IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

Education, Employment and Employability: A trinity trap

Bhatnagar, R[1]; Kumar, S[2]; Paul, S[3]

1,2,3: Post-Grad in Economics (with specialization in World Economy); Centre for International Trade and Development; Jawaharlal Nehru University, New Delhi

Abstract: This paper essentially tries to peek into the concept, if education necessarily enhances the productivity of one self, and if it does so, whether that would imply high returns. Education is often used a stair case to move towards the higher payoff schemes of life. The paper analyses if this mindset is a myth prevailing in the education sector, forcing people to overeducate oneself and eventually reducing their scope in the job markets where experience and adequate education is weighted higher than over education. Different theories of education and job match are taken into account to determine if overeducation is essentially a persistent phenomenon prevailing in the labour markets, what are its causes and how does it affect the earning opportunities of an individual. The Mincer's wage equation has been used here to study the effect of returns for over, under and adequately educated individuals. A numerous case studies were taken into consideration in order to support the concept.

Key words: over education, under education, adequately educated, returns to education, employment and employability.

Motivation: The fact that getting a job is hard, is trivial. But what seems to be harder is to have a job satisfaction. People across the globe are thriving to spot on the paramount of their job satisfaction are yet failing to fathom it miserably. This paper takes a look into the concept with a theoretical dogma of Economics to answer this ardent question.

Introduction:

Overeducation happens to be a central issue captivating the attention of all economists across the globe. Overeducation has been most celebratedly defined as an attribute that leads to a significant attenuation in workers' returns to higher education. The concept of overeducated workers is identified by them bemoaning that the education demanded by their jobs is beneath their attained level of education. Overeducation can exist in any kind of labour market owing to the lack of experiences for the new entrants while joining the labour market and thereby be assigned to jobs that do not match with their formal education. Similarly, undereducated workers are those who report the education required by the jobs to be higher than the level of education they have attained. Job mismatch, which includes both overeducation and undereducation is seen to have serious consequences on not only the current earnings of an individual, but also have a potential to impact the future opportunities available to the individual. The degree to which a current mismatch might affect future earnings depends upon several factors including the labour market conditions, the level and kind of education, the kind of job under consideration and the innate skills of an individual among others.

The prime focus of this paper is on analysing the conditions which determine the degree of persistence of educational mismatch, especially overeducation. Several theories have been put forth by economists in this regard. The pivot instrument in this literature is an extended version of Mincer's wage equation where actual years of schooling is being disintegrated into years of over schooling, years of required schooling and years of under schooling.

Reasons for the Existence of overeducation:

As a lot will be said and has already been done worldwide, it is imperative to envisage the primary reasons that give rise to overeducation. Here are some of the points given by Lindley and McIntosh (Lindley & McIntosh, 2010) that stands strong as reasons:

- Barring the fact that aggregate over-education is considered permanent phenomenon, over-education is temporary for the individuals concern, as they expect a higher chance of getting promoted after getting into the job sector that requires a low skill set.

- An individual's constraint for mobility in the labour market can also be accounted for the family set back where they adhere thyself to the locally available jobs for which they might be overly educated.

- Finally, individuals with homogeneous education level possess heterogeneity in their abilities, so that the less able may be ostensibly over-educated in terms of their actual qualifications, but in reality, have skills that are in commensurate with their jobs.

Mathematical insight and theoretical overview to envisage the problem

The workhorse model in the overeducation literature is the extended version of the Mincerian wage equation introduced by Duncan and Hoffman (Duncan & Hoffman, 1981) A very lucid and simplified version of the same have been used in this paper in order to comprehend the debatable concept of "returns" from overeducation. The equation comes in the following form:

Equation: $\ln w_i = \beta_0 + \beta_1 E_i^r + \beta_2 E_i^o + \beta_3 E_i^u + x_i\beta_4 + u_i$

β_0 = constant
β_1 = returns to required level of education
β_2 = returns to overeducation
β_3 = returns to undereducation
β_4 = returns from experience/ experience squared

E_i^r = required years of education

E_i^u = years of undereducation

E_i^o = years of overeducation

Taking the above stated equation into account, the paper aims at reviewing the various theories that have so far been proposed to conceptualize the overeducation phenomenon.

Human Capital Theory (Becker, 1964): The classical human capital theory formulated by Becker upholds the concept that workers are paid according to their marginal productivity which indeed is determined by the level of human capital. Firms manipulate their technology as per the needs in order to fit in the labour market with relative supply of educated individuals. If there is a hike up in the skilled labour supply, this would lead to plummet in wages earned by skilled labour and hence, would motivate the firms to readjust their technologies in order to extract and thereby exploit the pool of skilled labours at a relatively lower costs (Duncan & Hoffman, 1981).

As traditional view holds, overeducation has been treated an exception to the human capital model owing to its association to a mismatch and, thereby, to a market disequilibrium. (McGuinness & Pouliakas, 2016)

In the simple form of the human capital model, attained level of schooling is the sole determinant of wages and is not contingent on the job to which a worker has been assigned.

This is a test of the joint equality: $\beta_1 = \beta_2 = -\beta_3$. In order to go in compliance with the Human Capital theory, the parametric equality formerly mentioned, obtained from Mincer's wage equation, signals that return to years of adequate schooling and return to years of overeducation should be equal to the losses from years of undereducation. This restriction is most often ruled out by the data. This has been interpreted as evidence against the classical theory. However, as Leuven and Oosterbeek (2011) (Leuven & Oosterbeek., 2011), argue, amongst others, "*overeducation does not need to represent a breach of the validity of the human capital model: in fact, overeducation could be conceived as a consequence of a lack of the work-related component of human capital, rather than a waste of human capital."* Also consistent with the human capital model is that over schooling works as a substitute for multitude of other components in a person's stock of human capital, likewise training, experience and innate ability.

A case study in Italy by Caroleo and Pastore (Caroleo & Pastore, 2018) reflected an attenuation of both demand and supply of human capital in the country. It reports that the variables that associate with a mismatch in job and educational attainment include the length of job search, the field of study, level of education and the type of first job among others. The most influential factors associated with the mismatch are well in consistent with the image of an immobile social structure, whereas not only success at schooling but also in the labour market is dramatically contingent on the socio-educational background of young people, wherein the field of study is also getting heavily influenced.

On analyzing the impact of overeducation on wages, the noncontingent punitive wage influence in line with overeducation is substantial. However, a control in the level and quality of human capital, it was observed that a humongous part of unconditional punitive wage is in fact, related to measures of skill attributes that the overeducated borne less than the rest of the sample. Therefore, it can be stated that the results are consistent with the prediction of Human Capital Model.

Occupational mobility theory: (Sicherman & Galor, 1990). It is a variation of human capital theory. The theory dictates that overeducation is an outcome of equilibrium in the labour market (Linsley, 2005). This theory conjectures that a fraction of the return to education arises from a higher probability of promotion, both within and across firms. Given an occupation of origin, it is more likely to have an occupational upgrading with the increase in the level of education. Workers, in order to accentuate their marketable skills and hence earnings, sometimes demand skill building opportunities and are not reluctant to pay for them. According to this theory, overeducation is not a persistent mismatch since overeducated workers may find it easy to move to higher-level jobs. Thus, on- the-job training and experience provides the workers with an opportunity to improve their job match along their working lifetime. As a result of which it can be stated that, there exist a negligible economic cost associated with overeducation.

A literature on Spanish labour market by Alba (Alba-Ramírez, 1993) advocates the hypothesis that workers find it easy to escape from the job mismatch with the help of on-the-job training and experience from their current job. The study finds that measured over age, there has been a falling trend in the proportion of overeducated workers, indicating that overeducated workers are able to find jobs that match their qualifications as they gain more experience in their working life, there by indicating that overeducation is not a persistent phenomenon. Overeducated workers show a higher attrition rate, which indicates a higher mobility owing to higher acceptability gained due to the on the job training and experiences. This transition pattern indicates a move towards attaining well-matched job overtime.

It is also possible that even in an economy which does not have an excess supply of graduates, some workers might end up with jobs for which they are overeducated. Thus, we can observe existence of overeducation at all education levels. This occurs usually because of a lack of experience among freshers.

The study finds that returns to years of overeducation are positive but lower than returns to years of adequate education. Also, undereducated workers receive higher wages than do workers with the same education who occupy jobs that require the schooling they have. This is due to the fact that the losses associated with a year of undereducation in those jobs are lower than the returns to a year of adequate schooling.

The study finds that returns to years of overeducation are positive but lower than returns to years of adequate education. Also, undereducated workers receive higher wages than do workers with the same education who occupy jobs that require the schooling they have. This is due to the fact that the losses associated with a year of undereducation in those jobs are lower than the returns to a year of adequate schooling.

Example:

We consider a hypothetical and lucid example to illustrate the concept of returns from over, under and adequately educated. The Minser's wage equation described above lies best in line to demonstrate the concept of returns. Evaluating the concept with two fictitious characters named, Ram and Yogi, we embark the saga by taking a glance at their achievements, trying to justify it through numeric and if it was influenced by years of education or it's ostensible as it seems.

For the primary construct, we assume that the obtained years of schooling for both being 12 years. Now, Ram manages a job for which he is overly educated by 2 years while, Yogi gets a job that makes him adequately educated for the post.

Previously mentioned study entails the fact that the returns to overeducation are positive but is less than the adequate education. For this case it is assumed that the experience factor or (X) from the equation, is constant and same for both the agents. Thus,

Return to overeducation: $w_1 = \beta_0 + 10\ \beta_1 + 2\ \beta_2$----------(1)

Return to Adequate years of education: $w_2 = \beta_0 + 12\ \beta_1$

$= \beta_0 + 10\ \beta_1 + 2\ \beta_1$---------- (2)

As, $\beta_2 < \beta_1$, ceteris paribus, w2>w1.

Thus, the returns to overeducation are positive but are less than the adequate education.

Similarly, we can infer that the losses from years of undereducation are less than the returns to adequate education.

Another survey on the Spanish Labour Force by Ballesteros et.al (Acosta- Ballesteros, Rosal, & Rodrı´guez, 2018) holds the view that over education seems to be a persistent phenomenon. But, the degree of persistence depends not only on the level, but also on the field of education. As the education level increases, adequateness of education in the first job tends to have a lowering impact on its next job. Moreover, some specialisations provide students with job-specific skills that help them in escaping from an initial mismatch, but over education in such fields may prove to be more persistent as compared to other general fields.

Also, internships during education, and a lower employment rate when entering the labour market hikes the

risk of suffering an initial mismatch. The evidence does not withhold the career mobility hypothesis, because additional human capital provided by on-the-job experience has no significant impact on the probability of a current mismatch.

Job Competition Theory (Thurow, 1975):

Job competition theory, unlike the Human Capital and Career Mobility theory, provides a demand sided view for the rise of overeducation. Pivot to the job competition theory revolves the assumption for the high wage to be the reason for the competition in the labour market. Competition amongst workers gives rise to a job queue, where jobs are ranked as per earnings. On the demand side, a labour queue is formed owing to the competition amongst firms for the search of workers with high productivity. With an underling assumption that formal education and on-the-job training complements each other, this subsequently lowers the training costs. As a result, in the labour queue, workers are ranked by education level and the highly educated persons end up with high paying jobs. According of the prediction of the job competition model, the overeducation is a persistent phenomenon.

Wages are solely determined by required level of education i.e., requirement of the job. Attained schooling has no direct impact on earnings. This model indicates the following restriction for Duncan and Hoffman's wage equation: $\beta_2 = \beta_3 = 0$.

Assignment Model (Sattinger, 1993): It stands as an amalgamation of job competition model and human capital model. This model suggests that the wage rate is determined by the workers' marginal product which is further determined by their human capital along with the availability and quality of jobs. The Assignment model assumes that education has a positive impact on workers' productivity. However, there exists heterogeneity even among the similarly educated workers, based on their ability to perform. This heterogeneity contributes to the existence of comparative advantage among workers in performing specific jobs. When jobs are not allocated to the workers in accordance to their comparative advantage, thereby leading to a mismatch, the problem of overeducation arises. Hence overeducation can be rendered as a consequence of allocative inefficiency projecting to underutilized skills which negatively impacts productivity. Under this model, overeducation shall prevail unless there is an improvement is made in the job matching process.
The testable hypothesis is: $\beta_1 = \beta_2 = \beta_3 = 0$. It means that both the attend education and job education requirement impact earnings. If this hypothesis is rejected, assignment model holds. Causes of over education in Australian labour market

A survey in Australia was performed by Leuven and Oosterbeek (Leuven & Oosterbeek., 2011) to study the labour market attribute. The controls of the conduct were: Age, age squared, gender, marital status, number and age of children, health status, immigrant status as well as job characteristics like sector employment, firm size, permanent position and tenure.
The inference of the study satiates with the rejection the human capital theory. And alternatively accepted the Job Competition model. Additionally, since $\boldsymbol{\beta 1} = \boldsymbol{\beta 2} = 0$, it stands imperative to mention herein that the assignment model also fails to put up a match in this regard.

Testing career mobility theory

As per the prediction of this theory overeducated individuals expect to have a lower promotion compared to similarly educated workers where the position for both matches the suit exactly. To the contrary, undereducation seems to have no discernible effects on expectations to promotion.

Testing through relation between tenure and job match as a prediction of the theory workers that are overeducated are less probable to have had 5 or more years of working experience with their current employer.

Testing if the overeducated individuals are more or less probable to have formerly joined to a level of occupation at a higher grade. As per the prediction of this theory goes, the overeducated workers are unlikely to have formerly moved to a higher-level job owing to their lack of labour market experience and training. Contrary to the case stands the fact where the undereducated workers are more probable to climb up the ladder in the occupational rank.

There is no strong evidence to abide by the career mobility theory. Moreover, overeducation seems to be a persistence phenomenon.

Conclusion:

This paper looks into the reasons for the existence of over education, the degree of its persistence in the labour market and its consequences at the individual level in terms of its impact on earnings. It considers different theories that provide an insight for the functioning of the labour market from both demand and supply perspectives and its implications for the persistence of over education. Also, validity and applicability of these theories are being tested through the study of empirical evidence.

The theories that support the view that over education is a temporary mismatch between years of education one has acquired and the years of education required by the job are classical Human Capital model, the Occupation Mobility theory. On the other hand, the Job competition model claims over education to be a persistent phenomenon. Empirical evidence was found to support the Human Capital theory, Job competition theory and Occupation mobility theory. The study finds that returns to years of overeducation are positive but lower than returns to years of adequate education. Also, undereducated workers receive higher wages than do workers with the same education level whose occupations exactly demand the schooling that they possess. This can be counted to the reason that losses accounted to years of undereducation in the job looks to be lower than the return to the year of adequate education.

Bibliography

Acosta-Ballesteros, J., Rosal, M. d.-d., & Rodrı´guez, O. M. (2018). Overeducation of Young Workers in Spain: How Much Does the First Job Matter? Social Indicators Research. *Soc Indic Res (2018) 138*, 109–139.

Alba-Ramírez, A. (1993). Mismatch in the Spanish Labor Market: Overeducation? . *The Journal of Human Resources, Vol. 28, No. 2 (Spring, 1993)*, 259-278.

Becker, G. (1964). Human capital: A theoretical and empirical analysis with special reference to education. *National Bureau of Economic Research, New York.* .

Caroleo, F. E., & Pastore, F. (2018). Overeducation at a Glance. Determinants and Wage Effects of the Educational Mismatch Based on AlmaLaurea Data. *Soc Indic Res (2018) 137*, 999–1032 .

Duncan, G., & Hoffman, S. (1981). The incidence and wage effects of overeducation. *Economics of Education Review, 1(1)*, 75–86.

Leuven, E., & Oosterbeek., H. (2011). Overeducation and mismatch in the labor market. *Erik Hanushek, F. Welch (eds.): Handbook of the Economics of Education, Elsevier Science, Vol. 4*, 283 - 326.

Lindley, J., & McIntosh, S. (2010). Is the Over-Education Wage Penalty Permanent? *Department of Economics, University of Sheffield ISSN*, 1749-8368.

Linsley, I. (2005). CAUSES OF OVEREDUCATION IN THE AUSTRALIAN LABOUR MARKET . *RESEARCH PAPER NUMBER 940* .

McGuinness, S., & Pouliakas, K. (2016). Deconstructing Theories of Overeducation in Europe: A Wage Decomposition Approach. *Discussion Paper No. 9698* .

Sattinger, M. (1993). Assignment models of the distribution of earnings. *Journal of Economic Literature, 31(2)*, 851–880.

Sicherman, N., & Galor, O. (1990). A theory of career mobility. . *Journal of Political Economy, 98(1)*, 169–192.

Thurow, L. (1975). Generating inequality. *Basic Books*.