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Paul L. Latreille
Philip D. Murphy
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Nigel C. O'Leary

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Forschungsinstitut
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Paul Latreille
University of Wales Swansea

David H. Blackaby
University of Wales Swansea

Philip D. Murphy
University of Wales Swansea

Nigel O'Leary
University of Wales Swansea

Peter J. Sloane
University of Wales Swansea and IZA Bonn

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IZA

P.O. Box 7240
53072 Bonn
Germany

Phone: +49-228-3894-0
Fax: +49-228-3894-180
Email: iza@iza.org

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ABSTRACT

How Far and For How Much? Evidence on Wages and Potential Travel-to-Work Distances from a Survey of the Economically Inactive*

The U.K. government has recently committed itself to an ambitious 80 per cent employment rate target. Recognising that achieving this aspiration will require significant numbers of the economically inactive to (re-)engage with the labour market, the government has enacted various policy reforms seeking to encourage those on the fringes of the labour market to do so. The present paper uses unique survey data to examine three factors relevant to these issues, namely the desire to work, minimum acceptable wages and the distance the inactive are prepared to travel to work for a given minimum acceptable wage offer.

JEL Classification: J21, J22, J31

Keywords: economic inactivity, reservation wages, travel-to-work distances

Corresponding author:

Paul L. Latreille
School of Business and Economics
University of Wales Swansea
Singleton Park
Swansea, SA2 8PP
United Kingdom
Email: p.l.latreille@swansea.ac.uk

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"If people... re-associate with the world of work, suddenly they come alive again…That will overcome depression and stress a lot more than people sitting at home watching daytime television… We have a situation where we can offer people liberation from dependence in a way that was never possible before."
David Blunkett, interview on Radio 4, 10th October 2005

I. INTRODUCTION

A key target set out in the UK government's recently published *Department for Work and Pensions' Five Year Strategy: Opportunity and Security Throughout Life* (Department for Work and Pensions, 2005) is that of attaining an 80 per cent employment rate by 2010[1]. The scale of the challenge represented by this aspiration is powerfully illustrated by the fact that although employment rates in the UK have risen to record levels in recent years, they remain slightly below 75 per cent. Such a rate is also entirely unprecedented among the developed economies. Moreover, at 4.7 per cent (July 2005), unemployment is historically low, at least by the standards of the last quarter of a century, and as such reductions in the level of (claimant count) unemployment are unlikely to offer significant opportunities to improve the employment rate further. The government itself has recognised that achieving their target employment rate therefore requires substantial reductions in current levels of economic inactivity, and the *Five Year Strategy* accordingly emphasises the need to continue with and extend previous reforms aimed at encouraging individuals on the fringes of the labour market into work, and highlighting those on incapacity benefit in particular. This shift of emphasis reflects also a growing recognition that the boundary between unemployment and inactivity is much less sharp today than it once was (see Bryson and Mackay, 1994 and Schweitzer, 2003).

[1] This is 10 percentage points above the 70 per cent employment rate target set by the Lisbon Accord in 2000; a co-ordinated European Employment Strategy designed to create 'more and better jobs' by 2010.

Coaxing the economically inactive (back) into work is a substantial policy challenge, not least since comparatively little is known about the barriers that prevent these individuals from returning to work. However, evidence from a variety of different sources now highlights a number of potential candidates. These include changes to financial benefits available to the inactive with work-limiting health problems; issues linked to the availability and affordability of public or private transport; a lack of childcare provision; deficiencies in employability skills; and the perceived benefit trap. Recent policy reforms such as the Pathways to Work scheme for example, appear to recognise that the factors which prevent those whose inactivity is a consequence of health problems from working are often many and complex, and the policy accordingly combines interventions from several bodies/agencies including Jobcentre Plus, the NHS and the voluntary sector, alongside the 'carrot' of a 'return to work credit' of £40 per week[2]. A similarly diverse and inter-related set of impediments is also likely to influence the decisions of those whose inactivity is a consequence of other considerations such as household/child-rearing activities and responsibilities.

The present study offers an entirely novel perspective on this issue using primary data from a recent survey of the economically inactive in Wales. While the analysis focuses on a single UK region, it should be noted that it is one characterised by above average levels of long-term health problems/disability and of economic inactivity (Blackaby *et al*., 2003) and thus where the issues are writ large[3], understanding these issues in such a region can clearly provide insights into other, perhaps less heavily affected regions. Moreover, the data collected provides information on the attitudes and aspirations of the economically inactive

[2] This scheme was initially piloted in three areas from October 2003 – Rhondda Cynon Taff, Renfrewshire and Derbyshire, with a further four added in April 2004. Rhondda Cynon Taff is a 'Valleys' area (see below) like Merthyr Tydfil and Blaenau Gwent which are included in the present study, and it shares many of the same problems. Another of the areas in the present study (Swansea) is due to participate in the second of the next three phases of the policy rollout (April 2006).

[3] The percentage of the working age population claiming incapacity benefit varies from 2 per cent in Wokingham to over 20 per cent in Merthyr Tydfil.

that is exclusive to this survey and unavailable from any other published or unpublished source. From this perspective therefore, the data offer a unique opportunity to examine the behaviour of the economically inactive, particularly in shedding light on the characteristics of the economically inactive who want to work and, from among this group, the factors which determine both the lowest acceptable wage offer individuals are willing to accept and the distance they are then prepared to travel to work for that wage.

The lowest wage that an individual is willing to accept and the distance they are prepared to travel to work are both important to understanding the determinants of the labour transitions. In particular, the likelihood that an individual receives an acceptable job offer and therefore exits from non-employment to employment is likely to depend on both these factors. For example, the higher is an individual's minimum acceptable wage, the less likely it is, *ceteris paribus*, that they will find a job that exceeds this wage and this lowers the exit probability from non-employment. Similarly, for any given minimum acceptable wage offer, the likelihood of an individual finding a job is likely to be related to the distance that individual is prepared to travel to find work, since this widens the pool of available job openings. Moreover, both of these concepts are likely to be inter-related. For example, the distance an individual is prepared to travel to find work is likely to affect their minimum acceptable wage in two ways. First, it can have a direct impact on the wage an individual demands, as higher remuneration is required to compensate the individual for the costs of commuting. Second, and more subtly, in expanding the range of job opportunities from which individuals sample, it can also increase the distribution of potential wage offers.

While an understanding of the factors influencing the size of the wage acceptable to individuals and the distance they are prepared to travel to work are central to an

understanding the nature of the job search process, with one or two notable exceptions they are typically treated as separate issues in the literature. For example, the reservation wage literature is dominated by articles that consider the reservation wages of job-seekers and the extent to which these vary by unemployment duration – so-called duration dependence effects (see Kiefer and Neumann, 1979; Lancaster and Chesher, 1983; Jones, 1988; and Blau, 1991). Similarly the literature on commuting is largely concerned with explaining commuting patterns of employed workers, and in particular gender differences in commuting patterns and the nature of any inter-dependencies that exist between employees' earnings and commuting (see Madden, 1981; Singell and Lillydahl, 1986; Simpson, 1987; Aronsson and Brannas, 1996; and Turner and Niemier, 1997). The exceptions are Van den Berg and Gorter (1997) and Rouwendal (1999) who both develop a structural model of job search, in which jobs are characterised by different wage/commuting time attributes[4].

The current paper breaks new ground by examining not only the characteristics of the economically inactive who want to work but also the information this group provides on both the minimum wage they are willing to accept in order to take a job and the distance they are prepared to travel-to-work for that wage. To our knowledge this is the first time such an analysis has been undertaken for this important group of individuals in the UK, whose aspirations and labour market behaviour are becoming increasingly of interest to policymakers, not least for the reasons set out above. As such we consider it represents an important contribution to our understanding of these issues and to the on going policy debate about economic activity and employment.

[4] Based on a survey of unemployed job seekers drawn from two travel-to-work areas in Scotland, McQuaid *et al*. (2001) have also examined unemployed job seekers' attitudes towards potential travel-to-work times.

The remaining sections of the paper are organised as follows. Section II outlines the survey methodology and data collection process, along with the empirical method used in the analysis. Results are discussed in Section III, with conclusions documented in Section IV.

II. SURVEY AND ECONOMETRIC SPECIFICATION

Survey

As indicated previously, the analysis presented in this paper is facilitated by and based on the responses given by respondents to a unique survey of the economically inactive in Wales undertaken by Beaufort Research and the University of Wales Swansea on behalf of the Welsh Assembly Government (WAG) between January and March 2004.

The sample selected included individuals of working age (men aged 16-64 and women aged 16-59 who were non-students) and who were economically inactive. A sufficiently large sample was selected to ensure the survey produced sufficient numbers of responses across a range of sampling dimensions. However, in order to produce sufficient coverage among a number of special groups of interest some over-sampling was undertaken in the age group 16 to 24[5]. Face-to-face interviews (lasting an average of 45 minutes each) were then conducted with chosen individuals in their own homes using a pre-structured questionnaire[6] designed by Beaufort Research and the University of Wales Swansea in collaboration with WAG.

Rather than choose a sample representative of the whole of Wales, it was decided at a fairly early stage, in consultation with WAG, to concentrate instead on a small number of selected areas of interest. The areas chosen to be included in the survey were:

[5] The estimates reported below are all based on unweighted data.
[6] The survey questionnaire is reported in full in Appendix A of Blackaby *et al*. (2004).

(i) *Valley Areas* that had previously been dominated by the coal mining and/or steel industries covering the Unitary Authorities of Blaenau Gwent and Merthyr Tydfil, in which concentrated clusters of economic inactivity were found.

(ii) Urban Hotspots where pockets of high levels of inactivity existed in wards of otherwise reasonably prosperous urban areas. The three wards chosen were Ringland in the Newport Unitary Authority, Townhill in Swansea, and Ely in Cardiff.

(iii) Cooler Areas where inactivity levels were close to the Welsh average. The two Unitary Authorities chosen to represent 'Cooler Areas' were Bridgend and Wrexham.

For information, Figure 1 shows the names and locations of the 22 Unitary Authorities in Wales, together with inactivity rates for each for 2004. As is evident, substantial differences emerge across sub-regions, a feature largely motivating the decision to focus on selected areas.

Within the Urban Hotspots, all interviewing was conducted in the electoral wards defined above. In the Valleys and Cooler areas, where a Unitary Authority was the surveyed unit, a second stage of sampling was undertaken. Electoral wards were used as the sampling unit, and within each Unitary Authority, wards were randomly selected with a probability proportionate to the number of economically inactive individuals present within each ward. Quotas in each sampling point in the survey were set on the basis of age, type of inactivity and gender.

The fieldwork was completed early in 2004 and produced a total of 1293 interviews. However, information on minimum acceptable wages and the distance respondents said they were willing to travel to work for that wage was only obtained from individuals who either

wanted a job now, or at some time in the future, i.e. who might be considered to be 'closer' to the labour market. This is important since, *ceteris paribus*, this is the group most amenable to policy intervention. The two question put to respondents were:

Wage question: 'What is the lowest gross weekly earnings you would consider in order to accept a job?'

Distance question: 'What distance in miles would you be prepared to travel each way in order to obtain a job with pay of the lowest gross weekly earnings you would consider in order to accept a job?'

For the sample of those answering the wage question, the median wage was calculated as £150, with clear variation evident by gender (£220 and £120 for males and females respectively). The distribution of weekly wages by gender is presented in Figure 2 which confirms the difference in the location of the distributions for men and women and also illustrates that the shapes of the distributions also differ markedly. Thus while both distributions are skewed, this feature is especially pronounced for women, the vast majority of whom have weekly minimum wages in the £51-£200 range.

A number of factors are important in explaining these gender differences, most notably the number of hours that respondents would expect to work in order to achieve the specified level of earnings. Given that for many of the women in the sample, inactivity is the result of household and family responsibilities, it is hardly surprising to find that this group typically want to work fewer hours than males for any given level of earnings (see Blackaby *et al*., 2004 for further discussion), which highlights the importance of including some control for hours when modelling weekly minimum acceptable earnings[7].

[7] In the analysis reported below, a part-time variable was included to capture differences in self-reported job preferences of male and female respondents.

In terms of the distance question, the data again reveal some interesting variations by gender (Table 1). Specifically the mean travel-to-work journey reported for men is more than twice that reported for women (15 miles compared to 6.5 miles). The finding that females have shorter travel-to-work journeys (distances and/or times) than males has been reported in a number of previous studies, both for the U.K. (for example, Dex, *et al*. 1995; McQuaid *et al*., 2001) and the U.S. (for example Madden, 1981; Turner and Niemeier, 1997). Where explanations for this differential have been sought, the gendered allocation of family/household responsibilities is typically cited as the major factor (referred to as the 'household responsibility hypothesis'). However, other potential explanations for the gender difference in commuting distances include women's "lower wage rates and shorter work hours [that] reduce the earnings return to their commuting" (Madden, 1981: 193), and differential access to and the use of alternative modes of transport (White, 1986).

Econometric Specification

Information on an individual's desire to work is captured by a binary variable (I) that takes the value 1 if the individual says they want to work now or at some point in the future, and 0 otherwise. Following standard methods we assume the 'want to work' decision is governed by a latent variable (I*), which measures an individual's propensity towards labour market participation. Specifically:

$$I_i^* = \gamma z_i + \varepsilon_i \text{ with } \varepsilon_i \sim N(0,1) \qquad (1)$$

where z_i is a vector of variables that affect an individual's desire to participate in the labour market; γ is a conformable vector of coefficients; and ε_i is a random disturbance. Actual

observations on the 'want to work' decision are then linked to I* according to the following process:

$$I_i = 1 \text{ if } I_i^* \geq 0$$
$$I_i = 0 \text{ if } I_i^* < 0 \qquad (2)$$

Estimates of γ are then found from a standard probit model, based on observations of the binary variable I_i.

The variables used to estimate the model fall into three main categories, which can be summarised as follows:

(i) *Personal Characteristics* – including a respondent's age, gender, educational qualifications, and marital status.

(ii) *Household Composition and Location* – including the presence of dependent children, residential location, and employment status of other household members.

(iii) *Attitudes and Perceptions* – including perceptions about local job opportunities, concerns about being able to fit into a regular work routine and concerns over transportation problems, an indication of whether respondents feel they would be better off on benefits than working, and feelings of attachment to the local community[8].

The theoretical justification for the wage and distance equations reported below is a job search model. However, the empirical specification used is not based on a fully specified structural model of job search, since to have done so would have been unnecessarily

[8] A list of variable definitions is given in the Data Appendix.

restrictive and have required both the adoption of specific functional forms and/or constraining the channels by which wages and travel to work distances were linked to ensure a tractable model (see Rouwendal, 1999 for a structurally based approach to a similar problem)[9]. Instead a more pragmatic approach was taken, which recognises some of the more important features of the data. In particular, given the nature of the questions asked about wages and the distance an individual is prepared to travel to work it is self evident that the answers respondents give to these questions are linked; practically in terms of how the answer to the distance question is conditioned on the response given to the wage question, but also via a mechanism by which the distance an individual is prepared to travel to work influences the distribution of wage offers from which they can choose. Both imply simultaneity, yet if the distance an individual is prepared to travel to work influences the distribution of wage offers it is difficult to conceive of a situation in which every variable determining distance should not also enter the wage equation (see Lancaster, 1985, p118). Of course it is possible that some variables entering the wage equation might be excluded from the distance equation. However, as such restrictions tend to be arbitrary and frequently open to criticism it was decided to sidestep these issues by reporting reduced form estimates, which nonetheless still provide most of the information needed by policy makers[10].

Before the results can be presented, one final estimation issue needs to be considered. As was noted above, information on wages and the distance an individual is prepared to travel to

[9] Another reason for not using a structural job-search model was that the wage information available to us related to gross rather than net weekly earnings, whereas net wages are typically used in most reservation wage models. However, respondents are known to have difficulty distinguishing between these two wage measures and often find it easier to consider job offers in terms of the wage-units used by employers when making offers, namely gross rather than net wages.

[10] We experimented with a 2SLS procedure for estimating the distance equation using state benefits and whether the individual wanted to work full or part-time as instruments. The results were qualitatively similar to the reduced form estimates reported below. However, the significance of the reservation wage term in the distance equation depended on the inclusion of the full/part-time variable in the list of instruments. The implied elasticity of distance with respect to the minimum acceptable wage for these estimates was 40 per cent. The results are available from the authors on request.

work are only reported for a sub-set of respondents, namely those saying that they 'wanted to work'. As this introduces a potential sample selection bias problem, both the reservation wage and distance equations were estimated using a Heckman (1973) two-step procedure based on the results of estimating the model described in equations (1) and (2)[11]. The empirical specification used, therefore, took the following form:

$$\text{Ln}(w_i^{min}) = \alpha_0 + \sum_j \alpha_j x_i + \alpha_R \lambda_i + \varepsilon_{1i} \quad (3)$$

$$\text{Ln}(D_i) = \beta_0 + \sum_j \beta_j x_i + \beta_D \lambda_i + \varepsilon_{2i} \quad (4)$$

where w^{min} and D are the responses given to the wage and distance questions by the i^{th} individual; x is a vector of independent variables including as in (1) a range of personal, household, location, and attitudinal variables; λ is the inverse Mills ratio obtained from estimating the probit model described by equations (1) and (2); α and β are reduced form parameters; and ε_1 and ε_2 are disturbance terms.

III. RESULTS

Estimates of the 'want to work' decision are reported in Table 2. Estimates of γ and their standard errors are shown in column 2; marginal effects are reported in column 3; and variable means are shown in column 4[12]. Four aspects of the results reported in Table 2 are worth highlighting. First, as might be expected, the desire to work among the economically

[11] As it turned out, neither of the sample selection variables entered into the wage and distance equations proved to be statistically significant. Nonetheless, the signs on these variables suggested that the conditional mean of wages was lower for those wanting to work but that the mean distance individuals were prepared to travel to work was higher – see Table 3.

[12] Marginal effects show the impact each variable has on the probability that an individual wants to work, measured relative to a baseline individual who is single, female, aged 55+, who lives in Wrexham, and has no qualifications or dependent children. The baseline individual is also defined as one for whom all of the attitudinal variables are set to zero.

inactive is graduated according to both age and qualifications. The young, and those with better qualifications, therefore, are much more likely to want to work than older and less well-educated respondents. Second, the presence of dependent children in the household significantly increases the likelihood of an individual wanting to work. Even though both the gender variable (MALE) and the interaction term between gender and dependent children (MDEPKIDS) were not statistically significant, this finding is most likely to be explained by the fact that many women with children expect to return to the labour market when their children are older[13]. Third, concerns about the ability to fit into a regular work routine (WORKPATTERN) and whether an individual felt they were better off on benefits than working (BETTEROFF) both reduce a respondent's desire to work, by 29 per cent and 8 per cent respectively. Clearly perceived psychological barriers associated with returning to work, as well as possible perverse incentives associated with the benefits system both act to discourage potential labour market participation. Interesting, however, concerns about local job opportunities (NOJTRAV), which are commonly associated with what has become known as a 'discouraged worker effect', were neither correctly signed, nor statistically significant. Fourth, and finally, the sign on the transportation variable (TRANSPROB) indicates that individuals with transportation problems are significantly more likely to 'want to work'. This suggests that unless such concerns are adequately addressed by policy makers they are likely to inhibit individuals who express a desire to work from fulfilling that ambition.

Least squares estimates (OLS) estimates of the reduced form equations (3) and (4) are shown in columns 2 and 3 of Table 3 - wage estimates in column 2 and distance estimates in column

[13] Sample sizes preclude a separate analysis of male and female respondents.

3. For each coefficient reported in Table 3, (adjusted) standard errors are shown in parentheses along with a standard indicator of statistical significance.

A number of features of the wage estimates reported in column 2 of Table 3 are worth highlighting. First, weekly minimum acceptable wages are significantly (22 per cent) higher for men than women, which confirms the pattern seen in the raw data. Second, and in accordance with intuition, reservation wages increase with age but at a decreasing rate, reaching a maximum on the basis of the estimates reported in Table 3 at 46 years of age. Wages are also sensitive to an individual's perception of how likely it is that they will obtain the type of job they want in their locality (JCHANCE)[14]. For example, minimum acceptable wages are 10 per cent lower for individuals who say their chance of obtaining a job of the type they want locally are not very good. In line with evidence presented elsewhere on earnings in employment (see Blanchflower and Oswald, 1995) therefore, it would seem that minimum wages demanded by the economically inactive respond to local demand conditions: falling when labour market conditions are poor and increasing when labour market conditions are better.

In the discussion of the weekly wage distributions reported for men and women given in the previous section, the importance of controlling for hours was noted in the context of estimating the wage equation. This is confirmed by the results reported in Table 3, which show that reported wages are around 50 per cent lower for respondents indicating that the type of job they want is part-time (i.e., less than 30 hours per week). As noted above, however, even when a control for hours is included in the analysis, gender differences still

[14] The question on which the variable JCHANCE is based was only asked if individuals said they 'wanted to work'.

remain a significant feature of the data, suggesting that on the basis of the wage offer distribution they face, men consistently demand higher wages than women.

Interestingly, the estimate reported on the state benefits variable (STBEN) indicates that respondents on higher state benefits demand higher reservation price. The effect is significant but relatively inelastic, with an implied elasticity of just under 5 per cent when evaluated at the mean of the STBEN variable. This estimate of the elasticity of wages to state benefits is smaller but not dissimilar to estimates reported elsewhere for the UK on the relationship estimated between reservation wages and benefits for unemployed workers [see Lancaster and Chesher, 1983 (14 per cent); and Narendranathan and Nickell, 1985 (16 per cent)][15]. Just like the unemployed therefore, the economically inactive respond to higher welfare payments by increasing the wage offer they need in order to take a job, which in turn reduces their chance of exiting inactivity.

Turning to the distance equation, estimates reported in column 3 of Table 3, the role of several of the variables included in the analysis is worth mentioning. For example, the distance an individual is prepared to travel to work is positively related to age but that distance increases at a decreasing rate with age. Ong and Blumenberg (1998) have suggested that a positive relationship between age and the distance an individual is willing to travel to work is likely to reflect the accumulation of marketable skills acquired by older workers, which tends to increase the range of possible job offers they are likely to generate and so increases the size of the search area over which they are prepared to look for work.

[15] However, using a generated benefits variable Jones (1989) found that the reservation wage/benefits relationship was imprecisely measured and in some estimates wrongly signed.

The distance an individual is willing to travel to work is also higher for individuals with intermediate level qualifications, A-levels (HQUAL2) or O-levels (HQUAL3), and for respondents who claim to have a strong attachment to their local community (ATTACH) or who believe that their chances of finding a job locally of the type they want are poor (JCHANCE). This latter result suggests that, like reservation wages, the distance individuals are prepared to travel to work is sensitive to local labour market conditions. However, while reservation wages fall in areas where local job opportunities are poor, the distance an individual is prepared to travel to work in such areas increases: the estimate implies that respondents living in areas where local job opportunities are poor are prepared to travel about 22 per cent further to work than are individuals living in areas where job opportunities are better. Together these results imply that individuals tend to respond to weaker demand conditions by changing behaviour so as to increase their chances of finding work.

Two other features of the distance equation reported in column 3 of Table 3 are also worth highlighting. First, individuals who claim transport-related problems make it more difficult for them to find work are significantly less likely to be willing to travel as far to secure a job than other respondents. For this group of individuals, therefore, it would seem that transport problems restrict the geographical area over which they are prepared to look for work, and as a result they are likely face a potentially damaging local mobility constraint were they to (re) enter the labour market.

Second, significant gender effects were discernable in the distance relationship, suggesting that men are prepared to travel around 35 per cent further to work than women. This result is independent of the presence of dependent children in the household and/or marital status. Thus, while these latter results provide little evidence to support the view that a patriarchal

constraint affects the distance economically inactive women are prepared to travel to work (see Gordon *et al*., 1989 for similar evidence for employed women in the US), nonetheless women in general do seem less prepared to travel as far to work as men, which by implication disadvantages women in terms of the range of job opportunities they are able to consider. Indeed, this effect is reinforced by the estimate reported on the part-time variable, which indicates that individuals who want to work part-time – most of whom are women – are prepared to travel around 24 per cent less far to work as individuals seeking full-time work. Job search for this group therefore, is likely to be much more localised in nature than it is for individuals seeking full time work who typically also demand higher wages.

IV. CONCLUSIONS

While the economically inactive have been the subject of a number of widely publicized and ongoing policy reforms over the last few years, it remains the case that comparatively little is known about the attitudes and aspirations of many in this group and the barriers preventing them from (re-)engaging with the labour market. Using unique survey data, the present study has examined the 'desire to work' and, conditional on this decision, minimum acceptable wages and the distance the economically inactive are prepared to travel to work. Both the wage and distance analysis reported in this paper focuses on a sample of the economically inactive who are more proximate to the labour market and hence most likely to respond positively to policy measures aimed at increasing the participation and/or employment rates of this important group of individuals.

Several key features emerge from the reported results. First, men have, on average, higher reservation prices than women, both in terms of the raw data and after controlling for other potential determinants of wages such as qualifications. Second, the econometric results

indicate that individuals are sensitive to local labour market conditions, and recognise the need to travel greater distances where job opportunities are less plentiful. The willingness (capacity) to do so is however, found to be significantly constrained by the presence of travel problems and the presence of dependent children. If the government is to succeed in its ambitious 80 per cent employment rate target, therefore, issues of mobility and household composition both need to be recognised by policymakers.

Table 1: Distance (Miles) Prepared to Travel Each Way to Obtain a Job with the Lowest Acceptable Wage

Per cent

	Gender		
Miles	All	Male	Female
2 or less	16	11	19
3-4	17	6	20
5-6	26	21	28
7-10	25	26	24
11-20	11	21	7
21 or more	5	15	2
Mean	8.71	14.85	6.57
Sample	662	171	491

Table 2: Desire to Work Estimates

Variable	Desire to Work (I) Coefficient (Standard Error)	Desire to Work (I) Marginal Effect (Standard Error)	Variable Mean
MALE	0.0848	0.0335	0.33
	(0.123)	(0.049)	
AGED 16-24	1.9821***	0.5751***	0.22
	(0.198)	(0.036)	
AGED 25-34	1.4601***	0.4811	0.24
	(0.182)	(0.045)	
AGED 35-44	0.9938***	0.3528***	0.21
	(0.169)	(0.051)	
AGED 45-54	0.6591***	0.2449***	0.17
	(0.166)	(0.056)	
MARSTAT2	-0.2368*	-0.0940*	0.35
	(0.130)	(0.051)	
MARSTAT3	0.1316	0.0519	0.26
	(0.127)	(0.050)	
HQUAL1	0.7855***	0.2744***	0.04
	(0.225)	(0.063)	
HQUAL2	0.6145***	0.2249***	0.07
	(0.177)	(0.057)	
HQUAL3	0.5640***	0.2131***	0.19
	(0.119)	(0.042)	
HQUAL4	0.3045	0.1172*	0.05
	(0.196)	(0.072)	
UA1	-0.0129	-0.0051	0.17
	(0.144)	(0.057)	
UA2	0.4368***	0.1674***	0.18
	(0.141)	(0.053)	
UA3	0.0253	0.0100	0.20
	(0.137)	(0.054)	
UA4	0.3534*	0.1355**	0.08
	(0.182)	(0.067)	
UA5	0.4092**	0.1556**	0.08
	(0.187)	(0.067)	
UA6	0.7973***	0.2810***	0.08
	(0.190)	(0.056)	
DEPKIDS	0.7802***	0.3010***	0.48
	(0.126)	(0.046)	
MDEPKIDS	-0.3302	-0.1311	0.07
	(0.212)	(0.083)	
WORKPATTERN	-0.7497***	-0.2880***	0.58
	(0.096)	(0.035)	
BETTEROFF	-0.1985***	-0.0786***	0.43
	(0.096)	(0.038)	
ATTACH	0.0339	0.0135	0.63
	(0.096)	(0.038)	
HHEMPLOY	0.1809	0.0711	0.25

	(0.116)	(0.045)	
NOJTRAV	0.1252	0.0496	0.50
	(0.097)	(0.038)	
TRANSPROB	0.5273***	0.2069***	0.52
	(0.100)	(0.038)	
CONSTANT	-1.5940***		
	(0.216)		
L(θ)	-565.08		
LR χ^2 [p-value]	643.90 [0.000]		
Number of Observations	1285		

Notes: All variables defined in the Data Appendix. Significance at the 1%, 5% and 10% levels denoted by ***, ** and * respectively.

Table 3: Wage and Distance Estimates

Variable	Wage Equation Ln(w^{min}) Coefficient (Standard Error)	Distance Equation Ln(D) Coefficient (Standard error)	Variable Mean
MALE	0.2227*** (0.063)	0.3527*** (0.132)	0.27
AGE	0.0273*** (0.011)	0.0701*** (0.023)	30.95
AGESQ	-0.0003* (0.000)	-0.0009*** (0.000)	1068.25
UA1	0.0881 (0.058)	-0.2764** (0.131)	0.15
UA2	0.0829 (0.061)	-0.2418** (0.113)	0.23
UA3	0.0757 (0.058)	0.0772 (0.115)	0.17
UA4	-0.0026 (0.089)	-0.2177 (0.135)	0.06
UA5	0.0323 (0.074)	-0.0516 (0.161)	0.08
UA6	0.0024 (0.078)	-0.4748*** (0.143)	0.09
HQUAL1	0.0795 (0.103)	0.1879 (0.186)	0.07
HQUAL2	0.0327 (0.067)	0.4318*** (0.139)	0.10
HQUAL3	-0.0237 (0.047)	0.3493*** (0.096)	0.28
HQUAL4	-0.0195 (0.094)	0.0026 (0.172)	0.07
DEPKIDS	0.0331 (0.063)	-0.0676 (0.113)	0.64
MDEPKIDS	-0.0183 (0.098)	0.0600 (0.213)	0.07
MARSTAT2	-0.0368 (0.052)	0.0238 (0.114)	0.28
MARSTAT3	0.0016 (0.056)	0.1070 (0.113)	0.22
JCHANCE	-0.0951** (0.038)	0.2266*** (0.079)	0.57
HHEMPLOY	0.0063 (0.049)	-0.0250 (0.107)	0.26
ATTACH	-0.0086 (0.038)	0.1351* (0.078)	0.64
TRANSPROB	0.0368 (0.044)	-0.2991*** (0.088)	0.62
STBEN	0.0006*** (0.000)	-0.0007 (0.001)	82.79

PARTTIME	-0.5228***	-0.2419**	0.59
	(0.045)	(0.010)	
λ	-0.1328	0.0332	0.46
	(0.090)	(0.165)	
CONSTANT	4.5834***	0.6506*	
	(0.184)	(0.389)	
R^2	0.4236	0.2221	
Number of Observations		487	

Notes: All variables defined in the Data Appendix. Significance at the 1%, 5% and 10% level denoted by ***, ** and * respectively and based on heteroscedastic-consistent standard errors.

Data Appendix: Variable Definitions

Variable Name	Variable Definition
$Ln(w^R)$	Log of respondent's minimum acceptable weekly wage
Ln(D)	Log of distance respondent is prepared to travel to work
MALE	Male (1/0)
AGE	Age in years
UA1	Lives in Merthyr Tydfil Unitary Authority (1/0)
UA2	Lives in Blaenau Gwent Unitary Authority (1/0)
UA3	Lives in Bridgend Unitary Authority (1/0)
UA4	Lives in Cardiff Unitary Authority (1/0)
UA5	Lives in Newport Unitary Authority (1/0)
UA6	Lives in Swansea Unitary Authority (1/0)
UA7	Lives in Wrexham Unitary Authority (1/0)
HQUAL1	Degree or higher educational qualifications (1/0)
HQUAL2	A-Levels or equivalent qualifications (1/0)
HQUAL3	O-Levels or equivalent qualifications (1//0)
HQUAL4	Other qualification (1/0)
HQUAL5	No qualifications (1/0)
DEPKIDS	Dependent children present in the household (1/0)
MDEPKIDS	Interaction between gender and dependent children variables (1/0)
MARSTAT1	Single (1/0)
MARSTAT2	Married (1/0)
MARSTAT3	Widowed/separated/divorced (1/0)
HHEMPLOY	Employed person in the household (1/0)
NOJTRAV	No jobs within a reasonable travelling distance: respondent strongly agrees or agrees that there are no jobs for somebody like them in a reasonable travelling distance (1/0)
TRANSPROB	Transport problems make it difficult to find work: respondent either strongly agrees or agrees with the statement (1/0)
JCHANCE	Considers the opportunities of finding the type of job they want locally as not being very good (1/0)
ATTACH	Attachment to the local community: respondent either strongly agrees or agrees that they are very attached to the local community (1/0)
WORKPATTERN	Difficulty in fitting into a regular work routine: respondent either strongly agrees or agrees that they would now find it difficult to fit into a regular work routine (1/0)
BETTEROFF	Better off on benefits: respondent strongly agrees or agrees that they are better off on benefits than working (1/0)
PARTTIME	Wants part-time job (1/0)
STBEN	Weekly state benefits excluding child support

Notes: (1/0) signifies a binary variable that either takes the value 1 or 0

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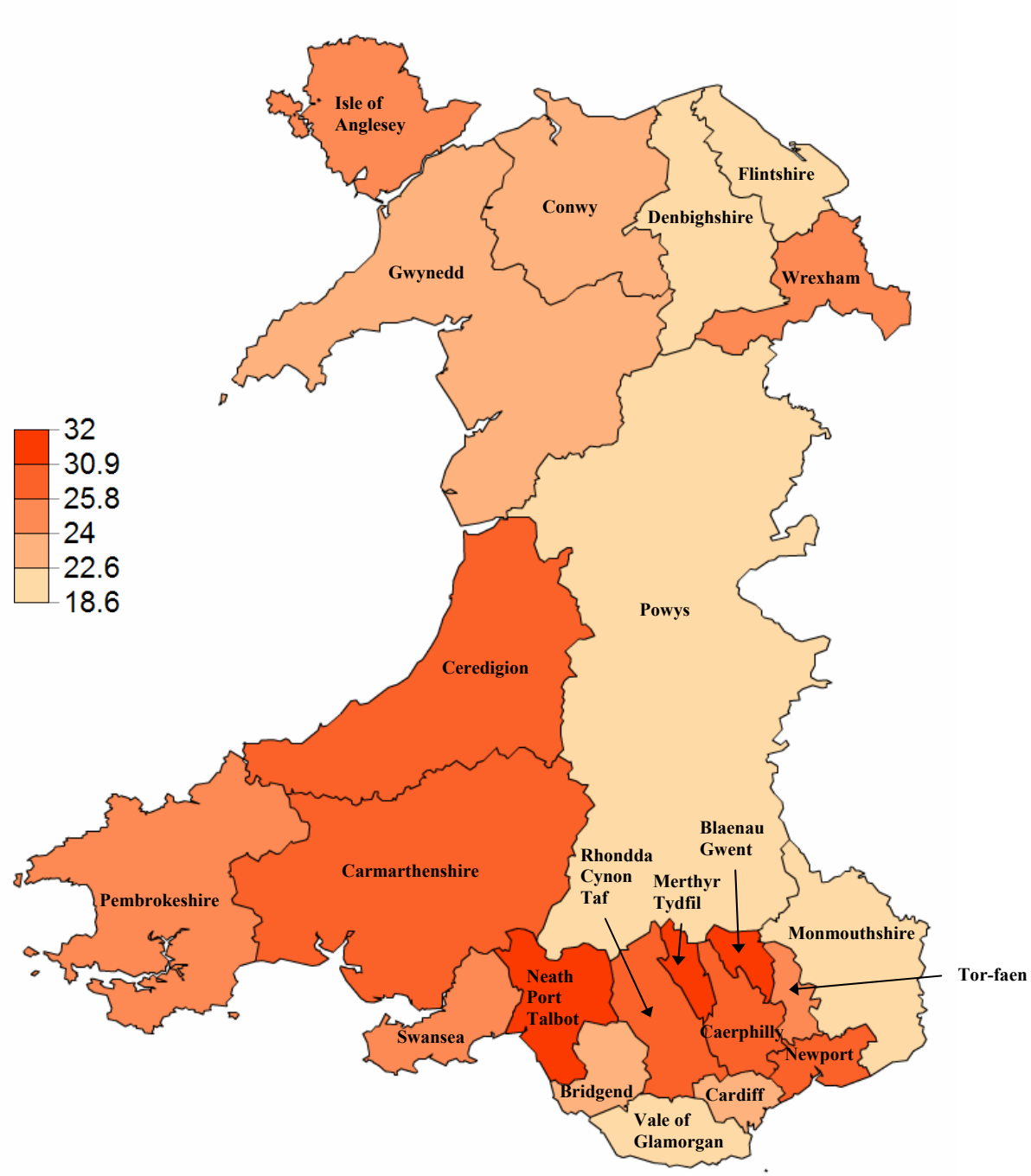
Figure 1: Map of Inactivity Rates by Welsh Unitary Authority



Source: Welsh Local Labour Force Survey 2004 (Persons of Working Age).

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Figure 2: Weekly Wage Distribution by Gender