Volume 8 Issue Number 1 JUNE 2019

JOURNAL OF POLICY AND LEADERSHIP

ISSN 1821 – 8318 Centre for Policy and Leadership,
School of Public Administration and Management, Mzumbe University
P.O. Box 2, Mzumbe Morogoro, Tanzania
Tel. +255 023 2604380/1/3/4, Fax +255 023 2604382/2600671
E-mail: cepole@mzumbe.ac.tz; Website: www.mzumbe.ac.tz

ISSN 1821 – 8318 Centre for Policy and Leadership,
School of Public Administration and Management, Mzumbe University
P.O. Box 2, Mzumbe Morogoro, Tanzania
Tel. +255 023 2604380/1/3/4, Fax +255 023 2604382/2600671
E-mail: cepole@mzumbe.ac.tz; Website: www.mzumbe.ac.tz

JOURNAL OF POLICY AND LEADERSHIP

Centre for Policy and Leadership
School of Public Administration and Management

VOLUME 8 ISSUE NUMBER 1 JUNE 2019

Mzumbe University, Tanzania
ISSN 1821 - 8318

CONTENTS

Examining Skills Mismatch in the Tanzanian Formal Labour Market

Pius Chaya[1] Benson Musoma[2] and Pius John[3]

Abstract

This study examined the pattern of skills mismatch in both private and public labour markets in Tanzania while taking Dar es Salaam and Dodoma regions as the areas of study. It employed cross sectional survey to collect primary from 319 workers who were selected by multistage sampling. Data were analyzed in SPSS using Multinomial logit model and Pearson Chi square. The study found out that 33.2% of employed workers are working in a circumstance of significant skills mismatch. Out of these, 9.7 % are underskilled and 23.5 % are over-skilled. In terms of sex, about 67.7 percent and 32.3 percent of males and females respectively were over skilled. This huge unqualified labour force could have a potential negative impact on the economy of Tanzania. This phenomenon therefore calls for a holistic skills upgrading and updating mechanism to be in place to align with the labour market standards.

Key words: Over skills, under skills, skills mismatch, extent, Tanzania, Labour market

[1]Institute of Rural Development Planning, Department of Rural Development and Regional Planning, P.O. Box 138, Dodoma, Tanzania, Email: pchaya@irdp.ac.tz

[2]Institute of Rural Development Planning,, Department of Development Finance and Management Studies P.O. Box 138, Dodoma, Tanzania

[3]Sokoine University of Agriculture, Development Studies Institute, P.O.Box3024, Morogoro, Tanzania; Email: piusjn@suanet.ac.tz

Introduction

Skills Mismatch(SM) is a common phenomenon in most economies. As economies struggle to avert the dwindling of labor market performance, yet there are serious violations of recruitment procedures as

well as weak economies to accelerate the skills mismatch. Skills mismatch can be defined as a situation whereby a worker is found to be working in a job that does not require him to efficiently use his or her skills. The skills mismatch exists in different forms such as over skill (working in a job that requires modest skills) and under skill (working in the job that demands more skills). Therefore, skills mismatch is calculated based on the employed labour force in a particular period.

Approaches for Quantification of skills mismatch have been different in many labour markets. The objective measure (Rumberger, 1987), subjective measures (Hartog, 2000; Duncan and Hoffman, 1981) and empirical measures (Verdugo and Verdugo, 1988) have been the common methods for quantifying skills mismatch. In all of the above studies, the use of techniques such as Job Analysis (JA), Realised Measure (RM) and Workers' Self Assessment (WSA) have been popular. The JA compares the required and actual level of skills (Oosterbeek and Webbink, 1996; Rumberger, 1987) while the RM compares the required level of skills with the standard deviation (Groot and Maassen van der Brink, 1995; Verdugo and Verdugo, 1989). The WSA compares the actual level of education that the worker possesses with respect to the required level of education for a worker to perform a particular job (Linsley, 2005; Sloane). Yet, this method is prone to giving wrong information (Hartog, 2000).

The evidence on the extent of over skill and under skill among workers in the world is patchy and limited. The study by Amador et al.,(2008) using WSA on job -worker mismatch and wage and satisfaction differentials in Spain, using 2001 European Community Household Panel (ECHP) survey data, revealed 36.4 percent of employees were over skilled, 19.6 percent were adequately skilled and 44 percent were under skilled. Amador *et al*; (ibid) again used Pearson's chi square and Cramer's V (0.01) in comparing both Education Mismatch and Skills Mismatch to analyse if there was any significant difference between the two. Their findings have revealed that in Spain, 29.5 percent of the employed workers were over educated, 38.4 were adequately educated, 32 percent were under educated and 34.9 percent were over skilled, 24. 8 were adequately skilled and 40.2 percent were under skilled. Adedeji and Oluyomi, (2012) used descriptive analysis to study the skills mismatch in Nigeria. They found that about 60.6% of university graduates were faced with skills mismatch.

By 2006 , Tanzania had a total 11.7% people in the labour force who were unemployed. During that period, the Labour Force population was 18,821,525 of whom, 16,627,133 persons were employed and among the employed, 1,682,383 persons were in the informal sector (URT, 2012). The estimates of currently unemployed persons for year 2011 are 2,368,672 persons which is equivalent to 10.7% of the labour force population. Currently the total number of labour force population is estimated to be 22,152,320 persons, of whom 19,783,648 are estimated to be employed, among the employed, 2,502,327 persons are estimated to be employed in the informal sector (ibid).

The formal labour market of Tanzania has a dual characteristics with private and public sectors operating in a competitive way. The two offer high wages, good working conditions, high job security; employment stability as well as good chances for career advancement (URT, 2012, 2006). Evidence shows an increase of 13.8% as at 2012 of employed workers in the formal sector in Tanzania compared to 2011 such that a total of 1,550,018 persons were employed in the formal sector in 2012 as compared to 1,362,559 persons in 2011. The proportion of total employment was higher in the private sector (63.1% in 2011 and 64.2% in 2012) than in the public sector (36.9% in 2011 and 35.8% in 2012) for the two years (National Bureau of Statistics, Tanzania, 2013).

The employment by specific sectors has been as follows:- Public Administration and Defence; Compulsory Social Security industry had the highest proportion of the total regular employees in two reference years, despite the decrease from 27.7 percent in 2011 to 20.8 percent in 2012, followed by education with a noticeable increase from 13.6 percent in 2011 to 18.7 percent in 2012. Dar es Salaam Region had the largest proportion of the total employees in each reference year which decreased slightly from 33.6 percent in 2011 to 33.0 percent in 2012 while the region with the smallest share of total employees was Rukwa with a share of 0.8 percent in 2011 and 1.1 percent in 2012(ibid). There were 126,073 existing vacancies in 2012 in Tanzania. Technician and associate professionals had the largest number of vacancies which was 76,252 (60.5%) vacancies in the formal sector. Professionals were the second with 23,163 (18.4%) vacancies; followed by service workers and shop sales workers with 9,395 (7.5%) vacancies. Crafts and related workers had the lowest number of vacancies generated in 2012 with 1,136 (0.9%) vacancies. All these show the composition of formal labour market in Tanzania in terms of skills mismatch (ibid).

The government and other labour market actors are struggling to ensure that the labour market in the country is having decent and fair working environment. These can be proved through a series of reforms that have been undertaken by the government. The Investment Reform and Privatisation (1980s), Public Sector Reforms Program-PSRP- (1990s) and Civil Service Reforms Program –CSRP- (1993) (Danish Trade Unions, 2003) have been some of the few initiatives. In addition, National Employment Policy of 2008 (URT, 2008), National Strategy for Growth and Reduction of Poverty (NSGRP II) with its acronym in Swahili as MKUKUTA II (URT, 2010a) and the Tanzania Long Plan Perspective (2010-2026)(URT, 2010b) are some of the labour market related efforts . The implementation of the policy has required the presence of Tanzania Employment Law and Labour Relations Act of 2004 (URT, 2004) that provides for legal and strategic advice in all areas of the employment and industrial relations in both private and public sectors across a broad scope of policy implementation. Despite all these initiatives information on the extent of skills mismatch in Tanzania

has been limited. This necessitated quantifying the extent of both over skills and under skills among formal sector workers in Tanzania.

Theoretical Framework

Human Capital Theory (HCT)

According to Blanchard (2006), human capital is translated into skills based on the level of education that a person possesses. The author contends further that workers with higher level of education are likely to have more skills in particular areas of specialization. These skills are the ones that are acquired by a person in terms of quality and quantity and can signal the productivity of workers in the labor market. This theory goes further to explain that a person who has more level of education as determined by years of schooling is likely to have more return to schooling (Walterskitchen, 1999). This is consistent with the schooling model that also emphasizes that wage rate as well as the return to schooling will grow significantly with an increase in the years of schooling. This still implies that a University professor has to earn more than a director with single degree (Borjas, 2006).

A number of scholars have also attempted to criticize the assumptions of human capital theory. For example, Linsley (2005) in his study on over education in the Australian labor market argues that over education causes a worker to earn less and he/she might be placed in a job that he/she is over skilled or over qualified. In the context of this study, it is criticized that the theory has overlooked the notion that productivity of a worker can not solely depend on the years of schooling, rather it is influenced by a number of factors such as individual, and types of markets as well as enabling environments for the worker to perform better. In addition, level of education can not predict the skills that workers posses, as opposed by Nordin (2004) who argued that education mismatch can not predict skills mismatch. The contention of this study is further based on the fact that taking an example of a fresh agricultural officer who is a first degree graduate enters the labor market without experience and the labor market has acute shortage of vacancies, and then this person may stay unemployed for a while. The final decision will likely be to work in the position that does not match his/her skills (i.e. skills mismatch). This can end up working in either as a bank teller that requires a person with basic arithmetic skills (and hence become over skilled) or working as an agricultural officer that requires Diploma level of education (and hence become over educated). In this case, the human capital theory is disputed in the sense that a worker may end up getting low wage and become demoralized as he/she has no powers of bargaining for the increment in wage due to the mismatch status that he /she possesses.

Similarly, Thurrow (1975) in Linsley (2005) reported that even though the Human Capital Model (HCM) can show the relationship between over education and under education with over skill and under skill, yet there is no causal effect relationship between the two problems. As Nordin (2008) argues, over educated and under educated workers are likely to experience income penalty and income premium respectively and this cannot be the case of skills mismatch.

The authors argue further that both over education and under education are just proxies of over skill and under skill. Moreover, Ayara (2002) on his study on the contribution of human capital investment while supporting the human capital model in Nigeria found out that education has not had the expected positive growth impact on economic growth since educational capital has gone into privately remunerative but socially unproductive activities; there has been a slow growth in the demand for educated labour; and education system has failed in that schooling provides few (or no) skills to the new entrants into the labour market. Therefore, this study has adopted this theory in the course of studying the problem of skills mismatch with particular focus on how lack of job opportunities in the labor market creates a queue problem of which can trigger the problem of skills mismatch.

Methodology

This study was carried out in Dodoma and Dar es Salaam regions as these regions are characterized with many workers from both formal public and private sectors. The study also selected formal sector as the case study due to its potentiality for economic growth through service delivery, and job creation.

The study employed a cross sectional approach to get some data on SM. The Workers Self Assessment (WA) approach was used to get data from workers while assessing themselves their matching or mismatch status. This approach has been widely used (Van de Velden and Van Smoorenburg, 1997) as it is up-to-date and focuses on how an individual perceives the jobs in the labor market. Despite the above strengths, this method has a number of limitations; which include workers giving wrong information about their skills as observed by Hartog (2000), the failure to effectively analyse the context of skills that a worker possesses with respect to the job that he or she performs (Battu *et al.*, 2000), and lack of well designed recruitment systems in some organizations.

This study employed workers survey/interview method to collect primary data on the extent of skills mismatch. The data were collected using structured questionnaire. The pre-testing of the survey instruments was done for 10 workers before comprehensive data collection. This was carried out to ensure that the data were consistent over time and could be replicated in different settings. Moreover, the validation test was carried out to assess if the research instruments truly measured what they intended to measure.

This study decided to take all districts from Dar es Salaam namely Ilala, Temeke and Kinondoni to increase the chance of getting enough data from offices. On the other hand, four districts out of six were randomly selected from Dodoma region namely Dodoma municipality, Bahi, Chamwino and Kondoa districts.. For the case of districts, about 72 workers were from Dodoma municipality, 3 from Kondoa, 31 from Bahi, 6 from Temeke, 152 from Kinondoni, 38 from Ilala and 17 from Chamwino. Thus the sampling of offices was situational and convenient. First case was when many offices were located in the same locality (clustered); here simple random sampling was used. This was commonly employed for the case of urban areas like Dodoma urban, Temeke, Kinondoni and Ilala districts. Second case, was where the offices were so scattered and this made the use of snow ball sampling. More importantly, in some areas private organizations were fewer than public organizations. This disrupted the trend of selection in the sense that an extra public organization had to be added to the study to make up for the missing origination from the private sector.

The choice of offices was based on the merit of being public or private. The sampling offices was a bit tedious, since in some cases office location was not clearly known and one category of offices

were located in one place, for instance all private offices or all public offices. The sampling of organizations that is private or public was done by skipping one interval, that means when the first office is public, and then the second selection was supposed to be private. This ensured that there were equal representation of both the public workers and private formal workers. Thus, this study sampled through multistage cluster 177 workers from private sector and 142 from public sector. On the basis of sex, there were 201 male workers and 118 female workers sampled. This sampling ensured that when the first worker was a male then the second selection was a female. This was possible in offices where representation of females was small. However, the number of male workers was more than that of females due to the historical fact that women were marginalized to get education, which led to few of them acquiring education in earlier days.

Model Specification

Analytical Framework

Part I: Multinomial Logit Model (MLM) - Classification tables

The MLM was employed to generate the classification table for Over skill and under skill. To get the extent of mismatch, all workers who were over skilled, under skilled and perfect matched were summed up and divided by the sample size (see equations 4, 5 & 7) and see also Table 1. The equations that assisted in the quantification of the mismatch are as follows: Suppose,

- ALS be actual number of bundle of skills as per type of skills learnt
- RLS be the required bundle of skills for current job as per type of skills learnt

Thus ,

1. A worker is entitled into over skilled (OS) when ALS>RLS; Thus, ALS-RLS is positive and more than 1..There is excess in skills that are not required to perform the current job……..……...(1)
2. A worker is regarded as under skilled when ALS<RLS; this further means that , ALS-RLS gives a negative value, meaning that there is deficit in terms of skills required for the worker o adequately perform the job…….(2)
3. The worker has no mismatch when ALS=RLS; ALS-RLS=Zero. This is a worker who is well fitting in the current job in terms of skills, and thus there is no deadweight loss…….(3)

Table 1: Models for Computing the Extent of over and under skills

SN	Type of mismatch	Classes of Mismatch	Formula
1	SM	Over skill	OS= $\sum_{P=1}^{Pn} os/sz*10($ ……(4)
		Under skill	US= $\sum_{P=1}^{Pn} us/sz*10($ …….(5)
2	PM	Perfect Match Skills (PMS)	PMS= $\sum_{P=1}^{Pn} pms/sz*10($ …..(6)

Where: *$P_{n=}$ worker n;*

$P_{=1=}$ from worker 1 and

Sz= sample size of the study

Part II. Estimating the extent of over skills and under skills – Cross Tabulation

The extent of over skills and under skills was also computed by using Pearson Chi square distribution (see equation 7). In this approach, the relationship of two was computed in terms of other parameter such as sector of the economy and sex. Thus, the contingency classification tables were used.

$$\chi^2 = \sum \frac{(Oi-Ei)^2}{Ei} \quad \text{……(7)}$$

Where: χ^2 is the calculated Chi Square statistics**,** O_i is the observed value for person i; E_i is the expected value for person i. Prior to data analysis, data were edited and coded amenable for processing in the SPSS. The data thereafter were analyzed using SPSS software. This statistical package has features that could accommodate the categorical variables, numerical and non-numerical variables, it is also readily available and user friendly.

Results and Discussion

The study discusses skills mismatch trends in labour markets among formal sector workers in terms of sex, regions and by sector.

Skills Mismatch Trends in Formal Labour Markets

The findings in Figure 1 report that, on average, 9.7 percent of the workers in the formal labour market were over skilled, 23.5 percent were under skilled and 66.8 percent had perfect match. On average, about about 33.2 percent of the workers in the formal sector had skills mismatch. This extent of skills mismatch is accelerated by many factors including high level of unemployment in the labour market, which forces job seekers to accept any position and information asymmetry in the labour market. These findings are similar to those by Di Pietro and Urwin (2006) who reported that 80.32 percent of the graduates were working in the jobs for which they felt having a university degree, made them use "none" or "a little" of the skills and knowledge acquired at university. Other similar findings are reported by Allen and Van Der Velden (2001) from their study on Dutch graduates and by Green and McIntosh (2002) from their study on the UK graduates.

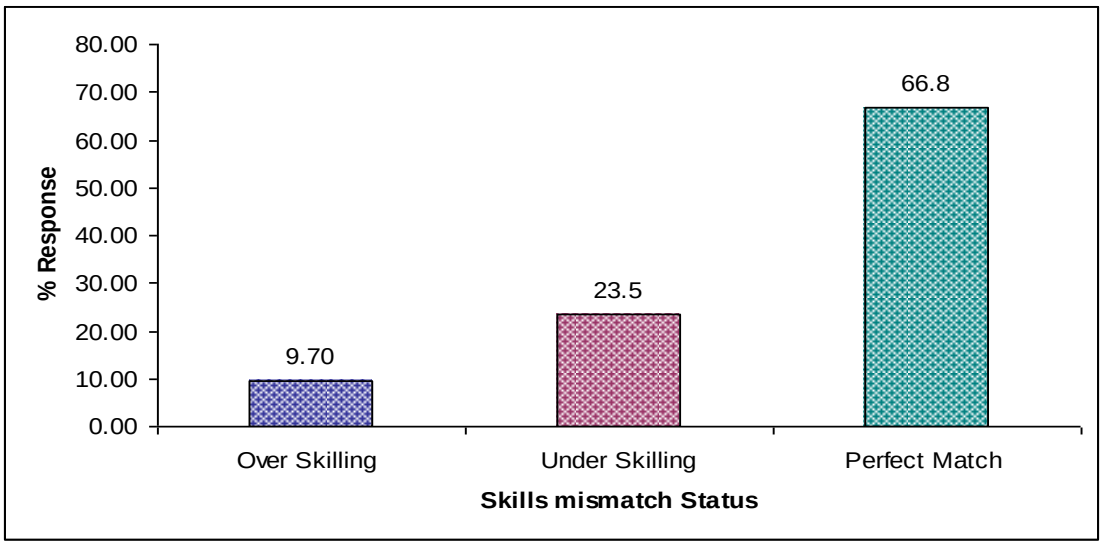

Figure 1: Extent of Skill Mismatch in Tanzanian Labour Market

Skills Mismatch Trends by Sex

In terms of sex, about 67.7 percent and 32.3 percent of males and females respectively were over skilled. On the other hand, 57.3 percent and 42.7 percent male and female workers respectively were under skilled (Table 2). This infers that the extent of under skilling as well as over skilling in this aspect of Skills Mismatch is more prevalent among the males than it is among the female workers. This again is due to the fact that, males in most cases are aggressive in seeking jobs in the labour market and hence they become subjective to Skills Mismatch.

Table 2: Skills Mismatch Trends by Sex of Workers

Status of Skills Mismatch		Sex of Workers		Total by Mismatch
		Male	Female	
Over Skilling	Number	21	10	**31**
	%	67.7	32.3	**100**
Under Skilling	Number	43	32	**75**
	%	57.3	42.7	**100**
Perfect Match	Number	137	76	**213**
	%	64.3	35.7	**100**
Total by Sex	**Number**	**201**	**118**	**319**
	%	**63**	**37**	**100**

Skills Mismatch Trends at the Sectorial Level

The results in Table 3 below show that the private sector had many under skilled workers (54.7 percent) than in the case of the public sector (45.3 percent). Also, the private sector had many over skilled workers (67.7 percent) than was the case in the public sector (32.3 percent). The cause for the difference is that the labor policies are not well coordinated and private employers do not use the public employment policies. This anomaly creates loopholes for the private sector's employers to manipulate recruitment procedures.

Table 3: Skills Mismatch Trends by Sector of the Economy

			Category of Sector		
			Private Sector	**Public Sector**	**Total by Skill Mismatch**
Status of Skills Mismatch	Over Skilling	Number(n)	21	10	31
		Percent	67.7	32.3	100
	Under Skilling	Number(n)	41	34	75
		Percent	54.7	45.3	100
	Perfect Match	Number(n)	115	98	213
		Percent	54.0	46.0	100
Total by Sector		**Number(n)**	**177**	**142**	**319**
		Percent	**55.5**	**44.5**	**100**

Skills Mismatch Trends across Tanzania's Region

The results in Table 4 show that out of 31 workers who were found with over skill , 67.7 percent (n=21) of them were from Dodoma region while 32.3 percent (n=10) of them were from Dar es Salaam region. For the case of under skill, out of 75 workers who were also found having this problem, about 42.7 percent (n=32) of them were from Dodoma region while 57.3 percent (n=43) were from Dar es Salaam region. Also, more workers with perfect match were from Dar es Salaam region (67.1 percent (n=143) than for Dodoma region which had 32.9 percent (n=70). Region wise, Dodoma region had about t 17.1 percent (n=21) of workers, 26 percent (n=32) and 56.9 percent (n=70) of workers who were over skilled, under skilled and perfect matched respectively. For Dar es Salaam, things were quite different, where the extent of over skill, under skill and perfect match stood at 5.1 percent (n=10), 21.9 percent (n=43) and 73 percent (n=143) respectively**.** This analysis shows that Dodoma region had higher incidence of workers with over skilling problem than for the case of Dar es Salaam region. Things were different for Dar es Salaam region where it experienced high incidence of under skill as for the case of Dodoma region. In the case of perfect match, majority of workers in Dar es Salaam region had perfect match.

Table 4: Skills Mismatch Trends by Region

Status of Skills Mismatch		Region		Total
		Dodoma	**Dar es salaam**	
Over Skilling	Count	21	10	31
	% within Status of Skills Mismatch	**67.7**	32.3	100
	% within Region	17.1	5.1	9.7
	% of Total	**6.6**	**3.1**	**9.7**
Under Skilling	Count	32	43	75
	% within Status of Skills Mismatch	42.7	**57.3**	100
	% within Region	26.0	21.9	23.5
	% of Total	**10.0**	**13.5**	**23.5**
Perfect Match	Count	70	143	213
	% within Status of Skills Mismatch	32.9	**67.1**	100
	% within Region	56.9	73.0	66.8
	% of Total	**21.9**	**44.8**	**66.8**
Total	**Count**	**123**	**196**	**319**
	% within Status of Skills Mismatch	38.6	61.4	100
	% within Region	100.0	100.0	100
	% of Total	**38.6**	**61.4**	**100**

Conclusion and Policy Implications

Based on the study objectives, the study concludes that on average, 33.2 percent of the workers in the formal sector had skills mismatch. In terms of sex, about 67.7 percent and 32.3 percent of males and females respectively were over skilled. The private sector has many under skilled workers (54.7 percent) than in the case of the public sector (45.3 percent). Also, the private sector had many over skilled workers (67.7 percent) than was the case in the public sector (32.3 percent). There were many workers with over skill - 67.7 percent from Dodoma region than the case was for Dar es Salaam region which stood at 32.3 percent . For the case of under skill, 42.7 percent was found in Dodoma region while 57.3 percent (n=43) was from Dar es Salaam region. These figures call for the government and other stakeholders to intervene to avert the situations. Specifically, labour policy should be reviewed to take into account the need for adherence to recruitment standards and guidelines.

References

Alba- Ramirez, A. (1993), Mismatch in the Spanish Labour Market: Over-education, *The Journal of Human Resources, 28, 259-278.*

Allen, J and van der Velden, R. (2005), The Role of Self-Assessment in Measuring Skills, Paper for the Jacobs Foundation Conference 'Interdisciplinary and Cross-National Perspectives on Skill Formation and the Reform of Vocational and Professional Training', 14-16 April, Marbach

Allen, J. and van der Velden, R. (2001), Educational mismatches versus skill mismatches: effects on wages, job satisfaction and on-the-job search', *Oxford Economic Papers*. Vol.53 (3): p434–452.

Allen, J. and Van der Velden, R. (2001), "Educational mismatches versus skill mismatches: effects on wages, job satisfaction, and on-the-job search", *Oxford Economic Papers*, 3; pp. 434-452.

Adedeji, S and Oluyomi, P.(2012), Skills mismatch among university graduates in the Nigeria Labour market.US-China education review, Davd Publsiger, Ibadan

Allen, J. and Van der Velden, R. (2001), Educational mismatches versus skill Mismatches: effects on wages, job satisfaction, and on-the-job search, *Oxford Economic Papers*, 3; p. 434-452.

Allen, J.; De Weert, E. (2007), what do educational mismatches tell us about skill mismatches? A cross-country analysis. *European Journal of Education*, Vol. 42,

Ayara, N. (2002), the Paradox of Education and Economic Growth in Nigeria: Empirical Evidence. Selected papers for the 2002 Annual Conference. Nigerian Economic Society (NES) Ibadan. Polygraphics Ventures Ltd.

Battu, H. and Sloane, P.J. (2002), To what extent are ethnic minorities in Britain over-educated, *International Journal of Manpower*, vol. 23 (3), p192-208.

Battu, H., and Sloane, P.J. (2000), How well can we measure graduate over-education and its effects?' *National Institute Economic Review*,

Blanchard, O. (2006), *Macro-economics, Pearson*, Prentice Hall: USA, 4th Edition.

Borjas, G.J. (2006) , *Labor Economics* , 2ND edition McGraw-Hill Education, US

Danish Trade Union (2003), Profile of the Labour Market and Trade Unions in Tanzania, project No.036/002/01:Http:// www.loft.dk accessed in 2009.

Di Pietro, G., & Urwin, P. (2006), Education and skills mismatch in the Italian graduate labor market. Applied Economics, *38*(1), p79-93.

European Centre for the Development of Vocational Training (CEDEFO), (2011), What next for skills on the European labour market, Thessaloniki, GREECE, **www.cedefop.europa.eu** retrieved in February 2011.

Groot, W. & Maassen van den Brink, H. (2000), Overeducation in the labour market: a meta-analysis, *Economics of Education Review*, *p*149-58.

Hartog, J. (2000), Overeducation and earnings. Where are we, where should we go?, *Economics of Education* Review, *p* 131-147.

Hartog, J. (2000), Over-education and earnings: where are we, where should we go? *Economics of Education Review*, Vol. 19, Issue 2, p. 131–147.

Hartog, J. (2000), Over-education and earnings: where are we, where should we go?", *Economics of Education Review*, 19 (2); pp. 131-148.

Linsley, I. (2005), Over education in the Australia Labour Market, Its Incidence and Effects: The University of Melbourne, Australia.

Nordin, M, Persson, I and Rooth, D.(2008), Education –Occupation Mismatch: I there an Income Penalty? Discussion Paper No.3806 Germany

Nordin, M. (2008), Ability and rates of return to schooling - making use of the Swedish enlistment battery test, *Journal of Population Economics, p*703-717.

Oosterbeek, H.; Webbink, D. (1996), Over scholing, overscholing en inkomen [On education, overeducation and earnings]. *Economisch Statistische Berichten*, Vol. 81, No 4049, p. 240-241.

Rosenbaum, J. E., Kariya, T; Settersten, R and Maier, T. (1990), Market and Network Theories of the Transition from High School to Work: Their Application to Industrialized Societies. *Annual Review of Sociology*, p263-299.

Rumberger, R. (1987), The Impact of Surplus Schooling on Productivity and Earnings. *Journal of Human Resources*, 22(1), p24–50.

Rumberger, R. W. (1987), The impact of surplus schooling on productivity and earnings", *Journal of Human Resources*, 22(1); pp. 24-50.

Rumberger, R.W. (1987). The impact of surplus schooling on productivity and earnings. *Journal of Human Resources*, Vol. 22, No 1, p. 24-50.

Sloane , P. (2009), Addressing Skill : Mismatch in Difficult Times: Matching Skills and Jobs:Anticipating Needs in Challenging Times , CEDEFOP, Thessaloniki, Greece

Sloane, P. J., Battu, H. and Seaman, P. T. (1999), Overeducation, undereducation and the British labour market, *Applied Economics, p*1436-1453.

Sloane, P.J. (2004), "Much Ado About Nothing? What Does the Over- Education Literature Really Tell Us?", in F. Büchel, A. de Grip, A. and A. Mertens, (eds.) *Overeducation in Europe: Current issues in theory and policy*. Cheltenham, UK: Edward Elgar.

Spence, M. (1973), Job market signalling, *Quarterly Journal of Economics*, p 355-374

Thurow, L.C. (1975), Generating Inequality: Mechanisms of Distribution in the U.S. economy, Basic Books, New York

United Republic of Tanzania (URT), (2008), National Employment Policy, Dar es Salaam.

United Republic of Tanzania (URT), (2009), Public –Private Paternership Policy, Dar es Salaam.

United Republic of Tanzania (URT), (2006), Intergrated Labour Force Survey 2005/2006, NBS , Dar es Salaam.

United Republic of Tanzania (URT), (2001), Intergrated Labour Force Survey 2001/2002, NBS , Dar es Salaam.

United Republic of Tanzania (URT). (1999), Intergrated Labour Force Survey 1999, NBS , Dar es Salaam.

United Republic of Tanzania (URT). (2004), Employment and Labour Relation Act of 2004, , Dar es Salaam.

United Republic of Tanzania (URT). (2010a), MKUKUTA II, , Dar es Salaam.

United Republic of Tanzania (URT). (2010b), Tanzania Long Term Plan Perspective(2010-2025) , Dar es Salaam.

United Republic of Tanzania (URT). (2012), Employment and Earning Survey ,2012, Dar es salaam,

Verdugo, R.; Verdugo, N.T. (1988), The impact of surplus schooling on earnings: some additional findings. *Journal of Human Resources*, Vol. 24, No 4, p. 629- 695.

Walterskitchen, E. (1999), The relationship between Growth, Employment and Unemployment in the EU, Workshop in Barcelona, 16-18 September 1999, Austrian Institute of Economic Research.