

# GROUNDING SUPPLY CHAIN MANAGEMENT IN RESOURCE-ADVANTAGE THEORY\*

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A key issue for strategic supply chain management research is whether purchasing can be a source of long-term competitive advantage. Recent resource-based works in strategic management suggest that purchasing *cannot* be a source of long-term competitive advantage. In contrast, recent works in supply chain management suggest that purchasing *can* be such a source. This article explains why works in strategic management and supply chain management come to such radically different conclusions on purchasing strategy. Specifically, this article points out that the negative conclusion concerning purchasing strategy is derived from theories of competition based on the neoclassical, equilibrium economics research tradition. Therefore, the positive case for strategic purchasing needs to be grounded in a research tradition that provides a clean break from the neoclassical, equilibrium economics research tradition. The authors discuss the characteristics of what has come to be labeled “the resource-advantage research tradition” and offer it as an appropriate grounding for purchasing strategy, in particular, and supply chain management, in general.

*Keywords:* purchasing department contribution to strategy; competitive advantage; resource-advantage theory

## INTRODUCTION

All disciplines have research traditions. These traditions typically include a knowledge content (e.g., concepts and theories), suggested methodologies (i.e., research designs for generating new knowledge content), and favored epistemologies (i.e., criteria for evaluating knowledge-claims). Some disciplines have numerous research traditions; others have only a few. Some research traditions are open to alternative methodologies; others are relatively closed. A major function of research traditions is that they provide a “grounding for,” that is, a foundation for, specific research projects designed to advance knowledge.

As to research projects reported on in *The Journal of Supply Chain Management* (and its predecessors), Carter and Ellram (2003) identify the four most frequently explored content areas to be inventory/production, purchasing organization, contracting cost/price analysis and global purchasing. As to research designs, the four most common include surveys, case studies, interviews and archival works. And as to data analysis techniques, the four most common are descriptive statistics, means testing, anecdotal analyses and regression. A supply chain management area that has emerged recently, they report, is purchasing strategy. Indeed, “over half of the articles on this subject appear after 1990, suggesting the relatively recent ascendance of purchasing as a strategic contributor” (Carter and Ellram 2003, p. 36). As Freytag and Mikkelsen (2007, p. 187) point out, “Purchasing has at last become strategic in its perspective.” A key issue for

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strategic supply chain management research is whether purchasing can be a source of long-term competitive advantage (McGinnis and Vallopra 1999).

Consider Ramsay's (2001) work on purchasing's potential contribution to competitive advantage. He points out that the resource-based view (RBV) is a widely adopted, perhaps *the* most widely adopted, view of corporate strategy.<sup>1</sup> The RBV assumes intra-industry organizational heterogeneity and maintains that the purpose of strategy is the achievement of above normal returns (i.e., "rents") through competitive advantages based on "successful product differentiation and/or low output prices" (Ramsay 2001, p. 39). Ramsay (2001) reviews the current RBV literature that bears on purchasing's potential contribution to sustainable competitive advantage. His analysis of highly influential works, such as those of Dierickx and Cool (1989), Peteraf (1993) and Barney (1991), leads him to conclude: "There can be little doubt, then, that many . . . [RBV] authors reject the idea of organizations gaining a sustainable competitive advantage through their purchasing activities, . . . [which] looks profoundly depressing for the purchasing function" (p. 41). Ramsay (2001, p. 45) then proceeds to argue on several grounds that "there is a healthy prospect of generating competitive advantage from purchasing activities."

Ramsay's (2001, p. 41) argument for purchasing strategy is that there are four conditions that must be present in real-world competition in order for RBV theorists to argue cogently that purchasing *cannot* contribute to sustainable competitive advantage: (1) functional homogeneity (i.e., all purchasing functions must be homogeneous), (2) perfect competitor information (i.e., all purchasing functions must have information relating to the activities of all rival purchasing functions), (3) perfect purchased resource mobility (i.e., all relevant resources must be available for purchase with identical purchase specifications, without restriction, by any purchasing function) and (4) universal imitation attractiveness (i.e., imitation costs must always be less than likely revenues or profits, or, if negative, the net balance must still be attractive to potential competitors). His analysis indicates that "the four conditions are *routinely* breached in real markets." Indeed, some of the necessary conditions are "absurd."

In retrospect, given the persuasiveness of Ramsay's case, readers might wonder how it came to be that so many RBV writers — capable and prominent theorists all — could conclude that purchasing could not contribute to sustainable competitive advantage. The answer lies in the first paragraph of this article. The works of many RBV theorists — but not all — are still grounded in and

strongly influenced by the neoclassical, equilibrium economics research tradition. In this tradition, perfect competition is the ideal form of competition, equilibrium analyses are preferred, organizations and consumers are maximizers, demand is homogeneous within industries, innovation is exogenous to competition, mathematics is the preferred language of discourse, formal proofs and statistical tests on third-party generated data are favored, and historical evidence and statistical tests on survey data are disfavored. Even though many RBV theorists depart from the neoclassical, equilibrium economics research tradition in some respects, they still rely heavily on it for most of their concepts, theories, and methodologies. Consequently, there is a straightforward reason as to why (at least some) RBV theorists come to a manifestly erroneous conclusion (in Ramsay's words, an "absurd" conclusion) with respect to the possibility of organizations gaining a sustainable competitive advantage through their purchasing activities: many RBV theorists still base many of their analyses on the neoclassical, equilibrium economics research tradition.

Therefore, if Ramsay's (2001, p. 45) conclusion that "there is a healthy prospect of generating competitive advantage from purchasing activities" is correct — and we believe that it is — the conclusion and the arguments supporting that conclusion need to be grounded in a research tradition that provides a clean break from neoclassical economics. We argue in this article that the research tradition based on what is called the "resource-advantage theory of competition" (hereafter, R-A theory) can provide a foundation for purchasing strategy, in particular, and supply chain management, in general.<sup>2</sup> In developing the argument, we first provide an overview of R-A theory. We then discuss the status of the R-A research program and show how Ramsay's (2001) analysis is consistent with (can be grounded in) R-A theory.

## THE R-A THEORY OF COMPETITION

R-A theory is an evolutionary, process theory of competition that is interdisciplinary in the sense that it has been developed in the literatures of several different disciplines. These disciplines include marketing (Hunt and Morgan 1995, 1996, 1997, 2005; Hunt 1997a, 1999, 2000b, c, 2001, 2002a, b; Foss 2000; Hodgson 2000; Hunt and Arnett 2001, 2003, 2004; Morgan and Hunt 2002; Hunt and Derozier 2004; Hunt and Madhavaram 2006a, b), management (Hunt 1995, 2000a; Hunt and Lambe 2000), economics (Hunt 1997b, c, d, 2000d, 2002c), ethics (Arnett and Hunt 2002), law (Grengs 2006) and general business (Hunt 1998; Hunt and

<sup>1</sup>Ramsay uses "RBP" to reference the resource-based perspective. Because the customary convention in the strategy literature is to identify the resource-based view of the organization as "RBV," we will use the "RBV" designation.

<sup>2</sup>Hunt and Morgan (2005) review the literature on R-A theory and divide the history of the research-advantage research program into an introductory period, corresponding to 1995–96, a development period, which would be 1997–2000, and a research tradition period, which would be 2001 to the present.

Duhan 2002; Hunt and Arnett 2006).<sup>3</sup> R-A theory is also interdisciplinary in that it draws on, and has affinities with, numerous other theories and research traditions, including evolutionary economics, “Austrian” economics, the historical tradition, the resource-based tradition, the competence-based tradition, institutional economics and economic sociology.

The knowledge content of a research tradition derives from its foundational premises. As introduced in Hunt and Morgan (1995, 1997) and further explicated in Hunt (2000b), the foundational premises of R-A theory are:

- P1. Demand is heterogeneous across industries, heterogeneous within industries and dynamic.
- P2. Consumer information is imperfect and costly.
- P3. Human motivation is constrained self-interest seeking.
- P4. The organization’s objective is superior financial performance.
- P5. The organization’s information is imperfect and costly.
- P6. The organization’s resources are financial, physical, legal, human, organizational, informational and relational.
- P7. Resource characteristics are heterogeneous and imperfectly mobile.
- P8. The role of management is to recognize, understand, create, select, implement and modify strategies.
- P9. Competitive dynamics are disequilibrium-provoking, with innovation endogenous.

As to methodologies, R-A theory is open to both qualitative and quantitative methodologies. As to epistemologies, R-A theory adopts scientific realism (Hunt and Morgan 1995). Scientific realism’s core tenets are (1) the world exists independently of its being perceived, (2) the job of science is to develop genuine knowledge about that world, even though such knowledge will never be known with certainty, (3) all knowledge claims must be critically evaluated and tested to determine the extent to which they do, or do not, represent or correspond to that world and (4) the long-term success of a theory gives reason to believe that something like the entities and structure postulated by the theory actually exists (Hunt 1990, 2003). A major advantage of scientific realism is that it is the only philosophy that does not make the success of science to be a miracle. Also, scientific realism — again, uniquely among philosophies — shows how science can be objective, when in fact it is (Hunt 1994).

### The Structure and Foundations of R-A Theory

Our overview of the structure and foundations of R-A theory will follow closely the theory’s treatment in Hunt (2000b). R-A theory is a general theory of competition

that describes the *process* of competition. Figures 1 and 2 provide schematic depictions of R-A theory’s key constructs. Using Hodgson’s (1993) taxonomy, R-A theory is an evolutionary, disequilibrium-provoking, process theory of competition, in which innovation and organizational learning are endogenous, organizations and consumers have imperfect information and in which entrepreneurship, institutions and public policy affect economic performance. Evolutionary theories of competition require units of selection that are (1) relatively durable, that is, they can exist, at least potentially, through long periods of time, and (2) heritable, that is, they can be transmitted to successors. For R-A theory, both organizations and resources are proposed as the heritable, durable units of selection, with competition for comparative advantages in resources constituting the selection process.

At its core, R-A theory combines heterogeneous demand theory with a resource-based view of the organization (see premises P1, P6 and P7).<sup>4</sup> Contrasted with perfect competition, heterogeneous demand theory views intra-industry demand as significantly heterogeneous with respect to consumers’ tastes and preferences. Hence, it is inappropriate to draw demand curves for most industries. Indeed, because of heterogeneous intra-industry demand, industries are best viewed as collections of market segments. Therefore, viewing products as bundles of attributes, different market offerings or “bundles” are required for different market segments within the same industry.<sup>5</sup>

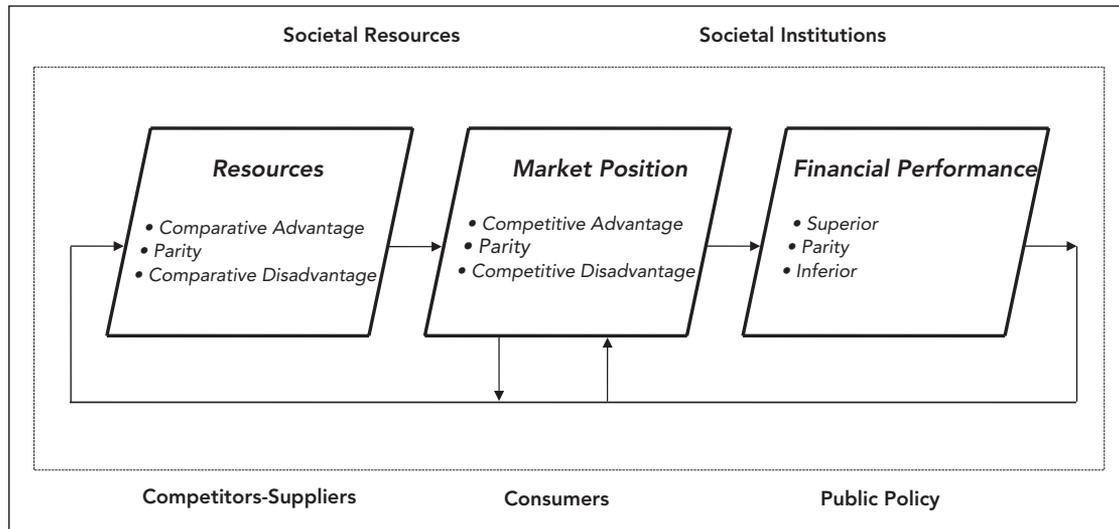
Contrasted with the view that the organization is a production function that combines homogeneous,

<sup>4</sup>Given that both RBV and R-A theory view organizations as combiners of heterogeneous, imperfectly mobile resources, a reviewer requested that we discuss how RBV and R-A theory differ. The differences are numerous. For example, works on RBV generally (1) view RBV as exclusively a theory of the *organization*, (2) view innovation as exogenous to the organization, (3) view competition among organizations to be equilibrating, (4) view demand as outside their theory, (5) confound marketplace positions of competitive advantage with the comparative advantages in resources that lead to the positions of competitive advantage, (6) view the organization as seeking “economic rents” (and, by implication, view organizations’ behavior as undesirable for society) and (7) are silent with respect to the public policy implications of RBV. In contrast, R-A theory (1) is a theory of *competition* that includes a theory of the organization, (2) views innovation as endogenous to the process of organizations’ competing, (3) views competition among organizations to be evolutionary and disequilibrating, (4) incorporates a theory of demand, (5) clearly distinguishes marketplace positions of competitive advantage from the comparative advantages in resources that lead to the positional advantages, (6) views the organization as seeking superior financial performance (and shows how this pursuit is highly beneficial to society) and (7) maintains that the theory has public policy implications and, indeed, has developed such implications in Hunt (2000b, 2007), Hunt and Arnett (2001), and Grengs (2006).

<sup>5</sup>For a more complete discussion of heterogeneous demand theory, see Hunt (2000b, pp. 44–55).

<sup>3</sup>These articles include only a small sample of the articles that either develop the theory or use it as a basis for theoretical or empirical analyses. See Hunt and Morgan (2005) for more.

**FIGURE 1**  
**A Schematic of the Resource-Advantage Theory of Competition**



Note: Competition is the disequilibrating, ongoing process that consists of the constant struggle among firms for a comparative advantage in resources that will yield a marketplace position of competitive advantage and, thereby, superior financial performance. Firms learn through competition as a result of feedback from relative financial performance “signaling” relative market position, which, in turn, signals relative resources.

Source: Adapted from Hunt and Morgan (1997).

perfectly mobile “factors” of production, resource-based theory holds that the organization is a combiner of heterogeneous, imperfectly mobile entities that are labeled “resources.” These heterogeneous, imperfectly mobile resources, when combined with heterogeneous demand, imply significant diversity as to the sizes, scopes and levels of profitability of organizations within the same industry. Resource-based theory parallels, if not undergirds, what Foss (1993) calls the “competence perspective” in evolutionary economics and the “capabilities” approaches of Teece and Pisano (1994) and Langlois and Robertson (1995).

As diagrammed in Figures 1 and 2, R-A theory stresses the importance of (1) market segments, (2) heterogeneous organizational resources, (3) comparative advantages/disadvantages in resources and (4) marketplace positions of competitive advantage/disadvantage. In brief, market segments are defined as intra-industry groups of consumers whose tastes and preferences with regard to an industry’s output are *relatively* homogeneous. Resources are defined as the tangible and intangible entities available to the organization that enable it to produce efficiently and/or effectively a market offering that has value for some market segment(s). Thus, resources are not just land, labor and capital, as in neo-classical theory. Rather, resources can be categorized as

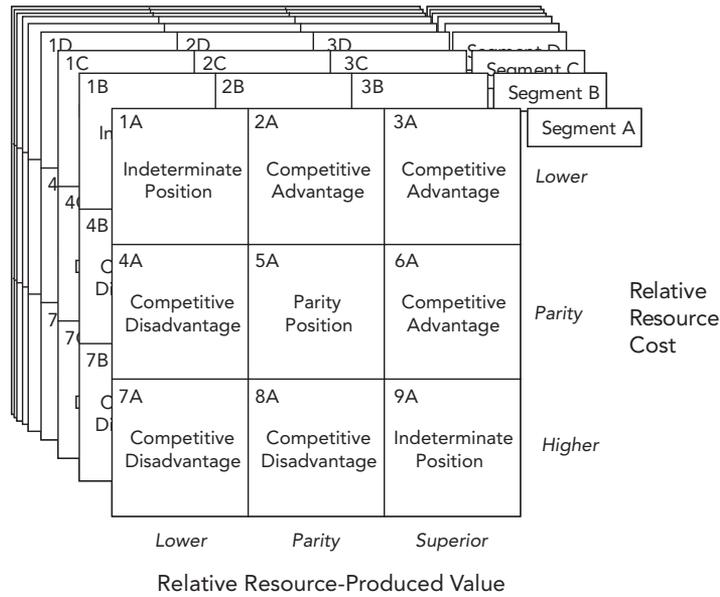
- financial (e.g., cash resources, access to financial markets),
- physical (e.g., plant, equipment),
- legal (e.g., trademarks, licenses),

- human (e.g., the skills and knowledge of individual employees),
- organizational (e.g., competences, controls, policies, culture),
- informational (e.g., knowledge from consumer and competitive intelligence), and
- relational (e.g., relationships with suppliers and customers).

Each organization in the marketplace will have at least some resources that are unique to it (e.g., very knowledgeable employees, efficient production processes, etc.) that could constitute a comparative advantage in resources that could lead to positions of competitive advantage (i.e., cells 2, 3 and 6 in Figure 2) in the marketplace. Some of these resources are not easily copied or acquired (i.e., they are relatively immobile). Therefore, such resources (e.g., culture, competences and processes) may be a source of long-term competitive advantage in the marketplace.

Just as international trade theory recognizes that nations have heterogeneous, immobile resources, and it focuses on the importance of comparative advantages in resources to explain the benefits of trade, R-A theory recognizes that many of the resources of organizations within the same industry are significantly heterogeneous and relatively immobile. Therefore, analogous to nations, some organizations will have a comparative advantage and others a comparative disadvantage in efficiently and/or effectively producing particular market offerings that have value for particular market segments.

**FIGURE 2**  
**Competitive Position Matrix**



Note: The marketplace position of competitive advantage identified as Cell 3A, for example, in segment A results from the organization, relative to its competitors, having a resource assortment that enables it to produce an offering that (a) is perceived to be of superior value by consumers in that segment and (b) is produced at lower costs than rivals.

Note: Each competitive position matrix constitutes a different market segment (denoted as segment A, segment B, ...).

Source: Adapted from Hunt and Morgan (1997).

Specifically, as shown in Figure 1 and further explicated in Figure 2, when organizations have a comparative advantage in resources, they will occupy marketplace positions of competitive advantage for some market segment(s). Marketplace positions of competitive advantage then result in *superior* financial performance. Similarly, when organizations have a comparative disadvantage in resources they will occupy positions of competitive disadvantage, which will then produce *inferior* financial performance. Therefore, organizations compete for comparative advantages in resources that will yield marketplace positions of competitive advantage for some market segment(s) and, thereby, superior financial performance. As Figure 1 shows, how well competitive processes work (to, for example, foster productivity and economic growth) is significantly influenced by five environmental factors: the societal resources on which organizations draw, the societal institutions that form the “rules of the game” (North 1990), the actions of competitors and suppliers, the behaviors of consumers and public policy decisions.

Consistent with its Schumpeterian heritage, R-A theory places great emphasis on innovation, both proactive and reactive. The former is innovation by organizations that, although motivated by the expectation of superior financial performance, is not prompted by specific competitive pressures — it is genuinely entrepreneurial in the classic sense of *entrepreneur*. In contrast, the latter is in-

novation that is directly prompted by the learning process of organizations’ competing for the patronage of market segments. Both proactive and reactive innovation can be “radical” or “incremental,” and both contribute to the dynamism of R-A competition.

Organizations (attempt to) learn in many ways — by formal market research, seeking out competitive intelligence, dissecting competitor’s products, benchmarking and test marketing. What R-A theory adds to extant work is how the process of competition itself contributes to organizational learning. As the feedback loops in Figure 1 show, organizations learn through competition as a result of the feedback from relative financial performance signaling relative market position, which in turn signals relative resources. When organizations competing for a market segment learn from their inferior financial performance that they occupy positions of competitive disadvantage (see Figure 2), they attempt to neutralize and/or leapfrog the advantaged organization(s) by acquisition and/or innovation. That is, they attempt to acquire the same resource as the advantaged organization(s) and/or they attempt to innovate by imitating the resource, finding an equivalent resource, or finding (creating) a superior resource. Here, “superior” implies that the innovating organization’s new resource enables it to surpass the previously advantaged competitor in terms of either relative costs (i.e., an *efficiency* advantage), or relative value (i.e., an *effectiveness* advantage), or both.

Organizations occupying positions of competitive advantage can continue to do so if (1) they continue to reinvest in the resources that produced the competitive advantage, and (2) rivals' acquisition and innovation efforts fail. Rivals will fail (or take a long time to succeed) when an advantaged organization's resources are either protected by such societal institutions as patents, or the advantage-producing resources are causally ambiguous, socially or technologically complex, tacit, or have time compression diseconomies.

*Competition*, then, is viewed as an evolutionary, disequilibrium-provoking process. It consists of the constant struggle among organizations for comparative advantages in resources that will yield marketplace positions of competitive advantage and, thereby, superior financial performance. Once an organization's comparative advantage in resources enables it to achieve superior performance through a position of competitive advantage in some market segment(s), competitors attempt to neutralize and/or leapfrog the advantaged organization through acquisition, imitation, substitution, or major innovation. R-A theory is, therefore, inherently dynamic. Disequilibrium, not equilibrium, is the norm. In the terminology of Hodgson's (1993) taxonomy of evolutionary economic theories, R-A theory is non-consummatory: it has no end-stage, only a never-ending process of change. The implication is that, though market-based economies are *moving*, they are not moving toward some final state, such as a Pareto-optimal, general equilibrium.

### STATUS OF THE R-A THEORY RESEARCH PROGRAM

R-A theory has been subjected to numerous investigations. These studies have revealed the theory to be able to explain, predict and understand a wide range of phenomena. Past explications of the theory in numerous articles spanning a wide variety of disciplines suggest content areas that supply chain management researchers may also wish to explore and further develop. What follows is a sample of the areas previously examined. (To improve readability, we do not provide multiple cites from individual articles. Instead, we provide specific page numbers from Hunt (2000b), which in turn references other articles.)

R-A theory contributes to explaining organizational diversity (pp. 152–155), makes the correct prediction concerning financial performance diversity (pp. 153–155), contributes to explaining observed differences in quality, innovativeness and productivity between market-based and command-based economies (pp. 169–170), shows why competition in market-based economies is dynamic (pp. 132–133), incorporates a resource-based view of the organization (pp. 85–86), incorporates the competence view of the organization (pp. 87–89), has the requisites of a phylogenetic, nonconsummatory and

disequilibrium-provoking theory of competition (pp. 23–24), explicates the view that competition is a process of knowledge discovery (pp. 29–30, 145–147), contributes to explaining why social relations constitute a resource only contingently (pp. 100–102), and has the requisites of a moderately socialized theory of competition (pp. 100–102).

In addition, R-A theory shows how path dependence effects occur (pp. 149–152), expands the concept of capital (pp. 186–190), predicts correctly that technological progress dominates the K/L (i.e., capital/labor) ratio in economic growth (pp. 193–194), predicts correctly that increases in economic growth cause increases in investment (pp. 194–199), predicts correctly that most of the technological progress that drives economic growth stems from actions of profit-driven organizations (pp. 199–200), predicts correctly that R-A competition can prevent the economic stagnation that results from capital deepening (pp. 200–203), contributes to explaining the growth pattern of the (former) Soviet Union (pp. 201–203), provides a theoretical foundation for why formal institutions promoting property rights and economic freedom also promote economic growth (pp. 215–228), provides a theoretical foundation for why informal institutions promoting social trust also promote economic growth (pp. 235–237), and has the requisites for a general theory of competition that incorporates perfect competition as a limiting special case, thereby incorporating the predictive success of neoclassical theory and preserving the cumulateness of economic science (pp. 240–243).

### Recent Trends

The works of Hunt (2000b, 2007), Hunt and Arnett (2001) and Grengs (2006) represent a recent, growing stream of research: the public policy implications of R-A theory. For example, Grengs (2006), an attorney advisor for the Federal Trade Commission, writing in the *Journal of Law, Economics and Policy*, focuses on antitrust policy. He first reviews the history of antitrust law and how competition has been viewed. He points out that the neoclassical, equilibrium-based view of competition has misguided the legal interpretation of antitrust law. He then argues that antitrust law should be guided by a dynamic theory of competition, and he maintains that dynamic competition's "most complete theoretical statement . . . is the "resource-advantage" (R-A) paradigm articulated by . . . *A General Theory of Competition: Resources, Competences, Productivity, Economic Growth*" (p. 128).<sup>6</sup> Grengs (2006) proceeds to show how the arguments in the Supreme Court's decision in *Verizon v. Trinko* follow the theory of competition identified by R-A

<sup>6</sup>The book Grengs (2006) identifies is Hunt (2000b).

theory. Grengs' (2006, p. 144) penultimate conclusion is:

In *Trinko*, the Supreme Court articulated a classical, rivalrous process view of competition, as refined through the corollary insights of the "Resource-Advantage" theory of competition, consistent with the 1890 enactment of the Sherman Act . . . Therefore, the Supreme Court and lower courts should refine their use of terms relating to competition, monopoly, and entry to conform to the Court's classical, rivalrous process view of competition, as refined through its articulation of the key premises of R-A theory.

The works of Hunt and Derozier (2004), Hunt and Arnett (2004) and Hunt and Madhavaram (2006a) represent a second, recent direction of research. These works focus on showing that R-A theory can provide a grounding for areas such as the competence-based, knowledge-based, relationship marketing, market-orientation and market segmentation approaches to strategy. The focus of the current article extends this stream of inquiry by arguing that R-A theory can ground purchasing strategy.

### GROUNDING PURCHASING STRATEGY

All strategies are premised (either explicitly or implicitly) on some theory of how competition *works*. This section shows how the R-A theory of competition grounds, that is, provides a theoretical foundation for, purchasing strategy. We begin with the concept of competitive advantage, which is followed by an analysis of Ramsay's (2001) four "conditions" that must be necessary in the marketplace for one to argue that purchasing cannot contribute to sustainable competitive advantage.

As Ramsay (2001) notes, the pursuit of competitive advantage is a key component of all modern theories of corporate-level and functional-level strategies. That is, all modern theories of strategy share the view that competition involves the struggle among rivals for *advantages*. Unfortunately, most theories of strategy do not clearly specify the kinds of advantages that organizations pursue. Also, most theories of strategy do not clearly articulate why the pursuit of competitive advantage is so important.

For R-A theory, organizations pursue two distinct kinds of advantages: advantages in resources and advantages in marketplace position. Specifically, they pursue comparative advantages in resources that will yield marketplace positions of competitive advantage and, thereby, superior financial performance (see Figures 1 and 2). The clear demarcation of "positions of competitive advantage" from "comparative advantages in resources" is a major plus for grounding purchasing strategy in R-A theory. This is because it is a comparative advantage in resources that leads to marketplace positions of competitive ad-

vantage. Thus, these two different kinds of advantages should not be confounded.

Furthermore, R-A theory explicates the nature of resources that will make the effective neutralization by rivals less likely (or at least more time-consuming). When resources are imperfectly mobile, inimitable, imperfectly substitutable and nonsurpassable, they are more likely to thwart effective neutralization (see premise P9). That is, when resources are tacit, causally ambiguous, socially or technologically complex, interconnected, or they exhibit mass efficiencies or time-compression diseconomies, they are *less* likely to be quickly and effectively neutralized and *more* likely to produce a sustainable competitive advantage.

The addition of "nonsurpassable" to the standard, RBV list of "mobile, inimitable, and imperfectly substitutable," is a distinct contribution of R-A theory. *Nonsurpassable* implies that rivals find it difficult to engage in some kind of major innovation in their efforts to create a superior resource. Here, "superior" implies that the innovating organization's new resource enables it to surpass the previously advantaged competitor in terms of either relative costs (i.e., an *efficiency* advantage), or relative value (i.e., an *effectiveness* advantage), or both.<sup>7</sup> The successful imitation of competitors' resources yields only parity marketplace positions (cell 5 in Figure 2), and (because all organizations seek *superior* financial performance) parity positions are unacceptable.

As to purchasing strategy, a significant stream of research examines purchasing's role in corporate strategy (Ellram and Carr 1994). The move to global sourcing, coupled with the rapid pace of technological change, requires organizations to consider purchasing's role in achieving "corporate strategic success through the selection and development of suppliers that can support the firm's long-term strategy and competitive position" (Ellram and Carr 1994, p. 17). It is notable that organizations continue to rationalize their supplier bases, reducing the number of suppliers to a select few with whom they develop long-term relationships (Burt, Dabler and Starling 2003; Ulaga and Eggert 2006). This rationalization has shifted the time horizon of purchasing activities from predominantly short-term, market-based, arms-length transactions to repeated transactions in long-term relationships with a small group of preferred suppliers. Long-term relationships with suppliers, negotiated by the purchasing function, are socially (and sometimes technologically) complex, often generate mass efficiencies due to increased purchase quantities, and exhibit time-compression diseconomies. Thus, it

<sup>7</sup>Most resource-based theorists focus on inimitable resources. This may be because most resource-based theorists still rely on the neo-classical tradition in economics, in which innovation is exogenous to competition. The idea of "nonsurpassable resources" is, to our knowledge, uniquely associated with R-A theory.

might be difficult for competitors to neutralize the comparative advantage of a superior supplier base that is developed and maintained by the organization's purchasing function.

As to why the pursuit of competitive advantage is so important, R-A theory maintains that organizations pursue marketplace positions of competitive advantage because such positions lead to superior financial performance. That is, R-A theory proposes that the organization's primary objective is superior financial performance (premise P4), which is pursued under conditions of imperfect (and often costly to obtain) information about extant and potential market segments, competitors, suppliers, shareholders and production technologies (P5). Superior financial performance is indicated by measures such as profits, earnings per share, return on investment, changes in stock prices and capital appreciation. Here, the "superior" in P4 equates with both "more than" and "better than." It implies that organizations seek a level of financial performance exceeding that of some referent. For example, the referent can be the organization's own performance in a previous time-period, the performance of rival organizations, an industry average, or a stock-market average, among others. Affecting the process of competition, both the specific measure and specific referent will vary somewhat from time to time, organization to organization, industry to industry and culture to culture (see the five environmental factors in Figure 1).

Why, then, do organizations pursue superior financial performance? For R-A theory, organizations are posited to pursue superior financial performance because superior rewards — both financial and nonfinancial — will then flow to owners, managers and employees (consistent with the view of human motivation identified in P3). However, superior financial performance does not equate with the neoclassical concepts of "abnormal profits" or "rents" (i.e., profits differing from the average organization in a purely competitive industry in long-run equilibrium) because R-A theory views industry long-run equilibrium as such a rare phenomenon that "normal" profits cannot be an empirical referent for comparison purposes. Furthermore, the actions of organizations that collectively constitute competition do not force groups of rivals to "tend toward" equilibrium. Instead, the pursuit of *superior* performance implies that actions of competing organizations are disequilibrating, not equilibrating. That is, R-A competition is necessarily dynamic because all organizations cannot be superior *simultaneously*.

Finally, with respect to the concepts of "normal" and "abnormal" profits, as well as the term "rents," note that these neoclassical terms are associated with an equilibrium situation, in which all the organization-based innovations that produce *most* of the increases in productivity and economic growth have stopped (or been

stopped by the government). Therefore, when the standard analyses of neoclassical economics condemn "abnormal" profits and "rents" as dysfunctional for societies, such analyses are actually condemning the very process by which organizations contribute to — indeed, *drive* — productivity and economic growth. Consequently, supply chain management researchers are well-advised to eschew the use of "abnormal" profits and "rents." Instead, researchers should consider using R-A theory's "superior financial performance."

### Condition One

Now consider condition one, functional homogeneity: all purchasing functions must be homogeneous. Ramsay (2001, p. 41) points out that in the real world of competition purchasing functions "exhibit an enormous range of differences in performance, personnel, skills, experiences, and so on, some of which may confer an advantage that is hard to replicate." Now note that P6 in R-A theory identifies resources as "financial, physical, legal, human, organizational, informational, and relational." That is, the individual personnel involved in purchasing are human resources. Also, P7 assumes that resources are "heterogeneous and imperfectly mobile." R-A theory does not assume that resources are *perfectly* heterogeneous. Rather, it assumes that many organizational resources are *significantly* heterogeneous. Therefore, R-A theory specifically assumes the possibility of the heterogeneity of human resources in purchasing that are required for Ramsay's (2001) claim that purchasing can contribute to competitive advantage.

The purchasing strategy literature provides empirical evidence for the existence of heterogeneity in human resources across organizations' purchasing functions and the subsequent consequences of such heterogeneity on organizational performance. Carr and Smeltzer (2000) demonstrate the positive effects of the skill levels of an organization's purchasing personnel, including technical, analytical and behavioral skills. Similarly, Carter and Narasimhan (1996) find significant differences in purchasing capabilities and resource allocations across organizations. Their study identifies seven strategic factors that explain more than forty percent of the variance in organizational performance. A key factor, they find, is the quality of human resource management in the purchasing area.

Also, with respect to "functional homogeneity," note that P6 in R-A theory assumes that firm resources can be "organizational" in nature. The implication is that organizational competences can be firm resources. Therefore, a purchasing *competence* may be a resource that can contribute to competitive advantage. Competences, by their very nature, are heterogeneously distributed among organizations and are not capable of being bought and sold in the marketplace. For R-A theory, competences are "higher order" resources that are defined as socially and/

or technologically complex, interconnected, combinations of tangible basic resources (e.g., information technology, such as EDI or supplier extranets) and intangible basic resources (e.g., specific organizational policies and procedures and specific employees' skills and knowledge) that fit coherently together in a synergistic manner. Competences are distinct resources because they exist as distinct packages of basic resources. Because competences are causally ambiguous, tacit, complex and highly interconnected, they are likely to be significantly heterogeneous and asymmetrically distributed across organizations in the same industry. As a consequence, a purchasing competence may be a resource that can contribute to a marketplace position of competitive advantage, and thereby to superior financial performance.

For example, pointing out that timeliness in purchasing is important, a reviewer asked how R-A theory would deal with the situation of an organization making commodity purchases when prices are low, rather than high. R-A theory addresses such situations in two ways. First, timely purchases drive down relative resource costs, as shown in Figure 2. Therefore purchasing at low prices contributes to an organization's competitive position. Second, if an organization can *consistently* purchase at low prices, then this would contribute to the organization's purchasing competence, which, as discussed in this section, is a distinct kind of organizational resource.

### Condition Two

Now consider condition two, perfect competitor information: all purchasing functions must have information relating to the activities of all rival purchasing functions. Ramsay (2001, p. 43) points out that causal ambiguity is a common phenomenon among competitors. He, quite correctly, points out that "causal ambiguity occurs in the purchasing arena when competitors are either unable to determine if an organization has achieved a competitive advantage as a result of some purchasing activity, or know that such an advantage exists but are unable to determine how it was achieved."

For R-A theory, the organization's information is imperfect and costly (P5). Therefore, the possibility that the purchasing function has causal ambiguity is specifically provided for. The notion of perfect competitor information, which comes from the neoclassical, equilibrium economics research tradition, assumes that explicit information (i.e., information that can be articulated and codified) alone is sufficient for understanding a competitor's resources. However, much of the value generated by resources has to do with their *value in use*, rather than their market or trade value. This type of information often has a significant tacit component and, therefore, is not readily accessible by outsiders. R-A theory, it is important to note, recognizes the value of both explicit and tacit information.

### Condition Three

Now consider condition three, perfect purchased resource mobility: all relevant resources must be available for purchase with identical purchase specifications, without restriction, by any purchasing function. Ramsay (2001, p. 44) points out that "much of the purchasing function's time and effort is devoted to the generation of *intangible* asset specificity." Because many purchased assets are specialized investments, "asset specificity becomes an everyday fact of purchasing life rather than some rare phenomenon" (p. 44). Developing these specialized investments occurs in buyer-seller relationships when organizations have long-term, strategic orientations (Chen, Paulraj and Lado 2004). Examples of asset specificity negotiated by the purchasing department (beyond the customization of a physical product) include services (e.g., engineering, design, marketing assistance), information (e.g., product availability, location in transit), logistics (e.g., warehousing, packaging, palletizing, delivery schedules) and financing (e.g., payment terms).

For R-A theory, the organization's resources are "heterogeneous and imperfectly mobile" (P7). Therefore, R-A theory accommodates the asset specificity that Ramsay (2001) points out as a possible means by which purchasing can contribute to competitive advantage.

### Condition Four

Now consider condition four, universal imitation attractiveness: imitation costs must always be less than likely revenues or profits, or if negative, the net balance must still be attractive to potential competitors. Ramsay (2001, p. 44) points out that "imitating a competitor's purchasing advantage might appear unattractive [because competitors may have] . . . insufficient financial incentives [and/or] . . . excessive imitation costs." Indeed, it is not uncommon for suppliers to make short-term sacrifices in order to preserve profitable, long-term relationships with customers. For example, Uzzi (1996) reports on situations in which suppliers in the apparel industry voluntarily sustain losses on particular transactions to assist their customers. Trade-offs like these make it difficult to determine the actual costs and benefits necessary for determining the attractiveness of imitating competitors' purchasing functions.

For R-A theory, the role of management is to "recognize, understand, create, select, implement, and modify strategies" (P8). Therefore, R-A theory acknowledges that competitors' managers may recognize and understand that they have insufficient financial incentives and/or excessive imitation costs to profitably imitate their rivals' purchasing strategies.

Also with respect to condition four, readers should note that R-A theory specifically rejects the notion that competition is industry-wide. Rather, demand is heterogeneous within industries (P1), which implies that competition is market segment, by market segment, by

market segment. Therefore, competitors' managers may decide not to compete in particular market segments in which the purchasing strategy in rival organizations has resulted in comparative advantages in the rival organizations' resources and, therefore, marketplace positions of competitive advantage. Therefore, R-A theory accommodates Ramsay's (2001) position with respect to "universal imitation attractiveness."

## CONCLUSION

The analysis here shows that purchasing strategy can be grounded in the R-A theory of competition. That is, the foundational premises of R-A theory can be used to explain, predict and understand how purchasing strategy can provide comparative advantages in resources. By accounting for real-world competitive conditions faced by supply managers — including resource heterogeneity, imperfect resource mobility and costly, imperfect information — R-A theory supports the conclusion that purchasing strategy can, indeed, contribute to an organization's marketplace position of competitive advantage.

R-A theory brings into focus many of the issues that face supply chain management. First, the *process* orientation of R-A theory of competition provides a framework for examining both organizational performance and, important for supply chain management, the performance of the entire supply chain. For example, what happens when a supply chain receives signals of inferior performance, such as declining market share or unsatisfactory profits? Which organizations in the supply chain are positioned to convert these signals into action? How do organizations in a supply chain evaluate their resources, relative to competitors' supply chains? Do supply chains that have formal mechanisms in place to evaluate overall supply chain resources outperform those that do not have such mechanisms?

Second, in R-A theory, the value of resources are understood to be highly contingent on the environment. That is, comparative advantages in resources depend on environmental factors, and some resources may be highly valuable in one environment and less so in others. This aspect of R-A theory encourages the development of supply chain theories that model the complexity and uncertainty of supply chain management. For example, how does supply chain performance vary when there are high levels of uncertainty about environmental conditions such as variable consumer demand, questionable resource availability in various parts of the world, and rapid regulatory or technological change?

Third, R-A theory, like supply chain management, recognizes that resources can be both internal and external to the organization. That is, resources must be *available* to the organization, not necessarily *owned* by the organization. Because R-A theory delineates the kinds of resources that are potential bases for comparative advantage, it

offers a structure for analyses of the strategic value of supply chain flows across organizations. That is, it offers a structure for analyzing the financial, physical and informational flows that are core elements of supply chain management. In addition, R-A theory recognizes the role of the diverse kinds of resources that have been shown to be important factors in supply chain performance, including human, organizational and relational resources.

Supply chain management is a relatively new area of investigation. As such, the development of theory is critical for the advancement of supply chain management as a discipline and a practice. Because most of the content areas of supply chain management identified in Carter and Ellram (2003) are, like purchasing strategy, premised on some theory of competition, most supply chain management research can, likewise, be grounded in R-A theory. R-A theory is a work in progress, as is supply chain management. Both can benefit from further, detailed explorations of (1) the implications of R-A theory for supply chain management and (2) the implications of supply chain management for R-A theory.

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