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IDENTITY REALIZATION, MULTIPLE LOGICS AND ORGANIZATIONAL FORM LEGITIMACY

ORGANIZATIONAL FOUNDING RATES DURING THE EMERGENCE OF THE DUTCH ACCOUNTING INDUSTRY, 1884-1939

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Organizational Founding Rates during the Emergence of the Dutch Accounting Industry, 1884-1939

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ABSTRACT

We analyze the difficult process of identity realization and legitimation development of a new organizational form. Particularly in the early decades of an emerging population, organizations face the challenging task to construct an identity that facilitates the build-up of legitimacy. The efforts of organizations in search of an identity often trigger collective action that crystallizes into multiple competing institutional logics that, eventually, result in the emergence of different organizational sub-forms. In our paper, we analyze the consequences of this contestation among multiple logics during a population’s emergence stage, fueled by competing self-organizing collective actors, on organizational founding rates. We claim that competition among collective actors affects the founding process in two opposing ways. On the one hand, such contestation spurs founding rates as entry barriers are reduced. On the other hand, identity heterogeneity undermines population-level legitimacy, producing fuzziness that hampers founding rates. We argue that differences in a sub-form’s perceived template quality will moderate the effects of this contestation on organizational founding rates. Our hypotheses are tested with data from the early history of the Dutch accounting industry, which took many years to reach a taken-for-granted status because of contestation among different professional associations.
INTRODUCTION

Understanding the emergence of new organizational forms has attracted the attention of many organization theory scholars as such emergence processes are the main drivers of organizational diversity, which determines a social system’s adaptive capacity (Ruef, 2000; Romanelli, 1991). Scholars have stressed the importance of gaining constitutive legitimacy – i.e., a taken-for-granted status – by new populations in the organizational form emergence process. In this respect, density dependence theory has been shown to be a useful model. This theory argues that population density spurs population-level legitimacy, which emerges from positive spillovers from individual instances of a new organizational form (Carroll and Hannan, 2000; Rao et al., 2000). A rise in the number of organizations that carry a specific form creates a legitimacy “commons” that enhances the form’s social acceptance, facilitates resource mobilization and ease of organizing, and spurs organizational founding and reduces mortality of organizations in the new organizational population (McKendrick et al., 2003). Evidence has indeed revealed that the founding (mortality) rate generally increases (decreases) with density in the organizational form emergence stage of new populations.

However, the theory falls short in providing a full account of the organizational form emergence process, mainly because its logic ignores the importance of heterogeneity among organizations that search for an identity in the emerging population. The form emergence process is typically characterized by fragmentation and contestation as enthusiasts propose and advocate alternative organizational frames and schemata (Rao, 1998; Ruef, 2000; Bogaert et al., 2010). This in turn hampers the development of a
shared understanding among core audiences with respect to the labels and schemata that apply to members of the emerging form (Hannan et al., 2007).

In their re-specification of density-dependent legitimation theory, Hannan et al. (2007) precisely argue that the perceptual ambiguity among core audiences such as founders, employees, investors and clients associated with such heterogeneity (which generates so-called fuzziness) hampers the development of a taken-for-granted status of new forms. Density is only expected to affect a form’s taken-for-grantedness when audiences agree about the meaning of labels and schemata that apply to the new population’s members. Organizations then have what they coined a sharp grade of membership in the category, implying that the population stands out against its background. However, when audiences disagree and fuzziness is high, positive spillovers from individual instances of the new form are not realized, nullifying the positive effect of classic density on legitimation. Hannan et al. (2007), therefore, propose different density measures, so-called fuzzy density and contrast, that take into account the grade of membership of the organizations that are associated with the new form. Empirical evidence indeed reveals that fuzzy density is better able to explain vital rates than classic density (Kuilman and Li, 2009; Bogaert et al., 2010). These findings are consistent with the earlier study of McKendrick et al. (2003), reporting that low sharpness of organizational identities, resulting from the heterogeneity of origin of organizations, constrained the degree to which new forms emerge as legitimate.

The revised theory is a considerable improvement of the classic conception of density-dependent legitimation by linking well with the general insights from typical real-life cases revealing that organizational form creation is pre-eminently a very
complex and intrinsically political process (Stinchcombe, 1968). However, both measures of density dependence theory still focus on the macro level: that is, population-level legitimacy is argued to be driven by population-level variables such as classic and fuzzy density. By doing so, neither of both versions of density dependence theory does take full account of the implications of organizational heterogeneity in the form emergence process. Indeed, recent research on organizational identity realization emphasizes the complex tension between individual (organizational-level) and collective (group-level) identity building, which is likely to have important implications for the form emergence process not captured by current density-based models (King et al., 2011; Lounsbury, 2008; Purdy and Gray, 2009). Recently, alternative accounts have been suggested that focus on the consequences of multiple institutional logics that tend to emerge and compete in nascent fields, resulting from the dilemma that individual organizations face.

Specifically, organizations in such emerging fields face a daunting task: they need to develop identities in the absence of population-level legitimacy, balancing uniqueness – in order to differentiate themselves from others to carve out their own distinct niches – with similarity – in order to build a collective identity facilitating the form’s taken-for-grantedness (Deephouse, 1999; King et al., 2011). The pressure to develop a unique organizational identity and a collectively shared identity often spurs an emerging population’s members to strategically push different opinions about how to organize the field, which schemata to apply, and how to perform the new tasks. This two-pronged search for identity and legitimacy often triggers fragmented collective action, where actors in a nascent field are likely to disagree about what constitutes the core identity features of the new organizational form (Rao et al., 2000). The end result of this tension
is that organizations self-organize around different competing institutional logics that all aim for dominance, resulting in the emergence of different sub-populations or sub-forms striving for legitimacy (Rao et al., 2000).

In this paper, we study the interplay between micro and macro processes, and between organizational identity realization, fragmented collective action, competing institutional logics and collective identity building. We investigate the consequences of the emergence of competing institutional logics on the founding rates of different sub-forms in a nascent population within a revised density dependence framework. We focus on organizational founding, as this is the major driver of the new form emergence process (McKendrick and Carroll, 2001; McKendrick et al., 2003; Bogaert et al., 2010). We aim to contribute to the understanding as to how the organizational and collective search for identity and legitimacy affects the founding rates of different organizational types, or sub-forms.

Our study contributes to the literature on founding processes and new form emergence by combining insights from the identity realization and competing logics literatures with recent advancements in organizational ecology’s density dependence theory. We test our hypotheses in the context of the organizational form emergence process in the Dutch accounting industry in the 1884-1939 period. This setting is well suited as the Dutch accounting profession was involved in a process of constructing an identity and gaining legitimacy that took many decades (see also Bogaert et al., 2010). In this period, accountants organized in several competing professional associations with differing quality templates, pushing competing institutional logics in collective attempts to justify the need for their specific services to external audiences.
THEORETICAL FRAMEWORK

Two Countervailing Forces

We focus on two countervailing forces that underscore the complexities associated with the organizational form emergence process. That is, we develop the argument that the effect of fragmentation among niche-carving activities by different groups of collective actors, and the associated contestation among alternative institutional logics, on founding rates is a double-edged sword. On the one hand, such contestation blurs boundaries, opens up resource space and reduces entry barriers, so spurring the founding rates of different types of sub-forms, especially at the low-quality end of offerings in the emerging population. Density in the niches of these sub-populations, and the incidence of the associated logics, will increase as a result, positively affecting these sub-populations’ legitimacy and founding rates in turn. On the other hand, however, these contestation processes increase population-level fuzziness and decrease population-level legitimacy “commons”, which does suppress the founding rates. However, given that population-level legitimacy tends to spillover to less favored sub-populations (Barnett and King, 2008), especially sub-populations that offer high perceived quality templates are expected to suffer most from decreases of the legitimacy “commons” at the population level.

Organizational and Collective Identity Realization

In emerging populations, organizations need to carve out niches and create resource space out of nothing for survival (Lounsbury and Glynn, 2001). This goes hand in hand with the need to realize organizational identities that embody the new form’s central, enduring and distinctive characteristics, and that address two fundamental questions:
“who are we as an individual organization?”, and “who are we as a group of organizations?” (Albert and Whetten, 1985; Whetten and Mackey, 2002). For populations that already have a taken-for-granted status, proven recipes with respect to organizing routines and institutional logics can be adopted relatively easily by newly founded organizations. However, identity realization is a huge challenge in emerging fields that lack such shared understanding.

On the one hand, organizations must develop unique individual identities by differentiating themselves from their competitors; on the other hand, reducing population fuzziness requires the development of a common ground to spur the taken-for-grantedness of the new form. Therefore, members of a nascent form have to develop distinguishing organizational features that specify the ways in which the organizational actor is both similar to and different from others in the emerging field (Greenwood and Hinings, 1993; Lounsbury and Glynn, 2001; Scott, 2001; Whetten, 2006). While individual organizations try to find their similarities and differences, group identification is essential for effective social exchange and accountability (Whetten and Mackey, 2002). At the population level, organizations need to construct their common characteristics associated with membership ties. As Aldrich and Fiol (1994) point out, the uniqueness of a single organization during the early stages of an industry’s development is not sufficient, but must be counterbalanced with the collective efforts of all players in the emerging industry to jointly produce a new identity.

As a result of this tension, a single answer to the “who are we?” question cannot be easily found; within a single emerging population, multiple and competing answers to this critical identity question circulate. Indeed, consensus on a single institutional logic
(and hence rapid institutionalization of the new form) is the exception rather than the rule (Purdy and Gray, 2009). In general, different potential categories or logics are available, and different claims can be made for different audiences of what is appropriate (Whetten and Mackey, 2002). As a result, self-categorization processes become important whereby the organizations’ membership in identity categories or sub-form groups are declared (Whetten and Mackey, 2002). By making positional choices when entering the emerging population, organizations carve out niches and gradually realize their identities (King et al., 2011), structuring long-run competitive and symbiotic relationships (Albert et al., 2000).

**Fragmented Collective Action, Competing Logics and Boundary Expansion**

In the absence of a single institutional logic, which provides the organizing principles to guide activity, collective action plays a key role in structuring the environment and constructing the meanings within emerging fields (Rao et al., 2000; Galvin, 2002). The dilemma between organizational uniqueness and collective identity, however, generally leads to fragmented collective action. Individual organizations claiming specific identities self-organize into distinct collective groups that try to push their core features and schemata that define the nascent form (Thornton and Occasio, 1999; Bogaert et al., 2010). As the answers concerning the “who are we?” question differ, collective actors make claims and counterclaims in an effort to legitimate certain groups over others, defining firm routines and capabilities in ways that provides them with a competitive advantage (Glynn, 2000; Reay and Hinings, 2009). During this process, different institutional logics emerge that compete for dominance.
An important consequence of the niche-carving activities of multiple collective actors is that resource space is opened up for different sub-forms. When alternative institutional logics compete for dominance, newcomers will have different options in terms of the templates to adopt. They might even strategically push new institutional logics in order to develop distinguishing identity features. As a result, self-regulatory fragmented collective action expands the boundaries of the whole population by opening up niches for entrepreneurs. As the number of competing institutional logics increases in the emerging field, the number of sub-populations and hence population-level fuzziness increase, too. In contrast, when a single institutional logic dominates the emerging field, the boundaries of the new population will be more solid, which reduces new entrants’ differentiation and positional opportunities, and hence increases a population’s entry barriers. With respect to the founding process, we therefore expect that founding rates in different sub-populations will increase due to fragmented collective action. This affects organizational densities in these emerging sub-groups, which – according to density dependence reasoning – increases the legitimacy of that particular sub-population, further spurring sub-population founding rates (Kuilman and Lee, 2009).

**Fuzziness and Population-level Legitimacy**

The growing number of organizations that adopt different templates paradoxically undermines the legitimacy commons at the population level. This follows from the revised density dependence theory as developed by Hannan et al. (2007). The revised theory stresses the importance of sense-making and cognitive categorization processes among core audiences in the form emergence process. Established organizational forms
are pictured as categories with high taken-for-grantedness, which implies strong consensus about the labels and schemata that apply to members of the category. In nascent forms, however, perceptual ambiguity abounds and classification is cumbersome. The new category’s labels and schemata are only partially applicable. As a result, fuzziness is high, which hampers the development of shared understandings and taken-for-grantedness.

In classic density dependence theory, the assumption is that each organization is a full member of the nascent form and that legitimacy increases with each and every additional member. The new theory, however, emphasizes the impact of fuzziness, implying that individual organizations have a different “grade of memberships” (GoM) in the emerging field. The theory predicts that if audiences perceive organizations to have low GoMs, then a nascent form does not stand out against its background, which precludes the emergence of a taken-for-granted category (Bogaert et al., 2010). As a corollary, the revised density dependence theory predicts that adding organizations with low GoMs to a population might even reduce the field’s legitimacy as fuzziness (contrast) increases (decreases).

Population-level legitimacy is a common good that is created by collective action. As with all common goods, they are open to exploitation and free-riding (Ostrom, 1990; Lenox, 2006; Barnett and King, 2008). In a similar vein, legitimacy is not expected to spillover to all types of members of a nascent form to an equal extent; some might benefit (suffer) more from the legitimacy commons (fuzziness) than others (Kuilman and Li, 2009; Bogaert et al., 2010). For instance, Bogaert et al. (2010) argue that especially low-quality organizations would benefit (i.e., have lower mortality rates) from population-
level legitimacy as they lack a strong and robust organizational identity. Conversely, they argue that the negative impact of increases in a population’s fuzziness would backlash more to high-quality organizational members. Before developing specific hypotheses, we first briefly introduce the details of our setting.

DUTCH ACCOUNTING

Historical Context

The emergence of the Dutch accounting industry can be traced back to late 19th century. As the number of modern enterprises operating with limited liability started to increase, the need for accounting and auditing went up as well (de Vries, 1985; Maijoor et al., 1995). Even though labels such as bookkeeping and controller were already established, due to the changes related to Industrial Revolution, accounting emerged as a new profession in the Netherlands (de Vries, 1985; Maijoor et al., 1995). However, the new profession struggled to gain legitimacy as a result of the absence of consensus among accountants about how to set the main rules for the profession, such as the required expertise and rules of conduct. As a consequence of this disagreement, accountants organized into different associations in order to convince the external audience about the necessity of their profession, emphasizing that their members had the expertise to answer to this need. Over time, the disagreement resulted in the establishment of a series of self-regulated associations competing for dominance.

The first Dutch professional society of accountants, Nederlands Instituut voor Accountants (NIVA), was formed in 1895 (Buijink, 1992). However, an independent audit of financial statements was only made obligatory by Dutch law in 1961 for listed
companies, implying that the Dutch accounting industry had a long period in an unregulated environment (Buijink, 1992). Even after the foundation of the first Dutch professional association, clear institutional codes about how the profession should eventually look like were lacking (de Vries, 1985). The ultimate goal of NIVA was to define the profession of accounting, the function of accountants, and the necessary qualifications to be an accountant. According to NIVA, a candidate had to pass an official exam in order to be qualified as an accountant.

At the end of the 19th century, the number of accountants continued to increase; however, they were not all members of NIVA. As a precaution, NIVA established a tough qualifying exam for new members, in order to keep the emerging profession’s standards high. However, their selectivity in accepting new members triggered the establishment of a new association called Nederlandse Bond van Accountants (Bond) in 1901. Bond, too, established criteria for member acceptance; however, the level of the exam they required was lower than that of NIVA. Hence, Bond had a lower quality than NIVA. The establishment of a second association failed to solve the conflict among accountants; quite to the contrary, as this gave way to the establishment of even more associations. In 1902 and 1903, two other organizations were founded: Nederlandse Academie van Accountants, and the Nationale Organisatie van Accountants. This period is characterized as the “disorganization of the profession” in the De Accountant, which was the official periodical of NIVA (Bogaert et al., 2010).

The disagreement about the qualifying exam, selection criteria and how to perform as a profession continued over decades, with all associations seeking dominance. Two further events illustrate this prolonged state of contestation. First, an attempt to
establish a monopoly association to unify all others in 1904 even resulted in the establishment of yet new associations. Second, the difference of opinion as to the requirements to be qualified as an accountant not only emerged between associations, but also among members of NIVA. As a result, a new association called the Nederlandse Accountants Vereniging (NAV) was established as a NIVA spinoff in 1907. The aim of NAV was to increase the standards of the profession beyond those promoted by NIVA.

Between 1907 and 1935, two developments determined the evolution of the Dutch accounting industry. Firstly, the demand for accountants increased with the growth of the number of large enterprises. Secondly, the scope of services expected from accountants expanded and became more complex, an example being entry into consultancy activities (de Vries, 1985; Bogaert et al., 2010). However, despite the increasing need for accountants, the discussions and struggles between different associations continued in this period, further triggering the emergence of new associations. This is visualized in Figure 1.

[Insert Figure 1 about here]

These developments and increasing concerns within the profession resulted in unification efforts. The aim was to introduce a uniform federal exam issued by a new independent institution. These efforts were associated with the merger of a few of the associations: NIVA and NAV in 1919 (Instituut), Organisatie and Academie (Organisatie) in 1922 and, finally, Instituut, Organisatie and Bond in 1934. This process of consolidation implied that the profession gained increasing societal esteem and legitimation. Finally, supported by the introduction of legal rules, the Dutch accounting
profession became institutionalized at the beginning of World War II (de Vries, 1985; Bogaert et al., 2010).

Density dependence studies

Earlier ecology-inspired work on the Dutch accounting industry mainly focuses on the relationship between classic density and founding/mortality rates (Pennings et al., 1998; Boone et al., 2000; Cattani et al., 2003; Bröcheler et al., 2004). Boone et al. (2000), focusing on the early decades in the industry’s history, reveal an effect of density on founding and mortality rates that is opposite to that predicted by classic density dependence theory. According to the findings of Boone et al., density-related legitimation processes failed to materialize at the onset of the Dutch audit industry (2000: 372). In a follow-up study, Cattani et al. (2003) propose that the main explanation for this is the absence of any control for geographical heterogeneity within the population in Boone et al. (2000). Therefore, Cattani et al. (2003) analyze founding rates in the Dutch accounting industry as a function of spatial density, revealing evidence in support of classic density dependence theory.

Bogaert et al. (2010) adopt another perspective. They analyze the Dutch accounting industry by taking Hannan et al.’s (2007) revised theory of density dependence as their steppingstone. Their main focus is on legitimation and firm exit. They provide support for hypotheses central to the revised density dependence theory, revealing the central role of fuzzy density and contrast. Their key argument is that Boone et al.’s (2000) findings can be explained by the fuzziness that characterized the early evolution of the industry, implying that the increase of classic density cannot capture
processes of legitimation in the early decades of the Dutch accounting industry. In the current study, we further develop this perspective by focusing on the role of multiple competing logics represented by different self-regulatory professional associations in the context of a revised density dependence framework, analyzing the impact of this environment of contestation on founding rates.

**HYPOTHESES**

In emerging fields that can be described in terms of multiple institutional logics, we can treat the adopters of a specific institutional logic as a sub-population. In such a contested environment, the critical question for a newcomer will be how to identify itself vis-à-vis the different logics and associated sub-populations. In the face of multiple institutional logics, if the form does not have a taken-for-granted status, newcomers will have different options in terms of the templates to adopt, and hence as to how to define their identity. If a single institutional logic dominates the field, the boundaries of the profession are relatively solid, the criteria for the form are already defined, and hence entry barriers are higher – all compared to the case of multiple competing institutional logics.

However, if the form does not have a taken-for-granted status, and if multiple institutional logics circulate in the emerging field, then a newcomer has the freedom to choose from this set of competing logics, or even to propose a new institutional logic as part of strategic behavior aimed at differentiation by developing distinguishing features. Therefore, adding a specific institutional logic – represented by collective action in the form of a specific self-regulatory association proposing an alternative template – will
expand the boundaries of the whole population by opening up niches for newcomers. This makes entry easier: as the number of competing logics increases in the emerging field, more sub-populations are created; and as more sub-populations are created, the founding rate for any sub-population will increase.

_Hypothesis 1_: The number of associations is positively associated with the organizational founding rate in a focal association’s sub-population.

Hypothesis 1 provides a ceteris paribus benchmark prediction only, ignoring heterogeneity among associations and the alternative logics they promote. However, we cannot assume that each collective action – here, in the form of self-regulatory associations – representing and supporting a different institutional logic will increase the legitimation of the emerging form. Instead, we argue that while contestation among collective actors does hamper the development of a legitimate collective identity, the impact on the overall legitimacy of the form will differ from one collective actor to the other depending on the “quality” or “status”\(^1\) of the institutional logic proposed by the specific collective actor. Legitimation of a form is a common good, open to exploitation just like in exemplary cases such as fisheries and forests (Barnett and King, 2008).

That is, if participation in these kinds of collective action, such as self-regulatory associations, is voluntary, the risk of free-riding is always there (Ostrom, 1990; Lenox, 2006). Therefore, we have to take into account the spillover effects between different types of collective actors, as well as those that do not participate in any collective action. We argue that the key dimension of heterogeneity is the status – or quality – of the collective actors. In our Dutch accounting industry context, this relates to the strictness of the professional requirements and standards as promoted by each association. As a

\(^1\) ‘Status’ and ‘quality’ are highly related concepts in our context.
collective good, form legitimation transcends to all sub-populations and all associations. However, the contribution of each association to overall legitimacy of the emerging form depends on their quality. To achieve high quality, high selectivity with respect to the admission of members is required for any focal association in order to keep a high professional standard. However, in such a case, there is also the incentive to deviate in the context of competition with other associations by setting a lower standard in order to attract more members. The more associations follow this strategy, the more the average quality of the profession will decrease.

*Hypothesis 2: The number of associations increases the organizational founding rate in the focal associational sub-population especially when the focal association’s offering is of low quality.*

One of the important assumptions of classic density dependence theory is that each member of the population contributes equally to the legitimacy of the form. However, competing institutional logics blur the boundaries of a field, by causing ambiguity or fuzziness as to what the new form precisely does entail. In such a fragmented environment, featuring multiple competing logics represented by rivaling self-regulatory professional associations, increased fuzziness will, in turn, decrease the overall legitimacy of the form. In order to take into account the impact of fuzziness on the legitimation of the form, Hannan et al (2007) introduce a revised theory of density dependent legitimation. This theory incorporates fuzziness in the form emergence process by introducing the new concept of grade-of-membership (GoM), which indicates the degree to which an entity (organization) belongs to the set (population) (Hannan et al., 2007: 15). A fuzzy set provides descriptions of cases in which membership can be partial.
If the organization is a full-fledged member of a population, then the GoM value is equal to 1; if the entity does not belong to the population at all, then the GoM value is equal to 0. This can be seen as the classic perspective to analyze the membership of entities.

In the form suggested by the revised theory, the membership of an organization can take any value between 0 and 1, denoting partial membership of the entity for any value $0 < \text{GoM} < 1$. An organization may contribute to different fields by being a member of multiple populations. Building on Hannan et al. (2007), we claim that in an environment that features multiple competing logics, as represented by different self-regulatory professional associations in the Dutch accounting industry, fuzziness will increase. This will, in turn, decrease the overall legitimacy of the form. In order to analyze the impact of fuzziness on the overall legitimacy of the form, we employ GoM weighted density. That is, we assign different GoM-values to organizations in the industry; taking into account the contributions of individual organizations to the population-level legitimation of the form (see the Methodology section on this). As GoM-weighted density increases, we expected that the overall legitimacy of the form will increase.

*Hypothesis 3: GoM-weighted density increases the organizational founding rate in the focal association’s sub-population.*

However, low-quality organizations are expected to benefit more from the externalities generated during the gradual legitimation process of the form, as explained above. The reason is that high-quality organizations are more visible and powerful as individual entities because of their high selectivity. Hence, they rely less on their category membership for their identity (Bogaert et al., 2010). In our setting of the Dutch
accounting industry, this translates into the argument that potential members of low-quality professional associations will benefit more from any increase in GoM-weighted density.

Hypothesis 4: GoM-weighted density increases the organizational founding rate in the focal associational sub-population especially when the focal association’s offering is of low quality.

METHODOLOGY

Data

Our data include information about the Dutch accounting industry for the emergence period 1884-1939. We model founding rates (defined as the yearly number of new entrant) at the level of each and every professional association. We constructed an extra category for the ‘mixed’ foundings, defined as the newcomer accounting firms in which accountants are members of different associations. In total, the database consists of 133 observations. The number of observations is 107 without the ‘mixed’ category.

The data are gathered from the membership lists of the Dutch accountant associations, financial directories, annual reports, and minutes of accountant associations. Membership lists contain information at the level of the individual accountant (Maijoor et al., 1995). This information is aggregated to the firm and association level in order to reconstruct the life histories of all accounting firms active in this period of the industry’s history (Buijink et al., 1993; Maijoor et al., 1995; Bogaert et al., 2010).
**Independent Variables**

The main independent variables are based on the counts of organizations in the (sub-) population. The first three independent variables are straightforward density measures. The first is the number of self-regulatory professional associations, denoted *Number of associations*, operating at time $t$. During the observation period, 14 associations ever existed. For details about year of founding and exit, and other descriptives of each association, we refer to Bogaert et al. (2010: 133). The second is *Classic density*, referring to the number of organizations operating in the population at time $t$. For robustness analysis, we also employ *Own density*, which involves the organizational density of the association to which the firm belongs at time $t$.

To construct the fourth dependent variable, GoM-weighted density at the population level, referred to as *Weighted density*, the contribution of each organization to the legitimacy of the profession at the population level is counted by estimating each organization’s GoM. The latter can be estimated by means of the relative popularity of its association in the population (see Bogaert et al., 2010). Aggregating these GoMs results in a weighted density count that explicitly takes “fuzziness” of the form into account. Formally, weighted density is calculated as follows: 

$$\sum_{i=1}^{15} \frac{N_{it}}{N_i} N_{it},$$

where $N_i$ equals the number of organizations in the population at time $t$, and $N_{it}$ represents the organizational density of association $i$ at time $t$ (Bogaert et. al., 2010). The numbers of organizations not being a member of any association are counted as “not-associated” (as a result, $i$ goes from 1 to 15). If all organizations, say 100, are members of the same association, then fuzziness is zero, implying that classic and weighted density are both equal to 100. If there are two associations each with 50 organizations, then classic density still equals
100. However, each organization’s GoM would only be .5 (50/100; instead of 1) and weighted density would only equal .5*50 + .5*50 = 50, thus taking fuzziness into account. We employ lagged values of *Classic density, Own density* and *Weighted density* in order to avoid simultaneity issues.

The final independent variable is included as a key component of interaction terms with all four density variables: the status – or quality – of a professional association. *High-quality association* is coded as 1 for *NIVA* or *NAV*, which are the high-quality associations, and 0 otherwise. Of course, *High-quality association* is added as a main or simple effect variable, too. Since we have no main effect hypothesis for *High-quality association*, this measure is then treated as a control variable.

**Control Variables**

Following earlier work on the Dutch accounting industry (e.g., Pennings et al., 1998; Bogaert et al., 2010; Boone et al., 2000; 2009), we include a series of control variables. First, we introduce a dummy variable for *World War I*, which equals 1 for the years between 1914 and 1918, and 0 otherwise. We expect that the founding rates might have been depressed in this period. Second, in order to control for the demand for accounting services, we add the yearly number of newly established limited liability firms, referred to as *New limited liability firm density* (obtained from the yearly editions of Van Nierop & Baak’s *Naamloze Vennootschappen*), since the need for transparency, and hence the demand for accounting services, increased with the emergence of modern limited liability firms at the end of the 19th and beginning of the 20th century (Edwards, 1989; Bogaert et al., 2010). Third, we include lagged *Founding* and *Mortality*. We expect that previous
exits will open space for the newcomers, and vice versa for the previous entries. We introduce two-year lagged values of both variables. Finally, we add a dummy variable for the Pre-association period that takes 0 for the pre-association period and 1 otherwise. This dummy allows us to control for the period starting with the foundation of the first accounting firm (1883) until the foundation of the first professional accounting association (1895).

**Model Specification**

Since our dependent variables are count measures, a Poisson process provides a natural baseline model for organizational founding processes (Hannan and Freeman, 1987). The basic Poisson model for event count data is

$$\Pr(Y_t = y) = \frac{e^{\lambda(x_t)\gamma}}{y!},$$

where both the expected number of events in a unit interval – that is $Pr(Y_t = y)$ – and the variance of the number of events in each interval equal the rate $\lambda(x_t)$. Poisson regression becomes non-robust if the variance of the dependent variable exceeds its mean, which is known as overdispersion (McCullagh et al., 1989). Overdispersion does not affect the coefficient estimates, but the standard errors might be underestimated, thus generating chi-square values that are overestimated (Wezel, 2005).

Negative binomial regression deals adequately with overdispersion (Cattani et al., 2003; Hannan and Freeman, 1989). In this approach, a stochastic error component is added to the model. The error component has a Gamma distribution that parametrizes overdispersion (Wezel, 2005). Because of overdispersion in our sample, we apply the negative binomial regression model. The general formulation is
\[ \lambda_t = \exp(\pi' x_t) \varepsilon_t, \]

where the error term \( \varepsilon_t \) follows a Gamma distribution.

We have panel data, where the cross-sections correspond to associations and the time series to years. To deal with potential autocorrelation, following Baron et al. (2001), we used Liang and Zeger’s (1986) method of generalized estimating equations (GEE). GEE generalizes quasi-likelihood estimation to the panel data context. We assume an exchangeable autocorrelation structure. The results are robust for other assumed autocorrelation structures. Because the observations within the associations cannot be assumed to be independent, we report Huber-White robust standard errors. We used STATA 9.0 for statistical analyses.

**FINDINGS**

Descriptive statistics and correlations are reported in Table 1, and the association-level founding rates model’s estimates are provided in Tables 2 and 3.\(^2\)

[Insert Tables 1, 2 and 3 about here]

We first focus on the effects of the main control variables, as reported in Model 1 in Table 2. Lagged *Founding* does not have any significant impact, and lagged *Mortality* has a significantly positive impact, as expected, suggesting that firms that exit from the industry open up space for newcomers. *High-quality association* and *New limited liability firm density* have a significantly positive effect on the founding rates. However, the estimates of *World War I* and *Pre-association period* are both non-significant.

\(^2\) For the models in which we analyze the moderating impact of association quality, we removed the observations that are belonging to the ‘mixed’ founding category because these observations are unclassifiable. For this reason, the number of observations is less for the interaction models with association quality.
Model 2 in Table 2 shows a significantly positive effect of the *Number of associations* on the organizational founding rate in the focal association’s sub-population. In other words, the contestation between professional associations, which represent competing institutional logics, spurs founding rates as entry barriers are reduced. This result provides support for H1. The moderating effect of *High-quality association* on the founding rate in the focal association’s sub-population in Model 3 in Table 2 is significantly negative, which is in line with H2. Figure 2 visualizes this interaction. The number of associations increases the founding rate especially when the focal association’s offering is of low quality.

[Insert Figure 2 about here]

In Model 4 of Table 2, we test the impact of *Weighted density* on associational founding rates, as well as whether this impact is moderated by the quality of the focal association. We find that *Weighted density* significantly increases an association’s founding rate, which is as predicted in H3. To analyze the impact of fuzziness on founding, we conducted an additional analysis focusing on the interaction of *Classic Density* and *Number of associations*. Model 5 of Table 2 shows that *Classic Density* increases the founding rate (when we compare Models 4 and 5, we observe that the effect of *Classic density* is much smaller than that of *Weighted density*). Model 6 includes the interaction effect of *Classic Density* and *Number of associations*, showing that this interaction is significantly negative, which also supports H3. Figure 3 shows this interaction effect. As expected, classic density only spurs the founding rate when the number of associations – and thus fuzziness – is low.

[Insert Figure 3 about here]
Finally, the result in Model 7 provides support H4: Weighted density significantly increases the founding rate particularly in Low-quality associations. Figure 4 plots this interaction effect.

[Insert Figure 4 about here]

In Models 8 to 15, reported in Table 3, we provide estimates of models added by way of robustness analyses. In these models, firstly, we analyzed the impact of Own density on associational foundings. Secondly, the focal variables are included in pairwise combinations in order to check which effects of the independent variables are unique. From Model 8 in Table 3, we learn that the Own density of a focal association significantly increases the organizational founding rate in that focal association’s sub-population by signaling that the legitimacy of that particular template induces entries into that self-regulatory association. For the pairwise combinations, first, we treat the Number of associations as a control variable, adding the other focal independent variables one by one (Models 9 to 11). Own density, Weighted density, and the interaction of High-quality association and Weighted density are still significant. Subsequently, in Models 12 to 14, we control for Own density. Again, the results are robust, except for the interaction of High-quality association and Weighted density. Moreover, in Model 15, we include the Number of associations, Weighted density and Own density simultaneously to the model: the estimate of Weighted density turns insignificant. All in all, we can conclude that the effects of the Number of associations and Own density dominate.

DISCUSSION AND CONCLUSION

The analysis reported here enhances prior work by taking into account the tension between structural and agency explanations of institutionalization. We do so by
integrating institutional logic thinking (Lounsbury, 2008) in organizational ecology’s revised theory of density dependence (Hannan et al., 2007). We apply our integrative framework to the case of legitimation development in the context of the new organizational form emergence process. The concept of institutional logic takes into account both the broader cultural beliefs and rules that structure the field, as well as the decision-making of actors in the field (Purdy and Gray, 2009). Given the critique of neo-institutional theory as to the latter’s weak formulation of rationality, we take on board the role and impact of agents in the field as decision-makers, as well as the structure of the field in terms of the organization of collective action.

In this context, we introduce the concept of organizational identity by emphasizing the process of identity realization in order to explain the variation in practices – or institutional logics – in emerging industries (King et al., 2011). The vehicle for this is the organization of competing collective action initiatives, each promoting an alternative institutional logic in the form of an organizational template for the emerging field. In this context, identity realization is critical. As the answer to the “who are we?” question differs between rivaling collective action initiatives in the early history of an emerging form, organizations develop their own identity depending upon their answers. The organizational identity corresponding with the dominant institutional logic eventually crystallizes into a population-level collective identity that serves, in turn, as a template for organizational action.

So, in this early history of an emerging field, the fragmented structure of the environment comes with contestation of rivaling institutional logics, organized through competing collective action initiatives. Such a fragmented population features a set of
sub-populations, each of these promoting an alternative template for the emerging organizational form. As a consequence, the evolution of classic density does not reflect the underlying struggle for legitimation, as its assumption of organizational homogeneity does not sit well with the fragmented state of the emerging population. Rather, weighted density, emphasizing organizational heterogeneity and partial grades of (sub-)population membership, nicely captures the intrinsically fuzzy process of collective population-level legitimacy development in an emerging field where different institutional logics fight for dominance.

The case of the early history of the Dutch accounting industry in the late 19th and early 20th century nicely illustrates our theoretical argument. In these early days, a unique official authority for regulating the profession was lacking. The organizational actors in this emerging field, accountants, engaged in strategic behavior as decision-makers by organizing collective action in the form of rivaling professional associations. To take into account the role of decision-makers and the identity realization process, we formalized our measures at the level of the sub-population of associations, focusing on the sub-populations’ founding rates. Our argument is that these associations were vehicles of collective action of the associated sub-populations that promoted competing institutional logics. As expected, indeed, our results reveal that as the number of competing logics reflected by the number of associations increases, association-level founding rates increase as well, since rivaling associations enlarge the options for newcomers and decrease entry barriers.

However, competing institutional logics may well differ in their quality, and hence in their impact on founding rates. Specifically, we argue that rivaling institutional
logics differ in the status – or quality – of the corresponding organizational template. In our Dutch accounting industry setting, this is reflected in the more or less strict membership requirements and professional standards promoted by different associations. According to our results, even though low-quality associations open up space for newcomers, they hamper the overall legitimacy of the emerging profession by undermining the requirements to be an accountant. We explain this by arguing that overall legitimacy of a population is an intangible common pool resource – or “commons” (Ostrom, 1990). As in the case of forests and fisheries, legitimacy can be conceptualized as a common good that all members of a population benefit from. However, as with all common goods, self-interested behavior may have consequences for the whole population.

In the case of the Dutch accounting industry, competition among associations generates quality differences, reflected in the entry criteria they promote for the profession. The end result of this competition and contestation is lower entry barriers for the low-quality associations. Low-quality associations harm the process of collective legitimation development at the population level, but they do so whilst enhancing entry into their own sub-population. With quality differences, legitimation externalities across sub-populations are asymmetric: low-quality associations benefit from legitimation-increasing densities in high-quality associations, but not vice versa.

Finally, our study provides a contribution to density dependence theory by taking into account the heterogeneity in the industry during the form emergence process, and by providing support that density weighted by grades of membership (GoM) is a better measure in order to explain this process. With a few exceptions, prior studies neglected
this heterogeneity that is intrinsically connected to the organizational form emergence process. In our study, in line with this revised density dependence theory, we employ GoM-weighted density in order to measure the impact of this heterogeneity. In support of the revised theory, we find that weighted density measures outperform their classic density counterparts in our organizational founding rate analyses.

We believe that our findings are generalizable to organizational fields that face an identity struggle and/or to fragmented fields that feature multiple institutional logics or sub-populations (Kuilman and Lee, 2009). In our case, these institutional logics are represented by different self-regulatory associations, which were promoting different organizing principles for the profession. This theoretical argument can also be applied to other types of collective action such as interest groups. Moreover, our findings can be generalized to mature fields that face challenges from newcomers that seek to change the prevailing institutional logic. Future work may focus on the study of such “challenged” social processes within different types of organizational populations.
REFERENCES


Figure 1

Number of professional associations in Dutch accounting, 1884-1939

Figure 2

The interaction effect of Number of associations and Quality on accounting firm founding rate
Figure 3
The interaction effect of Classic Density and Number of Associations on accounting firm founding rate

Figure 4
The interaction effect of Weighted Density and Quality on accounting firm founding rate
Table 1
Descriptive statistics

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*p < .05 (two-tailed), n = 133.
# Table 2

Negative binomial regression models for the founding rate of Dutch accounting firms

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*n = 133

* *p < 0.10; ** p < 0.05; and *** p < 0.01.
### Table 3
**Robustness analyses: Own density and pairwise combinations**

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<td>Weighted Density (t-1)</td>
<td>.01***</td>
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<td>(.003)</td>
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<tr>
<td>High-quality association*Number of associations</td>
<td></td>
<td>-3.66**</td>
<td>(.13)</td>
<td>(.13)</td>
<td>(.13)</td>
<td>(.13)</td>
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<tr>
<td>Number of associations*Weighted density (t-1)</td>
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<tr>
<td>High-quality association*Weighted density (t-1)</td>
<td></td>
<td>-.01**</td>
<td>(.005)</td>
<td>(.005)</td>
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<tr>
<td>Wald Chi2</td>
<td>79.47***</td>
<td>107.50***</td>
<td>184.82***</td>
<td>136.38***</td>
<td>106.49***</td>
<td>116.45***</td>
<td>41.31***</td>
<td>147.84***</td>
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</tbody>
</table>

*p < 0.10; **p < 0.05; and ***p < 0.01.