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**FIRMS STARTED AS FRANCHISES HAVE LOWER SURVIVAL RATES  
THAN INDEPENDENT SMALL BUSINESS STARTUPS**

By

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## Abstract

Aspiring entrepreneurs choosing to become franchisees certainly expect to improve their chances of survival during the turbulent early years of business startup and operation. Alignment with a franchisor parent company offers the franchisee managerial assistance, access to financial capital, and access to markets via the right to utilize the parent company trademark. This study examines survival patterns among franchise and nonfranchise small firms started between 1984 and 1987: survival through late 1991 is tracked for all firms. Although the franchise operations are larger scale, better capitalized young firms, the independent business startups are found to be more profitable and their survival prospects are better than those of franchises.

Keywords: Franchise, small business startup, survival, profitability.

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## I. INTRODUCTION

Persons entering self-employment by becoming franchisees commonly believe that their chances of surviving those early turbulent years of small business operations are enhanced by their decision to align with a franchisor parent company. The franchise is a safe bet, according to the conventional wisdom. It is time to reconsider this wisdom.

A nationwide survey of self-employed persons active in small business in 1987 serves as the data base analyzed in this study. A sample of 20,554 young firms drawn from the U.S. Bureau of the Census Characteristics of Business Owners (CB0) data base is utilized, and all of these firms were surveyed in late 1991 to determine firm survival rates. By late 1991, 34.7 percent of the franchisees and 28.0 percent of the nonfranchise young firms active in 1987 had discontinued operations. Further independent business vs. franchisee comparisons reveal that the young firms started without the benefit of a parent franchisor were significantly more profitable than the franchise firms. In short, the franchise route to self-employment is associated with higher business failure rates and lower profits than independent business ownership.

This study describes various owner traits and operational characteristics of franchise and nonfranchise young firms. Logistic regression equations are utilized to isolate the impact of the franchise characteristic on firm survival prospects when owner and firm traits are controlled for. It is the larger scale, better

capitalized firms headed by college graduate owners working full-time in their small businesses that are most likely to remain in operation; the franchise trait, other factors constant, exhibits a highly negative relationship to firm survival prospects. Separate analyses of minority-owned franchise and independent small business subsamples reveal that survival patterns among minority-owned firms closely resemble those present in the overall small business universe: franchise operations are more likely to go out of business than independent firm startups.

## **II. MEASURING SURVIVAL PATTERNS AMONG YOUNG SMALL BUSINESSES:**

### **DATABASE CONSIDERATIONS**

Most evidence on franchise survival rates is forthcoming from journalistic sources. A recent ad in Business Week, for example, claimed that "a franchisee has a four times greater chance to succeed than an entrepreneur who launches a new independent business." Factual underpinnings for this claim were not apparent. At the other end of the journalistic spectrum, the February 1994 issue of McCall's magazine claims that 50.7 percent of Decorating Den's franchisees terminated operations during the three year period ending in December 1992. Decorating Den is a franchisor that grew spectacularly during the 1980s; its franchisees invest between \$17,000 and \$50,000 to launch their firms.

Thus, claims about franchise rates of survival have often tended to extremes. The purpose of this study is to raise the

debate to a higher plain. The presence of a large new nationwide small business data base compiled by the Census Bureau - CBO data base - makes it possible for issues of franchisee survival to be analyzed in rational, comprehensive ways. The CBO data analyzed in this study were compiled by the U.S. Bureau of the Census in 1992. The CBO was drawn from the universe of persons who filed a small business federal income tax return in 1987, including 1) schedule C, form 1040, 2) Form 1065, and 3) Form 1120s. The CBO oversamples minority and women business owners, and it oversamples the larger scale small businesses that utilize paid employees. Comprehensive descriptions of the CBO appear in Nucci (1992) and Bates (1990b). Of the roughly 90,000 small businesses surveyed to create the CBO data base, over 70 percent responded. All of the reported statistics in this study are weighted to adjust for both 1) survey nonresponse, and 2) the Census Bureau's nonrandom sampling in the creation of the CBO: the firms described in this study are therefore representative of young firms that grossed at least \$5000 in total revenues in 1987 and filed one of the above income tax returns.

This study covers only firms formed over the 1984-87 period and the unit of analysis is firms, not persons. Thus, the universe of firms covered in this study is 4,005,561 small businesses. A description of the CBO sample of young firms analyzed in the following pages appears in the appendix.

The sample of franchise firms analyzed here is not identical with the universe of franchise units opened between 1984 and 1987 for several reasons. First, some franchise units are owned by the franchisor. Second, some new franchise units are owned by multi-unit firms that began operations before 1984. Third, multi-unit new firms included in this study might own franchise operations at several locations, but such a firm is only counted once, because the unit of analysis here is the firm. Thus, the failure rate for all new franchise units operating in 1987 that opened up between 1984 and 1987 may differ from the closure rate reported in this study.

### **III. CHARACTERISTICS OF FRANCHISE AND INDEPENDENT YOUNG FIRMS**

Existing studies identify traits that are positively correlated with firm longevity. The larger scale, older small businesses have higher survival rates over time than smaller, younger firms (Evans, 1987; Bates and Nucci, 1989). Among very young firms, owner traits associated with greater likelihood of survival include owners working full-time in the firm, highly educated owners, and large owner financial capital investment in the firm at startup (Bates, 1990a). Table 1 indicates that franchisees are generally better endowed with traits linked to survival than nonfranchise young firms. In terms of mean 1987 sales revenues, the young franchisees report \$513,961, over five times larger than the corresponding figure of \$102,410 reported by

the independent businesses. Capitalization at startup is similarly much greater -- mean value = \$86,493 -- for the franchise firms, almost three times greater than the nonfranchise firm capitalization of \$29,822. Only in the area of owner educational background do the franchise firms appear to be weaker than the independents: 9.1 percent of the former and 16.2 percent of the latter had pursued graduate studies beyond the bachelor's degree. All of the above group mean differences are statistically significant. Yet, despite the obvious strengths of the young franchise firms summarized in Table 1, they are dramatically less profitable than independent firms of the same age, and they exhibit a lower survival rate -- 65.3 percent (versus 72.0 percent for nonfranchise firms) -- over the 1987-late 1991 period; these differences are statistically significant at the 5 percent level.

Aspiring entrepreneurs choosing to become franchisees certainly expect to improve their odds of survival over the early turbulent years of business startup. This expectation of lower risk for franchise, as opposed to independent business, startups is certainly portrayed in existing industry and academic studies: see, for example, Castrogiovanni, Justis, and Julian (1993) and Ashman (1988). Beyond low risk of failure, what specifically does the potential owner seek to gain by purchasing a franchise rather than operating an independent business? Rubin (1978) lists hypothesized advantages accruing to franchisees. First, the trademark and the product sold appear to be valuable, which facilitates access to

customers for the young franchisee. Second, the franchisor often makes capital available to the franchisee, either by extending credit directly or co-signing for a bank loan. Third, franchisees lacking appropriate human capital can receive managerial advice and assistance from franchisors.

Table 1 summary statistics provide evidence that is consistent with these hypothesized advantages of the franchise relationship. Franchisees are generating greater sales per unit of capital and labor input than independent firms:

	<u>franchisees</u>	<u>nonfranchise firms</u>
sales per employee (mean)	\$ 98,839	\$ 85,342
sales per dollar at startup		
financial capital (mean)	\$ 5.94	\$ 3.43

Regarding access to debt capital, 63.2 percent of the Table 1 franchise firms report that they used borrowed capital to help finance business entry, versus 33.6 percent of the independent firms. Yet, the franchise operations are only moderately more leveraged than the independents, on average: debt accounted for 55.7 percent of firm capitalization at startup for franchisees, versus 54.4 percent for the independent firms.

The above figures on sales per employee and per dollar of invested capital are possibly capturing industry effects rather than franchise vs. independent firm differences. Franchisees are



heavily overrepresented in retailing and finance, insurance, and real estate (FIRE), and they are underrepresented in other service industries. Among all 20,554 of the small firms described in Table 1, weighted statistics on industry distribution indicate that in the young firm universe -- franchises and independent firms pooled together -- retailing, FIRE, and other services account for 17.3 percent, 7.7 percent, and 42.0 percent of all small firms (by number). Examining the same data industry by industry, franchises make up 7.9 percent of all retailers, 6.7 percent of the firms in FIRE, 3.2 percent of all small businesses, but only 0.8 percent of the firms operating in other services. Comparing franchisees only to all firms, the peculiar industry distribution of the franchises stands out clearly:

	<u>franchises only</u>	<u>all Table 1 small businesses</u>
% in retail	42.8%	17.3%
% in services*	10.7%	42.0%
% in FIRE	16.2%	7.7%
% in other industries	<u>30.3%</u>	<u>33.0%</u>
Total	100%	100%

\*dominant lines are business, personal, repair, professional, and recreational services.

Looking solely at franchise firms in retailing, sales per employee is \$106,790 and sales per dollar of startup capital is \$8.37; these figures are significantly larger than corresponding

sales ratios for independent retail firms. Simple comparisons of franchise and independent business characteristics are clearly misleading potentially, because the very different industry compositions of firms in these two groups. This problem is dealt with in following sections by utilizing econometric models to control for firm and owner traits so that the impact of the franchise characteristic on firm survival likelihood can be isolated.

At least in the industries where franchises are numerous, the traits typifying young franchises appear to be consistent with enhanced viability and improved survival prospects. Relative to similarly aged independent firms, they are much larger and better capitalized. Their only seeming disadvantage as a group is their lower incidence of very highly educated owners. Could this lower incidence of graduate-educated owners account for the fact that the franchise group exhibited a lower rate of survival than independent business startups? Impacts of owner education, firm size, industry, and capitalization, the franchise trait, and other factors upon firm survival and discontinuance are further investigated below.

#### **IV. LOGISTIC REGRESSION ANALYSIS OF SMALL BUSINESS LONGEVITY**

Over the period from 1987 to late 1991, over 28 percent of the young firms described in Table 1 went out of business. Firms sold to a new owner, merged, or otherwise acquired are not counted as discontinued if they continue to operate. Logistic regression

equations are estimated in this section to explain small business longevity.

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 young small businesses (Bates, 1990a; Bates, 1994). Labor input quantity is measured by owner hours spent working in the business, as well as marital status and number of paid employees. Married persons living with their spouses are expected to benefit from the availability of family labor, which potentially increases labor input quantity. Quality of owner human capital is measured by two variables, level of formal education and presence of managerial experience prior to small business entry. Applicable demographic traits include owner age, minority racial/ethnic status, 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. In an important sense, all of the above factors can be thought of as control variables, since the major point of Table 2's logistic regression exercise is to observe the impact of the franchise trait, other things equal, upon firm survival.

In Table 2's analysis of young firms that were operating in 1987, positive coefficient values are associated with firms still operating in late 1991, and vice versa.<sup>1</sup> The franchise characteristic, other factors constant, is a highly significant

determinant of firm survival: franchisees are much more likely to go out of business than cohort independent firms. Other Table 2 findings reinforce results of past studies explaining firm survival patterns. The surviving firms active in late 1991 are disproportionately those headed by highly educated owners who worked full-time in the business. The surviving firms, further, were the larger firms in the sense that they began operations with greater owner financial capital investments; labor input - measured by number of employees - was higher among the survivors (Table 2). The very youngest firms - those started in 1987 - were most vulnerable to discontinuance, which is consistent with past findings (Evans, 1987; Bates, 1990a; Jovanovic, 1982). Other than the franchise survival relationship finding, the results of Table 2's logistic regression exercise are highly consistent with past empirical studies of small business discontinuance patterns.

Industry identifier dummy variables are added to the logit analysis in Table 3 to test the hypothesis that franchise survival patterns are shaped by industry effects.<sup>2</sup> Given the unique industry distribution of franchises, a situation where retailing is a very high risk industry and, or services is very low risk would potentially impact the Table 2 findings on franchise survival. Since the franchise trait is positively correlated with retailing and negatively correlated to the other services industry identifier variable, a re-estimation of Table 2's logit model - with industry variables - is in order. The results are presented in Table 3.

The addition of six industry identifier variables, in fact, has remarkably little impact on Table 2's finding that franchises are more likely to close down than independent young businesses. Relative to the excluded industry groups - transportation, communication, public utility, forestry, fisheries, and mining - both retailing and services, other factors constant, are less likely to close down. In terms of industry - specific risk of firm closure, manufacturing and FIRE are clearly the safest industries, while retail and services are middle of the pack. The fact that Table 3's franchise variable coefficient is virtually unchanged (relative to Table 2) by the addition of industry identifier variables into the logistic regression analysis is noteworthy. Table 2's finding that franchises are more failure-prone than other firms, even after owner and firm traits are controlled for, is reinforced by Table 3's logit results. Industry factors do not appear to explain the higher propensity of franchises to go out of business.

#### **V. ANALYSIS OF MINORITY-OWNED BUSINESS**

Minority-owned firms account for 9.2 percent of the firms analyzed in Tables 1 through 3. The minority characteristic was positively associated with firm survival in the Table 2 and 3 regression analyses and, although this relationship was not statistically significant, the minority trait was strong and close to the significance cutoff. Table 4 summarizes traits of franchise

and independent minority-owned firms to test for the presence of patterns of owner and firm traits that may delineate minorities from the overall universe of young firms.

Minority-owned firms are commonly smaller, less capitalized, and less profitable than cohort non-minority ventures (Bates, 1993; Bates, 1994). Table 4 (in comparison to Table 1) confirms this pattern, but several notable exceptions apply to the franchise group. Minority franchises, although more failure-prone, are just as profitable as independent young minority-owned businesses. A breakdown of Table 1 firms, using franchise and minority owner status traits, reveals the following mean 1987 net income statistics:

	<u>franchise</u>	<u>nonfranchise</u>
nonminority	\$ 1,548	\$ 19,437
minority	\$14,934	\$ 12,731

Clearly, the young nonminority firms are more profitable than the minorities overall, but the higher profitability of the minority franchises is noteworthy (and statistically significant).

The potential benefits of franchising - greater access to financial capital, management assistance, access to the parent franchisor's trademark and product lines - may be more beneficial to minority-owned firms than to nonminorities. Relative to nonminorities, minority owners in franchising are much more likely to be college graduates;<sup>3</sup> their firms, on average, are better

capitalized and more profitable. Minority franchises also have much lower mean sales than nonminorities, which reflects their different industry distribution - less retail-oriented and much more concentrated in other services. Clearly, the minority-owned franchise subset is not the mirror image of the broader franchise young firm universe described in Table 1. Do the factors explaining firm survival patterns for minority firms resemble those reported above? The brief answer is "yes".

Tables 5 and 6 replicate the Table 2 and 3 logit analyses of young firm survival, but the analysis is narrowed to include minority-owned firms only. As in the previous tables, the surviving minority firms are the larger scale, better capitalized ventures, run disproportionately by highly educated owners who work full-time in their firms. Finally, the franchise trait, other things equal, is very negatively related to firm survival, and this finding holds whether or not industry identifier variables are included in the logistic regression equations.

Minority franchisees, other things equal, are less likely to remain in operation than independent startups. Regarding profitability, the minority franchise owners are earning profits that are not statistically significantly different than those reported by independent minority startups. Coexisting with the lack of difference in profitability is the fact that, relative to the independents, the minority franchise owners, on average, are 1) better educated, 2) work longer hours, and 3) invest much more

financial capital into their ventures. Thus, greater investment of human and financial capital inputs yields the minority franchisees profits that are no higher than independents, as well as firm failure rates exceeding those of independents.<sup>4</sup>

## **VI. CONCLUDING COMMENTS**

Among the few scholarly studies that empirically investigate the franchise industry, I found no evidence of franchisee survival rates that was in any way inconsistent with the findings of this study. Most of the applicable studies examine franchisor rather than franchisee behavior: see, for example, Rubin (1978) and Norton (1988). Direct measurement of franchisee failure rates nationwide appears in a study by Castrogiovanni, Justis, and Julian (1993); they find that the annual failure rates for all franchises is in the four percent range. The higher franchise discontinuance rates reported here for young firms only are not inconsistent with the Castrogiovanni, Justis, and Julian study. Indeed, the logistic regression exercises clearly and consistently indicate a rising survival rate as young firms grow older. A long-run convergence upon an annual four percent failure rate for franchises of all ages can certainly co-exist with a much higher failure rate for very young franchises. The applicable small business literature has repeatedly shown that failure rates decline as firms grow older (Jovanovic, 1982; Evans, 1987; Bates and Nucci, 1989; Bates, 1990a).



Future research needs to examine underlying causes of the lower survival rates that typify the young franchise small businesses. One possible cause of poor franchise performance is the costs specific to this organizational form - upfront fees to the franchisor, royalty fees, marketing fees, and the like. Do these costs exceed the benefits accruing to young firms choosing the franchise route? Another avenue of investigation is the issue of owners choosing franchises possibly being cut from a different cloth than persons creating independent new businesses. Are the franchisees particularly risk averse? Are there particular traits of franchise owners that are not adequately captured by the sorts of human capital variables - education, management experience - examined in this study? Finally, franchises tend to concentrate in highly specific industry niches that may be inadequately captured by the broad industry categories examined in Tables 3 and 6 of this study. Perhaps segments such as fast foods have simply become saturated, causing young franchisees to generate returns that lag behind traditional earnings levels of franchisees. The potential research agenda is long and varied.

## Appendix

### A. LOGISTIC REGRESSION: VARIABLE DEFINITIONS

The dependent variable in the logistic regression exercises of Tables 2, 3, 5, and 6 is whether or not the business that was operating in 1987 is still functioning in late 1991. Businesses still operating are considered active firms; those that have closed down are considered discontinued. Independent variables are defined below:

Less than high school	For owners not completing high school, this variable = 1; (otherwise = 0).
High school grad	For owners completing four years of high school, this variable = 1; (otherwise = 0).
Some college	For owners completing at least one year of college but not attaining a bachelor's degree, this variable = 1; (otherwise = 0). This variable is excluded from the logit equation
College grad	For owners awarded a bachelor's degree, this variable = 1; (otherwise = 0).
Post-graduate	For owners that attend graduate school beyond the bachelor's degree, this variable = 1; (otherwise = 0).
Management experience	For those working in a managerial capacity prior to owning the business they owned in 1987, management experience = 1; (otherwise, management experience = 0).
Owner age	A continuous variable measured in years.
Owner age <sup>2</sup>	owner age squared.
Owner gender	For male owners, gender = 1; (otherwise, gender = 0).

Owner labor input	Number of hours during the 1987 calendar year spent by the owner working in the relevant small business, divided by 100.
Employees	Average number of paid workers reported to the federal government on 1987 quarterly payroll forms.
Married	For married owners living with their spouse, married = 1; (otherwise, married = 0).
Log financial capital	The log of the sum of debt and equity capital used to start or become owner of the business.
Leverage	The ratio of debt to equity capital invested in the firm at the point of entry.
Franchise	For franchisees, franchise = 1; (otherwise, franchise = 0).
Firm entered 1986	If the business was started or ownership was acquired during 1986, then this variable = 1; (otherwise = 0).
Firm entered 1987	If the business was started or ownership was acquired during 1987, then this variable = 1; (otherwise = 0).
Minority clientele	If 75 percent or more of the firm's clients are minorities, then this variable = 1; (otherwise = 0).
Minority-owned firm	If the firm is 51 percent or more minority-owned, then this variable 1; (otherwise = 0).
Retail, service, finance, insurance, and real estate, construction, manufacture, wholesale	A series of self-explanatory binary variables for identifying major industry groups.

## **B. NATURE OF THE DATA BASE**

The version of the Characteristics of Business Owners (CBO) data base utilized in this study was compiled by the U.S. Bureau of the Census in 1992. All of the reported statistics in this study are weighted to adjust for survey nonresponse as well as survey oversampling of the larger scale employer small firms, minority, and women-owned firms. Further, firms reporting gross revenues of under \$5000 were dropped to control for the phenomenon of "casual" small businesses; this problem is analyzed in Bates (1990b). Thus, the CBO samples of small businesses described in this study are representative of firms 1) operating in 1987, 2) generating 1987 total sales of at least \$5000, and 3) filing a federal small business income tax return in 1987. In the case of multi-owner firms, all owners (up to the ten largest) were surveyed in the creation of the CBO. Owner characteristics, when reported in this study, reflect the traits of the owner who worked the largest number of hours in the applicable firm during 1987, the "dominant" owner. Of the roughly 26,000 nonminority male and 26,000 nonminority female firm owners surveyed in the construction of the CBO, response rates were 73.8 percent for males and 75.4 percent for females. Minority-owned firm owners accounting for 9.2 percent of the applicable small business universe, had the following survey response rates: 1) African-Americans, 64.1 percent, Hispanics, 64.9 percent, and other minorities (largely Asians), 66.1 percent. Due to the tax return sampling frame, information available on

nonrespondents included firm sales, location, and industry; this information was used to weigh the respondent sample so that it is representative of the universe of relevant tax return filers/business owners, and not just the respondents. The applicable universe of young firms (started 1984-1987) was 4,005,562 businesses.

In cases where persons entered self-employment by purchasing an existing firm, the applicable firm is included if it was purchased in the 1984-1987 time period and (in the case of multiple owner firms) the new owner is the dominant owner. In cases where persons bought into ongoing firms that were started before 1984, the firm is excluded in all cases of nondominant owners entering between 1984 and 1987.

In sample observations where item nonresponse was a problem, my rule has been to try to keep the applicable firm in the sample. Item nonresponse was pronounced for only one of the variables analyzed in this study - 1987 net income (3211 of the 20,554 firms described in Table 1 did not report net income). The Table 1 sample size of 20,554 firms falls to 19,463 firms in Table 2 because of item nonresponse: firms from Table 1 are included in the Table 2 regression analysis only if they provided information on all of the variables included in this statistical exercise.

Interested researchers may access the CBO data base at the Center for Economic Studies, U.S. Bureau of the Census in Suitland, Maryland (phone # 301-763-2337).

Table 1:

Young Firms Operating in 1987: A Comparison of Owner  
and Firm Traits for Franchise and Independent Business Startups  
(Firms formed from 1984-1987 Only)

A. Firm Traits	Franchisees	Nonfranchise firms	Univariate F
1987 sales (mean)	\$ 513,961	\$ 102,410	153.5*
# employees (mean)	5.2	1.2	26.9*
1987 net income (mean)	\$ 2,649	\$ 18,850	13.2*
# of firms still operating in late 1991	65.3%	72.0%	14.2*
<u>B.Owner Traits</u>			
1. Owner education			
less than high school	10.3%	11.7%	1.1
high school grad	35.7%	28.8%	15.1*
college: 1-3 years	27.3%	23.3%	4.4*
college grad	17.6%	20.0%	2.3
post graduate	9.1%	16.2%	23.7*
2. Firm capitalization at startup:			
total financial capital (mean)	\$ 86,493	\$ 29,822	81.6*
equity (mean)	\$ 38,355	\$ 13,591	46.7*
debt (mean)	\$ 48,138	\$ 16,231	53.1*
3. Other owner traits:			
owner gender (male = 1)	73.3%	74.1%	0.2
owner age (mean)	38.9	40.6	13.9*
owner annual hours of labor input (mean)	2013	1870	9.8*
owner management experience (yes = 1)	39.3%	30.1%	25.4*
n	1,276	19,278	
n (weighted)	130,180	3,875,382	

\*Trait differences between the above groups are statistically significant at the .05 significance level.

Source: Characteristics of Business Owners data base.

Table 2:

Logistic Regression: Explaining Firm Survival over the 1987-late 1991 Period  
(Firms formed from 1984-1987 only)

	<u>Regression Coefficient</u>	<u>Standard Error</u>	<u>Variable Mean</u>
Constant	- 1.474*	.212	---
less than high school	.171*	.063	.112
high school grad	- .037	.046	.284
college grad	.400*	.052	.205
post-graduate	.654*	.059	.159
management experience	.038	.042	.312
owner age	.079*	.010	40.555
owner age <sup>2</sup>	- .001*	.0001	1766.1
owner gender	- .034	.039	.738
owner labor input	.025*	.002	18.764
# employees	.088*	.010	1.373
married	- .030	.042	.779
log financial capital	.086*	.004	6.846
leverage	.014*	.003	2.516
franchise	- .523*	.094	.033
firm entered 1986	- .218*	.046	.307
firm entered 1987	- .819*	.043	.373
minority-owned firm	.101	.060	.092
N	19463		
-2 Log likelihood	20,610.3		
Chi-square	2,335.3		

\*Statistically significant, five percent significance level.

Note: precise variable definitions for the above explanatory variables are spelled out in the attached appendix.

Table 3

**Logistic Regression: Explaining Firm Survival  
over the 1987-late 1991 Period  
(Firms formed from 1984-1987)**

	<u>Regression Coefficient</u>	<u>Standard Error</u>	<u>Variable Mean</u>
Constant	- 1.796*	.218	---
less than high school	.184*	.064	.112
high school grad	- .019	.047	.284
college grad	- .399*	.052	.205
post-graduate	.633*	.060	.159
management experience	.033	.042	.312
owner age	.081*	.010	40.555
owner age <sup>2</sup>	- .001*	.0001	1776.1
owner gender	- .011	.040	.738
owner labor input	.025*	.002	18.764
# employees	.086*	.010	1.373
married	- .052	.042	.779
log financial capital	.088*	.004	6.846
leverage	.015*	.003	2.516
franchise	- .539*	.095	.033
firm entered 1986	- .230*	.046	.307
firm entered 1987	- .823*	.043	.373
minority-owned firm	.115	.060	.092
retail	.227*	.063	.176
service	.309*	.053	.418
finance, insurance, and real estate	.450*	.078	.078
construction	.325*	.066	.128
wholesale	.193*	.097	.038
manufacture	.573*	.118	.029
N	19463		
-2 Log likelihood	20,553.9		
Chi-square	2,391.6		

\*Statistically significant, five percent significance level.

Note: precise variable definitions for the above explanatory variables are spelled out in the attached appendix.



Table 4

Young Minority-Owned Firms Operating in 1987: A Comparison  
of Owner and Firm Traits for Franchise and Independent Business Startups  
(Firms formed from 1984-1987 Only)

A. <u>Firm Traits</u>	<u>Franchisees</u>	Nonfranchise <u>firms</u>	<u>Univariate F</u>
1987 sales (mean)	\$ 210,137	\$ 70,277	62.8*
# employees (mean)	2.8	0.7	77.1*
1987 net income (mean)**	\$ 14,934	\$ 12,731	0.2
# of firms still operating in late 1991	67.5%	72.7%	6.1*
B. <u>Owner Traits</u>			
1. owner education			
less than high school	14.5%	18.3%	4.2*
high school grad	16.2%	22.0%	8.3*
college: 1-3 years	28.6%	21.9%	11.1*
college grad	22.9%	20.9%	1.0
post graduate	17.8%	16.9%	0.3
2. Firm capitalization <u>at startup</u>			
total financial capital (mean)	\$ 97,310	\$ 26,982	111.9*
equity (mean)	\$ 50,242	\$ 13,709	126.9*
debt (mean)	\$ 47,068	\$ 13,272	56.3*
3. <u>Other owner traits:</u>			
owner gender (male = 1)	69.5%	70.5%	0.2
owner age (mean)	39.3	40.6	6.7*
owner annual hours of labor input (mean)	1922	1828	2.5
owner management experience (yes = 1)	27.1	24.9	1.1
n	844	12,411	

\*Trait differences between the above groups are statistically significant at the .05 significance level.

Source: Characteristics of Business Owners data base.

Table 5

Logistic Regression: Explaining Minority-Owned Firm Survival  
 over the 1987-late 1991 Period  
 (Firms formed from 1984-1987)

	<u>Regression Coefficient</u>	<u>Standard Error</u>	<u>Variable Mean</u>
Constant	- 1.045*	.279	---
less than high school	.150*	.070	.178
high school grad	- .162*	.063	.215
college grad	.118	.064	.215
post-graduate	.302*	.071	.169
management experience	- .159*	.052	.262
owner age	.077*	.013	40.618
owner age <sup>2</sup>	- .0009*	.0001	1762.6
owner gender	- .021	.047	.702
owner labor input	.028*	.002	18.197
# employees	.124*	.018	.784
married	- .058	.050	.763
log financial capital	.078*	.005	6.826
leverage	- .013*	.004	2.108
franchise	- .383*	.112	.036
firm entered 1986	- .435*	.060	.269
firm entered 1987	- .768*	.054	.416
N	12466		
-2 Log likelihood	13,271.5		
Chi-square	1,179.8		

\*Statistically significant, five percent significance level.

Note: precise variable definitions for the above explanatory variables are spelled out in the attached appendix.

Table 6

Logistic Regression: Explaining Minority-Owned Firm Survival  
over the 1987-late 1991 Period  
(Firms formed from 1984-1987 only)

	<u>Regression Coefficient</u>	<u>Standard Error</u>	<u>Variable Mean</u>
Constant	- 1.377*	.285	---
less than high school	.192*	.071	.178
high school grad	- .165*	.064	.215
college grad	.089	.065	.215
post-graduate	.229*	.073	.169
management experience	- .168*	.062	.262
owner age	.070*	.012	40.618
owner age <sup>2</sup>	- .0009*	.0001	1762.6
owner gender	.002	.048	.702
owner labor input	.027*	.002	18.197
# employees	.111*	.018	.784
married	- .066	.051	.763
log financial capital	.085*	.006	6.826
leverage	- .014*	.004	2.108
franchise	- .294*	.119	.036
firm entered 1986	- .418*	.060	.269
firm entered 1987	- .755*	.054	.416
minority clientele	- .237*	.044	.410
retail	.304*	.073	.219
service	.507*	.065	.442
finance, insurance, and real estate	.078	.102	.057
construction	.436*	.090	.086
wholesale	.291*	.139	.027
manufacture	.314*	.150	.024
N	12466		
-2 Log likelihood	13,170.2		
Chi-square	1,281.0		

\*Statistically significant, five percent significance level.

Note: precise variable definitions for the above explanatory variables are spelled out in the attached appendix.

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## ENDNOTES

1. The small firm sample size drops from 20,554 in Table 1 to 19,463 in Table 2. Table 1 reports statistics on firms providing information on any of the traits described in this table, while Table 2 analyzes only firms reporting information on all of the traits described in that table. Thus, an owner refusing to report his/her age would be included in Table 1 but excluded from Table 2: item nonresponse is responsible for the differing Table 1 and 2 sample sizes.

2. Tables 2 and 3 are reported separately because industry identifier variables - not being true exogenous variables - potentially bias coefficients of other explanatory variables. Manufacturing, for example, is positively correlated with financial capital, while services is positively correlated with post-graduate education. Stability of the applicable variable coefficients in Tables 2 and 3 indicates that potential coefficient bias is, in fact, trivial.

3. Highly educated Asian immigrants are heavily represented in the minority franchise sample. A separate logit analysis focusing solely upon Asian immigrants indicated that franchising, other things equal, was associated strongly with business discontinuance. Asian immigrants accounted for nearly 40 percent of the minority franchise sample reported in Table 4.

4. Firms sold to a new owner are counted as surviving firms throughout this study. Among minority businesses, 5.8 percent of the franchises and 5.7 percent of the independent firms operating in 1987 had been sold by late 1991.