

## Rural Homeownership and Labor Mobility in the U.S.

Daniel Monchuk  
University of Southern Mississippi  
Hattiesburg, MS USA  
[dmonchuk@gmail.com](mailto:dmonchuk@gmail.com)

Maureen Kilkenny  
University of Nevada  
Reno, Nevada USA

Euan Phimister  
University of Aberdeen Business School  
Aberdeen, Scotland

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Are rural homeowners in the workforce as geographically mobile as urban?

Do rural unemployed homeowners end their unemployment spells more or less often without moving compared to urban unemployed homeowners?

Are re-employment prospects better elsewhere, do unemployed rural homeowners move as much as unemployed urban homeowners?

Can the urban unemployed find jobs more easily without moving?

Can an urban unemployed homeowner sell their urban house more easily?

The nonmetropolitan unemployed have slightly higher rates of exit from unemployment than metro unemployed.

We investigate if that is because unemployed rural people are more likely to become re-employed (locally or by commuting), more likely to migrate to find a new job, or to exit the labour force all together.

In addition to the fact that rural unemployment rates can be higher, cross-sectional data from the 2000 U.S. census documents these other relevant facts:

- Rural net out-migration is much higher (Figure 1),
- housing prices are much lower (Figure 2), and
- housing vacancy rates much higher (Figure 3) than urban.

These facts are related. Rural outmigration fuels excess housing supply, exacerbates vacancy rates, and contributes to even lower rural housing values than can be explained by remoteness alone.

In sum, because a rural homeowner enjoys more real housing at a lower cost than they can liquidate if they sell, all else equal, the relatively thin rural housing markets and low rural housing values may underlie a housing-tenure related 'lock-in' effect that relatively immobilizes rural labour.

We argue that because net relocation and transaction costs are higher for remote rural homeowners than urban, and because urban homeowners can more easily sell their residence for its full opportunity value, they require less of a wage premium to accept non-local re-employment.

In contrast, rural homeowners may not be able to sell their home for a price that would enable them to buy a comparable home in any other area. Thus rural homeowners would have higher real reservation wages with respect to employment that necessitates a move and lower reservation wages for local employment, compared to the reservation wages of urban homeowners for those options, all else equal.

TABLE 1: SUMMARY STATISTICS BY COUNTY TYPE

Variable	Total		Metro		Urban Adjacent to Metro		Urban Non-Adjacent to Metro		Rural	
	Mean	(St. Dev)	Mean	(St. Dev)	Mean	(St. Dev)	Mean	(St. Dev)	Mean	(St. Dev)
Unemployed with no exit from unemployment	0.811	(0.39)	0.813	(0.39)	0.782	(0.41)	0.830	(0.38)	0.780	(0.42)
<b>Type of Exit from Unemployment</b>										
Job with a move	0.022	(0.15)	0.024	(0.15)	0.015	(0.12)	0.023	(0.15)	0.020	(0.14)
Job with no move	0.127	(0.33)	0.123	(0.33)	0.142	(0.35)	0.115	(0.32)	0.190	(0.39)
Out of the labour force	0.040	(0.20)	0.041	(0.20)	0.061	(0.24)	0.032	(0.18)	0.010	(0.10)
<b>Time Unemployed (months)</b>										
White	6.730	(8.29)	5.455	(5.70)	5.711	(5.85)	8.807	(11.50)	13.020	(14.75)
Spanish	0.720	(0.44)	0.766	(0.42)	0.812	(0.39)	0.536	(0.50)	0.880	(0.33)
Female	0.055	(0.23)	0.084	(0.25)	0.000	(0.00)	0.017	(0.13)	0.000	(0.00)
Age (years)	0.147	(0.35)	0.145	(0.35)	0.102	(0.30)	0.187	(0.39)	0.110	(0.31)
Number of Children Previous Year	43000	(11.33)	43753	(10.40)	41619	(12.94)	40589	(13.27)	46060	(10.15)
Change in number of children from previous year	1.188	(1.20)	1.273	(1.20)	0.919	(0.88)	1.213	(1.35)	0.760	(1.15)
Marital Status in previous year (1=Married, 0=Single)	-0.010	(0.44)	-0.039	(0.46)	-0.046	(0.46)	0.086	(0.41)	0.020	(0.30)
Change in Marital Status from Previous Year (-1=No longer married, 0=no change, 1=became married)	0.022	(0.17)	0.016	(0.12)	0.041	(0.20)	0.037	(0.26)	0.000	(0.00)
Graduated High School	0.802	(0.40)	0.894	(0.31)	0.528	(0.50)	0.844	(0.36)	0.250	(0.44)
Graduated College	0.191	(0.39)	0.266	(0.44)	0.066	(0.25)	0.098	(0.30)	0.000	(0.00)
Seasonal Dummy (=1 if Feb - July, when net changes are positive)	0.582	(0.49)	0.594	(0.49)	0.614	(0.49)	0.539	(0.50)	0.540	(0.50)
Seasonal Industry Dummy (=1 if previous industry was Farming, agriculture, mining, construction, mining or forestry)	0.174	(0.38)	0.178	(0.38)	0.228	(0.42)	0.159	(0.37)	0.070	(0.26)
County Unemployment rate	6.055	(2.38)	5.904	(2.04)	6.005	(1.85)	7.421	(2.51)	2.950	(2.54)
No. Observations	1664		1020		197		347		100	

Note: Only includes individuals who owned their home or had a mortgage at the end of the spell. Source: PSID sample (described in text).

# Rural Homeownership and Labor Mobility in the U.S.

By Daniel Monchuk, Euan Phimister, and Maureen Kilkenny

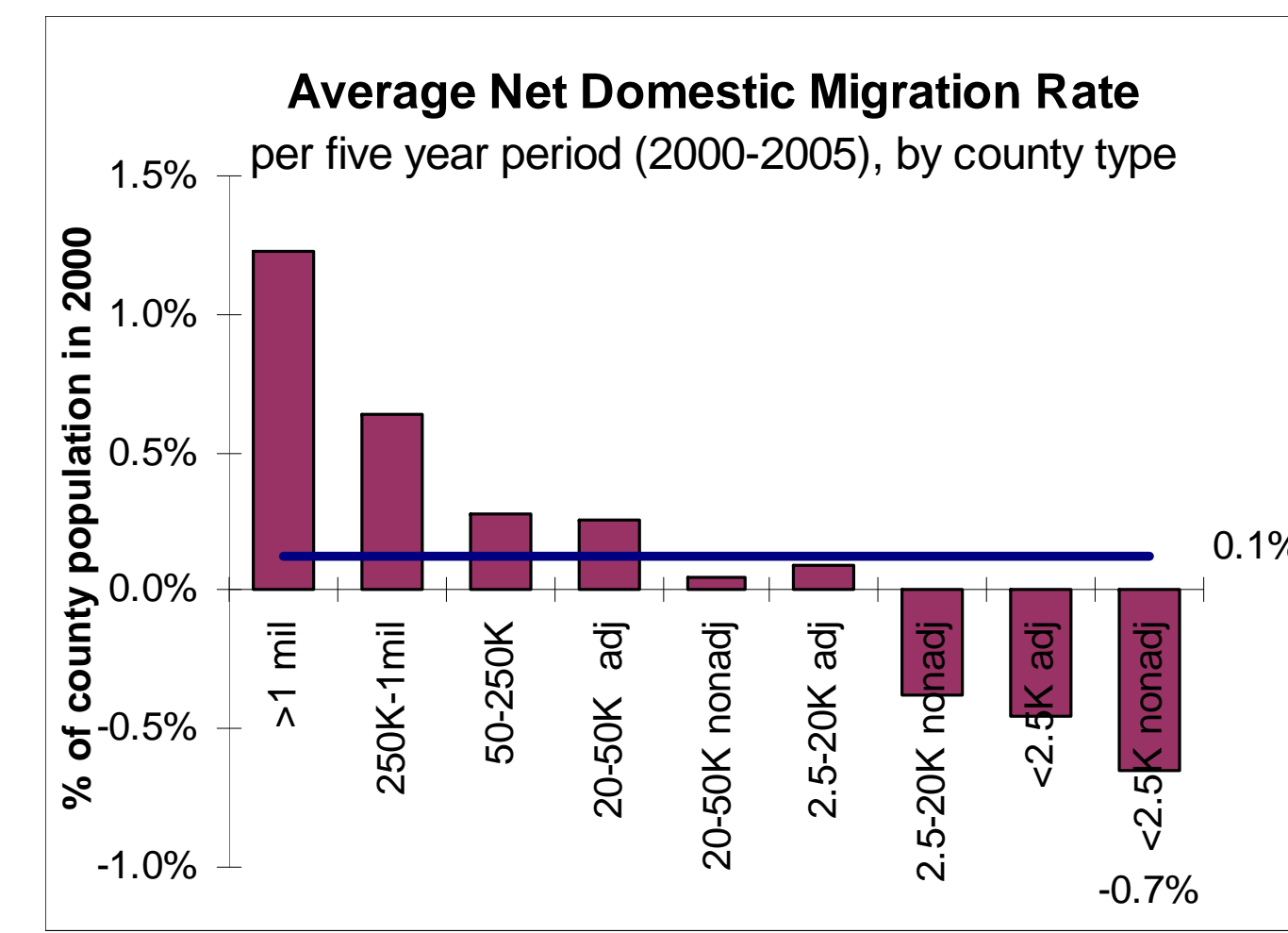


Figure 1. Five-year average net migration rate, 2000-2005. Source: Bureau of the Census CO-EST Estimates (annual); tabulation by authors

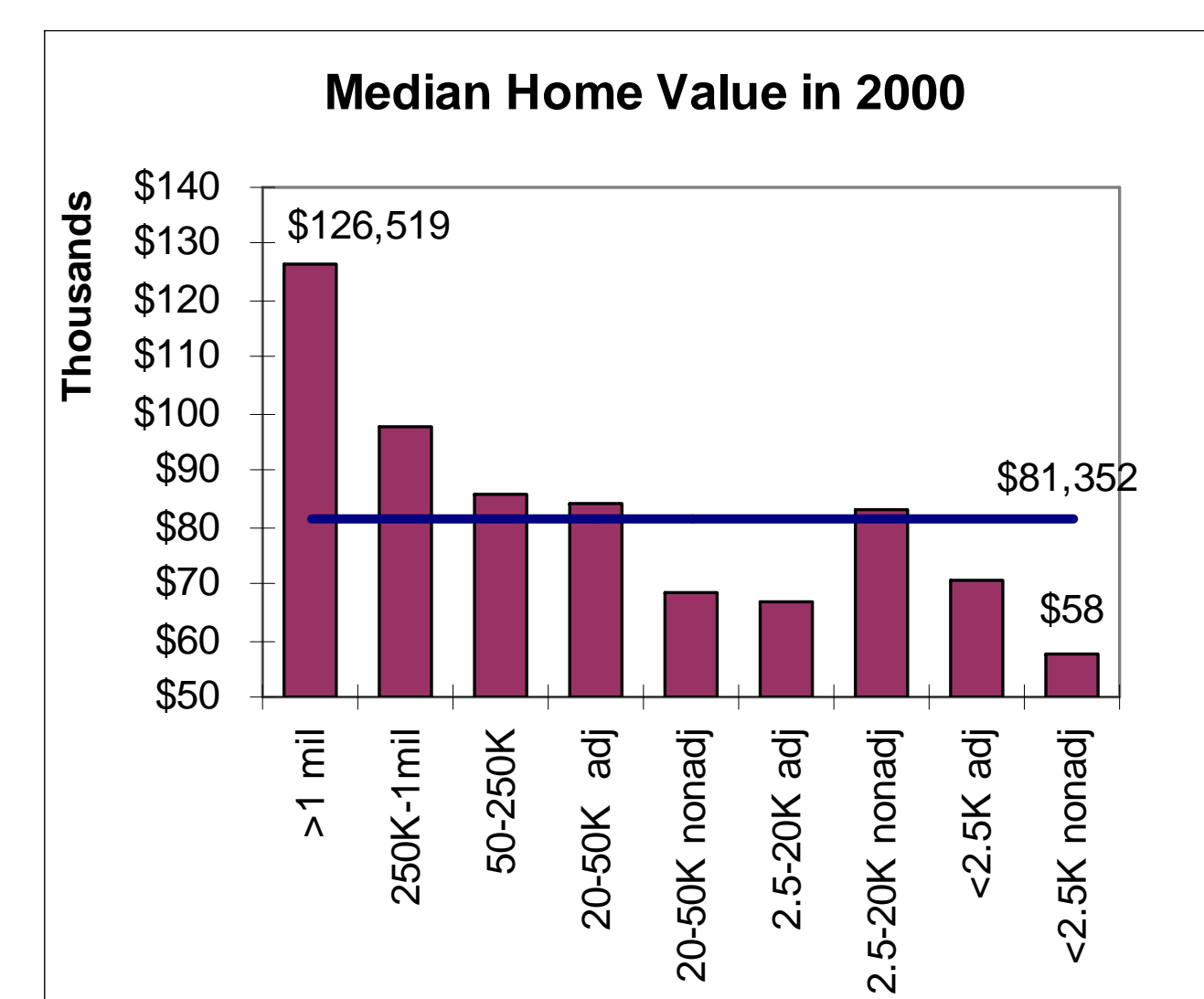


Figure 2. Median Home Values by county type. Source: 2000 Decennial Census STF 3; tabulation by authors

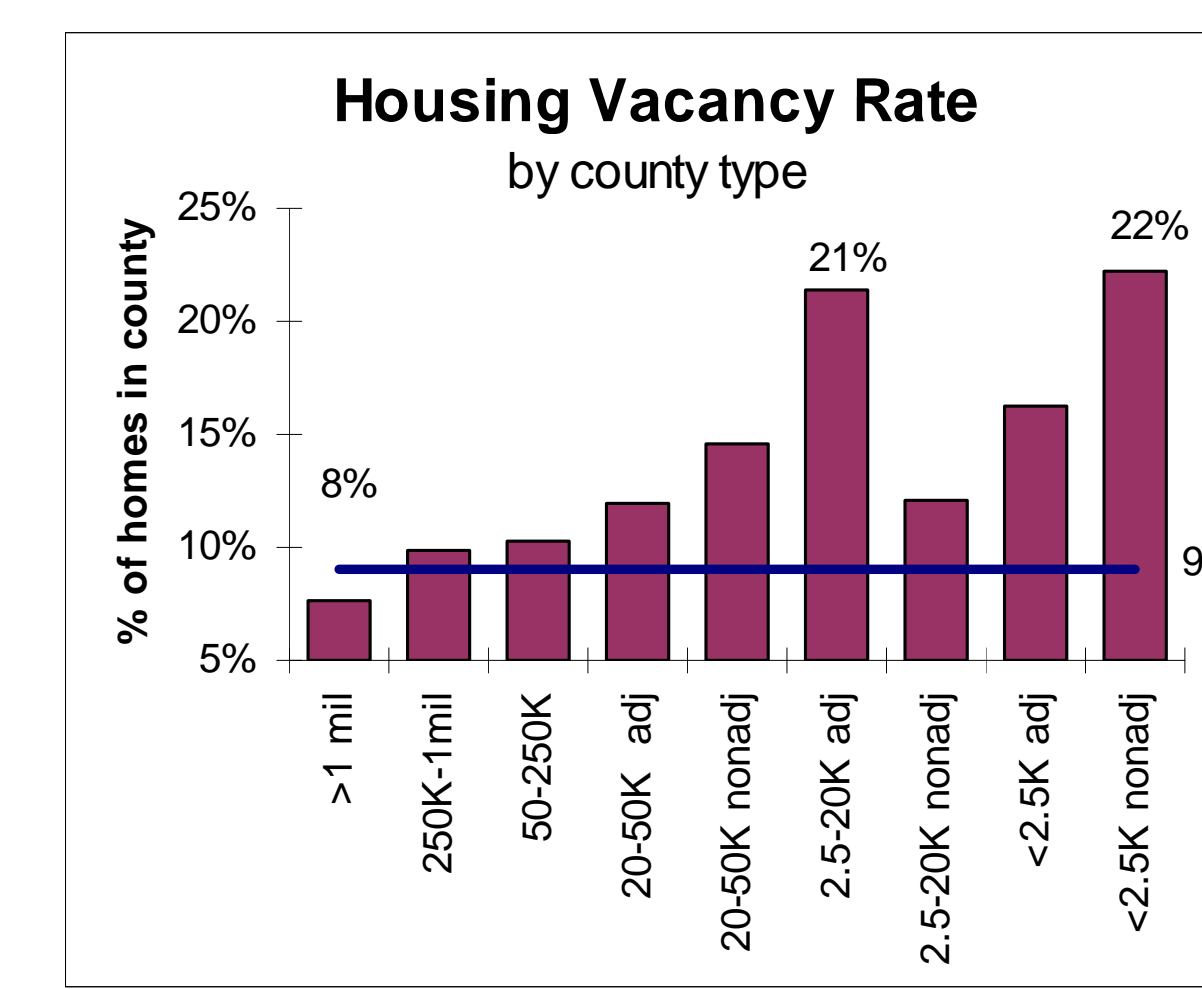


Figure 3. Percent of homes in counties by type that are vacant. Source: 2000 Decennial Census STF 3; calculation by authors

We distinguish between four types of unemployment transitions: (1) exit unemployment by taking a new job with a non-local residential move, (2) exit unemployment by taking a new job and not moving (staying in the same county), (3) exiting the labour force; and (4) remaining unemployed (a truncated or censored exit from unemployment).

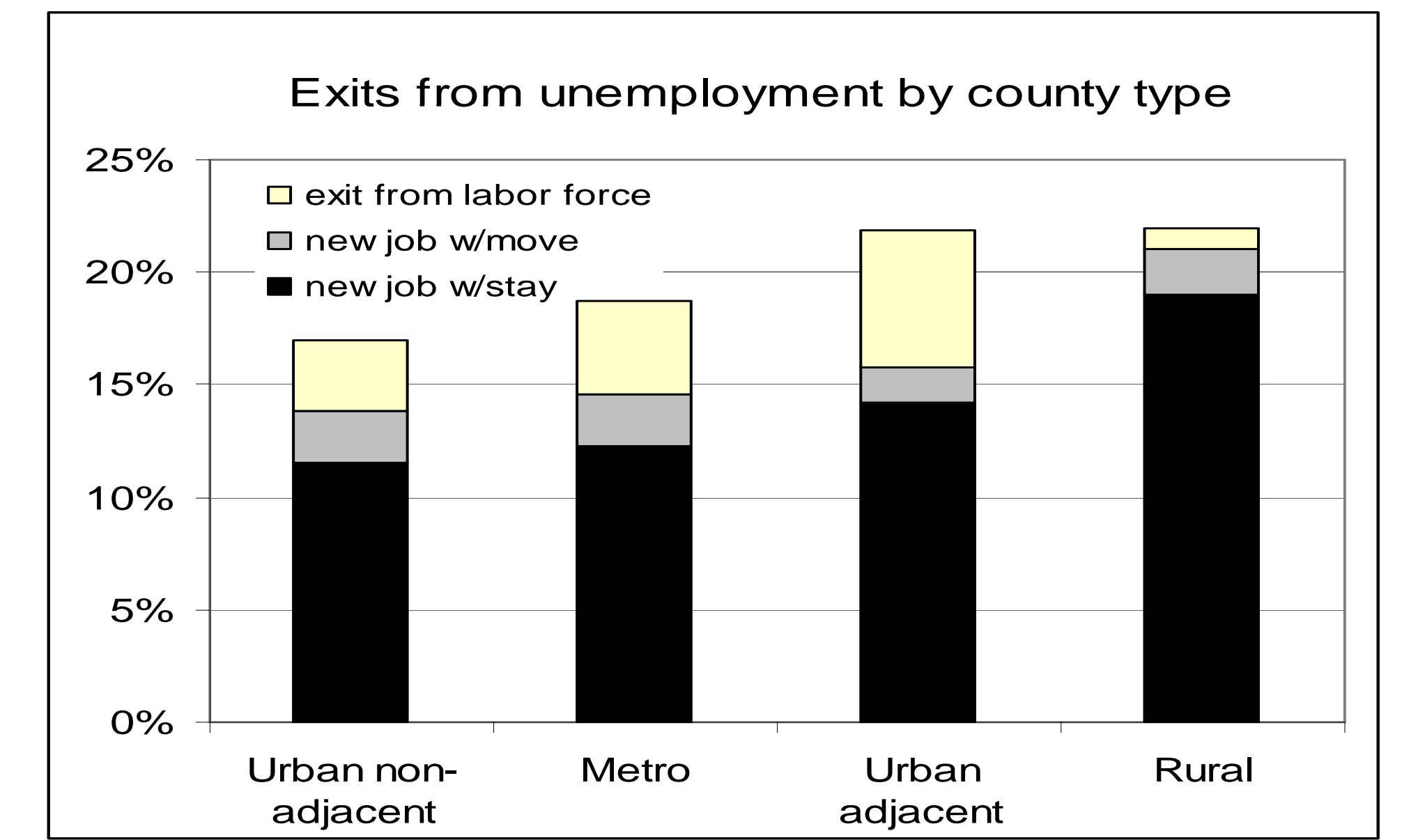


Figure 5. Non-censored exits from unemployment by county type. Source: PSID sample

We hypothesize that unemployed rural homeowners are more likely to stay in the labour force and accept a local job, and less likely to take a job that necessitates a move or to drop out of the labour force altogether.

We estimate a competing hazard model using a five year panel set of observations on individuals. We control for demographics of the individuals and the economic characteristics of their workplaces (Table 1).

Table 3 reports the calculated average marginal effects and the p-values of the significance of the marginal effects (in parentheses) from the multinomial logit model of competing hazard rates, estimated by maximum likelihood. The fit of the model is substantial, with well over half of the variation in exits from unemployment (57%) being explained by the variables in the model. Rurality for homeowners, as hypothesized, has a significantly positive immobilizing effect (exit from unemployment to a job without a move). It is also by far the largest measured effect, raising the hazard of an exit to a job without a move by 0.094.

Table 3. Competing Hazard Model of exits from unemployment among homeowners

Variable	Exit to Employment				Exit Labour Force	
	Move		Stay		Marginal Effect	P-value
	Marginal Effect*	P-value**	Marginal Effect	P-value		
Urban Adjacent to Metro	-0.003	(0.60)	0.001	(0.97)	0.006	(0.63)
Urban Non-Adjacent	0.007	(0.30)	-0.028	(0.19)	<b>-0.018</b>	<b>(0.01)</b>
Rural	-0.001	(0.87)	<b>0.094</b>	<b>(0.07)</b>	<b>-0.021</b>	<b>(0.03)</b>
(log) months unemployed	<b>-0.006</b>	<b>(0.00)</b>	<b>-0.027</b>	<b>(0.00)</b>	-0.001	(0.89)
White	-0.002	(0.59)	-0.036	(0.11)	-0.009	(0.44)
Spanish	0.002	(0.80)	-0.041	(0.16)	-0.011	(0.38)
Female	-0.002	(0.76)	0.057	(0.28)	-0.009	(0.46)
Age	0.000	(0.76)	<b>-0.012</b>	<b>(0.00)</b>	<b>-0.005</b>	<b>(0.00)</b>
Age squared	0.000	(0.14)	<b>0.000</b>	<b>(0.00)</b>	<b>0.000</b>	<b>(0.00)</b>
# Children Previous Year	0.000	(0.94)	0.013	(0.13)	-0.002	(0.60)
Change in #of Children	<b>-0.012</b>	<b>(0.01)</b>	0.005	(0.83)	0.004	(0.69)
Marital Status previous year	-0.002	(0.72)	0.041	(0.21)	0.001	(0.92)
Change in Marital Status	0.008	(0.33)	0.011	(0.86)	-0.021	(0.50)
Graduated High School	0.000	(0.92)	-0.030	(0.25)	0.000	(0.96)
Graduated College	0.001	(0.88)	<b>0.053</b>	<b>(0.06)</b>	<b>-0.015</b>	<b>(0.04)</b>
Seasonal Dummy	<b>0.009</b>	<b>(0.02)</b>	0.025	(0.12)	<b>0.019</b>	<b>(0.01)</b>
Seasonal Industry Dummy	0.010	(0.20)	0.033	(0.21)	-0.011	(0.16)
County Unemployment rate	<b>-0.003</b>	<b>(0.01)</b>	0.006	(0.14)	<b>0.004</b>	<b>(0.05)</b>
Number of observations	1664					
Pseudo R <sup>2</sup>	0.57					

Notes: Also included in the estimation, but not reported here, are four dummy variables for the years.

\* For 0/1 variables, the marginal effects reflect a change from 0 to 1

\*\* P-values correspond to the estimated significance of the marginal effects, computed at the mean

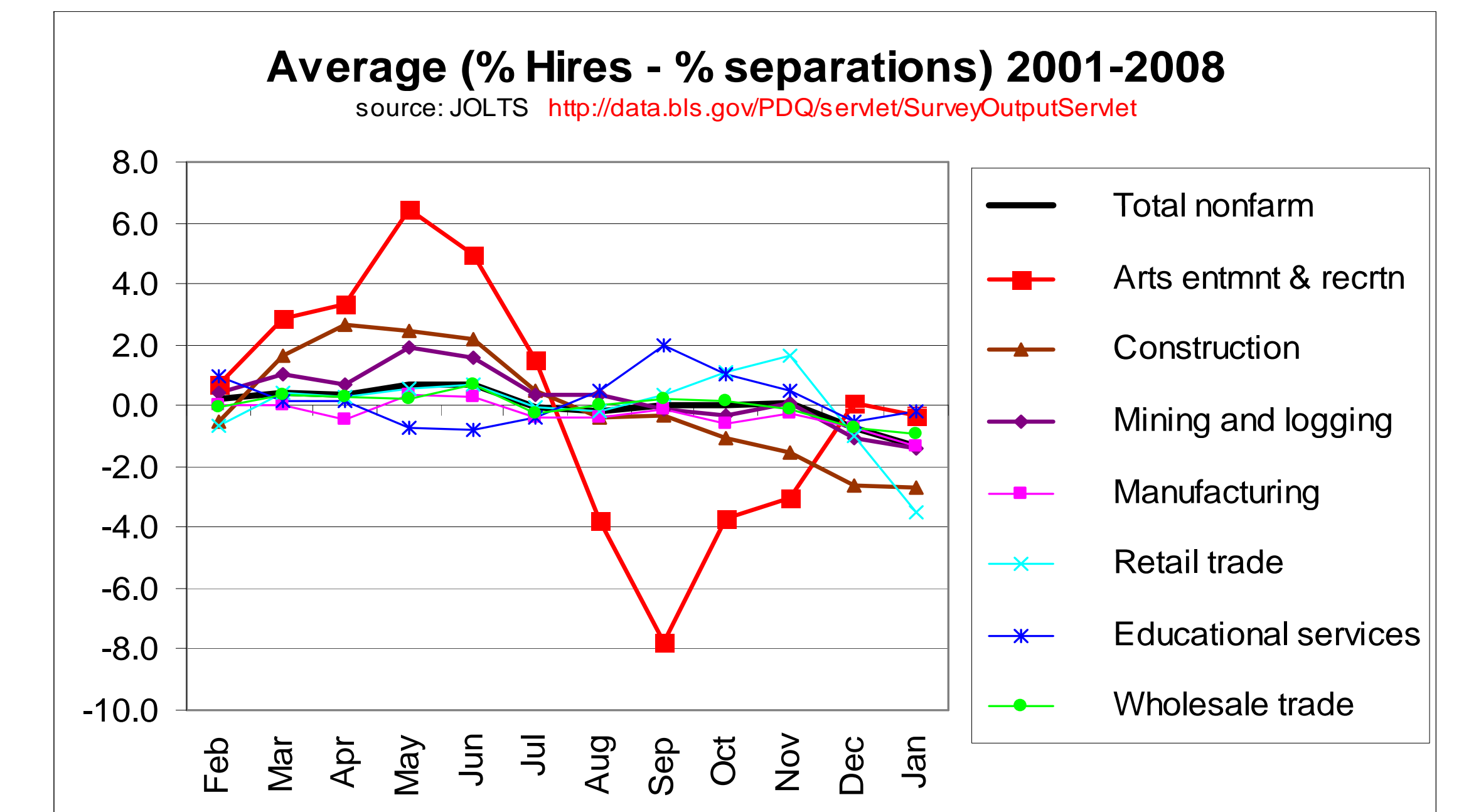


Figure 6. Monthly average net additions to employment by sector. Source: Bureau of Labor Statistics "Job Openings and Labor Turnover Survey" tabulations by the authors.

The estimated models (Table 3) reveal evidence of a rural 'lock-in' effect in which unemployed rural homeowners appear to be less mobile than unemployed urban homeowners.

Our findings echo the findings of lock-in effects arising from subsidized housing tenure and from mortgage illiquidity that have been identified by other researchers (Quigley (1987); Hughes and McCormick, 1987; McCormick, 2000; Battu et al. (2008); Ferreira et al. (2008); Coulson and Fisher(2009)