Resource-Based Theory in Marketing
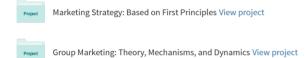
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CONCEPTUAL/THEORETICAL PAPER

Resource-based theory in marketing

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Abstract The use of resource-based theory (RBT) in marketing research has increased by more than 500% in the past decade, which suggests its importance as a framework for explaining and predicting competitive advantages and performance outcomes. This article provides a comprehensive review of RBT, including a contemporary definitional foundation for relevant terms and assumptions and a synthesis of empirical findings from marketing literature. This multidimensional analysis of RBT also evaluates extant marketing research according to four perspectives: the marketing domains that use RBT, the characteristics and uses of market-based resources that differentiate it from other research contexts, the extension of RBT to the "marketing exchange" as a unit of analysis, and the connection of RBT to related theories. This analysis also reveals some common pitfalls associated with prior research, offers tentative guidelines on how to improve the use of RBT in marketing, and suggests research directions to advance the theorization and empirical testing of RBT in the future.

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Introduction

The resource-based view of the firm (RBV) and the resultant resource-based theory (RBT) provide an important framework for explaining and predicting the basis of a firm's competitive advantage and performance (Barney et al. 2011; Slotegraaf et al. 2003; Vorhies and Morgan 2005). In the past decade, the applications of resource-based logic in marketing have grown exponentially; in the 1990s, only 19 articles in marketing explicitly referenced the RBT or RBV, but in the 2000s, that number increased to 104. In just 2010–12, more than 50 published conceptual and empirical marketing articles drew on RBT (according to a search of marketing journals' abstracts in the Business Source Premier database for explicit references to the theory). This upward trend indicates the growing importance of RBT to marketing. While top management journals have dedicated special issues solely to RBT (e.g., issues 17(1), 27(6), and 37(5) of *Journal of Management*), there is a need to synthesize the fragmented applications of RBT in marketing (Srivastava et al. 2001). This article therefore seeks to evaluate the use of RBT in marketing to (1) identify insights unique to marketing domains and resources, (2) suggest theoretical extensions or adaptations that might be necessary to apply RBT to marketing, and (3) provide guidance and direction for the future use of RBT in marketing research.

We start with a contemporary review of the assumptions, logic, and criticisms of RBT, to provide a foundation for evaluating its use in marketing. During its evolution over the past 30 years, many competing frameworks and definitions have emerged as theorists have sought to clarify constructs, offer alternative approaches, and address theoretical

inconsistencies (Barney et al. 2011). With this review, we provide a comprehensive definitional foundation of RBT terms and assumptions (Table 1), the lack of which may have been an underlying cause of confusion about the theory and its application in prior academic research (Priem and Butler 2001a).

From our compilation and synthesis of past marketing literature (Table 2), we also evaluate RBT from four distinct perspectives, to offer a multidimensional analysis of its use in marketing. For each of these perspectives, we offer insights and future research directions to advance the theorization and use of RBT in marketing. The first perspective evaluates the use of RBT across different *marketing domains*. Historically, RBT has been applied most frequently in three domains: marketing strategy (Fang et al. 2011; Ramaswami et al. 2009; Slotegraaf and Dickson 2004), international marketing (Capron and Hulland 1999; Ruiz-Ortega and García-Villaverde 2008), and marketing innovation (Dutta et al. 1999; Srinivasan et al. 2002). Our review suggests it can provide theoretical and empirical insights into the relative effects of multiple market-based resources on performance across many marketing contexts. The primary motivation for using RBT in various marketing domains is the compelling framework it offers for integrating multiple, dissimilar resources to explain synergistic, differential effects on performance and the contingencies associated with each (Fang et al. 2011).

In the second perspective, we address the characteristics and uses of *market-based resources*, such as building brands, relationships, and knowledge, which often differ from resources studied in non-marketing contexts. This market-based resource perspective suggests that marketing research increasingly focuses on intangible, complementary resources, whose effects on the firm's sustained competitive advantage (SCA) and performance may be greater than the effects of tangible resources (Srivastava et al. 1998). As much as 70% of a firm's market value may come from its intangible resources (Capraro and Srivastava 1997), and organizational performance increasingly seems tied to intangible resources, such as customer relationships or brand equity (Lusch and Harvey 1994). Extant research also suggests that the greatest benefits accrue when externally focused, market-based resources are complemented by internal resources (Dutta et al. 1999; Moorman and Slotegraaf 1999), in line with Day's (1994, p. 41) argument that to "exploit" outside-in capabilities, "there has to be a match" with inside-out capabilities. Further, little marketing research verifies the underlying resource requirements key to RBT's performance predictions. Specifically, RBT argues that SCA is generated only when resources are valuable, rare, imperfectly imitable, and the firm's organization (VRIO) enables exploitation of the resources' potential (Barney and Hesterly 2012). To help researchers apply RBT to market-based assets, we provide complete VRIO arguments for

brands and relationships, the two most frequently studied resources in marketing (Table 3).

The third perspective evaluates the use of RBT at the *exchange level of analysis*, which is important because RBT theorists have developed and tested this theory primarily at the firm level of analysis (Peteraf and Barney 2003). We provide a justification for using RBT at an exchange level by assessing RBT assumptions and logic at this level to identify theoretical inconsistencies. We also reevaluate the VRIO framework to determine whether a resource can generate SCA at the exchange level, to identify and describe any required adaptations. Overall, it appears valid to use RBT at the exchange level of analysis because it meets the assumptions and parallels extant resource-based logic, developed and tested at the firm level. Moreover, the "VRI" framework for evaluating exchange-level resources mirrors the logic for firm-level resources, while the organization (O) criterion requires some adaptation to account for the different skills, processes, and policies that enable resource exploitation at the exchange versus firm level of analysis.

In the fourth and final perspective, we evaluate the *connection of RBT to related theories*. Marketing researchers often couple RBT with relevant theories (e.g., Jap 1999; Palmatier et al. 2007), such as resource advantage, agency, and transaction cost economic theories, to provide unique insights into why firms and managers fail to exploit the full potential of market-based resources (i.e., these theories reflect the "organization" component of VRIO). In addition, researchers in both marketing and management argue that RBT "offers a unifying paradigm … which synthesizes diverse literature across different perspectives" (Palmatier et al. 2007, p. 189). According to this logic, RBT may subsume other theories in a single framework (Mahoney and Pandian 1992). For example, Peteraf (1993, pp. 189–190) asserts that RBT "is a unifying theory which … may prove to be a paradigm capable of elucidating and integrating research in all areas of strategy." Our analysis instead suggests that RBT cannot subsume or integrate other *theories* into one framework, because of the fundamental differences in their assumptions and logic. Instead, RBT can integrate multiple and diverse *resources* into one framework to evaluate the relative and synergistic effects of different market-based resources on performance. To aid researchers, we summarize the similarities, complementarities, and differences between RBT and related theories in Table 4.

Resource-based theory

Even though prior works have identified organizational resources as important to a firm's success (Penrose 1959), it was not until the 1980s that the resource-based view of the firm began to take shape. At that time, the dominant

paradigm held that industry-level factors determined each firm's profit potential (Porter 1979). Later researchers started to argue that factors internal to the firm, namely, its resources and capabilities, really determined its profits (Wernerfelt 1984). Wernerfelt's (1984) seminal work is widely considered the first major contribution to the RBV, but other researchers also helped transform the RBV into a full-fledged, resource-based theory. Lippman and Rumelt's (1982) and Barney's (1986) efforts helped advance theory; Barney's (1991) outline of the core tenets and defining characteristics of resources and competitive advantages constitutes a critical demarcation point.

Yet some confusion persists regarding whether it is more appropriate to use the term *resource-based view* or *resource-based theory*. Some scholars still refer to the RBV, despite evidence that this view has evolved into a theory (Barney et al. 2011). According to our search of the Business Source Premier database, the number of article abstracts referring to "resource-based theory" doubled from 2010 to 2011, while the number of abstracts referring to the "resource-based view" decreased in that same period, reflecting the research community's view. In addition, several research assessments (Armstrong and Shimizu 2007; Crook et al. 2008) support the RBT's credentials. Consistent with this evidence, we use the term *resource-based theory* to describe the contemporary theoretical framework.

Assumptions and logic of resource-based theory

According to Peteraf and Barney (2003, p. 314), a firm achieves a *competitive advantage* when it is able to generate "more economic value than the marginal (breakeven) competitor in its product market" (for definitions of all key RBT terms, see Table 1). A firm has achieved a *sustained competitive advantage* (SCA) "when it is creating more economic value than the marginal firm in its industry and when other firms are unable to duplicate the benefits of this strategy" (Barney and Clark 2007, p. 52). The resource-based logic relies on two fundamental assumptions about firm-based resources to explain how they generate SCA and why some firms may persistently outperform others. First, firms possess different bundles of resources, even if they operate within the same industry (Peteraf and Barney 2003). This *resource heterogeneity* assumption implies that some firms are more skilled in accomplishing certain activities, because they possess unique resources (Peteraf and Barney 2003). Second, these differences in resources may persist, due to the difficulty of trading resources across firms (*the resource immobility* assumption), which allows the benefits from heterogeneous resources to persist over time as well (Barney and Hesterly 2012). A resource-based logic proposes that if a firm possesses valuable resources that few other firms have, and if these other firms find it too costly or difficult to imitate these resources, then the firm controlling these resources likely can generate SCA (Barney and

Hesterly 2012). Even if these two assumptions are met though, not all resources are sources of SCA.

The VRIO framework includes four conditions for assessing whether a resource has the potential to generate SCA. Specifically, Barney and Hesterly (2012) argue that SCA results only if resources are simultaneously valuable, rare, imperfectly imitable, and exploitable by the firm's organization.[1] Firm resources are *valuable* if they "enable a firm to develop and implement strategies that have the effect of lowering a firm's net costs and/or increase a firm's net revenues beyond what would have been the case" without these resources (Barney and Arikan 2001, p. 138). In the parlance of a traditional strength, weakness, opportunity, threat (SWOT) framework, resources are valuable if they enable the firm to exploit an external opportunity and/or neutralize an external threat (Barney and Hesterly 2012). However, exploiting a valuable resource is not sufficient for achieving a competitive advantage, because other firms may possess it too.

The second condition states that a resource is *rare* if it is controlled by a small number of competing firms (Barney and Hesterly 2012). If a resource is valuable but not rare, exploiting it will result in competitive parity, because other firms that possess the resource also have the capability of exploiting it. A resource is *imperfectly imitable* if it is substantially costly to obtain or develop for competing firms (Barney and Hesterly 2012). Imperfectly imitable resources suggest that firms without that resource cannot obtain it through direct duplication or substitution. If a resource is valuable and rare but not costly to imitate, then exploiting it will result in a temporary competitive advantage for the firm. Once other competing firms obtain and exploit this resource (at a minimal cost disadvantage), any competitive advantage dissipates. However, if a resource is valuable, rare, and imperfectly imitable, exploiting it should result in SCA. According to Barney and Clark (2007), resources may be imperfectly imitable due to unique historical conditions, causal ambiguity, or social complexity.

The fourth and final condition pertains to the *organization*. Even if a resource is valuable, rare, and imperfectly imitable, a firm must be "organized to exploit the full competitive potential of its resources and capabilities" (Barney and Hesterly 2012, p. 94). That is, poor organizational processes, policies, and procedures may undermine a resource's potential competitive advantage (Barney and Clark 2007). Thus, the organization acts as an "adjustment factor" that either enables or prevents a firm from fully realizing the benefits embodied in its valuable, rare, and costly to imitate resources (Barney and Clark 2007).

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[1] Early versions of the RBV referred to a VRIN framework: valuable, rare, inimitable, and non-substitutable. However, the contemporary version subsumes the non-substitutability requirement of VRIN under the imperfectly imitable condition and adds *organizational* processes, as means for exploiting the potential of VRI resources (Barney and Clark 2007; Barney and Hesterly 2012). We adopt this updated VRIO framework.

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Table 1 Definitions of resource-based theory terminology

Terminology	Definition	Source
Resources	"Tangible and intangible assets firms use to conceive of and implement its strategies" (p. 138).	Barney and Arikan (2001)
Capability	A subset of resources, which represent an "organizationally embedded non-transferable firm-specific resource whose purpose is to improve the productivity of the other resources possessed by the firm" (p. 389).	Makadok (2001)
Dynamic Capabilities	Capabilities that can "continuously create, extend, upgrade, protect, and keep relevant the enterprise's unique asset base" in a changing environment (p. 1,319).	Teece (2007)
Market-Based Resources	A subset of the firm's assets and capabilities that are related to marketing activities such as building brands, relationships, innovation, and knowledge.	Srivastava et al. (1998)
Complementary Resources	Resources are considered complementary "when returns to one [resource] are affected by the presence of another" (p. 286).	Morgan et al. (2009)
Resource Heterogeneity Assumption	"Strategic resources are distributed unevenly across firms," or "different firms possess different bundles of strategically relevant resources" (p. 317).	Peteraf and Barney (2003)
Resource Immobility Assumption	Difficulty of trading resources across firms, which allows the benefits of heterogeneous resources to persist over time.	Barney and Hesterly (2012)
VRIO Framework	A tool for internal analyses of the different resources and capabilities a firm possesses and the potential of each of these to generate competitive advantages. Stands for Value, Rarity, Imperfect imitability, and Organization.	Barney and Hesterly (2012)
Valuable Resource	Resources that "enable a firm to develop and implement strategies that have the effect of lowering a firm's net costs and/or increase a firm's net revenues beyond what would have been the case" without these strategies (p. 138).	Barney and Arikan (2001)
Rare Resource	Resource is controlled by a small number of competing firms.	Barney and Hesterly (2012)
Imperfectly Imitable Resource	A resource that is substantially costly to obtain or develop for competing firms.	Barney and Hesterly (2012)
Organization	A firm's policies and procedures "organized to exploit the full competitive potential of its resources and capabilities" (p. 94).	Barney and Hesterly (2012)
Competitive Advantage	Creation of "more economic value than the marginal (breakeven) competitor in its product market" (p. 314).	Peteraf and Barney (2003)
Sustained Competitive Advantage	A firm has SCA "when it is creating more economic value than the marginal firm in its industry and when other firms are unable to duplicate the benefits of this strategy" (p. 52).	Barney and Clark (2007)

Firm resources and capabilities

Resources and capabilities are central constructs in RBT. Therefore, it is important to understand the conceptual differences between these constructs and distinguish them from dynamic capabilities, which have entered RBT research more recently. *Resources* refer to "tangible and intangible assets [that] firms use to conceive of and implement its strategies" (Barney and Arikan 2001, p. 138). The word "resource" refers to something an organization can draw on to accomplish its goals; Barney and Hesterly (2012) suggest four main resource categories: physical, financial, human, and organizational.

Capabilities are subsets of the firm's resources, which represent "an organizationally embedded non-transferable firm-specific resource whose purpose is to improve the productivity of the other resources possessed by the firm" (Makadok 2001, p. 389). They are generally information-based, tangible or intangible *processes* that enable a firm to deploy its other resources more efficiently and therefore enhance the productivity of those resources. Thus, capabilities are special types of resources whose purpose is to improve the productivity of other resources possessed by the firm (Makadok 2001).

Teece et al. (1997) introduce the concept of *dynamic capabilities*, which can "continuously create, extend, upgrade, protect, and keep relevant the enterprise's unique asset base" in a changing environment (Teece 2007, p. 1,319). They are particularly relevant in "high-velocity" or turbulent markets (Eisenhardt and Martin 2000, p. 1,106). Similar to capabilities, dynamic capabilities are resources that can be used to modify other resources and create value. Examples include product development routines, transfer processes, resource allocation routines, alliance and acquisition capabilities, and knowledge creation processes. Some researchers argue that dynamic capabilities require their own stand-alone theory (Teece 2007; Teece et al. 1997), while others view them as a means to extend RBT to dynamic environments (Peteraf and Barney 2003). The view that dynamic capabilities are fundamentally different stems from the notion that SCAs attained from deploying "typical resources" may be achieved only infrequently in dynamic markets, because the rapid change renders many resources obsolete as firms quickly and constantly reconfigure, gain, and dispose of their resources to meet the demands of a shifting market (Eisenhardt and Martin 2000). In practice though, RBT can deal with resources with short-term benefits and capabilities that are more valuable in specific environments (e.g., high-velocity markets) to explain their influence on SCA. Following Peteraf and Barney's (2003, p. 321) arguments that "dynamic capabilities literature is entirely consistent with RBT and should not be viewed as a separate theory," we consider dynamic capabilities as another type of resource that can be evaluated *within* an RBT framework.

Criticisms of resource-based theory

As do most theories, the RBV and RBT prompt criticisms, the most prevalent being that the theory is static and tautological, though these criticisms largely have been addressed by definitional and theory refinements (Makadok 2001; Peteraf and Barney 2003). For example, some critiques complain the theory is static and fails to either address the impact of organizational actions on resource effectiveness over time or describe how static resources affect SCA in dynamic markets. In response, the introduction of the VRIO, versus VRIN, framework has acknowledged that resources need to be leveraged effectively by the organization, instead of simply possessed by the firm. Furthermore, the inclusion of "dynamic capabilities" as a resource, as well as vast theorization focused on dynamic capabilities (Teece et al. 1997), has helped alleviate concerns about the RBT's ability to describe the effects of resources in turbulent environments. In a marketing domain, Day (2011, p. 187) also proposes *adaptive marketing capabilities* that allow firms to anticipate "trends and events before they are fully apparent and then [adapt] effectively."

Another criticism, that RBT is a tautological or self-verifying theory and therefore not empirically testable (Priem and Butler 2001b), may apply to some poor quality RBT research. Barney (2001, p. 51) acknowledges that when "resources that can generate a sustained strategic advantage are identified by their ability to generate a sustained strategic advantage," we clearly face a tautology. Researchers can address this criticism in three main ways. First, resources should not be defined in terms of outcome variables, such as performance or SCA (Lockett and Thompson 2001). Valuable, rare, and imperfectly imitable resources instead must be defined in terms of exogenous variables that are separate from the dependent variables of interest. Second, researchers can decouple the direct link between VRI resources and outcomes by describing organizational processes used to exploit resources (Barney and Clark 2007; Peteraf and Barney 2003). Thus, VRI resources are necessary but not sufficient conditions for achieving SCA. Third, researchers who longitudinally separate independent and dependent variables increase confidence in the causal ordering of effects. Thus RBT is not tautological per se, but prior research often operationalizes RBT in ways that render it empirically untestable.

Resource-based theory in marketing

In the 2000s, 104 marketing articles referred to RBT (in their titles or abstracts, listed in the Business Source Premier database), representing a more than 500% increase in the use of this theory in marketing research compared with the

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previous decade. This explosive growth necessitates a review of this body of research (for a review of RBT in management literature, see Crook et al. 2008). To compile and synthesize extant marketing literature, we evaluate the use of RBT in marketing from four distinct perspectives: (1) the use of RBT across three *marketing domains*, (2) the characteristics and use of *market-based resources* that differentiate it from resources studied in other contexts, (3) the extension of RBT to *marketing exchange* as the unit of analysis, and (4) the connection of RBT to *related theories*. We discuss in detail and offer insights and research ideas for each perspective in next sections of the paper.

Perspective 1: RBT applied to marketing domains

More than 60 empirical studies adopt RBT as their *main* theoretical framework (according to the Business Source Premier database, which we searched for empirical articles in marketing journals[2] that explicitly referenced the theory in the title or the abstract and then used RBT to support the majority of their hypotheses). These marketing researchers have applied RBT to a wide range of areas that we can group into three major domains: marketing strategy (Fang et al. 2011; Hult et al. 2005; Slotegraaf and Dickson 2004), international marketing (Capron and Hulland 1999; Ruiz-Ortega and García-Villaverde 2008), and marketing innovation (Dutta et al. 1999; Srinivasan et al. 2002). In Table 2, we provide a summary of illustrative marketing literature that uses RBT as a key theoretical framework, grouped by domain. Next, we provide a review of studies in each domain focusing specifically on the motivations for using RBT and the types of resources, outcomes, and moderators studied.

RBT in marketing strategy While many marketing researchers may investigate one resource (e.g., brand, relationship), firm function (e.g., sales, R&D), or phenomenon at a time, marketing strategists are often concerned with researching *multiple* resources and phenomena simultaneously in order to isolate and understand the drivers of overall firm performance. For example, in the strategy domain, researchers using RBT simultaneously examine nearly twice as many resources in the same framework as do researchers in the international or innovation domains. These differences highlight both the primary motivation for using RBT and its strength in the strategy domain, in that it offers a theoretical framework for integrating multiple resources to explain their synergistic and differential effects on firm performance and the contingencies associated with each linkage. Approximately 40% of the publications in this domain examine

the performance differentials for resources from multiple functions within a firm (Slotegraaf et al. 2003; Song et al. 2007); in total, 90% of the studies we reviewed in the strategy domain deal with relative comparisons of the links between multiple resources and performance.

The market-based resources most studied in the strategy domain are brand (Merrilees et al. 2011; Morgan et al. 2009), relational (Hooley et al. 2005; Jap 2001; Orr et al. 2011), and knowledge (Ramaswami et al. 2009) resources. Most research evaluates how resources *directly* affect firm performance, frequently measured by profitability (Vorhies and Morgan 2005), market share (Hooley et al. 2005), and return on investments (Menguc and Auh 2006). More than half the studies investigate the role of institutional or environmental moderating factors on the resource–performance linkage using RBT or other theoretical rationales (Fang et al. 2011). Moreover, many articles note synergistic effects between different resources and capabilities for creating and/or capturing customer value (e.g., Orr et al. 2011).

Research in this domain generally supports the notion that a firm's valuable, rare, and imperfectly imitable (VRI) resources, organized (O) with policies or procedures to support the exploitation of the resources' potential, enhance performance. For example, the effect of brand management resources on performance switches from negative to positive only when organized by customer relationship management, which appears critical for exploiting the potential of brand resources (Morgan et al. 2009). In some cases, strategists support RBT by demonstrating that internal resources have greater effects than the environmental or industry factors on firm performance. For example, Evanschitzky (2007) finds that resources explain almost twice as much variation in firm performance than industry structure does. Little research, however, explicitly describes or measures whether the resources studied meet all VRIO requirements, which undermines RBT in many marketing studies since the resources investigated have not been shown to meet RBT's assumptions for generating SCA.

RBT in international marketing The international marketing domain ranks second in terms of the number of articles using RBT. Studies investigating issues related to doing business with foreign partners, entering foreign markets, or entering new product markets appear in this domain; they all have "market entry or expansion" as a key feature. Management researchers (Barney and Hesterly 2012) suggest that a resource-based logic can serve to investigate two goals of market expansion: expanding into new markets to gain advantages from *existing resources* and expanding into new markets to develop *new resources* that can generate advantages in new and existing markets. Expanding into a different market to use existing resources and leverage "economies of scale" can be very risky, especially when a

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[2] We also include empirical articles using RBT that focused on marketing topics and were written by marketing scholars but were published in non-marketing journals.

Table 2 Illustrative resource-based theory research in marketing

Author(s)	Resources(^a)^b	Main Findings
Marketing Strategy		
Auh and Menguc (2009)	CEO Transformational Leadership (C); Market orient. (I)^c	The CEO's marketing background and politics in marketing decision making (PMDM) affect the development and deployment of resources. The marketing background increases transformational leadership capability but not market orientation (MO); PMDM decreases transformational leadership and MO.
Evanschitzky (2007)	Market orient. of networks (I); Resources (T & I)^e	Resources explain almost twice the variation in firm performance than industry structure does. The market orientation of networks increases the effect of all resources and contributes to SCA through resources.
Fang et al. (2011)	Customer mgmt., Innovation (I)^c	Deep innovation–broad customer and deep customer–broad innovation asset leveraging strategies lead to the best firm performance.
Hooley et al. (2005)	Marketing support resources, Market-based resources (I & C)^c	Managerial capabilities and market-based resources positively impact HR assets, and customer-linking & market innovation capabilities. Managerial capabilities increase reputational assets. Brand, company reputation, and credibility are key assets in increasing firm performance.
Hult and Ketchen (2001)	Market orient., Entrepreneurship, Innovativeness, Org. learning (C)^c	Constellation of market orientation, entrepreneurship, innovativeness, and org. learning enhance firm's positional advantage, which in turn increases long term performance. Market orientation has the strongest effect on positional advantage.
Hult et al. (2007)	Culture of competitiveness, Knowledge development (I)^e	Culture of competitiveness (CC) and knowledge development (KD), as well as their interaction, increase performance in supply chains. Market turbulence positively moderates the link between KD and performance, and negatively moderates the link between CC and performance.
Hult et al. (2005)	Mktg. orient. & info. processing, Responsiveness (I)^c	Positive effects of market orientation and market information processing on firm performance are fully mediated by organizational responsiveness.
Jap (2001)	Complementary capabilities; Bilateral idiosyncratic invest. (T or I)^e	Joint competitive advantages for buyers and suppliers are created and erode over time. Bilateral idiosyncratic investments help in the creation of competitive advantage; ex-post opportunism erodes competitive advantages, but idiosyncratic investments, goal congruence, and interpersonal trust can lessen this negative effect.
Menguc and Auh (2006)	Market orient., Innovation (I)^c	Market orientation has a stronger impact on firm performance when it is coupled with high innovativeness.
Merrilees et al. (2011)	Innovation, Branding, Market orient., Mgmt. (C)^c	Innovation capability is the strongest determinant of small firm performance. Branding also increases performance. Market orientation and management capability act as enabling mechanisms for building marketing capabilities.
Morgan et al. (2009)	Market-sensing, CRM, Brand mgmt. (C)^c	Marketing capabilities have direct and complementary effects on revenue and margin growth rates. CRM capability decreases revenue growth rate but increases margin growth. Effects of brand mgmt. capability are reversed. Overall impact of both capabilities on firm's profit growth rates is positive.
Orr et al. (2011)	Marketing, CRM, Brand mgmt., Mktg. employee development (C)^c	Marketing employee development capabilities moderate the relationships between firm-level marketing capabilities and customer satisfaction, market effectiveness, and objective financial performance. Such capabilities can be complementary or substitutes in improving performance.
Ramaswami et al. (2009)	NPD, Customer mgmt., Supply chain mgmt. (C)^c	Capability to understand customers improves the development of unique products. Customer management has the strongest impact on firm performance.
Richey et al. (2010)	Communication, Customization, Data storage technologies (C)^e	Only communication technologies improve the financial performance of B2B partnerships. Interaction with relationship quality enhances this effect. Resource complementarities exist for data storage resources but not for communication or customization resources.
Song et al. (2007)	Tech., IT, Market linking, Mktg. (C)^c	All four capabilities positively affect performance. This effect is moderated by firm's strategic type.
Slotegraaf et al. (2003)	Marketing, Technological (I); Financial (I or T)^d	Higher levels of intangible marketing and technological resources increase the effectiveness of market deployment related to distribution and coupon activity, whereas higher levels of financial resources decrease it.

Table 2 (continued)

Author(s)	Resources([a])[b]	Main Findings
Slotegraaf and Dickson (2004)	Mktg. planning (C)[c]	Firms with strong marketing planning capability engage in less improvisation from an approved marketing plan. However, post plan improvisation can improve intangible firm performance. Marketing planning capability has a curvilinear effect on firm performance.
Vorhies and Morgan (2005)	Array of marketing capabilities (C)[c]	Each marketing capability directly increases firm performance. Marketing capabilities also have synergistic effects on firm performance. Benchmarking of marketing capabilities is a tool for enhancing capabilities to drive SCA.
International Marketing		
Boulding and Christen (2003)	Order of entry (I)[c]	Pioneering firms experience an initial profit advantage, which lasts 12 to 14 years and then turns into a long-term profit disadvantage when compared with later entrants.
Capron and Hulland (1999)	Brand, Sales force (I); Mktg. expertise (C)[c]	Highly immobile resources (brand, sales force) are more likely than less immobile resources (marketing expertise) to be redeployed after a merger; Marketing expertise has a positive impact on market share and profitability.
Cui and Lui (2005)	Order of entry (I)[c]	Order of entry is not a sustainable advantage in itself.
Gao et al. (2006)	Brand core & local advantages, Order of entry (I)[d]	Brands' core advantages increase market share of foreign brands but not of domestic brands. Brands' local advantages increase market share of domestic but not foreign brands. Length of brand existence increases market share of domestic and foreign brands.
Homburg and Bucerius (2005)	Integration of marketing resources (I)[e]	Integration of marketing resources post-merger increases cost savings but decreases post-merger market-related performance, which is more important for overall financial performance.
Hughes et al. (2010)	Innovation ambidexterity (C)[f]	Investments in marketing differentiation strategy alone create the necessary strategic impetus to form innovation ambidexterity. Innovation ambidexterity codetermines both marketing differentiation and cost leadership advantages, and together these improve export venture performance.
Kaleka (2011)	Informational, Relational, Prod. development (C); Experiential, Financial (I)[f]	Service advantage increases export venture performance and is enhanced by product development and customer relationship capabilities. Experiential resources increase customer relationship and informational capabilities, and financial resources improve product development and informational capabilities.
Lages et al. (2009)	Relational, Quality, Org. learning for innovation (C)[f]	Organizational learning capability enhances product innovation. Relational capability improves product quality, innovation, and relationship performance. Relationship performance increases economic performance. Product quality is critical in international markets.
Luo et al. (2004)	Relational & Social capital of: bus. partner, governing agency (I)[c]	Customer relationships (CR) and business partner social capital increase sales growth and ROI. Governing-agency social capital (GASC) increases sales growth but not ROI. CRs are the main drivers of firm performance; business partnerships and GASC have a synergistic influence on firm performance.
Ruiz-Ortega and García-Villaverde (2008)	Mgmt., Mktg., Technical (C)[c]	Pioneers: all capabilities increase firm performance. Marketing capabilities do so the most. Early followers: management and technical capabilities increase performance. Late followers: technical and marketing capabilities increase performance.
Zou et al. (2003)	Array of mktg. capabilities (C)[c]	Export marketing capabilities impact the export venture's performance indirectly through low-cost and branding positional advantages. New product development, distribution, and communication improve the export venture's positional advantages, which in turn increase financial performance.
Marketing Innovation		
Atuahene-Gima (2005)	Market orientation (I)[c]	Market orientation enables the simultaneous exploitation of innovation competencies and exploration of new ones.
Dutta et al. (1999)	Marketing, R&D, Operations (C)[c]	The most important determinant of firm performance is the interaction of marketing and R&D capabilities.
Harmancioglu et al. (2009)	Mktg. execution proficiency, Tech. execution proficiency (C)[d]	Only mktg. execution proficiency directly improves all four dimensions of product success. Mktg. and technological resource fit advantages and mktg. and technical execution proficiencies predict new product success

Table 2 (continued)

Author(s)	Resources([a])[b]	Main Findings
		factors. Mktg. proficiencies moderate the relationship between resource fit and performance.
Lee and Grewal (2004)	Org. resources (T and I)[c]	Organizational slack resources decrease Tobin's q. They do not enable the development of new capabilities needed for sales channel adoption, but they lead to greater returns from communications channel adoption.
Li and Calantone (1998)	Market knowledge competence (C)[d]	Examined processes that comprise market knowledge competence (MKC). MKC increases new product advantage, which in turn increases product market performance.
Moorman and Slotegraaf (1999)	Product technology & marketing (C)[d]	Complementarities between product technology and product marketing capabilities increase brand performance, contingent on the ability to use information about the environment.
Srinivasan et al. (2002)	Technological opportunism (C)[c]	Firms' technological opportunism (TO) impacts the extent of radical tech. adoption. Future focus and top management's advocacy of new technologies increase TO. Organizational culture types impact TO differently.

[a] *I* Intangible Resources, *T* Tangible Resources, *C* Capabilities

[b] Level of analysis

[c] Firm or SBU

[d] Product or Brand

[e] Dyad or Network of Firms

[f] Export Venture

firm assumes that the assets that were advantageous in one market will also be beneficial in another. Wal-Mart's expansion into Germany provides an example of this mistake, which ultimately led to the closure of all its German stores. Wal-Mart's internal resources (logistics, low cost processes), so successfully exploited in the U.S. market, could not be exploited in the new market because Germans prefer specialized grocery stores instead of one-stop shopping (Landler and Barbaro 2006). Overall, research in the international domain focuses mainly on investigating which *existing* resources and strategies lead to desirable performance in new markets (Kaleka 2011; Zou et al. 2003), rather than on how to use expansion to develop *new* resources.

The three types of market-based resources most studied in international marketing are relational resources (Jean et al. 2010), experiential resources (Kaleka 2011), and order of entry advantages (Boulding and Christen 2003). The outcome variables mirror those from the marketing strategy domain, such as profitability (Cui and Lui 2005), market share (Capron and Hulland 1999), and sales growth (Ruiz-Ortega and García-Villaverde 2008). However, rather than studying overall firm performance, performance outcomes often refer to specific export ventures. Few studies in this domain investigate the contingency nature of the RBT-derived linkages, often due to the narrow scope of the sample, which limits the theoretical and empirical generalizability of the results. A few noted exceptions include industry growth (Homburg and Bucerius 2005), market protectionism (Gao et al. 2006), and communication culture (Jean et al. 2010), investigated as contingency factors.

Researchers in the international marketing domain often use RBT to test specific *positioning advantages* or *entry strategies* that might improve performance (Cui and Lui 2005; Hughes et al. 2010). Overall, research in this domain provides empirical support of RBT, in that relational (Luo et al. 2004) and experiential (Kaleka 2011) resources increase venture performance. Research on the order of entry provides conflicting conclusions: some researchers determine that order of entry does not offer long-lasting competitive advantages (Boulding and Christen 2003; Cui and Lui 2005), but others offer the opposite conclusion.

RBT in marketing innovation There are significantly fewer studies in this domain. Similar to strategy, researchers studying innovation are mainly interested in comparing the *relative effects of market-based resources on performance*, but rather than focusing on firm performance, they tend to narrow the scope to radical or incremental innovation performance (Atuahene-Gima 2005) or new product success (Harmancioglu et al. 2009; Li and Calantone 1998).

Diverse market-based resources (marketing capabilities, technology and R&D capabilities, innovation ambidexterity) appear in this domain, but resources related to *sensing* changes in the environment (customer and competitor sensing) and *responding* to them (technical execution, organizational resources) are particularly frequent (Lee and Grewal 2004; Li and Calantone 1998; Moorman and Slotegraaf 1999). In about 85% of studies, the link between marketing resources and outcome variables is contingent on intangible resources or capabilities (Harmancioglu et al. 2009), often

based on a range of theoretical rationales (organizational learning theory, communication culture theory).

Compared with other domains, research in innovation extends RBT the furthest from its theoretical roots, often with only a passing mention of VRIO conditions. Surprisingly, relational resources remain largely missing from studies in innovation, even though researchers have argued that relationships are critical for information gathering, testing, and the adoption of innovations (Arnold et al. 2011). Innovation researchers using RBT generally test moderated relationships, which suggests that the direct effect of resources on innovation may be less robust than on either firm or market entry performance (Moorman and Slotegraaf 1999).

RBT applied to marketing domains: insights and future research directions This review across the three domains suggests that the main purpose for which marketing researchers use RBT is to provide a theoretical framework that can explain how marketing activities lead to resources that can improve *long-term* performance. In practice, marketing is an accounting expense, regardless of its long-term effects on the brand or relational equity. RBT, however, allows marketing researchers to theorize about the long-term effects of marketing investments since spending often leads to the development of resources and capabilities, such as building stronger relationships with customers and other entities (i.e., being market-oriented) that can enhance future firm performance (Hult and Ketchen 2001). However, more than 90% of studies in Table 2 use cross-sectional data, which prevents any empirical investigation of the persistence of the resource-performance connection (i.e., *sustainability* of the competitive advantage).

Another commonality across the three domains is that RBT provides a framework that enables marketers to integrate multiple, dissimilar resources within one theoretical framework—from tangible resources, such as equipment, to intangible capabilities, such as building brand linkages or sensing environmental changes. For example, Kaleka (2011) examines such disparate resources as product development, customer relationships, and the ability to acquire information, all within one conceptual framework, to uncover their differential influence on performance. Extant research across all domains provides empirical support for the use of RBT to link multiple resources with performance in order to understand their relative effects. However, our review also suggests that to test the effects of resources on performance, studies must adopt appropriate performance measures, for instance, a study linking culture competitiveness and knowledge development resources to performance, focused on cycle time performance rather than overall firm performance (Hult et al. 2007). Thus, researchers should *match the scopes* of the focal resource and performance

measures, to provide an accurate indication of the "true" strength of the resource–performance linkage.

Finally, reviewing marketing research using RBT suggests that it is unbalanced, in the sense that most studies concentrate on the benefits that resources can provide, without acknowledging the costs of building and maintaining those resources, which may skew their true effects. For example, research affirms the positive effects of brand management on performance (Morgan et al. 2009), yet the costs of building new brands can be prohibitive (Aaker and Joachimsthaler 2000). Future RBT research should account for both the costs of developing and maintaining resources as well as the benefits to provide a more accurate view of the net return on investing in marketing resources.

Perspective 2: market-based resources

Market-based resources refer to a subset of firm resources (assets and capabilities) related to marketing activities, such as building brands, relationships, innovations, or knowledge. Fifteen years ago, Srivastava and colleagues (1998) argued that market-based resources were critical to firm performance, but they also highlighted the problems associated with a failure to capture market-based assets in financial statements and the difficulty of explaining how market-based assets improve performance. Little progress has been made with regard to the first point. Financial investments used to build market-based resources (e.g., Apple's $933 million advertising budget) appear in the income statement, but the benefits associated with such investments (Apple's brand assets, valued at $87.1 billion; Badenhausen 2012) are not explicitly accounted for. Yet RBT research has added significantly to our understanding of the performance-enhancing role of market-based resources (Morgan et al. 2009; Orr et al. 2011; Richey et al. 2010). Thus, in Perspective 2, we *evaluate how market-based resources lead to SCA and performance improvements*. Specifically, we examine two key characteristics, resource intangibility and complementarity, which help differentiate market-based resources from other resources a firm may possess and should play key roles in the generation of SCA (Srivastava et al. 1998; 2001). We also evaluate the use of the VRIO framework in marketing because it plays a critical role in determining whether market-based resources have the potential to generate SCA.

Resource intangibility Most resources studied in marketing are intangible (e.g., brand and relational assets, knowledge generating capabilities). Intangibility offers multiple benefits in terms of satisfying the VRIO requirements, which increases the likelihood that a resource will improve the firm's SCA. For example, the intangible nature of brand assets makes them hard to imitate (Srivastava et al. 1998), because an image or brand meaning is difficult or costly to build or change (Aaker and Joachimsthaler 2000). In addition, intangible market-

based resources often have multiple uses (e.g., strong relationships lead to more information sharing, risk taking, and adoption of innovations; Dutta et al. 1999) and can be redeployed easily after organizational change, unlike tangible resources (Capron and Hulland 1999).

Several long-term trends also increase the importance of intangible market-based resources. First, brand and relational assets are necessary as many firms are responding to the shift from a product- to a *service-based economy*; in 2011, services accounted for 80% of U.S. gross domestic product (Central Intelligence Agency 2012). Firms offering services with high experience (hospitality) or credence (healthcare) attributes benefit from having strong relational and brand resources, because they help alleviate customer anxieties caused by uncertainties about selecting and evaluating a service offering (Orr et al. 2011; Palmatier et al. 2006). Second, as Ramaswami et al. (2009) note, the shift toward *knowledge-driven* offerings make intangible knowledge resources more salient for success. Third, firms are *outsourcing many back-end processes*, such as manufacturing and design (Amaral and Parker 2008), which shifts firms' SCA to front-end and more intangible resources such as brands, relationships, and market sensing (Day 2011). For example, strong brand resources can help differentiate an outsourcing firm from its competitors and attract more business, while relational resources can help keep customers from switching to another firm (Kaleka 2011). Firms are realizing that copycat competitors can more easily imitate back-end tangible rather than front-end intangible resources.

Resource complementarity Research suggests that market-based resources exhibit stronger effects on performance than do many non–market-based resources (e.g., Hooley et al. 2005). But why? Researchers suggest that intangibility and complementarity among market-based resources may provide an explanation (Moorman and Slotegraaf 1999; Srivastava et al. 1998). Complementarity means that the benefits from one resource are leveraged by the presence of another (Morgan et al. 2009). Both resource intangibility and resource complementary make it more difficult for competitors to imitate. Complementarity between market-based resources, in addition to the obvious benefit of producing larger synergistic effects than a single resource, also limits imitation efforts, because competitors cannot easily identify which resources are responsible for generating the advantages (i.e., causal ambiguity).

A review of marketing research suggests that market-based resources tend to be more complementary than other types of resources, which implies that market-based resources are often organized or combined with other assets or capabilities to exploit their full potential. Extant research does not offer insights into whether it is more advantageous for a firm to complement its market-based resources with other market-based or non–market-based resources. However, paralleling Day's (1994) argument, to "exploit" outside-in capabilities (often a market-based resource, such as relationships or market sensing), there must be a match with inside-out capabilities (often logistics or manufacturing resources). We find that when externally focused market-based resources are complemented by internal resources, greater benefits accrue. For example, Dutta et al. (1999) find positive synergies between marketing (external market-based resource) and R&D (internal resource).

Use of VRIO framework in marketing The VRIO framework plays a critical role in RBT because it provides the conditions that distinguish between resources that do and do not have the potential to generate SCA. A recent management meta-analysis reveals that RBT research that describes and measures resources using the VRIO framework exhibits a much stronger positive impact on performance than research that does not do so (Crook et al. 2008). An early issue for RBT research was a lack of clear conceptual arguments and/or measures of how well the resources met the VRIO criteria. This gap may be an even greater concern in marketing, because researchers tend to examine multiple market-based resources simultaneously, compounding the chance that some resources fail to meet the RBT's resource prerequisites.

In reviewing this literature stream, we note four trends in the use of VRIO in marketing. First, existing VRIO arguments are expressed mostly by citing past empirical research (Morgan et al. 2009), less frequently with the researcher's own arguments (Evanschitzky 2007), and almost never through the actual measurement of VRIO (cf. Ramaswami et al. 2009). Second, the O (organization) requirement of the VRIO framework is widely neglected. Even recent research (Harmancioglu et al. 2009) continues to use the outdated version (VRIN) that does not encompass this aspect, despite its critical influence for avoiding tautological arguments (Barney 1995). Third, in many cases, value is the only VRIO requirement that marketing researchers address or verify (Lee and Grewal 2004). Fourth, researchers tend to provide arguments about only two of the four VRIO conditions, on average. We provide an example and guidance for checking the VRIO requirements for the two most frequently studied market-based resources—brands and relationships—in Table 3 to assist researchers.

Market-based resources: insights and future research directions One key insight from the analysis of this perspective of RBT research in marketing is the remarkable prevalence of and benefits from intangible marketing resources. Intangible resources are often harder to imitate, have more uses, and can be more easily redeployed after a change than tangible resources. In addition, the shift to services and knowledge-based economies appears to have enhanced

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Table 3 Theoretical rationale for key market-based resources

Value

Logic: (1) A valuable resource decreases costs or increases revenues in ways that would not be possible without this resource. This can be shown by comparing sales of similar products with one being a well known brand and the other representing a private store brand (Apelbaum et al. 2003); or by comparing revenues of firms differing in the degree of relational resources. (2) Valuable resources should exhibit *systematic* performance effects within and across firms (Crook et al. 2008).

Empirical Support (Brand Resources): National grocery brands are able to charge significant price premiums over store brands (Apelbaum et al. 2003); brands increase efficiency, lower the cost of capital, increase customer loyalty (van Riel et al. 2005); and decrease customer defection (Morgan et al. 2009).

Empirical Support (Relational Resources): Relational resources lower the cost of serving customers over time (Reinartz and Kumar 2003); increase profit margins (Morgan et al. 2009); contribute to innovation efforts (Srivastava and Gnyawali 2011); increase customer loyalty and referrals (Verhoef et al. 2001); and increase customer value to the firm (Palmatier 2008).

Rarity

Logic: (1) Because a rare resource is possessed by only a few firms, the level of this resource should vary among firms within an industry (Makadok 1999), with many firms not possessing the resource at all or having very low levels of it. (2) If a resource does not pass the test for imperfect imitability, it cannot pass the test for rarity (Crook et al. 2008); thus, researchers should test for imitability first.

Empirical Support (Brand Resources): Costs to create new brands are prohibitive (Aaker and Joachimsthaler 2000); thus, strong brands are relatively rare. The existence of current research on developing strong brands suggests that understanding how to effectively create them remains unclear.

Empirical Support (Relational Resources): Many companies fail at developing relational resources: 65% of CRM efforts are unsuccessful and very costly (King and Burgess 2008). Relational resources heavily depend on marketing departments, which employ mainly part-time employees, making it very difficult for firms to control their behaviors in regards to developing relationships (Grönroos 1999).

Imperfect Imitability

Logic: (1) If competitors are unable to imitate a resource at an acceptable cost, then the effects of the resource should persist *over time* for the firm; thus longitudinal data should be used (Makadok 1999). (2) Mechanisms that protect a resource from being imitated include unique historical conditions (e.g., trademarks for brands), social complexity (e.g., strong brand and relational resources require interaction of many actors), and causal ambiguity (e.g., tacit knowledge embedded in relational resources) (Crook et al. 2008), such that researchers should test for the presence of at least one of these mechanisms.

Empirical Support (Brand Resources): The development of brands is a socially complex and causally ambiguous process (Hooley et al. 2005). Brands cannot be obtained with money alone (Ouyang 2009). Consumers are less likely to purchase imitated brands (Hupman and Zaichkowsky 1995).

Empirical Support (Relational Resources): Relational resources help improve the quality of a relationship with customers, which in turn leads to persistent increases in financial outcomes for the firm (Palmatier et al. 2007). Relational resources entail various forms of knowledge, which is a highly tacit, difficult to imitate construct (Dyer and Singh 1998).

Organization

Logic: A VRI resource that is supported by organizational structure and processes should lead to SCA. This can be checked by comparing the effects of a resource separately and in combination with organizational aspects thought to enable the effectiveness of a resource.

Empirical Support (Brand Resources): Even strong brands frequently fail without proper management (Golder 2000). Building brands requires external and internal marketing; thus, providing appropriate employee education and training is very important (Kotler and Keller 2011).

Empirical Support (Relational Resources): Strong relational resources rely on many organizational factors: managerial support, internal and external communication, and so forth (Palmatier et al. 2006). Market-oriented culture greatly impacts relational resources (Cannon and Perreault 1999); appropriate metrics, and feedback loops for employees are necessary for successful CRM (Payne and Frow 2005).

many of the benefits of intangible resources. Future research should attempt to quantify these benefits and conduct more comparative empirical research to document the advantages of intangible market-based resources, which may help managers substantiate their marketing budgets.

We find evidence of the positive complementarity and synergistic effects of matching marketing resources with other firm resources and capabilities. However, little research has investigated any undesirable interaction effects among marketing resources even though evidence of such occurrences is starting to emerge. For example, research

studying interactions among capabilities related to new product development, customer management, and supply chain management suggests that trade-offs may be involved among different resources (Ramaswami et al. 2009): customer management capabilities interact positively with new product development capabilities but negatively with supply chain management, which makes the overall effect on performance difficult to determine.

Most extant RBT marketing research has studied the "steady state" resource–performance relationship, but little research examines how resources and capabilities are

developed or maintained in a dynamic setting (Day 2011). Important research questions thus remain: How long does it take to build marketing resources or capabilities? How fast do relational and brand resources decay without additional investments? What factors slow or accelerate growth and decay rates? Understanding resource and capability development is directly connected to the time it will take for competitors to imitate valuable resources and undermine the firm's SCA. For example, why was Disney's brand equity able to persevere through two decades of neglect after Walt Disney died, but Xerox lost its innovative capability regarding photocopiers in just a few years (Collis and Montgomery 2008)? Perhaps different types of resources and capabilities decay at different rates. Management researchers have offered some initial insights into capabilities' life cycles (Helfat and Peteraf 2003), but we would benefit from a clearer identification of factors that lengthen or shorten a resource's effective life.

Future marketing research should empirically integrate SCA into models as a mediating mechanism linking resources to performance. Most studies in Table 2 conceptualize SCA in terms of firm performance or as an invisible, performance-creating process in the causal chain that links resources to objective performance outcomes. Future empirical research could determine how to measure SCA and study under what conditions resources and capabilities can be converted into SCA.

The VRIO framework does appear in most marketing studies, but it is mainly used in reference to just the "value" condition of resources. Marketing researchers should adopt management research approaches to verify the remaining "RIO" conditions. For example, resource rarity might be checked by examining the degree to which it varies across competitors within an industry (Makadok 1999). To verify the imperfect imitability of a resource, researchers could examine the effect of the resource on performance over time; if its effects persist, competitors likely cannot imitate it easily, *ceteris paribus* (Makadok 1999). Finally, to check the organization of resources, researchers should try to identify organizational processes that enable the firm to take advantage of its valuable, rare, and imperfectly imitable resources. For example, Moorman and Slotegraaf (1999) show that a firm's technology and marketing resources increase firm performance only if the firm is able to use relevant information about the environment.

Thus, an overwhelming majority of marketing research does not argue or verify that resources meet the VRIO conditions, which undermines the theoretical validity of the research. Because SCA results only when all VRIO requirements are met, a greater reliance on the VRIO framework should be a priority for future marketing research.

Perspective 3: extending RBT to marketing exchanges

Considering that RBT developed in the management discipline, and its earliest marketing applications were in the strategy domain, it is not surprising that most research takes place at the firm level of analysis. However, researchers in marketing are beginning to apply RBT to customer–seller dyads and interfirm relationships to explain the effect of exchange-level resources on exchange performance and detail the contingent factors that affect this linkage (Jap 1999; Palmatier et al. 2013: Samaha et al. 2011). For example, Palmatier et al. (2007, p. 189) link customer–seller dyadic resources to exchange-level performance "by extending RBV theory from the more common 'firm' unit of analysis to an 'exchange,' arguably the most fundamental unit for marketing (Bagozzi 1975)."

The extension of RBT to marketing exchanges generates two important questions. First, is it valid to apply RBT at the exchange level of analysis, considering that theorists developed and tested the theory for use at the firm level? Second, if so, does the RBT need to be adapted for use at the exchange level of analysis? To address the *validity question*, we review RBT theorists' unit-of-analysis debates and evaluate RBT assumptions and logic when applied at the exchange level to identify any theoretical inconsistencies. Many theorists implicitly suggest that RBT is appropriate at only the firm level of analysis (Barney et al. 2011); however, Peteraf and Barney (2003, p. 312, italics in original) go further and explicitly state that a "defining feature of RBT is that it provides a *resource-level* and *enterprise-level* explanation of sustained performance differences *among firms*." Dyer and Singh (1998, pp. 660–661) agree that "extant RBV theory views the firm as the primary unit of analysis" but also argue conceptually that a resource-based logic could be extended to "interfirm linkages" (exchanges) where "dyad/network routines and processes [can serve] as an important unit of analysis for understanding competitive advantage." In summary, most RBT research focuses on firm-level resources, to differentiate the effects of firm-level from industry-level factors on firm performance, rather than evaluating exchange-level resources, which is the key focus in marketing research (Bagozzi 1975; Kotler 1972).

To evaluate whether RBT is valid at the exchange level of analysis, we also examine its two main assumptions. The first assumption of *resource heterogeneity* requires that resources and capabilities be distributed unevenly across firms, because "performance differences" stem from "resources having intrinsically different levels of efficiency" (Peteraf and Barney 2003, p. 311). This assumption and logic also holds when RBT is applied to marketing exchanges. Extant research supports the premise that resources (e.g., customer brand loyalty, customer–salesperson relationships) vary across exchanges, while customer

lifetime value analyses document that these exchange-level resources can lead to significantly different levels of performance across exchanges even within the same firm (Rust et al. 2004). For example, Gupta et al. (2004) suggest that the financial value of a firm depends critically on its intangible assets across customers. The second assumption of RBT, *resource immobility*, requires that resources are not easily transferable across firms. Again, research supports this premise for exchanges, because, for example, customer–seller relationships and learning processes are not easily transferred across different exchanges (Slotegraaf et al. 2003; Srivastava et al. 1998). Thus, analysis at the exchange level does not violate the two underlying assumptions of RBT.

Extending RBT to the exchange level of analysis is in many ways a natural progression "begun by Schmalensee (1985), which attempts to ascribe separate portions of the variation in profitability rates to different levels of analysis, including the industry level, the business group level, and the business level or firm level" (Peteraf and Barney 2003, p. 213). The level of analysis is probably more a function of the expertise of the researcher or historical traditions than a function of the variation explained or the feasibility of managerial intervention. For example, economists may rely more on the industry level, management researchers use the firm level, and marketing researchers adopt exchange-level variables, analyses, and theories. In summary, extant RBT research explains differences in *firm performance* for firms competing in the same marketplace due to underlying firm-specific resources, all else being equal. Marketers instead can use RBT to explain differences in *exchange performance* within the same firm, due to exchange-specific resources (e.g., salesperson–customer relationship).

Extending and adapting the VRIO framework to marketing exchanges Now that we have concluded that the exchange level of analysis does not violate RBT assumptions, we turn to the question of whether the VRIO framework needs to be *adapted* to assess whether exchange-level resources lead to performance advantages. First, an exchange resource is *valuable* if it has the potential to improve the efficiency or effectiveness of an exchange. For example, an exchange between a customer and salesperson governed by strong relational norms allows these exchange partners to reduce transaction costs and uncover new value-creating opportunities (Palmatier et al. 2007). However, a valuable resource is not sufficient for an exchange to perform better relative to other exchanges, if other exchanges also possess the same resource. Second, an exchange resource is *rare* if it only exists within a relatively small number of "competing" exchanges within a firm. If a resource is valuable but not rare, exploiting that resource will only result in parity among exchanges. Third, an exchange resource is *imperfectly imitable* if exchanges without it face a substantial

disadvantage in obtaining or developing it. If a resource is valuable and rare but not costly to imitate, exploiting it results in only a temporary advantage. A resource that is valuable, rare, and imperfectly imitable then has the *potential*, but no guarantee, to generate "SCA" and superior relative performance over other exchanges that lack that resource.

Finally, even if a resource is valuable, rare, and imperfectly imitable, the exchange must be organized and managed in a way that allows exploitation of the resource's potential. Poor skills, processes, and policies can undermine the potential of an exchange's VRI resource. For example, two exchanges in the same firm both may enjoy strong salesperson–customer relationships (exchange resource), but if one salesperson is in the key account management program, with complete control of the customer interface, he or she would be able to reach different parts of the selling firm to satisfy the customer's problems. Another salesperson not in the program has limited control and must receive permission to conduct support actions from the firm's centralized customer service center. The organizational difference between the two exchanges is critical to understanding why the same VRI resource (strong relationship) gets fully exploited only in the first exchange. The VRIO framework for assessing if a resource has the potential to generate relative performance enhancements in an exchange thus does not need to be adapted across the first three conditions (VRI). However, the organization (O) criterion requires some adaptation to account for the differences between exchange and firm organizational factors.

Extending RBT to marketing exchanges: insights and future research directions One key insight from this perspective is that it is valid to use RBT at the exchange level of analysis; it meets the same assumptions and parallels extant resource-based logic, developed and tested at the firm level of analysis. In particular, RBT can be a powerful theory to explain persistent performance differentials among marketing exchanges (e.g., customer–seller dyads) within the same firm due to variation in exchange-level resources and capabilities. However, further research is needed in two critical areas to enable this effort. First, we need to inventory and understand the role of exchange-level resources and capabilities *from an RBT perspective*, including relational governance (trust, norms), value-creating (communicating, investing), and value-capturing (customer lifetime value, dependence) resources and capabilities. Second, further research is needed to understand how the organization (O) criterion of the VRIO framework needs to be refined for the skills, processes, and policies that lead to resource exploitation at the exchange versus firm level of analysis. For example, exchange versus firm governance, organizational structures, and incentive systems are very different, which is critical to appropriating value from exchange resources (Heide 1994; Heide and Wathne 2006).

Another research direction would be to isolate performance variance that is due to resource levels. Specifically, even with the increased focus on customer lifetime value, we know little about the relative influence of customer- or exchange- versus firm-level resources on performance, or about cross-level resource interactions. For example, a salesperson–customer relationship is an exchange-level resource; brand assets and market orientation are more typically firm-level resources. But what relative difference do we find in the effects of these resources on performance, and under what conditions might each have a larger effect? Furthermore, when do exchange-level resources (e.g., relationships) interact with firm-level resources (e.g., brands)? These important questions can be investigated by extending RBT to marketing exchanges.

Perspective 4: connecting RBT to related theories

Marketing researchers often couple RBT with other theories (Jap 1999; Palmatier et al. 2007), with two main objectives. First, for firms to exploit the potential of its valuable, rare, and imperfectly imitable resources, they must have effective managerial and organizational processes in place. Other theories can provide insights into the success or failure of leveraging organizational activities (O in VRIO). We emphasize the complementary effects of resource advantage (RA) theory, agency theory, and transaction cost economics, which are more frequently used in conjunction with RBT in marketing than other theories. We potentially could include a wider range of theories (e.g., resource dependence theory, network theory) in this analysis, but we leave this more detailed discussion to the future research directions section. Second, researchers in both marketing and management argue that RBT "offers a unifying paradigm … which synthesizes diverse literature across different perspectives" (Palmatier et al. 2007, p. 189). In essence, RBT is proposed as a "theory of theories" that might subsume other theories in a single framework (Mahoney and Pandian 1992; Peteraf 1993). To evaluate how the related theories can explain the success and failure of organizational activities at exploiting resources, and the ability of RBT to unify related theories, we review each theory's similarities, complementarities, and differences, relative to RBT (Table 4).

Resource advantage theory In marketing literature, RBT has prompted the development of new theoretical perspectives, the most notable of which is RA theory (Hunt and Morgan 1995). At its most basic level, RA theory combines RBT with heterogeneous demand theory (Alderson 1957). Similar to RBT, RA theory views firms as "combiners of heterogeneous and imperfectly mobile resources—which is the fundamental tenet of the resource-based view" (Hunt 2002, p. 277). While RA theory shares several underlying principles with RBT, RA theory has a slightly broader perspective and helps clarify

certain characteristics of RBT in greater detail. One important contribution of RA theory is that it more clearly delineates what constitutes a competitive advantage. Whereas RBT asserts in general terms that a competitive advantage occurs when a firm creates more economic value than the marginal firm in its industry (Peteraf and Barney 2003), RA theory further clarifies the nature of competitive advantage by contending that it may occur in three different ways (Hunt 2007): (1) an efficiency advantage (i.e., *more efficiently* producing value than competitors), (2) an effectiveness advantage (i.e., efficiently producing *more value* than competitors), or (3) an efficiency-effectiveness advantage (i.e., *more efficiently* producing *more value* than competitors).

From an organizational perspective, RA theory also complements RBT, in that it provides an explanation for why firms fail to exploit resources to achieve superior performance or competitive advantage: (1) managers may lack the capability and information needed to maximize resources, (2) managers' self-interests also might diverge from those of owners, or (3) financial performance might be constrained by managers' views of morality (Hunt 1997). Of these three reasons given, the third is perhaps most distinctive, because it integrates the role of ethics in influencing competitive advantage.

Moreover, RA theory brings the importance of innovation to the forefront and suggests feedback is critical to innovation. According to RA theory, firms infer from their inferior financial performance that they must occupy inferior relative market positions and therefore possess a comparative disadvantage in resources. Disadvantaged firms are then motivated to neutralize and/or leapfrog more advantaged firms through acquisition or innovation (Hunt 1997). Thus, RA theory highlights the importance of feedback loops as a way for firms to become more competitive. In this manner, innovation is viewed as endogenous in RA theory, whereas RBT regards it primarily as exogenous (Hunt and Davis 2008).

Agency theory Agency theory primarily centers on managing principal–agent relationships (e.g., relationships between shareholders and managers) and two important problems that occur in such relationships: the agency problem (e.g., moral hazard, adverse selection) and risk sharing (Eisenhardt 1989). The focus of agency theory is to find the most efficient contract to govern the principal–agent relationship, because managers (agents) do not always act in the best interests of shareholders (principals) and instead may shirk or *dissipate valuable resources*—unless their rewards are tied explicitly to those of the firm and the agent is continually monitored and punished for misbehavior (Castanias and Helfat 1991). Various governance mechanisms may help align the interests of the agent with those of the principal, including commissions, profit sharing, performance measurements, monitoring, and threat of

Table 4 Connecting resource-based theory to related theoretical frameworks

Theory	Key Ideas	Similarities to RBT	Complements to RBT	Key Differences from RBT
Resource advantage theory (Hunt and Morgan 1995)	Competition is a constant struggle among firms for a comparative advantage in resources that yields competitive marketplace positions and, consequently, superior financial performance.	RA theory relies on assumptions of resource heterogeneity and imperfectly mobile and inimitable resources.	Provides an explanation for why managers fail to optimize resources, namely, because they (1) lack the capability and necessary information, (2) exhibit opportunism, or (3) are constrained by morality/ethics (Hunt 1997).	In RA theory, innovation is endogenous, whereas in RBT, it is viewed as exogenous.
Agency theory (Basu et al. 1985; Eisenhardt 1989)	Agency theory is fundamentally concerned with resolving two problems in agency relationships: (1) the agency problem (e.g. moral hazard, adverse selection) and (2) risk sharing.	Both theories recognize the importance of organizational alignment and governance as means for efficiently leveraging resources. Effective resource deployment is influenced by minimizing agency costs (Castanias and Helfat 1991).	Valuable, rare, and imperfectly imitable resources result in a sustained competitive advantage, but only if those resources are effectively deployed; agency theory is concerned with aligning managers' interests with shareholders', thus providing incentivesfor them to deploy resources in ways that maximize performance.	According to RBT, asymmetric information may contribute to causal ambiguity (and a sustainable competitive advantage). Agency theory suggests asymmetric information contributes to a competitive disadvantage because the firm lacks enough information to determine if its managers/agents are behaving appropriately.
Transaction cost economics (Williamson 1975, 1985)	Align transactions (which differ in their attributes) with governance structures (which differ in their costs and competencies) in a discriminating, transaction cost economizing way (Williamson 1991).	Both theories point to the importance of transaction specific investments as important resources for generating superior profitability. Resource combinations are influenced by transaction cost economizing (Teece 1982; Williamson 1991).	Managers may fail to optimize resources due to self-interest seeking (opportunism). Efficient resource deployment is also affected by transaction cost economizing (i.e., protecting against opportunism may result in inefficient resource allocations).	According to RBT, transaction specific investments are important resources that can generate economic rents (Barney 2001). For transaction cost theorists, transaction specific investments create opportunism concerns that must be resolved through governance choices.

termination of employment. Agency theory complements RBT, in that VRI resources may result in a SCA but only if the resources are effectively deployed (organized). Managers' interests need to align with shareholders', through the use of sufficient managerial incentives to deploy resources in ways that yield SCA for the firm.

A critical difference between RBT and agency theory lies in their views of asymmetric information. Under RBT, asymmetric information may help form the basis of a competitive advantage, because the firm knows more than it can tell (Mahoney and Pandian 1992). According to agency theory, however, asymmetric information (articulable knowledge not revealed by an agent) may contribute to a competitive *disadvantage*, because the firm lacks enough information to determine if its managers are behaving appropriately. In these circumstances, managers are more likely to shirk or dissipate valuable resources. This condition may be even more severe when RBT is applied at the exchange level of analysis, where agents spanning organizational boundaries may be responsible for resource exploitation.

Transaction cost economics theory (TCE) Whereas agency theory is principally concerned with managing an *agent's* self-interest seeking behaviors, TCE pertains more generally to managing opportunism by *trading partners*, such as management teams from other firms that engage in transactions with the focal firm. The central claim of TCE is that exchange transactions should be handled in such a way as to minimize the costs associated with those transactions. Exchange contracts are typically incomplete, because firms cannot predict or plan for all future contingencies. These limitations may increase the potential for opportunism, and firms must choose among governance mechanisms that offer sufficient protection against opportunism at the lowest total cost. Examples include market, hybrid, and hierarchy forms of governance.

The TCE view complements RBT by linking managerial self-interest-seeking behaviors that *dissipate valuable resources* to opportunism, or what Williamson (1975, p. 6) defines as "self-interest seeking with guile." Examples of opportunistic behaviors include withholding or distorting information and shirking or failing to fulfill promises or obligations. What separates opportunism from other forms of self-interest seeking is the notion of guile, which Williamson (1975, p. 47) defines as "lying, stealing, cheating, and calculated efforts to mislead, distort, disguise, obfuscate, or otherwise confuse." The fundamental essence of opportunism pertains to this element of deceit. Note that opportunism is distinct from the self-interest-seeking behaviors implied by agency theory, in that agents may pursue their self-interests without acting opportunistically. Moreover, TCE complements RBT by suggesting that efficient resource deployment is influenced by transaction cost economizing (Teece 1982). A firm may choose a suboptimal

set of resources or fail to exploit resources to curb opportunism.

A key difference between RBT and TCE pertains to how each theory views ownership (e.g., "make vs. buy") decisions. According to TCE, a firm's ownership decision centers on minimizing transaction and production costs (Williamson 1975). For example, when market exchanges have high transaction costs, a firm may opt for vertical integration or joint ventures/alliances. Conversely, RBT predicts that ownership decisions seek to maximize firm value by gaining access to other firms' valuable resources (Das and Teng 2000). That is, firms seek the optimal *resource boundary* to realize the value of their resources better than they could through other resource combinations.

Another key difference between these two theories is that RBT does not specifically address the central issue of TCE, opportunism. While investments in specialized assets boost productivity, the more specialized assets become, the lower their value in alternative uses. Because this development exposes the owner to a greater risk of opportunism, transaction parties must choose governance mechanisms that safeguard against the hazards of opportunism. For resource-based theorists, transaction-specific investments constitute resources that are among the most likely to generate economic rents (Barney 2001). For TCE theorists, however, transaction-specific investments create problems of opportunism that must be resolved through governance choices, which again creates unique problems when applying RBT to marketing exchanges.

Role of related theories in explaining resource exploitation According to Penrose (1959, p. 54), a firm may achieve superior performance not only because it is endowed with better resources but also because it is better able to use those resources. RBT argues that managerial and organizational processes are critical to exploiting resources, and each related theory complements RBT by providing a unique view on the effectiveness of these decisions and processes. Building on our previous review, we note that *RA theory suggests that firms fail to exploit their resources* if managers lack the required capability and information to maximize resources, their self-interests diverge from those of owners, or they are constrained by ethical standards. Agency theory suggests that *managers optimize resource exploitation only when their rewards are aligned* with those of the firm and they are monitored and punished for their failure to exploit firm resources fully. Finally, TCE theory suggests that due to their concerns of opportunism and efforts to reduce transaction costs, *managers may fail to exploit potential resources.* As a result, additional costs and complexities accrue during the exchange (e.g., costs associated with communicating, incentivizing, and monitoring), which undermines a firm's or manager's
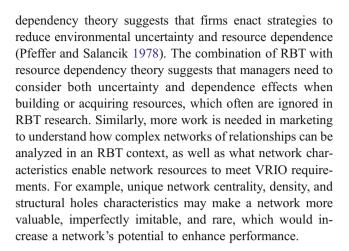
ability to organize in a way that fully exploits the firm's resources to generate SCA.

RBT as a consolidating theory Researchers in both management and marketing suggest that RBT has potential as a unifying paradigm for integrating other theories and providing a parsimonious foundation for multiple theoretical perspectives (Palmatier et al. 2007; Peteraf 1993). As Mahoney and Pandian (1992, p. 375) suggest, the "resource-based model has the potential to coalesce these research streams to provide a rich and rigorous theory of the strategic firm." It also provides a compelling framework for integrating multiple and diverse resources (brands, relationships, knowledge) into one model to study their relative and synergistic effects on SCA and performance (Capron and Hulland 1999; Palmatier et al. 2007). However, we disagree that RBT can integrate or subsume other theories; our analysis reveals fundamental differences in assumptions and logics between RBT and the theories evaluated here (Table 4).

Connecting RBT to related theories: insights and future research directions Our research outlines the benefits of adopting a multi-theoretic view when applying RBT to understand the efficacy of resource–performance linkages. Although RBT shares commonalities with other theories, important differences also exist. Despite these differences, RBT research should become more effective to the extent it can account for cross-theoretic complementarities. Two key research questions emerge from this last evaluation perspective: (1) how can various theories best be integrated to optimize resource decision making, and (2) how can different theoretical frameworks provide insights into the contingencies of RBT?

Our review suggests that various theoretical frameworks imply very different strategies for optimal resource deployment. For example, while transaction-specific investments (TSI) are likely to generate economic rents under RBT, TCE suggests that TSIs make firms vulnerable to the risk of opportunism. It is unclear how best to integrate these potentially positive and negative effects from different theories to identify the best strategies going forward. Similarly, while governance mechanisms can help align the behaviors of agents with principals and mitigate opportunism (agency theory and TCE), such governance structures may actually interfere with the optimal utilization of resources (RBT). If governance constrains autonomy (Ring and Van de Ven 1994), signals distrust, and undermines relational norms (Jap and Ganesan 2000), its net benefits seem unclear. In particular, both agency theory and TCE suggest that such strategies minimize costs, but RBT indicates that they inhibit resource exploitation.

Future research should also investigate the links of resource dependency, network theories, and RBT. Resource

dependency theory suggests that firms enact strategies to reduce environmental uncertainty and resource dependence (Pfeffer and Salancik 1978). The combination of RBT with resource dependency theory suggests that managers need to consider both uncertainty and dependence effects when building or acquiring resources, which often are ignored in RBT research. Similarly, more work is needed in marketing to understand how complex networks of relationships can be analyzed in an RBT context, as well as what network characteristics enable network resources to meet VRIO requirements. For example, unique network centrality, density, and structural holes characteristics may make a network more valuable, imperfectly imitable, and rare, which would increase a network's potential to enhance performance.

Conclusion

The strong proliferation of RBT research in marketing over the past decade seems unlikely to slow in the near future. This article provides a comprehensive review of extant RBT research to identify insights unique to marketing domains and resources, suggest theoretical extensions or adaptations for applying RBT to marketing, and, most importantly, provide guidance and direction for the future use of RBT in marketing. To achieve these objectives, we have used a multidimensional approach and analyzed prior marketing research from four perspectives: the marketing domains that use RBT, the characteristics and uses of market-based resources that differentiate it from other contexts, the extension of RBT to the marketing exchange as the unit of analysis, and the connection of RBT to other theories.

Each perspective generates unique insights and suggests important research directions. For example, the first perspective, evaluating the use of RBT across different marketing domains, suggests that the primary motivation for using RBT in many marketing contexts is that it offers a compelling framework for integrating multiple, dissimilar resources to explain their synergistic, differential effects on performance and their associated contingencies. Secondly, the market-based resource perspective suggests that marketing research increasingly focuses on intangible, complementary resources, whose effects on the firm's SCA and performance appear greater than the effects of tangible resources. In addition, little marketing research actually verifies the underlying resource requirements that are key to RBT-based performance predictions (VRIO criteria), which undermines the theoretical robustness of some research. The third perspective, evaluating the use of RBT at the exchange level of analysis, indicates the validity of using RBT at this level of analysis, but it also identifies the need for additional research to investigate the different skills, processes, and policies that lead to resource exploitation at the exchange

versus firm levels of analysis. Finally, in the fourth perspective, we evaluate the interconnections of RBT to related theories and find cross-theoretic complementarities, which provide unique views on how managers' decisions and a firm's resource conversion process can become more effective if researchers complement RBT with related theories (e.g., TCE, agency).

In summary, the rapid expansion of RBT-related research and evolution of RBT through clarification, adjustment, and modification continues to increase its applicability and breadth. We anticipate that RBT will keep evolving and changing, leading to increased explanatory power and generalizability. We hope this manuscript provides some direction for tackling many of the complex research issues that RBT is so well suited to address.

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