Starting off on the Wrong Foot?

Start-ups, TMT Structures, and the Unusualness Penalty

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Abstract (188 words)

Organizations vary in terms of how unusual their structures are at founding. Some organizations adopt structures that are common among organizations in their industry. Others deviate from industry norms by adopting unusual structures or creating entirely novel ones. The more unusual a firm's structure is, relative to other firms' structures (which captures de-facto industry-specific social norms), the more deviant it is and the stronger its effects on organizations will be. In this paper, we study the effects of the degree of unusualness in one important aspect of structure, top management team (TMT) job structures. We build on theories of legitimacy and deviance, imprinting and inertia, and TMTs to argue that organizations with more unusual TMT structures at start-up suffer an *unusualness penalty* and are more likely to fail. We also argue that even if organizations amass experience with their unusual TMT structures or those structures become less unusual, the unusualness penalty persists. To test these predictions, we analyze data on firms in one industry over five decades. The results support our predictions, indicating that unusual TMT structures have strong and persistent negative consequences that organizations cannot easily overcome.

Keywords: top management teams, job structures, entrepreneurship, legitimacy, imprinting, inertia, failure

In response to technical constraints and social mores, many start-ups adopt formal structures that are commonly used in their industry (Baron et al 1999; Baron et al 1996; Stinchcombe 1965). Such conformity with industry norms gives new organizations legitimacy and allows them to benefit from the knowledge amassed about operating with those structures. Despite these benefits to conformity, start-ups sometimes choose instead to stand out from the crowd by adopting less common structures, thus deviating from social norms. Here, we focus on deviations in one critical aspect of organizations' structures, their formal top management team (TMT) job structures, meaning the set of jobs filled by the group of managers leading an organization and setting its strategic direction. TMTs have strong effects on team and organizational functioning, strategic decision making, economic performance, organizational growth and flexibility for both new organizations and established ones (Hambrick 2007).

Most research examining the effects of deviance in organizational structures has conceived of deviance categorically, assuming implicitly that all organizations that do not adopt the dominant structure are similarly deviant. Instead, following research that shows the degree of deviation in products and strategies from industry norms matters (e.g., Deephouse 1999; Miller and Chen 1996; Smith 2011; see Zhao et al 2016 for a recent review), we recognize that the more unusual a firm's structure is, the more deviant it is. This line of work builds on social-psychological explanations of the effects of being unusual for individuals (Brewer 1991; Maslach et al 1985). On the one hand, being unusual makes individuals and organizations distinctive, which may benefit them. On the other hand, being unusual makes individuals and organizations unfamiliar, which may harm them if audiences are uncomfortable with the unfamiliar.

Not all deviations are evaluated the same way by all audiences at all times; instead evaluations may vary across audiences and organizations' lifecycles. Heterogeneity in audiences and evaluations helps explain inconsistency in findings about the impact of deviating from industry norms

(Goldberg et al 2016; Noh and Tolbert 2017; Phillips et al 2013; Pontikes 2012; Zhao et al 2016). For TMT structures, the critical audiences are investors, employees, suppliers, and distributors, all of which tend to value known structures and reject unusual ones. (In contrast, for product offerings, the critical audiences include customers and critics, who may or may not value unusualness.) Negative reactions to unusual TMT structures are especially likely when audiences evaluate start-ups, which have no track records apart from the reputations of their founders and executives, and so must derive legitimacy from adhering to industry norms (Khaire 2010; Suchman 1995). Therefore, we propose that start-ups with unusual TMT structures up will pay an *unusualness penalty*: they will have difficulty amassing legitimacy and resources, operate inefficiently, be less likely to thrive, and be more likely to fail. We further propose that the more unusual a firm's TMT structure is at start-up, the more deviant it is, the worse the firm will perform, and the more likely it is to fail.

Organizations that adopt deviant structures at start-up are unlikely to maintain the same level of deviance throughout their lives. Over time, the unusualness of any organization's start-up structure will change in response to changes made in the organization itself and to variation in the mix of the structures in use in its industry. And over time, organizations gain experience with their deviant start-up structures. Therefore, the negative effects of deviance at start-up may diminish over time. However, the combined forces of inertia, imprinting, and path dependence may prevent organizations from realizing such benefits (Beckman and Burton 2008, 2011; Burton and Beckman 2007; Marquis and Tilcsik 2013; Stinchcombe 1965). Therefore, we argue that firms that adopt unusual TMT structures at start-up will pay the unusualness penalty throughout their lives – even if their TMT structures become less unusual after start-up, and even after amassing experience with their unusual TMT structures.

We test these predictions using data on the TMT structures of all organizations in one industry over five decades: boutique wineries in the U.S. from 1941, when the industry had

rebounded from its near demise during Prohibition, to 1988, when it was flourishing. We focus on the TMT structures in place at start-up because following organizations from start-up onward reduces concerns about the effects of unobserved history (i.e., left truncation). We find strong negative and enduring effects of having a deviant structure at start-up.

TMT Structures and Firm Performance

Choices about TMT membership and structure (who will be in what positions) have strong effects on team and organizational functioning, strategic decision making, economic performance, organizational growth and innovation for both new organizations and established ones (Hambrick 2007). For instance, start-ups with TMT members who have greater functional breadth and diversity are more likely to later add jobs at all levels of the organization (Dencker et al 2009) and to experience churn through employee exits and entries (Boeker and Wiltbank 2005). Due to imprinting and path dependence, the effects of early TMT structure choices endure. For example, start-ups that begin life with less breadth in their TMT structures are less likely to expand those structures later (Beckman and Burton 2008).

TMT characteristics are also strong signals to external audiences and so affect organizational legitimacy. For start-ups, the impact of TMT characteristics on external audiences is especially important because start-ups have neither track records nor established reputations, so their audiences have few ways to judge start-ups, other than by what they can observe about those at the top. For instance, the experiences of TMT members can legitimate new ventures, thus facilitating access to resources, making it easier to fill critical roles, and bringing critical endorsements (Gulati and Higgins 2003; Higgins and Gulati 2006).

While most research has focused on TMT members' *characteristics*, such as experience, personality, and demographics, formal TMT job *structures* can also influence operations, legitimacy, and performance (Beckman and Burton 2008, 2011; Ferguson et al 2016). TMT job structures are

simultaneously the structures within which the work of TMTs is accomplished and reflections of what organizations do. Materially, TMT job structures determine what tasks managers do, how their tasks are coordinated, who interacts with whom, and how productive they are (Cohen 2016). Symbolically, the array of positions in a firm's TMT signals what that firm intends to do, what it values, and ultimately what it is – its identity (Baron 2004; Beckman and Burton 2008, 2011; Fligstein 1987). TMT job structures are highly visible, so they shape the degree to which TMTs are accepted as appropriate or natural, based on prevailing cultural models and accounts (Meyer and Rowan 1977), which smooths operations.

Not surprisingly given the importance of TMTs, there are strong norms about how they should be structured; in particular, what functions should be included in them. For instance, starting in the 1980s, the finance function, in the form of the Chief Financial Officer, became a more typical – even expected – feature of TMTs in large American corporations (Fligstein 1990). Yet not all firms conform to such norms about TMT structures. Even in 2000, over a decade after the rise of the finance conception of control, almost one-fifth of large industrial corporations did not have the finance function in their TMTs (Zorn, 2004). Other firms have members from functions rarely seen in TMTs, such as human resources (e.g., Chief People Officer at Microsoft) or customer relations (e.g., Chief Customer Officer at Allstate).

Unusual Structures

The structure adopted by most firms in an industry, the industry's central tendency, constitutes a de-facto social norm (Miller and Chen 1996; Smith 2011). Firms with typical structures (i.e., those that are similar to the structures of most other members of their industry) conform to their industry's de-facto social norms. In contrast, firms with unusual structures (i.e., those that differ from the structures of most other members of their industry) violate industry norms. Violating industry norms may hamper operational efficiency, reduce legitimacy, lower perceptions of

quality, impede access to resources, and thus harm performance (DiMaggio and Powell 1983; Meyer and Rowan 1977; Staw and Epstein 2000). Most basically, a more unusual structure may be technically inferior to a more typical one, and so may yield poorer performance. Organizations learn from the experiences of others, adopting structures and practices that appear to work for others. To the extent that such learning is accurate rather than superstitious (Levitt and March 1988), more typical structures become less unusual precisely because they offer operational benefits. Another consideration is that organizations with less unusual (more typical) structures have more role models to study, so they can learn faster and better how best to operate with those structures. Moreover, exchange-partner organizations (suppliers, distributors, and regulatory agencies) can more quickly accumulate experience with organizations that adopt less unusual (more typical) structures, and so can more easily learn how interact with them. The operational issues associated with unusual structures are similar to the issues associated with unusual product offerings: firms offering products that fit within established categories have operational advantages that stem from following pathways that are familiar to employees and suppliers (Hsu et al 2009; Negro et al 2011).

In addition to technical considerations, typical structures may become taken for granted as the "right" or "natural" ways to organize, and thus become legitimated (Deephouse 1996), even if they offer no operational benefits (DiMaggio and Powell 1983; Meyer and Rowan 1977; Staw and Epstein 2000). Organizations are often subject to superstitious learning, meaning that decision makers perceive the experience of learning as compelling, but they misperceive causal connections between actions and outcomes (Levitt and March 1988). Observers may, for example, interpret a start-up's adoption of a more typical structure as a signal that decision makers know how things should be done, and, conversely, its adoption of a more unusual structure as a signal that decision makers do not know how things should be done. As a result of superstitious learning, organizations

that adopt more unusual structures will be less legitimate – even if they are operationally equivalent to or superior to less unusual ones (Staw and Epstein 2000).

Audiences Evaluate Structures

Organizational structures are evaluated by employees and exchange partners, including distributors and suppliers of human, financial, and material resources. Such audiences are generally uncomfortable with the unfamiliar; they prefer dealing with the familiar and have greater experience, and thus greater skill, in doing so. Potential employees with industry experience may find firms with more unusual structures less appealing because they have, over the course of their careers, learned how to work in firms with more typical structures; therefore, they may be less willing to take jobs in firms with more unusual structures. Suppliers and distributors may also find firms with more unusual structures less appealing, simply because they are more uncertain about which people, in which structural positions, have authority to contract with them. In sum, more unusual structures make these audiences more uncomfortable than less unusual ones, which in turn makes firms with unusual structures less legitimate and less technically efficient than firms with more typical structures.

Notwithstanding their costs, unusual structures may also have benefits, most notably increasing organizational visibility: organizations with more unusual structures stand out more from the crowd and so garner more attention. For some types of audiences and some types of organizations – start-ups in all industries and all organizations in most cultural industries – being unusual is congruent with expectations that they break from convention and innovate.

The benefits and costs of unusualness can be reconciled by considering which audiences are evaluating organizations, what their evaluations include, and what they value (Paolella and Durand 2016; Zuckerman 2016). With respect to TMT structures, the relevant audiences include suppliers, distributors, and potential employees, who are likely to prefer firms with more typical TMT

structures and penalize those with more unusual ones. Although customers and critics may prefer more unusual *products*, especially from start-ups in most industries and all firms in creative industries, and organizations that adopt more unusual TMT *structures* may create more unusual products, customers seldom pay attention to TMT structures. If this logic holds, then on balance, adopting unusual TMT structures will confer minimal benefits and maximal costs, in the form of reduced efficiency, less legitimacy, fewer resources, lower quality evaluations, and thus poorer performance. Thus we propose:

> **Hypothesis 1**: Organizations with more unusual TMT structures at start-up are more likely to fail than organizations with less unusual TMT structures at start-up.

The Unusualness Penalty Endures

The unusualness of firms' structures may vary over their lives, due to both micro and macro dynamics. At the micro level, although structures are subject to strong inertial pressures (Baron 2004; Hannan et al 2006) and organizations tend to keep their initial structures in place long after founding (Beckman and Burton 2008; Stinchcombe 1965), firms sometimes do change their structures to improve fit to environmental conditions (including audience expectations) or to respond to their own and others' experiences (Baron et al 1996; Baron et al 2001; Guillén 2002). In particular, firms that begin life with more unusual structures may face greater pressure to change their structures than firms that begin life with less unusual structures. At the macro level, the distribution of structures used by other firms in the industry may change as new firms are founded, existing ones fail, and surviving ones change their structures. As a result of such turnover among industry participants, structures that were rarely seen in an industry at the time a focal firm was founded may become more common in that firm's later years; conversely, structures that were common may become rare. Taken together, micro and macro dynamics suggest that the unusualness of firms' structures may change over time.

Although firms structures may become less unusual (more typical) over time, theories of imprinting and path dependence suggest that the effects of initial decisions about organizational structures persist, even if the structure itself changes (Marquis and Tilcsik 2013; Stinchcombe 1965). If so, the unusualness penalty (based on structures at start-up) will endure: start-up structures will have effects that outlast the structures themselves. Empirical studies support this prediction. All organizations socialize employees into ways of doing things early in their tenure, and neither employers or employees alter their patterns of behavior easily, even when resource levels or external conditions change (Tilcsik 2014). Start-ups in particular experience path dependence; for example, Swedish start-ups that began life by adopting socially accepted formal legal structures (corporation, partnership, or sole proprietorship) were quicker to establish relationships with customers and financiers and less likely to disband (Delmar and Shane 2004). These studies suggest that even if start-ups' structures become less unusual over time, the evaluations of suppliers, distributors, and potential employees will not change. If so, firms' initial choices about TMT structures will have lasting effects. This line of reasoning leads us to predict:

> **Hypothesis 2**: The effects on failure of the unusualness of TMT structures at start-up will persist, not diminish, as those start-ups age and gain experience with their TMT structures.

> **Hypothesis 3**: The effects on failure of the unusualness of TMT structures at start-up will persist, even if their TMT structures become less unusual after start-up.

Note that hypothesis 3 applies to two situations: (1) firms change their TMT structures and (2) firms do not change their TMT structures, but those structures become less unusual because the composition of the industry changes.

Research Design

Research Site

We test these hypotheses using data on the TMTs of start-up firms in one industry: farm wineries in the U.S. from 1940 to 1989. Our study period begins shortly after Prohibition ended and the wine industry rebounded; it ends around the time the industry was well established across the country, with wineries in 43 of 50 states, from California to Alaska and New Hampshire, and before the development of the world wide web began to dramatically alter how all organizations, including wineries, presented themselves to external audiences. Farm wineries are small specialist producers, often called "boutique" producers, that compete by differentiating their products and appealing to either connoisseurs or adventurous tourists (Haveman et al 2016; Swaminathan 1995, 2001). Farm wineries are distinguished from large mass-producer wineries based on size: industry conventions define farm wineries as producing less than 50,000 cases of wine per year or having storage capacity of less than 100,000 gallons at founding (Adams 1990; Hiaring 1976). We focus on farm wineries because they are much smaller than mass producers, which makes them more susceptible to industry norms. Farm wineries are also much more numerous than mass producers: over the five decades we study the industry, farm wineries constituted 81.4 percent of U.S. wineries.

The number of farm wineries varied greatly over our study period. It rose from 43 in 1941 to 158 in 1948, then declined to 141 in 1967, then rose to 1,022 in 1989. Many early farm wineries produced undifferentiated products for local markets; they did not thrive because they could not handle increasing competition with the more efficient mass-producer wineries (Swaminathan 1995). Starting in the mid-1960s, the consolidation of mass-producer wineries prompted a new wave of farm-winery foundings that fuelled the rapid growth of this organizational form (Swaminathan 2001). These newer farm wineries differentiated their products from those of mass producers by

focusing much more on producing dry table wines, rather than the sweet sherries, ports, and dessert wines that earlier cohorts of farm wineries had produced (Swaminathan and Delacroix 1991).

Many of the wineries we study are much smaller than the large corporations studied in most previous research on TMTs. This is an important advantage because theories of TMTs apply to small firms as well as large ones; indeed, they may apply more strongly to smaller firms. Size is valued in Western societies, so smaller firms are less legitimate than larger ones and must work harder to justify their existence, including through adoption of typical structures (Haveman 1993). Beyond this, it is important to determine scope conditions for theories about TMTs; to do so, we must test these theories thoroughly in a wide variety of empirical settings (Stinchcombe 1968).

Data Sources and Measures

We gathered data on farm wineries from *Wines & Vines Annual Directories*. For every winery every year, the *Directories* record winery name; municipality and state; year founded; size; number of production facilities; vertical integration in terms of acres of vineyards owned, if any, and presence of bottling facilities; diversification in terms of number of brands and types of wine produced; and, central to our analysis, the names of key personnel (owners and the most important employees), along with their titles. Conversations with the publisher of the *Directories* revealed that wineries list whatever personnel they wish, so each winery's listing reveals its own perceptions of which positions it considers to be the most important, rather than a pre-ordained structure dictated by the *Directories*. This indicates that the *Directories* are a reasonable approximation of what functions are in place in the organizations and of what the relevant audiences – employees, suppliers, and distributors – would see when interacting with the organization. Even if some wineries use the *Directories* to engage in a form of window dressing, they will report what they believe relevant audiences expect to see.

Measuring the dependent variable: failure. We created an indicator variable for *failure* set to one the final year a winery appeared in the directories and zero before that year. Our data take the form

of one observation per winery per year and cover all 1,367 farm wineries founded between 1941 and 1988, inclusive. Of these, 465 had failed by 1989. Our data include all wineries from founding to the year before they failed or the end of our observation period (1989), whichever came first.

Measuring the independent variable: unusualness of TMT structures at start-up. For any organization, its structure, relative to those of others in its industry, can range from completely "normal" (it has the same structure as all other industry members) to completely idiosyncratic (it has a different structure than all other industry members). In other words, all unusual structures are not equally unusual. Thus, we measured TMT structure unusualness as a continuous variable; specifically, by assessing the fraction of other organizations in the industry that have the same structure as the focal organization.

Creating this measure involved several steps. First, to determine TMT structure, we assessed which of five basic functions – corporate governance, general administration, finance and control, marketing and sales, and production – were filled by key personnel in the focal firm in the focal year. We coded the job titles of key personnel exactly as recorded in the *Directories*, creating one observation per job title per person per firm per year. If two or more people in a firm had identical job titles in the same year, we entered each person separately into our database as a holder of that title in that firm and that year. If one person in a firm had two or more job titles in a single year, we created one record for each title. After entering job titles into our database exactly as they appeared in the *Directories*, we imposed a uniform coding scheme.

Next, we coded areas of functional specialization. We assigned every job title to one of the five functions mentioned above. Table 1 lists the five functions and the most common job titles in each function. The *Directories* often recorded data for subsidiaries separately from their parent firms, so the final step was to aggregate data to the firm level of analysis. We did this because subsidiaries are not independent entities, so their TMT structures cannot be analyzed separately from those of

their parent firms. Then, for each firm each year, we created five dummy variables, each coded one if the focal function was filled by key personnel in the focal firm that year and zero otherwise.

[Table 1 about here]

We then determined the configuration of functions in each firm's TMT. With five functions, there are 32 (2^5) possible configurations; we observed 29 of these. We calculated the proportion of firms with each configuration. By far the most common configuration was a structure with positions in only the corporate governance function (predominantly wineries that listed only owners as key personnel): 41.9 percent of firms had this configuration at start-up. The next three more common configurations were corporate governance plus production (15.7 percent of new wineries); finance and control plus general administration plus production (6.7 percent); corporate governance plus general administration plus production (5.0 percent). There were large shifts in the distribution of configurations over time; notably, the most frequently observed TMT configuration, with positions in corporate governance only, was found in 80.0 percent of start-up farm wineries in 1941, but only 35.1 percent in 1989. But even at 35.1 percent, this configuration was still the most common one in 1989.

Next, we calculated two measures of the unusualness of TMT structures: one captures the unusualness of a firm's *configuration*, the other captures the unusualness of the individual *functions* in that configuration. We calculated *configuration unusualness* as the proportion of existing firms in the year before the focal firm's founding that had TMT configurations different from the focal firm. The highest possible value for this variable is one, which would occur when all other firms had TMT configurations different from the focal winery. The lowest possible value is zero, which would occur when all other firms had the same TMT configuration as the focal winery; however, the lowest observed value was 0.128.[1] Consider, for example, Baldinelli Shenandoah Valley Vineyards, founded

[1] Univariate statistics for all unusualness measures are shown in Table 2, which we discuss in detail below.

in 1979 in California's Amador Valley, near Sacramento. At start-up, it adopted the second most common configuration: corporate governance plus production, seen in 13.2 percent of all wineries the year before it was founded. Configuration unusualness at start-up for this winery is one minus the proportion of other wineries with its start-up configuration, which equals 0.868 (1 - 0.132), making Baldinelli slightly more unusual than the typical (sample-average) winery start-up during our study period.

We also assessed the unusualness of each firm's TMT structure at start-up at the function level (*function unusualness*), based on the Jaccard index of dissimilarity or distance (Everitt et al 2011; Jaccard 1901, 1912). This is a standard measure of dissimilarity between pairs of entities with binary attributes; it is the complement of the widely used Jaccard index of similarity (e.g., Hsu et al 2012). Rather than compare *pairs* of firms, as in previous research, our measure compares one firm to *all others*, using the average Jaccard distance between the focal firm and all others. Specifically, we calculated the average *non-overlap* between each firm and all other firms, based on which functions were present in TMT structures. If a function was present in the focal firm's TMT structure, non-overlap was the fraction of other wineries whose TMTs *did not* contain that function. If a function was not present in the focal firm's TMT, non-overlap was the fraction of other wineries whose TMTs *did* contain that function. We summed these five fractions and divided by five to create a variable that in theory ranges from zero, if all other firms' TMT structures have the exactly same functions as the focal firm, to one, if all other firms' TMT structures have completely different functions from the focal firm. In our data, this variable ranged from 0.060 to 0.749.

Again, consider Baldinelli Shenandoah Valley Vineyards, with its start-up configuration of corporate governance plus production. The year before it was founded, the corporate governance function was present in 72.0 percent of all wineries' TMTs; finance and control in 33.6 percent; general administration in 47.3 percent; marketing and sales in 14.2 percent; and production in 52.4

percent. Baldinelli's non-overlap score for each of the two functions in place at start-up (corporate governance plus production) is one minus the proportion of wineries with its functions, while its non-overlap score for each of the three functions not in place at start-up (general administration plus finance and control plus marketing and sales) is the proportion with those functions. We sum these proportions and divide by the number of functions present at start-up. Thus, for Baldinelli, we calculated the function non-overlap score as follows: [(1–0.720) + (1–0.524) + (0.336) + (0.473) + (0.142)]/5 = 0.341, which is lower than the score of 63.2 percent of wineries doing business in 1978.

Measuring experience with TMT structure. To do this, we created an interaction between the unusualness of that structure at start-up and firm age (*configuration unusualness* × *age* and *function unusualness* × *age*). If the effect of having an unusual TMT structure declined over firms' lives, as they and their exchange partners accumulate experience with those TMT structures, these interactions would be negative and statistically significant. But if the effect of being unusual persisted, these interactions would be non-significant.

Measuring change in TMT structure unusualness. We calculated change in unusualness by subtracting start-up unusualness from current-year unusualness and scaling the difference by start-up unusualness. We created two variables, one based on configuration unusualness (*change in configuration unusualness*), the other based on function unusualness (*change in function unusualness*). A *positive* value on these variables indicate that the focal firm's TMT structure became *more* unusual, while a *negative* value indicated it became structure *less* unusual. If a decrease in unusualness reduces the unusualness penalty (and an increase increases it), we would expect to see a positive and statistically significant effect on this variable. But if a decrease in unusualness does not alter the unusualness penalty, we would expect to see a non-significant effect.

Measuring control variables. We controlled for several factors shown by previous research to affect failure rates: winery *age* in years; winery *size*, measured in terms of storage capacity, following industry conventions and logged because the distribution was skewed; and competition using *number of wineries of the same form in the focal state* and its square (Swaminathan 2001).[2] All models included state fixed effects to capture time-stationary unobserved differences between states.[3] Finally, we controlled for *average unusualness in the industry*, calculated as the mean TMT structure unusualness in the focal year for all existing wineries, using either the configuration-based or function-based measure, as appropriate.

Method of Analysis

The dependent variable, failure, is a discrete event that occurs over time, so we used event-history methods (Tuma and Hannan 1984), specifically the streg procedure in Stata with an exponential distribution. Because winery age is a control variable, this approximates a Gompertz model.[4] Because there are multiple observations on each winery, which are not independent, we clustered standard errors on wineries.

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[2] We also estimated models including controls for several additional firm level variables: the number of product types and the number of brands produced. These variables had non-significant effects on failure rates, so we dropped them from the analyses.

[3] Following previous research (Swaminathan, 2001), we also estimated models with explicit controls for state-level factors instead of state fixed effects: market size in terms of state population and local norms concerning alcohol, using the percentage of the state population in dry counties (counties that prohibit the sale of alcoholic beverages); and per-capita wine consumption in the state. These variables had non-significant effects on failure rates, so we excluded them from the models shown here. The difference between our baseline models and those of Swaminathan is due to differences between the samples analyzed: our sample includes only wineries that were founded in our study period, while his included all wineries.

[4] In robustness checks, we estimated models with log-logistic and piecewise exponential distributions, but the results did not differ substantively from those shown here.

Results

Table 2 presents univariate statistics and bivariate correlations for all variables in our analysis. This table reveals that many wineries adopted fairly unusual TMT structures at founding. Mean configuration unusualness start-up is 0.738 and mean function unusualness at start-up is 0.347. Such high values suggest that the wine industry has weak social norms; thus, tests of our hypotheses using data on this industry will be conservative, since the unusualness penalty should be greater when social norms are stronger. This table also shows that both measures of change in unusualness were positive, indicating that most wineries had fairly unusual TMT structures later in life.

[Table 2 about here]

This table also shows that *configuration unusualness* and *function unusualness* were highly correlated (r=0.81). Function unusualness is about half the value of configuration unusualness because the former is a less restrictive measure than the latter. If the focal firm's TMT structure shares some, but not all, functions with a comparison firm's TMT structure, such sharing reduces function unusualness, but unless all functions are shared by both firms, it does not reduce configuration unusualness.

Table 3 presents multivariate analyses. This first half of the table analyzes configuration unusualness, while second half analyzes function unusualness. We discuss each half in turn.

[Table 3 about here]

Configuration unusualness. Model 1 shows that older and smaller wineries were more likely to fail. The number of wineries in the focal state had the expected U-shaped effect. Average configuration unusualness in the industry had a significant negative effect, which suggests that wineries benefited from other wineries having unusual structures, perhaps because such structural heterogeneity indicated strategic heterogeneity, and thus reduced competition. This model also shows that any increase in configuration unusualness at start-up significantly increased failure rates,

which supports hypothesis 1. The effect is sizeable: all else held constant, a winery that had a start-up structure with the mean level of unusualness (multiplier of the failure rate = exp[0.791×0.738] = 1.79) was 21 percent less likely to fail than a winery with a start-up structure with unusualness one standard deviation above the mean (multiplier = exp[0.791×(0.738+0.246)] = 2.18).

Model 2 tests hypothesis 2, which predicts that accumulated experience with TMT structures would not diminish the unusualness penalty. The constrained main effect of configuration unusualness at start-up was positive and statistically significant, while the effect of the interaction between configuration unusualness at start-up and firm age was negative and non-significant. Together, these indicate that the unusualness penalty did not diminish as wineries gained experience with such configurations, which supports hypothesis 2. Model 3 tests hypothesis 3, which predicted that if firms' TMT structures became less unusual after start-up, the unusualness penalty would not diminish. Change in configuration unusualness after start-up had non-significant effects, while the main effect of configuration unusualness at start-up was positive and statistically significant. These results support hypothesis 3.

Function unusualness. Model 4 shows that older and smaller wineries were more likely to fail, paralleling the results for configuration unusualness in model 1. But different from model 1, the number of wineries in the focal state had non-significant effects on both the linear and squared terms. (In results not shown here, we dropped the squared term, and found a positive and significant effect for the linear term.) Average function unusualness in the industry had a significant negative effect, again suggesting that wineries benefited from other wineries having unusual structures. This model also shows that the more unusual wineries' TMT structures were at start-up, in terms of the functions represented in them, the more likely they were to fail. This result supports hypothesis 1. The effect is sizeable: all else held constant, a winery that at start-up had a structure with the mean level of function unusualness (multiplier of the failure rate = exp[1.910×0.347] =

1.94) was 29 percent less likely to fail than a winery that at start-up had a structure with configuration unusualness one standard deviation above the mean (multiplier = exp[1.910×(0.347+0.133)] = 2.50).

Model 5 tests hypothesis 2, which predicts that as wineries accumulated experience with their TMT structures, the unusualness penalty would persist. The constrained main effect of function unusualness at start-up was positive and statistically significant, while the interaction with age was negative, very small in magnitude, and non-significant. This result supports hypothesis 2. Model 6 tests hypothesis 3, which predicts that even if wineries' TMT structures became less unusual after start-up, the unusualness penalty would persist, by including change in unusualness (start-up vs. current structure). There were positive and non-significant effects of change. Moreover, the main effect of function unusualness at start-up was positive and significant. These results support hypothesis 3.

Robustness checks. To test the robustness of our results, we conducted several additional analyses. To save space, these analyses are not shown here; they are available on request from the first author. We began by re-estimating all models using two different specifications – first a log-logistic distribution, second a piece-wise exponential specification. Both alternative specifications yielded similar patterns of results to those shown here, which suggests that our results are not sensitive to the form of age dependence estimated. Next, we probed the sensitivity of our analyses to the distribution of configurations. One configuration, corporate governance only, accounted for 35.0 percent of firm-year observations. We dropped from the analyses all firms with this configuration. After doing this, our results still held.

Finally, because previous research suggested that the returns to being unusual depend on the level of unusualness (Jennings et al 2009), we replicated our analyses, adding a squared term for unusualness. For both configuration and function unusualness, the coefficients on both the linear

and squared terms were non-significant. To probe this further, we created two separate unusualness measures, one for wineries one standard deviation above the mean unusualness, one for wineries one standard deviation below the mean unusualness. For both configuration and function unusualness, both variables had non-significant effects while the main effects of unusualness remained positive and significant. These results suggest that the linear analyses we showed here captured the effects of unusualness well.

Alternative explanations. Firms that start life with more unusual TMT structures may be more likely to change those structures, and change is likely to increase the chance of failure (Hannan and Freeman 1984). The results shown here suggest otherwise: change in unusualness had no effect on failure, and start-up TMT structure unusualness had a persistent positive and significant effect on failure. Yet we did find that firms with more unusual TMT structures were more likely to change those structures. So, to investigate the effects of change further, we conducted several robustness checks. First, we created two measures of change: (1) an indicator variable set equal to one if a winery ever changed its TMT structure and zero otherwise, and (2) the cumulative number of times a firm changed its TMT structure. Both variables had non-significant effects on failure, and in models that included these measures, the effects of start-up unusualness were still positive and significant. Second, to assess whether the effects of changing TMT structure unusualness were non-linear, breaking slope at the zero-change point, we separated change into two components: (1) decrease in unusualness and (2) increase in unusualness. Each component was coded zero when the other component was non-zero. These analyses showed that organizations whose TMT structures became less unusual after start-up were no more likely to survive than those whose structures became more unusual.

Third, reasoning that firms whose structures become less unusual may differ from those whose structures become more unusual, we re-estimated models separately on those subsets of

firms. For both subsets, unusualness at start-up had positive effects: statistically significant among firms whose structures became more unusual, and marginally significant (p=0.079) among firms whose structures became less unusual. Fourth, we distinguished between (1) firms that changed their TMT structures and (2) firms that did not change their structures, but their structure unusualness changed because the composition of the industry changed, and thus industry-level average structure unusualness changed. For both subsets of firms, the effects of unusualness at start-up were positive and statistically significant. For the former, the effect of change was positive and marginally significant (p=0.084), providing weak evidence that changing to a more unusual structure increased the unusualness penalty. For the latter, the effect on the variable measuring the difference in unusualness between the start-up and current structure was non-significant.

Together, these four analyses fail to support the explanation that firms that start life with more unusual TMT structures may be more likely to change those structures, and that change is likely to increase the likelihood of failure. It may be that any gains in terms of legitimacy and operational efficiency that accrue to firms whose TMT structures become less unusual after start-up are negated by the process costs of change (Barnett and Carroll 1995).

A second alternative explanation is endogeneity: unusualness is a proxy for poor management quality, poor-quality managers adopt unusual TMT structures, and poor-quality managers run their firms so as to perform poorly. If so, we would expect that among higher-quality wineries, unusualness would have smaller (or null) effects. Because our main explanatory variable (start-up unusualness) is constant within each winery, we cannot discount this alternative explanation by estimating models with winery fixed effects. So to investigate this possibility, we had to explicitly model winery quality based on (1) geographic location and (2) product portfolio.

First, geography matters a lot in the wine industry. California has long been the dominant wine-producing state (90 percent of wine produced in the United States comes from California) and

the best location for growing grapes for wine. Thus, wineries launched in California were likely higher-quality than wineries launched in other states, net size (which proxies resource levels), age (which proxies experience), and competition and legitimacy (controlled for by the count of wineries in the focal state and its square). The quality difference between wineries in California and other states is accentuated by agglomeration economies: because California wineries are far more numerous than wineries in other states, start-ups in California had deeper pools of managers from which to draw and so would be less likely to be poorly run than start-ups in other states. When we split the sample between California start-up wineries and start-up wineries in other states, we found positive and statistically significant effects of start-up TMT structure unusualness (both configuration- and function-based) in both subsamples. Indeed, the effects were stronger for wineries in California than for wineries in other states, suggesting that industry norms are stronger in that state.

Second, if wineries with more unusual structures had poorer quality managers, they may have made worse choices in terms of product quality. We examined this possibility by distinguishing between wineries that produced only dry table wines and wineries that produced other types of wine (mostly sweet sherries, ports, and dessert wines). Dry table wines required better-quality grapes, specifically European vinifera grapes, such as Pinot Noir, Cabernet Sauvignon, Syrah, Chardonnay, and Sauvignon Blanc. Other types of wine were produced using poorer-quality grapes, either native labrusca grapes, such as Concord and Catawba, or hybrids of native labrusca grapes and European vinifera grapes, such as Vidal Blanc and Marechal Foch. The sweetness of these types of wine masked other unpleasant characteristics, notably the "foxiness" that comes from using labrusca and hybrid grapes. Therefore, wineries that produced only dry table wine were producing better-quality products from better-quality inputs than wineries that produced other kinds of wine. Previous research has shown that wineries' survival chances were increased by their decision to enter the

table-wine segment (Swaminathan and Delacroix 1991). When we split the sample between wineries that produced only dry table wine and those that produced other types of wine, we found consistent positive and statistically significant effects for both measures of unusualness in both subsamples. Indeed, the effects of start-up unusualness were stronger for the former than for the latter, again suggesting that industry norms were stronger among wineries that produced only the higher-quality dry table wines.

Discussion

We began by posing questions about the effects of adopting unusual structures at start-up: Does starting off with a more unusual structure hinder an organization's life chances? Do those effects diminish or endure as organizations accumulate experience or as their structure becomes less unusual after start-up? These questions are important for entrepreneurs who face frequent trade-offs between the fitting in by adopting industry-normative structures and standing out by adopting unusual structures.

Organizational scholars have produced considerable evidence on the effects of unusualness in product offerings, but they have seldom examined the effects of unusualness in terms of structure. We argued that while similar mechanisms may be at work, unusual structures are likely to be evaluated by different audiences than products. Audiences evaluating structures (investors, employees, suppliers, and distributors) consistently favor industry-typical structures, whereas audiences evaluating products (customers and critics) may instead prefer unusual products.

Our findings supported our main hypothesis: firms that adopted more unusual TMT structures at start-up were more likely to fail than those that adopted less unusual structures. Any distinctiveness reward that specialist organizations might have derived from standing out from the crowd was not sufficient to overcome the unusualness penalty. Our findings also supported our ancillary hypotheses: the unusualness penalty endured, even as firms accumulated experience with

their structures and even if their structures became less unusual over time. We argued that these findings are due to a combination of legitimacy and technical efficiency. Unusual structures might simply indicate that firms have bad management or don't know what they are doing. But our robustness checks (comparing the unusualness penalty in firms in higher-quality locations and firms that produced higher-quality products) did not support that argument. Moreover, the endurance of the unusualness penalty long after start-up suggests that efficiency alone cannot account for the unusualness penalty. If efficiency explained our findings, we would expect the effects of unusualness to diminish as firms learned to work with their structures, as they adopted less unusual structures, or as their structures became less unusual through shifts in industry demography.

Our findings resonate with those in the categories literature that show that audiences penalize organizations whose products do not fit in accepted categories or span multiple categories (e.g., Hsu 2006; Phillips et al 2013; Rao et al 2003; Zuckerman 1999). These category spanners and category misfits like the unusual wineries we study deviate from norms and are punished for it. Across these studies, scholars argue that audiences impose penalties largely because spanning or not fitting into existing categories creates ambiguity about product quality and organizational competence, identity and even loyalty (Durand and Boulongne 2017 forthcoming). Rather than look at category spanning or fit, we look at how common a practice is and find that those who are unusual are penalized and those who are more unusual are punished more. We offer a simpler explanation for this effect: audiences are unfamiliar with what is unusualness and so punish what they do not know.

Categories research on product portfolios and strategy also provides intriguing contrasts to our findings on TMT structures. Most germane for comparison is a study of wineries in California, which showed that entering the table-wine market, which was unusual at that time, improved wineries' life chances (Swaminathan and Delacroix 1991). Others have found that organizational

and individual norm violations are not punished and are even rewarded (Kacperczyk and Younkin 2017; Paolella and Durand 2016; Sgourev and Althuizen 2014). Future work might explore these seemingly opposing effects of different types of unusualness, as well as the effects of unusual product portfolios, business practices, human-resource policies, and strategies.

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Table 1: Winery Functions and the Most Common Jobs in Each

Function	**Most Common Jobs in each Function**	
Corporate Governance	Owner	Founder
	Member of the Board of Directors	Partner
Finance and Control	Accounting	Financial Management
	Controller	Treasurer
General Administration	Administration/Management	Planning
	Human Resources	Legal
Sales and Marketing	Advertising	Packaging
	Hospitality	Public Relations
	Merchandising	Sales and Service
	Marketing	
Production	Distribution	Research and Development
	Grape Growing	Quality Control
	Plant	Wine Cellar
	Purchasing	Wine Making

Table 2: Means, Standard Deviations, Correlations

		Mean	S.D.	Min	Max	1	2	3	4	5
1	Failure	0.045	0.208	0	1	1				
2	Configuration unusualness (at start-up)	0.738	0.246	0.128	1	-0.046	1			
3	Configuration unusualness x age	3.711	3.838	0	38.411	0.037	0.164	1		
4	Change in configuration unusualness	0.228	0.651	-0.809	6.81	0.042	-0.615	0.006	1	
5	Function unusualness (at start-up)	0.347	0.133	0.06	0.749	-0.041	0.815	0.077	-0.517	1
6	Function unusualness × age	1.711	1.784	0	20.099	0.033	0.144	0.933	0.015	0.207
7	Change in function unusualness	0.254	0.746	-0.828	12.153	0.039	-0.486	0.106	0.873	-0.485
8	Age (years)	5.619	6.031	0	42	0.044	-0.295	0.784	0.473	-0.297
9	Size (ln storage)	9.354	1.244	4.643	12.429	-0.031	0.186	0.256	0.016	0.165
10	Number of wineries in the focal state	153.76	167.611	1	459	-0.044	0.153	0.062	-0.141	0.145
11	Number of wineries in the focal state^2	51732.9	74076.6	1	2.11E+05	-0.041	0.168	0.095	-0.129	0.156
12	Average config. unusualness in the industry	0.846	0.068	0.469	0.882	-0.116	0.476	0.2	-0.205	0.476
13	Average function unusualness in the industry	0.389	0.059	0.155	0.426	-0.116	0.519	0.156	-0.293	0.533

		6	7	8	9	10	11	12	13
6	Function unusualness × age	1							
7	Change in function unusualness	0.053	1						
8	Age (years)	0.736	0.523	1					
9	Size (ln storage)	0.272	0.066	0.158	1				
10	Number of wineries in the focal state	0.084	-0.158	-0.027	0.146	1			
11	Number of wineries in the focal state^2	0.116	-0.142	0.003	0.137	0.979	1		
12	Average config. unusualness in the industry	0.22	-0.166	0.079	0.071	0.272	0.297	1	
13	Average function unusualness in the industry	0.182	-0.228	-0.003	0.07	0.291	0.308	0.933	1

Note: This table covers 8,901 firm-year observations on 1,241 farm wineries from their first year of operation to their last or 1989, whichever comes first. Of these, 438 failed during our study period.

Table 3:
Event-History Analysis of the Effects of Unusual TMT Structures at Start-up on Organizational Failure

	Configuration Unusualness			Function Unusualness		
	1	2	3	4	5	6
Unusualness (at start-up)	0.791•••	0.657•	0.944•••	1.910•••	1.928•••	1.985•••
	(0.214)	(0.265)	(0.256)	(0.443)	(0.510)	(0.464)
Unusualness × age		0.0161			-0.00222	
		(0.0210)			(0.0398)	
Change in unusualness			0.0865			0.0276
(start-up vs. current)			(0.0774)			(0.0684)
Age (years)	0.0381•••	0.0289•	0.0354•••	0.0389•••	0.0395••	0.0375•••
	(0.00766)	(0.0140)	(0.00824)	(0.00841)	(0.0127)	(0.00965)
Size (ln storage)	-0.165•••	-0.166•••	-0.169•••	-0.175•••	-0.175•••	-0.176•••
	(0.0438)	(0.0437)	(0.0435)	(0.0446)	(0.0446)	(0.0444)
Number of wineries	-0.00609•	-0.00603•	-0.00615•	-0.00341	-0.00342	-0.00346
in the focal state	(0.00250)	(0.00251)	(0.00251)	(0.00257)	(0.00257)	(0.00258)
Number of wineries	1.05e-05•	1.03e-05•	1.06e-05•	5.99e-06	6.00e-06	6.08e-06
in the focal state^2	(4.90e-06)	(4.90e-06)	(4.91e-06)	(4.99e-06)	(4.99e-06)	(5.01e-06)
Average unusualness	-6.109•••	-6.023•••	-6.164•••	-8.054•••	-8.061•••	-8.058•••
in the industry	(0.660)	(0.665)	(0.656)	(0.992)	(0.982)	(0.989)
State fixed effects	yes	yes	yes	yes	yes	yes
Constant	3.238•••	3.255•••	3.192•••	1.258	1.254	1.240
	(0.798)	(0.802)	(0.801)	(0.696)	(0.701)	(0.700)
Number of observations	8,901	8,901	8,901	8,901	8,901	8,901
Degrees of freedom	48	49	49	48	49	49

Note: • indicates $p < .05$, ••$p < .01$, and ••• $p < .001$, two-tailed t tests. There were 8,901 firm-year observations on 1,241 wineries from their first year of operation to their last or 1989, whichever comes first. Of these, 438 failed during our study period.