

New Firm Survival: Institutional Explanations for New Franchisor Mortality

Scott Shane • Maw-Der Foo

*Sloan School of Management, Massachusetts Institute of Technology, 50 Memorial Drive,
Cambridge, Massachusetts 02146*

*Sloan School of Management, Massachusetts Institute of Technology, 50 Memorial Drive, Cambridge,
Massachusetts 02146 and National University of Singapore*

Why do some new firms succeed and others fail? Economists argue that new firms fail because entrepreneurs inefficiently manage production and organizational design (Williamson 1985). Sociologists (e.g., Granovetter 1985) have typically viewed this explanation as undersocialized, and argue that institutional legitimacy must also be considered to explain the survival of new firms. This paper examines the survival of 1292 new franchisors established in the United States from 1979–1996. The results show that institutional legitimacy adds to economic explanations for the survival of new franchisors and suggests the importance of a properly socialized explanation.

(Franchising; Firm Survival; Institutional Theory)

Economists typically argue that the survival of new firms depends on the efficiency of their production processes and their organizational designs (Williamson 1985). When examining franchisors, economists have argued that survival depends on their ability to achieve efficiencies in three areas: production, resource acquisition, and contracting. First, franchise systems exploit scale economies in marketing, production, and administration (Caves and Murphy 1976). New franchisors which are established below minimum efficient scale must grow rapidly in the early years for the franchisor to survive (Martin 1988). Second, franchising is an efficient way to obtain labor and capital (Lafontaine and Kaufmann 1994). When new franchisors are growing rapidly or need to obtain large amounts of capital, the relatively greater use of franchising will be survival enhancing (Shane 1996). Third, franchisors which economize on the agency costs of adverse selection, moral hazard, and hold-up, and engage in efficient risk bearing between the princi-

pal and the agent should be more likely to survive over time (Fama and Jensen 1983).¹

Sociologists (e.g., Granovetter 1985) have criticized this explanation as under-socialized. They argue that the success of new firms depends not only on economic efficiency, but also on institutional approval (Hannan and Freeman 1984). In particular, they argue that firm survival depends on the ability to establish cognitive and socio-political legitimacy (Aldrich and Fiol 1994). Moreover, they hold that policies adopted at the time of founding imprint the firm with the characteristics of that time and place, which continue to influence the survival of the firm over time (Stinchcombe 1965).

In this study, we explore whether institutional theory adds to economic explanations for the survival of new franchise systems. In specific, we examine the

¹ Adverse selection is the problem of not being able to determine if someone else is lying. Moral hazard is the problem of not being able to determine if someone else is cheating. Hold-up is the problem of not being able to hold one's counterpart to the terms of a bargain.

effect of cognitive legitimation, sociopolitical legitimation, and imprinting on the survival of 1292 new business format franchisors established in the United States between 1979–1996, controlling for factors found to be important in previous studies.

This study makes three important contributions. First, we show that institutional theory adds to economic explanations for the survival of new franchisors, suggesting that economic explanations alone are undersocialized (Granovetter 1985). Second, the study contributes to institutional theory by demonstrating the survival value of certification in a multi-industry context. Third, the study contributes to our understanding of franchising by correcting erroneous conclusions of prior cross-sectional research, through a research design that avoids the problems of path dependence, censoring, and selection bias.

The paper proceeds as follows: The second section describes business format franchising. The third section develops the institutional explanation for firm survival. The fourth section describes the study methodology. The fifth section discusses the results. The sixth section provides conclusions.

Business Format Franchising in the United States

Taking place in over 50 industries, ranging from banking to the Internet, business format franchising is a mode of distribution of goods and services by which an individual (the franchisee) obtains from another individual (the franchisor) the rights to use a trade name and operating system in return for oversight by the franchisor and the payment of royalties.

While the origins of franchising in the United States can be traced to the Singer Sewing Machine Company in the mid 1850s, the current, regulated era of franchising can be traced to October 21, 1979. On that date, the Federal Trade Commission issued a trade regulation rule that required franchisors to disclose to prospective franchisees specific information about the franchisor organization, its principals and the investment that the franchisee must make to enter the franchise system. In this study, we examine the survival of new franchisors established during the current regulated period.

While some organizational theorists have avoided studying franchisors because they question whether or not franchisors are an organizational form, franchising is a useful setting for examining the survival of organizations for four reasons.² First, franchising allows researchers to explicitly examine the effect of different terms of agency contracts on firm survival since these terms are publicly disclosed. Second, to reduce transaction costs, franchisors typically offer standard contracts to all franchisees on a take-it-or-leave-it basis. This makes the variation in contracting a firm-level phenomenon and allows researchers to examine the firm-level effect of agency contracting. Third, unlike technology licensors or R&D contractors, franchisors develop standard operations across their licensees. This means that one can examine the effects of different factors on firm survival while holding the production process constant. Fourth, since franchise law varies across states, one can explore the effect of imprinting on firm survival by examining the effect of differences in founding location.

Theory Development and Hypotheses

Institutional theory argues that firm survival depends, in part, on the acquisition of cognitive and sociopolitical legitimacy (Meyer and Rowan 1977). Cognitive legitimacy is the degree to which an organization's activities are taken for granted. Sociopolitical legitimacy is the "extent to which a new form conforms to recognized principles or accepted rules and standards" (Aldrich and Fiol 1994, p. 646). Legitimacy enhances survival by making it easier for new firms to obtain access to resources (Aldrich and Auster 1986), attract customers (Wiewel and Hunter 1985), answer challenges about competence, combat competitive threats (Baum and Oliver 1991), and achieve perceived reliability (Hannan and Freeman 1984). Institutional theory also argues that policies established at founding imprint a firm with the characteristics of that place, and that these policies influence later firm survival (Stinchcombe 1965). In the section below, we

² We are grateful to Paul Ingram for the explanation of why organizational theorists have not examined franchisors.

develop specific hypotheses about the effect of cognitive legitimacy, socio-political legitimacy, and imprinting on the survival of new franchisors over time.

Cognitive Legitimacy

When a firm engages in a new activity for the first time, it needs to establish internal and external norms, new roles for organization members, standard operating procedures, and new patterns for interacting. The fact that these activities are not yet taken for granted creates a liability of newness (Stinchcombe 1965). The time and effort that the organization must expend for members to learn new roles, socialize strangers, and establish routines and procedures, make firms engaging in new activities more likely to fail (Hannan and Freeman 1984). However, over time, people learn routines, procedures, roles, and patterns for interacting in ways that become reliable, reproducible, and taken for granted (Stinchcombe 1965). The taken for grantedness of activities allows the organization to “conserve time and other organizing resources” (Aldrich and Fiol 1994, p. 648), which enhance survival prospects. Previous research has shown that cognitive legitimacy is enhanced as firms become older (Carroll and Delacroix 1982). This argument leads to Hypothesis 1:

Hypothesis 1. Greater age will decrease the probability of new franchisor failure.

Firms also have greater cognitive legitimacy when they are larger (Aldrich and Auster 1986). Larger organizations are more visible, more powerful and more prestigious, which enhance their taken for granted nature. Larger firms are perceived as having greater ease in raising capital, having greater long term stability, and as having better internal labor markets (Singh and Lumsden 1990). Previous research has shown that the cognitive legitimacy of firms is enhanced if they are larger (Carroll and Delacroix 1982). This argument leads to Hypothesis 2:

Hypothesis 2. Larger size will decrease the probability of new franchisor failure.

Socio-Political Legitimacy

When a firm engages in an activity for the first time, its management can rarely convince others that it knows

the “right” way to do things. Uncertainty about the value of the new organization’s way of doing things makes it difficult to gain the support of stakeholders. The firm can reduce the uncertainty to external constituents by doing things in a way that is already accepted by them as appropriate and valid (Aldrich and Fiol 1994). One of the most important mechanisms for obtaining sociopolitical legitimacy is certification by powerful institutional actors. Podolny (1993) explains that when the attributes of an organization cannot be directly observed, external constituents infer them from attributions made by respected institutions. Therefore, certification by institutions that possess social acceptance also can enhance the prospects of a new organization (Scott and Meyer 1983).

Although sociopolitical approval is granted by many institutions—governments, financial institutions, and other societal actors—certification by the media, which often provides information about new organizations, play a particularly important legitimizing role (Baum and Oliver 1991). Rao (1994) explains that publications like *A.M. Best*, *Moody’s*, *Consumer Reports*, *J.D. Powers*, and business magazines like *Business Week* and *Entrepreneur Magazine*, legitimate new firms through rankings. Media certification reduces uncertainty, the cost of consumer search, and the difficulty of measuring intangible capabilities, thereby allowing firms to enhance their perceived status (Baum and Powell 1995). Moreover, media rankings differentiate the amount of approval allotted to individual firms, allowing different firms to be allocated different levels of approval (Hybels 1995).

Rao (1994, p. 32) has shown that certification is survival enhancing for new firms.

Certification contests are *social tests* of products and organizations . . . [that] legitimate organizations . . . because of the taken for granted axiom that winners are ‘better’ than losers and the belief that contests embody the idea of rational and impartial testing. . . . As a result, certification contests enable organizations to score favorably in relation to their rivals . . . and generate status orderings of organizations that determine their access to resources. . . . By creating status orderings, certification contests . . . enable higher status firms to extract greater rewards for producing even the same good as lower status firms, and thereby . . . higher survival prospects.

This argument leads to Hypothesis 3:

Hypothesis 3. *External certification will decrease the probability of new franchisor failure.*

Imprinting

Firms are imprinted by their place of founding with a particular way of operating that influences the firm even when the initial environmental effect is gone (Stinchcombe 1965, Carroll and Delacroix 1982). DiMaggio and Powell (1983) argue that this imprinting occurs because new organizations must adhere to local norms, legal and regulatory policies to obtain resources. Once a policy is established, however, it becomes difficult to change. People prefer predictability and reliability, leading organizations to favor stability (Singh et al. 1986). Moreover, policies become embedded in ties to the institutional environment (Granovetter 1985); and routines and procedures become perceived as the only acceptable way of doing things (Meyer and Rowan 1977). Thus, firms are severely constrained in their ability to change policies previously established (Hannan and Freeman 1984). In franchising, Lafontaine and Shaw (1996) have observed that once franchisors set contract terms, they change them very little over time. Shane (1998) showed that these policies persist even when they lead to the failure of the franchise system.

The legal environments of the states in which franchisors are founded contribute to this imprinting effect. New franchisors must attract franchisees, but the threat of franchisor hold-up makes this difficult. Franchisees are concerned that franchisors will appropriate quasi-rents by opportunistically threatening to terminate them after they have made specific investments. Therefore, franchisors develop policies to overcome this problem; and the different legal environments in which systems are founded influence these policies. Fourteen states (Arkansas, California, Connecticut, Delaware, Hawaii, Illinois, Indiana, Michigan, Minnesota, Nebraska, New Jersey, Virginia, Washington, and Wisconsin), have termination laws in which franchisors are required to show "good cause" to terminate franchisees before the expiration dates of their contracts (Brickley et al. 1991). "Good cause" is defined as noncompliance with the terms of

the franchise contract and does not include general poor performance (Williams, forthcoming). If franchisors terminate franchisees without "good cause" in "termination" states, they are required to compensate franchisees for their losses (Klein 1995). Therefore, termination laws reduce the threat of opportunistic hold-up by franchisors by making termination more costly.

By providing franchisees with protection against opportunistic franchisors, termination laws lower the cost of attracting qualified franchisees.

"If franchisees are risk averse and the termination laws reduce uncertainty about potential quasi-rent appropriation by franchise companies . . . [then] termination laws reduce the costs of franchising relative to company-ownership and result in more franchising" (Brickley et al. 1991, p. 110).

Given the greater barriers to termination in termination states, franchisors founded in these states more easily attract applications from qualified franchisees. Consequently, franchises founded in these states are structured to use franchising more heavily relative to company ownership of outlets.

Franchisors established in termination states become imprinted with routines for managing a higher proportion of franchised outlets than firms which are founded in nontermination states. Even when these franchisors expand into nontermination states, and the laws applicable to franchisee termination are different, the initial imprinting of the systems' founding location influences their approach to franchising. Therefore, franchisors founded in termination states are less likely to survive if they maintain a lower proportion of franchised outlets. This argument leads to Hypothesis 4.^{3,4}

³ There is an alternative argument about the effect of termination laws which is not supported by the data. Adoption of termination laws may lead to higher moral hazard costs and thus lead to less franchising in termination states.

⁴ As one of the anonymous reviewers pointed out, there is an alternative explanation for this hypothesis. Firms founded in termination states are more likely to expand to other termination states. Those franchise systems that "cross-over" fail because they have the wrong "fit." Our data cannot distinguish between the fit explanation and the imprinting explanation since they will yield the same empirical results.

Hypothesis 4. *Franchisors founded in termination states will be more likely to fail if they use company ownership more intensely.*

Imprinting also influences franchisor policies toward outlet capitalization. The ability of new franchisors to attract franchisees is also constrained by a lack of information about the quality of the new franchise system. This situation creates the potential for low quality franchisors to opportunistically misrepresent their quality to franchisees (Gallini and Lutz 1992), and makes franchisees reluctant to contract with franchisors. To combat this adverse selection problem, qualified franchisors adopt policies to disclose information to franchisees. The policies that they adopt are influenced by the legal environments of the states in which the systems are founded. Sixteen states (California, Florida, Hawaii, Illinois, Indiana, Maryland, Michigan, Minnesota, New York, North Dakota, Oregon, Rhode Island, South Dakota, Virginia, Washington, and Wisconsin) have laws which require franchise system registration with state authorities. Registration provides information about the franchisor's system which reduces the adverse selection problem and makes it easier for franchisors to attract franchisees.

However, registration also influences franchisors to adopt a policy of lower outlet capitalization. Regulators in registration states typically argue that an undercapitalized franchisor is an unreasonable risk to franchisees and deny registration or impose escrow or bonding requirements on poorly capitalized franchisors (Kaufmann 1992). Moreover, regulators in these states usually allow registration of only those franchise systems for which the franchisor's net worth exceeds the franchisee's required capitalization. This preference for lower outlet capitalization among regulators in registration states means that franchisors founded in registration states are designed with lower outlet capitalization.

Franchisors founded in registration states become imprinted with low capitalization policies; and their survival depends on the maintenance of these policies. Therefore, even as these franchise systems expand to states which do not have registration requirements, these firms are more likely to survive if they have

lower outlet capitalization. This argument leads to Hypothesis 5:

Hypothesis 5. *Franchisors founded in registration states will be more likely to fail if they have higher levels of outlet capitalization.*

Methodology

Data

We examined the survival of 1292 new U.S. headquartered business format franchisors established in the United States between 1979 and 1996. The analysis used data collected from *Entrepreneur Magazine's* annual listing of franchise systems, which assembles information on the existence or nonexistence of the franchisors, the location of the firm at founding, and annual data on each system's franchise fee, royalty rate, outlet capitalization, franchisee financing, number of company-owned and franchised outlets, and a numerical ranking of the system based on a proprietary formula.

Entrepreneur Magazine obtains its data by surveying annually all franchisors that it knows to exist. Similar to surveys conducted by academics, *Entrepreneur Magazine's* list includes only information from firms which choose to respond to the survey. Although no source identifies the entire population of business format franchisors operating in the United States, previous researchers have estimated *Entrepreneur Magazine* captures half of all franchisors and most new ones (Lafontaine 1995). *Entrepreneur Magazine* verifies the information contained in the magazine; and franchisors have a strong incentive to provide accurate information since prospective franchisees are likely to verify it (Scott 1995).

Entrepreneur Magazine's list is representative of the population of business format franchisors operating in the United States. Shane (1996) examined 138 firms that first offered franchises in the United States in 1983 by compiling data from *Franchise Annual* and *Entrepreneur Magazine* and found that the data provided by the two sources are unbiased. Shane (1998) found no significant differences between lists of new franchise systems started between 1981 and 1983 taken from *Entrepreneur Magazine*, *IFA's Franchise Opportunities*

Table 1 Number of Franchise System Entrants and Exits: 1979–1996

Year	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	Total
Number Started	56	118	81	123	78	61	53	72	85	75	75	59	73	60	44	61	61	57	1292
Number Failed	27	48	54	73	116	42	75	74	75	58	61	85	56	83	40	64	63	3	1097

Guide, Franchise Annual, and Sourcebook of Franchise Opportunities on royalty rate, franchise fee, system age, number of outlets, advertising rate, and industry distribution.

The dependent variable was the probability of franchisor failure. We define entry as occurring in the year that *Entrepreneur Magazine* indicated that the franchise system was established. We define failure as exit from *Entrepreneur Magazine's* listing, and nonreemergence in the listing at a later date. Shane (1996, p. 224) examined 138 firms that first began to franchise in the United States in 1983 and found that none of the firms in his sample that were delisted from *Entrepreneur Magazine*, “show up in later years of *Entrepreneur Magazine* or *Franchise Annual*.”⁵

During the 1979–1996 period, 1097 (85 percent) of the franchisors failed. Table 1 shows the entries and exits of franchise systems by year. These failure rates are consistent with Shane (1996) who found a 75 percent failure rate of new franchisors across a ten year period, and Lafontaine and Shaw (1998) who found a 70 percent failure rate over 12 years.

Analysis was conducted on 1292 firms, called cases by researchers of firm mortality. Cox regression analysis was used to test the effects of the covariates on franchisor survival. Cox regression analysis controls for the effects of right censoring, and thus avoids the problem of biased estimators that exists when a case is misclassified as surviving when, in fact, it has only not been observed to fail. Previous organizational ecology

⁵ In franchising, the problem of accounting for mergers and acquisitions is not as significant as in other studies of firm survival because the brand name of the franchise system is a significant asset of the business (Lafontaine and Shaw 1998). Therefore, the chain name is almost always preserved following a merger or acquisition and exits of franchisors from directories due to merger- or acquisition-induced name change is small.

research (Hannan and Freeman 1984) shows how right censoring leads to biased results with alternative statistical techniques, such as logistic regression.

The failure rate model was estimated as an instantaneous hazard rate. Each franchise system's information was broken into annual spells, with the new covariate information included each year. There are 3608 firm-year observations in the sample.⁶ A firm-year observation is the set of covariate values for a particular firm for a particular year. The effects of the covariates were tested against survival during the following calendar year. As is the norm in research on firm mortality, firms that failed during the observation period were labeled events. If the organization did not fail during the period of the study, it was treated as right censored.

Operationalization of the Institutional Theory Covariates

Following institutional theory arguments about cognitive legitimacy (Baum and Oliver 1991), we test the effects of firm age and firm size on firm survival. Age is operationalized as the log of the number of years since firm incorporation.⁷ Size is operationalized as the log of the number of units in the chain (Ingram and Baum 1997).

Following Rao (1994), we test the effects of media certification by operationalizing *Entrepreneur Magazine's*

⁶ We use the term “firm-year” to be consistent with previous research on organizational mortality.

⁷ Readers should note that the age of the franchise system (the number of years since the system was founded) and age of the firm (the number of years since firm incorporation) are correlated 0.97. Because of multicollinearity, we could not include both measures in the same regression equations. Readers should note, however, that the same results are found if age is measured as the age of the franchise system, and the two different concepts of age are statistically indistinguishable in this study.

ranking of franchise systems. The ranking is based on a proprietary formula that incorporates the quantitative data that is reported in the magazine with the subjective assessment of the magazine's experts.⁸ By incorporating the objective measures into the regression models independently, our measure of *Rank* represents the behavioral response of people to the system and measures certification as defined by institutional theory (Baum and Powell 1995).

We recognize that the *Entrepreneur Magazine* ranking is an imperfect measure. Some researchers question the use of rankings as a measure of certification because rankings envision a behavioral response of people to certification itself and incorporate many different reputations, including those of financial stability and strength, litigation history, and termination policy. Moreover, to be listed in *Entrepreneur Magazine*, a franchise system must respond to the magazine's survey; and, to be ranked, the franchisor must provide information that the magazine can verify to be accurate by comparison to a uniform franchise offering circular.⁹ Despite these weaknesses, institutional theory argues that rankings, such as those of *Entrepreneur Magazine*, are valid measures of certification because media rankings represent the overall reputation of a firm, and because people act in response to this combined reputation when making decisions (Rao 1994).

We operationalize certification in three ways. First, since previous research on certification (e.g., Rao 1994) showed that the best functional form for the rank variable is its logarithm, we operationalize *Rank* as the log of the annual ranking of the franchise system by franchising experts in *Entrepreneur Magazine*.¹⁰ Second, we operationalize *Rank1* as a dummy variable of one if the franchise system was ranked by *Entrepreneur Mag-*

azine. Third, we operationalize *Rank2* as a scale of 1–9, in which 1 was assigned to unranked systems and the numbers 2–9 were assigned to each of the next 12.5 percent of the rankings. We test these alternative operationalizations in different regression models.

We measure the effects of imprinting by examining the effect on system survival of the interaction of franchisor policies with founding in different state legal environments. To capture the effects of state regulation, two dummy variables were created. *Termination* was coded 1 if the franchise system was founded in a state in which franchisee termination laws exist and 0 otherwise. Similarly, *Registration* was coded 1 if the franchise system was founded in a state in which registration requirements exist and 0 otherwise.¹¹

Operationalization of the Economic Theory Controls

We control for several variables taken from economic theory. First, we operationalize *System Growth* as the percentage rate of growth in the number of outlets over the previous two years.¹² Firm growth enhances the survival of new franchise systems by enabling them to reach minimum efficient scale (MES) more quickly. Since scale economies in marketing, purchasing, and administration reduce per unit costs as size increases in many industries in which franchising takes place, these economies provide an efficiency advantage to size by lowering costs relative to those of competitors (Chandler 1977). Therefore, new firms need to grow quickly or they will be driven out of business by more efficient competitors who operate with lower per unit costs (Martin 1988).

However, adverse selection problems increase as growth accelerates (Norton 1988). Principals must differentiate better qualified agents from worse qualified ones (Levinthal 1988). As firms grow faster, the information needed to make these decisions must be acquired more quickly and about people for whom the principal has less information, increasing the cost of

⁸ We have no knowledge of the effect of any political dynamics influencing the ranking system, but we cannot rule out the existence of such an effect.

⁹ If the information cannot be verified, then the system is listed, but not ranked.

¹⁰ The actual rank ranged from 1 to 501 and was reverse coded, with the best system receiving a rank of 501. All unranked franchisors were assigned a score of 1. We also examined different functional forms for the *Entrepreneur Magazine* ranking, and found that the natural logarithm best captured the certification effect.

¹¹ The current location of the headquarters and the location of headquarters at franchise system founding are statistically indistinguishable in this sample since their correlation exceeds 0.99.

¹² The results do not change if one-year system growth is used.

avoiding the adverse selection problem (Prescott and Visscher 1980). Moreover, rapid growth makes it hard for an undercapitalized franchisor to keep up with the investment in the infrastructure needed by the growing system. Finally, growth saturates markets, cannibalizing sales at existing outlets.

Over time, the beneficial effects of growth become dominated by the negative effects. Surviving franchisors are more likely to have reached MES, since franchisors that fail to reach MES tend to die. Consequently, over time, franchisors become increasingly likely to have reached minimum efficient scale. Once firms have reached MES, the benefits of growth begin to dissipate, while the adverse effects continue to grow. Consequently, over time, the effect of system growth on system survival goes from positive to negative.

Second, we control for the system royalty rate because it provides the primary incentive to both franchisors and franchisees (Lafontaine 1992). Franchisors with too high royalties have franchisee incentive problems, while franchisors with too low royalties have franchisor incentive problems (Rubin 1978). We do not predict the direction of this effect since different researchers have argued that royalty rates should have a positive, a negative, or a curvilinear effect (Lafontaine and Shaw 1996). *Royalty Rate* is operationalized as the ongoing percentage of sales that franchisees pay to the franchisor for the use of the trademark and operating support. Where a range of royalties was reported, the average was used. Where a flat royalty was reported, it was divided by the industry average level of sales to create a percentage.

Third, we control for the franchise fee, which is an investment in system specific assets which generates quasi-rents, motivates hold-up and makes the franchisee reluctant to invest (Lafontaine 1992). *Franchise Fee* is operationalized as the dollar value of the up-front fee that the franchisee pays to the franchisor to purchase an outlet. Where a range was provided, we used the mean.

Fourth, we include a dummy variable if the franchisor provides financing to the franchisee to control for franchisor resource constraints (Lafontaine 1992). Firms which have sufficient capital to finance franchi-

sees are more likely to have the necessary resources to survive over time (Caves and Murphy 1976).

Fifth, we examine the impact of efficient contracting for resources. We operationalize the relative emphasis of the franchise system on company ownership of outlets as *Company*, the percentage of total outlets that are company-owned. We examine the interaction of *Company X Capitalization* (the amount of money needed to open an outlet). Agency theory arguments about efficient risk bearing suggest that firms that have a high level of capitalization and a large percentage of company-owned outlets should be less likely to fail. When the agent is more risk averse than the principal, it is more efficient for the principal to insure the agent. Franchisees are typically more risk averse than franchisors because franchisees' risk involves employment risk—which cannot be diversified—and because franchisors typically have more wealth than franchisees (Brickley and Dark 1987). When risk-averse agents are required to bear risk, they make inferior investment decisions than less risk-averse actors. Since agent risk is a function of the size of the investment, inefficient risk bearing increases with the size of the investment that the franchisee is required to make (Brickley et al. 1991). Therefore, as the required investment by franchisees increases, franchisors that design agency contracts to allocate risk to themselves by owning more outlets should be less likely to fail.

Sixth, we examine the interaction between *Company X System Growth*. Agency theory suggests that firms which are growing rapidly should be more likely to fail if they rely more heavily on company-owned outlets. Franchising reduces the cost of agent selection since investment in a franchise system provides an incentive for agents to self-select (Norton 1988). As explained above, firms are more likely to experience adverse selection problems in identifying employees when they grow rapidly. Thus, rapid growth raises the value of mechanisms like franchising that minimize the adverse selection problem by providing an incentive for outlet operators to self-select (Shane 1996).

Seventh, we examine the interaction of *Company X Time*. Previous research (e.g., Lafontaine and Kaufmann 1994) has argued that an emphasis on franchising is

advantageous in a system's early years because the franchisor needs to obtain resources and establish a brand name. These activities are enhanced by franchising, which allows more outlets to be created per unit of resources than does company ownership of outlets.

Operationalization of the Ecological Theory Controls

We also include controls suggested by ecological theory. Ecological theory argues that firms are relatively nonadaptive and suffer from a liability of change which reduces the reliability stakeholders favor (Hannan and Freeman 1984). We measure *Fee Growth*, the two-year percentage change in the franchise fee; *Royalty Growth*, the two-year percentage change in the royalty rate; and *Capitalization Growth*, the two-year change in the amount of capitalization necessary to open an outlet.¹³ We also measure *Finance Change* as a dummy variable of -1 if the franchisor eliminated financing, 0 if the franchisor did not change financing policies, and 1 if the franchisor added financing.

Other Controls

Because the survival prospects of firms vary by industry (Dunne et al. 1988, Fladmoe-Lindquist and Jacques 1996), we also used a set of dummy variables for different industry sectors, except for computer-related industries, to control for industry. We control for the rate of growth of state per capita income growth to capture the portion of firm survival that results from between state variation in economic performance, rather than from between state differences in franchise regulation.

Results

Table 2 shows the Cox regressions predicting franchisor failure. The regressions measure the effect of the independent variables on the likelihood that the franchisor will fail. A positive coefficient demonstrates that the independent variable has a positive effect on franchisor failure.

Model 1 shows the effect of the control variables.

¹³ Operationalization of these variables as one-year growth does not change the results.

Model 2 adds the effect of the institutional theory variables. Model 3 adds the interactions of *System Growth X Time* and *Company X Time*. Model 4 tests the robustness of the stock variables, by dropping the change variables and increasing the sample size. Model 5 eliminates the outliers for skewed variables that could not be transformed to test the robustness of the results for these variables. Model 6 and Model 7 test the robustness of the *Rank* variable by replacing it with dichotomized and trichotomized versions, respectively.

Model 1 (chi-square = 180.08, $p < 0.05$) shows that the economic, ecological and industry control variables explain some of the variance in the survival of new franchisors over time. Among the industry differences, new franchisors in the *Amusement* (Exp $B = 2.86$, $p < 0.10$), *Educational Services* (Exp $B = 3.71$, $p < 0.05$), *Home Furnishings* (Exp $B = 2.41$, $p < 0.10$), *Lodging*, (Exp $B = 3.44$, $p < 0.05$), *Photographic and Video Services* (Exp $B = 4.68$, $p < 0.01$), *Retail Food* (Exp $B = 3.41$, $p < 0.05$), *Quick Service* (Exp $B = 2.33$, $p < 0.05$), and *Miscellaneous Retail* (Exp $B = 2.58$, $p < 0.05$) industries, are more likely to fail than new franchisors in other industries. However only the effect for *Photographic and Video Services* is robust across all models. Among the ecological controls, *Financing Change* (Exp $B = 1.69$, $p < 0.01$) and *Fee Growth* (Exp $B = 1.01$, $p < 0.01$) increase the probability of system failure; however, the effects of these variables are not robust across all models.

Among the economic theory variables, *Company X System Growth* (Exp $B = 1.01$, $p < 0.01$), makes the new franchise system more likely to fail. Holding *Company* at the mean value, we find that the proportional hazard for failure is 34.31 percent when *System Growth* is in the lower quartile and 97.49 percent when *System Growth* is in the upper quartile. In Model 1, *Capitalization X Company* (Exp $B = 0.99$, $p < 0.10$) makes the new franchisor less likely to fail.

However, when we add the institutional theory variables in models 2, 3, 5, and 6, we find that the effect of effect of *Capitalization X Company* on firm failure turns positive. For example, in Model 2, when we hold *Company* at the mean value, we find

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New Firm Survival

Table 2 Cox Regressions Predicting the Failure of New Franchise Systems (1979–1996)

Variables	Model 1@			Model 2@			Model 3@		
	<i>B</i>	S.E.	Exp. <i>B</i>	<i>B</i>	S.E.	Exp. <i>B</i>	<i>B</i>	S.E.	Exp. <i>B</i>
<i>Institutional Variables</i>									
(Ln) Age	#			−0.937**	0.122	0.39	−0.925**	0.123	0.40
(Ln) Size	#			−0.472**	0.063	0.62	−0.479**	0.063	0.62
Rank	#			−0.003**	0.001	0.99	−0.003**	0.001	0.99
Termination	#			−0.655**	0.182	0.52	−0.629**	0.184	0.53
Termination × Company	#			0.017**	0.004	1.02	0.017**	0.004	1.02
Registration	#			−0.556	0.390	0.57	−0.644	0.394	0.53
Registration × Capital	#			0.148+	0.089	1.16	0.166+	0.090	1.18
<i>Economic and Ecological</i>									
<i>Controls</i>									
Franchise Fee	0.002	0.003	1.01	0.004	0.003	1.01	0.003	0.003	1.01
Royalty Rate	−0.026	0.020	0.97	−0.015	0.023	0.99	−0.010	0.023	0.99
(Ln) Capitalization	−0.105+	0.063	0.90	−0.214**	0.079	0.81	−0.201*	0.080	0.82
Financing	−0.023	0.165	0.98	0.226	0.165	1.25	0.234	0.166	1.26
Company	0.022**	0.005	1.02	−0.015*	0.006	0.99	−0.018*	0.007	0.98
System Growth	−0.001	0.001	0.99	0.001	0.001	1.01	−0.001**	0.001	0.99
Company × System	0.001**	0.001	1.01	0.001**	0.001	1.01	0.001**	0.001	1.01
Company × Capital	−0.002+	0.001	0.99	0.003*	0.001	1.01	0.003+	0.001	1.01
Fee Growth	0.001**	0.001	1.01	−0.001	0.001	0.99	0.001	0.001	1.01
Royalty Growth	0.001	0.002	1.01	0.001	0.002	1.01	0.001	0.002	1.01
Capital Growth	0.001	0.001	1.01	0.001*	0.001	1.01	0.001*	0.001	1.01
Financing Change	0.522**	0.175	1.69	0.295+	0.170	1.34	0.286+	0.170	1.33
<i>Interactions with Time</i>									
Company × Time	#			#			0.001	0.001	1.01
System Growth × Time	#			#			0.001**	0.001	1.01
<i>Other Controls</i>									
Economic Growth	0.004	0.006	1.01	−0.004	0.008	0.99	−0.003	0.008	0.99
Amusement	1.049+	0.562	2.86	0.176	0.581	1.19	0.144	0.583	1.15
Automobile Rental	1.275	0.813	3.58	1.392+	0.818	4.02	1.356+	0.818	3.88
Automobile Service	0.319	0.430	1.38	0.374	0.435	1.45	0.344	0.435	1.41
Business Services	0.208	0.434	1.23	0.538	0.434	1.71	0.514	0.434	1.67
Building Products	0.139	0.473	1.15	0.672	0.495	1.96	0.676	0.495	1.97
Children's Products	0.162	0.695	1.18	−0.224	0.699	0.80	−0.256	0.699	0.77
Clothing	0.394	0.455	1.48	0.269	0.464	1.31	0.253	0.465	1.29
Desserts	0.083	0.557	1.09	0.313	0.568	1.37	0.285	0.569	1.33
Educational Services	1.310*	0.594	3.71	1.246*	0.602	3.48	1.197*	0.602	3.31
Employment Agencies	−0.155	0.472	0.86	0.343	0.480	1.41	0.245	0.484	1.28
Health and Beauty	0.200	0.444	1.22	1.592**	0.442	4.91	1.551**	0.444	4.72
Home Furnishings	0.880+	0.508	2.41	0.944+	0.518	2.57	0.929+	0.519	2.53
Lodging	1.235*	0.561	3.44	1.319*	0.577	3.74	1.309*	0.578	3.70
Maintenance	0.184	0.462	1.20	0.276	0.461	1.32	0.187	0.466	1.21
Miscellaneous	−0.950	0.710	0.39	−0.278	0.733	0.76	−0.271	0.732	0.76
Miscellaneous Retail	0.948*	0.467	2.58	1.052*	0.475	2.86	1.038*	0.475	2.82
Miscellaneous Services	0.121	0.574	1.13	0.425	0.583	1.53	0.475	0.579	1.61
Pet Services	−1.080	1.082	0.34	−1.830+	1.088	0.16	−1.801+	1.088	0.17
Photography and Video	1.543**	0.450	4.68	1.591**	0.457	4.91	1.565**	0.457	4.78
Printing	−0.133	0.561	0.88	0.065	0.565	1.07	0.039	0.566	1.04

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Table 2 *Continued*

Variables	Model 1@			Model 2@			Model 3@		
	<i>B</i>	S.E.	Exp. <i>B</i>	<i>B</i>	S.E.	Exp. <i>B</i>	<i>B</i>	S.E.	Exp. <i>B</i>
Quick Service	0.844*	0.411	2.33	0.584	0.417	1.79	0.552	0.417	1.74
Real Estate	-0.204	0.715	0.82	-0.695	0.720	0.50	-0.688	0.720	0.50
Restaurants	0.629	0.439	1.88	0.480	0.445	1.62	0.433	0.447	1.54
Retail Food	1.227*	0.507	3.41	0.635	0.513	1.89	0.600	0.514	1.82
Shipping and Packing	0.741	0.513	2.10	0.306	0.516	1.36	0.293	0.516	1.34
Personal Services	0.678	0.450	1.97	0.509	0.451	1.66	0.501	0.450	1.65
-2 Log Likelihood	4574.56			4298.16			4283.85		
Chi-square	180.08*			415.51**			441.21**		
Pseudo <i>R</i> -squared	0.032			0.090			0.093		
Variables	Model 4++			Model 5+++			Model 6@		
	<i>B</i>	S.E.	Exp. <i>B</i>	<i>B</i>	S.E.	Exp. <i>B</i>	<i>B</i>	S.E.	Exp. <i>B</i>
<i>Institutional Theory</i>									
(Ln) Age	-0.627**	0.048	0.53	-0.882**	0.124	0.41	-0.886**	0.122	0.41
(Ln) Size	-0.285**	0.035	0.75	-0.492**	0.064	0.61	-0.523**	0.056	0.59
Rank	-0.004**	0.001	0.99	-0.003**	0.001	0.99	-0.542**	0.158	0.58
Termination	-0.432**	0.108	0.65	-0.527**	0.185	0.59	-0.620**	0.184	0.54
Termination × Company	0.008**	0.002	1.01	0.014**	0.004	1.01	0.017**	0.004	1.02
Registration	-0.444*	0.207	0.64	-0.651+	0.395	0.52	-0.605	0.394	0.55
Registration × Capital	0.132**	0.051	1.14	0.166+	0.089	1.18	0.157+	0.090	1.17
<i>Economic and Ecological Controls</i>									
Franchise Fee	-0.001	0.002	1.01	0.004	0.005	1.01	0.004	0.003	1.01
Royalty Rate	-0.033*	0.014	0.97	0.006	0.027	1.01	-0.010	0.023	0.99
(Ln) Capitalization	-0.119**	0.041	0.89	-0.179*	0.084	0.84	-0.209**	0.080	0.81
Financing	0.195*	0.078	1.22	0.222	0.168	1.25	0.205	0.166	1.23
Company	0.001	0.002	1.01	-0.016*	0.007	0.98	-0.021**	0.007	0.98
System Growth	#			-0.001*	0.001	0.99	-0.001**	0.001	0.99
Company × System	#			0.001**	0.001	1.01	0.001**	0.001	1.01
Company × Capital	#			0.002+	0.001	1.01	0.003*	0.001	1.01
Fee Growth	#			-0.001	0.001	0.99	-0.001	0.001	0.99
Royalty Growth	#			0.001	0.002	1.01	0.001	0.002	1.01
Capital Growth	#			-0.001	0.001	0.99	0.001*	0.001	1.01
Financing Change	#			0.230	0.170	1.26	0.285+	0.169	1.33
<i>Interactions with Time</i>									
Company × Time	0.001+	0.001	1.01	0.001	0.001	1.01	0.001	0.001	1.01
System Growth × Time	#			0.001**	0.001	1.01	0.001**	0.001	1.01
<i>Other Controls</i>									
Economic Growth	-0.002	0.004	0.99	0.039	0.027	1.04	-0.003	0.007	0.99
Amusement	0.162	0.262	1.18	0.113	0.586	1.12	0.204	0.582	1.23
Automobile Rental	0.074	0.734	1.08	1.366+	0.829	3.92	1.414+	0.817	4.11
Automobile Service	0.039	0.217	1.04	0.285	0.438	1.33	0.392	0.435	1.48
Business Services	0.132	0.212	1.14	0.402	0.437	1.49	0.537	0.433	1.71
Building Products	0.102	0.252	1.11	0.600	0.498	1.82	0.608	0.493	1.84
Children's Products	-0.139	0.317	0.87	-0.316	0.701	0.73	-0.255	0.700	0.77

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Table 2 *Continued*

Variables	Model 4++			Model 5+++			Model 6@		
	<i>B</i>	S.E.	Exp. <i>B</i>	<i>B</i>	S.E.	Exp. <i>B</i>	<i>B</i>	S.E.	Exp. <i>B</i>
Clothing	-0.331	0.264	0.72	0.258	0.468	1.29	0.331	0.465	1.39
Desserts	0.220	0.261	1.25	0.190	0.582	1.21	0.338	0.569	1.40
Educational Services	0.460	0.287	1.58	1.072+	0.604	2.92	1.202*	0.601	3.33
Employment Agencies	-0.115	0.262	0.89	0.149	0.492	1.16	0.272	0.484	1.31
Health and Beauty	0.615**	0.217	1.85	1.401**	0.448	4.06	1.512**	0.444	4.53
Home Furnishings	0.435+	0.247	1.54	0.846	0.523	2.33	0.963+	0.520	2.62
Lodging	0.239	0.383	1.27	1.214*	0.589	3.37	1.207*	0.578	3.34
Maintenance	-0.068	0.235	0.93	0.215	0.466	1.24	0.197	0.466	1.22
Miscellaneous	-0.540	0.429	0.58	-0.242	0.735	0.78	-0.335	0.733	0.72
Miscellaneous Retail	0.515*	0.227	1.67	0.946*	0.478	2.57	1.078*	0.475	2.94
Miscellaneous Services	0.338	0.270	1.40	0.548	0.581	1.73	0.421	0.580	1.52
Pet Services	-0.518	0.403	0.60	-1.734	1.089	0.18	-1.763	1.088	0.17
Photography and Video	0.439+	0.235	1.55	1.484**	0.459	4.41	1.535**	0.458	4.64
Printing	-0.151	0.306	0.86	-0.100	0.571	0.91	0.048	0.565	1.05
Quick Service	0.068	0.205	1.07	0.497	0.421	1.64	0.608	0.417	1.84
Real Estate	-0.301	0.359	0.74	-0.920	0.831	0.40	-0.625	0.721	0.54
Restaurants	-0.018	0.230	0.98	0.335	0.450	1.40	0.450	0.447	1.57
Retail Food	0.147	0.257	1.16	0.560	0.517	1.75	0.719	0.514	2.05
Shipping and Packing	-0.382	0.316	0.68	0.280	0.521	1.32	0.321	0.517	1.38
Personal Services	-0.041	0.235	0.96	0.466	0.453	1.59	0.474	0.450	1.61
-2 Log Likelihood	14041.51			4213.76			4282.84		
Chi-square	850.68**			427.4**			449.57**		
Pseudo <i>R</i> -squared	0.062			0.095			0.094		
	Model 7@								
Variables	<i>B</i>	S.E.	Exp. <i>B</i>						
<i>Institutional Theory</i>									
(Ln) Age	-0.905**	0.122	0.40						
(Ln) Size	-0.486**	0.061	0.62						
Rank	-0.119**	0.034	0.89						
Termination	-0.617**	0.184	0.54						
Termination × Company	0.017**	0.004	1.02						
Registration	-0.644	0.394	0.53						
Registration × Capitalization	0.166+	0.090	1.18						
<i>Economic and Ecological</i>									
<i>Controls</i>									
Franchise Fee	0.004	0.003	1.01						
Royalty Rate	-0.011	0.023	0.99						
(Ln) Capitalization	-0.202*	0.080	0.82						
Financing	0.232	0.166	1.26						
Company	-0.019**	0.007	0.98						
System Growth	-0.001**	0.001	0.99						
Company × System	0.001**	0.001	1.01						
Company × Capital	0.003+	0.001	1.01						
Fee Growth	-0.001	0.001	0.99						

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Table 2 *Continued*

Variables	Model 7@		
	<i>B</i>	S.E.	Exp. <i>B</i>
Royalty Growth	0.001	0.002	1.01
Capital Growth	0.000*	0.000	1.01
Financing Change	0.279	0.170	1.32
<i>Interactions With Time</i>			
Company × Time	0.001	0.001	1.01
System Growth × Time	0.001**	0.001	1.01
<i>Other Controls</i>			
Economic Growth	-0.003	0.008	0.99
Amusement	0.178	0.582	1.20
Automobile Rental	1.360+	0.818	3.90
Automobile Service	0.369	0.435	1.45
Business Services	0.529	0.433	1.70
Building Products	0.666	0.495	1.95
Children's Products	-0.256	0.699	0.77
Clothing	0.293	0.464	1.34
Desserts	0.301	0.570	1.35
Educational Services	1.204*	0.602	3.33
Employment Agencies	0.265	0.484	1.30
Health and Beauty	1.535**	0.444	4.64
Home Furnishings	0.958+	0.519	2.61
Lodging	1.265*	0.578	3.54
Maintenance	0.201	0.466	1.22
Miscellaneous	-0.288	0.732	0.75
Miscellaneous Retail	1.053*	0.475	2.87
Miscellaneous Services	0.472	0.580	1.60
Pet Services	-1.790	1.088	0.17
Photography and Video	1.550**	0.457	4.71
Printing	0.032	0.565	1.03
Quick Service	0.575	0.417	1.78
Real Estate	-0.649	0.720	0.52
Restaurants	0.438	0.447	1.55
Retail Food	0.635	0.514	1.89
Shipping and Packing	0.307	0.516	1.36
Personal Services	0.500	0.450	1.65
-2 Log Likelihood	4283.08		
Chi-square	441.86		
Pseudo <i>R</i> -squared	0.094		

#: Variable not included in the regression equation; ** = $p < 0.01$; * = $p < 0.05$; + = $p < 0.10$ in two-tailed tests. @ = 1578 firm years, 495 cases, 391 events; +++ = 1427 firm years, 479 cases; 349 events; ++++ = 3608 firm years, 1292 cases, 1097 events.

that the proportional hazard for failure is -27.07 percent when *Capitalization* is in the lower quartile and 5.16 percent when *Capitalization* is in the upper quartile. Since much of the prior agency theory work on franchising fails to control for firm age and size (e.g., Brickley and Dark 1987, Brickley et al.

1991), our results suggest this prior work is under-specified. While contradicting the efficient risk bearing hypothesis, the results for this variable support Shane (1996), who argued that efficient contracting for resource acquisition purposes enhances new franchisor survival.

Model 2 adds the institutional variables (chi-square = 415.51, $p < 0.01$). The addition of the institutional variables improves the fit of the overall model, increasing the pseudo r -square from 0.03 to 0.09 (chi-square of the change = 235.43, $p < 0.01$). *Age* (Exp $B = 0.39$, $p < 0.01$), *Size* (Exp $B = 0.62$, $p < 0.01$), and *Rank* (Exp $B = 0.99$, $p < 0.01$), significantly reduce the probability of new franchisor failure. As was expected, *Company X Termination* (Exp $B = 1.02$, $p < 0.01$), increases the probability of new franchisor failure. For a termination state, we find that the proportional hazard for failure is 2.25 percent when *Company* is in the lower quartile and 23.17 percent when *Company* is in the upper quartile. Also as expected, high capitalization franchise systems had higher failure rates if headquartered in registration states, *Capitalization X Registration* (Exp $B = 1.16$, $p < 0.10$). For a registration state, we find that the proportional hazard for failure is 53.57 percent when *Capital* is in the lower quartile and 58.04 percent when *Capital* is in the upper quartile.

Model 3 (chi-square = 441.21, $p < 0.01$) examines the differential effect of *System Growth* and *Company* on the survival of new franchisors over time. The main effect of *System Growth* reduces system failure (Exp. $B = 0.99$, $p < 0.01$), but this effect dissipates over time, as shown by the interaction of *System Growth X Time* (Exp $B = 1.01$, $p < 0.01$). Holding *System Growth* at the mean value, we find that the proportional hazard for failure is -48.63 percent when *Time* is in the lower quartile and -40.10 percent when *Time* is in the upper quartile. *Company X Time* has no significant effect on system failure.

Model 4 (chi-square = 850.68, $p < 0.01$) examines the robustness of the model by eliminating the change variables. This allows us to increase the sample size to include those franchisors which failed in their first two years and tests the consistency of the effects of the remaining variables to the group. All of the hypothesized variables remain significant and signed in the same direction, demonstrating the robustness of the results for these variables.

Model 5 (Chi-square = 427.4, $p < 0.01$) examines the robustness of the model by eliminating outliers for

Table 3 Summary of the Results

Hypothesis	Proposed Relationship	Finding
H1	Newer franchisors are more likely to fail	Confirmed
H2	Smaller franchisors are more likely to fail	Confirmed
H3	Franchisors with external certification are less likely to fail	Confirmed
H4	Franchisors from termination states are less likely to fail if they use franchising more heavily	Confirmed
H5	Franchisors from registration states are more likely to fail if they have greater capitalization	Confirmed

skewed variables that could not be transformed.¹⁴ The results suggest that the previous regression models are not driven by outliers and are robust.

Model 6 (Chi-square = 449.57, $p < 0.01$) and Model 7 (Chi-square = 441.86, $p < 0.01$) examine the robustness of the *Rank* variable to the alternative specifications of *Rank1* and *Rank2*, respectively. The results show that the effect of *Rank* on survival is robust to its specification.

Discussion

This study was motivated by the need to link economic and sociological explanations for the survival of new franchisors. While economists argue that efficiency is an important determinant of the survival of new organizations (Williamson 1985), sociologists argue that obtaining legitimacy is central to this process (Hannan and Freeman 1984).

This study demonstrates that the survival of new franchise systems is better explained by adding institutional explanations to economic ones. We found support for our five hypotheses, as Table 3 summarizes, after controlling for economic and ecological factors influencing the survival of new firms. Firm age (Hypothesis 1), firm size (Hypothesis 2), and media certification (Hypothesis 3) reduced the

¹⁴ We could not transform four skewed variables: system growth, fee growth, royalty growth, and capitalization growth. Log(10), natural log, and square root transformations for these variables were collinear and caused the models to fail to converge when included together in the regression equations.

hazard of failure. New franchisors were also imprinted by the location of their founding. Franchisors founded in termination states were less likely to fail if they made more intensive use of franchising (Hypothesis 4). Franchisors founded in registration states were less likely to fail if they had low levels of outlet capitalization (Hypothesis 5). These results suggest that by modeling the survival of new firms as a function of both economic efficiency and institutional factors, researchers can develop explanations for the survival of these firms that are neither over- nor undersocialized (Granovetter 1985).

Institutional Theory

This study also contributes directly to the development of institutional theory by providing evidence for the effects of certification on modern firms. While Rao (1994) provides important empirical evidence for the survival value of certification, fundamental economic and social changes since the turn of the century raise questions about the validity of his findings to the current era. Moreover, this study improves upon Rao (1994) by providing evidence of the survival value of certification in a cross-industry study. Previous studies of certification examine its effects only in one industry even though many forms of certification span industries.

Second, although previous research (e.g., Brickley et al. 1991) has shown that the legal environment influences franchisor behavior, the results provide the first evidence that the legal environment in which a franchise system is founded imprints a firm and influences the survival of the franchise system over time. This result is important to policy makers concerned with the impact of legislation on entrepreneurial activity. Moreover, since entrepreneurs may choose the location where they establish a franchise chain, this imprinting effect has implications for both institutional theory and strategic choice theory that future research should explore.

However, this study also indicates that institutional theory's opposition to the importance of market forces (e.g., Oliver 1991) is misplaced, at least in the context of a competitive, for profit setting like franchising. The results here show that economic efficiency does matter

in explaining the survival of contractual organizational arrangements.

Economic Theory

The results support some dimensions of economic theory better than others. We find support for Shane's (1996) argument that the emphasis on contracting is survival enhancing for new franchisors that are growing rapidly or have high capitalization outlets. We also find that growth is survival enhancing in the earliest years of the franchise system, but is survival inhibiting as the franchise system ages. However, royalty rates and franchise fees had little effect on the survival of new franchisors, despite arguments that the royalty rate is the key incentive to both franchisors and franchisees, and arguments that franchise fees represent the net present value of future returns to the franchisee from investment in the franchise system.¹⁵ This finding is important because many economic models of franchising suggest that the formal terms of the franchise contract are central to franchisor and franchisee performance (e.g., Lafontaine 1992).

We also find no evidence that franchisor survival is enhanced by increasing company-owned outlets at the margin as capitalization increases to the potential for franchisee inefficient risk bearing (Brickley and Dark 1987). In fact, once we control for omitted variable bias, we find that companies that *increase franchising* at the margin as capitalization increases are more likely to survive.

Finally, we found little support for systematic industry differences in new franchisor survival. Previous research has argued that the survival of new franchise systems should vary by industry because industries vary on the complexity of franchise concepts, the incentive and ability to free ride, labor and capital intensity, the use of monitoring mechanisms, the appropriateness of franchising as a mechanism to pursue business opportunities, and economic attractiveness (Shane, 1998). While new franchise systems in the photography and video industry were signifi-

¹⁵ We also examined the squared terms for royalty rates and franchise fees. However, we found no effects of these curvilinear terms on survival.

cantly more likely to fail than franchise systems in other industries, this industry is not systematically different from other industries on any of the theoretical dimensions described above. Moreover, failure was no more common in new franchising areas or in more highly regulated industries nor for certain industries in certain years. The absence of industry effects is consistent with Lafontaine and Shaw (1998) and Shane (1996, 1998), who found no significant industry effects on franchise system survival rates.

Franchising Research

The results also have implications for franchising research. Business format franchising now accounts for one third of all retail sales in the United States and over 13.5 percent of U.S. gross domestic product, making it an important subject for researchers to understand (Lafontaine and Shaw 1996). However, the use of inappropriate methodology has led previous researchers to draw erroneous conclusions about it. Using event history analysis, we find support for the effects of several franchisor characteristics on new franchisor survival in a dataset from which Lafontaine and Shaw (1998, p. 4) concluded, "one has little capacity to forecast success or failure using publicly available initial observables," and that "franchisor rankings are not really a useful evaluation criteria for franchisees" (Lafontaine and Shaw 1998, p. 16). We attribute the difference in the findings to the use of a methodology that avoided problems of censoring and period effects.

Similarly, by examining franchising dynamically, this study avoids the problems of path dependence (Carney and Gedajlovic 1991) and selection bias (Shane 1996) that limit the reliability of findings from previous cross-sectional franchising research. For example, the results suggest that dual distribution in franchising (e.g. Bradach and Eccles 1989) may be an artifact of selection bias. Franchisors typically establish company-owned outlets before they start to franchise and then expand almost exclusively through franchised outlets when they start to franchise. Since franchisors are more likely to survive if they franchise more intensely (Shane 1996), a cross-section of surviving franchisors will display a mix of company-owned and franchised

outlets simply because of selection effects, without adopting a policy of dual distribution.

This study also suggests a methodological direction for future research on franchising. Longitudinal methods are clearly important to franchising research. While publicly available databases on franchising are rather limited, and do not allow for operationalization of many important theoretical constructs, future researchers could develop longitudinal databases by examining government records. For example, franchising researchers could code information contained in Uniform Franchise Offering Circulars archived at state agencies for important system characteristics.

Implications for Practitioners

The results of this study have important normative implications for practitioners. This study identifies a set of policies that new franchisors can adopt to enhance the survival of their firms over time. New franchisors should seek certification from media evaluators to enhance their survival prospects. Public relations or political strategies that make certification more likely are an important activity on which new franchisors should expend time and effort.

Moreover, franchise entrepreneurs should carefully consider where they establish their franchise systems. The need to adhere to government regulations will require them to adopt different policies to obtain resources in different locations. Since systems are imprinted by the policies they adopt in response to the legal environment in which they are founded, franchisors should carefully consider the long term effects of being founded in different locations.

The results show that franchise systems in one industry—photography and video—are less likely to survive than franchise systems in other industries. Practitioners interested in purchasing a franchise system in this industry should be aware that new photography and video franchisors are less likely than franchisors in other industries to be around to support them in the future.

Limitations

This study is not without limitations. First, the study examines only one type of media certification, that of ranking in *Entrepreneur Magazine*. This publication's certification is limited to the readership of the magazine at

each point in time. Moreover, other magazines, newspapers, franchising association newsletters, and television could also have an effect on the certification of new franchise systems. Nevertheless, despite the presence of alternative mechanisms for certifying franchise systems and limitations to this measure of certification, the results show that *Entrepreneur Magazine's* rankings do provide a certification effect consistent with that proposed by institutional theory.

Second, because the study uses archival data, several of the constructs were measured by proxy variables. For example, some scholars question the validity of the franchise fee as a measure of hold-up, arguing that these fees represent only a small portion of the franchisee's specific investment and do not systematically reflect total levels of specific investment (e.g., Bercovitz 1997). Therefore, the lack of a significant effect for this variable may be a result of a poor proxy rather than a rejection of the underlying argument for hold-up. Nevertheless, the use of proxy variables allowed the examination of the survival of new franchise systems over time and allowed for the examination of the differential effects of franchisor characteristics (such as system growth) over time and provided insights into the dynamics of franchising that would not have been possible with more fine grained, nonarchival data. Therefore, readers interested in understanding franchising should examine these results in conjunction with other franchising research that avoid the construct validity questions of proxy variables but lack the ability to examine dynamic research questions. Together these studies will provide convergent validity about franchisor survival.

Conclusion

In conclusion, this study has shown that new franchise systems are more likely to survive if they both gain legitimacy as well as efficiency. This finding expands the franchising literature by demonstrating that sociological explanations enhance economic explanations for the survival of new franchise systems. Hopefully, this study will spur further research on the factors that influence the success and failure of franchisors.¹⁶

¹⁶ The authors would like to thank Chee-Leong Chong, Rajiv Dant, and Paul Ingram for their helpful comments on an earlier draft of this paper.

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Accepted by Ralph Katz; received September 1997. This paper has been with the authors 3 months for 2 revisions.