DETERMINANTS OF SURVIVAL AND PROFITABILITY AMONG ASIAN IMMIGRANT-OWNED SMALL BUSINESSES*

By

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Abstract

The immigrant entrepreneur is often seen as a member of supportive peer and community subgroups. These networks assist in the creation and successful operation of firms by providing social resources in the form of customers, loyal employees and financing. This study provides evidence that the success and survival patterns of Asian immigrant firms derive from their large investments of financial capital and the impressive educational credentials of the business owners. Heavy utilization of social support networks typifies the less profitable, more failure-prone small businesses owned by Asian immigrants.

Keywords: Entrepreneur, social capital, Asian immigrant, class resources

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I. INTRODUCTION

Small business ownership among persons of Asian ancestry has grown quite rapidly in the U.S. during the 1980s. Gross revenues of Asian-owned small businesses, according to the Census Bureau, nearly tripled from 1982 to 1987, and the number of active firms grew from 187,691 to 355,331 -- an 89.3 percent increase (U.S. Bureau of the Census, 1991). Rapid Asian business growth has been immigrant driven: in the universe of firms operating nationwide in 1987 that were started since 1979, nearly 80 percent of the Asian small businesses were immigrant-owned. This study examines the performance of recently formed Asian immigrant-owned small businesses, focusing upon owner characteristics as well as firm traits; survival of firms operating in 1987 is traced through 1991.

Recent studies suggest that Asian immigrant entrepreneurs have achieved success operating in low growth or declining industry sectors; inner city areas have been the site of considerable business activity and minority clienteles have often been the targeted customer base. Waldinger (1986) found extensive firm development and growth among Chinese immigrants in a declining industry segment - garment manufacturing in New York City. Bonacich and Light (1988) report that Korean-owned businesses in Los Angeles have established a major presence in low income Latino and African American communities, particularly in small scale retailing. Korean-owned small business, they argue, is revitalizing previously decaying areas of inner city Los Angeles.

Stressing the relevance of cultural factors, Waldinger, Light, Bonacich, and others have treated immigrant firm ownership and operation as a group phenomenon, heavily dependent upon social resources available from group support networks. This view is contrasted to the perspective that owner "class" resources -- human capital and financial capital investments, specifically -- explain small business behavior.

Recent studies of minority entrepreneurship have often focused upon immigrants operating businesses in one specific location -- Koreans in Los Angeles (Bonacich and Light, 1988), Chinese in New York (Waldinger, 1986). Among recent Korean immigrants, for example, Bonacich and Light note that they effectively use family resources such as unpaid labor to develop successful small businesses (1988). These immigrant entrepreneurs, however, also tend to be highly educated persons with white collar work experience, and many of them possess substantial personal wealth. It is thus difficult to assess the relative importance of the numerous attributes of Korean entrepreneurs that are responsible for their concentration in small business. Qualitative studies of immigrant entrepreneurs operating at one geographic location are often provocative and interesting (Bonacich and Light, 1988). Yet generalization of the resultant findings is difficult because these studies rarely use sophisticated statistical methodology to sort out and pin down cause-and-effect relationships between individual or group traits and business performance. Data sources such as the

Census Bureau's Characteristics of Business Owners (CBO) data base -- examined in this study -- provide evidence that cannot be reconciled with specific social resources, cultural explanations of minority business behavior. An alternative explanation of Asian immigrant business patterns, put forth in this study, stresses education, skills, and financial capital resources. The success and survival patterns of Asian-owned firms, this study concludes, derive from the very substantial investments of financial capital and the impressive educational credentials of the business owners. Heavy utilization of social support networks typifies the less profitable, smaller scale, more failure-prone small businesses owned by Asian immigrants.

II. A COMPARISON OF ASIAN IMMIGRANT AND NONMINORITY SELF-EMPLOYMENT PATTERNS

The focus of this study is upon a nationwide sample of 5840 firms formed by Asian immigrants over the 1979-1987 period. Table one describes firms operating nationwide that are owned by Asian immigrants; this sample is representative of the relevant universe of firms entered since 1979 that filed small business income tax returns in 1987.[1] Firms owned by nonminorities constitute the small business norm in this country, in the sense that such firms account for over 90 percent of the small firm universe by number and 95 percent by total sales. A representative sample of nonminority-owned firms is presented in table one as a comparison group.[2]

Table One: Traits of Asian Immigrant and Nonminority Firms Formed in the 1979-1987 Time Period

A. Business Traits (mean values)	Asian Immigrant	Nonminority	Univariate F Statistic
1. Total financial capital*	$53,562	$31,678	9.76**
2. Equity capital*	$26,345	$14,014	9.91**
3. Debt capital*	$27,217	$17,663	3.77***
4. Percent of firms still in business, 1991	81.5%	77.0%	5.39***
B. Owner Traits			
1. Percent college graduates	57.8%	37.5%	83.77**
2. Percent with under 4 years of high school	11.4%	10.5%	0.40
3. Annual owner labor input hours (mean)	2079	1964	4.77***

Source: Characteristics of Business Owners Data Base (unpublished)

*At the date of entry into self-employment

**Trait differences between Asian immigrant and nonminority firms are statistically significant at a .01 level of significance

***Trait differences between the above firm groups are statistically significant at a .05 level of significance

Table one's comparison of businesses formed between 1979 and 1987 by Asian immigrants and nonminorities highlights underlying hypothesized causes of Asian business success:

1. 57.8 percent of the Asian entrepreneurs were college graduates (bachelor's degree holders), versus 37.5 percent of the nonminority business owners.
2. average financial capital investment at the point of business startup was $53,562 among the Asian immigrants, versus $31,768 entrepreneurs.

Professional services -- the field in which average owner remuneration is highest -- accounted for 11.3 percent of the Asian business startups, versus 8.8 percent of the nonminority firm formations.

III. SOCIAL CAPITAL AND PATTERNS OF BUSINESS BEHAVIOR

The concept of social capital has been utilized to explain the success of Asian immigrants who pursue self-employment. The entrepreneur is seen as a member of supportive kinship, peer, and community subgroups. These networks, in turn, assist in the creation and successful operation of firms by providing such social capital as sources of customers, loyal employees, and financing (Aldrich, Waldinger, and Ward, 1990).

1. Protected markets

What precise forms do these social resources take and how do they assist business operation? Social capital in the form of a captive market, according to Ivan Light (1972), derives from the culturally based tastes of ethnic minorities that can only be served by co-ethnic businesses. Particularly in the early years of settlement, immigrants are assumed to patronize co-ethnic businesses. Ethnic businesses offer co-ethnics the comfort and security of conducting transactions in their own language and culture. The ethnic entrepreneur's information costs in ascertaining consumer preferences among co-ethnics are lower than the costs of potential competitors from the "outside" (Evans, 1989).

Of the various forms of social capital associated with immigrant entrepreneurs, the protected market concept has been the most controversial. The very low incomes of most recent immigrants constrain the attractiveness of this protected market. The immigrant business that limits itself to the ethnic market sharply reduces its growth potential (Aldrich and Reiss, 1976). Fratoe reports that Asians are <u>much</u> less likely to sell to a minority clientele than black or Latino-owned firms (1988).

Table two data indicate that Asian immigrant entrepreneurs differ systematically regarding sales, profitability, owner financial investment, and discontinuance rates when they are divided into two groups: those serving a clientele that is 75 percent or more minority, versus those whose clientele is either racially diverse or largely nonminority. The Asian firms catering to a predominantly minority clientele are, on average, over twice as likely to discontinue operations; they are smaller, less profitable, and attract lower owner financial investments than cohort firms competing in the broader economy.

Table Two: Asian Immigrant-Owned Firms Formed Between 1979 and 1987, by Clientele Served

	Firms serving predominantly minority clientele*	Firms operating in the broader economy
1987 sales (mean)	$111,882	$137,351
1987 net income (mean)	$ 3,091	$ 16,622
Financial capital investment at startup (mean)	$ 38,622	$ 65,176
Percent with under 4 years of high school	12.1%	9.4%
Percent of college graduates	54.4%	58.2%
Percent of firms still in operation, 1991	74.1%	88.3%
Percent of all young Asian immigrant firms serving this client sector:		
minority clientele	37.9%	
broader economy	62.1%	
	100.0%	

Source: CBO data base

*The clientele is defined as predominantly minority if 75 percent or more of the customers served were minorities.

One problem with using table two data as a test of the protected markets thesis is the fact that Korean merchants often specialize in selling nonethnic products in minority markets. While Korean firms tend to be broadly dispersed geographically - often in Latino or African American neighborhoods - the concept of protected markets envisions ethnic businesses located in neighborhoods where co-ethnics are concentrated. As newly arrived immigrants cluster together spatially for mutual support, they build up a critical mass of customers needed to support the businesses that cater to their distinctive ethnic tastes. Chinatown in Manhattan, for example, was centered in four contiguous tracts in 1980 with populations more than one-half Chinese. This concentrated population "made Chinatown a hotbed of ethnic commerce, both large and small" (Aldrich, Waldinger, and Ward, 1990, p. 108). Agglomeration economics may occur when ethnic firms proliferate and the size and diversity of the ethnic marketplace attracts additional customers. Thus Chinatown becomes a regional ethnic shopping center.

The niche attracting Korean merchants to minority clienteles has often differed from the above Chinatown portrait. The Korean population of Atlanta, for example, is too small to support an ethnic Korean small business enclave: almost 60 percent of Korean firms in 1982 were found in the inner city or in areas that were at least 50 percent black (Min, 1988). According to Min (1984), Korean business owners in Atlanta said that they would have much more difficulty competing in white areas than in black neighborhoods. The attraction of black communities was the reduced competition stemming from the paucity of mainstream business competitors. In Los Angeles, half of the Korean businesses located outside of the Korean enclave were concentrated in the black and Latino areas of the county. Thus, catering to a minority clientele -- while possibly beneficial for both Korean and Chinese businesses -- entails serving co-ethnics relatively more frequently for Chinese merchants, less so for Koreans. Yet recalculations of table two -- first, excluding Koreans and secondly, including Chinese only -- do not alter the finding that Asian immigrant firms (and firm subgroups) are smaller, less profitable, and more prone to failure when they serve a clientele that is predominantly minority. Solely among Chinese, for example, the survival rate through 1991 of firms operating in 1987 was 78.3 percent among those catering to a minority clientele, versus 88.7 percent among those operating in the broader economy.

2. <u>Financial Support</u>

The rotating credit association typifies the process whereby supportive peer and community groups assist in the creation and successful operation of firms by providing social capital - loan funds, specifically. Light (1972) and Bonacich and Light (1988) have argued that Asians entering business have benefitted from their participation in rotating credit associations. These associations commonly were set up by groups of Asian immigrants that shared some important common traits, such as former residence in the same village in their homeland. Capital access constraints on small business formation were overcome by these associations, which were operated by groups of close associates. Each member of the rotating credit association made regular cash contributions, thereby creating a pool of savings that members could borrow for such purposes as small business formation.

One problem with the rotating credit association as an example of social resources is that there is little concrete evidence that they are a major force in financing Asian-owned businesses (Waldinger, 1986). But Light, Kwuon, and Zhong (1990) report that at least 11 percent -- and perhaps as many as 30 percent -- of the Korean-owned garment manufacturers in Los Angeles received loans from rotating credit associations.

The CBO database includes comprehensive data on many thousands of Asian-owned firms, and it records the sources of debt capital utilized to finance small business formation. According to the CBO, Asian immigrants report that their most common source of debt for financing small business entry is commercial bank loans; loans from family rank second, and loans from friends are third.

Table three lists sources of debt utilized by Asian immigrant firms that borrowed at least some of the startup capital that financed their entry into small business. Of the Asian immigrant firms described in table one, 50.3 percent of them financed business entry in part by borrowing, and financial institutions were their major source of loans. The pattern of relying most heavily upon financial institutions and family for business startup loans typifies both the Asian immigrant and nonminority samples of

Table Three: Financing Entry into Small Business; Asian Immigrant Borrowers (Firms Formed 1979-1987)

1. Major sources of debt utilized by borrowers:*

Family	37.7%
Friends	23.0%
Financial institutions	43.1%
Former owner	13.1%

2. Size of loan (mean) by source:

Family	$39,463
Friends	$36,793
Financial institutions	$83,131
Former owner	$75,979

3. Leverage (debt divided by equity) by source (mean):

Family	4.19
Friends	2.16
Financial institutions	5.09
Former owner	3.28

Source: CBO database

*More than one debt source may be used. Of those borrowing from financial institutions, for example, 20.4 percent also borrowed from family.

firms. Among Asian immigrants, 80.8 percent of the borrowers received loans from these two sources (table three). Corresponding figures for nonminority firms were 92.4 percent, with financial institutions serving as the main loan source and family ranking second.

Considering average size of loan, the Asian immigrant firms described in table three raised more startup debt capital (in absolute dollar amount) from financial institutions than all other sources combined. Further, one can leverage one's equity more effectively when borrowing from banks: mean debt is 5.09 times equity among Asian immigrants borrowing from financial institutions, versus 4.19 for family borrowings, and 2.67 for borrowing from friends.

While the table three data are inconsistent with the hypothesis that rotating credit associations are a major source of credit to finance business entry, they may nonetheless be a factor in some instances. Since rotating credit associations are not listed as an option on the CBO census form questionnaires, businesses utilizing this credit source may indicate either "friends" as the credit source, or "other" may be checked. While "other" was an infrequent choice, Asian immigrants indicated that "friends" were utilized as a loan source by 23.0 percent of all borrowers. Corresponding figures for nonminority cohort firms were a much lower 6.2 percent. Thus, Asian immigrants are over three times more likely to finance business entry with loans from friends, relative to nonminorities entering self-employment. Yet the two major sources of financial capitalization for business startup -- owner equity capital plus loans from financial institutions -- exceed $40,000 for the average Asian immigrant firm described in table one. If no loan funds whatsoever were forthcoming from family, friends, associates, rotating credit associations, and other minor debt sources, the average Asian immigrant business startup would nonetheless possess substantially more financial capital than its nonminority business cohort.

Despite its secondary importance as a credit source, greater utilization of loans from friends (some of which probably represent rotating credit associations) is consistent with the hypothesis that social resources available from group support networks disproportionately benefit Asian immigrant firms. Further, using friends as a credit source is a practice that varies across Asian subgroups: friends are the most common single credit source for Vietnamese entering business, with 48.0 percent of the borrowers receiving loans from friends. Corresponding figures for Asian Indians, Chinese, and Koreans are 23.9 percent, 16.2 percent, and 25.8 percent, respectively.

3. Sources of labor

Waldinger argues that social capital in the form of loyal, low cost co-ethnic employees may explain why self-employment is advantageous to Asian immigrants (1986). New arrivals often seek employment in an immigrant firm where they can work in a familiar environment with others who know their language. Bonacich and Light (1988) reported that Los Angeles Korean-owned businesses -- operating often in low income, nonwhite neighborhoods -- were very effective at generating jobs for co-ethnics: "about 62 percent of Koreans found employment in the ethnic economy" (p.6). Ethnicity provides a common ground on which workplace rules are negotiated. "Authority can be secured on the basis of personal loyalties and ethnic allegiance..." (Aldrich, Waldinger, and Ward, 1990, p. 38). The relevance of this form of social capital may be constrained, however, by Fratoe's finding that small businesses owned by Asians are considerably less reliant upon minority employees than blacks and Latinos (1988). Utilizing the CBO data base examined in this study, Bates and Dunham (1993) report that Asian immigrant-owned firms hire minorities predominantly, but less so than African-American employers. The CBO data base, however, cannot be utilized to test Waldinger's loyal, low-cost, co-ethnic labor force hypothesis directly, because it identifies employees only as "minority" or "nonminority"; minorities are not identified by ethnicity.

Family members may be another possible source of cheap, reliable labor for Asian immigrant firms. Small business owners face the possibility that their employees will shirk on the job. Married business owners can diminish this risk by hiring their spouses, since spouses presumably have identical incentives -- maximization of family income. Borjas (1986) reports that married

Asian immigrants are more likely to pursue self-employment than their unmarried Asian cohorts. Yet the evidence on this point is mixed. Boyd (1990) used six different measures of family and extended family in logistic regressions explaining Asian involvement in self-employment: five of the six measures were insignificant statistically as predictors of self-employment among Asians in the U.S. Chan and Cheung (1985) report that most Chinese-owned firms in Toronto had no family members as employees.

The impact of labor sources as well as minority clientele, owner educational background, financial investment in the firm, and other factors upon firm survival and discontinuance is further investigated below.

IV. FINANCIAL CAPITAL, HUMAN CAPITAL, AND SOCIAL CAPITAL DETERMINANTS OF SMALL BUSINESS LONGEVITY

Over the 1987-1991 period, 18.5 percent of the Asian immigrant firms described in table one discontinued operations. Firms sold to a new owner, merged, or otherwise altered are not counted as discontinued if they continued to operate. Logistic regression equations are estimated in this section to explain a measure of small business viability: longevity. Independent variables utilized to explain longevity among Asian immigrant firms include measures of social capital, owner characteristics, and firm traits. While longevity is the primary business viability measure under consideration, profitability is analyzed later in this study to test for the consistency (robustness) of the observed relationships between the explanatory variables and firm viability.

Based upon the findings of past econometric studies explaining small business longevity, greater owner investments of human and financial capital are expected to be related positively to the survival chances of Asian immigrant-owned small business (Bates, 1990b). Quality of owner human capital is measured by two variables, level of formal education and presence of managerial experience prior to small business entry. Labor input quantity is measured by owner hours spent working in the business, as well as marital status. Married persons living with their spouses are expected to benefit from the availability of family labor, which potentially increases labor input quantity. Applicable demographic traits include owner age and gender. Greater owner age, a broad proxy for work experience, is expected to benefit firms until diminishing effort associated with old age sets in.

To test the social capital theories examined earlier in this study, the minority composition of the firm's clientele is introduced as a contributory factor, and labor force composition is investigated as a longevity determinant for employer firms. Exact definitions of relative explanatory variables are summarized below:

Education 2: for owners completing four years of high school, education 2 = 1, otherwise education 2 = 0.

Education 3: for owners completing at least one but less than four years of college (and those not attaining a bachelor's degree), education 3 = 1; otherwise education 3 = 0.

Education 4: for owners awarded a bachelor's degree, education 4 = 1; otherwise education 4 = 0.

Education 5: for owners who attended graduate school, education 5 = 1; otherwise education 5 = 0.

Management exper: for those working in a managerial capacity prior to owning the business they owned in 1987, management exper = 1; otherwise, management exper = 0.

Owner age: a continuous variable measured in years.

Owner age^2: owner age squared.

Gender: for male owners, gender = 1; otherwise, gender = 0.

Wed: for married owners living with their spouse, wed = 1; otherwise, wed = 0.

Ongoing: if the owner entered a business that was already in operation, ongoing = 1; if the owner was the original founder of the business, ongoing = 0.

Labor input: number of hours during the 1987 calendar year spent by the owner working in the relevant small business, divided by 100.

Capital: the log of the sum of debt and equity capital used to start or become owner of the business.

Minority clientele: if 75 percent or more of the firm's customers were minorities, then minority clientele = 1; otherwise, minority clientele = 0.

Time 84: if the business was started or ownership was acquired during 1984 or 1985, then time 84 = 1; otherwise, time 84 = 0.

Time 86: if the business was started or ownership was acquired during 1986, then time 86 = 1; otherwise time 86 = 0.

Time 87: if the business was started or ownership was acquired during 1987, then time 87 = 1; otherwise time 87 = 0.

Minority labor force: for firms having paid employees only in 1987, this variable measures the percentage of workers (including white Hispanics) who were minorities; this continuous variable ranges in value from zero to one.

Leverage: the ratio of debt to equity capital invested in the firm at the point of entry.[3]

The dependent variable in table four's logistic regression is whether or not the business that was operating in 1987 is still functioning in late 1991. Businesses still operating are active firms; those that have closed down are discontinued. Logistic regression equations delineating active from discontinued businesses are reported in table four for all Asian immigrant firms and for employers only. The employers only group is analyzed primarily to measure the impact of labor force minority composition on firm survival, and secondarily, to analyze the stability of the explanatory variable regression coefficients when larger small businesses only (the employer subset) are examined. The firm sample size drops sharply -- from 4208 for all firms to 2623 for employers only -- the zero employee firms are deleted from the analysis.[4]

In table four's analyses of all Asian immigrant firms that were operating in 1987, positive coefficient values are associated with firms still operating in 1991, and vice versa; five types of explanatory variables are particularly strong for explaining survival and discontinuance patterns for the Asian immigrant firms started up since 1979. The surviving firms that are active in 1991 are disproportionately those started with the larger investments of financial capital, the older firms, those serving a clientele that is <u>not</u> predominantly minority, and those headed by owners who were working full-time (as opposed to part-time) in their firms. Beyond age 50, age of owner (positive, on balance) declines rather rapidly in importance as a predictor of firm survival; by 60, owner age has become negatively associated with firm survival. It is the younger owners -- particularly those in their 30s -- that exhibit the greater firm longevity, other things equal. Among the employer firms only, owner investment of financial capital becomes a stronger predictor of firm survival, while hours of owner labor input becomes less important. Among the employer firms (table four), a qualitative aspect of owner human capital -- managerial experience -- emerges as a positive, statistically significant determinant of firm survival. Owner education levels were generally not statistically significant determinants of firm longevity in table four's logit exercises. Education has an indirect effect on longevity -- highly educated owners invest much larger average amounts of financial capital in their business startups -- and this relationship is investigated further in table five below.

The very youngest firms -- those started in 1986 and 1987 -- were most vulnerable to discontinuance, which is consistent with the findings of past studies (Jovanovic, 1982; Evans, 1987; Bates, 1989 and 1990b). The strong result that the better capitalized firms at startup are more likely to stay active, other factors

Table Four: Logistic Regression: Explaining Firm Survival over the 1987-1991 Period Among Asian Immigrant Firms (firms formed in 1979-1987 only)

A. All Firms

Variable	Regression coefficient	Standard error	Variable mean
Constant	.867	.704	---
Education 2	.163	.174	.162
Education 3	.827*	.193	.160
Education 4	.049	.155	.326
Education 5	.234	.172	.245
Management exper.	.147	.108	.311
Owner age	.071*	.033	41.570
Owner age^2	- .001*	.0004	1817.9
Gender	- .136	.100	.689
Wed	.033	.118	.819
Ongoing	- .059	.115	.278
Labor input	.037*	.004	21.335
Capital	.055*	.013	8.639
Leverage	.017	.010	2.116
Minority clientele	- .762*	.093	.375
Time 84	- .605*	.167	.226
Time 86	- 1.258*	.160	.219

Time 87	- 1.846*	.152	.292
n	4208		
-2 Log L (Chi square)	3881.9 (665.9)		

*Statistically significant at the .05 level

Table Four: (continued)

B. Employers only

Variable	Regression coefficient	Standard error	Variable mean
Constant	- 2.220	1.291	---
Education 2	.439	.275	.163
Education 3	.339	.305	.130
Education 4	.064	.241	.287
Education 5	.293	.261	.318
Management exper.	.510*	.174	.395
Owner age	.225*	.058	42.695
Owner age^2	- .003*	.0006	1906.4
Gender	- .113	.182	.753
Wed	- .464	.272	.873
Ongoing	- .289	.165	.401
Labor input	.029*	.006	26.125
Capital	.075*	.035	10.413
Leverage	.032	.018	2.689
Minority clientele	- .922*	.175	.237
Minority labor force	.750*	.247	.644
Time 84	- 1.075*	.234	.226
Time 86	- 1.603*	.236	.213

Time 87	- .991*	.254	.208
n	2623		
-2 Log L (Chi square)	1508.8 (176.9)		

*Statistically significant at the .05 level

constant, is also highly consistent with past findings (Evans and Jovanovic, 1989; Bates, 1990b). Thus, the same factors found to explain firm longevity among small businesses generally are key to explaining survival among Asian immigrant firms.

The minority clientele factor is a powerful determinant of Asian immigrant firm survival, more so than for nonminority male and African American-owned firms (Bates, 1989). Thus Asian immigrant firms serving a predominantly minority clientele are much more likely to go out of business than cohort firms that operate in the broader marketplace. Firms with a high percentage of minority employees, other factors constant, are shown in table four (employers) to be more likely to remain in business. This finding is consistent with Waldinger's loyal, low-cost co-ethnic worker hypothesis, but it does not really constitute a test of the hypothesis because "minority" and "co-ethnic" are not synonymous.

Among the immigrant entrepreneurs under consideration, the Asian Indian subgroup relies least on minority employees and clients, while the Vietnamese rely most heavily. The Asian Indian firms as a group have the highest mean sales and profitability as well as the lowest rates of discontinuance; the Vietnamese, in contrast, have the highest firm closure rates, lowest mean sales, and their firms are the least profitable among the Asian subgroups. Utilizing social capital measures to analyze firm viability patterns appears to be a tricky business at best. An examination of Asian ethnic group differences in mean financial capital investment, however, reveals a consistent pattern: the firms started with the greater financial capital investments are the larger scale, more successful firms. Mean startup capital was $70,517 among the Asian Indian firms analyzed in this study, versus $27,812 among the Vietnamese. It is noteworthy that among the Asian immigrant ethnic groups, Vietnamese firms rely most heavily upon loans from group support networks while Asian Indians are most reliant upon financial institutions.[5]

Table four's logistic regression exercises offer several other insights into the survival and discontinuance patterns among firms owned by Asian immigrants. Being married and living with one's spouse was statistically insignificant, suggesting that the access to family labor potentially available to married business owners may be of minor importance. Entry into self-employment by purchasing an existing (ongoing) firm is much more common among Asian immigrants than among their table one nonminority cohorts: 24.1 percent of the former and 17.7 percent of the latter bought ongoing firms. Entry into self-employment by purchasing ongoing firms, other factors constant, is clearly not associated positively with firm longevity, both for employer firms and the broader group of all Asian immigrant businesses.

Several interesting traits differentiate the Asian immigrant employer firms from the broader small firm universe. Over 60 percent of the employer firm owners are college graduates and the incidence of owners educated at the graduate level is much higher than it is among the Asian immigrant firm population generally. The employer firms are much less likely to cater to a predominantly minority clientele than the zero employee Asian immigrant firms. Asian immigrant firms generally and the employer subset specifically were quite similar overall, regarding traits that are associated with longevity. Broadly, the well capitalized, older, more established firms are the businesses that are more likely to be active in 1991, particularly when their clientele is not predominantly minority. Owner gender appears to have no consistent pronounced relationship to firm survival prospects.

A comparison of the amounts of owner financial capital invested at the point of business entry by Asian immigrants, for surviving and discontinued firms, is highly revealing:

	Mean Financial Capital
Firms still operating in 1991	$64,249
Discontinued firms	$18,773

The survivors, as a group, were much larger firms and they were more likely to utilize borrowed capital to finance their business startups than discontinuances. Mean leverage (debt divided by equity) was 2.20 for the Asian immigrant surviving firms, versus 1.76 for the businesses that had discontinued operations. The fact that surviving firms are somewhat more leveraged than the discontinued businesses indicates that reliance upon debt capital at the point of business entry is associated with business strength rather than a heightened risk of failure. The more viable firms at the point of startup have greater access to debt (Bates, 1990b). They borrow more heavily than their weaker counterparts, create larger scale operations, and are more likely to still be active operating firms in 1991. This does <u>not</u> mean that across-the-board access to more debt would increase firm viability.

Past studies have shown that the largest loans went to those owners who possessed the highest personal incomes prior to entering self-employment (Bates, 1974). Having maximum access to debt, further, is directly associated with 1) being highly educated, and 2) investing a substantial sum of equity capital into one's business. Table five explores the loan amounts received by the Asian immigrant borrowing firms that were previously examined in table three.

Table five's linear regression model explains the dollar amount of debt (mean debt = $63,329) utilized by Asian immigrant borrowers to finance their entry into small business ownership. Direct relationships are expected to exist between amount of debt borrowed and owner equity capital investment, as well as human capital traits that are associated with firm viability. Following the findings of past studies, the stronger borrower is expected to get the larger loan. While weaker borrower may have a greater demand for credit -- particularly to overcome equity capital deficiencies -- supply side limitations (lender caution) are expected to limit loan access for less attractive borrowers.

Table five broadly indicates that college graduates possessing large amounts of equity capital possess the traits that lenders reward when they determine loan size. Male borrowers, further, receive significantly larger loans, other things equal. An owner who has attended graduate school can expect to receive a loan that is $23,723.00 larger than the borrower who dropped out of high school, other things equal. Additionally, an owner investing $50,000.00 in equity into a business venture can expect to receive a loan that is $45,680.00 larger, other factors constant, than a cohort who invests $10,000 in equity (table five).

Financial institutions tend to skim off the most attractive loan recipients, as demonstrated by the following figures:

	All Borrowers	Bank Borrowers	Non-Bank Borrowers
Debt (mean)	$62,329	$83,131	$40,470
Equity (mean)	$38,554	$43,625	$33,364
% who attended graduate school	21.9%	29.0%	15.6%

Asian immigrant bank borrowers receive larger loans both because of their attractive human and equity capital traits, and the fact that banks are willing to leverage each equity dollar more highly than other lenders, largely family and friends.

Table five demonstrates directly the interrelationships existing between owner education and financial capital investment.

The resultant multicollinearity in table four's logistic regressions that predict survival, of course, reduces the reliability of the regression coefficients for the Education 4 and 5 variables.

The previously discussed studies of Light (1972), Light, Kwuon, and Zhong (1990) and others indicate that supportive

Table Five: Linear Regression Model: Explaining Debt Quantities for Asian Immigrant Borrowers (Firms Entered in the 1979-1987 Time Period)

Variable	Regression Coefficient	Standard error	Variable Mean Value
Constant	243,703.32*	46,085.21	--
Education 2	- 64.08	10,103.35	.160
Education 3	6,231.90	10,032.36	.175
Education 4	19,975.31*	9,029.13	.331
Education 5	23,727.43*	9,806.51	.219
Management Experience	- 50.12	5,950.40	.315
Owner Age	- 12,624.57*	1,643.27	41.76
Owner Age^2	168.97*	24.99	1827.42
Gender	31,703.70*	5,958.17	.748
Ongoing	- 8,343.94	5,547.85	.368
Equity	1.142*	.023	38554.1
n		3110	
R^2		.486	
F		292.6	

*Statistically significant at the .05 level

community groups such as rotating credit associations are a major credit source for Asian immigrant business startups. The presence of these associations and their possible role as a secondary credit source for Asian immigrants is not denied, nor is this inconsistent with the empirical findings of this study. The relevant issue is whether this -- or other forms of social capital -- explains patterns of business viability among Asian immigrant entrepreneurs. Table five's findings are highly consistent with the hypothesis that debt is more accessible to the affluent, well educated business entrant. Borrowing from friends (other factors constant) is negatively associated with loan size and "family" is positively associated with loan size in table five's linear regression analysis of debt quantities.[6] Borrowings from family or friends (other factors constant), however, are statistically insignificant when these factors are treated as explanatory variables in table four's logit regressions; borrowing from financial institutions is positive and significant.

V. <u>PROFITABILITY</u>

Firm viability is a multidimensional phenomenon: small businesses that keep operating through time tend to be the larger scale, more profitable firms; high levels of profitability not only serve to motivate the present owner to remain self-employed: profitable operations also make small businesses potentially salable to new owners when the present owner chooses to retire or move on to other pursuits. Factors associated with small business survival and profitability in past empirical studies have basically been the same set of factors; see, for example, Bates (1985, 1990b, 1993). Thus, the hypothesized relationships between firm longevity and the independent variables, discussed above, are assumed to apply when firm profitability replaces longevity as the dependent variable under consideration. The log of the dollar amount of 1987 before tax profits is analyzed in table six, which reports the results of OLS multiple regression equations explaining the profitability of 1) all Asian immigrant firms, and 2) the employer subset of firms.[7]

Inherent difficulties in the analysis of small business profitability are rooted in the reality of widely varying accounting conventions regarding depreciation methods, inventory valuation, and so forth. Dollar measures of profitability, therefore, are apt to possess much more randomness than the previously examined small business dependent variable, longevity. In the CBO data base, furthermore, nonresponse problems on the initial survey questionnaires were greater for the question regarding before-tax profit amounts than they were for any other questionnaire item.

The OLS regression equations explaining profitability for Asian immigrant-owned firms, nonetheless, produced clearcut results that are broadly consistent with those previously reported table four logistic regression findings. Regarding the impact of social capital upon firm profitability, however, table six's findings indicate that the minority composition of the firm labor force has

Table Six: OLS Regression: Explaining Firm Profitability in 1987 Among Asian Immigrant Firms (firms formed in 1979-1987 only)

Variable	Regression Coefficient	Standard error	Variable mean
Constant	8.147*	.265	--
Education 2	.204*	.058	.165
Education 3	.257*	.057	.174
Education 4	.467*	.052	.293
Education 5	.827*	.055	.245
Management exper.	.168*	.035	.307
Owner age	.018	.012	41.858
Owner age^2	- .0002	.0001	1841.2
Gender	.197*	.035	.739
Wed	.079*	.044	.843
Ongoing	.020	.038	.243
Labor input	.030*	.001	21.060
Capital	.013*	.004	8.092
Leverage	.011*	.003	1.683
Minority clientele	- .093*	.033	.312
Time 84	- .327*	.042	.232
Time 86	- .427*	.044	.213
Time 87	- .434*	.044	.261
n	3768		
R^2	.274		
F	83.2		

*Statistically significant at the .05 level

Table Six (continued)

B. Employers only

Variable	Regression Coefficient	Standard error	Variable mean
Constant	7.722*	.461	--
Education 2	- .067	.090	.153
Education 3	- .002	.092	.145
Education 4	.425*	.082	.287
Education 5	.902*	.084	.295
Management exper.	.248*	.051	.366
Owner age	.058*	.022	42.315
Owner age^2	- .0007*	.0002	1867.2
Gender	.336*	.057	.786
Wed	.089	.079	.882
Ongoing	- .121*	.050	.357
Labor input	.022*	.002	26.713
Capital	.007*	.012	10.181
Leverage	.014*	.004	2.855
Minority clientele	- .075*	.060	.199
Minority labor force	.011	.070	.622
Time 84	- .145*	.061	.221
Time 86	- .462*	.065	.202
Time 87	- .348*	.070	.173
n	2129		
R^2	.217		

F	32.6

*Statistically significant at the .05 level

no impact on the profitability of Asian immigrant small businesses. Firms hiring predominantly nonminority employees are just as profitable as their Asian cohorts that employ a minority work force. While the labor force composition factor has a neutral impact of firm profitability, reliance upon a predominantly minority clientele, once again, is shown to reduce the viability (profitability) of Asian immigrant-owned firms.

The broad portrait of the Asian immigrant businesses generating the higher profit volumes is one of owners working full-time in their firms, being highly educated, and being in business for four or more years. Relative to the findings of the firm longevity analysis discussed previously, the owner human capital variables emerge as stronger determinants of firm viability, and financial capital investment emerges as relatively less important for explaining viability, when profitability is the dependent variable.

The fact that human capital measures such as owner education and managerial experience are more consistent determinants of firm profitability and more erratic determinants of longevity may be noteworthy. High rates of Asian immigrant business ownership coexist with a narrow industry base as well as annual sales and profits that are low, on average, relative to those reported by the dominant nonminority small business sector. Waldinger (1986), for example, observes that Asian immigrants pursue self-employment less as a matter of preference and more as a matter of blocked mobility: impediments to more attractive alternatives include poor English language facility and inappropriate skills and foreign credentials that are viewed skeptically by potential employers. The lower rates of business discontinuance observed in table one among Asian immigrants may reflect their paucity of alternatives rather than their success in business. If this is true, then highly capable owners (profitability notwithstanding) may exit self-employment when better opportunities arise.

Asian immigrants are very heavily crowded into several industry groups -- particularly retailing -- and <u>within</u> industries, they are often overrepresented heavily in several of the smaller-scale lines of business. Manufacturing, for example, is one of the larger scale industries where small business is active. Yet Asian manufacturers are concentrated in several of the small-scale lines of nondurable goods manufacturing: garments, food processing, printing. In retailing, Asian immigrants are overrepresented in restaurants and food stores but they are underrepresented (relative to nonminorities) in larger scale retailing fields such as building materials, new car dealerships, and appliance stores.

Based on CBO data, mean 1987 sales in major industry groups are presented below for the Asian immigrant and nonminority business samples previously described in table one:

	Asian Immigrant	Nonminority

Manufacture	$173,240	$381,740
Wholesale	$417,543	$520,223
Retail	$167,583	$266,873
Services	$ 85,462	$ 91,930

Mean 1987 firm profits in two of the above major industry groups were substantially lower for the Asian immigrant firms in comparison with those reported by nonminority-owned businesses.[8] Overall, the groups of Asian immigrant and nonminority small business summarized in table one reported mean profits of $9,970 and $20,519 respectively. Operating marginally profitable small scale firms may be a form of underemployment for many highly educated Asian immigrant entrepreneurs. If applicable barriers to upward mobility can be overcome, many of these self-employed persons could achieve a fuller utilization of their human capital either by 1) moving into managerial or professional salaried employment or 2) shifting into more skill intensive, larger scale lines of small business.

VI. CONCLUDING REMARKS

The social capital explanations put forth by Light (1972), Bonacich and Light (1988), Waldinger (1986), Aldrich, Waldinger, and Ward (1990), and others to explain the success of the Asian immigrant-owned small business community rest, in fact, on an uncertain empirical foundation. The appropriateness of the term "success" is in fact dubious in light of the fact that Asian immigrants, in spite of their much larger investments of human and financial capital into their firms, generate substantially lower sales and profits than cohort nonminority-owned small businesses. Success may indeed typify the firms owned by immigrant Asian Indians; Fratoe and Meeks (1988) in their analysis of self-employment among individuals associated with the fifty largest ancestry groups in the U.S., found that Asian Indians ranked highest, overall, in mean self-employment income. Asian Indian small business owners, however, are the Asian immigrant subgroup that is least oriented to serving a minority clientele, most likely to borrow from financial institutions, and least likely to employ a predominantly minority labor force, i.e. they are least likely to utilize the forms of social capital discussed above. Vietnamese firms, in contrast, are the group that most heavily serves a minority clientele, relies most upon minority workers, and utilizes community credit sources most actively. Relative to their Asian cohorts, Vietnamese report the lowest owner remuneration, run the smallest firms and suffer the higher firm discontinuance rates. Among Asian Indian and Vietnamese firms active in 1987, 14.9 percent of the former and 22.1 percent of the latter had shut down their businesses by 1991.

In defense of the sociological approach, note that the quantitative analyses pursued in this study are too broad to reject the results of very specific studies of immigrant groups operating in individual industries and, or cities. Waldinger, for example, focused upon Chinese immigrants operating in one industry (garments) in one city (New York). Waldinger's analysis may be on the mark; a legitimate concern, however, is that it is very risky to draw generalizations from such specific analyses about the behavior of Asian (or minority) business ownership nationally. In their analysis of "the underdevelopment of black business", Aldrich and Waldinger point to "the lack of a large protected market, and the fragmented social structure of black communities, which inhibits resource mobilization" (Aldrich, Waldinger, and Ward, 1990, p.62). Light (1972) and Fratoe (1988) similarly seek to explain the state of the black business community by noting its limited ability to generate social resources from supportive networks of co-ethnics.

The findings of this study call into question the validity of seeking to explain success in self-employment by observing utilization of social capital forms such as protected markets. Variations in owner human capital endowments and financial capital investments in one's firm, in contrast, explain patterns of small business longevity and profitability. Many Asian immigrants have achieved success in self-employment in the United States; business owners who were educated and affluent prior to self-employment entry have been particularly successful, group support networks notwithstanding.

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ENDNOTES

1. Detailed descriptions of the Characteristics of Business Owners (CBO) data base, which is used throughout this study, appear in Bates (1990a) and U.S. Bureau of the Census (1992).

2. The Asian immigrant and nonminority business samples described in Table 1 are both drawn from the CBO data base, using a selection criterion to weed out non-substantive businesses (largely employees who report small amounts of self-employment income, described in Bates (1990a)): firms reporting gross annual sales in 1987 of under $5,000 were deleted.

3. The leverage variable cannot exceed 19; this constraint is dictated by the nature of the questionnaire used to generate the CBO data base. Leverage values above 10 are, in fact, quite rare in the CBO data.

4. Sample sizes underlying the various tables in this report vary in size due to item nonresponse patterns on the relevant Census Bureau questionnaire form. Firms providing information on any of the items covered in Table 1 are included in that table; Table 4, in contrast, includes only those firms providing information on all of the items covered in Table 4. Imputed numbers are never used to fill item nonresponses in the CBO data base.

5. Asian subgroups were coded as explanatory variables and added to Table 4's logistic regression equations. Ethnicity, by itself, had very little explanatory power in delineating discontinued from surviving Asian immigrant firms because this factor is largely endogenous: neither "Vietnamese" nor "Asian Indian" had any explanatory whatsoever, other factors constant, in the context of Table 4's logit equations explaining firm longevity.

6. Regression equations explaining loan size that utilize loan source as explanatory variables are not reported in the text of this study. When loan source dummy variables are added to the Table 5 OLS equation, the "friends" variable coefficients is negative and "family" is positive; the friends and family loan source coefficients are statistically insignificant at a .05 significance level.

7. In Table 6's analysis of log profits, firms reporting profits of less than one dollar are excluded from the analysis.

8. Profits for Asian immigrant firms in services and wholesaling were lower in a statistically significant sense (=.05), relative to nonminorities; profit level differences in retail and manufacturing were quite minor and not statistically significant.