Management Science

Publication details, including instructions for authors and subscription information:
http://pubsonline.informs.org

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To cite this article:
Özgecan Koçak, Serden Özcan (2013) How Does Rivals' Presence Affect Firms' Decision to Enter New Markets? Economic and Sociological Explanations. Management Science 59(11):2586-2603. http://dx.doi.org/10.1287/mnsc.2013.1723

MANAGEMENT SCIENCE
Vol. 59, No. 11, November 2013, pp. 2586–2603
ISSN 0025-1909 (print) | ISSN 1526-5501 (online)

http://dx.doi.org/10.1287/mnsc.2013.1723

How Does Rivals' Presence Affect Firms' Decision to Enter New Markets? Economic and Sociological Explanations

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Four distinct theoretical programs have examined market entry decisions of multiunit firms, advancing different explanations for the relationship between a firm's likelihood of entry into a geographical market and the number of rivals that are already present in the target market. Within the strategy literature, theory of strategic interactions explains that firms will want to establish a foothold in markets where their multimarket competitors are scarce, but avoid markets where there are many multimarket competitors. Within economic geography, positive externalities such as increase in demand explain firms' desire to locate close to their rivals whereas negative externalities such as competition explain their desire to avoid them. Within the ecological tradition, density dependence theory explains this relationship in terms of legitimation of an organizational form in a particular market and subsequently increased competition for resources there. Within new institutional theory, the presence of rivals is seen as a signal that a particular market is suitable for entry. Although generally quoted and mentioned in the literature, these four explanations have not been sufficiently separated to indicate whether these four mechanisms all operate simultaneously or whether one of them might account for the often found inverse-U-shaped relationship. Distinguishing firms with different strategies and using various moderators, we test the four explanations jointly and demonstrate their scope of operation.

Data, as supplemental material, are available at http://dx.doi.org/10.1287/mnsc.2013.1723.

Key words: market entry; multimarket contact; forbearance; density dependence; mimetic isomorphism; spillovers; strategic groups

History: Received December 20, 2011; accepted January 22, 2013, by Jesper Sørensen, organizations. Published online in *Articles in Advance* June 14, 2013.

Introduction

When making the decision to enter a new market, do firms follow their rivals or avoid them? Four theoretical programs address this question:

According to strategy literature, when the level of multimarket contact between two firms is low, firms enter each other's markets to build retaliation and deterrence capabilities. As the multimarket frontier between them continues to grow, firms forbear from competition, avoiding rivals' turfs in exchange for similar treatment in their own core markets (Barnett 1993, Baum and Korn 1999, Gimeno 1999, Haveman and Nonnemaker 2000, Fuentelsaz and Gomez 2006).

Theories of agglomeration spillovers (Shaver and Flyer 2000, Kalnins and Chung 2004, Alcácer and Chung 2007) point out that clustering is attractive for production firms because of Marshallian externalities such as better availability of suppliers, labor, and opportunities for interfirm learning (Marshall 1890), and for retailers because of demand side externalities such as greater consumer traffic. Past a certain density (number) of rivals, however, competition for inputs and consumers makes clusters unappealing (Fujita and Thisse 1996).

Density dependence theory in organizational ecology links availability of and competition for scarce resources to audiences' acceptance of an organizational form (Hannan and Freeman 1977, Carroll and Hannan 2000). When density of organizations of a particular form in a market is low, the form is not legitimate and organizational founders find it difficult to attract resources. Rising density of similar firms in the market legitimizes the form and stimulates new entry. As density approaches carrying capacity of the market, however, intensifying competition for resources discourages further entries (Haveman 1993, Greve 2002, McKendrick et al. 2003, Dobrev and Kim 2006).

Firms' attraction to geographic markets with competitors can also be interpreted as an instance of mimetic isomorphism. According to the new institutional theory of organizational behavior, firms are attentive to norms of acceptable economic behaviors. Faced with uncertainty in market entry decisions, firms emulate competitors' entry decisions (Haveman 1993, Greve 2000, Henisz and Delios 2001, Bastos and Greve 2003). Past entries of successful firms provide assurance that the target market is worth pursuing (Greve 2002).

The four theories make consistent predictions: firms prefer to enter new markets with some rivals and avoid those with many. Nonetheless, they propose different mechanisms as an explanation, particularly for the positive effect of rival density. The proposed mechanisms can be differentiated from one another along at least two important dimensions. One dimension is the different assumptions of economic versus sociological theories on location-bound resources. Theories based on economics see local markets as arenas for competition that can be characterized adequately by the presence of material resources and rivals (Ghemawat and Thomas 2008). In contrast, theories of density dependence and mimetic isomorphism assume that organizations seek legitimacy from audiences and that conformity to audiences' expectations, which are sometimes based on symbolic attributes, is critical for access to resources. Because audiences of many organizational forms are local, organizations typically face different constraints across different locations. Thus, the degree of hospitality for organizational forms varies across locations (McKendrick et al. 2003, Cattani et al. 2003) and firm behavior varies across local contexts because cognitive institutions vary (Kostova and Roth 2002).

A second dimension that divides the four theories is whether they focus on benefits that flow from collocation with resourceful rivals or on benefits of collocation with strategically similar rivals. Both new institutional theory and spillover theories expect firms to follow resourceful rivals (Haveman 1993, Haunschild and Miner 1997, Shaver and Flyer 2000, Knott et al. 2009). In contrast, density dependence theory and theory of multimarket competition focus on organizational responses to most similar rivals. According to organizational ecology, legitimation and competition dynamics unfold within organizational (sub)populations, determined by audience perceptions of organizational form boundaries. According to strategy research, firms engage in strategic interaction with their closest rivals, and therefore strategic distinctions within an industry shape competitive dynamics (Gimeno and Woo 1996, Fuentelsaz and Gomez 2006).

When we chart these differences, it becomes evident that neither organizations' orientation toward audience expectations nor their reference groups in responding to rivals have to be exclusive. The four theories can hold at the same time and there is growing recognition that market entry is too complex to be accounted for by a single theoretical framework. For instance, strategy scholars observe that mutual awareness resulting from multimarket contact may enhance interorganizational imitation among multipoint competitors (Gimeno and Jeong 2001, Stephan et al. 2003, Ghemawat and Thomas 2008, Anand et al. 2009). Recent studies in ecology stress that movements between market spaces are driven by imitation (Dobrev and Kim 2006, Dobrev 2007), and some empirical studies have explored integration of density dependence theory with institutional explanations of imitation (Haveman 1993, Greve 2000, Dobrev and Kim 2006, Kuilman and Li 2006, Dobrev et al. 2006, Rhee et al. 2006, Dobrev 2007). There is also research that incorporates ecological thinking into the theory of multimarket competition (Barnett 1993, Baum and Korn 1996).

Studying the four theories simultaneously, we highlight the differences in their arguments and refine their boundary conditions. As the moderating relationships we hypothesize make clear, there are situations when one theory will be more relevant than another. We bring these situations into relief and use these to identify the distinctive mechanisms proposed by each theory. Modeling heterogeneity across geographic markets and strategic groups helps empirical identification. We thus improve on studies that rely on finding an inverse-U-shaped statistical relationship between likelihood of market entry and rival density.

Explicit modeling of heterogeneity in locations and in firms also allows us to avoid conflation of the different mechanisms. Without an empirical test that takes into account heterogeneity across locations in firms' choice sets and heterogeneity across firms, it is easy to confuse competitive dynamics with imitation dynamics and entry decisions driven by market characteristics with entry decisions driven by firm characteristics. For instance, firms may appear to be following each other into markets even though they only have a similar affinity for certain locations, and they may appear to be avoiding each other even though the same locations happen to be not attractive or hospitable to them. Or, small firms may appear to be emulating large ones whereas in fact they are responding to their multimarket rivals. Thus, although we recognize that all four theories may have explanatory power simultaneously, we try to separate their effects in our empirical analyses. In the next section, we introduce our empirical context. We then turn to a detailed exposition of the theoretical arguments to develop empirical hypotheses.

Empirical Context

Our empirical tests focus on Turkish banks. Banks' or other financial services firms' entry into local markets have been studied in various countries (Haveman 1993, Lomi 1995, Greve 2000, Fuentelsaz et al. 2002, Barreto and Baden-Fuller 2006). Even though previous research has not explicitly modeled strategic similarity when calculating multimarket contact densities, it is possible to do this in the banking industry. Banks follow different strategies by targeting retail customers, small and medium companies, or corporate clients, and by developing different capabilities because of their scale and scope of operations.

The banking industry is also an appropriate setting for studying the effects of locational heterogeneity in terms of audience expectations because banking services are delivered on location. Even if customers learn about bank identities and brands through national media and advertisements, banks' success in particular geographic markets depend on meeting audience expectations in that location. Informants from the industry confirm that delivery of banking services in local markets and the ability of branch personnel to respond to local needs are very important for performance.

The Turkish banking industry presents additional advantages for an empirical investigation that relies on locational and firm heterogeneity. Banks in Turkey are all national banks, with branch networks that are not spatially restricted. The country has diverse geographic markets, with a clear center and periphery structure and different levels of bank penetration due to uneven development. The banking industry includes Islamic banks, which constitute a clearly different subform that enjoys higher legitimacy in religious regions of the country. This allows us to model fit between organizational subforms and location-specific audience expectations.

We examine branch openings over the period from 2002 through 2011. The financial services sector in Turkey was dominated by state banks until the 1980s. Liberalization led to a wave of conventional domestic bank founding and foreign bank entry, as well as the establishment of the first Islamic banks. Economic crises tempered growth and stability in the sector, however, and until the end of 2001 when Turkish governments finally gave up relying on short-term borrowing to finance public sector deficits, many commercial banks saw it more profitable to buy government bonds than carry out retail banking. Following a banking rehabilitation program in 2001, banks refocused on retail lending and accelerated new market entry.

Theory

New Market Entry

New market entry is a critical part of a firm's growth strategy (Haveman 1993, Greve 2000). By expanding into new markets, firms can exploit scope economies in the use of resources and capabilities (Audia et al. 2001); manage idiosyncratic risks associated with particular locations (Baum et al. 2000); source lower cost inputs; have better and more timely information about shifting consumer preferences, emerging technologies, and rivals' competitive actions (Greve 1998, Anand et al. 2009); assemble more heterogeneous competitive repertoires (Miller and Chen 1996); and develop new resource configurations that can be the basis of superior innovation (Chung and Alcácer 2002, Alcácer 2006, Anand et al. 2009).

Market diversification is a costly decision that may entail significant uncertainty and irrecoverable resource commitments. Internally, expansion makes organizations more complex and difficult to manage. Besides imposing added layers of governance mechanisms, it requires systematic transfer of learning and collaboration among multiple markets (Baum et al. 2000, Audia et al. 2001, Kalnins 2004). It gives rise to agency problems and increases managerial information processing demands (Audia et al. 2001). Externally, market entry is likely to provoke a series of competitive retaliations that can have a negative impact on profitability (Miller and Chen 1996, Baum and Korn 1999). Thus, when entering new markets, firms need to consider the potentially disruptive consequences (Audia et al. 2001).

In this paper, we focus on entry into geographic markets. Given the significance of entry decisions for firms and markets, it is not surprising that multiple research programs studying organizations have addressed this issue. Most notably, economic research on strategic interactions and on location choice, and sociological research on organizational legitimation and emulation have advanced causal explanations for how firms' entry into new geographic markets relates to the presence of competitors in the market. We summarize the distinguishing features of these theories and our corresponding empirical hypotheses in Table 1.

Multimarket Competition

According to the strategic theory of market power and competitiveness, firms that compete in multiple markets may collude to sustain higher prices and profits. In a seminal game-theoretic elaboration, Bernheim and Whinston (1990) show that under conditions such as scale economies, differences across firms in cost structures, and heterogeneity of markets, multimarket contact relaxes incentive constraints that limit the extent of collusion, inducing

Table 1 Four Theories On Firms' Response to Density of Incumbent Rivals When Entering New Markets and Empirical Hypotheses That Follow from These Theories

	Firms follow closest competitors	Firms follow resource-rich competitors
Firms seek economic gains. Symbolic approval of local audiences not relevant.	*Multimarket competition* H1A: Firms' hazard of entry into a new market first increases and then decreases as a function of multimarket competitor density in the target market, net of total incumbent density. H1B: H1A is stronger for multimarket rivals in the target market that are strategically similar to the focal firm.	*Spillovers* H2A: Firms' hazard of entering a geographical market increases as a function of the number of resourceful rivals operating in the target market, net of density of other incumbents. H2B: H2A is stronger for focal firms that are strategically dissimilar from resourceful rivals.
Firms seek approval of local audiences. Rival density creates or signals legitimacy.	*Density dependent legitimation and competition* H3A: Firms' hazard of entering a geographical market first increases and then decreases as a function of the number of strategically similar competitors operating in the target market, net of density of other incumbents. H3B: H3A is weaker if local audience already accepts the focal firm's form.	*Mimetic isomorphism* H2A. H4A: H2A is stronger if the target market is far from the focal firm's existing markets. H4B: H2A is weaker if the target market is in the center.

firms to develop "spheres of influence" (p. 2). Scott (1993) followed up by arguing that the experience of repeated interaction in multiple markets induces firms to learn to adopt a "cooperative-like outcome" (p. 22), regardless of the effect of firm or market characteristics on incentives. Similarly, researchers focusing on managerial cognition and decision making focus on the ability of firms to signal and communicate as multimarket overlap increases. Boeker et al. (1997) maintain that multimarket competition helps firms interpret rivals' intentions and signal their own. Baum and Korn (1999) argue that high levels of multimarket contact facilitates recognition of mutual dependence.

Empirical research on how levels of multimarket contact relates to levels of rivalry and performance has found mixed results (see Fuentelsaz and Gomez 2006 for a recent review) and has been criticized for some theoretical and methodological shortcomings (see Baum and Korn 1999, Gimeno and Jeong 2001, Greve 2008). Recent work, especially in the context of market entry, has called into question the additive, linear specifications of multimarket contact effects, arguing for and empirically demonstrating an inverse-U-shaped relationship between multimarket contact and competitive interaction (Baum and Korn 1999, Haveman and Nonnemaker 2000, Stephan et al. 2003, Fuentelsaz and Gomez 2006, Anand et al. 2009).

Three strategic reasons have been cited as to why firms are initially more likely to enter a market occupied by their multimarket competitors. First, by establishing footholds in rivals' markets, firms improve their ability to signal intentions of competitive conduct (Baum and Korn 1999). Second, presence in multiple markets constitutes a bigger deterrent to future competition (Barnett 1993, Gimeno and Woo 1996, Haveman and Nonnemaker 2000). Firms who invade their rivals' territories can create hostage markets (Bernheim and Whinston 1990, Gimeno 1999), thus expanding the repertoire of competitive responses that can be employed in the face of a threat (Miller and Chen 1996). Third, firms may want to increase contact with rivals so that their managers in shared markets can collect critical information about rivals that is necessary for subsequent strategic action (Miller and Chen 1996, Stephan and Boeker 2001, Stephan et al. 2003). For instance, greater contact makes it easier to detect defection when market information is noisy (Greve 2008).

As multimarket overlap between firms reaches higher levels, it becomes a credible deterrent against deviance from collusive behavior and firms' motivation to create further deterrence declines. Perceptions of heightened interdependence lead to more cooperation, which translates into lower levels of competition and better performance (Barnett 1993, Gimeno and Woo 1996, Greve 2008, Ghemawat and Thomas 2008). When firms overlap in multiple markets, collusive interests among actors can be transmitted more effectively and through more channels. In addition, from a competitive intelligence standpoint, there are diminishing returns to gathering information about rivals' behavior in multiple markets (Stephan and Boeker 2001). Not only does knowledge accumulated from different markets becomes gradually similar, costs of monitoring competitors and coordinating and integrating the knowledge acquired from surveillance rise (Fuentelsaz et al. 2002). Thus, beyond a certain level of multimarket contact, firms forbear from competing aggressively in the spheres of influence of multipoint rivals (Baum and Korn 1999, Gimeno 1999).

Hypothesis 1A (H1A). *Banks' hazard of entering a geographical market first increases and then decreases as a*

function of their multimarket contact density with incumbent banks in the target market, net of density of total bank branches.

The argument that firms start to engage in mutual forbearance beyond a certain level of multimarket contact is based on the premise that firms need to recognize their interdependencies in order to engage in strategic retaliation or forbearance. For coordinated action, they also need to be able to communicate, using signals that are meaningful to all parties. Research on strategic groups has long argued that firms are more likely to recognize their mutual interdependence with other firms that follow similar strategies (Caves and Porter 1977). In the context of multimarket competition, Jayachandran et al. (1999) argue that the effect of multimarket contact on forbearance should be greater for firms with high resource similarity. Fuentelsaz and Gomez (2006) predict the opposite, because they argue that strategic similarity and multimarket contact should serve as substitute, not complementary, mechanisms in inducing firms to strategic interaction. Studying geographical market entry of Spanish banks, however, they find that firms that are more strategically similar respond more strongly to their multimarket competitors, unless their multimarket contact is very low. This gives some empirical support to the argument that strategic similarity and multimarket contact reinforce each other. Therefore, we predict that strategic similarity of multimarket competitors leads to stronger responses.

Hypothesis 1B (H1B). *Hypothesis* 1A (*the inverse-U-shaped effect of multimarket contact density with incumbents on the hazard of bank entry into target markets*) *is stronger for incumbents in the target market that are strategically similar to the focal firm, relative to incumbents that are strategically dissimilar to the focal firm.*

Unlike Fuentelsaz and Gomez (2006), we estimate the effect of multimarket contact densities separately within each strategic group while also controlling for densities of incumbent firms. This modeling strategy has the added advantage of exploring differences across strategic groups in the effect of multimarket contact densities on competitive behavior. Theory leads us to expect firms with greater market power (in our case, banks with the greatest scale) to exhibit the strongest propensity for mutual forbearance.

Spillovers

Economic geographers also emphasize firms' resource seeking behavior in explaining location decisions. In this theoretical framework, firms follow other firms in order to benefit from spillovers. Spillovers result from externalities in firms' purchasing, production, and sales activities. In regions with clusters of firms in the same industry, production costs are lower because of better access to common resources such as suppliers and labor, and learning across firms (Marshall 1890, Krugman 1991). Retail firms also benefit from demand externalities that arise from attraction of customers to areas that are dense in stores (Fischer and Harrington 1996, Fujita and Thisse 1996, Baum and Haveman 1996, Kalnins and Chung 2004). The theory also predicts that as levels of competition increase with density, firms will be inclined not to cluster as much (Fujita and Thisse 1996).

Firms are not equally motivated to cluster with others. Shaver and Flyer (2000) argue that resource-rich firms gain little from collocating with others in their industries and they lose comparatively more when their resources spill over to competitors. Thus, they predict and empirically find that larger firms among foreign manufacturing firms entering the United States are less likely to locate in states with agglomerations compared with smaller firms. Similarly, Alcácer (2006) shows that more capable firms collocate less than less capable ones. This asymmetry in firms' propensity to cluster is evident for retail firms as well. Kalnins and Chung (2004) show that unbranded small hotels follow branded large hotels into markets whereas branded hotels do not follow unbranded hotels. Knott et al. (2009) find that banks do not draw equal benefits from clustering and that spillovers tend to flow from the more efficient (or larger) banks to the smaller banks, making the latter more inclined to pursue collocation with the former.

The foregoing suggests that unlike multimarket contact arguments, which should be most applicable to firms with greater market power, spillover arguments will be most relevant for explaining the behavior of smaller firms that seek spillovers of the former. Accordingly, we expect to find the following:

Hypothesis 2A (H2A). *Small or medium-sized banks' hazard of entering a geographical market increases as a function of the number of large bank branches operating in the target market, net of density of other bank branches.*

The literature on location decisions of firms also points out that firms that can differentiate their products from one another are more likely to collocate. Assuming a certain level of similarity that creates the potential for firms to benefit from spillovers, differentiation allows firms to benefit from agglomeration without competing too intensely (Fischer and Harrington 1996). For instance, Picone et al. (2009) find that retailers that are better able to differentiate their products are more likely to strategically cluster. Baum and Haveman (1996) show that hotels often collocate yet simultaneously attempt to differentiate themselves. Freedman and Kosova (2012) also find that differentiation and agglomeration in the

hotel industry go hand in hand. Accordingly, we also expect firms to follow resource-rich rivals more readily if they can differentiate their products and services from them more easily. In our context, Islamic banks, like the other small and medium-sized banks, should be attracted to spillovers of large banks, locating in close proximity to benefit from demand agglomeration. Whereas Islamic and conventional banks provide similar products and services to their consumers (such as savings accounts, fund transfer and bill payment services, stock trading, credit cards and consumer loans) and their branches are indistinguishable in appearance, Islamic banks can differentiate themselves from the large conventional banks more easily than small and medium-sized conventional banks because they have a distinct collective identity. Therefore, we predict the following:

Hypothesis 2B (H2B). *Islamic banks' hazard of entering a geographic market will increase more with the density of large bank branches operating in the target market compared with Other* (*small and medium-sized conventional*) *banks' propensity to follow large banks*.

Density Dependent Legitimation and Competition

Sociological theories of economic behavior differ from economic theories in that they assume organizations' access to resources to depend on their conformity to audience expectations. We consider two sociological theories that relate firms' market expansion to audience expectations: theories of density dependent legitimation and mimetic isomorphism.

Organization ecology's density dependence theory asserts that founding rate in a population is affected by both the organizational form's perceived legitimacy among the audience and the level of competition for resources in the market (Hannan and Freeman 1977, Carroll and Hannan 2000). Because the number of organizations in a population shape processes of legitimation and competition, founding rate of new organizations depends on existing levels of density. At low levels of density, increasing legitimacy of the form encourages further firm establishment. The form acquires a taken-for-granted quality as more audience members (consumers, employees, investors) come into contact with it and thereby become aware of its features. At high levels of density, however, legitimation benefits of continued proliferation are lower. At the same time, intensity of competition that increases with density dominates over legitimation effects and leads to a decline in founding rates.

Even though the original theory sees cognitive legitimation as a population-level process, a number of studies find that legitimation is, to some extent, a local process. Thus, density of organizational populations in local markets drive entry of new firms. Research on various populations such as Californian thrifts (Haveman 1993); Italian (Lomi 1995), Japanese (Greve 2000, 2002), and Asian banks (Kuilman and Li 2006); and accounting firms (Cattani et al. 2003) shows that entry into new geographic markets has a monotonic, inverse-U-shaped relationship with density of firms in the same industry in the target market. Greve (2002) finds that legitimation strongly operates locally within small areas and spills over from neighboring areas, at a decreasing rate with increasing distance. Similarly, Cattani et al. (2003) find that entry rates of Dutch accounting firms in a focal area were more strongly affected by local rather than neighboring areas' density. In our context too, we expect that banks that are entering a market for the first time will have to establish their legitimacy, even if there is some familiarity that is built through national advertising.[1]

Banks will have an easier time gaining approval of local audiences in markets where there are greater numbers of similar banks. Barreto and Baden-Fuller (2006, p. 1559) find that Portuguese banks follow other banks in their "legitimacy-based reference groups" when opening new branches. Density dependence theory defines most relevant competitors as those that have the greatest overlap in resource needs (Hannan and Freeman 1977). It is not only commonality of material resources but perceptions of reference groups, that is, ecological proximity (Dobrev 2007) that gives form to legitimation and competition. Because these correspond to strategic similarity, we expect density dependence to be most clear when estimated for density by strategic group.

Hypothesis 3A (H3A). *Banks' hazard of entering a geographical market first increases and then decreases as a function of the number of strategically similar competitors operating in the target market, net of density of other incumbents*.

Reiterating the difference with economic theories, we note that in the theory of density dependent legitimation, audience evaluations of legitimacy channel the effect of incumbent rivals. Firms respond to levels of audience acceptance and resource availability rather than taking their rivals' presence in the market directly into account. Therefore, any preexisting differences in cognitive legitimacy across locations should moderate the relationship between rival density and likelihood of firm entry. This is anticipated by previous research. McKendrick et al. (2003) argue that new organizational forms are more likely to emerge in areas with preexisting regional identities related to similar activities because the preexisting identity gives greater visibility to the newly emerging form.

[1] Local legitimation dynamics may be more pronounced during the early life of an organizational form, but we consider the interaction of global and local effects too much detail to go into in this paper.

Khessina and Romanelli (2007) find that regional industrial identity increases the entry rates of nonlocal firms in related industries and the rates of investment by venture capitalists. Dobrev et al. (2006) show that in the formative years of the Singapore banking population, despite the official regulatory support of the colonial government, financial co-ops were ineffective in recruiting members and hence slow to develop into an organizational form because the relevant audiences did not identify with the co-ops' identity profile.

Building on the idea that organizational subpopulations can be legitimated more or less rapidly depending on the fit of their feature values with expectations, values, beliefs, and available resources in local markets, we predict that Islamic banks' branch founding rates will be less sensitive to density in geographic areas that vote for Islamic parties. First allowed in Turkey in 1985, these banks had 4% of market share in total credits and 3% of total bank branches in 2002, the starting year of our study. Compared to conventional banks, they were still a rarity, and had to establish themselves as legitimate banks in local markets. As local audiences evaluate and accept Islamic bank branches, subsequent entries of similar banks should be easier, because legitimacy will spillover to new examples of the same subform. We expect this relationship to be weaker in religiously conservative markets, where Islamic banks face a less steep hurdle in gaining legitimacy. In these markets, local consumers are more familiar with and accepting of the new form. Therefore, the positive effect of Islamic bank branch density on Islamic bank branch founding should be lower in these towns.

Hypothesis 3B (H3B). *The increase in Islamic banks' hazard of entering a geographic market because of the density of incumbent Islamic banks is lower in religiously conservative "Islamist" towns.*

Mimetic Isomorphism

Theories of organizational isomorphism also build on the assumption that organizations try to conform to audience expectations, especially in visible behaviors. Mimetic isomorphism refers to organizations emulating other organizations when they face uncertainty because the behavior of the latter serves as signals for the optimal choice and represents safer alternatives that will be easier to justify in case of adverse outcomes (DiMaggio and Powell 1983, Haveman 1993, Haunschild and Miner 1997, Greve 1998, Gimeno et al. 2005).

As organizations look to other organizations as reference models, they are likely to emulate similar organizations that are perceived as successful. Large organizations are often emulated because they are more visible, associated with greater organizational status (Haveman 1993, Haunschild and Miner 1997), and because the size they have achieved suggests that they have done something right (Baum et al. 2000). In our context, we expect that small or medium-sized banks follow large banks into new markets. This is consistent with the first order effect we predict in H2A. Mechanisms that are central to spillover and emulation theories are different, however. Although spillovers are benefits that arise directly from the presence of resource-rich rivals, in new institutional theory, presence of large firms is a signal for munificence of resources or audience judgments of appropriateness that are otherwise unobservable to decision makers in smaller firms. This gives rise to the possibility of distinguishing between spillover and emulation arguments by focusing on situational factors that make emulation more likely.

New institutional theory sees imitation as especially appealing in uncertain conditions. We test the moderating effect of two conditions that increase the level of uncertainty involved in entering a new market. First is the distance from the focal firm's existing markets. Studies of market entry argue that the farther out a firm ventures, the greater the level of uncertainty (Henisz and Delios 2001, Anand et al. 2009) and subsequently, the hazard of failure (Dobrev and Kim 2006, Dobrev 2007) that it faces. Uncertainties prolong time to entry into geographically distant markets (Fuentelsaz et al. 2002). Even highly experienced and relatively less risk averse decision makers such as venture capital firms are affected by it to such an extent that their willingness to fund a new venture declines sharply with the distance between their organization and the target venture (Sorenson and Stuart 2001). We predict, therefore, that small and medium-sized banks are more likely to follow large banks into more distant target markets.

Hypothesis 4A (H4A). *The more distant a bank's nearest branch to the target market, the more its hazard of establishing a new branch in the market increases with the density of large banks in the market.*

A second factor that increases uncertainty in entering new markets is location of the target market in the periphery of the resource space. Spatial inequalities in munificence are mirrored by availability of information about these places. Information generation and diffusion has a clear spatial dimension that favors large urban centers and core regions (Wheeler and Mitchelson 1989). Central markets are at the center of mass attention (Boone et al. 2002). Central markets are also at the hub of information flows. They are central in the decision-making landscape, housing headquarters of multimarket organizations, and producing "highest-order economic information" that other places need (Wheeler and

Mitchelson 1989, Audia et al. 2001). The more information originates from central markets, the more attractive they become for economic and social activities, generating further information about them (Wheeler and Mitchelson 1989). Kuilman and Li's (2006) study of foreign bank entry into Shanghai, the heart of the Chinese banking industry, illustrates this. As the city attracted more business and more information became available about the success of banks in Shanghai, more banks, including foreign banks, opened branches in Shanghai. Foreign banks generally opened a branch in this city before they opened branches in other cities. Because information about them is more accessible, we predict that decision makers are more likely to appraise investment opportunities in central markets by themselves, rather than through observations of rivals' behavior.

Hypothesis 4B (H4B). *The more central the target market is, the less a bank's likelihood of entering the market will increase with the density of large banks.*

Data and Estimation

Sample

Our data includes all conventional commercial banks (both domestic and foreign, as well as private and state owned) and Islamic banks. Information on conventional banks was obtained from the Banks Association of Turkey. All deposit banks as well as development and investment banks operating in Turkey are obliged to become members of the association. We drew upon its branch database, which lists the opening and closing dates and postal address of every bank branch that has ever existed since 1889. We obtained branch information for Islamic banks from the Participation Banks Association of Turkey. Its branch data features postal code, town and city information, and opening and closing dates.

Strategic Groups

The three state-owned banks that remain operational after two decades of privatizations continue to have noncompetitive goals, such as providing banking services to all geographic areas however remote, providing credits for agricultural activities, and supporting small business development. Our informants indicated state banks to be very different from other banks. Because we do not expect them to strategically interact with or follow other banks in the context of new branch openings, we do not analyze their market entries. We do, nevertheless, take their presence in geographic markets into account in total density and multimarket contact counts.

We separate the remaining (nonstate) conventional banks into strategic groups by using cluster analytic methods on annual balance sheet data. Our interviews with bank executives suggested the ratio of credits to total assets, ratio of consumer credits to all credits, and branch network size as the most relevant variables for identifying banks' strategy. Using hierarchical clustering with average linkage on standardized variables, we find the banks to separate into three groups: foreign-owned wholesale banks that typically operate out of a single branch and act as correspondents for their headquarters abroad, the four big universal banks that dominate the market, and the remaining small and medium-sized banks.[2] Because wholesale banks do not engage in retail banking and do not compete through their branch networks, we exclude these banks from our analysis but include them in total density counts.

We classify Islamic banks, which have a very different business model, into a separate group. These banks differ in their operations from their conventional counterparts in at least two respects. First, the prohibition of the collection and payment of interest in Islamic law means that they rely on interest-free (profit or loss sharing) financial instruments and products. Second, they are not allowed to finance activities that are forbidden in Islam (e.g., interest-bearing consumer finance, alcohol production, gambling). Islamic banks have been under the control of the Banking Regulation and Supervision Agency since 1999. They are subject to different licensing requirements, however, and all our informants identified them to be very different from conventional banks.

Our final sample has 34 banks: 4 large universal banks ("Big Four"), 6 Islamic banks, and 24 small and medium-sized conventional banks ("Other"). Islamic banks are smaller than Other banks on average (mean size 22 versus 94 branches in January 2002) but grow faster (to mean size 166 versus 203 branches in December 2011). In the same period, Big Four banks grew from average of 534 to 920 branches.

Geographic Markets

We treat each postal area identified by a distinct postal code as a local banking market. Postal areas represent neighborhoods or several adjacent neighborhoods. They are not arbitrarily created for the convenience of postal services but are meaningfully associated with patterns of economic and social interaction. Industrial zones generally have their own postal codes. Our interviews with banking executives also supported the postal area as the appropriate level of analysis. The next level up, township, fails to reflect the true dynamics of micro-competition, as the country has

[2] We classify one outlier in the cluster analysis, a small bank that was acquired midway through our study period and changed from a wholesaler to a retail bank, together with the retailers.

about 194 towns with populations over 100,000 inhabitants. Twenty-six of these towns are home to over 500,000 people.

The country has 3,402 postal areas. We restrict our analysis to all postal areas that have been home to at least one bank branch since the opening of the first bank branch in 1889. This procedure excludes very remote areas. Our sample includes 1,582 postal areas in 886 towns. The mean number of branches in a postal area was about 4.46 in January 2002 and 6.27 in December 2011. The range is 0 to 66. In December 2011, 121 postal areas in our sample did not have any bank branches.

Dependent Variable

New Market Entry. Market entry by bank i into postal area j in period t is captured by a dummy variable, which equals one if the bank opens a new branch. We use months as spells over which we examine entry decisions. We analyze entries into new markets, that is, branch openings in markets where the focal bank does not have a branch. We only study establishment of new branches, and disregard title changes due to acquisitions or mergers of banks, because decisions about the latter are not related to local markets. Big Four banks enter 958 markets, Islamic banks enter 527 markets, and Other banks enter 1,819 markets over the study period.

Independent Variables

Density of Competitors. Density of local banks in a target market is calculated as the total number of branches. In some models, density counts aggregate all (including state-run and wholesale) banks. In others, we separate density counts into strategic groups, as we explain above.

Multimarket Contact Densities. We calculate multimarket contact density for each bank-target postal area-month triplet by summing the multimarket contact (the number of postal areas it comes into contact with outside of the target market) of the focal firm with each of the incumbents in the target market. We scale this sum by the number of incumbents in the target market. This measure, often referred to as a "firm-by market extent measure" (Gimeno and Jeong 2001, p. 372) is the most frequently used measure in the literature (Baum and Korn 1996, Gimeno and Woo 1996, Haveman and Nonnemaker 2000, Stephan et al. 2003, Fuentelsaz and Gomez 2006, Greve 2008) and has been recommended in a methodological study of validity and reliability of alternative operationalizations (Gimeno and Jeong 2001). To test H1B, we calculate multimarket contact density of focal banks separately for competitors in different strategic groups.

Local Differences in Legitimacy of Islamic Banks. We code towns that consistently voted for Islamic political parties as *Islamist towns*. We use election outcomes of all municipal government elections held from 1994 to 2009 and code as "Islamist" towns where the total votes received by political parties with a religious message exceeded 20% in *all* elections. One hundred sixty-seven towns, accounting for about 26% of the observations in our main regression model, are marked as Islamist.

Distance to the Target Market. We calculate *distance from closest branch* as the minimum of the geodesic distances between the target postal area and all other postal areas in which the bank operated a branch in a given month. To compute this measure, we first obtained each postal area's latitude and longitude information and then used Vincenty's formula to calculate pairwise distances (Vincenty 1975).

Market Centrality. We proxy a given target market's centrality in the resource space with the share of its town in national gross domestic product (GDP) (*Share of town in national GDP*). GDP data are made available at the level of 81 provinces by the National Statistics Institute for 2001 and 2006 (TUIK 2012c). We extrapolated the ratios to the remaining years and adjusted by the ratio of town to province population.

Estimation

We use duration models to investigate when banks enter a new postal area. We prefer a semiparametric estimation of a proportional hazards model, namely, the Cox regression model (Cox 1972). We estimate the hazard of bank i entering market j in month t as $h_{ij}(t) = h_o(t)\exp\{\beta_x' x_{it} + \beta_z' z_{jt}\}$, where $h_o(t)$ is the baseline hazard, x is a vector of explanatory and control variables pertaining to bank i at time t, and z is a vector of variables pertaining to market j at time t. This model is semiparametric because the underlying hazard is not specified. This provides a welcome flexibility in our case because we cannot assume or measure the onset of risk. Moreover, we are not interested in predicting entry times, but the effect of covariates. Our data do not include tied events. We cluster the standard errors by bank in order to control for nonindependence of observations by bank and heteroskedasticity.

In a proportional hazards model, the hazard for each subject (bank-market pair) is assumed to be proportional to the baseline hazard. This assumption requires careful consideration. For our data, a look at the estimates of the hazard function for the three kinds of banks shows a rising and then falling hazard for Big Four and Other banks, and a more gradual increase followed by a constant rate for Islamic banks. Plotting the estimates on a log scale to assess proportionality of hazard rates, we find somewhat parallel lines for Big Four and Other banks but not for Islamic banks. This does not create a problem for our models where the sample includes only one kind of bank.

In models where we pool different kinds of banks (Models 3.1, 4.4, 4.6, and 4.7), we use stratified Cox regression, where the baseline hazards are allowed to differ by strategic group but the coefficients are constrained to be the same.

Control Variables

Of particular concern is variation in demand for banking services. Geographic markets are heterogeneous with respect to population size, economic development levels, and recency of economic development. Our measure of market centrality (explained above) partially captures population size and economic development. To have more precise controls of demand for banking services, we include town population, population dependency ratio (proportion of people above 65 or below 18 years old), change in number of vehicles in the province, change in number firms in the province, and whether the postal area is in an organized industrial zone. All these variables, except the last one, were constructed based on data we obtained from the Turkish Statistics Institute (TUIK 2010; 2012a, b, c). Population and dependency ratio vary annually. Number of new vehicles and firms vary monthly. To control for commercial and banking history of markets, we calculate "banking tenure" for each market, as the time that has elapsed since the founding of the first bank branch. We also add dummy variables indicating each of the seven regions of the country defined by the census as exhibiting similar demographic and socioeconomic characteristics and dummy variables indicating years.[3]

We control for bank size by the total number of branches that the bank had in the previous month. To control for differences in growth rates across banks and any momentum effects, we include the total number of branches that the bank opened in the previous month. Because we use stratified Cox models when the sample includes banks in more than one strategic group, we do not include controls for group membership.

Findings

In Table 2, we present descriptive statistics for the variables used in the analyses. All observations in the full sample model (Table 3, Model 3.1) are included in this table. Our correlations between first order terms are small to modest, suggesting that multicollinearity is not a serious problem.

In Table 3, we report coefficient estimates from Cox models that estimate the hazard of banks entering particular postal areas. Model 3.1 includes all banks. Variables that control for demand have unsurprising effects: larger, older markets, markets with proportionately fewer people younger than 18 or older than 65 (i.e., lower population dependency ratio), markets with a greater increase in registered vehicles, with greater increase in businesses, and those in organized industrial districts have a greater hazard of bank entry. Banks are also more likely to enter Islamist towns and markets that are farther from their existing markets. There is a momentum effect, as banks' hazard of entering new markets is higher if they entered more markets in the previous month.

In Model 3.1, the variable "MMC with banks in postal area (lagged)" is positively significant and its square term is negatively significant. A joint Wald test yields a $\chi^2(2) = 24.02$, with $p = 0.000$. In line with H1A, as banks' average multimarket contact with other banks in a target market increases, their hazard of entry into that market first increases and then decreases. Because we control for total number of bank branches (and its square) in the model, these linear and quadratic multimarket contact effects are net of density dependence effects.

In Models 3.2, 3.3, and 3.4, we split the sample based on strategic groups and estimate the hazard of market entry for Big Four, Islamic, and Other banks as a function of their multimarket contact with banks in their own group and banks in other groups (including state-run and wholesale banks). In Figure 1, we use the estimates from these models to graph how each group of banks responds to multimarket rivals in the same group. Islamic banks do not forbear from competition with their Islamic multimarket rivals, only showing a positive effect of multimarket contact density. Both Big Four and Other (small and medium-sized conventional) banks initially enter markets where their own group multimarket rivals are present. However, beyond a level of contact, their entry hazard declines, suggesting that forbearance occurs within their groups.

Note that in Figure 1, the inflection point that marks the point at which banks start forbearing occurs at a higher level of multimarket contact for Big Four banks than for Other banks. The extent of within-group multimarket contact above which forbearance occurs is around 293 for Big Four banks (Model 3.2) and 119 for Other banks (Model 3.4). At first sight, this seems anomalous: We would expect banks with greater market power to have greater incentives for mutual forbearance. The fact that there are only four of these firms, relative to 24 Other firms, should also

[3] If there remains unobserved heterogeneity in demand for banking services in spite of these controls, it would cause biased and inconsistent estimates because demand drives market entry both by focal banks and by their incumbent rivals. To address this concern, we considered using an instrumental variables approach but failed to find instruments that would drive the number of competitors, but not entry by the focal firm.

Table 2 Descriptive Statistics for Observations in Baseline Model (Table 3, Model 3.1)

Variables	Mean	SD	Min	Max	1	2	3	4	5	6	7	8	9	10
1. *New branch in focal postal area*	0.00	0.03	0	1	1.00									
2. *Postal area's banking age* (months)	516.68	426.21	0	1,476	0.01	1.00								
3. *Town population* (thousands)	28.30	28.04	0.634	237.04	0.02	−0.09	1.00							
4. *Population dependency ratio*	42.21	6.21	20.11	66.35	−0.01	0.07	−0.17	1.00						
5. *Postal area is in organized industrial zone*	0.8	0.27	0	1	0.01	0.15	0.13	−0.02	1.00					
6. *Change in number of firms in province*	1.72	1.51	−13.31	7.00	0.02	−0.13	0.38	−0.38	−0.06	1.00				
7. *Change in number of vehicles in province* (thousands)	0.03	0.11	−0.93	3.29	0.00	−0.02	0.05	−0.05	−0.00	0.12	1.00			
8. *Share of town in national GDP* (%)	0.19	0.32	0.00	1.57	0.01	−0.17	0.43	−0.30	0.02	0.24	0.06	1.00		
9. *Islamist town*	0.24	0.43	0	1	0.01	−0.07	0.28	0.03	0.04	0.23	0.03	0.15	1.00	
10. *Distance from closest branch of bank* (ln(km.))	3.41	1.76	0	7.75	−0.02	0.20	−0.38	0.44	0.04	−0.53	−0.08	−0.39	−0.19	1.00
11. *Bank's total number of branches in last month*	179.76	217.71	1	1,141	0.02	−0.06	−0.06	0.06	−0.04	−0.05	−0.00	−0.08	−0.02	−0.29
12. *Total new branches bank opened in last month*	1.38	3.12	0	51	0.03	−0.02	−0.02	0.02	−0.01	0.00	−0.00	−0.05	−0.01	−0.12
13. *Number of bank branches in postal area* (lagged)	3.52	4.95	0	66	0.03	0.35	0.29	−0.30	0.14	0.33	0.04	0.19	0.09	−0.25
14. *Number of bank branches in postal area* (lagged), *squared*	36.88	130.48	0	4,356	0.02	0.16	0.17	−0.21	0.05	0.23	0.03	0.14	0.04	−0.18
15. *Multimarket contact* (*MMC*) *with banks in postal area* (lagged)	93.74	116.73	0	1,063	0.02	0.12	−0.12	0.12	−0.02	−0.07	−0.01	−0.14	−0.03	−0.20
16. *MMC with banks in postal area* (lagged), *squared*	22,412.37	52,363.72	0	1,129,969	0.01	0.05	−0.12	0.11	−0.03	−0.07	−0.01	−0.12	−0.03	−0.13
17. *MMC with Big Four banks in postal area* (lagged)	49.54	90.68	0	1,059	0.04	0.22	0.21	−0.18	0.08	0.16	0.02	0.07	0.06	−0.32
18. *MMC with Big Four banks in postal area* (lagged), *squared*	10,678.18	32,180.12	0	1,121,481	0.04	0.12	0.12	−0.10	0.04	0.09	0.01	0.02	0.03	−0.23
19. *MMC with Islamic banks in postal area* (lagged)	2.56	13.01	0	183.5	0.03	0.08	0.21	−0.10	0.05	0.15	0.01	0.04	0.11	−0.22
20. *MMC with Islamic banks in postal area* (lagged), *squared*	175.90	1,243.33	0	33,672	0.02	0.05	0.15	−0.07	0.03	0.10	0.01	0.02	0.08	−0.17
21. *MMC with Other banks in postal area* (lagged)	17.23	43.16	0	649	0.04	0.14	0.24	−0.20	0.10	0.22	0.02	0.11	0.08	−0.33
22. *MMC with Other banks in postal area* (lagged), *squared*	2,159.48	8,598.09	0	421,201	0.03	0.07	0.15	−0.11	0.05	0.13	0.01	0.04	0.05	−0.24

Variables	11	12	13	14	15	16	17	18	19	20	21
12. *Total new branches bank opened in last month*	0.34	1.00									
13. *Number of bank branches in postal area* (lagged)	−0.15	−0.06	1.00								
14. *Number of bank branches in postal area* (lagged) *squared*	−0.10	−0.05	0.86	1.00							
15. *Multimarket contact* (*MMC*) *with banks in postal area* (lagged)	0.82	0.28	−0.08	−0.08	1.00						
16. *MMC with banks in postal area* (lagged), *squared*	0.79	0.24	−0.10	−0.08	0.92	1.00					
17. *MMC with Big Four banks in postal area* (lagged)	0.37	0.16	0.22	0.07	0.46	0.30	1.00				
18. *MMC with Big Four banks in postal area* (lagged), *squared*	0.45	0.18	0.09	0.01	0.48	0.40	0.91	1.00			
19. *MMC with Islamic banks in postal area* (lagged)	0.08	0.03	0.32	0.23	0.06	0.01	0.26	0.21	1.00		
20. *MMC with Islamic banks in postal area* (lagged), *squared*	0.12	0.04	0.21	0.14	0.10	0.04	0.26	0.25	0.94	1.00	
21. *MMC with Other banks in postal area* (lagged)	0.22	0.09	0.34	0.17	0.21	0.09	0.48	0.41	0.39	0.37	1.00
22. *MMC with Other banks in postal area* (lagged), *squared*	0.29	0.10	0.17	0.06	0.26	0.16	0.46	0.46	0.32	0.36	0.91

Table 3 Cox Proportional Hazard Estimates of Banks Entering New Markets

	Model 3.1† All banks	Model 3.2 Big Four	Model 3.3 Islamic	Model 3.4 Other
Region and year dummies	Included	Included	Included	Included
Postal code's banking age (months)	0.000*	0.000	−0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Town population (thousands)	0.012*	0.014*	0.011*	0.010*
	(0.001)	(0.002)	(0.001)	(0.001)
Population dependency ratio	−0.036*	−0.029*	−0.012	−0.039*
	(0.005)	(0.010)	(0.008)	(0.011)
Postal code is in organized industrial zone	0.505*	0.663*	0.132	0.368*
	(0.080)	(0.128)	(0.114)	(0.081)
Change in number of firms in market	0.147*	0.088*	0.168*	0.182*
	(0.018)	(0.025)	(0.043)	(0.024)
Change in number of vehicles in market (thousands)	0.299*	0.116	0.079	0.678*
	(0.112)	(0.377)	(0.146)	(0.236)
Share of town in national GDP (%)	0.434*	0.230*	0.718*	0.357*
	(0.079)	(0.111)	(0.160)	(0.132)
Islamist town	0.264*	0.122	0.787*	0.102
	(0.068)	(0.109)	(0.048)	(0.070)
Distance from closest branch of bank (ln(km.))	0.129*	0.192*	0.361*	0.164*
	(0.034)	(0.034)	(0.059)	(0.039)
Bank's total number of branches (lagged)	0.002	0.001	0.012*	0.006*
	(0.001)	(0.001)	(0.002)	(0.001)
Total new branches bank opened in previous month	0.074*	0.070*	0.013	0.059*
	(0.016)	(0.013)	(0.032)	(0.016)
Number of bank branches in postal area (lagged)	0.264*	0.358*	0.293*	0.214*
	(0.027)	(0.166)	(0.028)	(0.018)
Number of bank branches in postal area (lagged) *squared*	−0.005*	−0.015	−0.005*	−0.003*
	(0.001)	(0.008)	(0.001)	(0.001)
Multimarket contact (*MMC*) *with banks in postal area* (lagged)[a]	0.014*			
	(0.003)			
MMC with banks in postal area (lagged), *squared*[b]	−0.000*			
	(0.000)			
MMC with same group banks in postal area (lagged)[c]		0.008*	0.034*	0.021*
		(0.003)	(0.016)	(0.004)
MMC with same group banks in postal area (lagged), *squared*[d]		−0.000*	−0.000	−0.000*
		(0.000)	(0.000)	(0.000)
MMC with different group banks in postal area (lagged)[e]		−0.002	0.010	−0.000
		(0.002)	(0.008)	(0.002)
MMC with different group banks in postal area (lagged), *squared*[f]		0.000	−0.000	0.000*
		(0.000)	(0.000)	(0.000)
Observations	4,065,817	515,339	790,980	2,759,498
Market entry events	3,304	958	527	1,819
Log pseudolikelihood	−26,921.03	−7,080.52	−3,768.97	−15,478.26

Notes. Robust standard errors calculated by clustering around banks are reported in parentheses. Hazard ratios can be calculated by exponentiating the coefficients reported for each variable. H1A: $a > 0$ and $b < 0$; H1B: $c > e$ and $d > f$.

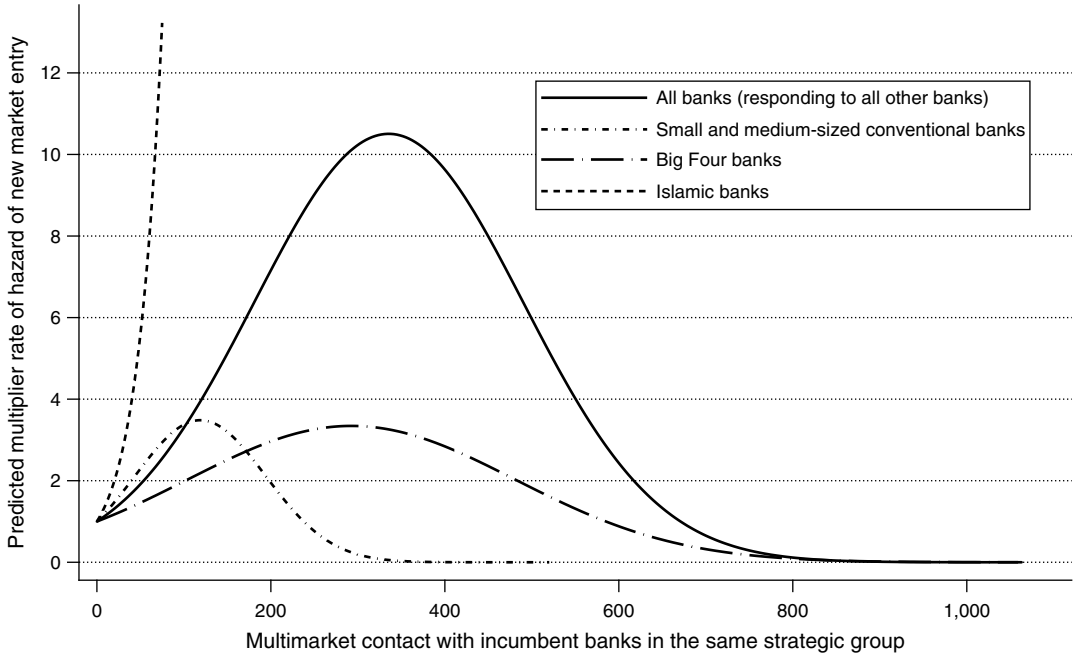
†Stratified Cox model, stratified by bank type.

*$p < 0.05$.

make collusion easier. Note, however, that the average Big Four bank operates in 485 markets and overlaps with the average Big Four incumbent in its potential target market in 106 markets. Other (small and medium-sized conventional) banks, however, operate in 79 markets on average and face same group incumbents with whom they have previous contact in 16 markets. In relative terms, Big Four banks do forbear more readily than Other banks.

We test H1B by observing whether banks respond more strongly to multimarket rivals in their own strategic groups than to multimarket rivals in different groups when entering new markets. As can be seen in Table 3, for each of the three groups of banks, coefficients estimated for multimarket contact with same group banks in target postal area are greater than those for multimarket contact with different group banks in target postal area and the latter are

Figure 1 **Predicted Effect of Multimarket Contact on the Hazard of Market Entry by Strategic Group**



never significant. According to Model 3.2, when the level of a Big Four Bank's multimarket contact with incumbent Big Four banks is at the sample mean of 106, the multiplier rate of the baseline hazard is 2.09 ($=\exp(0.008*106-0.00001*106*106)$). That is, a Big Four bank is twice as likely to enter a market with an incumbent Big Four bank that has 106 overlapping branch locations as it is to enter a market where its multimarket contact with incumbent Big Four banks is zero. The same level of contact with non-Big Four banks reduces a Big Four bank's baseline entry hazard by 20% (multiplier of the hazard is 0.80). According to Model 3.3, the hazard of an Islamic bank entering a particular market increases by 10% when its level of multimarket contact with incumbent Islamic banks increases from zero to three. An equivalent increase in multimarket contact with incumbent non-Islamic banks increases the hazard by 3%. Similarly, according to Model 3.4, an Other (small and medium-size conventional) bank that has an overlap of 16 branch locations on average with the incumbent Other banks in a target market is 12% more likely to enter that market relative to an Other bank that has no overlapping locations with the incumbent Other banks. When an Other bank's multimarket contact with banks outside its own strategic group is 16, however, the predicted increase in the hazard is 0.2%.

To see if the differences in estimated effects of multimarket contact with same versus different group banks are statistically significant, we perform Wald tests for the joint hypotheses: "MMC with same group banks in postal area (lagged) = MMC with different group banks in postal area (lagged)" and "MMC with same group banks in postal area (lagged), squared = MMC with different group banks in postal area (lagged), squared." The differences are statistically significant for Big Four ($\chi^2(2)=72.70$, $p=0.000$) and Other banks ($\chi^2(2)=56.72$, $p=0.000$) but not Islamic banks ($\chi^2(2)=2.05$, $p=0.360$). The first equality alone is also rejected for Big Four ($\chi^2(1)=12.61$, $p=0.000$) and Other ($\chi^2(1)=51.60$, $p=0.000$) but not for Islamic banks ($\chi^2(1)=1.15$, $p=0.283$). Thus, H1B is supported for Big Four and Other banks but not Islamic banks.

In Table 4, too, all models include multimarket contact density and its square. It is worth noting that as multimarket contact density variables lump banks of all kinds together in these models, Big Four banks do not appear to respond at all to multimarket rivals (Model 4.1), and Islamic (Model 4.2) and Other (Model 4.3) banks respond only positively. The quadratic effects are not statistically significant. This shows that the effect of multimarket contact densities are not only stronger within strategic groups (as shown above), but that aggregation of effects across groups may prevent their detection.

Looking at Table 4, we turn our attention to other density variables in order to test the remaining hypotheses. We separate the density variable into its component densities of the three strategic groups. We also include the squared density term for each strategic group. Consistent with spillover and mimetic isomorphism arguments, we find that banks of all groups respond to Big Four bank branch density, net of branch density of other banks. The estimated effect of Big Four bank branches in postal area is positive

Table 4 Cox Proportional Hazard Estimates of Banks Entering New Markets

	Model 4.1 Big Four	Model 4.2 Islamic	Model 4.3 Other	Model 4.4† Islamic and Other	Model 4.5 Islamic	Model 4.6† Islamic and Other	Model 4.7† Islamic and Other
Region and year dummies	Included	Included	Included	Included	Included	Included	Included
Postal code's banking age (months)	0.000*	0.000	0.000*	0.000*	0.000	0.000*	0.000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Town population (thousands)	0.014*	0.011*	0.011*	0.011*	0.011*	0.010*	0.010*
	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Population dependency ratio	−0.027*	−0.011	−0.046*	−0.041*	−0.008	−0.034*	−0.036*
	(0.010)	(0.009)	(0.010)	(0.008)	(0.009)	(0.008)	(0.008)
Postal code is in organized industrial zone	0.616*	0.109	0.392*	0.339*	0.120	0.343*	0.323*
	(0.122)	(0.120)	(0.075)	(0.065)	(0.117)	(0.062)	(0.062)
Change in number of firms in province	0.077*	0.176*	0.192*	0.184*	0.173*	0.176*	0.181*
	(0.027)	(0.034)	(0.024)	(0.018)	(0.035)	(0.017)	(0.018)
Change in number of vehicles in province (thousands)	0.114	0.073	0.652*	0.341*	0.069	0.329*	0.337*
	(0.375)	(0.134)	(0.222)	(0.115)	(0.134)	(0.117)	(0.116)
Share of town in national GDP (%)	0.255*	0.637*	0.346*	0.391*	0.616*	0.291*	0.963*
	(0.091)	(0.145)	(0.156)	(0.132)	(0.147)	(0.130)	(0.181)
Islamist town	0.100	0.718*	0.076	0.223*	0.986*	0.180*	0.191*
	(0.101)	(0.030)	(0.065)	(0.082)	(0.059)	(0.080)	(0.081)
Distance from closest branch of bank (ln(km.))	0.182*	0.326*	0.136*	0.165*	0.318*	−0.022	0.174*
	(0.035)	(0.064)	(0.039)	(0.034)	(0.065)	(0.039)	(0.033)
Bank's total number of branches (lagged)	0.001	0.007*	0.005*	0.005*	0.007*	0.005*	0.005*
	(0.001)	(0.003)	(0.001)	(0.001)	(0.003)	(0.001)	(0.001)
Total new branches bank opened in previous month	0.069*	0.012	0.062*	0.061*	0.012	0.061*	0.061*
	(0.013)	(0.032)	(0.016)	(0.015)	(0.032)	(0.015)	(0.015)
Big four bank branches in postal area (lagged)[g]	1.346*	0.267*	0.445*	0.414*	0.283*	0.293*	0.460*
	(0.257)	(0.138)	(0.062)	(0.062)	(0.142)	(0.056)	(0.062)
Islamic bank branches in postal area (lagged)[h]	−0.594*	0.835*	0.147	0.356*	0.906*	0.363*	0.358*
	(0.083)	(0.251)	(0.085)	(0.114)	(0.259)	(0.111)	(0.111)
Other bank branches in postal area (lagged)[i]	0.129	0.432*	0.355*	0.362*	0.436*	0.365*	0.356*
	(0.104)	(0.048)	(0.058)	(0.043)	(0.046)	(0.042)	(0.042)
Big four bank branches in postal area (lagged), *squared*[j]	−0.164*	−0.017	−0.028*	−0.026*	−0.018	−0.022*	−0.027*
	(0.032)	(0.011)	(0.005)	(0.005)	(0.012)	(0.005)	(0.005)
Islamic bank branches in postal area (lagged), *squared*[k]	0.145*	−0.141*	−0.012	−0.054*	−0.117	−0.055*	−0.053*
	(0.013)	(0.066)	(0.015)	(0.023)	(0.066)	(0.023)	(0.023)
Other bank branches in postal area (lagged), *squared*[l]	−0.011	−0.017*	−0.014*	−0.014*	−0.017*	−0.015*	−0.013*
	(0.011)	(0.003)	(0.005)	(0.003)	(0.003)	(0.003)	(0.003)
Multimarket contact (*MMC*) *with banks in postal area* (lagged)	−0.001	0.021*	0.010*	0.012*	0.020*	0.013*	0.012*
	(0.003)	(0.006)	(0.005)	(0.005)	(0.006)	(0.005)	(0.005)
MMC with banks in postal area (lagged), *squared*	−0.000	−0.000	−0.000	−0.000	−0.000	−0.000	−0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Islamic bank × *Big Four bank branch density in postal area* (lagged)[m]				−0.041			
				(0.025)			
Islamist town × *Islamic bank branch density in postal area* (lagged)[n]					−0.282*		
					(0.043)		
Distance from closest branch of bank × *Big Four bank branch density* (lagged)[o]						0.043*	
						(0.006)	
Share of town in national GDP × *Big Four bank branch density* (lagged)[p]							−0.125*
							(0.029)
Observations	515,339	790,980	2,759,498	3,550,478	790,980	3,550,478	3,550,478
Market entry events	958	527	1,819	2,346	527	2,346	2,346
Log pseudolikelihood	−7,037.81	−3,741.53	−15,549.20	−19,406.03	−3,736.15	−19,368.84	−19,388.70

Notes. Robust standard errors calculated by clustering around banks reported in parentheses. Hazard ratios can be calculated by exponentiating the coefficients reported for each variable. H2A: $g > 0$ for all bank groups; H2B: $m > 0$; H3A: $g > 0$ and $j < 0$ for Big Four, $h > 0$ and $k < 0$ for Islamic, $i > 0$ and $l < 0$ for Other; H3B: $n < 0$; H4A: $o > 0$; H4B: $p < 0$.

†Stratified Cox model, stratified by bank type.

*$p < 0.05$.

and statistically significant for all groups of banks. Specifically, Big Four banks are 3.84 times more likely to enter a postal area that has one Big Four bank branch as they are to enter a postal area that has no Big Four bank branches. The equivalent hazard rate multiplier is 31% for Islamic banks and 56% for Other banks. Thus, H2A is supported.

In Model 4.4, we combine Islamic and Other bank samples to test whether Islamic banks follow Big Four banks more than Other banks (H2B) explicitly. Statistically, we test if the interaction of Islamic bank dummy (for the focal bank) and Big Four bank branch density in postal area is significant and positive. We find the opposite of our predicted effect at a marginally significant level ($p = 0.095$), disconfirming H2B.[4]

In Table 4, we also find that all three kinds of banks respond to the presence of banks of their own kind, as predicted by density dependence theory (H3A). In Model 4.1, Big Four banks respond positively to Big Four bank branches in target postal area and negatively to the squared of this density ($\chi^2(2) = 28.71$, $p = 0.000$). In Model 4.2, Islamic banks respond positively to Islamic bank branches in target postal area and negatively to the squared of this density ($\chi^2(2) = 19.86$, $p = 0.000$). In Model 4.3, Other banks respond positively to Other bank branches in target postal area and negatively to the squared of this density ($\chi^2(2) = 89.01$, $p = 0.000$).

We test density dependent legitimation further in Model 4.5, by estimating whether Islamic banks respond less to incumbent Islamic bank density when entering markets in Islamist towns. Statistically, we test if the interaction of the Islamist town dummy variable and Islamic bank branch density is negative. The results support H3B. For illustration, consider two otherwise equivalent markets, one in an Islamist town and the other in a non-Islamist town: an increase in Islamic bank branches from zero to one increases the hazard of a subsequent Islamic bank entry by 87% in the Islamist town and by 2.47 times in the non-Islamist town.

The last two models in Table 4 test the theory of mimetic isomorphism. We test whether Islamic and Other banks' propensity to follow Big Four banks varies across markets according to levels of uncertainty banks face in entering these markets. We find that the density of Big Four banks has a higher positive impact on smaller banks' entry the farther the target market is from the focal bank's existing branches. In Model 4.6, the interaction of distance from closest branch of bank and Big Four bank branch density is positive and significant. This supports H4A. To illustrate the effect, suppose there are five Big Four bank branches in the target market. If the focal (Islamic or Other) bank's nearest branch is 10 km. away, then its hazard of entry into this market is 1.56 times its baseline hazard. If the nearest branch is 100 km. away, then the multiplier rate becomes 2.43.

In Model 4.7, the interaction of the target market's centrality in resource space (proxied by share of town in national GDP) and Big Four bank branch density has a statistically significant negative effect. This supports H4B: As centrality increases, the effect of Big Four bank branch density decreases. For example, consider two markets in towns that account for 0.1% versus 0.5% of GDP. An increase in the number of incumbent Big Four bank branches from one to two increases the hazard of entry by an Islamic or Other bank by 44% in the former market and by 37% in the latter market.

Robustness Checks

We carried out additional analyses to ascertain the robustness of our findings to our choice of measures and estimation methods. With respect to measures, we tried adjusting our multimarket contact densities for bank size, in order to account for the fact that large firms are likely to have high multimarket contact with others because of their sheer size (Greve 2008). Our results remained substantively unchanged. To test the sensitivity of our findings to the kind of estimation method we used, we also estimated parametric duration models. We replicated our results in regressions that specified the underlying hazard as piecewise exponential, Weibull, and log-logistic.

An alternative modeling approach is to use conditional (fixed effects) logistic regression to estimate the probability that a bank that opens a branch in a given month picks a particular market to enter over other potential target markets. Conditional fixed effects logistic models are widely used in studies of spatial expansion of multiunit organizations (Shaver and Flyer 2000, Greve 2000, Kalnins and Chung 2004, Ghemawat and Thomas 2008, Anand et al. 2009). An advantage of this set up is that by using bank-month fixed effects, we are able to rule out firm and time specific unobservable characteristics such as banks' capabilities, progress in banking technology, and macroeconomic conditions. However, because this application conditions on entry, spells in which a focal bank does not make any new market entries are excluded from the analysis. Indeed, when we repeat our analyses with conditional fixed effects logistic regression, the number of observations included in the regressions falls by as much as three fourths in some models. One concern this leads to is that this may cause an underestimation of forbearance.

[4] The lack of a main effect due to stratification is not a problem, because we are interested in the effect of density dependence being different for banks that are the most different from Big Four banks, here proxied by Islamic banks, not the unconditional effect of being an Islamic bank (Cleves et al. 2004, p. 165).

We do find a largely similar set of results that lead to the same conclusions about our hypotheses, but some of our estimates of multimarket contact density and its square differ across the two methods. Specifically, with the specification in Model 3.1 of Table 3, conditional logistic models estimate an insignificant effect of the squared multimarket contact density term, implying absence of forbearance. In subsequent models estimated on separate strategic groups, however, we do find the inverse-U-shaped relationship within each strategic group, including Islamic banks, for which we do not find a statistically significant second order effect for multimarket contact in our Cox models.

Discussion and Conclusion

Alcácer (2006, p. 1470) notes that "more research is needed to understand which mechanisms make collocation more or less important, whether these mechanisms are substitutes or complements, and under what circumstances one mechanism is more appropriate than another." In this paper, we examine two economic theories prevalent in the strategy literature and two sociological theories prevalent in the organizational theory literature that address how firms respond to their rivals when entering new markets. We find that elaborating on the four theories and testing them simultaneously makes the proposed mechanism of each theory more transparent and the empirical tests more precise.

In terms of theory, we notice that the sociological theories build on an assumption of locally varying audience expectations and resulting variation in legitimacy of organizational behavior. This makes modeling of locational heterogeneity critical for testing arguments of density dependence and mimetic isomorphism. Economic theories, in contrast, characterize markets by a particular configuration of resources and competitors. They do not recognize the existence of norms around organizational behavior that arise from audience expectations. Modeling heterogeneity across locations, we find that Islamic banks' entry into markets is less density dependent in Islamist towns. This supports the argument that preexisting cognitive legitimation makes density dependent legitimation less important. Similarly, by modeling differences in uncertainty across locations, we find that banks are more likely to emulate large banks when they face greater uncertainty. Our interviews provided further supporting evidence for this argument. The former general manager of a small bank stated that they followed large dominant banks because their presence indicates that a market is promising. In deciding where to locate a new branch, if someone had the idea to enter a virgin territory, their colleagues would ask why they would want to enter a location where even a certain Big Four bank is not present.

Even though we did not propose any hypotheses that pit the four theories against each other, our findings do contribute to discriminating between them. Examining market entry of Islamic and Other small and medium-sized banks separately, we are able to discriminate between spillover and mimetic isomorphism theories. Spillover theories imply that collocating with large firms is especially valuable for smaller firms that are dissimilar from the large firms. Previous tests of this argument have focused on retailers and hotels that combine collocation with product differentiation. Studies of market entry within this literature have examined the asymmetry between responses of small and large firms to one another, but have not compared responses of small firms that are more or less similar to the large incumbents. When we do that, we find some evidence that Islamic banks are less likely than conventional banks to collocate with Big Four banks. This is contrary to spillover arguments because Islamic banks are different from Big Four and Other (conventional) banks. In retrospect, our finding is consistent with sociological theories. If it is legitimacy, rather than expected value of spillover benefits that drives banks' market entry behavior, it is reasonable that Other banks, which are of the same conventional subform as Big Four banks, would be more likely to follow the latter, whereas Islamic banks, being different from conventional banks, would not be benefiting from legitimacy spillovers. Based on these findings, we suggest that further studies of spillovers may want to distinguish between material and symbolic externalities of clustering. Although material benefits may indeed be exploited by dissimilar firms, symbolic benefits are likely to accrue to similar firms.

A benefit of taking strategic group membership into account is that we are able to observe differences in strategic interaction patterns. As expected, firms follow their multimarket rivals in the same strategic group more closely. Strategic group membership appears to be a strong foundation for informing strategic behavior and devising coordination. An unexpected finding is that firms' responses to multimarket rivals varies across strategic groups. Islamic banks follow their Islamic multimarket rivals into new markets but do not forbear, and Big Four and Other banks exhibit the expected inverse-U-shaped pattern of interaction with multimarket rivals in their own groups. A possible explanation is that Islamic banks, the youngest group of banks in our data, have yet to reach a sufficient level of overlapping markets to embark on forbearance strategies. The maximum level of multimarket contact we observe among Islamic banks in our data (105) is lower

than the level of multimarket contact at which Big Four (293) and Other (119) banks start forbearance.

A novelty of our paper is that we examine Islamic banks' strategic interactions with conventional banks. In the regressions we report, we find that neither Big Four nor Islamic banks respond to multimarket rivals that are in different strategic groups whereas Other banks exhibit a slight tendency to follow them at high levels of multimarket contact. In additional analyses where we separate multimarket contact densities by strategic group, we find that Big Four banks respond to their multimarket contact with Other banks in the regular inverse-U-shaped pattern, but respond to their multimarket contact with Islamic banks in a U-shaped pattern. Islamic banks respond to Big Four banks in an inverse-U-shaped pattern but follow Other banks at an increasing rate. Other banks follow Big Four banks but do not shy away from them at high levels of multimarket contact. They do avoid Islamic banks when their multimarket contact with the latter are of a high degree. These asymmetries may arise because firms' perceptions of rivalry and therefore strategic reactions vary across the different strategic groups. We suggest that future studies of multimarket competition would do well to more closely examine perceptions of rivalry as well as competitive interactions within and between strategic groups (Barnett 1993, Fuentelsaz and Gomez 2006).

Supplemental Material

Supplemental material to this paper is available at http://dx.doi.org/10.1287/mnsc.2013.1723.

Acknowledgments

The authors have contributed equally to this paper and appear in alphabetical order. The authors appreciate comments received from the editor, the associate editor, and three anonymous reviewers; Christophe Boone, Glenn Carroll, Anıl Divarcı, Alpay Filiztekin, Işın Güler, Greta Hsu, Berkay Özcan, Phanish Puranam, Toke Reichstein, Arzu Wasti, Bernard Yeung; and seminar participants at Sabancı School of Management and the National University of Singapore Business School. All remaining errors are the authors' responsibility. The authors gratefully acknowledge help from experts in the Turkish banking sector: Şenol Altundaş, İnan Demir, Hasan Ersel, Selda Özçalık, Aslıhan Selamoğlu, Müjdat Ulutekin, Emre Yıldırım, and Reha Yolalan. This does not imply their endorsement of the research methods or the conclusions contained in this paper. Özgecan Koçak also thanks the National University of Singapore Business School for a visiting fellowship.

References

Alcácer J (2006) Location choices across the value chain: How activity and capability influence collocation. *Management Sci.* 52:1457–1471.

Alcácer J, Chung W (2007) Location strategies and knowledge spillovers. *Management Sci.* 53:760–776.

Anand J, Mesquita LF, Vassolo RS (2009) The dynamics of multimarket competition in exploration and exploitation activities. *Acad. Management J.* 52:802–821.

Audia PG, Sorenson O, Hage J (2001) Tradeoffs in the organization of production: Multiunit firms, geographic dispersion and organizational learning. *Adv. Strategic Management* 18:75–105.

Barnett WP (1993) Strategic deterrence among multipoint competitors. *Indust. Corporate Change* 2:249–278.

Barreto I, Baden-Fuller C (2006) To conform or to perform? Mimetic behaviour, legitimacy-based groups and performance consequences. *J. Management Stud.* 43:1559–1581.

Bastos PV, Greve HR (2003) Interorganizational learning and the location of manufacturing subsidiaries: Is chain migration also a corporate behavior? *Adv. Strategic Management* 20:159–191.

Baum JAC, Haveman HA (1996) Love thy neighbor? Differentiation and agglomeration in the Manhattan hotel industry, 1898–1990. *Admin. Sci. Quart.* 42:304–338.

Baum JAC, Korn HJ (1996) Competitive dynamics of interfirm rivalry. *Acad. Management J.* 39:255–291.

Baum JAC, Korn HJ (1999) Dynamics of dyadic competitive interaction. *Strategic Management J.* 20:251–278.

Baum JAC, Li SX, Usher JM (2000) Making the next move: How experiential and vicarious learning shape the locations of chains' acquisitions. *Admin. Sci. Quart.* 45:766–801.

Bernheim DB, Whinston MD (1990) Multimarket contact and collusive behavior. *RAND J. Econom.* 21:1–26.

Boeker W, Goodstein J, Stephan J, Murmann JP (1997) Competition in a multimarket environment: The case of market exit. *Organ. Sci.* 8:126–142.

Boone C, Carroll GR, Van Witteloostuijn A (2002) Resource distributions and market partitioning: Dutch daily newspapers, 1968 to 1994. *Amer. Sociol. Rev.* 67:408–431.

Carroll GR, Hannan MT (2000) *The Demography of Corporations and Industries* (Princeton University Press, Princeton, NJ).

Cattani G, Pennings JM, Wezel FC (2003) Spatial and temporal heterogeneity in founding patterns. *Organ. Sci.* 14:670–685.

Caves RE, Porter ME (1977) From entry barriers to mobility barriers: Conjectural decisions and contrived deterrence to new competition. *Quart. J. Econom.* 91:241–262.

Chung W, Alcácer J (2002) Knowledge seeking and location choice of foreign direct investment in the United States. *Management Sci.* 48:1534–1554.

Cleves MA, Gould WW, Gutierrez RG (2004) *An Introduction to Survival Analysis Using Stata* (Stata Corporation, College Station, TX).

Cox DR (1972) Regression models and life-tables. *J. Royal Statist. Soc. Series B* (*Methodological*) 34:187–220.

DiMaggio PJ, Powell WW (1983) The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *Amer. Sociol. Rev.* 48:147–160.

Dobrev SD (2007) Competing in the looking-glass market: Imitation, resources, and crowding. *Strategic Management J.* 28: 1267–1289.

Dobrev SD, Kim T-Y (2006) Positioning among organizations in a population. *Admin. Sci. Quart.* 51:230–261.

Dobrev SD, Ozdemir SZ, Teo AC (2006) The ecological interdependence of emergent and established organizational populations: Legitimacy transfer, violation by comparison, and unstable identities. *Organ. Sci.* 17:577–597.

Fischer J, Harrington JEJ (1996) Product variety and firm agglomeration. *RAND J. Econom.* 27:281–309.

Freedman ML, Kosova R (2012) Agglomeration, product heterogeneity and firm entry. *J. Econom. Geography* 12:601–626.

Fuentelsaz L, Gomez J (2006) Multipoint competition, strategic similarity and entry into geographic markets. *Strategic Management J.* 27:477–499.

Fuentelsaz L, Gomez J, Polo Y (2002) Followers' entry timing: Evidence from the Spanish banking sector after deregulation. *Strategic Management J.* 23:245–264.

Fujita M, Thisse J-F (1996) Economics of agglomerations. *J. Japanese Internat. Econom.* 10:339–378.

Ghemawat P, Thomas C (2008) Strategic interaction across countries and multinational agglomeration: An application to the cement industry. *Management Sci.* 54:1980–1996.
Gimeno J (1999) Reciprocal threats in multimarket rivalry: Staking out "spheres of influence" in the U.S. airline industry. *Strategic Management J.* 20:101–128.
Gimeno J, Jeong E (2001) Multimarket contact: Meaning and measurement at multiple levels of analysis. *Adv. Strategic Management* 18:357–408.
Gimeno J, Woo CY (1996) Hypercompetition in a multimarket environment: The role of strategic similarity and multimarket contact in competitive de-escalation. *Organ. Sci.* 7:322–341.
Gimeno J, Hoskisson RE, Beal BD, Wan WP (2005) Explaining the clustering of international expansion moves: A critical test in the U.S. telecommunications industry. *Acad. Management J.* 48:297–319.
Greve HR (1998) Managerial cognition and the mimetic adoption of market positions: What you see is what you do. *Strategic Management J.* 19:967–988.
Greve HR (2000) Market niche entry decisions: Competition, learning, and strategy in Tokyo banking, 1894–1936. *Acad. Management J.* 43:816–836.
Greve HR (2002) An ecological theory of spatial evolution: Local density dependence in Tokyo banking, 1894–1936. *Soc. Forces* 80:847–879.
Greve HR (2008) Multimarket contact and sales growth: Evidence from insurance. *Strategic Management J.* 29:229–249.
Hannan MMT, Freeman J (1977) The population ecology of organizations. *Amer. J. Sociol.* 82:929–964.
Haunschild PR, Miner AS (1997) Modes of interorganizational imitation: The effects of outcome salience and uncertainty. *Admin. Sci. Quart.* 42:472–500.
Haveman HA (1993) Follow the leader: Mimetic isomorphism and entry into new markets. *Admin. Sci. Quart.* 38:593–627.
Haveman HA, Nonnemaker L (2000) Competition in multiple geographic markets: The impact on growth and market entry. *Admin. Sci. Quart.* 45:232–267.
Henisz WJ, Delios A (2001) Uncertainty, imitation and plant location: Japanese multinational corporations, 1990–1996. *Admin. Sci. Quart.* 46:443–475.
Jayachandran S, Gimeno J, Rajan VP (1999) Theory of multimarket competition: A synthesis and implications for marketing strategy. *J. Marketing* 63:49–66.
Kalnins A (2004) Divisional multimarket contact within and between multiunit organizations. *Acad. Management J.* 47:117–128.
Kalnins A, Chung W (2004) Resource-seeking agglomeration: A study of market entry in the lodging industry. *Strategic Management J.* 25:689–699.
Khessina O, Romanelli E (2007) Regional industrial identity and spatial arrangements in the US. biotherapeutics industry, 1976–2004. Research Paper Series 07-07, Johnson School, Cornell University, Ithaca, NY.
Knott AM, Posen HE, Wu B (2009) Spillover asymmetry and why it matters. *Management Sci.* 55:373–388.
Kostova T, Roth K (2002) Adoption of an organizational practice by subsidiaries of multinational corporations: Institutional and relational effects. *Acad. Management J.* 45:215–233.
Krugman P (1991) Increasing returns and economic geography. *J. Political Econom.* 99:483–499.
Kuilman J, Li J (2006) The organizer's ecology: An empirical study of foreign banks in Shangai. *Organ. Sci.* 17:385–401.
Lomi A (1995) The population and community ecology of organizational foundings: Italian co-operative banks, 1936–1989. *Eur. Sociol. Rev.* 11:75–98.
Marshall A (1890) *Principles of Economics* (Macmillan and Co. Ltd., London).
McKendrick DG, Jaffe J, Carroll GR, Khessina OM (2003) In the bud? Disk array producers as a (possibly) emergent organizational form. *Admin. Sci. Quart.* 48:60–93.
Miller D, Chen M-J (1996) The simplicity of competitive repertoires: An empirical analysis. *Strategic Management J.* 17:419–439.
Picone GA, Ridley DB, Zandbergen PA (2009) Distance decreases with differentiation: Strategic agglomeration by retailers. *Internat. J. Indust. Organ.* 27:463–473.
Rhee M, Kim Y-C, Han J (2006) Confidence in imitation: Niche-width strategy in the UK automobile industry. *Management Sci.* 52:501–513.
Scott JT (1993) *Purposive Diversification and Economic Performance* (Cambridge University Press, Cambridge, UK).
Shaver JM, Flyer F (2000) Agglomeration economies, firm heterogeneity, and foreign direct investment in the United States. *Strategic Management J.* 21:1175–1193.
Sorenson O, Stuart TE (2001) Syndication networks and the spatial distribution of venture capital investments. *Amer. J. Sociol.* 106:1546–1588.
Stephan J, Boeker W (2001) Getting to multimarket competition: How multimarket contact affects firms' market entry decisions. *Adv. Startegic Management* 18:229–261.
Stephan J, Murmann JP, Boeker W, Goodstein J (2003) Bringing managers into theories of multimarket competition: CEOs and the determinants of market entry. *Organ. Sci.* 14:403–421.
TUIK (Turkish Statistics Institute) (2010) Population Census, 1980–2000, 2007, 2008, 2009. Unpublished data.
TUIK (Turkish Statistical Institute) (2012a) Business Demography. Business Statistics. Retrieved May 2012, http://www.turkstat.gov.tr/AltKategori.do?ust_id=9.
TUIK (Turkish Statistics Institute) (2012b) Motorized land vehicles registered and de-registered between 1995 and 2011. Unpublished data.
TUIK (Turkish Statistics Institute) (2012c) National Accounts. Retrieved May 2012, http://www.turkstat.gov.tr/AltKategori.do?ust_id=16.
Vincenty T (1975) Direct and inverse solutions of geodesics on the ellipsoid with application of nested equations. *Survey Rev.* 23:88–93.
Wheeler JO, Mitchelson RL (1989) Information flows among major metropolitan areas in the United States. *Ann. Assoc. Amer. Geographers* 79:523–543.