Starting off on the Wrong Foot?

Newly Founded Firms, TMT Structures, and the Unusualness Penalty

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15 August, 2016

We thank the Institute for Social and Economic Research and Policy (ISERP) at Columbia University and the UC Berkeley Institute for Research on Labor and Employment for financially supporting data collection. Mukti Khaire, Jong Hyang Oh, Arik Lifschitz, Lori Yue, and Eric Johnson helped code data. We also thank Anand Swaminathan for sharing his data on the wine industry. Finally, we thank Marc David Seidel and seminar participants at MIT, IESE, Boston University and the INSEAD Doriot Entrepreneurship Conference for insightful comments.

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Abstract

While there is abundant evidence about the effects of top-management-team (TMT) characteristics, less is known about the effects of TMT structures, meaning the array of functional positions that TMT members fill. There are strong norms about TMT structures, so organizations that violate these norms may suffer. This is especially true for startups, which rely on their TMTs for legitimacy. Although many new organizations adopt TMT structures that are typical in their industry, others adopt more unusual structures. To study the effects of TMT structure unusualness, we build on theories of TMTs, legitimacy, and imprinting. We argue that organizations with more unusual TMT structures at startup suffer an *unusualness penalty* and are more likely to fail, and that this unusualness penalty is stronger for specialists than generalists. We also argue that even if organizations amass experience with unusual TMT structures or their 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 generally support our predictions, indicating that unusual TMT structures have negative consequences that organizations cannot easily overcome.

The formal structure of the top management team (TMT) – the set of jobs filled by the group of managers leading an organization and setting its strategic direction – is one of the first structures to be put in place at founding, created as cofounders and early employees sort themselves into the firm’s top positions. Choices about TMT membership and structure (who will be in what positions) have strong effects on team functioning, strategic decision making, economic performance, organizational growth, and adaptation, for both new organizations and established ones (Hambrick, 2007). For instance, startups whose TMT members have greater functional breadth and diversity are more likely to later add jobs at all levels of the organization (Dencker, Gruber and Shah, 2009) and to experience churn through employee exits and entries (Boeker and Wiltbank, 2005).

There are strong norms about how TMTs should be structured; in particular, what functions should be included in them. For instance, from the 1980s onward, the finance function, in the form of the Chief Financial Officer, has become a more typical – even expected – feature of TMTs in large corporations; this trend was driven by the rise of the finance conception of control (Fligstein, 1990). Yet not all firms conform to such norms: some large U.S. corporations have no finance function represented in their TMTs, while others 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). Existing studies of deviations in TMT structures tend to focus on their adoption and to treat them as independent categorical outcomes (e.g., Hambrick and Cannella, 2004; Zorn, 2004; Menz, 2012; Menz and Scheef, 2014) where all non-normative structures are equal in their deviance. But some structures are more unusual – and therefore more deviant – than others. 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. That is why we examine differences in levels of structure unusualness.

Outside of research on TMTs, a few studies have demonstrated that the impact of deviating from de-facto social norms depends not just on *whether* an organizational structure or practice is deviant but on just *how deviant* it is (e.g., Miller and Chen, 1996; Deephouse, 1999; Jennings, Jennings and Greenwood, 2009; Smith, 2011). Much of this work echoes social-psychological explanations of the effects of being unusual for individuals (Maslach, Stapp and Santee, 1985; Brewer, 1991) in suggesting competing mechanisms. On the one hand, being more unusual allows individuals and organizations to benefit from distinctiveness, but on the other hand, being more unusual is unfamiliar and, if audiences are uncomfortable with the unfamiliar, will generate penalties. What little evidence we have about the effects of unusualness on organizations is inconsistent. Airlines and hedge funds with more unusual strategies performed worse than those with less unusual strategies (Miller and Chen, 1996; Smith, 2011). But banks with balanced strategies – neither too unusual nor too similar to others’ strategies – performed best (Deephouse, 1999), while law firms with a moderate number of novel employment practices performed worse than those with many or few novel practices (Jennings, et al., 2009). The paucity of and divergence in empirical studies on organizational unusualness indicates the need for more research.

Here, we argue that the effect of unusualness depends on the audience. For TMT structures, the critical audiences are investors, suppliers, employees, and distributors, which tend to value known structures and practices, and to reject unusual ones. In contrast, for other structures and practices, the critical audiences may be consumers or critics, who may view unusualness more positively. Negative responses to unusual structures and practices are especially germane to evaluations of startups, which have no track record apart from the reputations of their founders and executives, and so are driven to derive legitimacy from adhering to industry norms (Suchman, 1995;

Khaire, 2010). Therefore, organizations with unusual TMT structures at startup will pay an *unusualness penalty*: they will have difficulty amassing legitimacy and resources, and so will be less likely to thrive and more likely to fail. We further argue that this unusualness penalty will vary across forms of organization. Generalist organizations, which are larger and more legitimate, and therefore have deeper resource bases than specialists, have more leeway to deviate from social norms; therefore, generalist organizations will pay a smaller unusualness penalty than specialists. We also argue that because of inertia, imprinting, and path dependence (Stinchcombe, 1965; Burton and Beckman, 2007; Beckman and Burton, 2008; 2011; Marquis and Tilcsik, 2013), initial TMT structures will have lasting effects. Firms that adopt unusual structures at startup will continue to pay the unusualness penalty throughout their lives. Even if their TMT structures become less unusual after startup, the unusualness penalty due to startup TMT structure will endure.

We test these predictions using data on the TMT structures of all organizations in one industry over five decades: 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 startup because following organizations from startup onward reduces concerns about the effects of unobserved history (i.e., left truncation). By theorizing about the nature of audiences who evaluate unusualness, we help resolve the question of whether unusualness is penalized or rewarded. We also extend efforts to reconceptualize unusualness as arrayed along a spectrum from zero (the focal organization is identical to all other existing organizations) to one (the focal organization is unique – different from all other existing organizations) (Miller and Chen, 1996; Deephouse, 1999; Jennings, et al., 2009; Smith, 2011), which allows for deviations among deviants. In addition to studying differences in elements of organizational structure between some focal organization and others in its industry, which captures unusualness at the level of the structural element, we study unusualness at the level of the overall structure, by assessing how unusual an

organization's configuration of elements is compared to others in its industry. We expand the TMT literature by analyzing TMT structures, rather than TMT members' prior experience. Finally, we provide new evidence on the importance of early decisions about how entrepreneurs structure their organizations.

Theory

TMT Structures and Firm Performance

The experiences, demographic characteristics, values, and personalities of TMT members have strong effects on team functioning and on firm performance, strategy, growth, and adaptability (Hambrick, 2007). Easily observable characteristics of TMT members, such as functional background, education, gender, race, and tenure, directly influence top managers' individual and collective decision making, as well as organizational performance (Hambrick and Mason, 1984). Functional diversity in the experience of team members is one of the most frequently studied aspects of TMTs; it can produce benefits in terms of information flows, creativity and innovation, and monitoring of the environment, but it can also create costs in terms of heightened conflict, slower decision-making, and impaired communication (Bantel and Jackson, 1989; Hambrick, Cho and Chen, 1996; Cannella, Park and Lee, 2008).

In addition to their influences on internal operations, TMT characteristics also provide information to external audiences and so influence the legitimacy those audiences confer on organizations. For startups, the impact of TMT characteristics on external audiences is especially important because startups have neither track records nor established reputations, so their audiences have few ways to judge startups, other than by what they can observe about those at the top. For instance, the experiences of TMT members can confer legitimacy on new ventures, which in turn facilitates access to resources, enhances the ability to fill critical roles, and brings better endorsements (Gulati and Higgins, 2003; Higgins and Gulati, 2006).

TMT structures – the set of positions and functions included in the team – can signal legitimacy independently of TMT members' experience. Typically, in prior work, TMT structure has either been ignored or used as a proxy for TMT members' experience, yet the two are conceptually and empirically distinct: TMT structure and TMT member characteristics have separate effects on other aspects of organizational structure and on performance (Beckman and Burton, 2011; Ferguson, Cohen, Burton and Beckman, 2016). Which positions are in TMT structures at startup influences which positions will be in place later (Beckman and Burton, 2008). And fit between TMT structure and TMT member experience influences whether new members are hired and new positions created after startup (Ferguson, et al., 2016).

Unusual TMT Structures

Organizational strategies and structures, including TMT structures, that are different from those of most other members of their industry (i.e., the industry's central tendency) violate the de-facto social norms of their industry (Miller and Chen, 1996; Smith, 2011). Yet TMT structures vary in how different they are from that central tendency, and so in how unusual they are; therefore, TMT structures vary in how severely they violate social norms. More typical TMT structures are those that better conform to social norms, and conformity to social norms legitimates organizations that adopt such structures (Meyer and Rowan, 1977; DiMaggio and Powell, 1983; Staw and Epstein, 2000), thereby facilitating access to resources and improving performance. Conforming to social norms can also signal quality, just as degree of membership in a category does (Zuckerman, 1999). Having an *unusual* TMT structure – one that is rare in the focal industry or region, and therefore atypical – reduces organizational legitimacy, downgrades perceptions of quality, impedes resource access, and harms performance, for several reasons. Most basically, a more unusual TMT structure may be technically inferior to a more typical one, and so may yield poorer performance. The technical inferiority of more unusual structures may be due to the fact that organizations learn from

the experiences of others, adopting structures and practices that appear to work for others. To the extent that such learning is not 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 structures have more role models to study, so they can learn faster and better how best to operate with those structures. Moreover, external organizations (resource providers, distributors, regulatory agencies, customers) can more quickly accumulate experience with organizations that adopt less unusual structures, and so may find it easier to interact with those organizations. In other words, through their own experience and the experience of others in their sector, external organizations will learn better how to deal with organizations with less unusual structures than those with more unusual structures.

In addition to such technical considerations, typical TMT structures may become taken for granted as the “right” or “natural” ways to organize (Deepphouse, 1996), even if they offer no operational benefits, and thus become legitimated (Meyer and Rowan, 1977; DiMaggio and Powell, 1983; 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 startup’s adoption of a more typical structure as a signal that decision makers know how things should be done, and, conversely, interpret its adoption of an unusual structure as a signal that decision makers do not know how things should be done – even if that structural decision does not affect performance, or it actually improves performance. 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).

TMT structures are observed and evaluated by employees and exchange partners, including 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 TMT structures less appealing because they have, over the course of their careers, learned how to work in firms with more typical TMT structures; therefore, they may be less willing to accept jobs in firms with more unusual structures. Investors, suppliers, and distributors may also find firms with more unusual TMT structures less appealing as business partners, simply because they are more uncertain about which people, in which structural positions, have authority to contract with them, which may harm the performance of firms with more unusual TMT structures. In sum, more unusual TMT structures make observers more uncomfortable than less unusual ones, which in turn makes more unusual TMT structures less legitimate. These issues are similar to the issues facing firms with unusual product offerings: having products that fit within established categories gives firms advantages that stem from following familiar pathways (Hsu, Hannan and Koçak, 2009; Negro, Hannan and Rao, 2011).

Notwithstanding their costs, unusual TMT structures may also have benefits, most notably increasing organizational visibility: organizations with more unusual structures stand out more from the crowd and so garner attention more easily. For some types of audiences and some types of organizations – startups in all industries and all organizations in most cultural industries – adopting more unusual structures is congruent with expectations that they break from convention and innovate. For startups in particular, unusual structures can project distinctive identities (Navis and Glynn, 2011), which are highly valued by some audiences, such as customers, who can fulfill their desire to gain status or stand out from the crowd by purchasing distinctive products (Lynn and Harris, 1997) – even if those products are distinctive in name alone (Miller and Kahn, 2005).

The benefits and costs of unusualness for organizations can be reconciled by considering who is evaluating organizations and what their preferences are. With respect to TMT structures,

those who pay attention to them include investors, suppliers, distributors, and potential employees, who are likely to prefer more typical structures and penalize more unusual ones. Although customers may prefer more unusual products, especially from startups in most industries and all firms in creative industries, and organizations that adopt more unusual structures may create more unusual products, customers seldom pay attention to organizational structures, including TMT structures. If this logic holds, then on balance, unusual TMT structures will confer minimal benefits and maximal costs, in the form of reduced efficiency and less legitimacy, and fewer resources, and thus poorer performance and higher chances of failure. Thus we propose our most basic prediction:

Hypothesis 1: Organizations with more unusual TMT structures at startup are more likely to fail than organizations with less unusual TMT structures at startup.

But if the benefits conferred by unusualness are more than minimal (Deepphouse, 1999), we may find a non-linear (U-shaped) effect of unusualness on failure, and wineries with moderately unusual TMT structure the least likely to fail. Therefore, we propose an alternative hypothesis:

Hypothesis 1a: Organizations with TMT structures at startup that are moderate in their unusualness are less likely to fail than organizations with TMT structures at startup that have a high or low degree of unusualness.

Having a typical TMT structure is not the only way that startup firms can signal legitimacy; they can also do this through organizational form – e.g., through membership in the generalist or specialist form (Carroll, 1985). Generalist organizations tend to be larger than specialists because they compete on price and benefit from scale economies, while specialists compete on product differentiation and meeting the needs of an idiosyncratic market segment. In Western societies, bigger is better, so larger organizations are generally higher status and more legitimate than smaller ones. High-status organizations are given more latitude to deviate from social norms and may be less subject to the unusualness penalty (Phillips and Zuckerman, 2001). Larger organizations also tend to have more resources than small ones, and resources are a second source of legitimacy. In turn, legitimacy derived from size and possession of resources may provide “idiosyncrasy credits”

(Hollander, 1958) that make having more unusual (and therefore less legitimate) structures less harmful to organizations (Haveman, 1993a; 1993b; Miller and Chen, 1996). This logic suggests that generalist organizations will have some immunization against the unusualness penalty, but specialist organizations will not. Therefore we predict:

Hypothesis 2: The effects on failure of the unusualness of TMT structures at startup will be stronger for specialist organizations than for generalist organizations.

The Unusualness Penalty Endures

Even as organizations age and gain operational experience with their TMT structures, thereby increasing their operational efficiency, the penalty imposed on them due to the unusualness of their TMT structures at startup may endure: initial structures may have effects that outlast the structures themselves, in a form of path dependence. Theories of imprinting and path dependence suggest that the effects of early decisions about organizational structures persist (Stinchcombe, 1965; Marquis and Tilcsik, 2013). For instance, Swedish startups that began life by adopting typical and socially accepted formal legal structures (corporation, partnership, or sole proprietorship) were more likely to establish relationships with customers and financiers quickly after startup and less likely to disband, compared with startups that did not adopt such structures (Delmar and Shane, 2004). Such path dependence occurs because after structures are put in place at founding, the allocation of tasks and authority become institutionalized – they take on value far beyond any technical requirements (Selznick, 1957). People become socialized into ways of doing things early in their tenure in organizations and do not alter their patterns of behavior easily, even when environmental conditions change (Tilcsik, 2014). This line of reasoning suggests that external audiences who interact with organizations – suppliers, distributors, and investors – are unlikely to adjust the behaviors they adopted to deal with startup structures, even if those structures change after startup. More generally,

it suggests that those audiences are unlikely to adjust their initial perceptions of organizations' structures. Thus, firms' initial choices about TMT structures have lasting effects.

Yet the unusualness of firms' TMT structures may vary over their lives, due to both micro and macro dynamics. At the micro level, although TMT structures are subject to strong inertial pressures (Baron, 2004; Hannan, Baron, Hsu and Koçak, 2006) and organizations often keep their initial structures in place long after founding (Stinchcombe, 1965; Westphal, Gulati and Shortell, 1997; Beckman and Burton, 2008), organizations sometimes do change their structures to improve fit to environmental conditions (including audience expectations) or to respond to their own and others' experiences (Baron, Burton and Hannan, 1996; Baron, Hannan and Burton, 2001; Guillén, 2002). In particular, firms that begin life with more unusual TMT structures may face greater pressure to change structures than those that begin life with less unusual TMT structures. At the macro level, the distribution of TMT structures used by other organizations in the industry may change as new organizations are founded, existing organizations fail, and surviving organizations change their structures. As a result of such turnover among industry participants, TMT structures that were rarely seen in an industry at the time a focal organization was founded may become frequently seen in that organization's later years; conversely, structures that were frequently seen may become rare. Taken together, micro and macro dynamics suggest that the unusualness of organizations' TMT structures may change over time. Even if firms' TMT structures become less unusual over time, the unusualness penalty may endure, due to imprinting and path dependence (Stinchcombe, 1965; Marquis and Tilcsik, 2013).

In sum, this line of reasoning leads us to predict:

Hypothesis 3: The effects on failure of the unusualness of TMT structures at startup will persist, not diminish, as organizations age and gain experience with their TMT structures.

Hypothesis 4: The effects on failure of the unusualness of TMT structures at startup will persist even if firms' TMT structures become less unusual after startup.

Note that hypothesis 4 applies to two situations: organizations change their 'TMT' structures, and organizations 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 newly founded U.S. wineries over five decades, 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.

U.S. wineries can be divided into two main forms: generalist mass producers and specialist “boutique” or farm wineries (Swaminathan, 1995; 2001; Haveman, Swaminathan and Johnson, 2016). Mass producers are medium-sized to large generalists that produce a wide range of products aimed at the center of the market and that compete on price, seeking economies of scale in production, advertising, and distribution. Farm wineries are small specialist producers that are often called “boutique” producers and that compete by differentiating their products and appealing to either connoisseurs or adventurous tourists. Following industry conventions, we distinguished between the two forms based on size, defining as farm wineries those producing less than 50,000 cases of wine per year or having storage capacity of less than 100,000 gallons at founding (Hiaring, 1976; Adams, 1990).

The number of both forms of winery varied greatly over our study period. From the 1940s onward, increasing economies of scale led the mass-producer sector of the U.S. wine industry to

consolidate; many small and medium-sized mass producers were acquired by larger firms (Moulton, 1984). As a result, the number of mass-producer wineries declined from 309 in 1940 to a low of 175 in 1971, before rebounding slightly during the 1980s. This decline in numbers happened even as industry sales rose. The number of farm wineries also declined the first half of our study period, from 722 in 1980 to a low of 141 in 1967. Many early farm wineries produced undifferentiated products for local markets, and 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). By the beginning of 1990, there were 1,022 farm wineries across the U.S., all but 31 founded after 1965.

Although farm wineries greatly outnumbered mass producers throughout the five decades we study the wine industry, mass producers have long been the dominant form of winery in the U.S. Between 1940 and 1990, mass producers were on average 98 times as large as farm wineries: average storage capacity was 2.7 million gallons for mass producers and 30,000 gallons for farm wineries. On average over these five decades, mass-producer wineries accounted for 98.4% of industry production.

Many of the wineries we study (including some mass producers) are much smaller than the large corporations studied in most previous research on TMTs. Yet 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, 1993a). 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). Thus, an important advantage of this research site is that it differs from most others used in studies of TMTs.

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; city 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 – financiers, 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 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 1,685 wineries (1,367 farm wineries and 318 mass producers) founded between 1941 and 1988, inclusive. Of these firms, 661 (465 farm wineries and 196 mass producers) 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 unusualness of TMT structures at startup. This took 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 winery 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 winery per year. If two or more people in a winery 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 winery had two or more job titles in a single year, we created one record for each title. If one person worked for two or more wineries in a single year, we created one record for each firm. 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 merged data on subsidiaries into data on parent firms 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 winery that year and zero otherwise. We used these dummy variables to calculate two measures of the unusualness of TMT structures: one captures the unusualness of a firm's overall configuration, the other captures the unusualness of the functions in that configuration.

[Table 1 about here]

Next, we determined the configuration of functions in wineries' TMTs. We then calculated the proportion of firms with each configuration. With five functions, there are 32 (2^5) possible

configurations; we observed 29 of these in startups over our observation period. By far the most frequently observed configuration was a structure with positions in only the corporate governance function (predominantly wineries that listed only owners as key personnel). Across our study period, over 38 percent of wineries had this configuration at startup. The next three most frequently observed configurations together were found in 28.0 percent of all winery startups: corporate governance plus production (13.8 percent of new wineries); finance and control plus general administration plus production (8.0 percent); corporate governance plus general administration plus production (6.2 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 63.7 percent of startup wineries in 1941, but only 24.6 percent in 1989. But even at 24.6 percent, this configuration was still far more frequently observed in 1989 than any other.

We calculated the unusualness of firms' TMT configurations at startup (*configuration unusualness (at startup)*) as the proportion of existing wineries in the year before the focal firm's founding that had TMT configurations *different from* the startup. The highest possible value for this variable is one, which would occur when all other wineries had TMT configurations different from the focal winery. The lowest possible value is zero, which would occur when all other wineries had the same TMT configuration as the focal winery; however, the lowest observed values were 0.128 among farm wineries and 0.635 among mass producers.¹

Consider Baldinelli Shenandoah Valley Vineyards, a farm winery founded in 1979 in California's Amador Valley, near Sacramento. This winery had the second most common configuration: corporate governance plus production. In 1978, the year before it was founded, 13.2 percent of all farm wineries had that configuration. Configuration unusualness at startup for this

¹ Univariate statistics for all unusualness measures are shown in Tables 2a and 2b, which we discuss in detail below.

winery is one minus the proportion of other wineries with its startup configuration, which equals 0.868 ($1 - 0.132$), making it slightly (by one-half standard deviation) more unusual than the typical (sample-average) farm winery startup during our study period.

We also assessed the unusualness of each firm's TMT structure at startup at the function level (*function unusualness (at startup)*), based on the Jaccard index of dissimilarity or distance (Jaccard, 1901; 1912; Everitt, Landau, Leese and Stahl, 2011). This is a standard measure of dissimilarity between pairs of entities with binary attributes; it is the complement of the Jaccard index of similarity that is widely used in studies of organizations, including studies of wineries (e.g., Hsu, Roberts and Swaminathan, 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 actuality, this variable ranged from 0.060 to 0.749 among farm wineries, and from 0.301 to 0.656 among mass producers.

Again, consider Baldinelli Shenandoah Valley Vineyards, which had a configuration at startup of corporate governance plus production. In 1978, the year before this winery was founded, the corporate governance function was present in 72.0 percent of all farm 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 startup (corporate governance plus production) is one minus the proportion of farm wineries with its function, while its non-overlap score for each of the three functions not in place at startup (general administration plus finance and control plus marketing and sales) is the proportion who have those functions. We sum these and divide by the number of functions. 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 farm wineries doing business in 1978.

Measuring experience with TMT structure. To do this, we created an interaction between the unusualness of that structure at startup and firm age (*configuration unusualness* $\times$ *age* and *function unusualness* $\times$ *age*). If the effect of being unusual declines over firms' lives, as they and their exchange partners accumulate experience with their TMT structures, these interactions would be significant and negative. But if the effect of being unusual persists, these interactions would be non-significant.

Measuring change in TMT structure unusualness. We calculated change in unusualness by subtracting startup unusualness from the current-year unusualness and dividing the difference by startup unusualness. We created two variables, one based on configuration unusualness (*change in configuration unusualness*), the other 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 reduced the unusualness penalty, 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. 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.³ Because there are multiple observations on each winery, which are not independent, we clustered standard errors on wineries. We estimated models separately on farm wineries and mass producers because they were very different forms of organization and so had very different TMT structures (Haveman, et al., 2016), so the effects of many predictors would differ between the two forms.

Results

Table 2 presents univariate statistics and bivariate correlations for all variables in our analysis. It is divided into two tables: Table 2a for farm wineries and Table 2b for mass producers.

² In results not shown here, we estimated models with age squared, but it had non-significant effects. And, following previous research (Swaminathan, 2001), we 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 either farm-winery or mass-producer 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.

³ In robustness checks, we estimated models with log-logistic and piecewise exponential distributions, but the results did not differ substantively from those shown here.

These tables reveal that many wineries adopted fairly unusual TMT structures at founding. Mean configuration unusualness at startup is 0.738 for farm wineries and 0.887 for mass producers. Mean function unusualness at startup is 0.347 for farm wineries and 0.428 for mass producers. Such high values for unusualness suggest that the wine industry has weak social norms; if so, any test of our hypotheses using data on this industry will be conservative, since the unusualness penalty should be greater when social norms are stronger. Mass producers generally had more unusual TMT structures at startup than farm wineries, perhaps because they varied so much more in terms of size. Moreover, both forms of winery had fairly unusual TMT structures later in life, as all four measures of change in unusualness were positive.

[Table 2 about here]

These tables also show that the two measures of TMT structure unusualness – configuration-based and function-based – were moderately highly correlated among farm wineries ($r=0.805$), but less so among mass producers ($r=0.148$). The function-based measure is less restrictive than the configuration-based measure: if the focal firm's TMT structure shares some, but not all, functions with comparison firms' TMT structures, such sharing contributes to the function-based measure, but not to the configuration-based measure, unless all functions present in either firm's TMT structure are shared by both firms. That is why the function-based measure is slightly lower, on average, than the configuration-based measure: among farm wineries, the former is 47.0 percent of the latter; among mass producers, it is 48.3 percent.

Tables 3 and 4 present multivariate analyses. Table 3 analyzes configuration unusualness, while Table 4 analyzes function unusualness. In both tables, models 1 to 4 cover farm wineries and models 5 to 8 cover mass producers. We discuss each table in turn.

[Tables 3 and 4 about here]

Configuration unusualness. In Table 3, model 1 shows that among farm wineries, 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 startup significantly increased failure rates, which supports hypothesis 1. The effect is sizeable: all else held constant, a farm winery that at startup had a structure with the mean level of configuration unusualness (multiplier of the failure rate = $\exp[0.791 \times 0.738] = 1.793$) was 21 percent less likely to fail than a winery that at startup had a structure with configuration unusualness one standard deviation above the mean (multiplier = $\exp[0.791 \times (0.791 + 0.246)] = 2.178$).

To test hypothesis 1a, which predicts an inverted-U-shaped effect of unusualness at startup, we added the squared term for configuration unusualness at startup. Model 2 shows that the linear term had a negative but non-significant effect on failure, while the squared term had a positive but non-significant effect. Together, these results indicate there is no U-shaped effect of unusualness, which fails to support hypothesis 1a. Even if these coefficients had been statistically significant, fewer than 8.5 percent of farm wineries were below the inflection point (0.41). For the remaining more than 91.5 percent, any increase in configuration unusualness at startup increased failure rates, consistent with the findings in model 1.

Among mass producers, model 5 shows that larger wineries were more likely to fail, although this effect is not always statistically significant. This model also shows the expected inverted-U-shaped effect of the number of wineries in the focal state, although again, this effect is not statistically significant. Moreover, this model shows that configuration unusualness at startup had a non-significant effect on the failure rate. Model 6 tests for a non-linear effect of configuration

unusualness by adding the squared term. Although the effect on the linear term was positive and the effect on the squared term was negative, both were non-significant. Together, these results fail to support either hypotheses 1 or 1a.

To test hypothesis 2, which predicts that the effects of configuration unusualness at startup will be stronger for specialists (farm wineries) than for generalists (mass producers), we compared the statistical significance levels of those coefficients. Consistent with our prediction, the coefficient in model 1 was positive and highly significant ($p=0.000$) for farm wineries, while the coefficient in model 5 was negative and non-significant ($p=0.772$) for mass producers. But a Chow test shows that the difference between the coefficients is not statistically significant ($p=0.285$), most likely because the standard error on the coefficient for mass producers was so large. In sum, our results only partly support hypothesis 2.

To test hypothesis 3, which predicts that accumulated experience with TMT structures would not diminish the unusualness penalty, we turn to model 3 (for farm wineries) and model 7 (for mass producers). Among farm wineries, the constrained main effect of configuration unusualness at startup was positive and statistically significant, while the effect of the interaction between configuration unusualness at startup and firm age was negative but non-significant. Together, these indicate that the unusualness penalty did not diminish as wineries gained experience with such configurations, which supports hypothesis 3. Among mass producers, the constrained main effect of configuration unusualness at startup is non-significant, as is the interaction with firm age. These results fail to support hypothesis 3.

To test hypothesis 4, which predicted that if firms' TMT structures became less unusual after startup, the unusualness penalty would not diminish, we turn to model 4 (farm wineries) and model 8 (mass producers). For both forms of winery, change in configuration unusualness after startup had non-significant effects. The main effect of configuration unusualness at startup was positive

and statistically significant among farm wineries, but negative and non-significant among mass producers. These results support hypothesis 4 among farm wineries, but not among mass producers.

Function unusualness. In Table 4, model 1 shows that among farm wineries, older and smaller wineries were more likely to fail, paralleling the results in Table 3. But different than Table 3, the number of wineries in the focal state had non-significant effects on both the linear and squared terms. 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 farm wineries' TMT structures were at startup, 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 farm winery that at startup had a structure with the mean level of function unusualness (multiplier of the failure rate = $\exp[1.910 \times 0.347] = 1.940$) was 29 percent less likely to fail than a winery that at startup had a structure with configuration unusualness one standard deviation above the mean (multiplier = $\exp[1.910 \times (0.347 + 0.133)] = 2.501$). Model 2 adds the squared term for function unusualness at startup, to test for a curvilinear effect among farm wineries. Both terms had positive and non-significant effects. These results fail to support hypothesis 1a.

Among mass producers, model 5 shows the expected inverted-U-shaped effect of the number of wineries in the focal state, although this effect is not always statistically significant. This model also shows a negative and non-significant effect of function unusualness at startup, which fails to support hypothesis 1. Model 6 adds the squared term for function unusualness at startup, to test for a curvilinear effect. Although the effect on the linear term was positive and the effect on the squared term was negative, both were non-significant. These results fail to support hypothesis 1a.

To test hypothesis 2, which predicts that the effects of function unusualness at startup will be stronger for specialists (farm wineries) than for generalists (mass producers), we compared the significance levels of those coefficients. Consistent with our prediction, the coefficient in model 1 was positive and highly significant ($p=0.000$) for farm wineries, while the coefficient in model 5 was negative and non-significant ($p=0.162$) for mass producers. A Chow test shows that the difference between the coefficients is statistically significant ($p=0.004$). In sum, these results strongly support hypothesis 2.

To test hypothesis 3, which predicts that as wineries accumulated experience with their TMT structures, the unusualness penalty would persist, models 3 and 6 include interactions between function unusualness and age. Among farm wineries, the constrained main effect of function unusualness at startup was positive and statistically significant, while the interaction with age was positive but non-significant. This result supports hypothesis 3. Among mass producers, the constrained main effect of function unusualness at startup was negative and statistically significant, while the interaction with age was positive and statistically significant. This result fails to support hypothesis 3. Instead, it suggests that among mass producers, there are advantages to having an unusual structure at startup, but that these advantages diminish with age, zeroing out after just under 15 years.

To test hypothesis 4, which predicts that even if wineries' TMT structures became less unusual after startup, the unusualness penalty would persist, models 4 and 8 include change in unusualness (startup vs. current structure). For both farm wineries and mass producers, there were positive and non-significant effects of change. Moreover, the main effect of function unusualness at startup was positive and significant only for farm wineries. These results support hypothesis 4 among farm wineries, but not among mass producers.

Robustness checks. To test the sensitivity of our results to model specification and measurement, we conducted several additional analyses. Because we found no support for hypotheses 1, 3, and 4 among mass producers, we conducted these analyses on farm wineries only. 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 – to assess the robustness of our model 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 in statistical models.

Next, we probed the sensitivity of our analyses to the distribution of configurations. One configuration, corporate governance only, accounted for 38 percent of firm-year observations. We dropped from the analyses all firms with this configuration. After doing this, our results still hold.

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. The results we showed above partly disconfirm this explanation: the effects of change in unusualness on failure were non-significant, and the effects of unusualness remained positive and significant, even after controlling for change. Yet we found some evidence consistent with this explanation: firms with more unusual structures were more likely to change those structures (to less unusual structures) than firms with less unusual structures. This finding spurred us to investigate the effects of change further. We tried two alternative measures of change: an indicator variable set equal to one if a winery had ever changed its structure and zero otherwise, and a cumulative count of the number of times a firm had changed its structure. Neither measure had a significant effect on failure, and in models that included these measures, the effects of unusualness at startup were still positive and significant. We also tried separating the change measure into two components – *decrease* in unusualness and *increase* in unusualness – which allowed us to assess whether the effects of changing

TMT structure unusualness were non-linear, breaking slope at the zero-change point. Each component was coded zero when the other component was non-zero. Analyses using these two variables showed null effects: organizations whose TMT structures became less unusual were no more likely to survive than those whose structures became more unusual or those whose structures remained at the same level of unusualness.

We then examined the possibility that the effects of change differed across subsets of wineries. We reasoned that firms whose structures become less unusual may differ from those whose structures become more unusual, so we re-estimated models separately on those subsets. The effects of unusualness at startup were positive for both subsets; the effect was statistically significant among wineries whose structures became more unusual, but merely marginally significant ($p=0.079$) among farm wineries whose structures became less unusual.

Finally, because the effects of changing unusualness level might depend on whether this change is due to the focal organization's changing its structure versus industry-level change in average unusualness, we repeated the analyses on two subsets: firms that changed their structures and those that did not change their structures, but those structures' unusualness level changed because the composition of the industry changed. For both subsets, the effects of unusualness at startup were positive and statistically significant. For the subset that changed their structures, 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 those that did not change their structures, but those structures' unusualness level changed because the composition of the industry changed, the effect on the variable measuring the difference in unusualness between the startup structure and the current structure was not statistically significant.

Together, these analyses provide little evidence to support the alternative explanation that firms that start life with more unusual TMT structures may be more likely to change those

structures, and 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 startup 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* they run their firms so as to perform poorly.⁴ We directly investigated quality differences in wineries in two ways, based on geographic location and product portfolio strategy. First, California is the dominant wine-producing state (90% of wine produced in the United States comes from California) and the best location for growing grapes for wine. Thus new wineries launched in California were likely to be of higher quality than new wineries launched in other states, net of factors like size (which proxies resource levels), age (which proxies experience), and competition and legitimacy (which are controlled for in our analyses with the count of wineries in the focal state and its square). If California wineries are of higher quality than wineries in other locations, they should have higher-quality managers. If adopting unusual TMT structures at startup is associated with low-quality management, then the unusualness penalty should be less for California wineries than for wineries in other locations. But, in results not shown here to save space, when we split the sample of farm wineries between California and other locations, we found positive and statistically significant effects in both subsamples for both measures of unusualness. Indeed, the effects were stronger for wineries located in California than for wineries located elsewhere.

Second, we distinguished between wineries that produced only dry table wine and wineries that produced other wine products – mostly sweet sherries, ports, and dessert wines. Over the history of the American wine industry, sweet sherries, ports, and dessert wines were produced using

⁴ Unfortunately, because our main explanatory variable (TMT structure unusualness at startup) does not vary within a winery over time, we cannot include winery fixed effects, which could help to discount this alternative explanation.

poor-quality grapes; their sweetness masked other unpleasant characteristics, notably the “foxiness” that comes from using native *labrusca* grapes, such as Concord and Catawba, or from using hybrids of native *labrusca* grapes and European *vinifera* grapes, such as Vidal Blanc and Marechal Foch. But dry table wines required better-quality grapes, specifically European *vinifera* grapes, such as Pinot Noir and Sauvignon Blanc. Therefore, wineries that produced only dry table wine were producing better-quality products than wineries that produced other kinds of wine. Analyses of two subsamples (table wine only vs. all other product portfolios), which are not shown here to save space, paralleled analyses of the geographic subsamples: there were consistent positive and statistically significant effects for both measures of unusualness in both subsamples. Moreover, the effects are stronger for wineries that produced only dry table wine than for wineries that did not produce dry table wine.

Discussion

We began by posing questions about the effects of adopting unusual TMT structures at startup: Does starting off with a more unusual TMT structure help or hinder an organization’s life chances? Are those effects stronger among specialist firms than among generalist firms? Do those effects diminish as wineries accumulate experience or as their structure becomes less unusual after startup? While the upper-echelons literature has explored the effects of TMT demography in great depth, it has been less thorough in charting the effects of TMT structure, despite mounting evidence that TMT structure and TMT demography are conceptually and empirically distinct. Research on the effects of unusualness has long presented a puzzle: does doing something unusual produce an unusualness penalty or a distinctiveness reward? This puzzle is especially important for entrepreneurs who face frequent trade-offs between the known and unknown. Thus answering questions about the effects of adopting unusual TMT structures at startup helps expand our understanding of upper echelons, of the effects of unusualness, and of entrepreneurship.

Our findings partly supported our hypothesis that firms that adopted more unusual TMT structures at startup would be more likely to fail than those that adopted less unusual structures – we found supportive results for specialist organizations but null effects for generalists. The effect on specialist organizations is linear: contrary to some previous research (Deepphouse, 1999; Jennings, et al., 2009), it is not especially weak or strong at low or high values. Any distinctiveness reward that specialist organizations might have derived from standing out from the crowd were not enough to overcome the unusualness penalty they paid.

A variation on our legitimacy explanation builds on the link between TMT structures and organizational identities. To the degree that organizations' TMT structures affect their identities, having more unusual and therefore less familiar TMT structures may create identity issues: organizations with more unusual structures fit less easily into established identity categories or conform less well to the expectations of their identity category. This interpretation is consistent with recent work showing that audiences penalize organizations whose products do not fit in accepted categories or span multiple categories because analysts, investors, critics, and customers do not know how to evaluate such organizations (Zuckerman, 1999; Rao, Monin and Durand, 2003; Hsu, 2006). In these cases, audiences may see organizations as impure and perceive them as performing more poorly. Our findings point to a slightly different mechanism: audiences are simply unfamiliar with rare structures and extract an unusualness penalty for organizations that adopt such structures. It is not that audiences understand but dislike these categories; it is that audiences do not like the unusualness of these structures, simply because of their unfamiliarity. They are concerned with fit between a structure and de-facto industry norms (Haveman, 1993a; 1993b; Miller and Chen, 1996).

We explored a set of questions about what might help organizations overcome the penalty that comes from starting life with an unusual structure. While these effects are strong for specialist

organizations, they are non-significant and often in the opposite direction for generalists. This suggests that specialists are more dependent on the benefits derived from having common and therefore legitimate structures, while generalists' larger resource bases and greater legitimacy inoculates them against the penalties associated with having rare and therefore illegitimate structures. It may also be that for generalists, differentiation has benefits that work against the unusualness penalty. This is an area ripe for future investigation.

We found that even with accumulated experience the unusualness penalty did not go away. Moreover, changes in the unusualness of structures after startup able did not affect the unusualness penalty. The endurance of the unusualness penalty suggests that efficiency alone cannot account for the unusualness penalty.

Our findings highlight the importance of looking at common versus rare structures in more than dichotomous terms – in relative levels of unusualness. Simply said, it matters not just that a focal organization follows the same pattern as others in its industry; it also matters how many others have that pattern. Our work builds on that of others who have constructed continuous measures of unusualness drawing on similar theory (Deephouse, 1999; Jennings, et al., 2009). Our study helps to reconcile these studies' contradictory findings by more fully considering audiences for unusualness.

Our focus in this paper was on firm-level conformity to industry norms. Our results suggest that beyond firm-level conformity, industry-level conformity is an important factor. We saw that in years when there was a higher level of structural unusualness in the industry (when firms in the industry were more unusual on average, so the least unusual structure was less dominant), all firms were more likely to survive, net of the effects of individual firms' unusualness. This presents an interesting dilemma: it seems preferable to follow a conformist strategy, but if too many firms follow a conformist strategy, everyone is worse off. Because level of structural unusualness in the

industry was highly correlated with calendar year, we can merely suggest that the level of variation across industries is an important avenue for future research on unusualness.

We investigated unusualness only in terms of 'TMT' structure. Research on product portfolios and strategy provide intriguing contrasts to our findings on structures. Most germane for comparison is a study of wineries in California, based on the same data we use here, which showed that entering the table-wine market, which was an unusual practice at that time, improved wineries' life chances (Swaminathan and Delacroix, 1991). 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 overall strategies. The effects of unusualness should also be explored for outcomes beyond failure.

Our findings provide further evidence in a debate on the importance of 'TMT' structures in general and of the structure chosen at startup. On the one hand, there is a growing body of evidence demonstrating that the employment structures in place at startup determine a broader set of structures and practices at subsequent times, as well as the ability to adapt, employee behaviors, and ultimately organizational performance. Others have argued that these structural work arrangements are peripheral aspects of organizations and that making changes to them are inconsequential (e.g., Hannan and Freeman, 1984) – like rearranging deck chairs on the *Titanic*. Our findings on organizational failure provide support for the idea that these structures are important aspects of structure with lasting implications.

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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 2a: Means, Standard Deviations, Correlations for the Analysis of Failure (Farm Wineries)

	Mean	S.D.	Min	Max	1	2	3	4	5	6	7
1 Failure	0.045	0.208	0	1	1						
2 Configuration unusualness (at startup)	0.738	0.246	0.128	1	-0.046	1					
3 Configuration unusualness (at startup) ²	0.606	0.32	0.016	1	-0.029	0.984	1				
4 Configuration unusualness x age	3.711	3.838	0	38.411	0.037	0.164	0.174	1			
5 Change in configuration unusualness	0.228	0.651	-0.809	6.81	0.042	-0.615	-0.554	0.006	1		
6 Function unusualness (at startup)	0.347	0.133	0.06	0.749	-0.041	0.815	0.786	0.077	-0.517	1	
7 Function unusualness (at startup) ²	0.138	0.096	0.004	0.561	-0.015	0.707	0.71	0.082	-0.405	0.965	1
8 Function unusualness x age	1.711	1.784	0	20.099	0.033	0.144	0.147	0.933	0.015	0.207	0.23
9 Change in function unusualness	0.254	0.746	-0.828	12.153	0.039	-0.486	-0.425	0.106	0.873	-0.485	-0.393
10 Age (years)	5.619	6.031	0	42	0.044	-0.295	-0.264	0.784	0.473	-0.297	-0.231
11 Size (ln storage)	9.354	1.244	4.643	12.429	-0.031	0.186	0.195	0.256	0.016	0.165	0.169
12 Number of wineries in the focal state	153.76	167.611	1	459	-0.044	0.153	0.111	0.062	-0.141	0.145	0.08
13 Number of wineries in the focal state ²	51732.9	74076.6	1	2.11E+05	-0.041	0.168	0.128	0.095	-0.129	0.156	0.091
14 Average config. unusualness in the industry	0.846	0.068	0.469	0.882	-0.116	0.476	0.377	0.2	-0.205	0.476	0.329
15 Average function unusualness in the industry	0.389	0.059	0.155	0.426	-0.116	0.519	0.42	0.156	-0.293	0.533	0.376

	8	9	10	11	12	13	14	15
8 Function unusualness x age	1							
9 Change in function unusualness	0.053	1						
10 Age (years)	0.736	0.523	1					
11 Size (ln storage)	0.272	0.066	0.158	1				
12 Number of wineries in the focal state	0.084	-0.158	-0.027	0.146	1			
13 Number of wineries in the focal state ²	0.116	-0.142	0.003	0.137	0.979	1		
14 Average config. unusualness in the industry	0.22	-0.166	0.079	0.071	0.272	0.297	1	
15 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 2b: Means, Standard Deviations, Correlations for the Analysis of Failure (Mass Producers)

	Mean	S.D.	Min	Max	1	2	3	4	5	6	7
1 Failure	0.054	0.227	0	1	1						
2 Configuration unusualness (at startup)	0.887	0.092	0.635	1	0.005	1					
3 Configuration unusualness (at startup) ²	0.795	0.156	0.403	1	0.003	0.998	1				
4 Configuration unusualness $\times$ age	8.637	8.366	0	42.37	-0.017	-0.078	-0.073	1			
5 Change in configuration unusualness	0.025	0.122	-0.232	0.575	0.001	-0.793	-0.778	0.083	1		
6 Function unusualness (at startup)	0.428	0.075	0.3	0.656	-0.031	0.148	0.147	-0.006	-0.084	1	
7 Function unusualness (at startup) ²	0.189	0.071	0.09	0.43	-0.032	0.148	0.146	-0.013	-0.089	0.995	1
8 Function unusualness $\times$ age	4.239	4.169	0	22.284	-0.019	-0.195	-0.186	0.965	0.197	0.131	0.121
9 Change in function unusualness	-0.005	0.171	-0.54	1.064	0.026	-0.154	-0.149	0.009	0.31	-0.485	-0.477
10 Age (years)	9.964	9.867	0	47	-0.019	-0.222	-0.212	0.982	0.218	-0.023	-0.032
11 Size (ln storage)	13.257	1.815	7.601	18.497	0.047	-0.052	-0.059	0.221	0.028	-0.195	-0.212
12 Number of wineries in the focal state	105.808	61.371	1	194	0.023	0.143	0.125	-0.112	-0.153	-0.044	-0.044
13 Number of wineries in the focal state ²	14922.4	11148.7	1	37636	0.028	0.114	0.098	-0.178	-0.135	-0.069	-0.071
14 Average config. unusualness in the industry	0.902	0.027	0.779	0.937	-0.003	0.229	0.224	0.235	-0.132	0.083	0.1
15 Average function unusualness in the industry	0.425	0.014	0.404	0.449	-0.001	-0.144	-0.143	-0.052	0.161	-0.031	-0.057
	8	9	10	11	12	13	14	15			
8 Function unusualness $\times$ age	1										
9 Change in function unusualness	-0.075	1									
10 Age (years)	0.978	0.025	1								
11 Size (ln storage)	0.2	-0.023	0.227	1							
12 Number of wineries in the focal state	-0.152	0.063	-0.144	0.083	1						
13 Number of wineries in the focal state ²	-0.212	0.075	-0.203	0.064	0.96	1					
14 Average config. unusualness in the industry	0.23	-0.128	0.22	0.084	-0.089	-0.191	1				
15 Average function unusualness in the industry	-0.055	0.193	-0.043	0.003	0.083	0.147	-0.408	1			

Note: This table covers 3,224 firm-year observations on 291 mass-producer wineries from their first year of operation to their last or 1989, whichever comes first. Of these, 178 failed during our study period.

Table 3: Event-History Analysis of the Effects of Unusual TMT Configurations at Startup on Organizational Failure

	Farm Wineries				Mass Producers			
	1	2	3	4	8	6	7	8
Configuration unusualness (at startup)	0.791*** (0.214)	-1.475 (1.258)	0.657* (0.265)	0.944*** (0.256)	-0.285 (0.984)	27.53 (18.46)	-1.365 (1.382)	0.598 (1.408)
Configuration unusualness (at startup) ²		1.746 (0.963)				-16.29 (10.77)		
Configuration unusualness × age			0.0161 (0.0210)				0.0815 (0.0766)	
Change in configuration unusualness (startup vs. current)				0.0865 (0.0774)				0.889 (1.050)
Age (years)	0.0381*** (0.00766)	0.0339*** (0.00804)	0.0289* (0.0140)	0.0354*** (0.00824)	-0.0147 (0.00946)	-0.0115 (0.00985)	-0.0856 (0.0671)	-0.0154 (0.00953)
Size (ln storage)	-0.165*** (0.0438)	-0.166*** (0.0438)	-0.166*** (0.0437)	-0.169*** (0.0435)	0.0836* (0.0389)	0.0741 (0.0397)	0.0855* (0.0391)	0.0842* (0.0391)
Number of wineries in the focal state	-0.00609* (0.00250)	-0.00634* (0.00250)	-0.00603* (0.00251)	-0.00615* (0.00251)	-0.0559 (0.0293)	-0.0502 (0.0294)	-0.0581* (0.0294)	-0.0599* (0.0301)
Number of wineries in the focal state ²	1.05e-05* (4.90e-06)	1.09e-05* (4.91e-06)	1.03e-05* (4.90e-06)	1.06e-05* (4.91e-06)	0.000194* (9.73e-05)	0.000176 (9.74e-05)	0.000201* (9.76e-05)	0.000206* (9.99e-05)
Average unusualness in the industry	-6.109*** (0.660)	-5.348*** (0.768)	-6.023*** (0.665)	-6.164*** (0.656)	1.770 (3.373)	1.196 (3.375)	2.360 (3.440)	1.771 (3.398)
Constant	3.238*** (0.798)	3.091*** (0.819)	3.255*** (0.802)	3.192*** (0.801)	-4.786 (2.904)	-16.07* (7.931)	-4.384 (2.922)	-5.562 (3.144)
Number of observations	8,901	8,901	8,901	8,901	3,224	3,224	3,224	3,224
Degrees of freedom	48	49	49	49	25	26	26	26

Note: * indicates $p < .05$, ** $p < .01$, and *** $p < .001$, two-tailed t tests. In models 1 to 4, average level of configuration unusualness in the industry and number of wineries in the state are measured for farm wineries only. There were 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. In models 5 to 8, average level of configuration unusualness in the industry and number of wineries in the state are measured for mass producers only. There were 3,224 firm-year observations on 291 mass-producer wineries from their first year of operation to their last or 1989, whichever comes first. Of these, 178 failed during our study period.

Table 4: Event-History Analysis of the Effects of Unusual TMT Functions at Startup on Organizational Failure

	Farm Wineries				Mass Producers			
	1	2	3	4	5	6	7	8
Function unusualness (at startup)	1.910 ^{***} (0.443)	0.860 (1.830)	1.928 ^{***} (0.510)	1.985 ^{***} (0.464)	-1.553 (1.111)	10.07 (12.34)	-4.266 [•] (1.919)	-0.923 (1.236)
Function unusualness (at startup) ²		1.337 (2.246)				-12.69 (13.48)		
Function unusualness × age			-0.00222 (0.0398)				0.290 [•] (0.140)	
Change in function unusualness (startup vs. current)				0.0276 (0.0684)				0.521 (0.507)
Age (years)	0.0389 ^{***} (0.00841)	0.0368 ^{***} (0.00940)	0.0395 ^{**} (0.0127)	0.0375 ^{***} (0.00965)	-0.0138 (0.00905)	-0.0144 (0.00903)	-0.134 [•] (0.0584)	-0.0148 (0.00892)
Size (ln storage)	-0.175 ^{***} (0.0446)	-0.173 ^{***} (0.0447)	-0.175 ^{***} (0.0446)	-0.176 ^{***} (0.0444)	0.0760 (0.0397)	0.0678 (0.0401)	0.0765 (0.0401)	0.0829 [•] (0.0408)
Number of wineries in the focal state	-0.00341 (0.00257)	-0.00354 (0.00257)	-0.00342 (0.00257)	-0.00346 (0.00258)	-0.0538 (0.0276)	-0.0537 (0.0274)	-0.0473 (0.0284)	-0.0560 [•] (0.0275)
Number of wineries in the focal state ²	5.99e-06 (4.99e-06)	6.23e-06 (5.00e-06)	6.00e-06 (4.99e-06)	6.08e-06 (5.01e-06)	0.000184 [•] (9.06e-05)	0.000183 [•] (8.98e-05)	0.000162 (9.33e-05)	0.000191 [•] (9.01e-05)
Average unusualness in the industry	-8.054 ^{***} (0.992)	-7.626 ^{***} (1.205)	-8.061 ^{***} (0.982)	-8.058 ^{***} (0.989)	-2.089 (5.448)	-3.627 (5.605)	-0.782 (5.499)	-3.201 (5.714)
Constant	1.258 (0.696)	1.232 (0.703)	1.254 (0.701)	1.240 (0.700)	-1.581 (2.477)	-3.290 (3.086)	-1.067 (2.498)	-1.542 (2.489)
Number of observations	8,901	8,901	8,901	8,901	3,224	3,224	3,224	3,224
Degrees of freedom	48	49	49	49	25	26	26	26

Note: • indicates $p < .05$, ** $p < .01$, and *** $p < .001$, two-tailed t tests. In models 1 to 4, average level of function unusualness in the industry and number of wineries in the state are measured for farm wineries only. There were 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. In models 5 to 8, they are measured for mass producers only. There were 3,224 firm-year observations on 291 mass-producer wineries from their first year of operation to their last or 1989, whichever comes first. Of these, 178 failed during our study period.