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## RETURNS ON HUMAN CAPITAL IN ETHNIC ENCLAVES: NEW YORK CITY'S CHINATOWN\*

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*This study addresses a recent controversy over the character of labor markets in enclave economies: does the enclave provide positive earnings-returns to educational and other human capital characteristics to immigrant minority-group workers? We study the case of the Chinese enclave in New York City, using three distinct operational definitions of the enclave—as a place of residence, place of work, and industrial sector. Regardless of the definition employed, there is considerable evidence of positive returns for earnings for male enclave workers from education, labor market experience, and English-language ability. By contrast, none of these human capital variables is positively related to income of female enclave workers. Implications of these results for comparative research are suggested.*

A key proposition in the theory of ethnic enclave economies is that the enclave opens opportunities for its members that are not easily accessible in the larger society. The enclave housing market, labor market, and capital market partially shelter ethnic group members from competition by other social groups, from discrimination and abuse on account of their ethnic origins, and from surveillance and regulation by government. In many respects these boundaries around the enclave provide tangible benefits to group members and seem to offer a positive alternative to assimilation.

This study addresses a recent controversy over the specific proposition that immigrant workers in the enclave labor market achieve greater returns on human capital than those who participate in the outside economy (Portes and Bach 1985; Wilson and Portes 1980). Based on research among recent immigrants in Miami's Cuban community, Portes and his colleagues reported that those who work within the enclave have greater probability of becoming self-employed entrepreneurs. Compared to immigrants who are employed in the secondary labor market, those in the enclave have occupations that correspond more closely with their educational attainment, and earnings that corre-

spond more closely with their occupational status.

Portes's interpretation of such findings has recently been questioned by Sanders and Nee (1987), who analyzed census data for Cuban immigrants in Florida and for Chinese immigrants in California. They reasoned that if human capital investments yield greater returns to persons tied to the enclave, such returns should show up as effects of education and labor market experience (and possibly English-language ability) on earnings. Portes did not find such effects on earnings in his research on recent immigrants in Miami, or in parallel studies of recent Mexican immigrants, but this hypothesis is certainly consistent with the strong emphasis in his theoretical writings on the superior returns on skills and past human capital investments of enclave workers. And one might reasonably expect to find such relationships in a sample that includes immigrants from a wider variety of time periods.

Sanders and Nee distinguished ethnic group members who could be categorized as entrepreneurs from those who are employed by others. Among Cuban immigrant entrepreneurs, they found that earnings were positively associated with college education and labor market experience both within and outside of the Miami-Hialeah enclave. Among Cuban employees, however, there was a significant earnings-return to education and labor market experience *only outside of the*

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*enclave economy*.<sup>1</sup> The analysis for Chinese immigrants in California generally reproduced these results. Sanders and Nee concluded that the earnings-return to human capital in enclave economies is mostly limited to those immigrants who become entrepreneurs. More generally, by calling attention to this disparity in benefits of the enclave economy, Sanders and Nee implicitly suggested a greater focus on the exploitative aspects of employer-employee relationships between coethnics.

In their published response to these findings, Portes and Jensen (1987a) criticized this study on theoretical and methodological grounds, concluded that its findings are "irrelevant" to the earnings-return hypothesis, and reported results of their own analyses of census data that they characterized as contradicting those of Sanders and Nee. Our purpose here is to provide further empirical grounds for evaluating the validity and generalizability of Sanders and Nee's results. We accomplish this through a replication of their study for yet another enclave situation, New York's Chinatown.

#### ALTERNATIVE DEFINITIONS OF THE ENCLAVE ECONOMY

If earnings-returns from human capital characteristics such as education and labor market experience are limited to ethnic entrepreneurs, as reported by Sanders and Nee, the positive function of the enclave is sharply circumscribed. In their critique, Portes and Jensen accepted the general strategy of comparing models of earnings for persons within and outside of the enclave (although Portes's previous work compared the enclave to the primary and secondary labor markets as distinct economic sectors), and comparing models for workers with models for entrepreneurs. But they criticized Sanders and Nee for incorrectly operationalizing the concept of enclave.

For Portes, "enclave entrepreneurs are owners of firms in an area where similar enterprises concentrate. Enclave workers are employees of these firms" (Wilson and

Martin 1982; Portes and Manning 1986; Portes and Jensen 1987a). Portes and Jensen argued that Sanders and Nee, by defining the enclave in terms of *place of residence*, missed the central element in the concept. Further, they asserted that the Sanders and Nee definition is inherently biased because the "place of residence" procedure excluded the better-off segment of the enclave participants who may move out of the residential enclave to more affluent neighborhoods or suburbs elsewhere, and overrepresented the worse-off segment of the population, who are more likely to reside in the geographic enclave (Portes and Jensen 1987a, p. 768).

Portes and Jensen proposed that census data of the type analyzed by Sanders and Nee be organized according to place of work, rather than place of residence. We note that the two methods have one thing in common: they are both geographically bound. Neither is sensitive to ethnic ownership nor to the ethnic composition of the labor force of the firm in which one is employed. It is possible that only a modest proportion of persons identified as within the enclave actually are employed in minority-owned firms. This is particularly likely since minority-owned businesses often have no paid employees. In the New York (N.Y.-N.J.) SMSA in 1982, about 90% of Chinese-owned firms had no paid employees, and the remaining firms averaged only about four employees (U.S. Bureau of the Census 1982). Therefore, any study relying on the Census of Population is liable to define the enclave in a way that includes many nonenclave employees. This procedure probably leads to an underestimation of differences between enclave and nonenclave labor markets. At the same time, it may lead to an overestimate of the absolute size of the enclave labor market.

The two teams of researchers disagreed on whether the results of analysis depend on which indicator is employed. Sanders and Nee (1987, p. 756) specifically stated that their results were replicated using place of work as the measure of enclave participation. But among private sector employees who work in the Miami-Hialeah area, Portes and Jensen (1987b) reported positive significant effects of work experience, education, and English-language ability on earnings.

<sup>1</sup> In a footnote, Sanders and Nee (1987, p. 756) reported that when the enclave is defined as Dade County, there is a modest return on education for enclave workers.

## NEW YORK CITY'S CHINATOWN: A REPLICATION

In the following analysis of New York City's Chinatown, we join the debate in three ways. First, we add a new case study to the research on immigrant earnings. Second, we examine and compare three possible ways of defining the economic enclave: by place of residence, by place of work, and by industry. These three definitions require detailed discussion and defense. We stress that we are not really interested in where people live or work, or what industry they are employed in. We simply use these measures as indicators of the likelihood that a person works in the enclave. Each of them partially captures the concept of economic enclave. Third, we include a separate analysis of the labor market situation of immigrant women, who constitute a large share of the enclave labor force but who have been ignored in previous studies.

The place of residence definition assumes that Chinese immigrants who live in New York City are more likely to participate in the enclave economy than are those who live in surrounding areas. This assumption is justified by the concentration of the region's Chinese population in New York City. The 1980 Census shows that 84.5 percent (for a total of 124,372) of New York State's Chinese live in New York City, and the majority of New York City's Chinese are concentrated in three counties—New York County (41.9 percent), Kings County (21.0 percent), and Queens County (31.8 percent). Further 73 percent of New York County's Chinese live in 14 census tracts in Lower East Manhattan. Chinese immigrants, particularly recent immigrants, tend to seek both residence and jobs in Manhattan's Chinatown or the newly developing Chinese enclaves in Flushing, Queens, and Sunset Park, Brooklyn. Chinese immigrants who live outside New York City are far less likely to work in the city, and those who do are more likely to take up higher ranking or professional jobs in the core economy.<sup>2</sup> This is possible because

<sup>2</sup> The PUMS data show that of those Chinese immigrant employees who live in New York City, about 25 percent work outside the City; they tend to be restaurant workers (61 percent). Chinese immigrants who live outside New York City are far less likely to work in the city; only 21 percent of the immigrant employees who live outside the City

New York City, especially Manhattan, is also a Central Business District for the metropolitan area.

Using place of residence for a study of the New York Chinatown may be more defensible than the residence definition adopted by Sanders and Nee. The City of San Francisco accounts for only a little more than a quarter of California's Chinese population, while other large concentrations can be found elsewhere in that state (for example, 18 percent of California's Chinese live in Oakland and surrounding communities, and 14 percent in the City of Los Angeles). Thus what Sanders and Nee defined as outside of the enclave may well include residential enclaves other than San Francisco.<sup>3</sup>

Another way to define the enclave is by place of work. In using this type of definition, we delimit the enclave as Chinese immigrants working in New York City. Evidence has shown that the majority of the Chinese-owned businesses are stationed in New York City, where thousands of ethnic jobs are provided for the Chinese immigrants. The 1982 Survey of Minority-Owned Business Enterprises (U.S. Bureau of the Census 1982) indicated that 87 percent of all Chinese-owned firms in New York State were located in the New York metropolitan area (5,413 of 6,216 businesses). And of the 5,978 total entries in the 1988 Chinese Business Directory for metropolitan New York (Key publications 1988), the majority (59 percent) of Chinese firms were located in Manhattan's Chinatown and Flushing, where they could be supported by the large concentration of ethnic population. Our data from the 1980 Public Use Microdata Sample for New York State and adjacent counties in the Tristate area show that 67 percent of the region's immigrant Chinese labor force, regardless of where they lived, worked in New York City.

In contrast to the two geographic definitions, we make use of a third definition by industrial sectors. Because ownership infor-

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commute into the City to work. About 63 percent of those non-NYC residents who do work in the City are in the high-ranking managerial, professional, and technical jobs.

<sup>3</sup> Sanders and Nee compensated for this by including a variable in their equations, ETHNIC, which represents the percentage of Chinese or Cuban residents in the city, town, or county in which the respondent lives.

mation is not provided in the PUMS data, we rely on information about the ethnic composition of particular industries. We assume that sectors in which Chinese immigrants are overrepresented constitute the enclave economy, while all others are regarded as nonenclave. Recent studies on New York City's Chinatown indicate that the garment and restaurant businesses are the two basic Chinese industries. According to Peter Kwong (1987, p. 26), some 450 restaurants employed 15,000 workers, and 500 garment factories employed about 20,000 immigrant women in Manhattan's extended Chinatown area alone. The PUMS data show that 22.6 percent of the immigrant Chinese labor force in the entire region worked in the garment and textile-related industries (as compared to 2.9 percent for all workers in New York State) and 23.0 percent worked in eating and drinking places, apparently restaurants (as compared to 3.9 percent for all workers). Finally, some 14 percent of Chinese immigrants worked in retail shops and services that may have an ethnic clientele.

The 1988 *Chinese Business Guide and Directory for Metropolitan New York* further confirmed this distribution: the garment industry (a total of 437) and restaurant business (a total of 783) alone composed 20 percent of the total number of entries. Other Chinese-owned services catering predominantly for a Chinese clientele also were well represented, for example, barbershops and beauty salons (111), offices of herbal doctors (101) and herbal stores (53), clinic centers (23), doctors (300), dentists (98), small department stores (107), entertainment and video-rental stores (61), food stores (303), jewelry stores (97), and travel agencies (115). Thus the enclave niches are the garment industry, restaurant business, and ethnic-oriented retail and service industries.<sup>4</sup> This definition is not precise, but no doubt a large proportion of the Chinese immigrant population is engaged in those niches.

Whether the economic enclave is defined by place of residence, or place of work, or industry, there is a large amount of overlap between the three. Of those Chinese immi-

grants who work in New York City, only 8 percent reside outside of the city, while 54 percent of those who work outside the city also live outside. Further, 69 percent of those who live and work in New York City were employed in what we define as enclave industries, compared to only 33 percent of those who live and work outside the city. This empirical overlap provides additional confidence in all three definitions of the enclave.

#### METHODS OF ANALYSIS

For the sake of comparability, our analysis follows exactly the procedures employed by Sanders and Nee (1987). The source of data is the 5 percent PUMS for New York State and counties adjacent to New York City in New Jersey and Connecticut (U.S. Bureau of the Census 1980). Our sample is limited to Chinese immigrants, ages 25–64, who worked at least 160 hours and earned a minimum of \$500 in 1979. Persons in the sample are categorized as workers or entrepreneurs. We conduct separate analyses for males and females.

The dependent variable in this study is the logged value of personal earnings in 1979. There are a large number of independent variables. Those which have clear meaning in terms of human capital include: labor market experience, education, and English-language ability. Marital status, the number of hours worked (logged), period of immigration, citizenship, and occupation (and presence of children for females) are included as control variables.

The operationalization of several of these predictors requires some further explanation, although details can be found in Sanders and Nee (1987). Labor market experience is calculated from a person's age, but not counting years in which the person was in school; the square of this term is also included for males.<sup>5</sup> Education is represented by three

<sup>4</sup> The enclave industries include the 1980 PUMS standard industry codes 132 to 152, 500 to 532, 540 to 542, 550 to 571, 580 to 691, 771 to 780, and 812 to 830. The nonenclave industries include all other industrial codes except 900 to 992.

<sup>5</sup> The squared term for labor market experience was included by Sanders and Nee to measure nonlinearity in the relationship. We also estimated equations without this term, which is collinear with labor market experience. In some of these equations, the coefficient for labor market experience (which is typically significant when the squared term is included) is not significant. Its inclusion or exclusion does not affect the estimates of coefficients for other predictors.

variables showing the number of years up to or above a given threshold: years of elementary education (with a maximum of eight years), years of high school education (with a minimum of zero and maximum of four), and years of college education (with a minimum of zero and maximum of eight). Year of immigration is represented by a series of five dummy variables, and occupation is represented by nine dummy variables.

Sanders and Nee (1987) reported that the sample of Cubans for whom place of work information is available is seriously biased in favor of more educated, wealthier, and earlier immigrants. In such cases, it is especially important to include adjustments for sample selection bias in the regression models (Berk 1983). To test for a similar bias in data for New York's Chinese immigrants, we estimated logit regression models in which the dependent variable represented availability of place of work data and independent variables included income (logged), education, and year of immigration. We estimated these "hazard" models separately for workers and employers. For the New York case, we found no significant bias in the place of work sample (no coefficient was even as large as its standard error), and therefore in the following equations we include no correction factor.

## RESULTS

We begin with results for male immigrants. Our procedure is to estimate OLS regression equations separately for workers and entrepreneurs, categorized as within or outside of the ethnic enclave. We present three sets of results, one for each alternative definition of the enclave. (The equation for entrepreneurs who work outside of New York City is omitted due to the insufficient number of cases. In equations where the industry definition is used, only two occupational dummy variables are included, due to the restricted range of occupations represented in enclave industries.) Significance tests in these tables refer to one-tailed tests of the hypothesis that the population coefficient equals zero.

In addition to these regression equations, we also conducted *F*-tests of the significance of differences in coefficients between different samples. Sanders and Nee reported comparable tests in their samples, showing that the equations for workers and entrepreneurs are significantly different, and equa-

tions for workers inside and outside the enclave are also significantly different. We found significant differences between the equations for workers and entrepreneurs within the enclave, regardless of how the enclave was defined. We found two comparisons where the equation for workers within the enclave differed significantly from the equation for workers outside the enclave (using place of work or industry to define enclave). To facilitate comparison with Sanders and Nee, we report all of the models separately regardless of the results of the *F*-tests.

### *The Place of Residence Definition*

Table 1 summarizes the model that is estimated using place of residence as the definition of the enclave. Among workers living in New York City, there are significant positive effects on earnings of labor market experience, college education, and English-language ability. Hours worked, U.S. citizenship, and occupation, as control variables, have statistically significant and strong effects. Labor market experience and college education are similarly related to earnings for workers living outside New York City. It is curious, however, that English-language ability has no effect in this latter group. One would expect, from the enclave model, that this variable would have greater effects *outside* the enclave than *within*.

The equation for entrepreneurs living in the city shows no effect for labor market experience or education. Unlike the results reported for California Chinese by Sanders and Nee, it appears that these human capital variables are *more important for workers* than for entrepreneurs in the New York enclave. English-language ability is an important predictor for enclave entrepreneurs, as are the hours worked and occupation control variables.

Finally, the model for entrepreneurs living outside the city shows still another pattern: labor market experience and English-language ability have no effect. College education has a significant positive effect, while high school education has a negative effect.

These results differ from those that might be predicted from a reading of the existing literature. Unlike Sanders and Nee, we find positive returns on human capital for workers

Table 1. Regression Equations for Chinese Immigrants (Male, Aged 25 to 64) Living in the Tri-State Area Who Worked at Least 160 Hours and Earned a Minimum of \$500 in the Private Sector in 1979 (Place of Residence Definition)

Dependent variable: 1979-earnings (ln)	<i>Live in NYC</i>	<i>Live in NYC</i>	<i>Live in Tri-State</i>	<i>Live in Tri-State</i>
	Workers <i>B</i> <sup>a</sup>	Entrepreneurs <i>B</i> <sup>a</sup>	Workers <i>B</i> <sup>a</sup>	Entrepreneurs <i>B</i> <sup>a</sup>
Intercept	4.353**	3.105*	4.014**	8.789*
Labor market experience	.016*	.012	.026*	.032
Labor market experience squared	-.019 <sup>b</sup>	.00047 <sup>b</sup>	-.039 <sup>b</sup> *	-.001
Elementary education	-.002	.015	.058	.082
High school education	-.003	-.020	-.023	-.353**
College education	.065**	.047	.048**	.123*
English-language skills <sup>c</sup>	.096**	.245**	.046	-.004
Married	.007	.065	.203*	1.500*
US citizen	.110*	-.136	.088	-.206
Log-hours worked 1979	.564**	.580**	.601**	.055
Immigration 75-79	-.102	-.056	-.429**	-1.454*
Immigration 70-74	-.090	.302	-.226	-.973*
Immigration 65-69	-.006	.422*	-.130	-.660
Immigration 60-64	-.130	.533*	-.082	-.750
Immigration 50-59	.082	.201	.063	-1.157*
Professional specialists	.187*	.848**	.080	.699*
Technicians	.191	-.324	-.041	—
Sales	-.168	-.187	-.059	.033
Administrative support including clerical	-.170	-.728	-.220	—
Business, protective and household services	-.368**	-.166	-.792**	-.596
Precision production and craft	-.014	.225	-.229	.560
Operators	-.358**	.117	-.111	-.369
Transportation	-.311	-.065	—	-.114
Laborers	-.349*	—	-.182	—
<i>R</i> squared	.381	.383	.557	.611
Number of cases	975	157	365	60

\* Significant at .05 level, one-tail (the *t*-ratio is greater than or equal to 1.65).

\*\* Significant at .01 level, one-tail (the *t*-ratio is greater than or equal to 2.33).

<sup>a</sup> Unstandardized regression coefficients.

<sup>b</sup> The decimal point to the parameter estimate is moved two places to the right.

<sup>c</sup> Likert scale (0-4). Large number indicate better English-language skills.

Source: U.S. Bureau of the Census (1980).

both inside and outside the enclave. And unexpectedly, college education has a positive effect for entrepreneurs outside the enclave, but not inside. Finally, unlike the portrait of the enclave as a place where cultural assimilation is unnecessary, we find positive returns on English language and citizenship for workers within the enclave, but not outside.<sup>6</sup>

### *The Place of Work Definition*

Coefficient estimates for models in which the

<sup>6</sup> Sanders and Nee similarly found that English-language ability is a significant predictor of earnings for both Cuban and Chinese employees who live within the enclave.

enclave is defined by place of work are provided in Table 2. The equation for workers employed in New York City shows positive returns from labor market experience and college education, but not from English-language skills. The equation for workers employed outside the city shows a comparable effect of college education, but no effect of labor market experience. Again, English-language ability has no effect.

Using the place of work definition, entrepreneurs within the enclave have positive returns on labor market experience and college education comparable to (possibly larger than) workers. There is a very strong effect of English-language ability. As noted above, we do not report a model for entrepreneurs working outside of the enclave.

Table 2. Regression Equations for Chinese Immigrants (Male, Aged 25 to 64) Living in the Tri-State Area Who Worked at Least 160 Hours and Earned a Minimum of \$500 in the Private Sector in 1979 (Place of Work Definition)

Dependent variable: 1979-earnings ( <i>ln</i> )	Work in NYC Workers <i>B</i> <sup>a</sup>	Work in NYC Entrepreneurs <i>B</i> <sup>a</sup>	Work in Tri-State Workers <i>B</i> <sup>a</sup>
Intercept	4.287**	3.108	5.192**
Labor market experience	.023*	.091*	.036
Labor market experience squared	-.033 <sup>b</sup>	.001	-.049 <sup>b</sup>
Elementary education	-.008	-.025	-.026
High school education	.014	-.044	-.018
College education	.060**	.095*	.068*
English-language skills <sup>c</sup>	.042	.397*	.106
Married	.143*	.100	-.211
Log-hours worked 1979	.628**	.434	.487**
US citizen	.085	.002	.201*
Immigration 75-79	-.303*	-.063	-.197
Immigration 70-74	-.206*	.010	-.234
Immigration 65-69	-.049	.335	-.199
Immigration 60-64	-.225*	.609	-.318
Immigration 50-59	-.080	.190	.182
Professional specialists	-.049	.240	.407*
Technicians	-.123	—	.222
Sales	-.412**	-.326	-.233
Administrative support including clerical	-.358**	-1.049*	-1.469**
Business, protective and household services	-.705**	-.029	-.455**
Precision production and craft Operators	-.377**	-.323	.204
Transportation Laborers	-.546**	-.176	-.080
	-.594**	-.307	—
	-.679**	—	-.174
<i>R</i> squared	.575	.522	.483
Number of cases	421	80	264

\* Significant at .05 level, one-tail (the *t*-ratio is greater than or equal to 1.65).

\*\* Significant at .01 level, one-tail (the *t*-ratio is greater than or equal to 2.33).

<sup>a</sup> Unstandardized regression coefficients.

<sup>b</sup> The decimal point to the parameter estimate is moved two places to the right.

<sup>c</sup> Likert scale (0-4). Large number indicate better English-language skills.

Source: U.S. Bureau of the Census (1980).

### *The Industrial Sector Definition*

The last set of equations uses industrial sector to categorize people as within or outside the enclave (see Table 3). Once again, we find that college education has positive returns on earnings for enclave workers. Labor market experience does not, but there is a positive effect of English language. For workers outside the enclave, all three of these predictors have significant positive effects.

The same human capital variables that predict earnings for enclave workers also predict earnings for enclave entrepreneurs: college education, English language, and citizenship. College education is significant for entrepreneurs outside of enclave indus-

tries, as is labor market experience; English language is not.

### *The Case of Women Workers*

Up to this point, the analysis has been limited to men. This limitation has been necessary in order to maintain comparability with previous studies. Substantively, however, it is indefensible. Women constitute a major share of the labor force. More important, it is well known that women's position in the labor market is not the same as men's, and there is no reason to believe that mobility processes experienced by men are in any way applicable to women. In fact, separate analysis of Chinese immi-



Table 3. Regression Equations for Chinese Immigrants (Male, Aged 25 to 64) in the Tri-State Area Who Worked at Least 160 Hours and Earned a Minimum of \$500 in the Private Sector in 1979 (Industrial Sector Definition)

Dependent variable: 1979-earnings (ln)	<i>In Enclave</i> Workers <i>B<sup>a</sup></i>	<i>In Enclave</i> Entrepreneurs <i>B<sup>a</sup></i>	<i>Outside Enclave</i> Workers <i>B<sup>a</sup></i>	<i>Outside Enclave</i> Entrepreneurs <i>B<sup>a</sup></i>
Intercept	4.509**	4.654**	3.312**	-2.069
Labor market experience	-.002	-.004	.050**	.104*
Labor market experience squared	.005 <sup>b</sup>	.009 <sup>b</sup>	-.077 <sup>b**</sup>	-.001
Elementary education	.006	.014	-.036	.104
High school education	-.004	-.079	-.034	-.155*
College education	.065**	.121**	.090**	.133**
English-language skills <sup>c</sup>	.079**	.234*	.123**	.080
Married	.003	.249	.113	.369
Log-hours worked 1979	.568**	.471**	.697**	1.125**
US citizen	.016	-.186	.222**	-.138
Immigration 75-79	-.096	-.458	-.233	-.703
Immigration 70-74	-.092	.074	-.104	-.157
Immigration 65-69	-.056	.298	-.030	-.225
Immigration 60-64	-.059	.275	-.169	.377
Immigration 50-59	.081	-.351	.071	-.013
Business, protective and household services	-.261**	-.101	-.136	-1.475*
Operators	-.219**	-.131	-.339*	-1.569*
<i>R</i> squared	.339	.280	.403	.679
Number of cases	729	157	611	60

\* Significant at .05 level, one-tail (the *t*-ratio is greater than or equal to 1.65).

\*\* Significant at .01 level, one-tail (the *t*-ratio is greater than or equal to 2.33).

<sup>a</sup> Unstandardized regression coefficients.

<sup>b</sup> The decimal point to the parameter estimate is moved two places to the right.

<sup>c</sup> Likert scale (0-4). Large number indicate better English-language skills.

Source: U.S. Bureau of the Census (1980).

grant women working in the New York metropolitan area reveals some very different patterns. We will describe these briefly here; for a more complete analysis, see Zhou (1989).

New York's Chinatown was a bachelor's society for the greater part of this century. It was not until after 1965, when U.S. immigration policies were revised to favor family reunification, that Chinese women entered New York in large numbers. In the 1940s, there were six times as many Chinese men as women in New York State; by 1980, the ratio had declined to 106 men per 100 women. Large-scale immigration of women has had two kinds of effects. First, through sheer numbers and by promoting a family-centered society in which most adults are living with a spouse, it has expanded the market for Chinese goods and services that are inaccessible in the larger society. This has stimulated development of a more diversified enclave economy, including such sectors as the food industry, restaurant business, and beauty salons. Second, by providing a large addi-

tional pool of cheap labor at a critical time in the city's overall economic restructuring, it has promoted the rapid development of a Chinese garment industry. The labor force participation of Chinese women over age 16 is unusually high in New York State (59 percent). Women's concentration in the garment industry is extraordinary: more than 55 percent of all Chinese immigrant women who worked at least 160 hours and earned over \$500 in 1979 were employed in the garment industry (compare to Glenn 1983 on the "dual wage earner family").

The specific question here is whether participation in the enclave economy affects immigrant women's ability to reap earnings returns on human capital, as hypothesized for men. There are too few cases of entrepreneurs in our female sample to support separate analysis. Therefore, we will deal only with employees. Table 4 reports equations for female workers both within and outside of the enclave, with enclave defined by place of residence, place of work, and industry. The independent variables in these equations are

Table 4. Regression Equations for Immigrant Chinese Employees (Females, Aged 25 to 64) Living in the Tri-State Area Who Worked at Least 160 Hours and Earned a Minimum of \$500 in the Private Sector in 1979

Dependent variable: 1979-earnings (ln)	Place of Residence		Place of Work		Industrial Sector	
	NYC B <sup>a</sup>	Outside B <sup>a</sup>	NYC B <sup>a</sup>	Outside B <sup>a</sup>	Enclave <sup>1</sup> B <sup>a</sup>	Nonenclave <sup>2</sup> B <sup>a</sup>
Intercept	4.469**	2.334**	4.334**	2.826**	4.096**	3.786**
Labor market experience	-.004*	.004	-.004	-.005	-.002	-.003
Elementary education	.007	-.013	.012	-.016	.014	-.032
High school education	-.003	.043	-.002	.009	.005	.008
College education	.016	.046*	.020	.093*	.038	.004
English language skills <sup>b</sup>	.043	.002	.013	-.058	-.036	.123**
Married	-.082	-.094	-.054	-.343**	-.068	-.111
Fertility	.007	-.073*	-.004	-.046	.003	-.003
Log-hours worked 1979	.669**	.951**	.679**	.940**	.685**	.789**
U.S. citizen	.018	.102	-.004	.078	.086	-.036
Immigration 75-79	-.246**	-.224	-.271**	-.319	-.172*	-.282**
Immigration 65-74	-.056	-.136	-.066	-.203	.002	-.148*
Sales, administrative support and precision production	-.472**	-.319**	-.516**	-.242	-.567**	-.311**
Business, protective, and household services	-.376**	-.400**	-.314	.029	-.440**	-.350**
Operators and laborers	-.768**	-.328**	-.785**	-.098	-.612**	-.570**
R squared	.456	.555	.417	.438	.364	.431
N of cases	815	211	400	130	637	389

\* Significant at .05 level, one-tail (the *t*-ratio is greater than or equal to 1.65).

\*\* Significant at .01 level, one-tail (the *t*-ratio is greater than or equal to 2.33).

<sup>a</sup> Unstandardized regression coefficients.

<sup>b</sup> Likert scale (0-4). Large numbers indicate better English-language skills.

<sup>1</sup> Enclave industries include 1980 standard industry code 132 to 152, 500 to 532, 540 to 542, 550 to 571, 580 to 691, 771 to 780, and 812 to 830.

<sup>2</sup> Nonenclave industries include all other industrial codes except 900 to 992.

Source: U.S. Bureau of the Census (1980).

the same as those used for men, with the addition of a variable indicating whether the woman had any children.

We note first that there are significant differences between the equations for men and women (based on *F*-tests similar to those reported above for workers vs. entrepreneurs and enclave vs. nonenclave). Among women outside the enclave, there are some significant positive coefficients for human capital variables: college education in one equation, English language in another. But the most consistent effects are for hours worked and occupation. Similarly, among women within the enclave, regardless of the definition, the strongest predictors of earnings are occupation and hours worked. The surprise here is the total absence of human capital effects: neither education, nor English-language skills, nor citizenship has any significant effects. In one equation, labor market experience has a significant *negative* coefficient.

These findings for women workers require

a careful reformulation of the hypothesis of the positive functions of the enclave economy. In this case, and we suspect that New York's Chinatown is not an unusual case, female immigrant workers within the enclave have no measurable earnings returns on previous human capital. This result does not stem in any obvious way from personal characteristics of these women. They are not unusually low in education, nor are they predominantly part-time workers (of those who live in New York City, for example, 26 percent have some college education and the average number of hours worked is 38.3). What then accounts for the fact that Chinese immigrant women's earnings are unrelated to their education, experience, language ability, and citizenship? Our view, based upon fieldwork in Chinatown, is that they face two sorts of disadvantages. The first, which they share with men, is the set of disadvantages associated with immigrant status. The second is a set of cultural obstacles within the

enclave: occupational segregation by gender (particularly in the garment industry) and a triple role as wives, mothers, and wage workers. These women on the whole are *expected* (and expect themselves) to earn wages in ways that do not conflict with their family obligations. Sewing at piecework rates is a good fit to these expectations: working hours are flexible, and a higher income can be gained by working faster—even if the pay per piece is low. Many middle-aged women, those who immigrated at age 40 or 50, accept a short-term orientation toward work: their purpose is not to develop a working career (this applies even to many who had professional occupations in China) but to contribute immediately to the household income for the benefit of younger members. And finally, the limited number of jobs with higher educational qualifications tend to be reserved to men. The male supremacy that dominates Chinese culture reinforces gender discrimination in the enclave labor market.

#### DISCUSSION AND CONCLUSION

Broadening the analysis of enclave labor markets to include the position of immigrant women leads to startling results. Researchers must now ask to what degree the positive functions of the enclave for men are derived from the subordinate position of women. The result may depend on the structure of the enclave economy and its relationship to the larger economy: what kinds of industries can prosper, with what labor requirements, and at what wages. It may also depend upon the values and motives of the immigrants themselves. We encourage caution in evaluating women's status. Like unpaid family labor, paid work in jobs incommensurate with one's education and other attainments has both a negative and a positive side. Viewed from an individualistic perspective, the enclave labor market appears clearly exploitative of women. But we must remember that Chinese culture gives priority not to individual achievement but to the welfare of the family and community. As Glenn (1983) emphasizes, female labor force participation is part of a *family* strategy. It is not obvious that the Chinese immigrant community has better options in the face of limited opportunities and discrimination in the mainstream economy.

Aside from the situation of women work-

ers, how does the enclave labor market function for men, and what differences are there between workers and the self-employed? One consistent finding here is that college education has positive returns for earnings for male enclave workers, regardless of how the enclave is defined. Labor market experience and English language have positive effects for these workers in two out of three equations. We conclude that among New York's Chinese immigrants, enclave workers *are* able to take advantage of human capital resources to increase earnings (although not consistently more than workers outside of the enclave). Further, there is no consistent evidence that entrepreneurs in the enclave or outside of the enclave have greater returns on human capital than do similarly situated workers.

There are two ways to interpret this main result for New York's Chinatown, and the choice between them depends upon one's reading of the facts about San Francisco and Miami-Hialeah. Portes and Jensen (1987a) argued that Sanders and Nee's results are an artifact of an incorrect specification of the Cuba and Chinese enclaves that they studied. Sanders and Nee reported that they derived the same findings for the Miami-Hialeah and San Francisco cases using the place of work definition as they did using the place of residence definition. But Portes and Jensen disputed this report based on their own reanalysis of the same data for Miami-Hialeah.

Unfortunately, neither we nor the reader can resolve this factual discrepancy. We note, however, that Portes and Jensen's (1987b) unpublished table included a different age range (18–64 instead of 25–64) than used by Sanders and Nee, operationalized education, occupation, and year of immigration differently, compared coefficients in the equation for persons working in the enclave with those for all persons rather than with those for persons working outside of the enclave, and omitted a correction for sample selection bias which Sanders and Nee described as especially important for the place of work sample in Miami-Hialeah.

Let us suppose that a methodologically correct analysis of census data for San Francisco and Miami-Hialeah does reveal significant earnings-returns to human capital for enclave workers, as argued by Portes and Jensen. Then, our findings for New York's

Chinese would be one more confirmation of Portes' hypothesis *as a general rule about enclave economies*. This enclave hypothesis is weakened, however, by the fact that human capital returns for men are no greater within the enclave than outside. To make a stronger case would require that persons outside of the enclave be further classified into the primary or secondary labor market, which we have not been able to do here.

Alternatively, let us suppose that Sanders and Nee's findings are confirmed. This is theoretically more interesting, because then our results for New York City would indicate that there are *differences among enclaves*, even enclaves of the same ethnic minority, concentrated in the same types of industries and occupations, in the earnings-returns to human capital.

Portes and Bach (1985) have shown previously that the situation of Cuban immigrants differs from that of Mexican immigrants, who are not sheltered by a differentiated enclave economy. If in fact there are also important differences among enclave economies—if male enclave workers get earnings-returns on human capital in New York but not in San Francisco and perhaps not in Miami-Hialeah—then there is an opportunity to develop a comparative theory of enclave economies. The most positive outcome of this controversy would be to stimulate other researchers to extend investigation to other minorities in other places.

Why might the Chinese experience in New York differ from that of Chinese in San Francisco or Cubans in Miami? We are not able to provide a comparative theory here, or to explain these particular cases. However, we wish to stress the thesis that *enclave economies are neither uniform nor static*. Consider, for example, the specific conditions that made possible an enclave economy in Miami after 1959. These include (following Wilson and Portes 1980, p. 314) "the presence of immigrants with sufficient capital and initial entrepreneurial skill [and] . . . sustained immigration." The initial group of migrants included large numbers of educated people from entrepreneurial backgrounds, many with considerable assets, for whom the United States government made generous provisions for small business loans. The most recent wave (refugees expelled from Cuban jails) are quite a different group, with potentially different prospects for upward

mobility. Similarly, Chinese immigration to the United States comes from two very different origins: one stream from rural areas of Southern China (principally Guangdong Province), and another from cities and towns along the East Coast of China, Hong Kong, and Taiwan. Mobility opportunities for the former group, who are less educated, and less likely to have access to capital resources, may be more limited. One possible reason for differences among Chinese enclave economies (or for changes over time) could be differences in the origin of immigrants.

Other sources of variation may include the kinds of jobs available in the enclave, the rate of immigration over time, the size of the enclave labor market, and the strength of the boundary protecting it. For example, Sanders and Nee (1987, p. 764) argued that the long-term development of enclave businesses is "constrained by the principle of competitive exclusion. . . . An enclave economy can support only so many entrepreneurs." And further, "[s]uccess of small businesses depends, substantially, on the maintenance of a large pool of low-wage workers." Possibly, then, rates of upward mobility and returns to human capital may be greater in the early phase of enclave development and may be limited by subsequent rates of immigration.

Hypotheses of this sort require more comparative studies of enclave labor markets. In such research, our experience suggests that the PUMS data are a useful source of information on labor markets, particularly if the researcher has enough other information on which to base judgments about enclave definitions. But we emphasize that census data are only a proxy for more direct measures, which would require information on the ownership and labor force composition of firms in which respondents are employed.

Although we have focused on the issue of earnings-returns on human capital, some other results concerning Chinese in New York should not be overlooked. First, the probability of a male immigrant's being self-employed is greater in the enclave than outside, which supports the notion of an enclave as providing paths for upward mobility. (Curiously, based on the sample sizes reported by Sanders and Nee, this is not true of the Miami and San Francisco enclaves.) Second, whatever the returns to human capital, the absolute earnings gap between workers (both male and female)

within and outside the enclave is large: enclave workers have worse jobs at lower pay. It is clear that the Chinese enclave in New York offers some compensations but not equality with the larger economy.

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