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Variation in Organizational Practices: Are Startups Really Different?

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Abstract:
The idea that new ventures are simple mimetic reflections of the organizational practices of existing organizations contradicts the recognized importance of organizational diversity for innovation. There is an inherent contradiction in the literature between the persistence implied by the inheritance of practices from prior employment, and the experimentation prevalent in the organizational practices contributed by new organizations. This paper first accounts for mechanisms that may drive heritage of practices from parent organizations to their spawns. It then sets out to explore mechanisms that may cause a lower degree of diversity in applied practices among established organizations, and lastly, the conditions that may cause a greater degree of diversity among practice combinations of startups. The reviewed mechanisms suggest that the distribution of organizational and strategic practices among established organizations and startups to be somewhat dissimilar, and that startups significantly contribute to the variation in organizational practices. Using a sample set of Danish organizations, we find evidence of greater diversity in organizational practices among newer organizations, while established organizations are more likely to converge on a set of similar practices. Our results further indicate that strategic disagreements between the entrepreneur and their prior employer are associated with greater differences in strategic orientation. A distinction between strategic and HRM practices provide additional insights.

Keywords: Entrepreneurship (L26), New Firms, Startups (M13), Corporate Culture, Diversity (M14)

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Introduction

While entrepreneurs are seen as a source of change, introducing new ideas and organizational practices, there is evidence that new ventures embody mimetic reflections of the organizational practices of existing organizations where founders were previously employed (see e.g., Feldman, Ozcan and Reichstein 2019a; Phillips 2005; Stinchcombe 1965). The borrowed practices may pertain to: practices on technicalities or product issues (Agarwal et al. 2004; Basu, Sahaym, Howard and Boeker 2015; Chatterji 2009; Cirillo, Brusoni and Valentini 2013; Feldman et al. 2019b), market related practices (Adams, Fontana and Malerba 2015; Agarwal et al. 2004; Klepper and Sleeper 2005), or practices that have to do with reputation and legitimacy (Vanacker & Forbes 2016). The persistence of established routines seems to contradict the idea that entrepreneurial ventures are a primary sources of new organizational practices and and hence a major source of variation in the population of organizations. It is a conundrum that research depicts entrepreneurs as being a significant source of novelty and renewal while also describing them as establishing duplicates of their parent firms.

This study, however, attempts to reconcile the idea that organizational routines are inherited, with the idea that newly established organizations experiment and play a significant role in introducing new organizational practices. Few studies empirically examine the distribution of organizational practices among organizations, although a rich theoretical literature offers predictions that the practices of established organizations will have lower variance when compared to the population of entrepreneurial organizations. Once established, organizations are subject to legitimacy mechanisms and competitive pressures that decrease diversity in organizational practices (Hannan & Freeman 1984). The population of newly formed organizations is expected to exhibit greater heterogeneity in organizational practices when

compared to the population of established organizations in an industry. In addition, the degree to which entrepreneurs create new organizations that diverge from the practices of their former employers may reflect a search for new routines associated with entrepreneurs who start organizations due to strategic disagreements with their former employers (Brittain & Freeman 1986; Cassiman & Ueda 2006; Christensen 1993; Dobrev & Barnett 2005; Klepper & Sleeper 2005; Klepper & Thompson 2010; Stuart & Sorenson 2003). Marrying these two views will offer new insights on evolution of a population of organizations while also providing additional evidence on the role of entrepreneurs as experimentors. Resolving the conundrum and marrying the two views on entrepreneurship lends new insight on the dynamics of survival and legitimacy among organizations. By also investigating it across different type sof practices, we ar able to feed into the debate of the limitation of organization apractices from parent ofto dpawn what role that plays in shaping the means and ways organizations operate.

The paper draws on two surveys targeted at established organizations and start-ups respectively. Both surveys inquire about organizational practices, allowing us to investigate dissimilarities between respondents on both strategic and human resource dimensions. This data has already been utilized to confirm heritage in organizational practices from parent organizations to their spawns (see Feldman et al. 2019a). This paper, however, investigates the average distance in organizational practices between parent organizations and their spawns, trying to decipher the degree to which startups contribute to diversity in ways of organizing, or whether the heritage mechanisms leave no room for startups to play this role. Because little is known about the overall distribution of organizational practices, we examine the difference between established organizations and startups as a benchmark, and consider whether the

variations are greater when comparing two startups and/or lower when comparing two established organizations. The results are instructive.

The empirical results confirm the organizational imprinting founded by Feldman et al. (2019a) using the same data; this suggests that start-ups are comparable, yet incomplete, images of their parent organizations. Our empirical results nevertheless reveal that established organizations exhibit lower variation among organizational practices within an industry when compared to the distribution of practices among start-up organizations, confirming that startups are a source of diversity in organizational practices. Furthermore, while the organizational practices of spawns are closer to those of their parent organizations, the paper provides evidence that strategic disagreement is a source of sustained diversity: the set of particular start-ups where the entrepreneur was motivated to found a new organization due to strategic disagreements with their prior employer contributes to an above average diversity in organizational practices among the population of startup organizations. The paper not only speaks to the literature on heritage of organizational routines, but also to the broader topic of variation, replication and selection in the evolution of organizational practices (see e.g., Burton & Obel 2018; Hodgson & Knudsen 2004).

The paper is organized as follows. Section 2 presents the theoretical framework. Section 3 describes the survey method and presents the data used and the measures on which we build the empirical analysis. The econometric approach is presented in Section 3. Section 4 provides the empirical results while section 5 concludes the paper.

Organizational practices and the logic of organization creation and survival

Prior literatures have described founders as replicators of inherited routines from their prior employment (Burton, Sørensen & Beckman 2002; Klepper 2001; Phillips 2002; Roberts et al.

2011; Stinchcombe 1965). In fact, founders often have a specific organizational logic in mind– a model or blueprint when designing their ventures (Baker, Miner & Easley 2003; Baron et al. 2001; Burton et al. 2019; Dencker, Gruber & Shah 2009). These logics are dictated by: cultural prescriptions (Baron et al. 2001), interpretations of the ways the world works (Mathias & Williams 2018), and tactics to deal with changes in the external environment (Boeker 1989; Zuzul & Tripsas 2019). These constructed organizational logics guide the choices that founders make when organizing their start-ups, and setting the initial conditions for emergent processes that determine the eventual and persistent organizational structures (Sørensen & Sharkey 2014).

An alternative view suggests that the process of organization formation allows for more degrees of freedom in generating new types of organizations with greater variety of organizational practices (Aldrich 1999; Colombo, Rossi-Lasastra and Matassini 2016). Indeed, a series of studies on the initial founding phase of Silicon Valley tech companies demonstrate that clear differences existed in organizational structures and practices between companies in the same industry, agglomerated in the same region, and created by entrepreneurs who were tightly connected with each other (Baron & Hannan 2002).

These considerations beg the question of the extent to which an emerging organization reflects organizational experimentation and the adoption of a greater range of new practices (Ruef 2005) when they are inextricably linked to the pre-existing arrangements and practices inherited from prior organizations. Furthermore, it questions from where we observe the greater part of variation in organizational practices across the population. We argue that start-ups are a significant source of the variation in organizational practices, especially as compared to established organizations (see Figure 1), even if they are mimetic versions of their parent organizations.

*** INSERT FIGURE 1 ABOUT HERE ***

Organizational Heritage: The premise of the study

Organizational heritage rests on the premise that founders do not randomly assign organizational practices in their new ventures, but instead install familiar practices observed from their prior affiliation. This creates an organizational legacy by which the organizational practices of the parent organization are mirrored in its spawn. A growing stream of literature examining the performance of start-ups has attributed the observed correlation between prior affiliation of the founder and performance of a start-up to organizational legacy, suggesting that founders have transferred practices from their prior organizations into their new ventures (Burton & Hannan 2002; Chatterji 2009; Dencker et al. 2009; Dahl & Reichstein 2007; Feldman et al. 2019a; Klepper 2001; Phillips 2002). As noted by Roberts et al. (2011), parent organizations impart practices that are imprinted into the DNA of their start-ups. Scholars have repeatedly called for empirical investigations of the intergenerational organizational heritage thesis (see e.g., Agarwal et al. 2004; Feldman et al. 2019a; Phillips 2005). In two notable attempts, Agarwal et al. (2004) identified a knowledge legacy that links spinouts to their established parents, while Phillips (2005) demonstrated that founders of law firms replicated the human resource practices of their parent organizations. A test of general heritage from parent to spawn was carried out by Feldman et al. (2019a) using survey based data looking at similarities across various organizational features.

The organizational heritage perspective identifies four broad mechanisms that can facilitate the transfer of practices. The first mechanism highlights experiential learning. Founders

have preferences and beliefs that are shaped by their past experience. In solving organizational problems, founders heavily rely on recipes and standard operating procedures learned from prior experience (March 1991; Nelson & Winter 1982). Phillips (2005) offers explicit support of this mechanism, as the replication of organizational practices increased among those founders with longer tenures at their previous organizations.

A related second mechanism emphasizes emulation. When faced with uncertainty, individuals economize on search costs and imitation becomes a rationally efficient response. Alternatives chosen by established organizations will appear better informed and less risky (Greve 1998; March 1991). Imitation simplifies cognitive tasks and permits the individual to engage in external attribution in justifying his choices in the case of adverse outcomes (Greve 1998). Founders of new ventures must be particularly prone to borrowing from others for two additional reasons. Organization creation involves significant creativity and trial-and-error learning (March 1991). Innovation of new practices also requires substantial resources and time, which founders often lack (Aldrich 1999; Stinchcombe 1965), forcing them to improvise (Baker et al. 2003) and make do with what is available (Baker & Nelson 2005). Mimicking practices outside the organization is thus inherently appealing when survival is a more immediate and pressing issue.

New ventures suffer a liability of newness (Stinchcombe 1965). They lack a credible narrative account (Santos & Eisenhardt 2009). There are two legitimacy gains to the adoption of legacy practices. Given uncertainty, founders must convince external parties of the organization's quality, and they do so by providing information that signals the organization's legitimacy (Beckman 2006; Higgins & Gulati 2006). An organization's viability can be anchored in the legitimacy of its structures and processes, as these often serve as easily observed and

monitored proxies for less visible targets of evaluation. An organization that is perceived as structurally legitimate becomes a repository of confidence, enabling it to have more favorable access to resources in its environment (Freeman et al. 2016; Hannan & Freeman 1984; Higgins & Gulati 2006; Zuzul & Tripsas (2019). Most founders, even those who engage in bricolage, will be faced with the need for resources from external stakeholders (Baker & Nelson 2005). Modeling the organization after an existing member of the population offers founders the advantage of accumulating legitimacy through the creation of a social frame of reference for external resource holders. Santos and Eisenhardt (2009) observe that "template adoption" is a powerful identity mechanism for nascent organizations, which should make the start-up familiar and understandable to market audiences.

Although a number of organizations can be candidates for emulation, founders are more likely to emphasize their previous affiliation in their target choices. Problemistic search often starts in the vicinity of experience (Levinthal & March 1993; March 1991), which makes prior work settings a natural point of departure. Further, for imitation of a practice to occur, there has to be some level of visibility for observers to gauge its true value (Greve 1998; Haunschild & Miner 1997). Organizational practices are often accompanied by subtle and tacit knowledge, which impede their observability. Turning to a known context reduces barriers to observation and provides the founder with the possibility of making more accurate inferences backed also by their own experience and observations. Finally, in their quest for resources, new organizations are often forced to disclose signals that will help resource providers assess the underlying quality of their operations. In particular, research shows that external resource holders allocate significant attention to the previous affiliations of founders (e.g., Higgins & Gulati 2006).

Mimicking the practices of the prior organization signals legitimacy and conveys an expectation of reliability and accountability (Ruef 2005).

A third mechanism facilitating organizational heritage is network embeddedness (Agarwal et al. 2004; Burton et al. 2002; Phillips 2002; Ruef 2005). Over time an internal network of professional advice relationships develops in organizations as people seek information, advice, and opportunities for problem solving among their colleagues (Beckman 2006). These networks often overlap with friendship networks, making them more resilient to disruption. When asked about their connections, employees routinely categorize their peers as friends and acquaintances and express a stronger preference to interact with them. Employment in the same company or even in the same industry has also been found to provide an important basis for social identification among managers (McDonald & Westphal 2003).

Although mobility out of an organization may dissolve some weaker ties, it will not prevent individuals from exploiting them in the event of a need for advice or counseling. The process of founding an organization will heighten the entrepreneur's attraction to prior organizational ties. Designing a new venture involves the installation of highly complex interconnected procedures, processes and practices. In their search (March 1991), founders will likely turn to these ties for solutions, as drawing upon social capital in the former organization will produce solutions in a relatively quicker and more cost effective way, and receiving advice tends to prevent distress that can arise from innovation efforts. Further, the validity of the advice received will be perceived as higher. Baker et al. (2003) found that entrepreneurs relied on their professional networks as their primary means of access to information about organizational practices and advice about the various problems encountered during the process of founding their new organization.

The last mechanism stresses the cognitive underpinnings of opportunity recognition: the type of opportunity the founder is likely to identify will often be in proximity of the parent organization (Dencker et al. 2009; Klepper 2001; Roberts et al. 2011). Founders are expected to pursue ideas their parents do not want to pursue either because these ideas would have cannibalized other products or because the market is estimated to be too small to be of interest to the established organizations (Baker et al. 2003; Klepper 2001; Klepper & Sleeper 2005). Models from this perspective envision spinoffs pursuing the same practices as their successful established parents.

Organizational practice variation among established organizations

The distribution of organizational practices among organizations is expected to narrow over time. Two mechanisms may drive this convergence among established organizations. First, the experience of organizations may trigger both the adoption of more proven practices, and the abandonment of practices associated with poorer performance (Miner & Anderson 1999). Second, organizations in the extreme tails of the distribution may not survive, prompting a narrowing in the distribution of practices (Hannan & Freeman 1984; Nelson & Winter 1982). Although both adoption and abandonment and exit predict that organizational practices converge over time among established organizations, they encapsulate qualitatively different views of how this is attained. Each mechanism warrants further consideration.

Adoption and Abandonment Mechanism

The adoption and abandonment mechanism builds on the idea that poor performance stimulates a problemistic search (March 1991). Poorly performing organizations conduct adaptive emulation in which they imitate the strategy, structure and practices of organizations

viewed as successful (Abrahamson & Rosenkopf 1993; Strang & Macy 2001). Levinthal and March (1993) argue that the best strategy for an organization experiencing performance shortfalls may be to emphasize the exploitation of the successful exploration of others—that is, to adopt the demonstrated organizational practices of organizations in the same industry.

This mimetic adoption behavior has been found in a variety of settings. Haunschild and Miner (1997) found that organizations adopted the acquisition practices of their more successful peers. Korn and Baum (1999) demonstrated that commuter airlines imitated policies of their high-performing competitors. Kraatz (1998) found that colleges' imitation of program offerings of their counterparts was stronger when their own performance was substandard. The diffusion of organizational practices such as quality circles and benchmarking also followed a pattern where organizations responded to perceived failure by imitating the practices of their most successful peers (Strang & Macy 2001). Williamson and Cable (2003) found a similar adaptive emulation of human resources management practices among Fortune 500 firms. And Brusoni and Sgalari (2006) found, while looking at adoption of practices in the tire industry, that the adoption of robotic technology simultaneously triggered the adoption of specific organizational practices, suggesting that some practices are (and should be) adopted together.

Mimetic adoption can be driven by several learning mechanisms. The first is vicarious learning where organizations observe the operations of significant external organizations and copy their successful practices (March 1991). The second is by deliberate inferential learning where organizations use the experience of others as a natural experiment (Miner & Anderson 1999). The third mechanism is cooperative learning where organizations learn from formal collaborations with other organizations. Each of these learning mechanisms can be facilitated by informal inter-organizational networks, which diffuse organizational practices among a

population (Kraatz 1998; Strang & Macy 2001). Institutions can also foster learning by promoting adoption. Finally, mimetic adoption can also occur when personnel move from highly successful organizations (Sørensen, J. B., & Sharkey 2014). Greater frequency of mimetic interactions lowers the variation of practices in a population over time.

Abandonment, rather than emulating success, operates from learning through organizational failures in the population. This could happen in three broad ways: through observations of direct failure, through reactions to failure by other organizations, and through the consequences of reactions to failure. The first involves elimination of practices carried out by failed organizations. For instance, in the context of multi-unit organizations, failures of other chain's locally named units have led to an abandonment of local naming practices among other chains (Chuang & Baum 2003). Miner et al. (1999) describe how certain technological and organizational practices that were associated with failed hatcheries disappeared from the chicken-breeding industry through organizational deaths. As a result, practices became more homogenized within the industry (see, Miner & Haunschild (1995) also for examples from other industries). The other two drivers of abandonment involve intermediary processes of learning. Change in practices in a population may arise from the abandonment of practices by other organizations, perhaps in reaction to a failure. This could follow a stratified pattern, in which a more successful organization's abandonment will cascade down through the performance hierarchy. Abandonment can also induce further movement away from the organizational practice, either because of: institutional pressures for conformity and because movement away from the practice becomes legitimate (Haunschild & Miner 1997; Greve 1998; Kraatz 1998); or because the frequency of abandonment may serve as a valid proxy indicator that the practice has little technical or economic value (Abrahamson & Rosenkopf 1993). All in all, abandonment

leads to the removal of practices from the population, and together with adoptive mimetic behavior, works to narrow the distribution of organizational practices over time.

Exit Mechanisms

On the other hand, Hannan and Freeman (1984)'s original formulation, the theory of structural inertia, argues that organizations exist because they are able to perform reliably and, if questioned, to account rationally for their actions. Both reliability and accountability are a function of routinization and institutionalization of organizational practices. Hence, established, older organizations consist of more stable, standardized and reproducible organizational routines. Yet, these very same characteristics that make an organization stable also generate strong inertial forces and resistance to change, lengthening the time necessary to make a change or even reducing the probability of change. Reconfiguration of core elements of an organization will involve disruptive modification of ties between the organization and its environment, threatening its legitimacy (Hannan & Freeman 1984). Attempts to do so will also destabilize the internal environment of the organization. Consequently, organizations that operate inefficiently (and unreliably) will be weeded out of the population over time. As inefficient organizations fail, and their more efficacious rivals remain in the population, the population's average organizational efficiency and competitive strength are also expected to increase over time (Hannan & Freeman 1984).

Subsequent work has produced substantial evidence which demonstrates that attempts to change core features destabilize organizations (Baron et al. 2001). Studies have also unpacked two dimensions of change and their relative influence on an organization's survival, namely, the process of change and the content of change. The process of change elevates the hazard of

failure: its detrimental effect occurs independently of the content effect, and lasts for the duration of transformation.

The implication of both theories is thus an increasingly narrower distribution of organizational practices among established organizations over time. Through a competition-induced population level learning effect, an established population may be able to correct the practices of an individual firm that goes astray due to obsolete practices, systems, structures or strategy (cf. Barnett & Sorenson 2002). This framework permits organizations to: avoid the practices that thrived in failed organizations, acquire new practices, and pass these acquired practices on to other organizations usually in a fashion that trickles down from the more successful organizations to the less successful organizations. Structural inertia, on the other hand, will lead to maladaptive change efforts and the selection will eliminate the diversity in the population by removing poorly fit organizations (Hannan & Freeman 1984).

Only a few studies have empirically examined the distribution of organizational practices among established organizations. Miner and Haunschild (1995) noted that, over time, large established pharmaceutical firms adopted organizational and technical routines from the biotechnology industry, which subsequently became dominant in the industry. Another example for convergence in organizational practices, provided by Miner and Haunschild (1995), occurred in the daycare industry after a few centers introduced practices that alleviated the need for parental involvement. When this strategy turned out to be economically successful, other centers adopted the practices after facing declining demand as a consequence. In a study explicitly designed to probe convergence in the hard disk drive industry, McKendrick (2001) found that while manufacturers were initially likely to adopt similar national organizational practices, over time, the industry as a whole converged on the same global organizational blue print.

Theory does not predict complete homogeneity of organizational practices over time. Temporal differences in environmental conditions at time of founding may also dictate enduring differences in organizational practices (see e.g., Boeker 1989). The learning perspective acknowledges that imitation (adoption and abandonment) may also provide a source of variation in organizational routines to the extent that routines are improvised or miscopied (March 1991; Miner & Anderson 1999). In addition, organizations can also import practices from outside populations or experiment to generate new practices. Research finds that although such nonlocal adoption and learning may depress the survival of individual organizations, structural inertia could be helpful when the population runs the risk of collectively falling into a competency trap (Barnett & Sorenson 2002).

Variation among start-ups

The organizational heritage thesis predicts that the distribution of practices among startups is mirrored in the corresponding distribution of established organizations. Yet, circumstances may explain why organizational practices among start-ups may display relatively more heterogeneity when compared to established organizations. First, exact replication depends on information about how the practice is conceived and implemented (Phillips 2005). Imperfect information constrains copying; this holds true even in contexts such as franchising where entrepreneurs are given relatively clear normative recipes, backed up by extensive replication experience (Ruef 2005; Winter & Szulanski 2001). In particular, drawing inferences from noisy data is biased by the characteristics of the individual observers, and the social contexts in which they have been embedded (March 1991; Denrell 2003). These limitations will force the would-be-copycats to rely upon heuristics and improvision in interpreting and defining the practice. As a result,

changes in content are (un)intentionally introduced during the process of adoption (Levinthal & March 1993; Rivkin 2000).

The literature makes two broad claims: that established organizations copy each other's practices as they are more likely to define each other as social reference groups, and that an individual leaving to found a new organization will typically expropriate practices from the parent organization to reduce any financial or social start-up costs and to reap legitimacy benefits. This will lead to extensive borrowing (Baker et al. 2003; Phillips 2002; Ruef 2005). Following the logic that a second-order imitation has more error built in it than the first order imitation, start-ups will miscopy practices that have themselves been miscopied by their parents, thus multiplying the deviation in observed organizational practices.

While it is true that founders have access to information about the nature and value of organizational practices through their own experience and from that of their former colleagues, they will nonetheless be constrained in delineating an identical template from the complex inner world of the organization. Their previous assigned organizational roles will only provide them with a limited vision of the range of practices (Rivkin 2000; Phillips 2002). Their personal connections will offer rich but varied interpretations, conflicting storylines, and confusing occurrences from which founders need to deduce inferences (March 1991). The shortage of resources coupled with the need for urgent action will compel them to settle on incomplete or flawed understandings. As Phillips (2005) notes, the top priority of a founder is the survival of the new organization. In transferring organizational routines from the parent, the founder may not have comprehensive knowledge about routines and may even show less concern for their long-run effects on the new organization. Winter and Szulanski (2001) note that urgency is a hallmark of founding and entrepreneurs may abandon efforts to make a true replication given

resource constraints. Whatever founders miss in replicating organizational practices, they will attempt to make up by engaging in improvision and bricolage, combining elements and inputs from the environment (Baker et al. 2005; Baker & Nelson 2005). The result will thus be a deviation from the target practice. When cumulated across start-ups, these deviations will cause greater variation in practices in communities of start-ups than among established organizations.

Heterogeneity in the distribution of organizational practices among startup organizations may also reflect the influence of external resource holders. Consider the case of investors who may champion the adoption of the organizational practices they prefer from their prior experience, which are likely to be outside of the focal industry. While Baron and Hannan (2002) conclude that founders and venture capitalists sort on the basis of compatible expectations, investors have bargaining power to demand concessions in strategic and organizational practices. Another source of variation is due to founders launching ventures outside the domains of their prior organizational experience (Phillips 2005; Roberts et al. 2011; Ruef 2005), further contributing to the experimentation, improvisation and innovative practices introduced into the population of new startups.

When entrepreneurs are motived by disagreement

A body of literature suggests that startups are frequently motivated when employees become frustrated, or have a disagreement, with their employer (Aldrich 1999, Baker et al. 2003; Chen & Thompson 2011; Dobrev & Barnett 2005; Klepper 2001; Klepper and Thompson 2010; Stuart & Sorenson 2003). The source of the disagreement can be varied. An employee can champion an idea that the organization rejects, or they may believe their efforts to pursue an innovation have been purposefully obstructed by their employer. These incidents are more likely to happen if:

opportunities fall outside of the organization's core activities, opprotunities distract employees from their assigned tasks, opportunities are evaluated as insufficiently lucrative (given the organization's size and internal revenue requirements), or the organization has limited commercialization capacity (Agarwal et al. 2004; Brittain & Freeman 1986; Cassiman & Ueda 2006; Klepper 2001). Evidence that such disagreements lead to spinoffs comes from a variety of industries. For example, in a detailed study of U.S. car manufacturers, Klepper (2003) found that top-level engineers formed spinoffs, as result of disagreements with the parent organization about the kinds of cars to produce. Similarly, within the laser industry, most spin-offs came into existence because the parent either did not aggressively pursue the technology or abandoned it completely (Klepper & Sleepers 2005). Spinoffs in the disk drive industry developed new, smaller disk drives that their parents chose not to pursue, even after developing prototypes of these new drives (Christensen 1993).

Adjustments in the organizational strategy, systems, processes and structures can also furnish disagreements and cause spinoffs (Klepper 2001). Phillips (2005) observed that the primary reason why law organization partners departed to found their own organizations was because they disagreed with the parent organization's accepted norms and practices, such as: organization of work, profit-sharing rules, and the structure of career tracks. Brittain & Freeman (1986) found that leadership changes led to greater spin-off rates in semiconductor businesses, whereas Klepper (2002) cited dissatisfaction with organization management as an additional impetus for spinoff formation in the auto industry. Spin-offs were also triggered when semiconductor, biotech and laser companies were acquired by organizations outside their industries, as the acquiring organizations brought radically different mental models and organizing logics into the acquired companies (Brittain & Freeman 1986; Stuart & Sorenson

2003; Klepper & Sleepers 2005). Boeker and Karichalil (2002) found that the loss of managerial and governance controls critically influenced the founder's propensity to leave.

These studies reference three different change-frustration dynamics. The first is when the employee deems change as necessary, while the organization remains unresponsive. The second is when the organization implements change, but the employee is in conflict with the intended change. The third is when both parties find change imperative, but cannot agree on the nature, process, or direction of the change. In each of these cases the organization and the employees face a strategic disagreement, which is likely to motivate the formation of a new organization that will break with prevailing practices, and be more likely to experiment with organizational practices.

Summing up and hypotheses

To sum up, this paper builds on three research topics in forwarding three testable hypothesis. First, we emphasized organizational heritage by referring to four mechanisms; experiential learning , emulation, network embeddedness and opportunity recognition. All of these may lead to greater overlaps in organizational pracises between a parent and its spawn than between other organizations. Second, that the variation in practices is larger among startups than among estblaed firms. The limited variation in practices among established firms are suggested to be attributable to a tendency to adopt the proven and legitimized practices as the orgnaizations evolve and to a survial mechanisms where only those organizations that in fact adopts the proven practices in fact remains in business. The greater variation in practices among startups can be attributed to imperfect information among founders who only knows parts of the entire set of practices from the parent firm and may only have an incomplete picture of those he/she knows

about. Also, there may be an influence from external stakeholders which may create previous unseen combinations of practices amomng startups. Third, that entrepreneurs leaving their parent firm due to disagreement will exhibt a greater dissimilarity with their parent firm than comparable others. The premise here is that such disagreement often has to do with importannt and central strategic circumstances which may have a significant impact on the choices on organizational practices and hence separate the parent and the spawn from each other in this respect.

Based on these pemises, the paper hence sets out to test three hypotheses:

Hypothesis 1: Startups are more similar with their parent organizations than with other established organizations in their organizational practices

Hypothesis 2: There is more variation in the organizational practices among startups than among established firms

Hypothesis 3: Startups founded by an entrepreneurs who left the parent firm due to disagreements contribute more to the variation in organizational practices than other startups

DATA AND METHODS

Our investigation aims to understand variation in organizational practices among established organizations and start-ups. We commissioned Statistics Denmark to carry out an online survey that was linked to official register data. The survey was sent out to two different populations of organizations. First, we targeted a population of 3409 Danish organizations with

more than 40 employees in 2008. The sample was drawn from manufacturing, retail, and knowledge intensive services. The respondents were compared to organizations with more than 40 employees in those industries and found to be representative in terms of size and industrial subsector. No evidence of systematic response bias was found. Two separate survey components were sent to the established organizations. The first component asked about strategic issues and was sent to each organization's Chief Executive Officer (CEO). The second component asked about Human Resource Management (HRM) practices and was directed to each organization's HRM manager. This was done to secure the best possible answers by identifying the individual best positioned to answer these specific questions. 890 CEO responses were registered to the first part (26.1% response rate) and 1239 HRM manager responses were registered to the second part (36.3% response rate). The overlap between these provided us with a complete set of answers for 640 organizations (18.8% response rate).

The second survey targeted entrepreneurs who founded an organization in the five-year period between 2001 and 2006. 2278 entrepreneurs were targeted, of which 500 had been previously employed by one of the organizations targeted in the first sample containing the established organizations. The entrepreneur was asked to complete all questions, as start-ups are unlikely to have a designated HRM manager. The response rate among the 500 entrepreneurs was 18.4%, providing a total of 92 matched parent-spawn observations. Two of these spawns shared the same parent; we randomly deleted one of the spawns, leaving us with 91 startups for consideration.[1] The 91 start-ups are overrepresented in the service industries, when compared to their parent organizations. This can be partly attributed to the lower entry barriers of these industries. The entrepreneur survey also inquired about individual attributes. The 91 matched

[1] Results proved consistent regardless of which of the founders we deleted. Results of these sensitivity tests are available upon request.

entrepreneurial respondents were similar to the random sample of entrepreneurs in terms of gender, age, and income.

Both surveys were conducted in 2009. Responses reflect status on organizational practices at that point in time.

Dependent variable: Similarity in organizational practices

The 91 startups and their 91 parent organizations are the subjects of the investigation leaving us with 182 organizations for the analysis. We compare each organization with all the other organizations. This means that there are a total of 16,471 ((182x181(/2) dyadic observations. 91 of these are comparisons between an established organization with its own spawn. There is equal number of comparisons (4095) between two startups and between two established organizations. Finally, there are 8190 comparisons between established organizations and a startups that do not have a parent-spawn relationship ((91*91)-91).

The comparisons are made across 10 different organizational practices. Table 1 displays the 10 questions posed to the organizations about their organizational practices. The table also reports the scale of the measures used, and the standardized values of the two subpopulations—91 startups and 91 established organizations. The far-right column reports the difference between the means of the two populations, considering the standardized values of the responses. It suggests that the startups, to a greater extent, reach outside the boundaries of the organization and draw on external sources, and that they to a greater extent focus on job security for their employees.

*** INSERT TABLE 1 ABOUT HERE ***

We also considered the raw values of the responses of the startups and the established organizations. These are depicted in Box-Jenkins plots in Figures 2 and 3. Again, Figure 2 suggests a higher number of external sources among the startups, which is not only driven by extreme value about also a greater share in the lower values of the distribution. The plot suggests that the difference in mean may at least partially be attributed to a greater number of established organizations that do not at all draw on any of the listed external sources. In Figure 3, it is worth noticing that the mean scores are comparable across startups and established organizations for many of the Likert based measures.

*** INSERT FIGURES 2 & 3 ABOUT HERE ***

To measure the similarity in organizational practices in a dyad of two organizations compared, we rely on the index used by Gimeno and Woo (1996). This is represented by:

$$S_{jk} = \frac{\sum_{i=1}^{Q}\left[1 - \sqrt{\frac{(q_{ij}-q_{ik})^2}{m_i^2}}\right]}{Q}$$

S_{jk} represents the similarity in organizational practices between organization j and k. Q denotes the total number of organizational practices considered (equals 10 in this study). q_{ij} and q_{ik} represent the response from organization j and k on question i respectively. m_i denotes the maximum possible difference between respondents for question i. The index can take on values between 0 and 1; 0 indicates no overlap in organizational practices, and 1 suggests complete alignment in organizational practices between the compared organizations.

In order to make the responses more comparative across questions, we standardized the questions by industry before calculating the similarity. This modifies the values within questions so that the scales become pseudo-intervals. These actions were taken for two reasons. First, the adoption of organizational practices is highly industry-specific. Second, the majority of questions

are based on a seven point Likert scale. A five point Likert scale is normally thought to be an interval scale measure. However this may be a strong assumption. By standardizing the responses we at least partially accommodate these issues. Results using standardized questions tend to be marginally weaker than when using non-standardized questions.[2]

Explanatory variables

We have four different feasible comparisons given the comparison of established organizations and start-ups respectively: comparison of a start-up and its own parent organization (Parent-Spawn), comparison of two established organizations (Both Established), comparison of two start-ups (Both Start-ups), and comparison of a start-up and an established organization that is not the start-ups own parent (Start-up-Established), which we include as a benchmark category for a reference point. Each of these is represented by a dummy variable. Finding a positive estimate for the "Both Established" dummy would suggest a lower variation in the practices used across established organizations. The established organizations are, on average, more similar to each other than a comparison between a startup and an established organization. A negative estimate for the "Both Startups" dummy would, in a similar fashion, suggest a greater variation in the ways of organizing across startups than across other organizations. Finally, a positive estimate associated with the "Parent-Spawn" dummy would simply confirm the conclusions made by Feldman et al. (2019a) using the same data.

The survey sent to the entrepreneurs contains questions that map the entrepreneur's motivation to transition into entrepreneurship. We utilized two questions which indicated that dissatisfaction at the prior work place was a contributing factor to the entrepreneurs' transition to

[2] These results are available upon request.

entrepreneurship. The fourth explanatory variable indicates a dummy variable equal to 1 if the entrepreneur was *Motivated by Disagreement* with the prior organization when deciding to establish the new organization. This dummy could only be calculated for the dyads that involved only one startup, meaning that it is only present for 8190 observations comparing a startup with an established organization, and the 91 observations for which the dyad consists of an established organization and its own spawn.

Controls

We include a number of controls to limit potential bias attributed to spurious correlations. These are in the form of comparisons between the dyads. First, we consider two *organization comparison controls*. As *Size Difference* may account for variation in similarity between start-ups and established organizations, we include a measure of the logarithm of the absolute difference in number of employees between the pair of compared organizations. Industry differences may dictate differences in the compared organizational practices. We use a categorical variable to indicate the overlap in industry affiliation; compared organizations are in the *same 4-digit industry*.

Second, we include two *founder at parent controls* which capture the position of the entrepreneur at the parent organization immediately before transitioning to entrepreneurship. These are subject to the same observational conditions as the disagreement variable, only being observed by a subset of observations. First, *tenure at parent* organization may be associated with heritage in two opposing ways. First, greater tenure means a lower likelihood of transitioning to entrepreneurship. Again, this may translate into a greater tendency of experimentation when finally establishing one's own organization. Tenure, however, also means a greater chance of observing the organizational practices of the established organization, allowing the individual to

mimic those practices to a greater extent. We control for tenure at the parent organization by indicating whether the individual has been with the parent organization for three years or more (36%). Second, we control for *wage rank at parent* organization since individuals positioned higher up in the hierarchy of any organization may be more favorably placed to learn about the practices and, hence, able to mimic them better when starting their own organization.

Finally, we include *founding controls* capturing conditions that have to do with the circumstances of the founding and the startup. Again, these can only be observed for the dyads that contains one and only one startup. Entrepreneurs may transition to entrepreneurship as a primary endeavor (51%) while others start organization while simultaneously employed (*hybrid entrepreneur*). When entrepreneurial venturing is the primary occupation, the entrepreneur may have more time and resources, allowing consideration of alternative organizational practices, resulting in a less similar new organization. A dummy variable is included that is equal to 1 if the entrepreneur pursued the self-employment full time. Entrepreneurs may receive *advice from former colleagues* about organizational practices. Indeed, 13% of entrepreneurs received advice from their former colleagues in the start-up phase. Drawing on former colleagues may increase similarity if entrepreneurs copy practices in the former work place. Organizations may be established by a team rather than a single individual, which may lead to a greater variety of inputs for the practices to be adopted for the new organization. We control for the number of *co-founders*, expecting to find a lower degree of similarity due to the greater degree of variety in inputs for practices. 40% of the startups in our sample where established by more than one founder. We also control for whether the parent organization could be characterized by high growth. Well performing organizations are likely to have adopted better-suited practices, and hence their practices that dominate in the population. There are hence good reasons to adopt

these well known practices when establishing a new organization. *Growth of the parent* organization is measured as average employment growth in the two years prior to spinning out of the parent. Finally, we control for the age of the organization. Adaptation and selection mechanisms dictate that start-ups active for a longer period should become more similar to the population of organizations. A positive estimate would suggest organizations revert towards the mean (best practice) as time passes. Since our data contain organizations that were established in the period of 2001 until 2006, but the practices of the organization were not observed until 2009, some of the start-ups indeed have had the opportunity to revert toward the mean for a longer period than others. We control for *years since leaving* the parent organization.

Econometric technique and robustness checks

The dependent variable is continuous and Gaussian distributed (see Figure 4). Furthermore, it is characterized by being truncated at zero and at one, with zero representing complete lack of similarity, and one showing a perfect overlap in practices. 15 of 16,836 observations exhibited the value 1 while none portrayed a value at zero. Corner solution issues were considered using a Tobit regression. These estimates did not depart significantly from Ordinary Least Square (OLS) regressions, wherefore we report the OLS estimates.

*** INSERT FIGURE 4 ABOUT HERE ***

We also considered the contribution of each of the 10 questions in summing up the overall similarity measure. We did so by exploring the similarity in responses across each of the 10 question in turn using the same equation as the overall similarity index only not summing across questions. We then explored the similarities across all ten question visually (see Figure 5) and econmetrically.We found no particular correlations between the various ten similarities

indeces and we found no reason to suspect that some of the questions contributed significantly more to the overall similarity index than others. A few of the questions exhibt extreme indeces indicating complete dissimilarity. But any differences in means across the ten questions are only weakly significant at best.

*** INSERT FIGURE 5 ABOUT HERE ***

The observations are not strictly independent due to dyadic nature of the dataset (each organization enters into 183 observations). Estimates may be biased both upward and downward due to this feature of the data, which violates the basic assumption of regression analysis. A bootstrap approach is applied to account for this and to produce estimates not biased for this reason.

Another empirical challenge pertains to entrepreneurs possibly providing more extreme responses than managers, which may produce bias in the estimates. Entrepreneurs' responses may be more extreme than managers for three reasons. First, entrepreneurs are characterized by representativeness, which compels them to generalize based on small non-random samples (Tversky & Kahneman 1974). When (not) observing a practice in use, the entrepreneurs may quickly conclude that it is widely (never) used. Second, Alpar & Spitzer (1989) showed that entrepreneurs more often provide extreme responses to complex and time demanding questions. Third, established organizations are often comprised of multiple plants and establishments that tend to differ in installed practices. Coming from such establishments may prompt the respondent to provide answers more close to the median or mean, since they think of the likely average practices across all the section of the organization. Respondents from start-ups find it easier to identify whether a practice is installed or not wherefore they will respond with extreme values. Empirical consideration of the used questions and provided values indicated that the

entrepreneurs only for two out of the ten questions gave extreme responses compared to the managers. Question number 8, which regards the focus on employees performing jobs that involve job rotation, and question number 10, asking the respondents to indicate the percentage of employees that had been eligible for cash bonuses based on individual performances, exhibited extreme values among entrepreneur responses, as compared to manager responses. We omitted these variables from the analysis to test if this produced any bias in the results. Results proved robust with respect to this potential source of bias.

RESULTS

Table 2 presents the descriptive statistics for the variables used in the analysis along with the Pearson correlation coefficients. The reported Pearson correlation coefficients indicate some high covariance between some variables. These are not surprising though. The highest is between the size difference of the considered organizations and the dummy that the two considered organizations both are startups. Since startups are relatively small and the differences in size thereby rather limited, this negative correlation (-0.82) was to be expected. We considered the Variance Inflation Factor to reveal concerns of multicollinearity. None of the values fell below 5 which thereby indicates an acceptable level of multicollinearity.

The correlation matrix contains missing values. There are the correlations between dummies that captures dyads that do not have only one startup, and the variables that only can be calculated if there is one and only one startup in the dyad.

*** INSERT TABLE 2 ABOUT HERE ***

Table 3 holds results of regressions investigating the population dynamics of variations in organizational practices. Model 1 in Table 3 (overall model) provides the results for the

similarity index for all organizational comparisons (16471 comparisons). A positive estimate associated with the parent-spawn dummy suggests that the organizational similarity between a start-up and its parent organization is on average higher than between a start-up and other established organizations. This is simply a confirmation of Feldman et al. (2019a) who used the same data but a different technique.

The positive estimates associated with the both established variable suggest the organizational similarity between two established organizations is on average higher than between an established organization and a start-up. In addition, the significant negative estimate associated with the both start-ups variable suggests the organizational similarity between two start-ups is on average lower than between an established organization and a start-up.

*** INSERT TABLE 3 ABOUT HERE ***

Model 2 (partial model) provides the comparisons between the similarity in organizational practices between start-ups and established organizations only, including the parent-spawn comparisons (8281 comparisons). A number of additional controls accounting for variations in the dependent variable regarding entrepreneur-specific effects are included.

The disagreement motivation variable is negative and statistically significant, suggesting start-ups that are motivated by disagreements to a greater extent contribute to organizational diversity. The startups that are established by founders motivated by disagreement tend to start organizations that are more dissimilar to established organizations than those that are not motived by disagreement.

The results also provide support to the expectations regarding control variables. Diversity in organizational practices is decreased by founders that: take advice from former colleagues,

start with a co-founder, and have greater tenure at the parent organizations. The years since spawning exhibit a positive and statistically significant coefficient, suggesting a reversion towards the mean industry practices as time passes. The entrepreneurial firms may indeed be a source of novelty in organizational practices. Yet, this finding may also provide some support to two of the mechanisms which lead to hypothesis 2 due to lower variation in practices among established organizations. The lower variation among those who has been establinhed befor may point to the selection effect only leaving those firms in business which have adopted the proven practices. This dynamic effect if not very strong however as can be seen from the plot of the margins associated with years since leaving displayed in Figure 6. Please note that the greater standard deviations associated with parent versus spawn solely can be attributed to the lower number of observations used for these estimates.

*** INSERT FIGURE 6 ABOUT HERE ***

Model 3 in Table 3 tests whether the founders motivated by disagreement when leaving their parent organization also distance themselves from the parent organization in terms of the organizational practices they install in their newly founded organization. We find no evidence of this. Even if they leave due to disagreements, they cannot help themselves but to mimic the parent organization. Yet, startups formed after a disagreement are nevertheless contribute more diversity to the overall variation in combinations of organizational practices found in the population of organizations.

Effect sizes

The parameter estimates are small suggesting the effects, even though statistically significant, are rather trivial. Indeed, the parent-spawn estimate and the constant in the second model in Table 3 indicate that a start-up, on average, only has about 3% (0.023/0.766) more overlap in practices

with their parent organization than with other established organizations. Similarly, results of model 1 indicate that on average there is 1.5% more (less) overlap between two established (startups) than between a startup and an established organization.

To evaluate the effect size of the estimates, we computed Cohen's d for the explanatory variables expressed as the difference in mean similarities between the groups divided by the standard deviation of the combined sample of the considered groups. The statistics of the both established (startup) estimate is 0.012 (-0.012). To measure the standard deviation of pooled sample, we followed conventions and used the within-group standard deviation expressed by the residual standard error (0.074). Cohens D for the both established (startups) estimate is hence 0.162 (0.162) which is a relatively small value, suggesting that when comparing two established (startups) organizations, 56 (56) percent of them would exhibit a greater (lower) similarity than when comparing a startup and an established organization.

Distinguishing between strategy and HRM practices

Phillips (2005) specifically investigated heritage effects on HRM practices in Silicon Valley law organizations, showing that it is confined to certain subpopulations of spawns. That study indirectly insinuates that there may be differences across certain categories of organizational practices. Embracing that idea, we split organizational practices into Strategic and HRM practices calculating separate similarity indexes using the same formula. For strategic practices, responses to questions about the use of external knowledge sources for innovative purposes and open channels of communication (Questions 1 and 2) and the degree of employee autonomy (Questions 3 and 4) are utilized. HRM practices are captured by responses to questions pertaining to: promotion and recruitment practices (Questions 5 and 6), employee management (Questions 7, 8, and 9), and reward practices (Question 10). We ran a confirmatory factor analysis to check the internal validity of the split. This analysis supports our decision

to categorize the questions into the two groups by producing two latent constructs based on the same split of questions.

Table 4 presents the regression results indicating differences between strategic (models 1 & 2) and HRM practices (models 3 & 4). These are the alternative versions of models 1 and 2 in Table 3. As a baseline, we only find significant heritage when considering HRM practices. In terms of variation in practices across the population of organizations, we find that established organizations exhibit less variation in both strategic and HRM practices. Results, however, indicate that it is predominantly in the HRM practices that startups account for a significant share of the novelty presented by contributing significantly to the dissimilarity. This cannot be said to be the case for strategic practices (i.e., significance is only associated with Both startups variable in the HRM regression). Entrepreneurs that spawn out motivated by disagreement exhibit above average contribution to dissimilarity, both when it comes to strategic and HRM practices.

*** INSERT TABLE 4 ABOUT HERE ***

Conclusions and Suggestions for Further Research

To aid understanding of the distribution of organizational practices, this paper provides three contributions. First, we provide theoretical development of the underlying mechanisms that affect the similarity of organizational practices between different subpopulations of organizations. Survival and legitimacy mechanisms dictate greater similarity among established organizations over time, while entrepreneurs are likely to engage in greater experimentation. Second, we confirm the special parent-spawn relationship, which is expected to decrease variation as entrepreneurs adopt the organizational practices of their parents, except in the case when a strategic disagreement motivates the founder. We do show that startups that are founded through disagreement motives contribute substantially to diversity in adopted practices, yet that

the founders still mimic the practices of their parent organizations. Finally, we use rich survey data matched with administrative records. Our empirical results provide a nuanced understanding of the logic behind variation in organizational practices.

Building on theoretical predictions our empirical results demonstrate that there is more heterogeneity in organizational practices among start-ups than within established organizations. Start-ups, as expected, are more diverse in their organizational practices. This finding confirms that established organizations converge on a set of institutionalization standards and practices that create stability (Haunschild & Miner 1997; Strang & Macy 2001; Williamson & Cable 2003). The emergence of a shared identity around similar organizational practices facilitates the establishment of a favorable resource environment (McKendrick 2001). In contrast, start-up organizations exhibit greater distribution of organizational practices, which is expected to play a significant role in introducing new ideas in the economy (see e.g., Hannan & Freeman 1984; Nelson & Winter 1982; Sørensen & Sorenson 2007; Stinchcombe 1965). This, however, seems only to be present when considering HRM practices and not so much for strategic practices. This may partly be because strategic decisions are more complex and difficult to assemble, as elements of a strategy are tightly coupled, supported by considerable tacit knowledge, and are often casually ambiguous (Rivkin 2000; Wasserman 2012; Winter & Szulanski 2001). Entrepreneurs may resort to choosing standard routines. This is regardless of the fact that introducing new strategic practices may further differentiate new organizations from the founders' prior employment.

Overall, we confirm that the effect size of legacy is relatively low, suggesting that entrepreneurs extract ideas of how to organize from cultural heritage; the founder has been influenced in the way that she thinks and tends to make similar choices as the parent

organization. That the effect size is low may also resonate well with the fact that the startups, even if they mimic the parent, still contribute significantly to the variations found in the population of organizations in terms of selected internal practices. This low effect may also suggest that this heritage may not be a deliberate choice of adopting blueprints but rather an unintentional consistency in the set of coherent organizational choices. This resonates with the perspective that individuals are often only exposed to a subset of the many routines of their parent organizations, and hence have limited information about the full range of organizational practices and the dominant combinations of the these. They may simply be organizing in part blindness, which then contributes new combinations, rather than doing so on purpose. Organizational diversity may also be due to the introduction of entirely new practices, which we are not able to track but which would certainly be at odds with prevailing practices.

Our analysis did not consider diversity through more spawning by considering extremes of the distribution of organizational practices because of data limitations. Spawning is a relatively rare event making it difficult to match multiple spawns to a single parent organizations. Greater diversity may also occur if more spawning is taking place from parent organizations at extremes of the organizational practices. We control for this potential bias in our investigation yet this is a question that warrants further investigation.

It is important to emphasize that understanding variations and selection mechanisms internally in organizations is an important step for our understanding the evolution. This has especially been emphasized in evolutionary economics. Knudsen (2002) specifically debated internal selection dynamics of organizations addressing some of the key questions in terms of how firms organize and how this is part of processes of adaptation/selection and the principles of

variation and continuity. This paper adds to this discussion by reconciling the inheritance hypothesis with the idea that startups may be an important source for newness and novelty.

Our results suggest several additional avenues for future research. There is a substantial amount of variation in organizational practices that our results are not able to explain. This suggests that understanding the impact of psychological traits of the entrepreneur, such as risk preferences and openness, may have a mitigating effect on the transfer of organizational practices from the parent. The statistically significant results on organization demographic and social characteristics suggest the utility of further consideration of individual factors and possible other sources of inspiration for how to organize following the proposal of Aldrich and Yang (2014). Certainly this is something that we hope to explore. In addition, the choice of which parent organization to work for involves a selection problem, and the context of the parent shapes the likelihood that the individual will leave the parent organization in favor of entrepreneurship (Dobrev & Barnett 2005; Ozcan & Reichstein 2009). Certainly there is more work to be done to understand this selection effect and to then determine how experience with specific organizations and the realization of a strategic disagreement shapes the degree of organizational heritage that the entrepreneurs bring to the new organization. More work on the occupational position of the entrepreneur in parent organizations and the types of practices inherited, either strategic or human resource related, may help explain the types of variation we observe among organizations. Building on entrepreneurs' prior professional positions suggests that fuller consideration of the founding team may illuminate more detail about the adoption of organizational practices, and provide a more behavioral perspective on entrepreneurial dynamics.

Finally, our data are a cross-section and, with a time series there are many extensions to consider. For example, currently we are not able to examine the link between firms'

organisational practices and their productivity. Thus, we are not able to say what types of practices lead to better performance and if these are the set of practices that are replicated by entrepreneurs. Further, we are not able to consider changes in organizations practices over time. For example, the automation of routine functions and the digitisation of business practices may affect force greater homogeneity among firms and lead to less experimentation and a loss if innovation. Furthermore, digitization has found to be closely linked to specific performance aspects of the firm (Sorbe et al. (2019) and Gal et al. (2019)) and may hence both have.a direct and indirect effect on the organizational choices of firms. Indeed, digitization may be an critical aspect of organizational choices and change which the present study have not been able to capture or explore due to data limitations. We hope our investigation encourage others to examine these questions and extend our findings.

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FIGURES

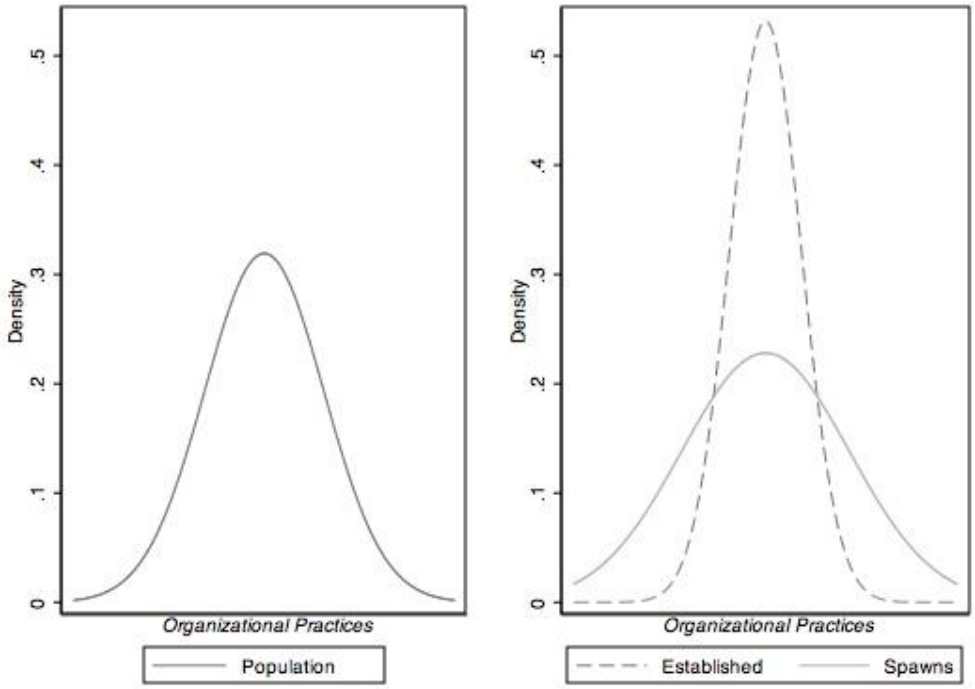

FIGURE 1: Distribution of organizational Practices across population (left) and the distribution when splitting the population into established organizations versus their spawns (right)

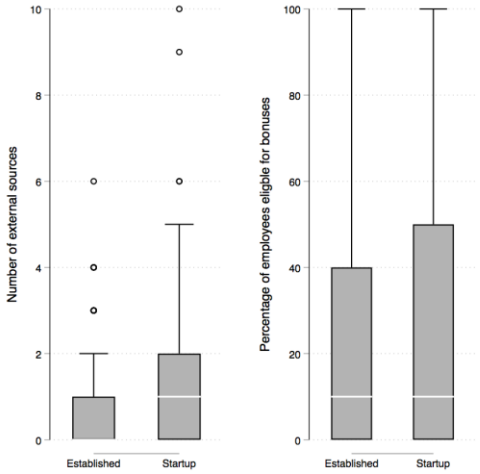

Figure 2: Box plots split between established and startup organizations considering number of external sources (left) and percentage eligible for bonuses (right)

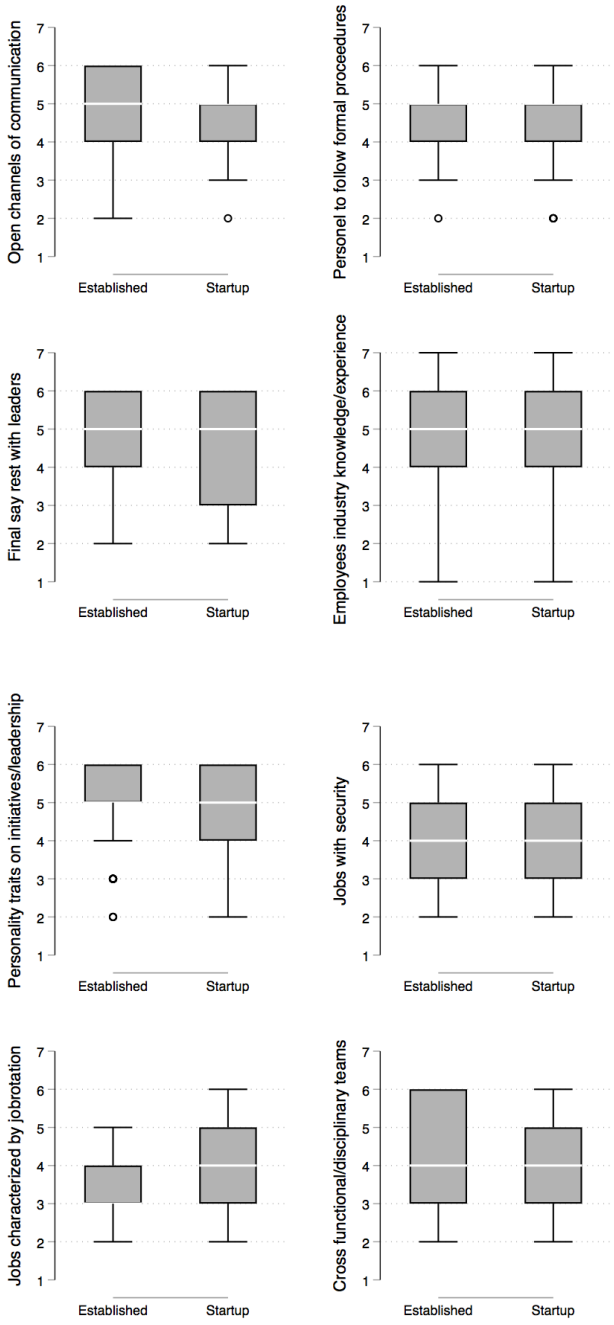

Figure 3: Box plots of split between established and startup organizations considering the practices which were captured with a 7-point Likert scale

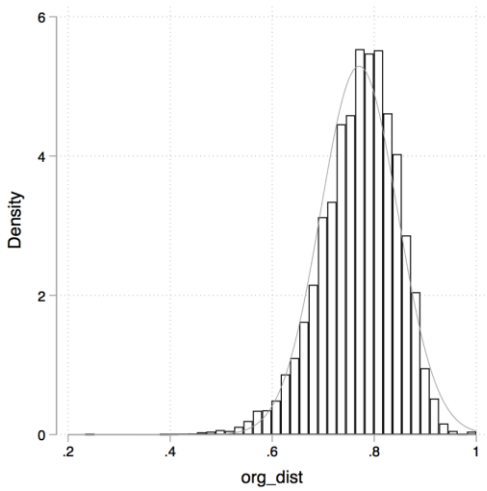

Figure 4: Observed distribution of the similarity index among the considered 16471 comparisons

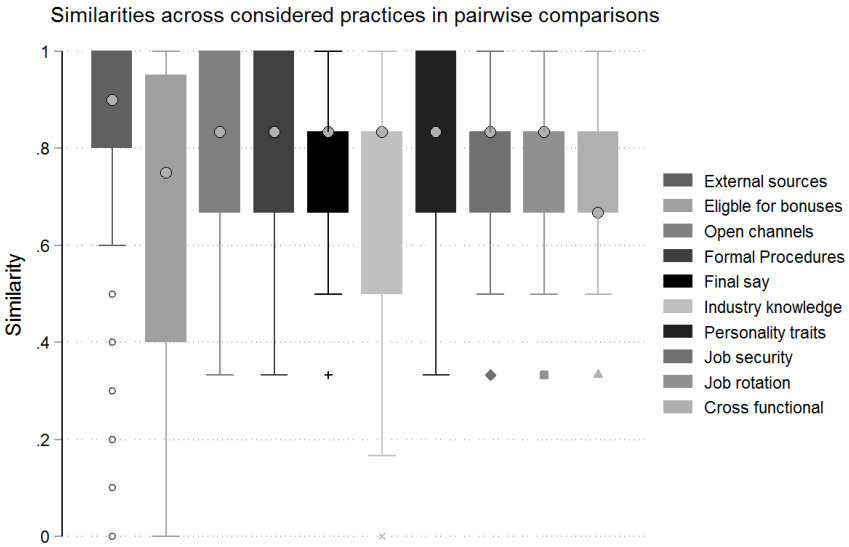

Figure 5: Similarity indeces across the ten questions consideredusing a boxplot (16471 dyadic comparisons)

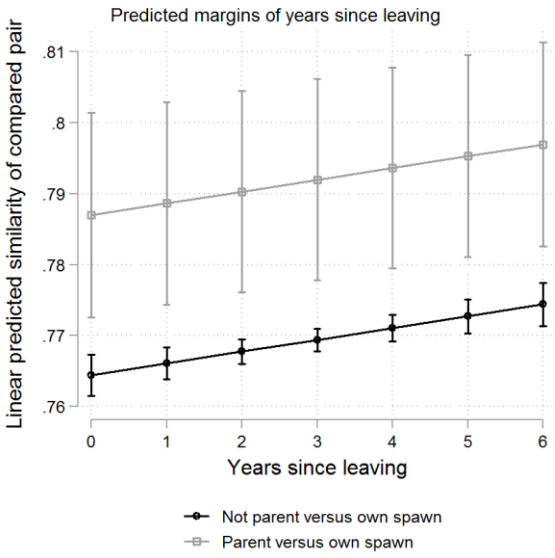

Figure 6: Marginal effects plottet for the "Years since leaving" variable

TABLES

TABLE 1

Questions used for assessing the similarity in organizational practices and standardized values in the two subgroups

No.	Question	Scale	Start-up	Established	Difference
1	Number of external sources of information and knowledge used (a) Suppliers of equipment, materials, components, and software; b) Customers and users; c) Competitors or other companies in your industry; d) Consultants, commercial laboratories or private R&D institutes; e) Universities or other higher education institutions; f) Public research institutes; g) Conferences, trade fairs or exhibitions; h) Science journals or trade-/technical publications; i) Industry affiliations; j) Online communities)	0-10	0.256 [0.116]	-0.256 [0.082]	-0.512 [0.142]**
2	To what extent does your firm prefer open channels of communication with easy access to important information	1-7 Likert	-0.100 [0.096]	0.100 [0.110]	-0.200 [0.146]
3	To what extent does your firm prefer to get personnel to follow the formal procedures	1-7 Likert	0.009 [0.105]	-0.009 [0.102]	-0.018 [0.147]
4	To what degree does your firm prefer to let the final say rest with the formal leaders	1-7 Likert	0.003 [0.107]	-0.003 [0.101]	-0.005 [0.147]
5	When you think of your firms promotion and recruitment process, to what extent does the firm emphasize employees industry knowledge and experience	1-7 Likert	-0.044 [0.106]	0.044 [0.101]	-0.089 [0.146]
6	When you think of your firms promotion and recruitment process, to what extent does the firm emphasize employees personality traits related to taking initiative and exercising leadership	1-7 Likert	-0.051 [0.101]	0.051 [0.106]	-0.102 [0.146]
7	If you think about your firms employees, how much focus does your firm have on that employees perform jobs that have a high degree of job security	1-7 Likert	0.190 [0.105]	-0.190 [0.098]	-0.379 [0.144]**
8	If you think about your firms employees, how much focus does your firm have on that employees perform jobs that involve job rotation	1-7 Likert	-0.178 [0.108]	-0.178 [0.096]	-0.357 [0.144]*
9	If you think about your firms employees, how much focus does your firm have on that employees perform jobs that require participation in the cross-functional/disciplinary teams	1-7 Likert	-0.079 [0.099]	0.079 [0.108]	0.157 [0.146]
10	What percentage of employees has been eligible for cash bonuses based on individual performances	0-100	0.049 [0.110]	-0.049 [0.097]	-0.097 [0.146]

† $p < 0.10$, * $p < 0.05$, ** $p < 0.01$ at a two sided test, Standard errors in parentheses

Note: The table is an adaptation of a table presented in Feldman et al.(2018) the difference being that this one contains standardized values

TABLE 2

Means, Standard Deviations, and Pearson Correlations

	Mean	S.D.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Organizational distance															
(1) Similarity index	0.770	0.075													
Comparisons variables															
(2) Parent versus own spawn	0.006	0.074	0.01												
(3) Both established org.s	0.249	0.432	0.08	-0.04											
(4) Both startups	0.249	0.432	-0.06	-0.04	-0.33										
Disagreement variable															
(5) Disagreement motivation	0.220	0.414	-0.06	0.00	.	.									
Founder at Parent controls															
(6) Tenure at parent	0.725	1.590	0.09	-0.00	.	.	0.14								
(7) Wage rank at parent	0.692	0.243	-0.00	-0.00	.	.	-0.08	0.02							
Organization comparison controls															
(8) Org. size Difference	4.875	2.454	0.04	0.03	0.32	-0.82	-0.00	-0.00	-0.00						
(9) Same 4-digit industry	0.016	0.124	-0.00	0.14	-0.01	0.04	-0.03	0.02	-0.03	-0.040					
Founding controls															
(10) Hybrid Entrepreneur	0.352	0.478	0.06	0.00	.	.	0.05	0.62	-0.10	0.00	0.02				
(11) Advice from former colleagues	0.132	0.338	0.04	0.00	.	.	0.11	0.01	0.15	-0.01	-0.00	0.05			
(12) Co-founder	1.407	0.491	0.00	0.00	.	.	-0.01	-0.18	0.09	0.00	0.00	-0.09	0.07		
(13) Growth of parent org.	0.057	0.152	-0.00	-0.00	.	.	0.04	0.04	-0.14	0.00	0.01	0.03	-0.16	0.07	
(14) Years since leaving	2.725	1.882	0.04	0.00	.	.	0.01	0.06	0.07	0.00	0.00	0.11	0.02	-0.16	-0.14

TABLE 3
Determinants of Organizational Similarity – Results of Bootstrap OLS Regressions

	(1) Overall model		(2) Partial model		(3) Interaction model	
Comparisons variables						
Parent versus own spawn (P)	0.016 **	(0.01)	0.023 ***	(0.01)	0.021 **	(0.01)
Both established organisations	0.012 ***	(0.00)				
Both startups	-0.012 ***	(0.00)				
Disagreement variable						
Disagreement motivation (D)			-0.015 ***	(0.00)	-0.015 ***	(0.00)
Interactions						
P x D.					0.008	(0.02)
Organization comparison controls						
Org. size Difference	-0.001 ***	(0.00)	-0.001	(0.00)	-0.001	(0.00)
Same 4-digit industry	-0.001	(0.01)	-0.031 ***	(0.01)	-0.031 ***	(0.01)
Founder at Parent controls						
Tenure at parent			0.005 ***	(0.00)	0.005 ***	(0.00)
Wage rank at parent			-0.007 *	(0.00)	-0.007 **	(0.00)
Founding controls						
Hybrid Entrepreneur			-0.001	(0.00)	-0.001	(0.00)
Advice from former colleagues			0.011 ***	(0.00)	0.011 ***	(0.00)
Co-founder			0.004 **	(0.00)	0.004 **	(0.00)
Growth of parent org.			0.003	(0.01)	0.003	(0.01)
Years since leaving			0.002 ***	(0.00)	0.002 ***	(0.00)
Constant	0.776 ***	(0.00)	0.766 ***	(0.00)	0.766 ***	(0.01)
Number of observations	16471		8281		8281	
Number of repetitions	50		50		50	
Chi-square	150.174 ***		142.627 ***		278.638 ***	
Adjusted R-square	0.009		0.019		0.019	

Note: Benchmark in comparison variables is startups vs established organizations. Standard errors in parentheses
* p<0.1, ** p<0.05, *** p<0.01

TABLE 4
Determinants of Strategic (left) and HRM (right) Similarity – Results of Bootstrap OLS Regressions

	Strategy Practices Regression		HRM Practices Regression	
	(1) Overall model	(2) Partial model	(3) Overall model	(4) Partial model
Comparisons variables				
Parent versus own spawn (P)	0.013 (0.01)	0.016 (0.01)	0.017 * (0.01)	0.027 *** (0.01)
Both established organisations	0.011 *** (0.00)		0.013 *** (0.00)	
Both startups	-0.002 (0.00)		-0.019 *** (0.00)	
Disagreement variable				
Disagreement motivation		-0.011 *** (0.00)		-0.018 *** (0.00)
Organization comparison controls				
Org.s size Difference	0.001 * (0.00)	0.000 (0.00)	-0.003 *** (0.00)	-0.001 (0.00)
Same 4-digit industry	-0.006 (0.01)	-0.020 ** (0.01)	0.002 (0.01)	-0.037 *** (0.01)
Founder at Parent controls				
Tenure at parent		0.007 *** (0.00)		0.004 *** (0.00)
Wage rank at parent		0.015 *** (0.00)		-0.022 *** (0.00)
Founding controls				
Hybrid Entrepreneur		0.004 (0.00)		-0.004 (0.00)
Advice from former colleagues		0.017 *** (0.00)		0.007 ** (0.00)
Co-founder		0.000 (0.00)		0.007 *** (0.00)
Growth of parent org.		0.004 (0.01)		0.002 (0.01)
Years since leaving		0.000 (0.00)		0.003 *** (0.00)
Constant	0.804 *** (0.00)	0.788 *** (0.01)	0.762 *** (0.00)	0.750 *** (0.01)
Number of observations	16471	8281	16471	8281
Number of repetitions	50	50.000	50	50
Chi-square	204.083 ***	11.668 ***	113.186 ***	131.687 ***
Adjusted R-square	0.006	0.024	0.008	0.012

Note: Benchmark in comparison variables is startups vs established organizations. Standard errors in parentheses

* p<0.1, ** p<0.05, *** p<0.01