Interfirm Rivalry between Small Hardware Stores and “Big Box” Retailers: Market Commonality and Product Mix Similarity as Antecedents to Competitive Response*
by Reginald A. Litz and Jeffrey M. Pollack

We examined market commonality and product mix similarity as predictors of competitive response by small retail hardware stores to their nearest “Big Box” competitor. Data from 314 small retail hardware stores revealed a consistent relationship between greater market commonality and small firm responsiveness. However, no consistent relationship was observed between resource similarity and responsiveness. Tests for interactions between these two predictors were inconsistent—two (of five) specific product categories (i.e., hardware and tools, seasonal goods) were significant but in divergent patterns. We discuss what these findings suggest concerning the competitive interaction between small retailers and their Big Box rivals.

Introduction
For small neighborhood hardware stores, the large format or “Big Box” retailer’s increasing dominance signals a fundamental shift in the marketplace with more than 5,000 independent hardware stores closing since 1990; meanwhile, Home Depot (1,900 stores and $73 Billion in 2004 sales) and Lowes (1,200 stores and $36 Billion in 2004 sales) account for over half of hardware and building supply sales (Mitchell 2006). In recent years, this trend shows signs of becoming a global phenomenon with Lowes now operating outlets in Canada (31 stores) and Mexico (two stores), whereas Home Depot has stores in Canada (180 stores), Mexico (19 stores), and the People’s Republic of China (seven stores) (2011 Company reports).

Why might this be so? Extant research provides one answer: that larger competitors—larger in both organizational size as well as market share (Chen and Hambrick 1995)—are advantaged across most, if not all, facets of operation including procurement, name recognition, advertising, infrastructure, and market...
power. The implications of this reality are devastating for many small retail incumbents. Accordingly, one contemporary view is that these small businesses are effectively helpless once large-format retailers come to town (e.g., Arnold and Luthra 2000).

However, research within the domain of competitive dynamics also suggests that size is not the only determinant of rivalry and competitive response (for reviews, see Kilduff, Elfenbein, and Staw 2010; Smith, Ferrier, and Ndofor 2001). For instance, data in the airline industry show that small airlines’ responses, relative to larger ones, differed substantially—in short, small players were not helpless but were capable of quick, secretive, and significant responses (Chen and Hambrick 1995). Overall, the rich literature on competitive dynamics has explored competitive environments at a general level (e.g., Lee et al. 2000; Smith et al. 1997), as well as the specific industry contexts such as airlines (e.g., Gimeno 1999; Smith et al. 1991) and electricity generation (Zhang and Gimeno 2010). Furthermore, extant research also provides insight into how small intraindustry competitors behave (Payne, Kennedy, and Davis 2009) as well as how new entrants compete with incumbents (Hockerts and Wüstenhagen 2010).

One unexplored gap, however, concerns how small stores respond to the presence of one or more Big Box players. In short, what do small players do when a giant enters their neighborhood? In this study, we consider this question in the competitive environ of Do-It-Yourself retailing. To contextualize our previously stated research question, how does the longstanding retail mainstay, the small neighborhood hardware store, respond when a Big Box, such as Home Depot or Lowes, is located in their market? Given the significant market share realized over the past two decades by such giants, the retail hardware industry is especially well suited for such an investigation.

The present research seeks to contribute to the literature, from both a practical and theoretical standpoint, on the circumstances under which a small retailer engages in competitive behavior (e.g., Baum and Korn 1999). We draw on an extant conceptualization of interfirm rivalry (Chen 1996) to consider two key factors: one interorganizational, market commonality; the other intraorganizational, product mix similarity. And, we also examine the interactions of both market commonality and product mix similarity to provide insights into the moderating effects impacting competitive environments. Within this context, we take an “entrepreneurial perspective” in that managers and owners of small retail hardware stores can, with knowledge of market commonality and product mix similarity, shape their competitive responses to proximal Big Box rivals (Smith and Cao 2007, p. 332). Our findings extend the existing literature and affirm that (1) the degree to which two firms overlap in the same market does matter as it concerns the small firm’s competitive responsiveness, and (2) this effect is significant for the concomitant relationship between competitive responsiveness and product mix similarity (e.g., Deephouse 1999; Hunt and Morgan 2005).

We proceed as follows. In the next section, we delve into the literature related to the antecedents of competitive dynamics and derive our primary hypotheses. Then, we present our research context, methods, and results. In our conclusion, we discuss the implications and limitations, as well as directions for further research.

Interfirm Rivalry: Conceptualization and Hypotheses

Early literature related to competitive dynamics emerged in the 1980s during which seminal efforts explored a variety of issues including competitor’s responses in the banking industry (MacMillan, McCaffrey, and Van Wijk 1985), interfirm dynamics in the technology sector (Smith et al. 1989), as well as the firm-specific rivalry between Kodak and Polaroid (Bettis and Weeks 1987). Research has continued in earnest over the last 30 years examining general competitive action (e.g., Lee et al. 2000; Smith et al. 1997), as well as specific industries such as such as airlines (e.g., Gimeno 1999; Smith et al. 1991) and electricity generation (Zhang and Gimeno 2010).

In the domain of competitive dynamics, the core of empirical work focuses on how firms act and other firms react—essentially, exemplifying the process Schumpeter (1934, 1950) called “creative destruction,” in which one player’s initiatives either decimate or transform its rivals’ basis for existence. Overall, this process breeds a cycle of new opportunity discovery as businesses enact competitive behaviors and reshape the marketplace (Zahra 2008). These actions and competitive reactions, in
Schumpeter’s estimation, determine each firm’s long-term viability and survival in the marketplace (Smith, Ferrier, and Ndofor 2001; Smith, Grimm, and Gannon 1992) with competitive behavior including everything from new product introductions to pricing changes (Miller and Chen 1996; Smith, Ferrier, and Ndofor 2001).

Multiple conceptual and empirical frameworks for examining competitive dynamics exist within the literature (see Smith, Ferrier, and Ndofor 2001). The framework that guides our investigation is Chen’s (1996) conceptualization of interfirm rivalry. In his framework, Chen argued that interfirm rivalry was determined by two key factors: market commonality, that is, the extent to which two competitors share the same competitive space, and resource similarity, that is, the extent to which they offer the same products and/or services. That said, we also begin with an acknowledgment—namely that undiscerning application of this framework to the competitive dynamics between small retailers and Big Box players may be problematic. Our reasoning is simple: the resource disparities between the small and large competitors are arguably so significant as to make conventional comparison irrelevant. With this limitation in mind, we explore one accessible characteristic potentially shared by both large and small competitors: product mix similarity.

In this context, competitors are firms that “operate in the same industry, deliver similar products and services, and target similar customers” (Chen 1996, p. 104). Consistent with this characterization, we focus on the market commonality and product mix similarity shared by small retailer hardware stores and their nearest Big Box competitors. Market commonality refers to the spatial position a competitor has in the marketplace; in short, this construct predicts that as proximity increases, each firm is more likely to perceive, and respond to, the other as a rival (Chen 1996). For instance, imagine a situation in which you were the owner of a small retail hardware store, and imagine that Home Depot has a location directly across the street from your store. This represents a substantial market overlap (i.e., high market commonality), as opposed to a minimal market overlap were the Big Box to be located across town (i.e., low market commonality). Accordingly, and drawing on extant research (e.g., Chen 1996; Chen and Miller 1994; Kilduff, Elfenbein, and Staw 2010), market commonality should directly predict competitive response. Thus, our first hypothesis is:

**H1**: Increased market commonality with a Big Box rival predicts increased competitive response by the small retailer.

Regarding product mix similarity, we draw specifically on Chen’s (1996) definition of competitors as firms in “the same industry, who offer similar products and target similar customers” (Chen 1996, p. 104, italics added). To the extent that the smaller firm has a similar product mix as the larger retailer, we expect this will predict competitive response. Please imagine, again, the situation in which you are the owner of small retail hardware store, and again, imagine that Home Depot has a location in your market. If the product mix in your store is exactly the same as the product mix in the Home Depot, this presents a situation in which product mix similarity is high. And, consequently, substantial overlap in product mix should directly manifest in competitive response. We, therefore, offer our second hypothesis:

**H2**: Increased product mix similarity with a Big Box rival predicts increased competitive response by the small retailer.

Considered together, these two dimensions also suggest a hypothesis of interaction—namely, that a small incumbent firm is most likely to compete with, and respond to, a large entrant to the extent that its spatial positioning and physical inventory are characterized by high levels of both market commonality and product mix similarity, respectively (Chen 1996, p. 108). Thus, we predict the most significant levels of competitive response would occur in competitive scenarios where the small store is nearer in market space and closer in product mix to the Big Box retailer. Specifically, we propose an interaction effect. More specifically:

**H3**: The main effects of market commonality and product mix similarity will be qualified by an interaction. Specifically, high product mix similarity predicts competitive response more strongly for small retailers with high, relative to low, market commonality.
Sample and Procedures

The present research was conducted in collaboration with the Russell R. Mueller Retail Hardware Foundation, the research arm of the North American Retail Hardware Association (NRHA). Our sample included retail hardware stores in the NRHA’s database for the United States (i.e., the states of Texas, North Carolina, Washington, northern California and Iowa, and the metropolitan areas of Chicago, New York City/Long Island, Atlanta, Minneapolis-St. Paul, Kansas City, and San Diego). We included businesses that identified themselves as hardware stores. We did not discriminate based on sales, whether the stores were single or multiple-unit operations, or whether the stores were affiliated with a retail hardware trade name (i.e., Ace Hardware; Litz and Stewart 1998).

In 2003, we attempted to personally contact all 1,971 stores in our sampling frame to maximize response rates (Dillman 1978). Due to misclassification, business closures, and inaccessibility of managers, we were unable to contact roughly one-third of these stores. Of the remaining 1,320 (67 percent), 355 managers declined to participate, whereas 965 agreed to complete the survey. After mailing the survey to willing participants, we received 346 surveys (an effective response rate of 36 percent of the managers who agreed to participate).

Each respondent was asked to identify the name of his/her store’s nearest Big Box competitor. Given our focus on small firm response to reasonably similar large entrants, we included only those that identified one of three Big Box home improvement retailers as their nearest large format competitor; the three retailers include Home Depot, Lowes, and Menards. These three retailers were selected as effectively homogenous insofar as they all compete in the Do-it-Yourself retail segment. Given occasional identification of other large-format retailers, such as Wal-Mart (Vance and Scott 1994), which we excluded, our final data set included 314 small stores (32.4 percent of those firms that agreed to participate). Means and standard deviations for all data used in our analysis, including descriptive controls, such as total number of full-time employees \((M = 7.3)\), total selling area \((M = 8,681\text{ square feet})\), and years in business \((M = 42.05)\), are found in Table 1.

Validity and Reliability

Consistent with recommendations within the literature concerning the difficulties inherent in securing performance-related data from small and privately held firms (Carmines and Zeller 1979; Dess and Robinson 1984), as well as concerns with common method variance (Podsakoff et al. 2003), we sought to assess the data’s validity and reliability. We therefore resurveyed a subset of the respondents (105 stores, or 30.3 percent of the original sample) two years later, in the fall of 2005 during which we asked each store manager to complete the identical version of the survey, including a request for updated annual sales data for 2004 (versus 2002 sales data gathered in the original 2003 study). Roughly one-third (32 stores or 30.5 percent) returned the survey within two months; in all but one case, the same individual completed the survey (the sole exception involved the spouse of the original respondent completing the survey).

As our study relied on self-report data, we used this retest data to check the consistency of the seven perceptual outcome items, as well as market commonality. As Table 2 reports, no statistically significant differences were detected in any of the seven items or in market commonality. We also checked our product clusters and, similarly, found no significant differences in product mix. Considered together, we accepted the data as sufficiently valid and reliable for the purposes of the analyses that follow.

Measures

Market Commonality. We measured market commonality using a single item which asked store managers how close, in miles, the nearest Big Box retailer was to their store (this variable was correlated highly with minutes away as well as the calculated difference from their self-reported physical locations in http://www.mapquest.com). We reverse coded the resulting variable such that higher numbers represented increased market commonality.

Product Mix Similarity. Product mix similarity was operationalized as the absolute difference between product mix of the small retailer compared with that of the Big Box retailer. A description of how this variable was calculated follows. First, we asked participants to estimate the percentages related to the amount of sales their store had across five product groups;
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<td>−0.20**</td>
<td>−0.16**</td>
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*p < .05, **p < .01.

S.D., standard deviation.
these groups corresponded to five broad clusters—home improvement, home repair, hardware and tools, seasonal goods, and paint and sundries—as reported by a published case study of the industry’s leader Home Depot (Wheelen et al. 2004).

Participants reported how important each of the 18 product groups was to their 2002 sales using the following scale: 1 (do not sell; 0 percent), 2 (not very important; 1–5 percent), 3 (somewhat important; 6–10 percent), 4 (important; 11–20 percent), 5 (very important; 20 percent+). We created this scale in consultation with the NRHA who advised us that store owners would be best able to estimate ranges (rather than know exact percentages). We therefore acknowledge the approximate nature of the data used in our exploration. We then assigned a specific midpoint percentage to each response (i.e., 1 = 0 percent, 2 = 5 percent, 3 = 10 percent, 4 = 15 percent), excepting the final category, which we estimated at 20 percent, as an estimate of the product similarity relative to the nearest Big Box retailer. Our test–retest calculations showed no significant difference between Time 1 (2003) and Time 2 (2005). We accepted this variable as sufficient for the purposes of this study.

Using the reported percentages of product category sales, we clustered product sales data into one of the five different clusters based on the Home Depot case study (Wheelen et al. 2004). The five clusters, and the percentages of sales reported by Home Depot for each, included home repair (i.e., plumbing, heating, lighting, electrical supplies which together totaled 27.10 percent), home improvement (i.e., building materials, lumber, floor, and wall coverings totaling 34.20 percent), hardware and tools (13.50 percent), seasonal goods (14.80 percent), and paint and sundries (10.40 percent). We, then, used these figures to calculate a measure of product mix similarity by subtracting each small firm’s sales in each of the clusters from the percentages reported by Home Depot and then summing the absolute values of all five differences.

We offer the following two illustrative cases. Whereas Respondent A reported sales percentages of 37.1, 24.2, 23.5, 9.8, and 5.4 percent...
for the five clusters of home repair, home improvement, hardware and tools, seasonal goods, paint and sundries, respectively, Respondent B reported 28.1 percent, 33.2 percent, 14.5 percent, 15.8 percent, and 9.4 percent for these same clusters, respectively. We would calculate the product mix similarity of Respondent A as the sum of the absolute value of the differences between the small store and the Big Box in each of the five clusters as 40 (i.e., \( \text{ABS}[37.1 - 27.1] + \text{ABS}[24.2 - 34.2] + \text{ABS}[23.5 - 13.5] + \text{ABS}[9.8 - 14.8] + \text{ABS}[5.4 - 10.4] = 40 \)), whereas we could calculate the product mix similarity of Respondent B as 5 (i.e., \( \text{ABS}[28.1 - 27.1] + \text{ABS}[33.2 - 34.2] + \text{ABS}[14.5 - 13.5] + \text{ABS}[15.8 - 14.8] + \text{ABS}[9.4 - 10.4] = 5 \)). Using the method just mentioned, we calculated both total aggregated product similarity (a sum of all the individual values) as well as specific cluster-based scores (i.e., home repair, home improvement, hardware and tool, seasonal goods, and paint and sundries). We reverse coded the resulting variable such that higher numbers represent greater product mix similarity.

**Competitive Response.** Our study’s dependent variable centered on the small retailers’ competitive responsiveness to the large retailers’ presence. Drawing on the NRHA’s domain-related expertise, we identified several specific behaviors that would be likely and/or possible for the typical small hardware store to enact in response to the Big Box. We found that many of the NRHA’s specified competitive responses resonated with existing literature such as Smith, Ferrier, and Ndofor (2001) who conceptualized an organic competitive framework that includes the actor, action, industry environment, the responder, and the response.

Using a five-point scale (where 1 = not at all and 5 = very often), respondents were asked to how often they, or someone from their small store, would (1) “visit this Big Box to check their product mix,” (2) “study this Big Box store’s sale flyers,” (3) “visit this Big Box store to check product prices,” (4) “match the Big Box’s price on items included on the Big Box’s sale flyers,” (5) “match the Big Box’s price on items not included in the Big Box’s sale flyers,” (6) “use my own loss leaders to attract customers,” and (7) “adjust my product mix to complement, rather than compete directly against, this Big Box.” The composite measure, which combined the seven items, was checked for adequate reliability (\( \alpha = 0.80 \)) before being deemed adequate for the study’s purposes.

**Control Variables.** Drawing on Chen and Hambrick (1995) as well as Miller and Chen (1996), we included the following control variables for each small store: (1) number of full-time employees, (2) total number of square feet of selling area, (3) 2002 sales, (4) the number of years the small retailer had been operating at their current location, (5) the years the small retailer had been in business, and (6) the percentage of goods sold which was outside the five categories identified by the Wheelen et al.’s (2004) case study (e.g., sporting goods, pet supplies, automotive, toys, and giftware).

**Results**

In examining our first two hypotheses, we used the standard regression approach with continuous variables recommended by Cohen et al. (2003). H1 examined the relation of market commonality with competitive response and proposed that increased market commonality was positively related to increased competitive response. As the six models contained in Table 3 report, results supported H1. Results showed that increasing market commonality (i.e., fewer miles between small retailer and Big Box) was paralleled by increased competitive responsiveness.

H2 proposed a similar relationship between product mix similarity and competitive response. We used both total aggregated product similarity (Model 1, Table 3) as well as specific product-based scores (Models 2–6, Table 3) for the categories of home improvement, home repair, hardware and tool, seasonal goods, and paint and sundries. Overall, results did not consistently support our predictions—the main effects of total aggregated product similarity, as well as the specific categories of home improvement, home repair, hardware and tool, and seasonal goods, were not significantly related to competitive response. The one exception was for the product category of paint and sundries—the main effect between product similarity in the area of paint and sundries predicted increased competitive response.

H3 proposed that high product mix similarity would predict competitive response more strongly for small retailers with high, relative to low, market commonality. As Table 3 shows, each of the six models included a market commonality × product mix similarity interaction.
## Table 3

Regression Models: Market Commonality, Product Mix Similarity, and Their Interaction Predicting Competitive Responsiveness

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<th></th>
<th>Model 1: Total Product Similarity</th>
<th>Model 2: HI</th>
<th>Model 3: HR</th>
<th>Model 4: HT</th>
<th>Model 5: SG</th>
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<td>0.07</td>
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<td>0.14*</td>
<td>0.15*</td>
<td>0.17**</td>
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<td>2.19* (228)</td>
<td>2.17* (226)</td>
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<td>3.22** (226)</td>
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<td>R² (Adjusted R²)</td>
<td>0.09 (0.05)</td>
<td>0.08 (0.04)</td>
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<td>0.10 (0.07)</td>
<td>0.11 (0.08)</td>
<td>0.10 (0.06)</td>
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*p < .05, **p < .01.

HI, home improvement; HR, home repair; HT, hardware and tools; MC, market commonality; PS, paint and sundries; SG, seasonal goods.
term (created by using the standardized values for each construct). Consistent with H3, the main effects of market commonality and product mix similarity were qualified by product-specific interactions. Considered at the aggregated level, the store's total product similarity did not demonstrate any significant market commonality \(\times\) product mix similarity interactions. However, two specific product categories (i.e., hardware and tools, and seasonal goods) did demonstrate significant interactions, whereas the remaining three (i.e., home improvement, home repair, paint and sundries) did not. Interestingly, the two product categories that achieved significant interactions had divergent directions. More specifically, Aiken and West's (1991) test of simple slopes, conditioned one standard deviation above and below the mean, showed that (1) market commonality predicted competitive responsiveness more strongly for small retailers with low (versus high) hardware and tools product mix similarity, and (2) market commonality predicted competitive responsiveness more strongly for small retailers with high (versus low) seasonal goods product mix similarity. We illustrate these dynamics in Figures 1 and 2, and we discuss possible reasons for these findings in the following section.

**Discussion**

This research seeks to contribute to small business literature by examining the dynamics of small retailer competitive responsiveness toward their nearby large rivals; the specific context we have considered is that of the neighborhood hardware store facing off against a Big Box rival. As reported, our results supported H1, which predicted that increased market commonality would predict increased competitive responsiveness. However, our investigation did not generally support H2, as increased product mix similarity was not consistently related to competitive responsiveness. Taken together, our findings suggest a rather straightforward set of conclusions: when it comes to competitive responsiveness, spatial proximity generally matters; in contrast, product mix similarity generally does not.

That said, this study also suggests a more complex story may be at work when it comes to product mix; this is inferred from the two significant interactions that together suggest that market commonality matters for some products and not for others. Why might this be? We can envision at least three reasons; the first relates to the significance of product brands, the second to the importance of information-intensive transacting, and the third to the role of retailer–customer relationships. We also discuss, here, findings regarding the interactions involving the specific product categories of hardware and tools (significant, but not in predicted direction) and seasonal goods (significant, in predicted direction).

### Why Product Similarity Might Not Matter as Envisioned

First, regarding product brands, the small store's responsiveness vis-à-vis the Big Box may be determined by the extent to which they are engaged in a direct “apples-to-
apples” comparison. For example, if the small store sells exactly the same product as the Big Box (e.g., a Black & Decker 12-Volt Lithium Drill/Driver, Model #LDX112C), the small store would have a fundamentally different reason for paying close attention to the giant’s weekly flyer than if they sold a different brand or model not sold by the Big Box (e.g., Benjamin Moore paints). Insofar as our research design did not address this “apple-to-apples” versus “apples-to-oranges” contrast, we encourage future research to explore the implications of this distinction for small retailer responsiveness.

A second reason why product mix similarity might warrant more complex consideration arises from another possibility: information-intensive transacting (Glazer 1991). More specifically, our measure of product mix similarity did not factor in the possibility of the small store enriching, and thereby differentiating, its product offerings through the detailed information and informal instruction provided by its sales staff. Again, and in the spirit of our previous brand-related example, we assert that to the extent the small store is able to transform its products (which may also be offered at the nearby Big Box) into more complex offerings that include both the physical product and an element of intangible expertise; the small retailers make coarse-grained price-based comparisons irrelevant.

Likewise, a third reason for the observed nonsignificant product-based relationship ema-

nates from the possible existence of a relational bond between the small store and its customers. By embracing the logic of scale, Big Boxes are, we believe, ill-positioned to facilitate rich and emotionally complex relationships with their customers. In essence, choosing to maximize transacting economies means implicitly foregoing relational dis-economies, which typically mean knowing fewer customers better. Though the Big Box greeter may be friendly, given their volume of customers, they cannot as readily be a friend. This difference may, however, create an important opportunity for small retailers that are able to meet their customers’ product-based needs while engaging them as persons.

In closing, we make one final note regarding the specific product categories of hardware and tools versus seasonal goods. In sum, our theory base suggests that competitive responses of small retailers should be especially strong in situations where a small store is nearer in market space and closer in product mix to the Big Box retailer. This premise held true for the interaction involving seasonal goods but not for hardware and tools. We noted the previous three caveats of product brands, information-intensive transacting, and the role of retailer–customer relationships as reasons why we did not find what was expected regarding product similarity. Yet why would these two interactions, in particular, be in opposite directions?

The interaction of seasonal goods × market commonality predicted competitive responsiveness more strongly for small retailers with high (versus low) seasonal goods product mix similarity. As one possible explanation, it may be that small retailers who are close to a Big Box rival and have similar seasonal good products feel especially pressured to compete given the time-bounded nature of the selling cycle. For example, if both the small retailer and the Big Box rival have an abundance of holiday decorations, the small retailer may feel an urgency to sell before the opportunity expires. This premise warrants additional exploration in future work.

Conversely, for the interaction of hardware and tools × market commonality, the same relation may not apply. Market commonality predicted competitive responsiveness more strongly for small retailers with low (versus high) hardware & tools product mix similarity. In this case, as one possible explanation, it may be that small retailers who are close to a Big Box rival and have dissimilar hardware and tool products feel out of step with the rival, and consequently, an especially high desire to compete given the out-of-balance mix of his/her products. Hardware and tool products can change rapidly as new innovations are introduced (relative to the more stable categories of home improvement, home repair, paint and sundries, and seasonal goods). For example, if both the small retailer and the Big Box rival have very different stock in the category of drills (e.g., the Black & Decker 12-Volt Lithium Drill/Driver mentioned earlier), the small retailer may feel a need to monitor the rival’s inventory closely in order to keep pace with sales trends on which the Big Box may more accurately identify and act. This premise also warrants additional exploration in future work.

In summary, our theory-based predictions regarding the role of product mix similarity were not in line with our findings. In the
preceding section, we offered three possible reasons (product brands, information-intensive transacting, and the role of retailer–customer relationships). And, we offered examples of why we found divergent results for the interactions involving the specific product categories of hardware and tools versus seasonal goods. We now turn to the limitations as well as future directions of this work.

Limitations of This Study

The generalizability of these findings is limited by several factors. First, our study relied on a single respondent. Though that may be appropriate for exploratory efforts, we encourage future forays to include, where possible, multiple representatives from the same firm. More specifically, and in the spirit of Lubatkin et al.’s (2006) work on the role of top management team ambidexterity in small and medium-size firms, future efforts could examine how small firm responsiveness is influenced by the nature of the small firm’s top management team.

In our design, we also did not differentiate between the stores that were members in a retail hardware trade-name organization (e.g., franchise) versus independents, or between operations that were single or multiple-unit operations. Given the extent to which buying groups figure prominently in this industry (Litz and Stewart 2000), we would encourage future efforts to explore possible relationships between small firm responsiveness and buying group membership. For example, might greater affiliation with a retail hardware trade-name (e.g., Ace Hardware) result in greater responsiveness to the trade-name organization’s initiatives and concomitantly less to the nearby Big Box? Future research could clarify such questions. Likewise, given how multiple unit operations typically require greater coordination, might some of behaviors identified here (e.g., matching prices offered by the Big Box) be more easily undertaken by single site operations?

Third, our data were also constrained insofar as it excluded customers. However, given the extent to which creating customer-perceived value (Gale 1994) is the defining challenge faced by every retailer, future research designs could include customer perceptions and trading behaviors. Such input could also advance the field’s understanding of the extent to which small firm responsiveness is related to the nature of the customer served. More to the point, some customers may be more inclined to choose products that permit direct comparison, or products that do not need information-intensive transacting, or simply not appreciate the retailer’s efforts to offer “a personal touch.” Such occurrences, we surmise, could play an important role in determining how small retailers respond to their nearby Big Box. Likewise, this study also overlooked at least one other possibility—that is, being in close proximity to the Big Box could actually generate a spillover effect, regardless of what products were sold. This possibility has been noted by retail location researchers (Bell 1994), particularly insofar as the Big Box might function as a quasi-retail anchor. Under such conditions, retail becomes less about what you sell than where you sell it.

Two other limitations warrant mention. First, this research is set in the retail hardware store industry—this suggests the possibility of these findings being an industry-specific artifact. Put differently, the dynamics of the retail Do-it-Yourself industry may be appreciably different from that of other competitive environs also characterized by large format domination (e.g., the book retailing industry per: Raff 2000) insofar as the nature of the products sold could have influences not contemplated here. Second, though we have made some use of longitudinal data (in this case as a 2003–2005 subsample validity check), we envision future efforts tracking multiple industries characterized by Big Box competition (e.g., retail hardware and retail bookselling) over time. Such efforts could clarify the extent to which responsiveness is industry-specific or follows more generic response patterns related to generic stages of competitor entry (e.g., Porter 1985).

A final limitation of this research is that it was exclusively focused on small retailers within a single country; future research may find value in replicating the present findings within an international sample. Given the international expansion of the two Big Boxes noted at the outset of this paper, future research could explore the role of national culture as a determinant of small firm responsiveness. Such efforts could build on efforts such as Kreiser et al.’s (2010) six-country study that assessed the relationship between national culture and entrepreneurial risk-taking and proactiveness.
Other Possibilities for Future Research

Overall, these findings suggest a number of other interesting possibilities that investigators might wish to consider exploring. For example, this study is only a partial test of the multistage process envisioned by Chen (1996), which included the action and response variable of “perceived likelihood of attack” and the outcome variable of “organizational performance” (1996: 111). Given the comprehensiveness of Chen’s conceptualization, future research could probe whether the responsiveness behaviors studied here actually contribute to small firm performance, brand management, and further, how subsequent strategy should be aligned (e.g., Berthon, Ewing, and Napoli 2007; Lamberg, Tikkanen, Nokelainen, and Suur-Inkeroinen 2009). Additionally, future research could investigate additional environmental moderators related to competitive responsiveness such as small retailers’ community involvement (Litz and Samu 2008) and, perhaps, locally based employee hiring practices. Likewise, at present, we have included an omnibus measure of responsiveness that combined seven different behaviors. The integration of these different responses belies an important possibility—namely that responsiveness is a multidimensional construct. More specifically, the relationship between responsiveness and both market commonality and product similarity might vary according to the nature of the response (e.g., “visiting the Big Box to check product prices” versus “studying the Big Box store’s flyers”). Finally, given retail’s continued evolution toward Online transacting, researchers could explore the real influence of virtual players. Whether it be full-line retailers, such as amazon.com, or hardware-specific niche competitors, such as aubuchonhardware.com, “brick-intensive” Big Boxes and small stores increasingly compete alongside “click-intensive” virtual players (Gulati and Garino 2000). Given the important links between industry structure, competitive strategy, and firm performance, what do such changes mean? In short, do small hardware stores, such as those surveyed here, respond to cyber competitors differently than physical ones?

Conclusion

The present research establishes market commonality and product mix similarity as two potential drivers of competitive responsiveness for small retailers. Furthermore, the interaction of market commonality and product mix similarity on the outcome of competitive responsiveness hints at the potentially fruitful exploration of additional moderators in the competitive dynamics literature related to responsiveness. Building on this initial line of inquiry, increased research may identify ways in which smaller retailers can respond adaptively to the competitive rivalry resulting from the entry of a large-format retailer. Accordingly, we hope that future research might continue to examine the competitive rivalry between small retailers and large-format retailers, which will increasingly characterize the retail marketplace of the 21st century.

References


