# Communication

# Testing Hypotheses of Immigrant Self-Employment

## Andrew M. Yuengert

#### ABSTRACT

This paper attempts to explain high rates of immigrant self-employment, relative to native workers. Three hypotheses are tested. Estimates of a two-sector model of earnings support the home-country self-employment hypothesis: immigrants from countries with larger self-employed sectors have higher self-employment rates. The data also support the taxavoidance hypothesis. These two hypotheses explain 62 percent of the immigrant-native self-employment differential. There is little support for the enclave hypothesis. Enclaves do, however, affect sectoral earnings, in ways that are consistent with compensating differentials for enclave life, or negative selection into enclaves.

#### I. Introduction

Researchers are interested in self-employed workers for several reasons. The self-employed sector has expanded significantly over the last 20 years. This growth has both positive and negative aspects. Small businesses are an important source of labor demand, but they are also a significant part of the underground, untaxed economy (U.S. Internal Revenue Service 1979), and the

Andrew M. Yuengert is a professor in the Business Administration Division of Pepperdine University. [Submitted September 1992; accepted October 1993]

wages and benefits offered in small businesses are usually lower than in the more formal large-firm wage sector (Brown and Medoff 1989). As more workers choose self-employment, research interest has grown (Blau 1987; Evans and Leighton 1989; Evans and Jovanovic 1989).

Apart from Borjas (1986), relatively little attention has been paid to the self-employment experience of *immigrants*. The immigrant self-employed are of interest for the same reasons native self-employed are of interest, and more. The immigrant self-employed sector is a source of employment both for immigrant business owners and the new immigrants who are often their employees. Immigrants have higher self-employment rates than native workers (Borjas 1986); moreover, self-employment may be an important, overlooked sector in the analysis of immigrant assimilation (Yuengert 1991).

To the extent that policymakers are interested in promoting or discouraging self-employment in general or among immigrants, they must try to understand the determinants of native and immigrant self-employment. In this paper I extend the analysis of immigrant self-employment in two important ways. First, in the context of a switching regression model of earnings, I test several hypotheses of immigrant self-employment, only one of which (the enclave hypothesis) has been tested before. Data from the 1980 Census support the home country selfemployment hypothesis: immigrants have higher self-employment rates because they come from countries with relatively large self-employed sectors, and thus are more likely to have been self-employed in their country of origin. There is also support for the tax avoidance hypothesis: immigrants face higher tax rates (on average), and are thus more attracted to self-employment, with its greater opportunities for legal and illegal tax avoidance. In these data, however, there is no support for the enclave hypothesis: Chinese, Mexican, and Cuban selfemployment rates are no higher in cities with large concentrations of immigrants from the same ethnic groups. The home country and tax avoidance hypotheses account for 55 and 7 percent, respectively, of the differences between immigrant and native self-employment rates. The dominant effect of home country selfemployment suggests that most of the determinants of immigrant self-employment are operative before immigrants arrive in the United States, and depend relatively little on where immigrants settle.

Second, by jointly estimating earnings in wage and self-employment along with self-employment choice, this paper offers a richer picture of immigrant self-employment. For example, home country self-employment affects immigrant self-employment rates not through relative productivity in self-employment, but through other aspects of the self-employment decision: greater preferences for self-employment, or lower start-up costs, for example. Enclaves, although they do not affect self-employment choice, depress earnings in the wage sector. Chinese enclaves do not affect the earnings of the Chinese, but they increase the wage earnings of natives and decrease the earnings of other immigrants in both sectors. Finally, poor English among Chinese immigrants is associated with lower wages in Chinese enclaves. These enclave effects might indicate a compensating differential for enclave life; alternatively, they may be correlated with unobserved variables that both affect the selection of immigrants into Chinese enclaves, and lower their earnings.

## II. Hypotheses of Immigrant Self-employment

Several hypotheses, formulated in terms of human capital theory, provide potential explanations for the immigrant-native self-employment differential. They are:

- 1) The home-country self-employment hypothesis. Many immigrants come from countries with relatively large self-employed sectors. They are more likely to have been self-employed in the country of origin, or to at least have had some exposure to and training in small business. Experience in the informal sector is a form of sector-specific human capital, inclining immigrants more towards self-employment in the United States. This effect could work through relative earnings (immigrants are more productive in the self-employed sector) or through lower business start-up costs (immigrants may be more efficient at starting a business, or less attached to the more formal U.S. wage market).
- 2) The tax avoidance hypothesis. Higher marginal tax rates make self-employment, with its greater opportunities for tax deductions and avoidance, more attractive (Blau 1987, Long 1982). Since immigrants are concentrated in high-tax states, they have higher self-employment rates.<sup>1</sup>
- 3) The enclave hypothesis. Borjas (1986) found that Hispanics are more likely to be self-employed in cities with higher concentrations of Hispanics. Presumably, immigrants have a comparative informational advantage in providing goods and services to other immigrants, or find easier access to start-up capital in enclaves. Whether the enclave effect works through relative earnings or some factor not directly related to observed earnings is not clear: Borjas estimated the effect of enclaves on self-employment choice only, not on sectoral earnings.<sup>2</sup>

# III. Model Specification

The endogenous switching framework has been applied to selfemployed sector in Britain (Rees and Shah 1986), to developing country labor markets (Blau 1985, Vijverberg 1985), and to the analysis of self-employment in the presence of consumer discrimination (Borjas and Bronars 1989), but has not yet been used to model differences between immigrant and native selfemployment.

The theoretical framework is a generalized Roy model (see Roy 1951, Heckman and Sedlacek 1985). Workers can choose to work in either of two sectors, in

<sup>1.</sup> Tax rates are exogenous in this analysis. The presence of family or ethic networks is probably a more important factor in an immigrant's location choice than tax rates.

<sup>2.</sup> A fourth hypothesis is that illegal immigrants are more likely to seek self-employment, to avoid detection. Estimates of illegal immigrant populations by state were used to test this hypothesis, but were insignificant predictors of earnings and self-employment.

A fifth hypothesis is that immigrants happen to enter industries and occupations that have high self-employment rates. Instead of explaining self-employment rates, according to this argument, one should explain the choice of industry or occupation. A breakdown of immigrant and native workers into broad industry-occupation cells, however, reveals that 60–90 percent of the immigrant-native self-employment differential is due to higher immigrant self-employment rates within cells.

197

wage or self-employment. Workers choose the sector in which they receive the highest utility; utility is a function of after-tax income, and as such should reflect the importance of human capital, unobserved ability, and the importance of startup costs.

Individual *i*'s earnings in self- and wage-employment are given by Equations (1) and (2), which are standard human capital earnings functions. Equation (3) is an index function for self-employment choice:

(1) 
$$Y_{si}(\lambda_s) = X_i \beta_s + \varepsilon_{si}$$

(2) 
$$Y_{wi}(\lambda_w) = X_i \beta_w + \varepsilon_{wi}$$

$$(3) I_i^* = Z_i \delta - \eta_i$$

Because the parameter estimates of these models are typically sensitive to distributional assumptions, the Box-Cox distribution is used as a more flexible functional form (see Heckman and Sedlacek 1985).  $Y_{si}(\lambda_s)$  and  $Y_{wi}(\lambda_w)$  are Box-Cox transformations (with  $\lambda_s$  and  $\lambda_w$  as parameters) of earnings in each sector.<sup>3</sup> In Equation (3),  $I^* > 0$  implies self-employment,  $I^* < 0$  implies wage employment.  $\varepsilon_{si}$ ,  $\varepsilon_{wi}$ , and  $\eta_i$  are jointly normally distributed.<sup>4</sup>  $X_i$  and  $Z_i$  are vectors of explanatory variables;  $\beta_s$ ,  $\beta_w$ , and  $\delta$  are parameters.<sup>5</sup> Equations (1), (2), and (3) are estimated by maximum likelihood.

Earnings, human capital, and demographic variables are drawn from the 1980 Census Public Use Samples.<sup>6</sup> Workers classify themselves as either wage or self-employed; I assume that this classification reflects primary employment. Incorporated and unincorporated self-employed workers are treated identically. In some cases, the data do not cleanly distinguish earnings or hours in either sector. For example, 22 percent of native-born self-employed workers in the sample report wage earnings; often, they are employees of their own incorporated firm. A much smaller proportion (2 percent) of those who classify themselves as wage workers report self-employed earnings. By defining earnings as the sum of wage and self-employment earnings, I avoid discarding the earnings of the incorporated self-employed, which are often reported as wage earnings, at the expense of adding earnings from self- and wage-employment in a relatively small number of cases.<sup>7</sup>

<sup>3.</sup>  $Y(\lambda) = \frac{Y^{\lambda} - 1}{\lambda}$ 

<sup>4.</sup> More exactly, because the Box-Cox specification imposes some restrictions on the error terms,  $\varepsilon_{si}$  and  $\varepsilon_{wi}$  are draws from truncated normal distributions. See Heckman and Sedlacek (1985).

<sup>5.</sup>  $X_i$  does not include a capital variable, which may play an important role in reported self-employed earnings. Following the literature, age must serve as a proxy for capital. The coefficient on age captures both the return to human capital and the accumulation of physical and financial capital.

<sup>6.</sup> Because average wages are less likely to approximate marginal products in self-employment than in wage employment, earnings were chosen as the dependent variable for analysis. An examination of hours worked and average wages reveals that, because immigrants work only slightly longer hours than natives in both sectors, the wage differential is only 1–2 percent larger than the earnings differential.

<sup>7.</sup> To test the sensitivity of the results to the treatment of wage and self-employment earnings, I defined them alternatively as follows: for wage workers, reported wage earnings only; for self-employed incorporated workers, the sum of wage and self-employed earnings; for self-employed nonincorporated workers,

Variables for age, age squared, education, dummies for year of immigration, dummies for six immigrant ethnic groups, and a full set of immigrant group interactions appear in all three equations. Other variables include a dummy for southern residence, a dummy for poor English language skills, and a vector of country of origin characteristics (1978 GNP and distance from the United States).<sup>8</sup>

The following variables correspond to the three hypotheses of immigrant selfemployment:

HOMESELF. Country of origin self-employment rate in 1969, relative to the U.S. rate. Pequals one for the native-born. 10

AVGTAX\$10 and AVGTAX\$25. Average federal and state income tax rates on \$10,000 and \$25,000, as of 1979, incorporating both standard deductions and the deductibility of federal taxes, where appropriate. 11

%COUNTRY (%CUBA, %MEXICO, %CHINA). Percentage of SMSA population from same country of birth. Equals 0 for the native-born. Each of these variables is allowed to have different effects on native workers, on immigrants groups not from COUNTRY, and on immigrants from COUNTRY. 12

Because the comparison of after-tax income is relevant to sector choice, and the self-employed can avoid the full burden of income taxes, the tax variables are included in the index function. Before-tax earnings are reported in the Census; state taxes will affect before-tax earnings only to the extent that workers demand higher before-tax wages in high-tax states. Gyourko and Tracy (1991) find that state and local tax rates do not affect before-tax wages, but are instead capitalized into land prices. Tax-rates are therefore excluded from the earnings equations; this exclusion identifies the model.

The data consist of immigrant and nonblack native males, <sup>13</sup> employed full-time in nonfarm occupations, <sup>14</sup> with positive earnings, ages 25–64, residing within the 150 largest SMSAs, from the A and B samples of the 1980 U.S. Census Public Use Samples. Table 1 presents descriptive statistics on the sample. Glancing across the various immigrant groups in the table, notice that there is a lot of

self-employment earnings only. This alternative measure did not substantially affect the results reported here.

- 8. These variables were significant determinants of 1979 immigrant earnings in Jasso and Rosenzweig (1985).
- 9. Source: International Labor Organization, *Yearbook of Labor Statistics*, 1950 to 1975. I also tried defining *HOMESELF* at different points in time for different year-of-immigration cohorts; the change in definition made no significant difference to the results.
- 10. Interactions of *HOMESELF* with year of immigration were included in earlier specifications; there were no statistically significant differences across years of immigration ( $\chi^2(12) = 15.05$ ).
- 11. Source: Commerce Clearing House State Tax Guide. I was unable to find tax data for Alaska, Iowa, Kansas, and New Mexico. \$10,000 and \$25,000 represent roughly the first and third quartiles of the sample earnings distribution. Average tax rates calculated at other earnings levels, as well as marginal tax rates, were tried, with statistically weaker, but substantially unchanged, results from those reported here.
- 12. Source: Census State Reports.
- 13. Black native workers have substantially different labor and self-employment profiles than other native workers. Separate comparisons between immigrant and black native earnings and self-employment experience may prove enlightening in future work.
- 14. Excluded part-time workers have slightly higher self-employment rates (9.3 percent versus 8.3 percent for native workers); this is consistent with decreased labor market attachment and a desire for greater flexibility of work hours among part-time workers.

 Table 1

 Descriptive Statistics, Immigrant and Native Samples

	*	Native	V Imn	White Immigrants	П	Black Immigrants	S	Im	Asian Immigrants	
Variable	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Str	Standard Deviation	Mean	Star	Standard Deviation
Log earnings	89.6	0.57	9.82	0.57	9.41		.49	19.6	0	.65
Self employment rate	0.083	0.28	0.152	0.36	0.046		.21	0.129	0	34
Age	40.91	11.35	41.76	10.09	39.54		9.83	39.25	6	91.
Education	13.24	3.03	12.64	4.23	11.77		3.59	14.67	4	90
Language	0.01	0.07	0.10	0.30	0.07		.25	0.16	0	0.37
%Cuba	0.30	1.68	0.58	2.29	1.93		5.08	0.35	-	10
%Mexico	1.19	2.42	1.52	2.74	0.39		1.33	2.60	3	40
%China	0.23	0.39	0 39	0.48	0.58		.39	0.70	0	69
Home self employment	1	0	1.26	0.71	1.72		.32	2.18	0	98
Average tax \$10,000	14.38	1.64	14.59	1.42	14.91		1.53	14.96	1	38
Average tax \$25,000	26.32	2.79	26.92	2.82	27.87		3.10	28.09	2	99
Z		4,079		,025		1,087			1,060	
		Cuban			Mexican			Other	Other Hispanic	
		Immigrants			Immigrants			Imr	Immigrants	
Log earnings		9.58	0.58	9.33		0.49		9.48		0.57
Self employment rate		0.150	0.36	0.042		0.20		0.080		0.27
Age	4	15.04	10.59	36.52		9.27		37.77		8.97
Education		1.78	4.28	7.73		4.21		11.99		4.05
Language		0.35	0.48	0.49		0.50		0.27		0.44
%Cuba		1.15	9.37	0.29		0.73		1.78		4.77
%Mexico		0.91	2.26	6.45		4.31		2.51		3.73
%China		0.22	0.29	0.41		0.41		0.56		0.48
Home self employment		1.88	0	2.42		0		2.39		0.52
Average tax \$10,000		12.85	1.51	14.32		1.33		14.73		1.34
Average tax \$25,000	2	74.04	2.80	27.44		3.07		27.79		2.93
7.		1,028			1,054				1,093	

variation in self-employment rates and the other variables. Although the self-employment rate for all immigrants (11.7 percent, not shown) is higher than the native rate of 8.3 percent, three of the immigrant groups in table one have lower self-employment rates. Most immigrant groups are younger than the native group, and all but the Asians are less educated. Most immigrants come from countries with relatively large self-employed sectors (Mexicans and other Hispanics have the largest). All but the Cubans face higher tax rates. Cubans on average live in cities with large Cuban populations—Mexican and Chinese enclaves are on average smaller.

#### IV. Empirical Results

Table 2 presents estimated coefficients of Equations (1), (2), and (3), for the variables representing the three hypotheses. <sup>16</sup>

The home country self-employment hypothesis finds support in these estimates. The variable *HOMESELF* is significant in the index function. It is insignificant in the earnings functions; whatever advantage is conferred by a large home country self-employed sector does not operate through relative earnings. It is possible that immigrants from countries with large informal self-employed sectors simply have greater preferences for self-employment (they are less averse to striking out on their own, given the probability of experience in the home-country informal sector), or their compatriots are more willing to lend to small business startups.

The tax rate hypothesis also finds support in these estimates. The average tax rates are jointly significant ( $\chi^2(2) = 5.89$ , p-value = .0536) in the index function; moreover, they are qualitatively similar to the estimates of Blau (1987): the coefficient on the AVGTAX\$10 is negative; the coefficient on AVGTAX\$25 is positive. More progressive state tax structures are associated with high self-employment rates.

Contrary to the results of Borjas (1986), all three enclave variables (Mexican, Cuban, and Chinese) are insignificant in the index function, together rejecting the hypothesis that the probability of self-employment is larger in enclaves. <sup>17</sup> The insignificance of the enclave variables is not a result of the presence of the other hypothesis variables, or of slightly looser sample selection rules (relative to Borjas 1986). One possible explanation for the divergence of results is that Borjas's control sample was more narrowly defined (as natives of the same ethnic descent as the immigrant) than mine. One would expect the enclave effect, if it exists, to

<sup>15.</sup> When compared against their native-born ethnic counterparts, immigrants always have higher selfemployment rates.

<sup>16.</sup> The estimates of the rest of the coefficients in the model are available from the author upon request. 17. In a previous draft of this paper (Yuengert 1991), reporting analysis on another sample from the 1980 Census, the Mexican and Chinese enclave variables were significantly positive in the index function. These divergent results raise the concern that the negative result is a statistical fluke, unique to the sample. To check this, I drew three other random subsamples from the 1980 Census, of roughly the same size, and estimated the model three more times. Each of the three sets of estimates reaffirmed the negative result. The enclave results reported here are thus not unique to the particular sample I have drawn.

 Table 2

 Maximum Likelihood Estimates for the Pooled Sample (t-statistics in parentheses)

	Index	ex tion	Wage-employed Earnings Equation	ployed	Seur-Employed Earnings Equation	loyed quation
Variable	Coefficient	f-statistic	Coefficient	t-statistic	Coefficient	r-statistic
Homeself	0.237	(5.71)	0.004	(0.38)	0.044	(1.27)
avetax\$10	-0.064	(2.36)	1	1	1	
avgtax\$25	0.037	(2.42)	1	1	1	
Enclaves						
%Mexico	0.596	(0.43)	-1.630	(3.76)	0.671	(0.65)
%Cuha	0.565	(1.15)	-0.538	(2.71)	-0.512	(1.60)
%China	-13.71	(1.17)	-2.531	(0.23)	1.429	(0.23)
Interactions of %China	with					
Native-born		(0.01)	3.933	(2.25)	-4.504	(1.11)
Other Immigrants	-3.264	(0.57)	-4.557	(3.24)	-9.931	(2.07)
Poor English		(1.00)	-10.68	(1.86)	3.331	(0.33)
Variance	1	1	0.210	(3.82)	0.095	(1.54)
Cov (E,n)	1	1	0.025	(0.54)	0.169	(1.16)
= poor	-110,313.126 n = 1	10,426				

persist when measured against a more diverse control sample, containing fewer workers who can make use of familiarity with the culture and needs of enclave members to start up businesses. The absence of an enclave effect in this sample therefore casts some doubt on its existence.

When they affect earnings, immigrant enclaves depress them. The coefficients on the enclave variables in both sectoral earnings equations are often negative, although only the wage coefficients on *Mexico* and *Cuba* are statistically significant. There are two explanations for this result. Immigrants in enclaves may compete with one another in the labor market or, if they are self-employed, in the product market. They are substitutes in production, and the products their businesses offer are substitutes in consumption. If this is the case, then presumably immigrants are willing to tolerate lower earnings because of the benefits of life in the enclave. These benefits may include the presence of family and familiarity with the culture, but they may also include access to start-up capital. Alternatively, there may be negative selection of immigrants into enclaves: those immigrants with lower unobservable skills may be more likely to join an enclave community.

Each enclave variable was allowed to affect native and other immigrant earnings separately, and was interacted with a dummy for poor English language skills. Only the Chinese enclave interactions were significant; the Cuban and Mexican interactions were dropped. Chinese enclaves depress the earnings of other immigrants in both sectors, at the same time increasing native wage-sector earnings.

The interaction of language with the Chinese enclaves is negative and marginally significant in the wage equation. This may imply that Chinese immigrants with poor english skills face lower demand for their skills, and that any preference that Chinese employers might have for Chinese workers (lower monitoring costs, for example) does not sufficiently counteract the limited opportunities that accompany poor language skills. Alternatively, this may indicate negative selection into enclaves; of the non-English speaking Chinese immigrants, those with fewer unobservable skills are more likely to locate in an enclave.

There is no evidence of selection into either sector, though the error structure of the self-employed earnings equation is imprecisely estimated.

How much of the native-immigrant self-employment differential can these estimates account for? Table 3 accounts for the self-employment gap. Native-immigrant differences in the hypothesis variable values are multiplied by the coefficient estimates to account for differences in self-employment. The unconditional differential is 3.39 percent. The unconditional differential understates the differences in self-employment, because immigrants are on average younger and less well-educated than natives. Since age and education are associated with higher self-employment rates, the differential in Line 2, controlling for age and education, is larger (5.25 percent).

The hypothesis variables (home country self-employment, tax rates, and enclaves) together account for 64 percent of the conditional differential. Greater rates of self-employment in the various countries of origin account for most of the differential (55 percent); higher average tax rates account for another seven percent.

63.7

Table 3
Accounting for the Immigrant-Native Self-Employment
Differential

Differential to be explained: Differential controlling for a education, and southern r	ige,	3.389 percent 5.246 percent
Explanatory Variables	Effect of Explanatory Variables	Percent of Differential Accounted For
Home self-employment	2.853%	54.7%
Taxes	0.359	6.9
Enclaves	0.113	2.1

3.325

#### V. Conclusions

Sum of hypothesis variables

The self-employed sector is an important source of labor demand, and may play an important role in successful immigrant assimilation. In this paper, I have tested three hypotheses of higher immigrant self-employment rates. A two-sector model of earnings, estimated on data from the 1980 U.S. Census, provides support for the home-country self-employment hypothesis and the tax avoidance hypothesis. Immigrants from countries with high self-employment rates (who are therefore more likely to possess small business skills) are more likely to enter self-employment. Also, immigrants are more concentrated in high-tax states, where self-employment (with its greater opportunities for tax avoidance) is more prevalent. These two hypotheses together account for 62 percent of the conditional differential in native and immigrant self-employment.

In contrast to Borjas (1986), there is little support in these estimates for the enclave hypothesis. Self-employment rates are no higher in cities with higher concentrations of immigrants. Cuban and Mexican enclaves are, however, associated with lower wage-sector earnings for Cubans and Mexicans, respectively. This earnings differential may be evidence of a compensating differential for the advantages of enclave life, or negative selection of immigrants into enclaves. Chinese enclaves do not affect Chinese earnings, but they decrease the earnings of other immigrant groups. Finally, Chinese immigrants with poor language skills earn less in enclaves than outside of them. Again, these differentials may be evidence of either compensating differentials or negative selection into enclaves. More research into immigrant earnings inside and outside of immigrant enclaves will be needed to fully explain these patterns.

#### References

- Blau, David. 1985. "Self-Employment and Self-Selection in Developing Country Labor Markets." Southern Economic Journal 52(4):351–63.
- ——. 1987. "A Time-Series Analysis of Self-Employment in the United States." Journal of Political Economy 95(4):445-67.
- Borjas, George J. 1986. "The Self-Employment Experience of Immigrants." *Journal of Human Resources* 21(4):485–506.
- Borjas, George J., and Stephen Bronars. 1989. "Self-Employment and Consumer Discrimination." Journal of Political Economy 97(3):581–605.
- Brown, Charles, and James Medoff. 1989. "The Employer Size-Wage Effect." Journal of Political Economy 97(5):1027-59.
- Evans, David S., and Linda S. Leighton. 1989. "Some Empirical Aspects of Entrepreneurship." American Economic Review 79(4):519–35.
- Evans, David S., and Boyan Jovanovic. 1989. "An Estimated Model of Entrepreneurial Choice Under Liquidity Constraints." *Journal of Political Economy* 97(4):808–27.
- Gyourko, Joseph, and Joseph Tracy. 1991. "The Structure of Local Public Finance and the Quality of Life." *Journal of Political Economy* 99(4):774–806.
- Heckman, James J., and Guilherme Sedlacek. 1985. "Heterogeneity, Aggregation, and Market Wage Functions: An Empirical Model of Self-Selection in the Labor Market, Journal of Political Economy 93(6):1077-1125.
- Jasso, Guillermina, and Mark Rosenzweig. 1985. "What's in a Name? Country-of-Origin Influences on the Earnings of Immigrants in the United States." In *Human Capital* and *Development*, vol. 5, ed. Oded Stark and Ismail Sirageldin. New York: JAI Press.
- Long, James E. 1982. "The Income Tax and Self-Employment." *National Tax Journal* 35(1):31–42.
- Rees, Hedley, and Anup Shah. 1986. "An Empirical Analysis of Self-Employment in the U.K." *Journal of Applied Econometrics* 1(1):95–108.
- Roy, A. D. 1951. "Some Thoughts on the Distribution of Earnings." Oxford Economic Papers 3(1):135–46.
- Vijverberg, Wim. 1986. "Consistent Estimates of the Wage Equation when Individuals Choose Among Income-Earning Activities." Southern Economic Journal 52(4): 1028-42.
- U.S. Internal Revenue Service. 1979. Estimates of Income Unreported on Individual Income Tax Returns. Publication 1104 (9-79). Washington, D.C.: GPO.
- Yuengert, Andrew M. 1991. "Self-Employment and the Earnings of Male Immigrants in the U.S." Federal Reserve Bank of New York Research Paper no. 9105.

Copyright of Journal of Human Resources is the property of University of Wisconsin Press. The copyright in an individual article may be maintained by the author in certain cases. Content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.