THE IMPACT OF INTERGENERATIONAL EFFECTS AND GEOGRAPHY ON YOUTH EMPLOYMENT OUTCOMES: A STUDY OF THE PERTH METROPOLITAN REGION

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ABSTRACT: High youth unemployment in Australia is one of the major labour market issues confronting policy makers. The following study examines the influence of intergenerational effects and geography on the employment prospects of teenagers. Utilising data from the 1991 and 1996 Censuses for the Perth metropolitan region the study identifies substantial intergenerational rigidities at work in the most economically disadvantaged areas of Perth. Average youth unemployment rates in the Perth metropolitan region were over 15 per cent at the time of the 1996 Census, substantially higher than those recorded two decades ago. However, the burden of unemployment has not been borne equally by neighbourhoods within the metropolitan region. It appears that the demographic characteristics of neighbourhoods are a significant causal factor in the employment outcomes of youths. The implication for policy is that the targeting of individuals at risk of unemployment may not be appropriate unless the relationship between youth unemployment, region and demography is taken into account.

1. INTRODUCTION

There is a growing body of evidence for Australia and elsewhere suggesting that the underlying relationships between family, neighbourhood and youth need to be addressed if employment opportunities for disadvantaged youth are to be improved (see, for example, Miller, 1998; Le and Miller, 1999; Hunter, 1995, 1996; Gregory and Hunter, 1995; Bradbury et al, 1986).

There are important linkages between the socioeconomic status of regions and the employment and educational patterns of its constituents, particularly youth. Youth who are identified by certain regions and socioeconomic characteristics are more likely to be over-represented in the pool of young unemployed. They are also more likely to have low educational attainment. The consequences will be continued labour market disadvantage and inequality of opportunity.

The authors express their gratitude to the Western Australian Department of Training for their sponsorship of the research undertaken in this paper.
Gregory and Hunter (1995) have shown that there is a growing concentration of urban poverty and that these areas are developing their own 'pathologies', the consequence being a cycle of increasing disadvantage. Consistent with this is a study by Le and Miller (1999) which found that socioeconomic factors were a significant causal factor in labour market outcomes. As Hunter (1996) points out, it is important to determine whether there are influences other than personal attributes that are contributing to inequality of employment outcomes. If there is then policy aimed solely at correcting personal attributes will be deficient and will fail to adequately address the problem. For the purpose of the analysis undertaken in this paper, youth are defined as those who are aged between 15 and 19 years.

2. OVERVIEW OF YOUTH LABOUR MARKET

Persistently high youth unemployment has become one of the dominant features of the labour market over the last two decades in Australia and other OECD countries. At the same time there has been a trend away from low skilled employment in advanced economies (BLMR, 1987; Committee on Employment Opportunities (CEO), 1993). As this is the main destination for those entering the labour market for the first time (Daly et al. 1998) the prospects for youth are somewhat diminished.

Figure 1 shows the pattern of youth unemployment in Western Australia and Australia for the period 1979-98. Youth unemployment rates observed for Western Australia since 1979 compare somewhat favourably with the rest of Australia and show a clear pattern of cyclical fluctuation. Full-time youth employment in Western Australia fell from 51,000 in May of 1979...
to 31,400 in April of 1999, a decline of just over 38 per cent. Over the same period the youth cohort increased in size by over 15 per cent, thus exacerbating the difficulties facing youths in the labour market.

The major response to the collapse in youth full-time employment has been increased enrolment in further education and training (Lewis and Koshy, 1999). A number of factors have contributed to this, such as government incentives (Kenyon and Wooden, 1996; Lewis and Mclean, 1998), increased government funding of places in tertiary education (Kenyon and Wooden, 1996), decreased opportunity costs of study, due to reduced employment opportunities, (Lewis and Koshy, 1999) and increased relative returns to education (Chia, 1991).

Figure 2 shows the percentage of youths in full-time and part-time employment and the percentage who are in some form of post-compulsory education for 1986-99. Accompanying the decline in full-time employment has been a rise in the number of youths in part-time employment. There has also been a substantial rise in the number in post-compulsory education over this period.

The following figures highlight the dramatic increase that has taken place in youth part-time employment over the last two decades. In 1979 as few as 11,500 were in part-time employment. By April of 1999 this number had grown to 41,800, an increase of 272 per cent.
Table 1. Youth Share of Total Employment in Western Australia, 1979 and 1999

<table>
<thead>
<tr>
<th>Year</th>
<th>Part-Time</th>
<th>Full-Time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1979</td>
<td>1999</td>
</tr>
<tr>
<td>15-19 Years old</td>
<td>11,500</td>
<td>42,800</td>
</tr>
<tr>
<td>Total Employment</td>
<td>94,300</td>
<td>251,400</td>
</tr>
<tr>
<td>15-19 Share of Employment (per cent)</td>
<td>12.2</td>
<td>17.00</td>
</tr>
</tbody>
</table>

Source: ABS PC AUSSTATS, Tables LABEM5G, LABEM5H.

Another way of looking at the significance of changes in youth part-time and full-time employment is to observe the change in the youth share of employment in each category. As shown in table 1 there has been a dramatic decline in the youth share of full-time total employment and an increase in their share of total part-time employment.

Reduced opportunities to gain full-time employment and the increase in part-time employment opportunities have had a dramatic impact on participation in post-compulsory education and training (see, for example, Karmel, 1995; Lewis and Koshy, 1999).

Lewis and Koshy (1999) argue that increased education enrolments, to a large extent, are a reflection of hidden unemployment. Nonetheless, increased enrolments may be beneficial from both an individual and social perspective, as it has been clearly established in numerous studies that lifetime employment and earnings are enhanced by higher levels of training and education (see, for example, Miller, 1998, 1986, 1982; Bradbury et al., 1986; Veum and Weiss, 1993; Bell et al., 1992; Le and Miller, 1999; Chia, 1991).

However, a small percentage of youth are unable, or disinclined, to participate in post-compulsory education and also do not participate in the labour force. In September of 1999 this represented around 2.3 per cent of the youth age-cohort. For these people the incentives must be insufficient or inaccessible. Alternatively, they may be unaware of the incentives, or, not understand them.

The analysis so far has concentrated on aggregate trends in the youth labour market. However, there is significant variation in the geographic and socioeconomic distribution of youth unemployment and employment in the Perth metropolitan youth labour market. The role that neighbourhood characteristics play in the youth labour market may offer some insights as to what is behind adverse youth labour market outcomes.

3. ROLE OF NEIGHBOURHOODS

There is a growing body of evidence suggesting that youth unemployment is not only affected by the characteristics of individuals, but also by non-personal factors. Among the suggested non-personal factors contributing to unemployment are neighbourhood demographics and intergenerational rigidities
Intergenerational Effects on Youth Employment in the Perth Region

Two hypotheses are suggested for differential labour market outcomes between urban regions. The spatial mismatch hypothesis looks at the impact of job decentralisation and the constraints on housing choices of people who have low socioeconomic status. This model suggests proximity to work affects employment outcomes. Vipond (1984), for instance, found that location, measured by distance of a local government area to the Sydney CBD, was a significant determinant of unemployment differentials in the Sydney intra-urban labour market. Vipond argues that there are spatial frictions which prevent complete integration of the metropolitan labour market. The most important of these is accessibility to employment opportunities, which Vipond points out are greatest closest to the CBD.

Another approach suggests that concentration of people who are disadvantaged, that is, socioeconomic concentration, results in social isolation which has a negative impact on labour market outcomes (O'Regan and Quigley, 1998). The effect is felt on high school dropout rates and labour force participation rates.

Several mechanisms are suggested as influencing labour market outcomes under the socioeconomic concentration model alluded to above. Among these are the absence of positive role models; lack of informal job networks; and disruptive influences. The main contrast between the models is that the internal composition of neighbourhoods matters more than external employment opportunities (O'Regan and Quigley, 1998).

3.1 Socioeconomic Status

Gregory and Hunter (1995) examine the effects of increasing income inequality and the growing geographic concentration of urban poor. They produce evidence suggesting that there was no systematic contribution from socioeconomic status and its geographic concentration to the likelihood of employment in 1976. However, by 1991 the composition of neighbourhood employment had deteriorated substantially with the likelihood of unemployment increasing for low socio-economic status (SES) areas. In 1991 the employment rate of youths in low SES areas was only 80 per cent of that observed in high SES areas (Gregory and Hunter, 1995).

Geographic concentration of unemployment has important consequences for the prospects of future employment. First, it reduces the network of friends and relatives in employment, thereby reducing the opportunities to find employment (Gregory and Hunter, 1995; CEO, 1993; O'Regan and Quigley, 1998). Second, since employment opportunities are more likely to be in other locations (i.e. other than low SES areas), then the costs of job search are increased (Vipond, 1984). It also lowers the reward for working, since travel or re-location to the place of work will be more expensive, thus increasing the likelihood of spatial mismatch (Gregory and Hunter, 1995).
3.2 Endowments Hypothesis

Hunter (1996) estimated a model to test the hypothesis that the worsening employment outcomes in low SES areas was due to a sorting of characteristics. The endowments hypothesis suggests that the reason employment outcomes in low SES areas have deteriorated over time is because people who are unemployed, or have characteristics that make them more prone to unemployment, concentrate in areas which are already disadvantaged. That is, low SES areas experience higher unemployment because the concentration of constituents with attributes not conducive to employment is higher. The main findings from the Hunter (1996) study were that neighbourhood effects play a large part in determining employment outcomes. Hunter (1996) concluded that the returns to a given set of endowments had deteriorated substantially since 1976. Neighbourhood effects were interpreted as being the result of living in a low status collection district or intra-family effects which are correlated with an areas' socioeconomic status (Hunter, 1996).

3.3 Industry Endowments

Hunter (1995) found that industry structure was an important explanator of the decline in employment in low SES areas. The overall structure of industry may change over time in such a way that blue collar or low skilled employment declines. As employment of this type may be expected to be relatively high in low SES areas, then people in these areas are also likely to shoulder more of the unemployment burden. The other possibility is that industry may be in decline in these areas in particular. As a consequence the burden of unemployment will fall directly on these areas. The decline of industry in these areas may reflect general declines in specific industries, for example, manufacturing. Alternatively, the decline may come about due to the decline in household income in the area, due to declining employment ratios, which logically will feed into reduced economic activity and further labour market decline.

3.4 Intergenerational Mobility

The relationship between a parent's unemployment and their child's may be a reflection of transmission of tastes, constraints, or, true state dependency (O'Neill and Sweetman, 1997). Parents who have a low distaste for unemployment may raise children with similar attitudes towards unemployment. Thus, this will increase the likelihood of the child becoming unemployed. Another example of transmission of constraints involves the income of the parents being too low to finance further education of their children (O'Neill and Sweetman, 1997) which would increase the likelihood of youth unemployment.

The geographic location of parents may result in the spatial mismatch of youths and employment. This is due to the financial dependency of youths on their parents, something which has been increasing over the last 14 years (Schneider, 1999). This will reduce the probability of job matching and sampling where unemployed youth are located in disadvantaged areas with low employment opportunities and who are also financially dependent on their parents.
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Using UK data O'Neill and Sweetman (1997) found that the probability of becoming unemployed for a male, if the father was unemployed, was over two times higher than for males whose fathers were employed. Local labour market conditions and education were also found to affect the outcome. However, even after controlling for these factors the tendency for greater unemployment still existed. This also appears to be the case in the Australian context. Bradbury et al (1986) found that even when personal characteristics of youths are controlled for, high unemployment probabilities are positively correlated with the disadvantage of parents.

4. ESTIMATION OF NEIGHBOURHOOD EFFECTS

In this paper the impact that various demographic characteristics of neighbourhoods have on youth employment-population ratios in the Perth metropolitan region are examined. To do this a cross-section model of youth employment is estimated relating the youth employment to population ratio to various neighbourhood demographic variables. The model to be estimated is:

\[ y_j = \alpha + \sum \beta_j X_{ij} + u_i \]

where:

- \( y \) is the youth employment-population ratio
- \( \alpha \) is the intercept term
- \( \beta_j \) is a vector of parameters to be estimated
- \( X_{ij} \) is a matrix of observations on the demographic characteristics of neighbourhoods
- \( u_i \) is the error term, assumed to be identically, independently normally distributed with mean zero and constant variance
- \( i \) is a subscript denoting the neighbourhood of the observation
- \( j \) is a subscript denoting the demographic characteristic of the observation

4.1 Variables and Data

Employment outcomes of youths should, in the absence of the transmission of constraints and tastes from parents to youths, be largely independent of the demographic endowments of a neighbourhood. An important caveat to this statement is that the neighbourhood endowments should largely be a measure of the characteristics of adults and exclude that of youths. The choice of variables for the models outlined above have, where possible, been selected on the basis of their independence of youths' characteristics and their significance in previous studies with respect to employment outcomes.

Data for the estimation of this model are from the Australian Bureau of Statistics (ABS) 1996 Census of Population. The unit of analysis chosen was the neighbourhood, defined for the purpose at hand as being a collection district (CD). This is the smallest available area for analysis from the Census. Typically CDs contain around 225 households which is roughly equivalent to a suburban block. The CD captures the composition of neighbourhoods, whereas individual, or unit record, data does not.
The sample used is for the Perth metropolitan region based on the Census hierarchy of areas. More specifically the geographic area is defined at the Statistical Division level (see ABS, 1996). In total there are 2314 CDs in the metropolitan region. The final sample available for the estimation of the model was 2270. Those CDs that had no youth aged between 15 and 19 in the labour force were removed from the sample. The following sets out the variables used in the regression model. A statistical summary of the variables is given in table 2.

**Housing**

The distribution of state housing and the extent of home ownership is one of the mechanisms that may contribute to the degree of disadvantage in an area. Where the density of state housing is highest it might be expected that youth employment will be lower (see, for example, Bradbury et al, 1986; and Miller, 1998). The own house variable is calculated as the proportion of dwellings within a CD that were owned by the occupants, being purchased by the occupants, or where the occupants were involved in a rent-purchase scheme at the time of the Census.

The state house variable has been included as a dichotomous variable taking the value 0 or 1. CDs were counted as having state housing present if their state housing density was, statistically, significantly higher than the metropolitan average at the 2.5 per cent level of significance. The corresponding value was found to be 24.4 per cent. Thus, the characteristic was considered present if state housing as a proportion of total dwellings in a CD is greater than 24.4 per cent.

**Income**

Bradbury et al (1986) and Miller (1998) found that the level of family income was negatively correlated with youth unemployment. Extrapolating from this it could be inferred that the higher the proportion of people below a given level of income, for example, the median income, the greater the likelihood that the youth employment-population ratio in that area will be low. The median household income bracket for Western Australia was $500-$699 per week in 1996. The variable used in the model is the number of households with total household income less than $500 per week as a percentage of all households within a CD. The variable has been normalised by dividing the total working age population (that is, those aged between 15 and 65) of a collection district.

**Education and Occupational Status**

The link between the educational attainment of parents and employment outcomes of children was not statistically significant in a study by O’Neill and Sweetman (1997). However, in other studies (see Miller et al, 1995; Miller, 1998; Bradbury et al, 1986) it was shown to be a causal factor. The measures of human capital to be estimated in the model are primarily based on the extent of post-compulsory schooling that people possess within a CD. The measures used to capture the educational and occupational status of a neighbourhood are:
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Higher Qualifications

Five levels of qualification were aggregated to construct this variable. The qualifications used are higher degree, postgraduate diploma, bachelor degree, undergraduate diploma and associate diploma. These qualifications specifically relate to those who have already obtained them. Thus, it is unlikely, if not impossible, that youths will have had time, due to their age, to obtain the qualifications mentioned. On this basis it is reasonable to assume that this variable can be considered a measure of adults' qualifications. The variable used is the number of people in a CD with these qualifications as a percentage of the CD population over 15 years of age.

Skilled and Basic Vocational

This variable is the number of people who have a skilled or basic vocation qualification as a percentage of the CD population over 15 years of age.

Skilled Labour

This variable includes those categorised as tradespersons and related workers, advanced clerical and service workers, intermediate clerical, sales and service workers, and intermediate production and transport workers in the Australian Standard Classification of Occupations (ASCO) 2nd edition. The sum of these categories is expressed as a percentage of the CD labour force.

Unskilled Labour

This variable is the number of elementary clerical workers and labourers and related workers as a percentage of the CD labour force. The occupations have been coded using the Australian Standard Classification of Occupations 2nd edition (ABS, 1996).

Adult Unemployment

This variable is the number of persons in a CD aged between 20 and 65 who are unemployed as a percentage of the labour force aged between 20 and 65 years.

Non-English Speaking Background (NESB)

A number of studies have examined the influence of English proficiency on employment (see, for example, Inglis and Stromback, 1986; Miller and Neo, 1997; Miller 1998). The consensus is that poor literacy is an important determinant of employment outcomes. Miller (1998) shows that human capital, especially in the form of higher qualifications, is less transferable internationally for those with a non-English speaking background than it is for those who come from English speaking countries.

To capture this influence the percentage of the CD population who speak a language other than English at home is used. It includes anyone in a household over the age of five years who normally speaks a language other than English at home. Due to the limitations of the data source it has not been possible to
disaggregate this variable by age. The *a priori* expectation is that NESB will be negatively correlated with employment for two reasons. First, if being from a non-English speaking background lowers the employment prospects for parents, then the network of employment contacts is reduced for youths from these families, regardless of their English proficiency. Second, to the extent that the measure captures deficiencies in youths’ English proficiency, there will be a negative correlation with employment.

**Aboriginal and Torres-Strait Islanders (ATSI)**

Previous studies have shown that Aboriginal and Torres-Strait Islanders are seriously disadvantaged in the labour market (Le and Miller, 1999; see, for example, Ross, 1990, 1993). However, Harris (1996) shows racial background, including being of Aboriginal descent, to be insignificant when educational attainment is controlled for (see also Bradbury et al., 1986). For the study of CDs in the Perth Metropolitan area it has been necessary to include this characteristic as a dummy variable, due to the relatively small number of CDs that have Aboriginal and Torres-Strait Islanders resident. There are 60 CDs out of 2270 with Aboriginal and Torres-Strait Islander residents. The dummy variable takes the value one if there are ATSI residents in the CD and zero otherwise.

**Mobility**

Mobility may be a factor influencing employment outcomes for youth and adults alike, as they both share the same local labour market (Bradbury et al., 1986). In standard neoclassical analysis mobility of labour is important in improving employment outcomes. However, it has also been suggested that new entrants to an area lack detailed knowledge of local labour markets, consequently mobility may be an important contributor to poor employment outcomes (Le and Miller, 1999; Bradbury, et al., 1986). Other reasons suggested by Bradbury et al. (1986) are that families at greater risk of unemployment are also more likely to move, for example, renting families. The measure used is the number of people who were enumerated at a different address in the 1996 census than in the 1991 census, as a percentage of the CD population.

**Distance**

Vipond (1984) tested the impact of distance on labour market outcomes in the Sydney labour market. The main finding was that there is a positive intra-urban unemployment gradient, that is, unemployment increases with distance from the CBD. Vipond gives evidence showing that the greater proportion of employment opportunities are within the CBD area. One of the reasons suggested for a positive intra-urban unemployment gradient is that there is informational friction associated with space (distance in this context) and also the transport structure is such that it is radial in nature, with the CBD at its centre. As a consequence, suburban industry is not well serviced by public transport networks. The counter argument to this is that the unemployment gradient should be negative, due to the decentralisation of industry away from the city centre and into the suburbs and outer regions. Those who can not afford
to shift, due to economic disadvantage, are the ones who end up trapped in the inner city, thus a negative intra-urban unemployment gradient.

The measure used here for the distance variable is the distance of the collection district from the CBD. This was calculated by taking the longitudinal and latitudinal coordinates of the collection district centroid and taking the straight-line distance to the CBD.

One Parent Family

This variable captures the influence of sole parents on the employment outcomes of youth. Bradbury et al (1986) found that labour market outcomes were significantly worse for youths when they were from sole parent families. This variable is the number of 15-24 year olds who reside in a collection district who are from one parent families and are dependent on their parent as a percentage of the total number of 15-24 year olds in the area. The use of this age category, rather than 15-19 year olds, is due to the fact that it is the nearest grouping for the youth cohort that could be obtained from the Census.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Youth Employment Population Ratio</td>
<td>44.60</td>
<td>13.39</td>
</tr>
<tr>
<td>Own House</td>
<td>68.64</td>
<td>17.55</td>
</tr>
<tr>
<td>Below Median Income</td>
<td>86.11</td>
<td>6.66</td>
</tr>
<tr>
<td>NESB</td>
<td>13.83</td>
<td>9.86</td>
</tr>
<tr>
<td>Mobility</td>
<td>48.62</td>
<td>14.37</td>
</tr>
<tr>
<td>Skilled Labour</td>
<td>43.39</td>
<td>10.70</td>
</tr>
<tr>
<td>Unskilled Labour</td>
<td>14.95</td>
<td>6.35</td>
</tr>
<tr>
<td>Higher Qualifications</td>
<td>39.33</td>
<td>16.49</td>
</tr>
<tr>
<td>Skilled and Basic Vocation</td>
<td>34.26</td>
<td>12.89</td>
</tr>
<tr>
<td>Adult Unemployment Rate</td>
<td>8.26</td>
<td>4.99</td>
</tr>
<tr>
<td>Distance</td>
<td>14.60</td>
<td>9.99</td>
</tr>
<tr>
<td>One Parent Family</td>
<td>23.66</td>
<td>15.17</td>
</tr>
</tbody>
</table>

Table 2. Employment Model: Descriptive Statistics
Regression Estimates

The youth employment-population ratio was regressed on the variables listed in table 2 using Ordinary Least Squares (OLS). As is common with models that use cross-section data, such as that obtained from a population census, the presence of heteroscedasticity was detected. Although it can be shown that the derived estimates are still unbiased they will, nonetheless, be inefficient. As the sample is particularly large, the issue of inefficiency is less important than would otherwise be the case with a small sample size. However, the problem of biased variances remains and, as a result, can lead to incorrect inferences due to the standard errors of the estimated parameters being biased. To overcome this the model was re-estimated using OLS based on White’s heteroscedasticity adjusted standard errors (White, 1980). The results are presented below in Table 3.

Consistent with prior expectations, the estimated model showed that the higher the proportion of housing in an area that is owned, the higher the youth employment rate. The estimated coefficient for the state housing dummy variable was significant at the ten per cent level and had the expected positive sign.

The estimated parameter of the income variable had the expected sign and was significant at the five per cent level. This suggests that CDs with a higher proportion of households below the median household income experienced inferior labour market outcomes for youth. This supports the argument that household financial constraints impinge on the employment opportunities of youth, either through limited education or reduced employment networks due to the location of residence.

Table 3. Estimated Youth Employment Model

<table>
<thead>
<tr>
<th>Regressor</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>T-Ratio</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>24.3119</td>
<td>5.2027</td>
<td>4.6729</td>
<td>.000</td>
</tr>
<tr>
<td>Own House</td>
<td>0.0978</td>
<td>0.0347</td>
<td>2.8216</td>
<td>.005</td>
</tr>
<tr>
<td>State Housing (dummy)</td>
<td>-1.7876</td>
<td>1.0117</td>
<td>-1.7670</td>
<td>.077</td>
</tr>
<tr>
<td>Below Median Income</td>
<td>0.2368</td>
<td>0.0941</td>
<td>2.5169</td>
<td>.012</td>
</tr>
<tr>
<td>NESB</td>
<td>-0.1765</td>
<td>0.0329</td>
<td>-5.3484</td>
<td>.000</td>
</tr>
<tr>
<td>Mobility</td>
<td>-0.0761</td>
<td>0.0208</td>
<td>-3.6548</td>
<td>.000</td>
</tr>
<tr>
<td>Skilled Labour</td>
<td>0.1873</td>
<td>0.0510</td>
<td>3.6693</td>
<td>.000</td>
</tr>
<tr>
<td>Unskilled Labour</td>
<td>-0.0161</td>
<td>0.0784</td>
<td>-0.2052</td>
<td>.837</td>
</tr>
<tr>
<td>Higher Qualifications</td>
<td>0.1170</td>
<td>0.0503</td>
<td>2.3244</td>
<td>.020</td>
</tr>
<tr>
<td>Skilled &amp; Basic Vocation</td>
<td>0.2897</td>
<td>0.0530</td>
<td>5.4636</td>
<td>.000</td>
</tr>
<tr>
<td>Adult Unemployment</td>
<td>-0.2529</td>
<td>0.0960</td>
<td>-2.6328</td>
<td>.009</td>
</tr>
<tr>
<td>ATSI (dummy)</td>
<td>1.1996</td>
<td>1.5269</td>
<td>0.7857</td>
<td>.432</td>
</tr>
<tr>
<td>Distance</td>
<td>-0.1166</td>
<td>0.0431</td>
<td>-2.7057</td>
<td>.007</td>
</tr>
<tr>
<td>One Parent Family</td>
<td>-0.0381</td>
<td>0.0248</td>
<td>-1.5410</td>
<td>.123</td>
</tr>
</tbody>
</table>

R²                        0.14496  Adjusted R²  0.14004
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The NESB variable was highly significant and the negative sign consistent with findings from other studies, such as Miller and Neo (1997), Inglis and Stromback (1986) and Miller (1986). Nonetheless, it is not clear from the model estimated here whether the effect is operating through the family and surroundings or through the youth themselves. It was not possible to separate NESB within households on the basis of age.

The estimated coefficient of the mobility variable was significant at the one per cent level and has a negative sign. This result is counter to the neoclassical view that increased mobility reduces unemployment. It is consistent with the view that those who are disadvantaged, in terms of employment outcomes, are more likely to move or that new entrants lack detailed knowledge of local labour markets.

The estimated parameter of skilled labour was strongly significant and also has a substantial impact on the employment outcomes of youths. Possible mechanisms at work are the increased exposure to employment networks and intergenerational effects.

The proportion of people holding higher qualifications in a CD exerts a strong influence on the employment-population ratio. Two possible explanations for the significant result in the employment model are demonstration effects leading to higher human capital development in youths and increased employment networks.

The skilled and basic vocation variable makes a substantial contribution to the differences in youth employment outcomes for a neighbourhood. The most compelling interpretation of this result is that direct employment opportunities are associated with the presence of tradespeople, whether they be in the family or in the neighbourhood. This might best be described as a transmission of opportunity, rather than constraint.

Adult unemployment was significant at the one per cent level and had a relatively large coefficient. This is consistent with studies on intergenerational mobility by O'Neill and Sweetman (1997) and the findings of Miller et al (1995). That is, the labour force status of parents influences the outcomes of their children. It can not be clearly ascertained as to whether the influence is a direct one from parents, or, whether overall neighbourhood adult unemployment exacerbates the outcome. Nonetheless, the strong significance suggests the presence of adult unemployment exerts a strong downward influence on youth employment.

However, the possibility still exists that high youth unemployment is correlated with adult unemployment because they experience the same local labour market conditions. In the context of youth financial dependency this could still be interpreted as a transmission of constraints.

The ATSI variable was insignificant in the employment model. This result contrasts with the findings of Le and Miller (1999) who found that indigenous status increases the likelihood of unemployment. However, Harris (1996) found that this variable is insignificant when other factors, such as educational attainment, are controlled for. The insignificance of the variable in this study may well be due to the relatively low densities of indigenous people living...
Perth’s neighbourhoods. A study of ex-metropolitan regions, or estimation using unit record data may yield a more accurate estimation of the influence of this variable on youth employment outcomes.

The main determinants of youth employment outcomes, on the basis of statistically significant coefficients, are the extent of home ownership and the presence of a high density of state housing in a neighbourhood, NESB, income, mobility, skilled labourers, people holding higher qualifications and skilled and basic vocations, adult unemployment and distance from the CBD.

One of the most substantial determinants of youth employment-population ratios is the level of adult unemployment in a neighbourhood. All the estimated parameters had the a priori expected effect.

5. SOCIOECONOMIC DISTRIBUTION OF YOUTH UNEMPLOYMENT

The Perth metropolitan region has a relatively low youth unemployment rate. However, there is substantial variation within the metropolitan region itself. The primary concern of this paper is the variation that exists within the metropolitan area and what the major influences are.

The ABS Socioeconomic Index for Areas (SIEFA) 1996 Socioeconomic Index of Disadvantage was used to group collection districts into deciles according to their index value. High scores of this index indicate relative wellbeing. The components of the index include, for example, household wealth, unemployment, and educational attainment of the residents in

![Figure 3. Distribution of Youth Unemployment by Socioeconomic Index of Disadvantage (per cent) Source: ABS CDATA91, CDATA96, ABS](image-url)
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a collection district (ABS, 1998). The same sample of collection districts is used here for the 1991 and 1996 observations. Figure 3 illustrates the unequal distribution of the unemployment burden on areas that have a low socioeconomic status in the Perth metropolitan region. Youth unemployment rates are determined for each decile. Deciles are determined by the index value according to the SEIFA Socioeconomic Index of Disadvantage.

It appears that the economic recovery that was well under way by this time did not benefit disadvantaged areas, at least as far as youths are concerned. The average unemployment rate for the metropolitan region was 15.3 per cent. As can be seen from Figure 3 the top six deciles, ranked by the SEIFA Index, recorded youth unemployment rates below this figure. Lower deciles recorded very high youth unemployment rates, the lowest decile being just under 30 per cent. Whereas all other deciles recorded some improvement compared to 1991, some of them quite marked, the most economically disadvantaged areas experienced a worsening of youth unemployment.

One possibility is that the areas in question are disadvantaged due to their distance from areas of employment. Some studies have found proximity to employment to be a significant determinant of employment outcomes (see, for example, O'Regan and Quigley, 1998; Vipond, 1984). To examine this issue youth unemployment mapped in Figure 4, on the basis of the 1996 Census, by suburb in the Perth metropolitan region.

One of the prominent features is the concentration of youth unemployment in the areas surrounding the Central Business District. Some of the heaviest concentrations of the unemployed are located in areas that are well serviced by major road networks, such as the freeway system that cuts through Perth in a North-South direction and Stirling, Canning and Great Eastern Highways that run East and West. These areas are also serviced by a modern rail system. Likewise, Fremantle is also extremely well serviced by transport. The bus and rail terminus are located in the heart of Fremantle and it is also connected by major trunk routes running to light and heavy industrial areas to the South and to the Perth CBD in the East. Fremantle itself is a busy tourist precinct with 7 day a week trading and a substantial restaurant and retailing trade.

The geographic distribution of youth unemployment suggests that there are factors other than proximity to employment that are contributing to employment outcomes in Perth, Fremantle and adjacent areas.

Other areas where there is a heavy concentration of high youth unemployment are Kwinana, Rockingham, Mandurah and a small number of suburbs located at the periphery of the metropolitan region. Rockingham and Mandurah would tend to lend support to the hypothesis that proximity to employment is a significant factor in youth unemployment.

Kwinana is at the heart of heavy industry in Western Australia which suggests that it is less desirable as a residential address. As a result housing costs and rentals would be somewhat lower. To the extent that this is the case it would be an affordable place of residence for the disadvantaged and unemployed and thus suggests that there is an element of sorting of endowments at work for
Figure 4. Youth Unemployment by Suburb in Perth Metropolitan Region, 1996 Census.
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adults which is being transmitted to their children.

6. CONCLUSION

The principal argument of this paper is that neighbourhood characteristics play a significant role in determining youth employment outcomes. Most prominent in the Australian literature is the argument relating to the growing concentration of urban poverty and the effect that this is having on employment outcomes. Some of the suggested mechanisms at work in these models are the lack of informal job networks, absence of positive role models, and disruptive influences. The internal composition of a neighbourhood appears to be just as important as external employment opportunities. Whether the adverse employment outcomes experienced in poor neighbourhoods are a result of the sorting of endowments or the result of the decreasing returns to a given set of endowments is, arguably, inconclusive. In the context of youth unemployment it still remains to be determined. What is more certain, and is the finding of this paper, is that there is a strong relationship between the demographic characteristics of a neighbourhood and the employment outcomes of youths.

Clearly youth unemployment is not a general problem which can be addressed by macro level solutions, such as stimulating aggregate demand. The analysis of youth unemployment needs to address the role that neighbourhood characteristics are playing in determining youth employment outcomes. A more complete understanding of the transmission of constraints and intergenerational rigidities is required before appropriate policy can put in place to address youth employment opportunities and emergent youth employment equity issues.

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REFERENCES


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Perth.


