

A Decomposition Analysis of Immigrants-Natives Wages in the UK: Evidence from the Quarterly Labour Force Survey, 2009

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Abstract

The immigrants are characterized on the average with higher human capital and are rewarded potentially less as compared to their native counterparts. This question has motivated me to analyze the immigrants-natives wage gap in detail and find the extent of this potential discrimination against the immigrants. I analyze the data from the first two quarters of the Quarterly Labour Force Survey, 2009 using the Oaxaca Decomposition technique. Applying both the threefold and twofold decomposition approaches, I computed the wage gap first using simple decomposition based on threefold and then the twofold approaches using both coefficients of the native model and coefficients of the pooled model as weights separately. My findings from these computations are that immigrants have on the average higher human capital endowments and their rewards are not at least the same with the rewards for natives. This suggests discrimination is present to some extent against the immigrants otherwise they would have earned than what they earn at their current level of education, experience and other characteristics.

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Chapter 1

Introduction

1.1. Introduction

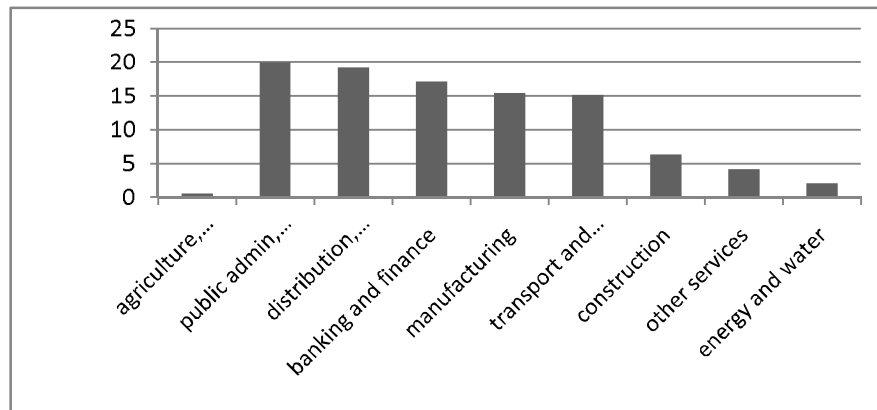
Immigrants play an important role in the economic systems of their host country. They bring with them experience and exposure, cultural diversification, social and many economic goods which are socially and economically desirable. The United Kingdom has seen net immigration since 1980s, before this the emigrants out flowed the immigrants, and currently it is one of those major economies which has been absorbing much of the immigration. The recent statistics shows immigrants come from various parts of the world. Major groups include Poland, Ireland, India, Pakistan and Bangladesh. Polish immigrants increased in the UK population only after the increase in the number of member states in the EU in May 2004 and UK and a few other countries like Denmark removed the restrictions on the number after expansion of the EU, living and working of immigrants from these members of the EU (Srisankarajah et al, 2007).

Lindley & Elliot (2008) has rightly quoted Prime Minister of the UK, Tony Blair who rightly thought at that time that UK need more managed immigrants, as immigration is essential for the country (Home Office, 2005), but the observed discrimination against the immigrants which is a component of the ethnic discrimination having different levels for different cultures (Chiswick, 1978). The observed disadvantage for immigrants in the

literature motivates this work to look into detail what has happened to the wages of immigrants in the UK in the recent times. The success of government policies to eradicate any uneconomic discrepancies in the earnings of immigrants and natives are evaluated using recent data.

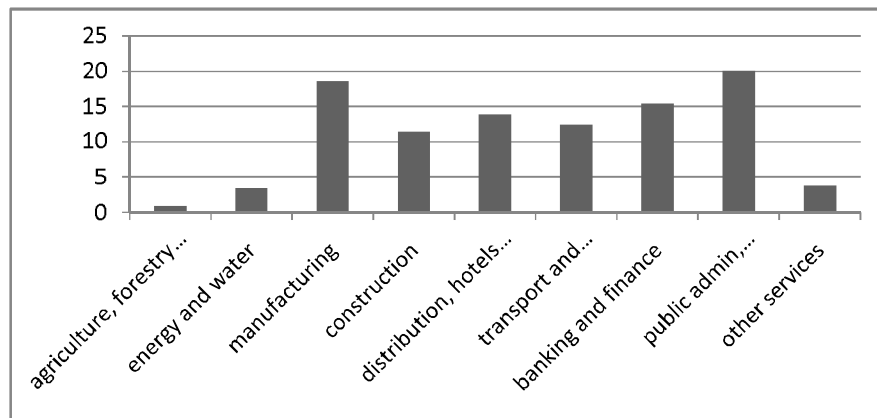
Figure 1 from the sample shows concentration ratios of immigrants in various occupations summarized into industrial sectors. It is observed that 20% of the immigrants are working in public administration, education and health, 19.23% are attached to distribution, hotels and restaurants, 17.12% work in banking, finance and insurance, 15.48% work in manufacturing and 15.10% immigrants are working in transport and communication sector. Comparatively the distribution of the natives into different sectors indicates that 18.64% are working in the manufacturing, 20.01% work in public admin, education and health , 15.43% in banking and finance and 13.88% are working in distribution, hotels and restaurants sector. Immigrants work in those industrial sectors where wages are relatively low when ranked on the basis of average wages. The regional distributions (Figures 3 & 4) of the immigrants and natives show that more immigrants are concentrated in the regions of London and South East of England as compared to natives who are more dispersed.

Figure 1: Occupational distribution of Immigrants in UK



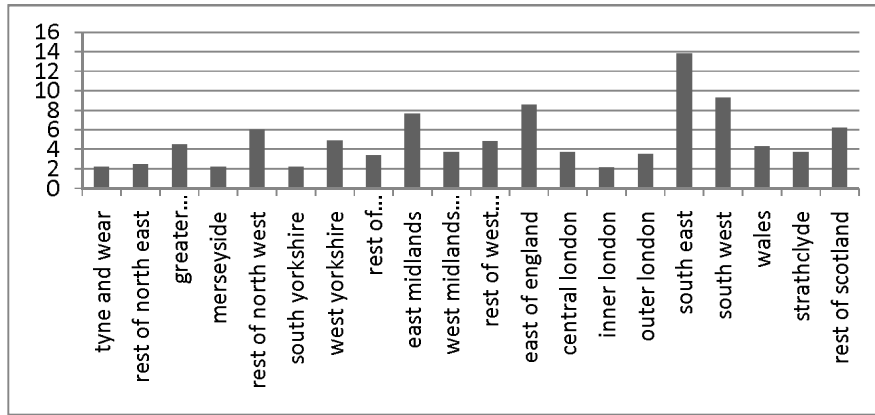
Source: Author's Sample from the QLFS 2009

Figure 2: Occupational distribution of the Natives in UK



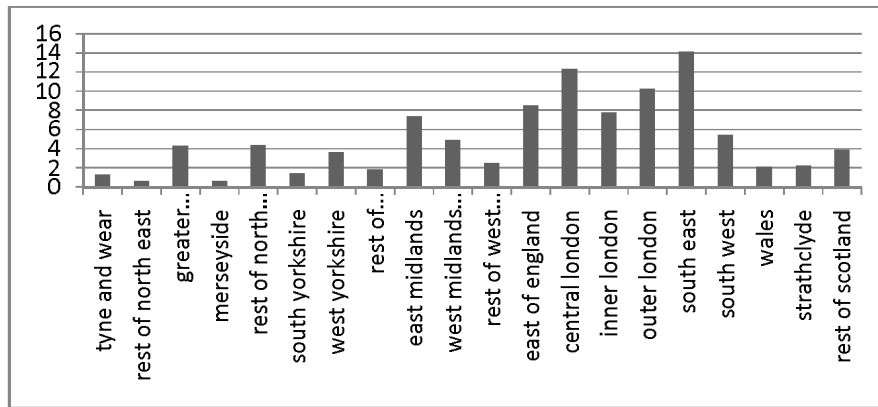
Source: Author's Sample from the QLFS 2009

Figure 3: Regional Distribution of natives in UK, QLFS 2009



Source: Author's Sample from the QLFS 2009

Figure 4: Regional distribution of immigrants in UK, QLFS 2009



Source: Authors Sample from the QLFS 2009

The average wage rates for the natives and immigrants in Table 1 indicate that difference in average hourly wage rate is approximately £1 when immigrants and natives both have education for a maximum of 17 years or less. The difference increases to more than £2 between the wages of the two groups when they have education for 19 or more years. The average hourly wage from the pooled sample is higher for immigrants (£14.94) than natives (£14.06). It reflects the findings of Hunt (2008) and Manacorda et al (2006)

when comparing wages for different education years. They stated that immigration only affects wages of other immigrants and the wages of immigrants would be depressed as more university educated immigrants join the labour force.

Table 1: Average hourly pay by education for Natives and Immigrants

Schooling Years	Immigrants	Natives	Difference
less than 17 years	12.46231	13.37559	0.91328
17 to 18 Years	18.74139	20.64956	1.90817
19 or more years	19.71659	21.96737	2.25078

Source: Author's Sample from the QLFS 2009

1.2. Hypothesis and Policy Implications

Theories of human capital suggest that individuals with higher investments in their human capital should be rewarded with higher returns than those who have lower investment. I test this major hypothesis by estimating and decomposing wages of the immigrants and natives using Oaxaca Decomposition techniques. The objective is to estimate the wages of the immigrants and natives to check the gap between the wages of the two groups. I check if more educated immigrants do earn at least the same wages as natives. I will test this hypothesis by checking if return to education per year is the same by testing the equality of the coefficients of number of years of education in their wage functions. Further I will check if there is no gap between the wages of the two groups. Raw figures (Table 1 & 4) indicate average hourly pay of immigrants in the pooled sample is higher than

natives but when compared on the basis of level of education it is clear that they do not have more hourly wages than the natives even though they have higher average years of education than the natives. There remain questions to be answered, that what happens to the earnings when comparing human capital characteristics and rates of returns to these characteristics for the natives and the immigrants. To identify what happens to the estimated average wages in case rates of returns are not equal for the two groups, I use recent data from the Quarterly Labour Force Survey, 2009 and discuss some of the questions like these by estimating the wage gap.

I also analyze if only returns in the market are different after controlling for and adjusting to different individual characteristics. Or there is some amount of discrimination against the immigrants which lead to lower rates of returns for the immigrants than what they could have earned in the absence of discrimination. It would not only serve estimating the earning functions and identify the major determinants of the wages for both natives and immigrants but it would also help in the estimation of the extent of the explained and unexplained parts of the gap. Further it will then be helpful in identification of any disadvantages in earnings to the status of being an immigrant as compared to the status of being a native. The objective of this analysis is to estimate if the wage differential has narrowed down in the recent times by using recent data and comparing with the previous results and hence enrich the literature with up-to-date estimates.

Our study is not free of limitations and one limitation lies in the essence of the technique I apply to estimate the gap in the earnings of immigrants and natives, is that it decomposes the wages around the mean characteristics while it could be well understood to capture the gap across the wage distribution as Hunt (2008) has shown for UK and others with similar results for various other countries. These studies have indicated that the gap is not uniform across the distribution, but the scope of this essay does not allow me to go into such details and capture the whole picture of wage gap across the wage distribution. Hence I could not capture the true picture of the gap across the wage distribution using the decompositions based on conditional wage distribution using quantile regression techniques as suggested by Machado & Mata (2001) and Melly (2005) and others. Further I limit the analysis to the sample of full time employed working males which let analysis free of effects of possible differentials due to gender and females participation problems in the labour market.

1.3. Framework of the dissertation

The next chapter of this dissertation elaborates some of the major findings from the literature with a full description. Chapter 3 discusses the estimation framework of the analysis. I summarized major characteristics sample in chapter 4, while chapter 5 presents major findings from the empirical analysis of the theory and data. Chapter 6 concludes.

Chapter 2

Literature Review

2.1. Introduction

The native-immigrant wage differential analysis stands among the major research areas in the field of labour economics and economics of discrimination. Until recently there are only a few contributions in research towards the analysis of discrimination against the immigrants in the UK. It is only in the last decade or more that analysis of immigrant-native wage, employment and occupational attainment received much attention in the literature (Sriskandarajah et al, 2007). It is only from the 1980s and onwards that net immigration as the immigration is higher than the emigration. Since then the immigrants' ratio in the UK population has increased to the level more than 11% in 2009 according to the latest report from the National Statistics (ONS, August 2009). Hence it is worth to identify if immigrant communities face any economic discrimination in the UK labour market.

The Economics of discrimination provides some basic understanding on why immigrants might have lower wages than the natives even if they have higher human capital formation, like past experience they have gained in their own countries but experience gained in home country might not be of relevance to the host country. Hence if theories of human capital and neoclassical employer taste models do work, then it would be reasonably possible to identify and estimate what factors do contribute towards the

wage differentials between the immigrants and the natives. The literature on the analysis is huge and I summarize some of the important findings on the economics of discrimination against the immigrants in the following pages.

2.2. Economic Discrimination:

Discrimination is not only a prevailing phenomenon in the current labour market but has been one of the main issues that most of the world societies and economic systems have in one or other form. The labour market discrimination is not restrained to a single sector or against a specific group but it has taken in many sectors and against many groups in one or other form. The gender discrimination is one that has been mostly estimated and predicted as it is worth viable based on sex and there are government policies which aim to restrict economic agents to discriminate against any specific gender in any form. It is the objective of the social and economic system also known as equal opportunity system. This system also protects from discrimination based on races, membership of a social or religious community or disability.

Economists have put forward different explanations to show why there is discrimination against a group in the labour market. Gary Becker (1957) has been one of the founding economists who paved the way for the analysis of the economic discrimination. His formulated Neo-classical model of employers' taste for discrimination is based on utility functions including profitability. This model is based on microeconomic principles of utility

maximization and according to this model the discriminators attempt to maximize their utility function. According to this model, one group discriminates against the other groups based on his taste for discrimination. Thus employers discriminate against one of the genders like females or community like immigrants to maximize their utility functions which include their taste for discrimination by paying lower wages to the discriminated group. In long run a perfectly competitive environment in the labour market it would ensure the discriminatory behavior of the employer towards any specific group to disappear.

The classical theory of wage determination in perfect competitive labour market laid down by Adam Smith and his followers was criticized by Johan Stuart Mill (1885) on the basis that classical theory cannot be applied to analyze a system of labour market with distinct parts/sectors as classical theory assumes a uniform structure of the labour market. Against the classical theory of uniformed wages across the market, segmented market theory is put forward to analyze labour market functioning simultaneously with distinct sectors and different wage rates for different groups from these sectors. The primary and secondary job markets are the two different sectors in parallel under the same market structure with different wage settings and other conditions.

The dual labour market approach, is one approach to the segmented theory of the market structure, considers the labour market with two or more

distinctive occurrences or sectors and according to dual theory there are distinct behavioural and economic phenomena in these two different sectors and agents in these two market sectors would be considered as distinct markets and the uniform market approach based on the classical theory cannot be applied to the wage determination in this type of markets with distinctions in its phenomena.

Another approach to the segmented market theory is the job crowding hypothesis which generalizes that some agents are over supplied into one or the other occupations and they are receiving lower wages in these sectors when compared to their wages in the other sectors and this type of occupational setting is not free from discrimination as if some individuals or groups are finding it hard to get a job otherwise they can do equivalently to those who are currently working in that sector but due to crowding into some other sector they cannot find the job (Pike, 1984). Similarly if agents in the same labour markets behave like they are erecting barriers against the entry of other agents, there would be a wage differential in that market due to economic inequality instead of differentials in the earnings due to different abilities and efficiencies (Darity & Williams, 1985). But empirical studies showing movements of labour from the secondary job markets to the primary markets which counter the basic segmented labour market theory (Rosenberg, 1980 and Mayhew & Roswell, 1979).

While analyzing earnings in the labour market there arise issues of what factors contribute to the determination of wages and what are the factors affecting phenomena that two similar agents in all aspects but from different sexes, races or from different communities receive different rewards for their human capital even if they have the same abilities and productivities. Theory of Human Capital answers these and similar other questions. According to the theory two similar agents could have different wages due to differences in their age, level of education, experience, skills and training (Harmon et al (2001) and Harmon & Walker (2001)) and if still there remains any gaps, then it might be due to discrimination.

When empirical estimation of the differential in wages of two different groups is the main objective of study then Mincerian earnings function is the most adopted function. It determines the rates of returns to the human capital and shows their impact on the wages (Mincer, 1974). Investment in human capital determines the wages in terms of returns to long term investment of the labour in education, training, new skill development like computer knowledge and information technology and its utilization which contribute in the productive capabilities of labour, hence these factors are important for determination of the wages and also for differential analysis. Empirical research find out that education, experience, training and skill levels are the most considered human capital determinants.

2.3. Immigration and assimilation

Assimilation has been in contrast to the decomposition analysis of wages of immigrants and natives. As immigrants have to integrate in a new economic society in their host country and the host country might be in very different state of demand for the human capital endowments of these immigrants. It is evident that over the time, the assimilation would induce immigrants to stock with skills specific to and human capital requirements of their host country Nielsen et al (2004). Borjas (1987) and others have summarized that there are initial wage differences between the immigrants and natives but these differences decline over time as immigrants stay and participate in the labour market in their host countries. The hypothesis mostly rejected but widely applied is that immigrants assimilate to the host country population over time.

To estimate if immigrants assimilate over time and the wage gap should be determined over time. From policy perspective the question is that whether immigrants' wage function converges towards the natives' wage function over time and that if these functions do not converge over time then why not?. Immigrants are in competition with the natives in the labour markets in their host countries and they are disadvantaged at least in the initial years of their immigration into the host country because of human capital factors are not specific to the system of their host economies they have just moved in

and it will take time to the acquisition of minimum level of these skills and human capital specific to host countries (Chiswick (1978, 1980).

Similarly Licht and Steiner (1994) tested this hypothesis of assimilation verses naturalization for permanent and temporary immigrants in Germany and found that natives are highly paid as compared to the immigrants in the German labour market and the hypothesis of immigrants' assimilation could not be established. Naturalization is highly influenced by assimilation as compared to the decision of the immigrants to remain permanently in their host country (Aldashev et al, 2008).

Hence in concluding from these and other similar studies that immigrants would be compensating for their initial lower earnings by earning even higher than their native counterparts after gaining experience in the host country and due to their steeper earnings profiles for permanent immigrants reflecting their intensive investment in human capital as compared to temporary immigrants (Dustmann, 1993).

2.4. Immigration and skill transferability

As discussed earlier, one important reason why immigrants have lower wages compared to their native counterparts are the problems in adjustments in the initial years after their arrival to their host country. As they have to adjust in the new host country specific economic and social conditions which has significant effects on the status of their work also depending on

their initial skills and human capital. When immigrants spend more time in the host country the skill transferability becomes easy but in the initial years of their immigration they have to face some problems in adjustments as stated above. Problems in the initial years of their stay in their host countries are related to language, economic and social life.

This transferability has been tested using different measures like language and other cultural and institutional factors like new working conditions in the labour market. Conclusion is that immigrants with lower transferability would be at a loss in the labour market as compared to those immigrants who have close ties and high transferability both in cultures and in labour market conditions to the natives. Those who are close to the natives, they have the advantage in adjusting to their host country conditions and reaping the benefits of similarity (Chiswick, 1978). In case of discrimination, the wage rates of these immigrants will not be close to the wage rates of natives even if they have least differences in conditions compared to those who have more differences with natives and more visible gaps in wage rates (LaLonde & Topel, 1997).

Dustmann (1993) also suggested temporary immigrants will invest less in their human capital specific to their host country. As the wage differential converges in the long run, hence it is evident from the above studies that there might be lower discrimination in the long run due to assimilation and adaptations to their host countries environment. Using data from Spanish

labour market and applying quantile regression technique, Domínguez & Gutiérrez (2008) also showed that those immigrants who have higher human capital are well off as compared to their native counterparts, concluding that discrimination is not possible against these immigrants as they have higher human capital than natives.

2.5. Discrimination and the Model Specification

Literature is rich in techniques applied to the analysis of wages between individuals from different sexes, races and from different other groups in the labour market. I compare only some of these model specifications which are common in the literature to identify any discrimination in the labour market. Oaxaca and Ransom (1994) have summarized five similar approaches most frequently found in the literature to estimate wage differentials. Their finding is that one econometric model could produce smallest standard errors but still results of all approaches could be varying.

Blinder-Oaxaca (1973) approach most commonly applied statistical technique for decomposing wages of two groups into a part explained by the differences in endowments and a part which remains unexplained. This approach decomposes wages weighted on coefficients of the model of a reference group. There are several suggestions in selection of the reference group also assumed as the non-discriminatory group and in choosing of the appropriate weights. In the literature on the native-immigrant wage gap analysis, native group is widely used as the non-discriminatory group, often

there is no specific reason as to select the reference group as non-discriminatory (Cotton, 1988) also average coefficients on the two groups can be used as a reference groups (Reimers, 1983).

Neumark (1988) have suggested using pooled sample across the two groups as the reference group and coefficients from the pooled model as weights. Oaxaca-Ransom (1994) have suggested alternative this approach but showed their approach is similar to the approach suggest by Neumark (1988). The approach of using pooled model has an issue as documented by Jann (2008) that it transfers a portion of the unexplained part of the decomposition to the explained part but it is not well documented in the literature with an exception to Fortin (2006).

Oaxaca Decomposition technique is extended to engulf various econometric models to encompass various issues with the simple regression analysis and other important issues like selection bias. Observance of wages is only due to participation in the labour force and decomposition analysis should be adjusted for the bias due to selection of those individuals who participate (Neuman & Oaxaca, 2004). The approach is also applied to identify discrimination across the wage distribution when it is extending to the quantile regression models. This method has the quality to estimate the detailed decomposition across the wage distribution and it helps in the identification of the discrimination if it happens only against the low paid workers or is same across the whole distribution.

The common approaches adopted to analyze the wage gap using quantile regression, are based on Oaxaca Decomposition technique suggested by Machado & Mata (2000 & 2001) and Melly (2005). I will step aside of this approach due to the scope of this study does not allow me to extend my analysis to estimate the wage gap across the wage distribution hence I will use the most common approach, the basic Oaxaca-Blinder Decomposition Approach.

Chapter 3

Methodology

3.1. Introduction

The wage decomposition approach suggested by Blinder (1973) and Oaxaca (1973) is applied to estimate and identify the extent of gap between wages of the immigrants and natives. The approach is based on two separate equations for each group which determine the relationship between group specific characteristics and their wages. Then the two estimated equations are used in the estimation of the gap due to differences in characteristics which is called the explained part of the gap and an unexplained part giving differences in the rates of returns due to discrimination including the gap due to unobserved characteristics.

First I estimate the average wage gap using a variant of the Oaxaca-Blinder Decomposition approach suggested by (Winsborough and Dickinson (1971), Jones & Kelley (1984) and Daymont & Andrisani (1984)) capturing the interaction term which captures any past discrimination following Aldashev et al (2008), this approach is called the threefold approach. The wage gap is estimated using first immigrants as a reference group and then immigrants as reference group. I explain results from the estimation based on the natives as the reference group and complete results are given in the Appendices.