

Know Thy Enemy: A Review and Agenda for Research on Competitor Identification

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Competitor identification, a core element of competitive dynamics, has been of long-standing interest to researchers in management and related disciplines. This broad interest has resulted in various definitions and conceptualizations of competitor identification as well as various approaches to studying it, which impairs the integration of existing knowledge aimed at answering vital questions regarding its nature, processes, and implications. To help researchers confront the complexities underlying this phenomenon, we identify, review, and organize theory and research on competitor identification across the management, marketing, and industrial organization economics disciplines. Based on our review, we organize the identified literature into four perspectives on competitor identification labeled as industry-oriented, strategic groups-oriented, manager-oriented, and customer-oriented. For each of these perspectives, we also identify major research streams and these streams' foci and contributions. Building on our review, we propose an agenda for future management research that addresses both unresolved debates in the reviewed literature and identifies new promising connections between competitor identification and specific areas of management theory and research. We organize this future research agenda into six main themes focusing on exploring the dynamics of competitor identification, building connections to research on interorganizational relations, building a practice and process perspective, expanding micro-oriented approaches, and exploring international and entrepreneurial dimensions of competitor identification.

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If you know the enemy and know yourself, you need not fear the result of a hundred battles. If you know yourself but not the enemy, for every victory gained you will also suffer a defeat.

—Sun Tzu

Coping with rivalry among firms is a fundamental aspect of management and of firms' strategies; hence, competitive analysis and dynamics have been vital areas of management research (Chen & Miller, 2012; Ketchen, Snow, & Hoover, 2004; Porter, 1998). Echoing Sun Tzu's ancient observations on strategy in military affairs, identifying competitors is an essential component of competitive analysis and thus of strategy formulation and implementation (Bergen & Peteraf, 2002; DeSarbo, Grewal, & Wind, 2006; Zajac & Bazerman, 1991). Hence, competitor identification has sustained research across several business disciplines, including management, marketing, and industrial organization (IO) economics (Chen, 1996; Thomas & Pollock, 1999).

Although competitor identification may appear to be an intuitive phenomenon with a lay meaning and simplicity, a review of the literature quickly contradicts this assumption by revealing various definitions and conceptualizations of competitor identification as well as various approaches to studying it that have emerged across disciplines (e.g., Barney & Hoskisson, 1990; Chen, 1996; Peteraf & Bergen, 2003; Wu & Olk, 2014). This range of conceptualizations and approaches impairs the integration of existing knowledge aimed at answering vital questions regarding the nature, processes, and implications of competitor identification. Therefore, a comprehensive review and organization of the literature is needed to help management scholars to confront the underlying complexities of this phenomenon.

The purpose of this article is twofold. First, we identify, review, and organize theoretical and empirical research on competitor identification across business disciplines to capture its diversity, contributions, and limitations.¹ Second, building on our review, we propose an agenda for future research on competitor identification. Accordingly, our article is structured as follows. In the first main section, we illustrate different conceptualizations of competitor identification and their respective emphases to outline the scope of our review, discuss how we identified articles to include in our review, and provide a detailed description of our review procedures. In the second main section, we organize the reviewed literature into four perspectives on competitor identification that we label as industry-oriented, strategic groups-oriented, manager-oriented, and customer-oriented. For each of these perspectives, we also identify major research streams and these streams' foci and contributions. In the third main part of the article, we build on our review to propose an agenda for future management research that addresses both unresolved debates in the reviewed literature and identifies promising new connections between competitor identification and specific areas of management theory and research. We organize this future research agenda into six main themes focusing on exploring the dynamics of competitor identification, building connections to research on interorganizational relations, expanding micro-oriented approaches, building a practice and process perspective, and exploring international and entrepreneurial aspects of competitor identification.

Review Scope and Procedures

Given our review's purpose to identify, review, and organize a dispersed body of literature, similar to other reviews (Lange, Lee, & Dai, 2011; Wassmer, 2010), we began by surveying the literature for different conceptualizations of competitor identification to establish our review's scope and identified a diverse set of conceptualizations rooted in different theoretical and disciplinary priorities and emphases. We compared and contrasted these different conceptualizations, which revealed that even though they all are about how competitors are identified and are concerned with answering the question "who competes with whom," they also entail several different emphases capturing different dimensions of competitor identification (see Table 1). Specifically, as we illustrate in Table 1, competitor identification has been variously conceptualized as setting competitive boundaries based on product or geographic markets (Fraser & Bradford, 1983; Philips & Thisse, 1982) or as identifying groups of firms based on customer preferences (Cooper & Inoue, 1996), on relative similarities among sets of firms (Barney & Hoskisson, 1990; Peteraf & Bergen, 2003), and/or on managers' cognitions (Reger & Huff, 1993). Additionally, some definitions may emphasize how researchers identify competitors for purposes of analyses (e.g., McGee, Thomas, & Pruett, 1995; Peng & Liang, 2016), whereas others may emphasize how firms and their management identify competitors to make decisions (e.g., Porac, Thomas, Wilson, Paton, & Kanfer, 1995).

These different emphases may be informed by disciplines' theoretical commitments. Specifically, IO economics scholars may consider competitor identification primarily important for studying the evolution of industries and their boundaries (Porter, 1983) and focus on product and geographic markets; marketing researchers may view this phenomenon primarily in terms of how it relates to developing, pricing, promoting, and positioning products and services (Cooper & Inoue, 1996) and focus on customer preferences; and management researchers may relate competitor identification to how firms attain and sustain competitive advantages (McGee et al., 1995; Peteraf & Bergen, 2003) and focus on firm attributes and on firms' managers.

Procedures to Identify Articles for Review

Not surprisingly, despite some overlap across definitions and disciplines, these different conceptualizations yielded a diverse range of theoretical and empirical contributions. To construct the sample of articles for our review, we closely followed procedures used by other reviews of research on similarly complex phenomena (Ireland & Webb, 2007; Shepherd, Williams, & Patzelt, 2015; Short, Ketchen, Shook, & Ireland, 2010). This involved identifying a set of keywords that encompass the different aspects of research on competitor identification across disciplines. To identify these keywords, we built on our evaluation of the different conceptualizations discussed above as well as on previous reviews (Barney & Hoskisson, 1990; Cooper & Inoue, 1996; Hodgkinson, 1997; Kaplan, 2011; Thomas & Pollock, 1999) and other prominent articles (e.g., Bergen & Peteraf, 2002; Chen, 1996; Clark & Montgomery, 1999).

The resulting list of keywords included *competitor identification*, *competitive analysis*, *strategic groups*, *cognitive maps*, *cognitive identification*, *environmental scanning*, *managerial mental models*, *competitive market structure*, *differentiator*, *substitutor*, *indirect competitor*, *direct competitor*, *potential entrant*, *market definition*, *competitive landscape*, and *spatial*

Table 1
Examples of Conceptualizations of Competitor Identification and Their Key Emphases

Source	Definition	Key Emphases			
		Markets or Products	Customers	Firm Attributes	Managers
Weitz, 1985: 229	Competitor identification results from identifying market boundaries based on similarities in customer needs; firms competing within those boundaries are identified as competitors.	✓	✓		
Brooks, 1995: 535; Burt, 1988: 358	Firms are competitors to the extent that they have common customers and suppliers as well as similar products.	✓	✓		
Cooper & Inoue, 1996: 293	Competitors are identified based on "the preference structure of each customer segment."		✓		
Day, 1981: 288	Direct and potential competitors are identified based both on a firm's resources and on the customer needs it serves.		✓	✓	
McGee et al., 1995: 257	Competitors are identified by grouping firms that share similar assets, strengths, and competences.			✓	
Peng & Liang, 2016: 1899	Competitors are identified based on a combination of similarities in capabilities and in market communalities.	✓		✓	
Smith et al., 1997: 149	Competitors are identified as groups of "companies with similar resource endowments whose competitors, actions, and results are relevant to each other."			✓	
Thomas & Pollock, 1999: 128	Competitors are identified by grouping firms based on their networks of relationships with rivals, suppliers, and customers, or based on personal networks of managers.		✓	✓	✓
Porac et al., 1995: 204	Firms are identified as competitors "when one firm orients toward another and considers the actions and characteristics of the other in business decisions, with the goal of achieving a commercial advantage over the other."			✓	✓
Reger & Huff, 1993: 103	Competitors are identified based on managers' shared "perceptions about strategic communalities among firms."			✓	✓

competition. Following common practice (e.g., Piazza & Castelluci, 2014; Zott, Amit, & Massa, 2011), we searched the Business Source Complete (EBSCO) database using these keywords to identify articles on competitor identification published in journals indexed in Thomson Reuters' Web of Science. To retrieve all relevant articles for singular and plural versions of our keywords, we applied the truncation function (similar to Combs, Ketchen, Shook, & Short, 2011; and Shepherd et al., 2015); and to target our search we paired keywords reflecting broader research streams (i.e., potential entrant, market definition, competitive landscape, spatial competition) with the search term *competitor*. We also consulted experts from marketing and IO economics (as did Ireland & Webb, 2007) to ensure we included each discipline's major journals.

This initial process yielded 467 articles. Because not all articles identified through our keywords may fall within our review's scope, similar to other reviews (e.g., Combs et al., 2011; Piazza & Castelluci, 2014), we checked each article and included it in our review only if competitor identification and/or its processes were part of the article's focus. Our final sample consisted of 190 articles published between 1977 and 2015 (see Appendix A in online supplement). We attributed articles to disciplines based on journals' categorization in Thomson Reuters' Web of Science.²

Review Procedures

We closely reviewed each article's theoretical focus, research questions, findings, and contributions. In doing so, similar to others (Chen & Hirschheim, 2004; Short et al., 2010; Wassmer, 2010), we developed formal criteria to capture each article's key attributes. First, we captured its purpose, research question(s), and key concepts. Second, we identified its paradigmatic orientation. Third, we recorded whether it was empirical (if so, what methodologies were used for data collection and analysis) or nonempirical (theory or review). Fourth, we reviewed each article's key findings, contributions, and suggestions for future research.

Specifically, building on typologies of social science paradigms (Burrell & Morgan, 1979), we distinguished positivist, interpretivist, and critical paradigms (Chen & Hirschheim, 2004; Crotty, 1998). We classified an article as positivist if it formulates and tests models and/or hypotheses or if it reports research built on observations with the intent of trying to discover the true workings of this observed reality; as interpretivist if it aims to understand and describe social reality from the situated perspective of research participants; and as critical if it reports an openly ideological inquiry expressing an agenda for sociopolitical change.

We classified nonempirical articles into theory articles with a purpose of building and/or extending theory and review articles reviewing some literature or both. For empirical articles, we recorded the methodological diversity across studies because methodologies' assumptions, strengths, and limitations shape research in any area (Scandura & Williams, 2000). We distinguished empirical studies as quantitative, qualitative, or both based on the collected and analyzed data. We also distinguished common approaches to data collection: (a) archival, (b) survey, (c) field study, (d) interview, and (e) experiments.³ Moreover, we classified studies as cross-sectional if they collected or aggregated data for one time point and as longitudinal if they included data for multiple time points.

We also classified the main types of data analysis for each article, including (a) correlation analysis; (b) regression analyses including logit, probit, quantile, and hierarchical regression; (c) analyses of variance including ANOVA, MANOVA, and MANCOVA; (d) cluster analysis; (e) ethnography for field studies; (f) qualitative methodologies including multiple case studies and repertory grids for creating cognitive maps from interview data; and (g) “other” data analyses, including multidimensional scaling, data envelopment, and discriminant function analysis. Finally, we distinguished articles that tested hypotheses or propositions and model formulation articles that developed and empirically tested formal models.

We assessed interrater reliability of our classification by randomly drawing and coding about 10% of the sample. Both authors independently coded half of this sample, and interrater reliability exceeded .80 for all coding areas. We then discussed all differences until we agreed and adjusted our coding based on this consensus. Thereafter we coded the rest of the random sample, and the lowest interrater reliability for any category increased to .93. The first author then classified all studies and marked any coding instances perceived as difficult (all of which were about inclusion and/or paradigms); these were independently coded by the second author, and any remaining disagreements were resolved through discussion. We also drew a second random sample of similar size that was independently coded by a colleague after being instructed by the first author. Interrater reliability exceeded .85 for all categories.

Four Perspectives on Competitor Identification

In this section, we organize the reviewed literature into four theoretical perspectives and map out differences between them. We begin with noting a few overall characteristics of the reviewed sample of articles (for a summary of these characteristics, see Appendix B in the online supplement). Overall, management articles account for about two-thirds of our sample, with the remainder falling into the marketing or IO economics. Also, a large majority of articles is informed by positivism (while none are informed by the critical paradigm), representing mostly quantitative empirical studies. Most empirical studies collected cross-sectional data from archival sources followed by survey or interview data. As regards methods for data analysis, various forms of regression, analyses of variance, and cluster analysis were most common, whereas qualitative methods were relatively uncommon.

In organizing the reviewed literature, we were inspired by seminal work that mapped the diversity of strategic management theory and research into major schools of thought and captured their diverse disciplinary, epistemological and methodological commitments (Mintzberg, 1990; Whittington, 2001). We used an organizing framework based on a set of diagnostic questions to identify four distinct perspectives on competitor identification and to map out key differences of these different approaches (see Table 2). These four perspectives broadly capture the diversity of approaches regarding nature, definition, processes, and outcomes of competitor identification. We label these perspectives based on their different foci, i.e., on an understanding of competition anchored in industries (*industry-oriented*), on groups of competitors within industries (*strategic groups-oriented*), on the role of managers' cognition (*manager-oriented*), or on customer preferences (*customer-oriented*) as key to competitor identification. In the following sections, we discuss the key aspects of each of these perspectives.

Table 2
Perspectives on Competitor Identification: An Organizing Framework

	Industry-Oriented Perspective	Strategic Groups-Oriented Perspective	Manager-Oriented Perspective	Customer-Oriented Perspective
Key theoretical issues				
When are firms competitors?	All firms in an industry are competitors	Firms are competitors if they hold similar strategic positions in their industry	Firms are competitors if their managers identify them as competitors	Firms are competitors if potential customers regard their products as competing to satisfy the same needs
How are competitors identified?	By analyzing industries regarding their product market-related attributes as well as their geographic location to establish industry boundaries	By analyzing firms' similarities and differences in terms of key resources, capabilities, strategies and/or environmental characteristics	By analyzing managers' interpretations of their competitive environment and of strategic commonalities of firms in it	By analyzing customers' evaluations of available products and services related to their needs and preferences
What is the main focus of analysis?	An industry and its boundaries	Groups of firms in relatively similar strategic positions, i.e. "strategic groups"	Managers and their interpretations of other firms	Customers and their evaluations of products and services that satisfy certain needs
What are primary theoretical interests?	What shapes competition in an industry starting with the identification of competitors to explain performance differences across industries	Groups of relatively close competitors in an industry Determinants of membership in strategic groups	Managers' interpretations of competition How managers scan their environment to identify and learn about competitors What shapes managers' identification of competitors	Consumers' classification of competitors based on their products How consumers switch between products in a category leads to identification of new competitors
Key research design issues				
Based on what kind of data are competitors typically identified?	Cross-sectional and longitudinal archival industry-level data	Cross-sectional and longitudinal archival within-industry firm-level data	Cross-sectional interview and survey data on managers' perceptions and interpretations	Cross-sectional archival customer purchase data
What are typical methods for analyzing data?	Regression and cluster analysis	MANOVA, cluster-, factor-, and regression analysis	Qualitative methods, repertory grid, ANOVA, regression analysis	Multidimensional scaling, hierarchical clustering

Because the assumptions embedded in any theoretical and methodological approach shape research questions, designs, and according empirical evidence (Burrell & Morgan, 1979; Scandura & Williams, 2000), each of these four perspectives offers valuable but partial insights on competitor identification. Our organizing framework in Table 2 illustrates that none of these perspectives is “superior” to others but, rather, provides valuable insights by offering an approach to the notion of competitor identification that builds on certain assumptions. We now discuss all four perspectives in detail, noting that they are not necessarily separated by clear-cut boundaries.

The Industry-Oriented Perspective

We label the first perspective on competitor identification as *industry-oriented* because it assumes that all firms in an industry are by default competitors (Thomas & Pollock, 1999). Accordingly, its main theoretical motivation is to build on competitor identification to shed light on performance differences across industries and to explore the structures and dynamics that shape competition in an industry. The resulting research emphasized identifying competitors by analyzing product and market-related characteristics to establish industry boundaries (e.g., Bogner & Barr, 2000). Commonly defining industry boundaries based on SIC or NAICS codes, this perspective is pioneered by IO economics and marketing scholars advancing positivist approaches that empirically test formal models, mainly by collecting archival industry-specific or multi-industry data and using regression or cluster analysis (e.g., Numan & Willekens, 2012). Panel A in Table 3 summarizes the research streams associated with this perspective.

A first research stream assumes that defining the boundaries of markets is key to identifying competitors. For example, Storbacka and Nenonen (2012) investigate the centrality of market definition to identifying competitors in growing industries. This research stream also focuses on the importance of geographic market boundaries and explores how geographic proximity of competitors shapes the intensity of competition, the strategies of incumbent firms and potential entrants, and the resources and strategic priorities of these competitors, all of which are likely to impact competitor identification (Boyer, 1992; Mazzeo, 2002; Phlips & Thisse, 1982). Relatedly, in population ecology, geographic proximity has been used to identify local populations of competitors and the likelihood of potential entrants to enter these local populations (Kuilman & Li, 2006). Finally, research on competitive landscapes (an alternative term for competitive environments) focuses on how environmental changes such as socioeconomic and technological shifts may alter competitor identification (Samiee, 2008).

Relaxing the assumption that all firms in an industry are competitors resulted in a second research stream on types of competitors. One line of research distinguished direct and indirect competitors; direct competitors overlap in terms of offered products or services and in terms of targeted customer needs, while indirect competitors serve different markets and offer products that satisfy different but similar customer needs (Bergen & Peteraf, 2002; Chen, 1996). This literature has recognized that indirect competitors both may be more difficult to identify (Simmonds, 1986) and may be critical for competitive intensity and firm performance (Shelegia, 2012). Expanding these distinctions, differentiators (i.e., competitors in the industry offering similar products with unique attributes) are identified as a kind of direct competitor whereas substitutors (i.e., those offering different products with the

Table 3
Summary of Perspectives

Research Streams	Representative Topics	Theoretical/Empirical Focus	Representative Articles	Summary of Key Theoretical Arguments and Findings/Claims
Panel A: The industry-oriented perspective				
Determining characteristics of competitive environments	Market/business definition	Explores the implications of the definitions of market boundaries for identifying competitors.	Fraser & Bradford, 1983; Storbacka & Nenonen, 2012	Defining markets to define industry boundaries is based on strategic, operational, and financial choices of competitors as well as on the environment. Challenges pertaining to defining boundaries of dynamic markets and industries are identified.
	Location-based competition	Assumes product markets are bounded by geography and identifies competitors in an industry based on proximity.	Kuilman & Li, 2006; Philips & Thisse, 1982	Geographic location shapes market boundaries, intensity of competition, positions and strategies of incumbent firms or potential entrants, and thus competitor identification.
	Competitive landscapes	Focuses on implications of an industry's competitive environment (or competitive landscape) for competitor identification.	Kim & Linn, 1988; Samiee, 2008	Various changes may transform an industry's competitive landscape; competitor identification should consider these by properly (re)defining industry boundaries.
Distinguishing types of competitors	Direct versus indirect competitors	Identifies firms' direct and indirect competitors (or substitutes) in an industry.	Shelegia, 2012; Simmonds, 1986	Direct and indirect competitors in an industry can be identified based on product range and customer base; identifying these competitors is vital for firms' strategies.
	Potential entrants	Explores the competitive implications of identifying potential entrants into an industry as potential competitors.	Cato & Oki, 2012; Fershtman, 1990	Potential entrants, entry barriers, and industry attractiveness are key factors for competition in an industry. Identifying potential entrants is a key component of competitor identification.
Panel B: The strategic groups-oriented perspective				
Challenging industry homogeneity	Intermediate levels of analysis	Introduces intermediate levels of analysis between firms and industries to explore the variety of firms within an industry.	Hatten & Schendel, 1977; McGee & Thomas, 1986	Industries are not homogeneous in terms of competitors and competition. Early research identifies groups of close competitors in an industry (i.e., strategic groups).

(continued)

Table 3 (continued)

Research Streams	Representative Topics	Theoretical/Empirical Focus	Representative Articles	Summary of Key Theoretical Arguments and Findings/Claims
Identifying strategic groups and their determinants	Role of generic strategies	Explores how different generic strategies determine membership in strategic groups.	Kim & Lim, 1988	Intended generic strategies can be used to identify groups of competitors.
	Role of firm environment	Focuses on how environmental characteristics affect strategic group formation and structure.	Zúñiga-Vicente et al., 2004	Environmental characteristics are important for strategic groups and major environmental changes may alter group structures.
	Role of resources	Applies the resource-based view to advance strategic groups approach.	Mehra & Floyd, 1998	Key strategic resources can be used to differentiate firms and identify strategic groups.
Outcomes of strategic group membership	Performance implications	Investigates the link between strategic group membership and firm performance.	Cool & Schendel, 1987; Short et al., 2007	Inconsistent findings provide limited support for the effects of strategic group membership on firm performance; more intense competition with closer competitors may increase performance.
	Competitive dynamics implications	Focuses on how strategic group membership impacts competitive dynamics within and between an industry's strategic groups.	Cool & Dierckx, 1993; Mas-Ruiz et al., 2014	Rivalry within strategic groups is more intense than rivalry outside and between strategic groups.
	Relational implications	Explores whether and how strategic group membership can affect relations among firms.	Ferguson et al., 2000; García-Pont & Nohria, 2002	Members of a strategic group observe each other more closely, are more likely to become partners, and contribute to the group's reputation.
Panel C: The manager-oriented perspective				
Cognitive dimension of competition	Cognitive competitive groups	Holds that managers identify competitors based on their knowledge and perceptions of the competitive environment.	McNamara et al., 2002; Panagiotou, 2007	Based on how they interpret their environment, managers identify groups of competitors; these cognitive strategic groups are central to their decisions on how to compete and how to benchmark competitors' actions.
Environmental scanning for competitor identification	Environmental scanning, antecedents, & implications	Explores how managers scan their competitive environments and how key contextual factors including their firm's strategy impact environmental scanning.	Boyd & Fulk, 1996; Jennings & Lumpkin, 1992; May et al., 2000	Environmental scanning activities (e.g., assessing opportunities) are shaped by firms' generic strategies, industry complexity, and resource endowments. This scanning is the basis for identifying competitors depending on characteristics of the environment (e.g., uncertainty, industry type) and of firms (e.g., size, age).

(continued)

Table 3 (continued)

Research Streams	Representative Topics	Theoretical/Empirical Focus	Representative Articles	Summary of Key Theoretical Arguments and Findings/Claims
Managers' mental models	Frames of reference	Argues that managers develop frames of reference (i.e., interpretations of their firm's environment) to facilitate decision making and explores the determinants of these frames.	Calori et al., 1992; Fiol & Huff, 1992	Managers have different frames of reference for different firm needs, including identification of competitors; these frames are influenced by environmental factors (e.g., regulations, market saturation and segmentation).
	Multiple models	Theorizes that managers may have multiple cognitive maps (i.e., mental models of competitors and competition in an industry) for their competitive environment.	Combe et al., 2012; Daniels et al., 1994; Porac & Thomas, 1990	Each manager may have a diverse array of cognitive maps of their competitive environment depending on the situation they are facing; these maps are utilized to identify competitors and determine competitive actions.
Panel D: The customer-oriented perspective				
Customer-based identification of competitors—competitive market structures	Methods to identify market structures	Emphasizes development of models of how customers perceive firms' products to identify and classify competitors.	Bockenholt & Dillon, 1997; DeSarbo et al., 2006	Demonstrates how structures of competition can be identified based on customer needs and their perceptions of products based on various factors (e.g., product newness, price elasticity).
	How customers switch between competitors	Focuses on implications of brand switching behaviors as well as customer identities on competitor identification.	Dawes, 2014	Competitive market structures evolve with customers' preferences for satisfying needs; brand switching has different implications for competitive market structures in product and service industries.
	Hierarchies of competitive market structures	Theorizes that customers have hierarchies of preferences to satisfy their needs and studies these preference hierarchies to identify competitors.	DeSarbo & Soete, 1984; Kumar & Sashi, 1989	Hierarchical preferences and market characteristics can be used to identify products and services (and thereby competitors) competing to satisfy customer needs.

potential to satisfy the same customer needs) are identified as a kind of indirect competitor (Bergen & Peteraf, 2002). Additionally, some scholars have identified potential entrants to an industry (i.e., potential competitors) as vital for competitor identification (Fershtman, 1990) because their characteristics may be interrelated with incumbents' competitive strategies and market conditions (Cato & Oki, 2012).

The Strategic Groups–Oriented Perspective

The second perspective on competitor identification, which we label *strategic groups–oriented*, assumes that not all firms in an industry may compete with each other. Accordingly, it focuses on groups of firms within industries and on similarities and differences among these groups of firms as keys to competitor identification (Barney & Hoskisson, 1990; Smith, Grimm, Wally, & Young, 1997). Primary focus of this research is to identify firm characteristics that determine whether or not firms are likely to compete (e.g., firms' key resources, capabilities, size, competitive strategies), how these characteristics can be used to identify groups of relatively closely competing firms (i.e., those occupying similar strategic positions or competing in the same industry niches), and what outcomes are linked to membership in such groups (Chen, 1996; McGee & Thomas, 1986; Peng & Liang, 2016; Thomas & Venkatraman, 1988).

Contributions to this perspective mainly stem from management and IO economics and largely are positivist quantitative studies to identify groups of competitors (e.g., Cool & Shendel, 1987; Short, Ketchen, Palmer, & Hult, 2007) using mostly (cross-sectional and longitudinal) archival data for industries such as airline, finance, or automotive and using cluster analysis, mean comparisons, or regression analysis (e.g., Garcia-Pont & Nohria, 2002). We summarize the research streams produced by this perspective in Panel B of Table 3.

A first research stream challenged the assumption of intra-industry homogeneity and aimed to identify groups of closely competing firms (i.e., strategic groups) within industries (McGee & Thomas, 1986). Building on these insights and assuming that firms primarily compete with similar others in their industry, a second research stream emphasizes identifying competitors by defining groups of firms that share certain characteristics (Thomas & Pollock, 1999). This stream focuses on characteristics of firms' strategies, resources, and environmental features to determine strategic group membership (Mehra & Floyd, 1998). Because their structure and boundaries are ambiguous (Barney & Hoskisson, 1990; Ketchen et al., 2004), researchers applied various approaches to identify strategic groups. An early example is Amel and Rhoades's (1988) study of strategic groups in the U.S. banking sector using cluster analysis, whereas a more recent example is a study by DeSarbo et al. (2009) that used multidimensional scaling to identify strategic groups and to follow their evolution also in the U.S. banking sector.

The third research stream in this perspective concerns key outcomes of strategic group membership, including firm performance, competitive intensity, and firm entry and exit. Because strategic groups and firms' strategies in these groups evolve based on these outcomes, they are also central to competitor identification (DeSarbo, Grewal, & Wang, 2009). For example, Cool and colleagues (Cool & Dierickx, 1993; Cool & Schendel, 1987) found that intensity of rivalry among competitors and level of firm performance within strategic groups differ significantly from that in their industry overall. Similarly, a recent study by Mas-Ruiz et al. (2014) showed that firm size affects the type and intensity of rivalry within

and between strategic groups. Other outcomes of strategic group membership that received attention include cooperative relationships (Garcia-Pont & Nohria, 2002) and reputation (Ferguson, Deephouse, & Ferguson, 2000). Finally, some scholars emphasized that differences between strategic groups may in part be explained by the evolution of a shared identity among member firms (Peteraf & Shanley, 1997).

The Manager-Oriented Perspective

The third perspective, which we label as *manager-oriented*, emphasizes the importance of understanding how managers learn about and identify other firms as competitors. Accordingly, this perspective primarily adopts a cognitive approach to study how managers identify competitors based on their perceptions of other firms and of their competitive environment. Hence, this perspective differs from both the industry- and the strategic groups-oriented perspectives' assumption that researchers can identify competitors by analyzing archival data of firms' or competitive environments' characteristics (Reger & Huff, 1993).

The manager-oriented perspective falls squarely within the management discipline, and it is paradigmatically and methodologically more diverse than the other perspectives. Also, due to challenges of studying cognitive concepts empirically, theoretical contributions are common (e.g., Fiol & Huff, 1992; Peteraf & Bergen, 2003). Empirical studies are mainly informed by an interpretivist lens (e.g., Calori, Johnson, & Sarnin, 1992; Daniels, Johnson, & de Chernatony, 1994) and mainly rely on qualitative methods and interview data to explore how managers' cognitive maps are linked to competitor identification and how these cognitive maps adapt and change (e.g., Boari, Odorici, & Zamarian, 2003; Reger & Huff, 1993). We identified three major research streams in this perspective, which we summarize in Panel C of Table 3.

A first research stream integrates research on managerial cognition and on strategic groups and highlights that managers develop cognitive maps of their environment to focus on groups of competitors and that they benchmark their firms against these groups to make and support decisions (Panagiotou, 2007; Reger & Huff, 1993). This stream also explores how both firms' resources and social environments (e.g., Ginsberg, 1994) may shape managers' cognitive maps. A second research stream focuses on how organizational and contextual factors (e.g., uncertainty, industry type, or firm size) affect how managers scan their environment to identify competitors and how these activities are shaped by managers' cognitions (Jennings & Lumpkin, 1992; May, Stewart, & Sweo, 2000). For instance, Boyd and Fulk (1996) studied how managers' perceptions of environmental uncertainty affect decisions underlying environmental scanning.

A third research stream focuses on how managers develop multiple situation-specific cognitive maps of their competitive environments and how they use these cognitive maps to identify competitors (e.g., Daniels et al., 1994; Porac & Thomas, 1990). For example, Porac and colleagues (1989) found that managers in the Scottish knitwear industry acted upon cognitive maps of their industry that constrained their focus and their responses to certain competitive threats. Related research studied how managers develop geographically bounded mental models of competition that inform their decisions (Combe, Rudd, Leeflang, & Greenley, 2012), how they compare competitors using cognitive reference maps (Calori et al., 1992), and how teams of top managers reconcile multiple cognitive maps (Fiol & Huff, 1992).

Finally, we note that Bergen and Peteraf (2002) and Peteraf and Bergen (2003) worked towards a conceptual integration of the manager-oriented and customer-oriented perspectives. Arguing that cognitive limitations may impair managers to accurately recognize competitive threats, particularly those originating from indirect or potential competitors, they emphasized the need for a framework for identifying competitors based both on customer demand and managers' cognitions.

The Customer-Oriented Perspective

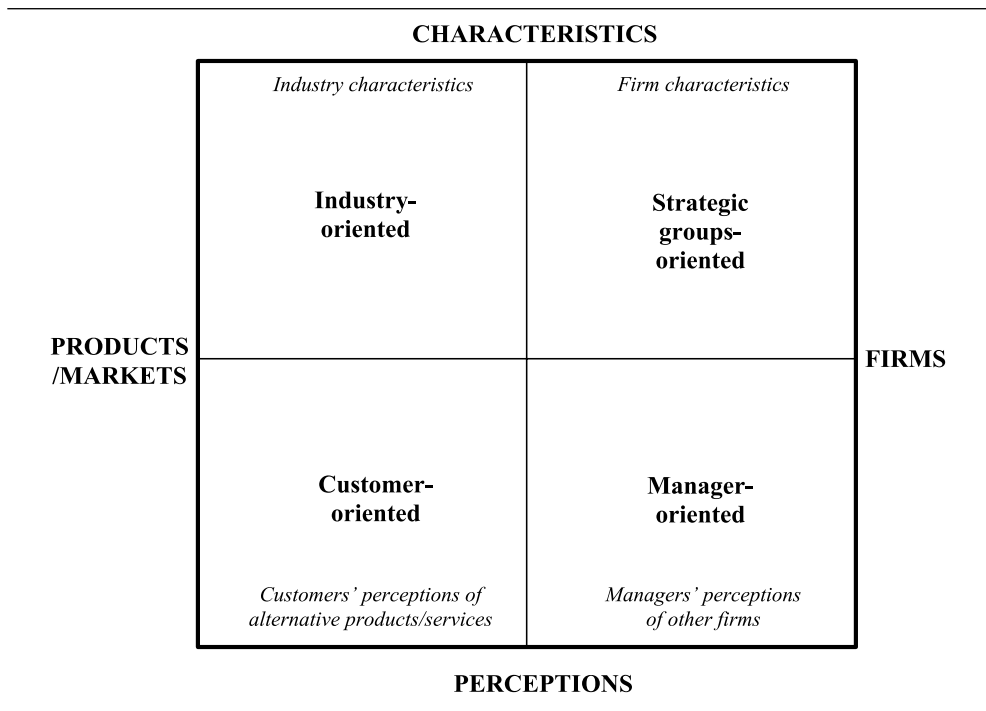
We label the fourth identified perspective on competitor identification *customer-oriented* because the research it covers starts from the premise that because firms ultimately compete for satisfying customer needs, customers' perceptions, preferences, and decisions are key to competitor identification (Day, Shocker, & Srivastava, 1979; Eliashberg & Chatterjee, 1985). Accordingly, this research focuses on analyzing customers' perceptions of alternative products and services that fit their preferences as the basis for identifying groups of close competitors in a product market (referred to in this literature as competitive market structures) (Cooper & Inoue, 1996; Weitz, 1985). This perspective is largely the domain of marketing scholars, who explore competitive market structures primarily through positivist and quantitative empirical research designs using cross-sectional archival customer purchase data regarding product markets such as automobiles, soft drinks, or coffee (e.g., DeSarbo et al., 2006; Kumar & Sashi, 1989). The customer-oriented perspective comprises a relatively modest number of studies, and its main research topics can be subsumed under a single research stream with the primary focus on identifying an industry's competitive market structures by utilizing different types of customer-based data and/or by advancing the methods used to identify them (see Panel D in Table 3).

A first key topic is to advance methodological approaches for identifying competitors based on how they satisfy customer needs in a product market and for how changes in customer preferences affect this competitor identification. For example, Bockenholt and Dillon (1997) introduced a pretest market model to identify competitors based on customer preferences. Another more recent approach explores how to model asymmetries in identifying different competitors for individual firms by distinguishing situations in which Firm A might compete with Firm B, while Firm B might not compete with Firm A (DeSarbo et al., 2006).

A second key topic explores how analyses of customers' brand-switching behaviors captured by customer purchase data can inform competitor identification (DeSarbo & de Soete, 1984). For example, Dawes (2014) studied brand switching behaviors to identify groups of competing firms as well as these behaviors' implications for competitive intensity. A third topic in this research stream takes yet another approach to defining competitive market structures, which uses sequential grouping of firms based on distinct product-related attributes to identify competitors. For example, Kumar and Sashi (1989) identify closely competing products in the nonalcoholic beverage industry first based on product-related attributes (diet vs. nondiet) and then based on respondents' choice of flavor (cola vs. noncola).

We also note a few individual articles' contributions. To begin with, recent research started to explore how to collect and analyze social media data, including product information disclosed by firms or data about customer preferences, to identify competitors (He, Zha, & Li, 2013). Along different lines, an experimental study by Chernev and colleagues (2011) finds that firms whose products satisfy needs linked to certain customer identities

Figure 1
Organizing the Perspectives on Competitor Identification



may be competitors even when they operate in different product markets, thereby showing how customer identities may be used to identify indirect competitors. Finally, Clark and Montgomery (1999) argued that managers tend to focus on firm attributes while neglecting customer preferences and accordingly proposed a theoretical model to integrate the customer- and manager-oriented perspectives.

Multiple Dimensions of Competitor Identification Research—Organizing the Perspectives

Inspired by seminal work to map the diversity of perspectives in strategic management theory and research (Mintzberg, 1990; Whittington, 2001), above we have organized the literature into four complementary perspectives on competitor identification to capture the range of approaches to conceptualize and study this phenomenon. This is important because these perspectives build on different assumptions and theoretical commitments and accordingly emphasize different dimensions of competitor identification. In Figure 1, we organize the four perspectives and highlight their complementary nature by illustrating that each of the different perspectives explores different and complementary facets of competitor identification.

To begin with, the industry-oriented and customer-oriented perspectives broadly focus on products and/or markets to identify competitors, whereas the strategic groups-oriented and

manager-oriented perspectives do so by focusing on firms. By the same token, the industry-oriented and the strategic groups-oriented perspectives focus on identifying competitors by delineating characteristics of either industries or firms, while the customer-oriented and the manager-oriented perspectives do so by focusing on capturing perceptions of managers or of customers, respectively. Thus, collectively these perspectives suggest that both tangible characteristics of structures and boundaries of product markets as well as of firms matter for competitor identification, as do the perceptions of managers and of customers. Also, while it is unlikely for any individual study to integrate all dimensions, a few prior examples have shown that acknowledging and incorporating more than one dimension may help researchers to tap into complementarities among dimensions and thereby facilitate new theoretical and empirical insights (Bergen & Peteraf, 2002; Clark & Montgomery, 1999; McNamara, Luce, & Thompson, 2002; Wu & Olk, 2014). Organizing the perspectives along these dimensions also provides a basis for future management research informed by a range of theoretical and methodological commitments to contribute to advancing our understanding of competitor identification.

Charting a Way Forward: Promising Directions for Future Management Research on Competitor Identification

In this section, we build on our review and propose an agenda for future research on competitor identification that reflects a broad range of theoretical and methodological diversity and is informed by two major considerations. First, we highlight how future research may address unresolved debates and research questions identified in our review. Second, following Short's (2009) recommendation that building bridges between a review topic and other research areas, particularly bridges that span divisions between macroperspectives and microperspectives and different methodological traditions, can be conducive to spurring new theoretical and empirical insights, we identify promising new connections between competitor identification and specific areas of management theory and research. Based on these considerations, we organize our agenda for future research into six themes: (a) exploring the dynamics of competitor identification; (b) drawing connections to research on interorganizational relations; (c) expanding micro-oriented approaches; (d) building a practice and process perspective; and (e) exploring the international and (f) the entrepreneurial dimensions of competitor identification (for an overview, see Table 4). By illustrating promising new research directions in this manner, we hope to inspire scholars to both directly build on previous research to address unresolved questions and to make further connections between competitor identification and their respective areas of interest.

Dynamics of Competitor Identification

Our review indicates that all four perspectives have fallen short of addressing dynamics of competitor identification, which is important considering the dynamic nature of competition (Chen & Miller, 2012; Ketchen et al., 2004). Indeed, the limited attention to the dynamism of competitor identification in relation to environmental changes were noted across perspectives. For example, the industry-oriented perspective has not addressed how major environmental changes transform market boundaries (Bogner & Barr, 2000) or how they may impact

Table 4
An Agenda for Future Research on Competitor Identification

Theme 1: The Dynamics of Competitor Identification

- How do definitions of market boundaries change in response to environmental changes?
- How do strategic groups evolve over time, including after major environmental changes?
- How do changes in strategic group identity and in associated outcomes such as strategic group reputation impact identification of competitors?
- How do managers' cognitive maps of competitors change over time as firms' environment change?
- When and why might managers fail to identify new competitors in changing environments (competitive blind spots)?
- How may environmental changes alter customer perceptions, and how may firms track these changes to identify competitors?

Theme 2: Competitor Identification and Interorganizational Relations

- What are the implications of regional industry clusters for competitor identification?
- How do local institutions in regional clusters impact competitor identification?
- How may the structural properties of interorganizational networks be related to identification of competitors?
- How may managers' social relations and their ego-networks impact competitor identification?
- How do firms identify their cooperators?
- What may be similarities and differences between competitor and cooperator identification, and can such comparisons contribute to our understanding of cooperation?

Theme 3: Micro-Oriented Approaches to Competitor Identification

- How do managers' individual attributes affect how and whom they identify as their firms' competitors?
- What if any role do managers' perceptions of interactional justice play in competitor identification?
- What role if any do managers' emotions, such as managerial envy, play in competitor identification?
- How do firms with different organizational cultures approach competitor identification?
- What are the microfoundations of competitor identification and how do individual-level cognitions, emotions, and actions aggregate to firm-level routines, capabilities, and actions of identifying competitors?

Theme 4: Processes and Practices of Competitor Identification

- How do firms learn to identify their competitors, and what kinds of routines do they develop for this purpose?
- How does reaching or failing to reach aspirations shape firms' routine or nonroutine efforts of competitor identification?
- Viewing strategy as practice, what are key elements (practitioners, praxis, and practices) of competitor identification? What is the role of middle managers and of consultants as strategy practitioners for competitor identification?

Theme 5: International Aspects of Competitor Identification

- Under what conditions, to what extent, and how do managers go beyond their domestic arena when identifying competitors?
- Are there any differences in how multinational corporations (MNCs) identify competitors they compete with globally versus in individual countries?
- How are competitor identification responsibilities distributed between MNCs' headquarters and subsidiaries?
- What is the role of expatriate managers in MNCs' identification of competitors?
- Do expatriates and their host country counterparts differ in how they identify competitors, and are any such differences related to cultural differences between expatriates' home and host countries?
- How do institutional and/or cultural dimensions shape competitor identification in different national contexts?
- Do the importance, interpretations, and actual practices of competitor identification differ across countries?
- What if any are the links between competitor identification and firms' decisions to enter a country and their mode of entry?

Theme 6: Competitor Identification in Entrepreneurial Contexts

- How do individual characteristics of entrepreneurs impact competitor identification of startups?
 - How is competitor identification linked to entrepreneurial firms' opportunity recognition and exploitation?
 - Do new ventures' innovation strategies (radical versus incremental) matter for the identification of direct, indirect, and potential competitors?
 - Does competitor identification impact a startup's potential to secure venture capital?
 - How do entrepreneurs demonstrate competencies to identify their venture's competitors to venture capital firms?
 - How do social entrepreneurs identify competitors in comparison to commercial entrepreneurs?
 - What is the role of competitor identification in franchising, i.e., for franchisors, franchisees, and the relations between them?
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the relative importance of different types of competitors (Bergen & Peteraf, 2002; Samiee, 2008). Relatedly, the strategic groups-oriented perspective has fallen short of exploring the evolution of strategic groups (Ketchen et al., 2004; Thomas & Pollock, 1999), whereas the

manager-oriented perspective includes only limited research on the dynamics of managers' cognitive maps of competitors during times of major organizational or environmental changes (Kaplan, 2011; Zúñiga-Vicente, Fuente-Sabate, & Rodriguez-Puerta, 2004). Finally, the customer-oriented perspective has not settled how major technological or environmental shifts may influence customer preferences and thereby competitive market structures. Hence, our research agenda's first theme suggests opportunities to study potential dynamics of competitor identification.

To begin with, more research is needed to link competitor identification and environmental change. For example, research could explore whether and how definitions of market boundaries and thus competitor identification change due to technological or environmental shifts. This would involve tracking changes in defining market characteristics by analyzing dynamics in product features and trends in customer demands to identify direct and indirect competitors (e.g., potential entrants and substitutors that may emerge due to such changes). Research on strategic groups could be extended towards longitudinal studies on the dynamics of strategic groups and of firms' membership in them. This research could build on recent studies exploring the dynamics within and between strategic groups (DeSarbo et al., 2009; Mas-Ruiz, Ruiz-Moreno, & Martinez, 2014) and analyze longitudinal data on firm, strategic group, and industry-level attributes using hierarchical linear modeling (see Short et al., 2007). Research on strategic group dynamics could also build on studies of strategic groups' identity (Peteraf & Shanley, 1997) to explore how changes in this identity and in associated outcomes such as strategic group reputation (Ferguson et al., 2000) may impact competitor identification. Research in this vein could study managers' perceptions of the evolution of strategic groups' identities by collecting archival data such as annual reports and letters to shareholders or interview data from managers and analyzing this data using research designs to explore managers' cognitive maps involving causal mapping or the repertory grid technique (e.g., Reger & Huff, 1993).

Also, the manager-oriented perspective could be expanded by building on research noting that managers' cognitive maps may change (Boari et al., 2003; Reger & Huff, 1993) towards developing a dynamic perspective. For example, while potentially challenging, longitudinal qualitative designs inspired by Leblebici and colleagues (1991) would be well-suited to explore how managers' interpretive processes of competitors may unfold over time as their firms' environments change. These authors' findings showed how shifts in institutional conventions underlying the economic viability of the U.S. Radio Industry also changed the definitions of competition for resources deemed necessary for success, which implies that these institutional dynamics likely altered how firms identified their competitors. Another opportunity for extending the manager-oriented perspective towards a dynamic perspective is to study the potential role of managers' competitive blind spots (i.e., inadequate interpretations of the competitive environment; Zajac & Bazerman, 1991) for competitor identification. Interpretivist case study research designs focusing on firms that overlooked or misinterpreted competitive threats due to such blind spots could enrich our understanding of competitor identification by providing insights into the processes preceding and following these misinterpretations.

Finally, a focus on the dynamics of competitor identification could also build on Bergen and Peteraf (2002, 2003) to integrate the manager-oriented and customer-oriented perspectives to understand how major technological and social-cultural shifts may alter customers'

and managers' perceptions of putative competitors. This research could build on the customer-oriented perspective's contributions to analyze customers' perceptions underlying market structures to track the evolution of customer preferences following such changes. Concurrently, it could build on the manager-oriented perspective's focus on managerial cognition and study whether and how managers consider changes in customers' behaviors in identifying competitors.

Competitor Identification and Interorganizational Relations

Our research agenda's second theme focuses on establishing particularly promising connections between research on competitor identification and on interorganizational relations. To begin with, it is well established that regional industry clusters are vital for understanding competition (McCann & Folta, 2008) and that interorganizational relations tend to be amplified in these clusters because firms can more easily observe each other's actions (Boari et al., 2003). Thus, more research is needed to more deeply connect research on industry clusters and on competitor identification. For example, considering the importance of local competition (McCann & Folta, 2008) and of strategic similarities among local competitors (Mazzeo, 2002), research building on the manager-oriented perspective could study whether and how managers identify other firms in their cluster as direct, indirect, and potential competitors. Relatedly, local institutions such as local government agencies and industry associations are influential in shaping competition within a geographic industry cluster (Boari et al., 2003; Porter, 1998). Therefore, research that not only studies the perspective of managers but also extends to studying the views of representatives of these institutions could help to shed light on whether and how firms in a cluster identify one another as competitors. Specifically, interpretivist approaches using qualitative methodologies collecting data on shared interpretations of competition from managers as well as from the representatives of key local institutions such as local government agencies, industry associations, and universities would be a good fit for this type of research.

Given the importance of networks for the flow of resources among firms (Thomas & Pollock, 1999), research could also draw on network approaches (Borgatti & Foster, 2003) to link competitor identification to interorganizational networks. For example, network approaches would be well-suited to explore whether and how properties of interorganizational networks such as their density, the presence of cliques or structural holes, and/or individual firms' centrality might be related to competitor identification. Relatedly, because business relationships are altered when they are embedded in social relationships (Borgatti & Foster, 2003: 995), utilizing social network research designs could facilitate exploring the implications of managers' social networks and their ties with key stakeholders for competitor identification. Research along these lines could engage an ego-level network perspective (Zaheer, Gozubuyuk, & Milanov, 2010) to study whether and how structural properties of managers' ego-networks, that is, of their social connections to other actors in the industry, may be linked to competitor identification. An ego-network approach is well-suited to blend network theory and methods with conventional methods of collecting and analyzing data from individuals (Borgatti & Foster, 2003: 992). Inspired by Uzzi's (1997) study of how embeddedness in social structures may impact organizational outcomes, network approaches could be complemented by interpretivist studies exploring the relational experiences

resulting from managers' involvement in interorganizational networks in their industry and whether and how these experiences impact competitor identification.

Interorganizational relations are not limited to competition but also involve cooperative relations (Lado, Boyd, & Hanlon, 1997). Thus, the literature on competitor identification could also be extended to explore how firms identify cooperators. The four perspectives on competitor identification offer different starting points for such venues. The industry-oriented perspective may lead to a focus on possible adverse effects of cooperator identification such as collusion and on the potential for cooperation among firms in different industries that may complement one another in some ways. The strategic groups-oriented perspective may group potential cooperators based on attributes such as complementary resources or strategies or based on actual past cooperation. The manager-oriented perspective may begin by exploring whether and how managers develop cognitive maps of and choose potential cooperators, including whether managers' social networks may shape decisions to identify cooperators. Finally, the customer-oriented perspective may consider how customers' evaluations of products' complementarity may help firms to identify cooperators to satisfy customer needs. Relatedly, exploring the similarities and differences between competitor and cooperator identification could contribute to research on coopetition, which aims to understand the coexistence of competitive and cooperative interactions between firms (Lado et al., 1997).

Micro-Oriented Approaches to Competitor Identification

The third theme of our research agenda revolves around our assessment that the literature on competitor identification could be fruitfully expanded by building on well-established theory and research to focus on potentially pertinent micro-level phenomena. To begin with, given considerable evidence that managers' individual attributes such as demographics, personalities, experiences, and emotions may shape how they make their firms' strategic decisions (Carpenter, Geletkanycz, & Sanders, 2004), researchers could explore how these attributes may shape how and which firms managers identify as competitors. Building on literature on personality and individual differences as well as this literature's repertoire of research designs, scholars could, for example, investigate whether managers' demographic (e.g., gender, age) or personality traits (e.g., the "Big Five") are linked to competitor identification. Similarly, building on research that has linked top management team characteristics to various organizational outcomes, future studies could investigate the implications of these characteristics for competitor identification.

Another fruitful direction could involve connecting competitor identification to research on organizational justice, which has shown that individuals' perceptions of interactional justice or how fairly they were treated in similar previous interactions are important for subsequent interactions (Colquitt, Conlon, Wesson, Porter, & Ng, 2001). Specifically, researchers could explore whether managers' perceptions of interactional justice in interorganizational relations shape how they identify their firms' competitors (and cooperators). Along similar lines, research could start exploring the potential role of managers' emotions in competitor identification by focusing on managerial envy, which refers to an emotional response to perceived advantages of rivals that motivates managers to try and obtain the same advantages (Hill & Buss, 2006: 131). A starting point could be to investigate what if any role envy plays in leading managers to pay particular attention to and accordingly identify certain (kinds of) firms as competitors.

Another promising direction would be to consider organizational culture, defined “as a complex set of values, beliefs, assumptions, and symbols that define the way in which a firm conducts its business” (Barney, 1986: 657). For example, it would be interesting to study whether and how firms with different organizational cultures approach competitor identification differently. This broad question could be tackled by combining qualitative and quantitative approaches to studying culture similar to Hofstede and colleagues (1990). These authors’ research design combined interviews to create qualitative, empathic descriptions of each studied firm’s culture with surveys that aggregate individuals’ responses to questions that assessed their perceptions of relevant work practices and values to firm-level collective cultural characteristics.

Finally, a focus on the microfoundations of strategy and on understanding how individual-level factors and interactions lead to collective organization-level outcomes (Felin, Foss, & Ployhart, 2015) is promising for competitor identification research. Specifically, research could explore how individual-level cognitions, emotions, and actions may aggregate to firm-level routines, capabilities, and actions of identifying competitors. For example, this research could build on Gavetti’s (2005) work on cognitive microfoundations of capability development by linking organizational search processes to managers’ cognitive representations of problems related to competitor identification. It could also build on Gottschalg and Zollo (2007) to explore how motivational processes may impact competitor identification. Such efforts to aggregate individual-level constructs to the firm level could build on a repertoire of research designs in the microfoundations of strategy tradition (see Felin et al., 2015: 593-596).

Practices and Processes of Competitor Identification

The fourth theme of our agenda for future research flows from our observation that while all four perspectives in their own way tackle questions of “when are firms competitors?” and “how are competitors identified?” (see Table 2), they all lack a focus on the organizational practices and processes involved in competitor identification. Therefore, these practices have largely remained uncharted territory that is ripe with research opportunities.

A first promising future direction in this domain is to integrate research on competitor identification and on organizational learning. Rooted in the behavioral theory of the firm (Cyert & March, 1964), organizational learning is concerned with how firms and their members learn from their experiences and how they interpret, store, and retrieve what they have learned (Levitt & March, 1988). This theoretical lens could provide the basis for exploring how firms learn to identify their competitors, whether and how they develop routines for this purpose, and how they cope with periods of evolutionary and revolutionary environmental changes. This research could utilize a range of research designs commonly used to study organizational learning (Tsang, 1997), including case studies, field studies, and simulations.

Relatedly, the manager-oriented perspective could be extended by adopting the emphases on routine versus nonroutine decisions and on the importance of aspirations in the behavioral theory of the firm. Specifically, Cyert and March (1964) held that firms largely operate based on established routines and revert to nonroutine decisions when they do not meet their performance aspirations, which are primarily based on their past performance and their comparison with competitors’ performance. Research could explore whether and how reaching or failing to reach aspirations shapes firms’ routine or nonroutine efforts of competitor

identification. Inspired by the customer-oriented perspective, this research could also explore whether and how companies collect, analyze, interpret, and utilize customer data to identify competitors as part of their routine decisions and their nonroutine decisions when aspirations are not met.

Building on the manager-oriented perspective in a different vein, research could explore managers' actual practices to scan the environment and to identify competitors. This research would benefit from conceptualizing strategy as a social practice—that is, as something that managers do rather than something that firms have (Whittington, 2006). It could then explore the key elements of strategy as practice: practitioners, praxis, and practices; practitioners are the actors carrying out strategy; practices are shared routines and procedures of thinking and acting; and praxis refers to actors' actual activities (Whittington, 2006: 619). Applied to competitor identification, practitioners are the actors involved in identifying competitors, for example, top and middle managers. Praxis encompasses practitioners' activities to identify competitors, for example, efforts to collect and interpret information about the firm's environment. Finally, practices refer to the "shared understandings, cultural rules, languages and procedures" (Whittington, 2006: 614) that guide the activities involved in competitor identification.

For example, a strategy as practice perspective could explore the involvement of middle managers in competitor identification, who are considered key practitioners for strategy formulation and implementation (Vaara & Whittington, 2012). Research could follow examples of strategy as practice research on middle managers (e.g., Balogun & Johnson, 2004) and adopt field study research designs to collect and analyze data from interviews with middle managers; meetings and other communication within the firm; and/or managers' diaries to study how, why, and under what conditions certain firms are identified as (potential) competitors by middle managers and what this means for their firms. Also, research could explore the potential roles of consultants, another group of strategy practitioners (Vaara & Whittington, 2012), in firms' competitor identification. This could be insightful because consultants are strategy practitioners that are external to client firms and as outsiders they may have different views on and approaches to identifying competitors that may impact client firms' competitor identification practices.

International Aspects of Competitor Identification

The fifth theme of our agenda for future research reflects our insight that despite seminal (Porac, Thomas, & Baden-Fuller, 1989) and recent (Wu & Olk, 2014) examples of research that points to the importance of international competition, a dearth of research on competitor identification has considered international and cross-national dimensions. Building on the importance of cross-national differences for understanding management phenomena established by international management theory and research, considering international aspects of competitor identification brings into focus vital phenomena not attended to by prior research.

To begin with, research exploring competitor identification in and across different international contexts could extend some of the above suggestions to tackle complexities added by an international or comparative perspective. For example, this could involve distinguishing whether, under what conditions, to what extent, and how managers go beyond their domestic arena when identifying competitors. Studies along these lines could extend the work by Porac and colleagues (1989), who in their study's setting found that managers

focused on identifying domestic competitors and considered those somewhat sheltered from international competitors.

Also, connecting competitor identification with research focused on multinational corporations (MNCs) is promising. For example, research could investigate how MNCs identify competitors they compete with globally versus those they compete with only in individual countries. Another example regards exploring how managers at MNCs' headquarter versus subsidiary levels scan their domestic and international environments to identify direct and indirect competitors. Research in this vein could also explore how competitor identification and the flow of requisite information are organized between MNC headquarters and subsidiaries. Relatedly, because expatriate managers are frequently assigned to controlling positions of MNCs' local subsidiaries and are thus vital for MNCs' international operations, it would be beneficial to explore the role of expatriates in competitor identification. For example, research could study whether and how subsidiaries' expatriates and their local counterparts differ in how they identify competitors and if so, whether these differences are related to cultural differences between expatriates' home and host countries.

Comparative research to identify similarities and differences in competitor identification across countries and whether these are related to institutional and/or cultural characteristics constitutes another yet uncharted territory. A comparative tradition assumes that economic activity is embedded in socially constructed systems of national institutions and functions based on shared interpretations of social actors; thus, systematic comparative analyses of organizational phenomena across societies are vital (Fligstein & Freeland, 1995). In this tradition, firms' relations to competitors are shaped by explicit or implicit social understandings about how business is to be carried out and what form competition will take in a respective environment (Fligstein & Freeland, 1995), which implies that competitor identification should be shaped by these social understandings. Cross-national comparative studies could also take a strategy as practice perspective that focuses on identifying cross-national differences in the roles and relative importance of practices, praxis, and practitioners of competitor identification.

A final promising direction for extending the competitor identification literature into international contexts concerns exploring potential links between competitor identification and entry mode decisions. Assuming that the identification of competitors should precede decisions of whether to enter a country and if so by what mode (e.g., strategic alliances, joint ventures, acquisitions), future theory and research in this domain could explicitly incorporate competitor identification as a potential key antecedent of firms' decisions to enter international markets.

Entrepreneurial Dimension of Competitor Identification

Our review also indicates that there is a dearth of research on competitor identification in the context of entrepreneurial firms. Entrepreneurial contexts likely involve unique challenges and dynamics pertaining to competitor identification and making connections to the burgeoning field of entrepreneurship research brings into focus yet another set of vital phenomena and research questions not attended to by prior research. To begin with, assuming that in startup companies competitors are identified mainly by their founders, some of the micro-oriented suggestions for future research discussed above should also be extended to

entrepreneurial firms. To give an example, research could build on insights regarding the impact of individual characteristics of entrepreneurs (e.g., personality, educational background, and prior entrepreneurial experiences) on their firms (Herron & Robinson, 1993) and the established research designs in this literature to explore how entrepreneurial characteristics may impact startup firms' competitor identification.

There is also significant potential to link competitor identification with the body of literature concerned with strategic entrepreneurship, which is "concerned with the discovery and exploitation of profitable opportunities" (Shane & Venkataraman, 2000: 217) to create and sustain new ventures' competitive advantages (Ireland, Hitt, & Sirmon, 2003). Whether or not a given situation is considered an opportunity and a source of competitive advantage should be intimately related to an assessment of direct or potential competitors and research on how entrepreneurs identify these competitors can make vital contributions to understanding how they recognize and evaluate opportunities as well as how they aim to capture perceived opportunities.

Recognizing the importance of innovation strategies for strategic entrepreneurship (Ireland et al., 2003), researchers could also explore links between startup firms' innovation strategies and competitor identification. Distinguishing for example new ventures that pursue radical (creating new knowledge and new markets) versus incremental (using existing knowledge in existing markets) innovations (Dewar & Dutton, 1986), future research could explore whether there are differences in how these different ventures identify their competitors. Relatedly, it could explore any differences in whether and how other firms identify radically versus incrementally innovating startups as competitors based on their assessments of what customer needs the resulting innovations may satisfy. Studies exploring these issues could follow Dewar and Dutton (1986) and use experts' judgement to distinguish radical and incremental innovations based on the degree of change embodied in a product.

Another line of inquiry could build on a key challenge for startup firms to secure investments from venture capital firms. An important part of investors' assessment of new ventures is to evaluate how adept entrepreneurs are at identifying and evaluating the risks stemming from their competitive environment (Shepherd, 1999); hence, it would be interesting to explore whether competitor identification plays a role in pursuing and gaining these investments. Specifically, research could explore whether and how (assessments of) entrepreneurs' abilities to identify competitors contribute to venture capital investments. For example, building on a strategy as practice perspective, researchers could adopt interpretivist qualitative approaches to study how entrepreneurs demonstrate their competency to identify and evaluate their new venture's competitors as well as venture capital firms' practices to evaluate startups in terms of the process and outcome of competitor identification as they make their funding decisions.

We also see promise in linking competitor identification with the flourishing research domain of social entrepreneurship, that is, entrepreneurial activities aimed at creating social value (Short, Moss, & Lumpkin, 2009). Similar to commercial entrepreneurs, social entrepreneurs compete for resources, in their case resources such as social capital investments, government grants, or volunteer time (Short et al., 2009). Thus, social entrepreneurs also may have a need to identify their competitors and research could explore whether and how social entrepreneurs do so as well as whom they identify as competitors, which

would also shed light on the notion of competition in this domain. In this vein, it would be intriguing to explore whether and to what extent social entrepreneurs identify competitors based on their output (i.e., the social value they aim to produce) versus their inputs (i.e., the resources they aim to secure). This research could also shed light on similarities and differences of competitor identification in the domains of social and commercial entrepreneurship.

A final promising direction in this theme would be to extend competitor identification to the context of franchising (see Combs et al., 2011). Specifically, research could explore the role of competitor identification for franchisors, franchisees, and for the relationship between them. For example, this research could study how franchisees identify competitors, what characteristics they pay attention to when identifying their competitors, and whether and to what extent they identify other franchisees of the same franchisor as competitors. Relatedly, it could compare competitor identification by franchisors and franchisees and how the former impacts the latter.

Conclusion

Competitor identification is a core element of competitive analysis and by implication is an important topic for management theory and research. Based on our review, we have organized literature across three disciplines into four complementary perspectives on competitor identification that differ in fundamental elements including the conceptualization of competition, the way competitors are identified, their primary focus and theoretical interests, and the dominant research designs, methods, and data. Building on this review, we have proposed an agenda for future research that addresses open debates in the literature and makes promising connections to other areas of management theory and research. Moreover, this research agenda is inspired by the insight that we can enrich management research by embracing and building upon the diversity of research paradigms and methodologies used by researchers in our field (Mintzberg, 1990; Whittington, 2001), and we hope that our discussion of a diverse range of possible future research directions inspires researchers to make additional connections between competitor identification and their individual theoretical and empirical interests.

Notes

1. Our focus on competitor identification complements previous reviews on competitive dynamics and interactions (Chen, 2009; Chen & Miller, 2012; Ketchen et al., 2004). It also complements earlier reviews related to the domain of competitor identification, including reviews of research on strategic groups (Barney & Hoskisson, 1990; McGee & Thomas, 1986; Thomas & Venkatraman, 1988), on identifying competitors based on customer needs (Cooper & Inoue, 1996; Day, Shocker, & Srivastava, 1979; Eliashberg & Chatterjee, 1985), and on the cognitive dimension of competitive structures (Hodgkinson, 1997).

2. Marketing is part of the Business category, and we identified marketing journals in this category based on journals' scope statements. Also, we coded two *Journal of Business Research* articles as Marketing based on their content. Allocating articles to disciplines based on Web of Science categories is only one possible way to do so and may not be perfect. However, other categorizations (e.g., by authors' disciplinary backgrounds) have drawbacks in their own right.

3. Studies using multiple methods were coded into multiple categories.

4. The full list of articles included in the review is available as an online supplement.

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