE&T started collecting information on the educational qualification of employee in some selected occupational categories.<sup>5</sup> The educational classification adopted by the DGE&T is as follows:

General educational qualifications are divided into -

- a) below matric;
- b) below graduate and above matric; and
- c) graduate and post-graduate in arts, commerce and science.

Professional qualifications are divided into graduate, post-graduate and doctorate in -

- a) engineering and technology;
- b) medical;
- c) education;
- d) agriculture;
- e) business administration; and
- f) Others.

These data are brought out in the publication entitled, "Occupational-educational Pattern in India".

In addition to the EMI programme, the DGE&T maintains a live register, at the employment exchange level, of those who seek employment. The yearly publication of the DGE&T entitled "Employment Review" brings out data pertaining to job-seekers and placements.

However, employment exchange data has several limitations. Some of these are as follows:

- a) Incomplete registration of those employed
- b) Multiple registration,
- c) Registration of those already employed, and
- d) The urban bias of the employment exchanges.

#### **iv) Other Sources**

Annual Surveys of Industries (ASI) conducted by the Central Statistical organisation provides information on the industrial employment in India. The survey covers, on a Census basis, factories which utilize power and employ 50 or more persons, and factories employing 100 or more persons but not using power.

The Council for Scientific and Industrial Research (CSIR) maintains a national register from 1948 onwards. Those holding a degree in S&T or a diploma in E&T are expected to register. From 1957, an 'Indians Abroad' section was published in a bulletin called 'Technical Manpower'.

The other organisations engaged in collecting data on employment/unemployment are the Planning Commission, the IAMR, the Labour Bureau Shimla etc.

As one can see, there are a multiplicity of agencies to collect data on employment and unemployment in India. However, data comparability is a major problem in India because of the differences in the concepts and definitions used.

#### **THE GROWTH OF UNIVERSITY ENROLMENT AND UNEMPLOYMENT**

University enrolment in India has expanded at a phenomenal rate, and higher education has absorbed an increasing fraction of India's total education budget. According to studies conducted by IIEP (Panchamukhi, 1984, p.1) enrolment in Indian universities increased at the rate of 10 per cent per annum between 1950-51

and the mid-1970s. Other data indicate a 9.8 per cent increase between 1970 and 1975 (UNESCO, 1980). Since the mid-1970s, the enrolment increase has continued at a slower rate, rising at a 3.7 per cent rate in the period between 1975 and 1979 (UNESCO, 1984). By 1979, more than 5.3 million students were enrolled in higher education. Of the total enrolment, only 16 per cent was in the rural areas in the mid-1970s, and less than one-fourth were women, although this latter figure rose steadily throughout the 1970s, reaching 26 per cent in 1979. As a per cent of the 20-24 years old age cohort, university students represented 6.2 per cent in 1970, and 8.7 per cent in both 1975 and 1979.

Growth of employment in India has been much slower : in 1974, only 19.3 million Indians were employed for salaries and wages (700,000 in agriculture), and of the total, only 2.2 million were women. By 1983, the number had increased to 24 million, of which only 3 million were women. This represents an annual rate of increase of 2.4 per cent overall and 3.5 per cent for women (ILO, 1984). Unemployment in recent years is increasing much more rapidly than employment : According to the International Labour Organisation, unemployment in 1979 was 12.4 million compared to employment of 21.9

million; by 1981, employment had increased by 1 million but unemployment had risen to 15.1 million, or by almost 2.7 million (ILO, 1984; Tables 3 and 9)

These numbers are remarkable not only because of the magnitude of the unemployment figures relative to employment (approximately 38 per cent of workers were officially unemployed in 1981), but also because apparently a very high percentage of the employed in India are university educated, even though that group represents a tiny fraction of the adult population. In 1971, according to ILO statistics, 1.1 per cent of those Indians over 25 years of age had some post-secondary education (4.2 per cent in urban areas compared with 2.6 per cent in 1961). This translates into 2.5 million people in 1971, of whom 1.9 million were in urban areas. If we assume that this number doubled between 1971 and 1981 to 5 million, and all those with post-secondary education entered the "employable" labour force, this group would represent 14 per cent of the 36 million Indians estimated by the ILO to be in that labour force.

#### **THE CENSUS EVIDENCE ON EMPLOYMENT**

Between the Census period of 1971 and 1981, the work force (defined in terms of main activity) increased

from 176.4 to 222.52 million, i.e., at the rate of 2.34 per cent. The work force accounted for 33.45 per cent of the population in 1981 and 33.06 per cent of the population in 1971.

**Table 1**  
**Sectoral Distribution of Workers (%)**

	1971		1981	
	Male	Female	Male	Female
Primary	70.22	83.01	66.22	81.59
Secondary	11.48	7.66	13.91	8.94
Tertiary	18.30	9.33	19.87	9.06

**Source : Census of India, 1981**

Between the two Census periods, there is a decline in the relative share of employment in the primary sector. Employment has risen in the secondary and tertiary sector. The Increase is sharper in the case of males especially in the secondary sector. The decline of the share of the primary sector is mainly due to a decline in employment in the categories of cultivators and agricultural labourers.



Again, according to the 1981 Census, more than 80 per cent of workers in the rural areas are engaged in primary activities as opposed to nearly 13 per cent in the urban areas. In the urban areas more than 50 per cent of the workers are employed in services sectors and more than one-third are in the secondary sector. Non-household industry, trade and commerce and other service sectors account for more than two-thirds of employment in the urban areas (Table 2).

In the urban areas more than 45 per cent of workers are in occupational division 7, 8, and 9 (production and related workers, transport, equipment operators and labourers) (Table 2).

**Table 2**  
**Distribution of Main Workers by**  
**Industrial Category (1981) (%)**

	Rural	Urban
1. Cultivators	51.0	5.1
2. Agricultural Labourers	29.9	6.0
3. Livestock, Forestry, etc.	2.5	1.8
4. Mining & Quarrying	0.5	1.9
5. (a) Household Industry	3.1	4.9
(b) Other than Household Industry	3.4	24.7
6. Construction	1.0	4.0
7. Trade & Commerce	2.3	19.6
8. Transport, Storage and Communications	1.1	9.0
9. Other Services	4.9	23.0
<b>Total</b>	100.0	100.0

Source : Census of India, 1981

#### EDUCATIONAL PROFILE OF THE EMPLOYED

According to the 1981 Census 33.45 per cent of the workers were categorised as main workers and another 3.32 per cent as marginal workers.

The persons who are engaged in wage-employment in the working population (1981 Census) constitute 38.2 per cent. Of the wage-earning employed, only 25 per cent are in the organised sector and in the organised sector two-thirds are in the public sector.

More than 75 per cent of the people who are self-employed are engaged in agriculture and allied activities.

Table 3

## Educational Composition of Workers

Workers by Educational Level (%)

	1971		1981	
	Rural	Urban	Rural	Urban
Illiterates	68.8	31.6	64.5	30.4
Literates	9.7	11.2	9.3	8.2
Primary	12.9	18.0	13.2	16.5
Middle	5.4	15.1	6.6	13.2
Matric	2.6	16.8	5.2	21.2
Diploma	0.3	0.7	0.3	1.1
Degree & above	0.3	6.6	0.9	9.4
<b>Total</b>	100.0	100.0	100.0	100.0

Source : Census of India, 1981

The pattern of employment of the educated between rural and urban areas is similar in both Census years (Table 3)

- a) Relative share of the illiterate in the rural labour force is more than double that in the urban labour force.
- b) For any given level of education, the relative proportion of workers in the urban labour force is higher than that in the rural labour force.
- c) Upto the primary level of education, the relative share of workers between urban and rural areas is more comparable.
- d) Persons educated beyond the primary levels are relatively more in urban areas. This may partly indicate the migration pattern of the workforce from rural to urban areas.

In the case of urban workers, there is a decline in the relative proportions of illiterates, literates, primary and middle level graduates between the two Census periods. From matriculation level onwards,

there was a sharp rise in the relative share of the labour force in the urban areas in 1981. These comparisons show that

- a) the urban labour force in India have improved their educational levels over the period under consideration;
- b) this increase is sharper in the case of workers with educational level matriculation and above. In fact, the relative change was the highest in the case of workers with graduate level of education. Such a pattern of change reflects the educational preference pattern of the employers in the urban labour market in India.

#### **EMPLOYMENT IN THE ORGANISED SECTOR**

Employment in the organised sector accounts for nearly 10.3 per cent of the total employment.<sup>6</sup> Over the last two decades ending in 1981, employment in this sector has increased from 12.09 to 22.88 million, i.e., at an annual compound growth rate of 3.24 per cent.

**Table 4**  
**Employment by Industrial Division (%)**

	1971	1981
Agriculture, Hunting, etc.	7.03	5.77
Mining and Quarrying	5.62	4.14
Manufacturing	28.03	27.43
Electricity, Gas and Water	2.18	3.14
Construction	6.97	5.07
Wholesale and Retail Trade	2.01	1.72
Transport and Communication	14.92	12.10
Services	33.12	41.61
<b>Total</b>	100.00	100.00
Number (millions)	12.09	22.86

Source: **Statistical Outline of India, 1984, Tata Services Ltd., Department of Economics and Statistics, Bombay, 1984.**

Over the two decades, the relative share of employment in all sectors except services has declined. Apart from the services sector, other important sectors in terms of employment are manufacturing and transport. These three sectors together accounted for nearly 76

per cent of the total employment in 1961. The same share in 1981 was more than 82 per cent (Table 4).

Between the sectors (public and private), the public sector witnessed a higher growth rate in employment and it improved its share in total employment. In 1961, the public sector accounted for 58 per cent of the total employment in the organised sector. By 1981, this share had increased to 68 per cent. Employment in the public sector is service oriented while employment in the private sector is manufacturing sector-centred. In 1981, 51 per cent of total public sector employment was in the service sector and 60 per cent of total private sector employment was in the manufacturing sector.

#### **UNEMPLOYMENT OF THE EDUCATED**

The Second Five Year Plan (1956-61), for the first time provided a methodology of estimating unemployment in the subsequent Plan periods and also attempted a fairly detailed estimate of unemployment in India.

The Census of India, the NSS and the DGE&T collect data on unemployment in India at the macro

level. Now let us take a glance at the figures provided by these resources.

The incidence of unemployment by levels of education as per the 1971 Census is given in Table 5; the Table shows unemployment as a percentage of the respective category in the workforce. The rate of unemployment increases with the level of education; it reaches a peak at the diploma level and then comes down at the degree level. The curve depicting unemployment and levels of education takes an inverted 'U'-curve. This means that it is the graduates of the middle level education who are most hit by the unemployment problem (Psacharopolous, 1973; Psacharopolous and Sanyal, 1981). The inverted 'U'-curve is observed in many less developed economies. In developed countries, the highest unemployment rates are typically found among the less well-educated with a downward sweeping L-shaped curve as the level of education increases.



Table 5

## Employment by Levels of Education, 1971 (000)

Educational Level	Unemployment	% of Unemployed Workforce in the Respective Category
Illiterates	820	0.72
Literates	238	1.32
Primary	469	1.9
Middle	695	5.3
Matric	560	5.7
Diploma	82	11.8
Higher Educated	178	7.3
<b>Total Educated</b> (Matric & above)	12,894	6.36

Source : Census of India, 1971

### THE NSS EVIDENCE

The National Sample Surveys collect data on unemployment on a regular basis. One cannot, however, derive a comparable time series on unemployment from NSS data because of the differences in the concepts used in subsequent rounds of the survey.

Table 6  
Educated Unemployment (%)

	<u>1972-73</u>		<u>1978</u>	
	Male	Female	Male	Female
<b><u>RURAL</u></b>				
Matriculates	8.9	12.1	9.8	15.4
Graduates & above	17.3	19.1	17.6	24.9
<b><u>URBAN</u></b>				
Matriculates	5.9	6.1	7.3	9.4
Graduates & above	6.8	9.5	8.2	15.7

Source : NSS Reports (27th and 32nd Rounds)

A picture of the educated unemployment as depicted in the NSS rounds is given in Table 6. Figures from these two Tables are not strictly comparable. Therefore, inferences drawn from Table 6 should be seen in the light of this information.

Table 6 shows that rate of unemployment is higher in the urban areas. Rural women are worst hit in terms of unemployment in India. Between the 27th and 32nd rounds, unemployment among females has increased at a faster rate in both rural and urban areas.

The Seventh Five Year Plan (1985-90) makes use of the results of 38th NSS round, unemployment (usual status) in the age group 15+ is 8.77 million. Unemployment among matriculates and university graduates and above was 3.7 million in 1985.

### THE DGE&T EVIDENCE

Based on the live registers of employment exchanges, the DGE&T gives data on educated unemployment.

Table 7

#### Number of Job-Seekers Registered with Employment Exchange (in lakhs)

December End	No. of Exchanges	Matric	Hr. Sc.	Graduates & Post-Graduates	Total
1961	325	4.63 (78.5)	0.71 (12.0)	0.56 (9.5)	5.90 (100.0)
1971	437	12.97 (56.5)	6.05 (26.3)	3.94 (17.1)	22.96 (100.0)
1981	581	50.08 (55.5)	23.25 (25.8)	16.85 (18.7)	90.18 (100.0)
1984	666	71.26 (57.8)	30.82 (25.0)	21.23 (17.2)	123.31 (100.0)
1986	741	94.46 (57.4)	41.45 (25.2)	28.61 (17.4)	164.52 (100.0)

Source : CMIE, Basic statistics relating to the Indian Economy, August 1988

As is evident in Table 7, the number of educated unemployed increased from 5.9 lakhs in 1961 to 164 lakhs in 1986. Absolute increase among the unemployed took place in all the categories, but the compound rate of increase among graduates and post-graduates was faster than among matriculates. As a consequence, among the educated unemployed the proportion of matriculates has gone down from 78.5 per cent in 1961 to 57.4 per cent in 1986, while that of graduates and post-graduates has risen from 9.5 per cent in 1961 to 17.4 per cent in 1986. This only highlights the fact that in order to secure a job, there is a tendency towards over-education in India.

Studies (Blaug et.al., 1969; Panchamukhi, 1975; Kothari, 1978; and Varghese, 1982, 1988) show that there is an upgradation of 'devaluation' of educational qualifications in the labour market whereby jobs previously occupied by the lower level educated are now shared by persons with higher levels of education.

The increase in unemployment among the more educated may be partly due to the fast expansion of the higher education system, whereby the absolute numbers of graduates turned out by universities has gone up.

## EXPANSION OF THE HIGHER EDUCATION SYSTEM

Education is one of the most well developed social services in India. In the course of the last three decades, the educational system in India has recorded phenomenal growth. The number of students in schools, colleges and universities in India is more than the total population of Canada, France, Norway and United Kingdom taken together. For every five persons there is one student in Indian educational institutions. With its size and growth the educational sector has become so important in the national economy that there are now strong linkages between this sector and the economy.

In India higher education caters to the needs of nearly four per cent of the entire population in the age-group 17-23 years. Higher education has grown much faster than National Income itself. More than Rs.5 out of every Rs.100 coming out of the entire service sector of the country go back to higher education. While Rs.4 out of every Rs.100 of National Income are spent on education; higher education claims a quarter of this entire education budget. In comparison with other levels of education also, the growth in higher education is very impressive.

Table 8

**Multiples of Growth,  
(1950-51 to 1973-74)**

	Enrolment %	% to corresponding Age-Group	% of Outlay to National Income
Lower Primary	3	2	
Higher Primary	5	3	2.1
Secondary	7	4	
University	10	8	4.0

**Source : Panchamukhi, 1978**

How is that even after nearly three decades of Planning there is still a long way to go regarding the fulfilment of the constitutional commitment about universal primary education, whereas the enrolment targets in higher education are over fulfilled? This is so despite the fact that the production of a graduate costs sixteen times more than completion of the first level education, and that the rate of return on the first level education is found to be higher than the social rate of return on higher education (Panchamukhi, 1978).

## ANATOMY OF EXPANSIONISM

In India there are many considerations which have guided the expansion in higher education. Some of the more important considerations are -

- a) provision of equal higher educational opportunities leading to equality in the access to employment opportunities and hence in income. This may be termed as the equity objective.
- b) provision of adequate manpower of requisite skills for the country's economic development. As Panchamukhi says, "In their enthusiasm to avoid manpower shortages in the course of economic development, the planners overestimated the manpower requirements and hence implicitly supported the open door policy in higher education. Sometimes, the estimates of manpower needs were based upon too unrealistic sectoral rates of growth which have not been realised at all. This has led to unemployment, misemployment among the educated."

Higher enrolments have also been caused by some factors which may be labelled as push and pull effects. For instance, increase in the number of school final pass-outs, coupled with heavy subsidisation of higher education and liberal assistance to the students of backward communities, etc., have exercised a push effect on enrolments.

The development strategy adopted by the country and the widening of the scope of the governmental activity have caused a pull effect on enrolments. The public sector has significantly expanded its scope in India and its requirements for clerks and administrators has increased accordingly. The Class I and Class II posts with the Central Government requiring higher education, constitute nearly 3 per cent of total Central Government employment. 51 per cent of total employees hold Class III posts, in the case of which recruitment preference was shown to the persons with higher educational qualification (Panchamukhi, 1978).

#### **UNCERTAIN BASIS FOR PLANNING**

Objections can be raised against the logic and methodology of estimating the precise manpower requirements on the basis of aggregate and sectoral



rates of growth. The IAMR attempted to project demand for engineers by regressing on National Income growth. This implies that employment is the by-product of growth. But statistical exercises conducted by Panchamukhi (Panchamukhi, 1978) reveals that the change in general employment is not significantly related with the rate of growth of income of a region. (Table 9)

**Table 9**

1. **Problem** : % change in employment ratio (NSS 21st round over NSS 17th round) = F % (% change in state per capita income (y) during the period)
2. **Data** : Inter-state data, NSS data, 14 States
3. **Results** :  $y = a + bx$   

$$= - 3.7993 + 0.6346$$

$$(- 1.99) \quad (2.7026)$$

$$R^2 = 0.3783$$

$$F = 7.30$$
4. **Interpretation** : There does not seem to exist any significant high relationship between economic growth and a general employment situation.

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**Source : Panchamukhi, 1978**

Even though labour force, level of economic development (per capita National Income), and investment have together been able to explain (more than 99%) of the variation in employment of graduates and also non-graduates, the per capita National Income has not proved to be a statistically significant explanatory variable.

#### **EMPLOYMENT AND UNEMPLOYMENT OF THE EDUCATED : SURVEY OF SOME INDIAN STUDIES**

The first comprehensive analytical study on unemployment of the educated in India was made by Blaug et.al. (1969). Making use of the available information in this area from the Census, NSS, DGE&T, and other studies, they estimated the extent of educated unemployment and probed into the reasons for unemployment of the educated in India. According to them, supply factors, i.e., over-expansion of the educational system together with the rigidity of the labour markets are mainly responsible for widespread unemployment of the educated in India. To them, the only solution was to follow a policy of flexible labour markets. In their own words, "the causes of graduate unemployment in India run deep into the functioning of Indian labour markets, the hiring practices of the government, the institutions

of joint family and the personal values of educated Indians. The high returns in the past produce an upsurge in demand for education and expansion acquires a momentum which cannot easily be resisted (Blaug, et.al., 1969, p.250).

The report of the Committee on Unemployment (Planning Commission, 1973) sponsored many studies on unemployment and employment of the educated. A study in West Bengal on the problem of unemployment in selected urban and rural areas showed that, suburban as well as peripheral urban areas have a smaller incidence of unemployment than do metropolitan areas. 94.23 per cent of the educated employed were under 29 years of age. 56.59 per cent of the educated unemployed were concentrated in the 20-24 year age group. Most of the unemployed were looking for clerical and teaching jobs.

A study on employment and unemployment in some regions of Assam (Planning Commission, 1973) was based on a sample survey of 1402 households. The results showed that women had a higher incidence of unemployment. Secondary school graduates faced the maximum incidence of unemployment (58.4%). This is in conformity with the general pattern of unemployment of the educated in India.

Deshpande's study of the Bombay labour market (Deshpande, 1979) revealed that unemployment is less among females for many given levels of education except matriculation. Among the males, incidence of unemployment is highest at middle-level education. In case of females, the peak point of unemployment is at matriculation level. (Table 10)

**Table 10**

**Unemployment by Education in Greater Bombay (%)**

	Male	Female
Illiterates	21.26	17.50
Literates	06.02	03.13
Primary	33.01	18.75
Middle	15.73	45.00
Matric	00.58	00.62
Diploma	01.46	08.13
Non-Technical Degree	01.07	00.62
Higher Qualifications	00.29	00.00

**Source : Deshpande, 1979**

A study based on Diploma-holders and Technical-personnel data, by Prasad (1979) found that unemployment was less in the case of medical graduates (for both sexes) and maximum male unemployment was among engineering graduates. In the case of females, M.Sc. graduates faced the highest incidence of unemployment. This study showed that first divisioners faced less incidence of unemployment.

Rajeshwari (1984) examined the relationship between demand for and supply of scientific and technical manpower. The involved and detailed quantitative analysis comes to the conclusion that India has an oversupply of such manpower, which the present state of industrial development is unable to utilize optimally.

In the eighties, the IIEP had undertaken studies specifically to ascertain the pattern of employment and unemployment of the educated (Bose, et.al., 1983; Panchamukhi, 1987; Singh, et.al., 1985; Borkar and Kurulkar, 1987).

These studies, in general, attempt to understand why students choose their subjects of study, what students perception of the labour market are, how graduates do or do not find jobs, how long they are unemployed,

what kind of jobs graduates do find, including the salary they obtain, and how the characteristics of the unemployed differ from those of the employed.

These studies based on selected samples revealed that the incidence of unemployment is more in the rural areas and semi-urban areas than in the metropolitan regions. The rate of unemployment is highest among the arts graduate and least in the case of professional graduates. The study also showed that average earnings for graduates in education and other professional degrees was higher than the average earnings of arts, science and commerce graduate. (Table 11 and 12)

**Table 11**

**Unemployment by Faculty (%)**

	Bombay	Karnataka	Marathawada	West Bengal
Arts	45.2	87.4	69.2	42.2
Science	31.4	82.4	69.4	32.0
Commerce	26.0	80.6	60.0	25.8
Professional	21.9	40.0	12.1	-
<b>Total</b>	31.0	80.5	66.0	N.A.

Source : Varghese (1986c)

Table 12

**Average Monthly Earnings for Graduates (Both Sexes),  
By Subject of Study, 1981 (Rs.)**

Subjects Studied	Bombay	Karnataka
Arts	756	490
Science	738	642
Commerce	760	610
Education	777	662
Other Prof	1155	912

Source : Panchamukhi, 1987

There are numerous studies (see bibliography) which could not be individually listed in this Chapter. We can, however, provide a summary of the general conclusions arrived at by many of the studies in this area.

The general conclusions that emerge from these studies on the unemployment of the educated are as follows:

- a) Unemployment is a function of income-class. Incidence of unemployment is higher among the middle-class households than lower income groups.

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- b) Incidence of unemployment is the highest among arts graduates followed by science and commerce graduates.
- c) First-time entrants into the labour force face higher incidence of unemployment.
- d) Most of the unemployed are in the age-group of 16-25.
- e) Third divisioners constitute the highest proportion of the unemployed. They constitute more than two-thirds of the registrants in employment exchanges.
- f) Most of the unemployed matriculates and undergraduates aspire for clerical jobs. Graduates and post-graduates in general education look for jobs in administration and pedagogy. Graduates in professional/technical faculties prefer jobs related to the area of their study.
- g) There exists open competition between university graduates and matriculates for the same job in many areas. And many a time the matriculates lose in this race.
- h) Within the professional categories medical and agricultural graduates face the lowest level of unemployment.



- i) Incidence of unemployment among females is higher than that of males for any given level of education.

### **DURATION OF UNEMPLOYMENT**

There are two different aspects of unemployment : incidence and duration. Unemployment incidence is the percentage of unemployed in a given population group. It is the "unemployment rate". On the other hand, unemployment duration has a calendar time attached to it. It usually takes the form of "absorption rates X years after graduation", or, simply mean years or months unemployed since graduation.

Studies conducted in India has shown that the duration of unemployment experienced by the educated has increased over the years.

Studies conducted by DGE&T (1962, 1963, 1964, 1976) Planning Commission (1973), Kothari (1978), Prasad (1979) and IIEP (1981) have shown that -

- a) The incidence and duration of unemployment has increased over a period of time.
- b) Waiting time for graduates with general education was more than graduates with professional/technical education.

- c) Waiting period was longest in the case of arts graduates.
- d) For any given category of manpower or faculty of specialization, waiting period was less in case of persons with higher levels of education.
- e) Waiting period was shorter also in the case of persons with first division in comparison with others who secured only a second or third division.
- f) Duration of unemployment is relatively longer in the case of female graduates.

#### **THE ROLE OF THE PUBLIC SECTOR IN INDIAN HIGHER EDUCATION EXPANSION AND EMPLOYMENT**

A survey of the evidences presented above, clearly points out that the public sector in India has a major role to play in making the connection between higher education and jobs more "efficient", as a means of reducing unemployment of the educated.

We have shown that higher education has expanded rapidly in India despite high levels of unemployment among graduates, long waiting times for first jobs, when they are finally obtained, that are generally

not much more than high-level clerks. Further, the employment market for the educated is tightly tied to the expansion of the public sector itself.

Can we say that the principal purpose of university expansion has been to increase capital accumulation (economic growth) by providing high level productive manpower for the private sector? It would be difficult to justify the last twenty years of university expansion on that basis. However, the public sector in India is also responsible for production and capital accumulation.

It could be that the State needs high level skills for technical and managerial production roles. Again, observing the type of jobs obtained by the graduates in the early 1980s, it is difficult to explain the massive expansion in generalist degree if the goal were to increase rapidly the technical capacity of State-managed production. In addition, the enrolment in engineering and technology rose by only 2.2 per cent annually in the ten years (1963-73) while overall enrolment was rising at more than 10 per cent annually (Bose, et.al., p.59).

Rather, it appears that the principal reason for rapid university expansion has been political,

not economic. As the IIEP sponsored study on West Bengal States : "The growth of education in our country has been mostly in response to social demand.... and has rarely taken stock of its position in relation to needs of economy or say of material development" (p.58).

However, it is not completely correct to say that the State has simply responded to social demand. As the same (West Bengal) study points out, in that region, to achieve the objectives of democratization in higher education, the government initiated generous scholarship programmes for lower social class groups, lower castes, and women. In the Marathawada study it was pointed out that the differences in the employment opportunities for lower castes and higher castes graduates is the result of a decade of attempts by the Indian governments (State and Central) to democratize Indian society through higher education.

The IIEP studies suggest that the emphasis on democratization could shift to a high-skilled manpower focus under certain political conditions. Universities could begin, under pressure from the State, to restrict entry into the arts, commerce and science faculties and expand engineering and technical fields.

These studies also suggest that the educational activities at the primary and secondary levels be expanded, costs per student reduced and making the content of courses studied more responsible to the world of work. The promotion of schemes to boost self-employment is also suggested to mitigate the problem of educated unemployment.

The study also recommends a number of changes on the labour market side : an increase in the absorption of educated females into the labour force; and improvement in the "information" students receive about jobs; and a regulation of employment process to help the more able, better motivated and more deserving candidates secure jobs.<sup>7</sup>

## **CONCLUSION**

The review of major studies on education/employment linkages in India suggests that the solution of India's problem of educated unemployment is complex. It is rooted in an economy that is growing less rapidly than the expansion of higher education, and, indeed education in general and the growth of wage employment. Higher education continues to expand not only because of high unemployment at lower levels of schooling, as

Blaug et.al. found, but because higher education is a necessary prerequisite for most white collar jobs.

Eventually, the higher educated do find jobs, and some of them are unemployed because they are waiting for the "right" job (as the IIEP Marathawada Study points out).

Finally, what do the studies on educated unemployment suggest about the general nature of research on higher education? First, the studies would have benefitted from a more careful theoretical analysis of the expansion of Indian higher education and of the labour market for graduates. More research is needed in understanding why different social classes and women/men face different conditions in the labour market for the educated.

Other future areas of research have to look into students expectations about labour market processes, and also, the "revealed preference" of students in choosing particular subjects, the behaviour of graduates in job markets and much more information about the job markets themselves.

## NOTES

1. The existence of a positive return to investment in human capital has predictable consequences. Typical of these are:
  - a) The demand for extra education should vary inversely with the interest rate used to discount its future returns. This would be reflected in a time series analysis : i.e., if the interest rate fell the aggregate demand for places would rise. It would also be reflected in a cross section study, i.e., those prospective applicants with access to cheaper finance could demand more education than those who found it difficult to obtain funds.
  - b) The demand for extra education should vary inversely with incomes earned by the less educated, and directly with incomes earned by the more educated. It should vary inversely with fees charged and with other necessary associated costs.
  - c) The demand for extra education should vary inversely with expected working life beyond the period of education.
  - d) The demand for extra education should vary inversely with the variance of the return (assuming the typical person is risk averse), the riskiness having to be offset by a higher mean return for the same level of demand.
2. Studies like Blaug, et.al. (1969) are exceptions to this trend.
3. The 1981 Census distinguishes between main workers and marginal workers. The main workers were those who worked for the major part of the year

(six months or more) in any economically productive activity preceding the date of enumeration. Marginal workers, on the other hand, were those who worked any time at all in the year preceding the date of enumeration.

4. A person working eight hours a day for 273 days of the year is regarded as employed on a standard person year basis (Planning Commission, Sixth Five Year Plan (1980-1985), p.53).

Usual Status unemployment is defined as persons who remained unemployed throughout the year. Weekly Status unemployment (measured in number of persons), i.e., persons who did not find even an hour's work during the survey week. Daily Status unemployment (measured in person days or person years), i.e., persons who did not find work on a day or some days during the survey week.

5. Recently an attempt has been made to collect information on the educational qualification of the employees in all occupational categories.
6. Data on employment in the organized sector in India covers all establishments in the public sector and non-agricultural establishments in the private sector employing 25 or more persons.
7. For an excellent survey on employment and unemployment of the educated in India, see. N.V. Varghese, "Education and the Labour Market in India", IIEP Research Report No.67, Paris, UNE SCO, 1989.



## CHAPTER IV

## SOLUTIONS TO EDUCATED UNEMPLOYMENT - SOME REFLECTIONS

In the foregoing chapters, we have analysed the nature and causes of unemployment for educated labour. We have also traced the theoretical relationship between education and the economy and also sketched the unemployment problem of educated youth in the Indian labour market.

The present chapter looks at the solutions to the unemployment problem of educated youth in the labour market of LDCs. In this way it analyses the labour market policies that are used to deal with the problem of unemployment among educated youth.

We have already seen that the relationship between the economy and education system has typically been one of mutual dependence, the behaviour of each being a significant causal influence on the other. This relationship, moreover, is a complex one thereby making it difficult to disentangle cause from effect. While it would help the student of the subject if he regarded (say) the educational system as entirely passive, responding entirely to the needs of the labour

market, this is not the case and it would be misleading to assume that it is. Similarly, it is not true that firms merely make do with the labour that is forthcoming and have no influence on what is taught.

We emphasize here that our intention to start with labour market side policies is arbitrary and is not to be interpreted as prejudging the causal position.

### **EDUCATED LABOUR**

The basic findings of our brief survey on educated unemployment are as follows:

- Unemployment rates for educated labour are high in many countries. By this we mean that there is a substantial wastage of resources in training persons who cannot make use of that training. This point has to be made because the "high" rate of unemployment of the educated youth is invariably less than the rate of unemployment of the uneducated youth almost in every kind of situations.
- The supply of labour with primary and secondary education has increased rapidly.

- Long-established pay scales has resulted in inflexible salary structures.
- In the absence of wage flexibility, the revision of job expectation has been too slow to prevent the emergence of unemployment.

Once again the policy conclusions seem obvious : increase the flexibility of pay scales. In the short run, this would have two consequences. First, the occupational structure of employment would change in accordance with the supply and demand elasticities at each occupation level; this, in turn, would imply a change in the average educational attainment of labour within occupational groups in line with the relevant elasticities of substitution between educational levels within any given educational group. And, second, provided the supply curve of the existing educated labour force is not perfectly elastic, and that on average the wage for educated labour falls, some labour would be withdrawn from the market.

Although there is very little evidence on demand elasticities for labour in general (Harris and Todaro, 1969) and none on elasticities for labour at particular educational levels or for labour in

in the public sector, the presumption must be in favour of at least some elasticity. Nevertheless, provided the demand for educated labour is not highly elastic, there is some elasticity on the supply side, some proportion of the unemployed may withdraw from the labour force, and the investment resources embodied in them will be lost to the economy. The main effect, however, will be a lower return to any given level of education as the educational quality of any particular job is upgraded. This obviously has implications for educational investment.

In the long run the focus of attention shifts from the market for educated labour to the market for education. As long as the public sector continues to subsidize education, private demand for education will exceed public supply even if salary scales are flexible. Policy recommendations will, therefore, be required to prevent, or else cope with, the emergence of excess demand for publicly provided and subsidized education.

Of course, some of the demand will be satisfied by private institutions, but as long as private rate of return exceeds the social rate of return in public schools, excess demand for public schools will continue.

A solution frequently recommended is to make students (or parents) bear a higher proportion of the costs of education, thus reducing private demand for places and bridging the gap between private and social rates of return (Blaug, 1973; Fields, 1974). The argument for raising fees, is, of course, entirely dependent on the notion that demand is responsive to private costs and higher fees will lead to a reduced demand for places. However, empirical evidence for this proposition is actually rather thin.

The other simple way of dealing with educated unemployment is to restrict the expansion of education by imposing ceilings on the number of places that are provided at various stages in the process. However, as Blaug (1973) points out, a well established tradition of private secondary education in many LDCs makes it virtually impossible to control the scale of secondary education. Moreover, this results in fewer university graduates who are unemployed high school graduates (Blaug, 1973, pp.42-43).

Educated unemployment may also reflect an inappropriate combination of academic and vocational instruction; the skills supplied by the education system may not match the skills demanded by industry.

The appropriate role of vocational training, however, is a controversial issue (Foster, 1965; Blaug, 1973; Zymelman, 1978). Although the acquisition of industrial skills is an essential component in the transformation and upgrading of the labour force, the most useful institutional arrangement for imparting these skills remains unclear.

Though the effects of vocational training on unemployment of educated is widely debated upon, available evidence (though generalized from a small sample), suggests that vocational training can mitigate educated unemployment, provided it is not embedded in inflexible administration usually found in the formal education system. The two successful programmes - Industrial Training Board (ITB) in Singapore and SENAI, Brazil's national service for industrial apprentice, established in 1964, are two examples of successful vocational training programmes.

#### **POSITIVE THEORIES, MANPOWER PLANNING AND THE UNEMPLOYMENT QUESTION**

We have discussed in Chapter 2 the relationship between education and employment from a theoretical perspective.

Both the human capital approach and the screening hypothesis have been proposed as positive theories able to explain what actually happens in the labour market for educated. They supposedly explain why employers are willing to employ (and pay more) for people with high education qualification and why employees endeavour to acquire more education.

Neither is entirely satisfactory in accounting for the facts. For example, the weakness of the screening approach are obvious. It relies on higher education being the cheapest form of screening and maturing which on the face of it is not very likely. In particular it fails to explain why in India, for example, the three year honours degree should be the correct screen for almost all subjects and institutions. It fails to explain why earnings correlate with work experience, since the firm can itself learn about the quality of its employees by their performance on the job.

Throughout the sixties and seventies there was much debate on the relative merits for the planning of education of the manpower approach versus the rate of return or cost-benefit approach (Psacharopoulos; 1983).



According to the manpower requirements approach the gains resulting from the expansion of education comes from the ability of the economy to achieve certain increased levels of supplying skill requirements once production targets have been decided upon. Education targets are thus linked directly to specific production targets.

According to the rate of return argument, efficiency gains result from educational expansion if social benefits exceed social costs (at an appropriate rate of discount). This approach is framed in terms of the relationship between the costs of education and the increased productivity (and employability) of graduates in economic activities. The theoretical weaknesses of both these approaches have been widely discussed (Jolly and Colclough, 1973).

Some basic criticisms of the manpower planning approach include:

- zero labour substitution is assumed, that only one combination of education and training is possible for a given occupation;
- most manpower plans focus on wage employment in the formal sector, thus neglecting totally

employment processes in the informal sector.

- the presence of a stock of unemployed in spite of manpower forecasting is a major criticism against this approach.

As the IIEP research in the 1980's pointed out, in order to be able to estimate the trend in employment of the educated one would need to at least

- a) have different employment pattern factors (utilisation coefficients) per sector and per type of firm;
- b) to make assumptions concerning future trends in the structure of the economy per sector and the type of firms; and
- c) to assess the effects of these trends on the trends in the employment pattern (Hallak and Coillods, 1980, p.13).

Typically, the criticisms of the rate of return approach includes:

- a) the assumption that differences in earnings between persons reflect differences in productivity;

- b) the use of opportunity cost in the cost equation when in many circumstances these costs are zero because there are simply no opportunities for income generation;
- c) inability to show that the higher earnings of the higher educated are caused by that education;
- d) the inability to forecast manpower requirements;
- e) the difficulty of drawing policy conclusions.

The reconciliation between the approaches is forged partly because of a mutual appreciation of limitations, and because of a recognition that educational development has a range of goals which go beyond either approach. As Psacharopoulos notes:

"it may be more productive for manpower/education planners to spend time in other areas than making manpower forecasts or fully fledged cost benefit calculations. Such areas would include a major concern with internal efficiency, cost effectiveness rationalisation of competing training models, subject or curriculum bias

balance, teaching effectiveness, the timing of irrevocable decisions on specialisations" (Psacharopoulos, et. al., 1983, p.19).

### **THE DOMAIN-DISTINCTION ARGUMENT**

We end our discussion with the domain distinction argument.

One reason why the unemployment of educated labour is a persisting problem of LDCs can be understood in terms of the domain distinction argument (Majumdar, 1983).

One basic feature of the human capital formed through the process of education depends on investments made in two complementary parts and decided in two domains. Students can invest their time effort and money in their own education in a particular field only if somebody else, an institution or, perhaps, society as a whole also invests in providing them with that education. In turn, societal investment can be meaningful only if there are students who will invest their own time and money to get that education.

So long as the two kinds of investments decisions taken in the two domains match, the education system

would function properly. If these two investment decisions do not match we may have as Majumdar puts it, "only empty, or overcrowded, classrooms and under- or oversubscribed training programmes" (Majumdar, 1983, p.28).

The problem of mismatch (and, therefore, unemployment) arises when individuals who take their decisions in terms of their micro-logic (i.e., their private rate of return) fail to synchronize it with the societal macro-logic decisions (social rate of return).

A small example, borrowed from Majumdar (1983) will help clarify the problem.

Let us take the individual domain first. Let us assume, that professionally trained science graduates (100 in numbers) are known to have a high (say, 90%) probability of securing jobs on the completion of their degree. Again, let us assume, they are known to have, a high probability (say, 90%) of completing their technical course successfully. This might induce each to lower his or her private estimate of the private rate of return corresponding to the technical degree by a fraction dependent on the probability of failure

at the two levels. But obviously, this might leave the prospect bright enough for each of the science graduates wanting to invest in technical-level training. And yet, the small probability of failure (0.19) for each individual science graduate is clearly equivalent to the certainty of additional aggregate unemployment for the economy as a whole.

This is the fundamental macro-micro dilemma for decision making in investment in education. "If 100 science graduates intended to invest in the technical course on the basis of the estimate that 10 of them would fail to make it to the end of the course, and that of the 90 completing successfully, 9 would again lose out because only 81 of the higher paid jobs were available, then surely each would be justified or unjustified in taking the plunge" (Majumdar, 1983, pp.32-33). If we assume that every person has the same private uncertainties, he or she would have reduced the private rate of return in the same way. But is society justified at the macro-level to use a positive marginal (positive) social rate of return having merely marked it downward on the basis of individual logic?

Intuitively, one could say that since only 81 jobs are available for 90 students, then there can be no case of allowing societal investment to create a capacity for taking in 100 science students in the first place.

It may perhaps be argued that the fault here lies not with the marginal social rate of return but with the way it is calculated even when unemployment is a certainity in the aggregate. It may be suggested, for example, that if no better job opportunities were in prospect for all the people who could be trained, then the marginal social rate should really read as zero beyond an appropriate amount of the contemplated outlay on that training. This is not shown on the conventional rate-of-returns tables only because the rates are linked to increments of schooling for a whole group rather than to increments of outlay. But if the marginal social rates-of-return were shown, perhaps, more accurately in this manner, then it would be only another, more formal, way of showing that the omnibus rate-of-return approach did not work for societal decision making in the presence of aggregate unemployment, assuming that the availability of better-educated persons did not reduce unemployment by itself.

So, as long as there is a whole wide gap between what the individual perceives and what the society perceives, the fundamental problem of unemployment of educated youth remains in an economy.



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