Sustainable marketing, equity, and economic growth: a resource-advantage, economic freedom approach

Shelby D. Hunt

Abstract Sustainable marketing may be viewed as marketing that is within, and supportive of, sustainable economic development. Peattie (*The Marketing Review* 2(2):129–146, 2001) maintains that sustainable economic development poses major challenges for marketing. These challenges concern futurity, equity, and needs/wants. This article focuses on the equity and needs/wants challenges of sustainable development and argues that public policies and programs (of wealthy nations, poor countries, or bodies such as the United Nations) can improve economic equity by promoting the economic growth of poor countries. Furthermore, it argues that a major reason why past efforts to promote the economic growth of poor countries have so often failed is that such (allegedly) pro-growth policies have been guided by an impoverished theory of economic growth. Specifically, this article (1) discusses the implications of sustainable development for marketing, (2) shows seven ways that sustainable marketing and resource-advantage (R-A) theory intersect, (3) argues that the cause of sustainable marketing is furthered by promoting economic growth, (4) identifies the two major, radically different, theories of economic growth: neoclassical, static-equilibrium growth theory and dynamic competition growth theory, (5) shows how the two theories make four radically different, testable predictions, and (6) reviews the empirical evidence concerning the four predictions. The article concludes that the equity and needs/wants challenges of sustainable development and the cause of sustainable development more generally can be addressed by poor nations pursuing economic growth, which in turn implies that public policy should focus not on increasing investment, but on institutions that favor economic freedom and dynamic competition.

Keywords Sustainable marketing ·
Sustainable development · Resource-advantage theory ·
Dynamic competition · Economic growth ·
Economic freedom

S. D. Hunt (✉)
Department of Marketing, Rawls College of Business,
Texas Tech University,
Lubbock, TX 79409-2101, USA
e-mail: shelby.hunt@ttu.edu

Green marketing, argues Peattie (2001), can be categorized into three "ages." The first age was the 1970s' *ecological* marketing that focused on particular environmental problems, such as air pollution, the depletion of oil reserves, and the impact of pesticides on the environment (e.g., Henion and Kinnear 1976; Kassarjian 1971). The second age was the 1980s' *environmental* marketing that focused on advocating clean technology, understanding and targeting the "green consumer," viewing good socio-environmental performance as a potential basis of competitive advantage, and encouraging marketers to take a physical systems view of businesses (e.g., Elkington and Hailes 1988). And the current, third age, is *sustainable* marketing, which focuses on the goal of creating sustainable development and a sustainable economy. In such an economy, the full environmental costs of production and consumption are incorporated (Peattie 2001).

Sustainable development is development that "meets the needs of the present without compromising the ability of future generations to meet their own needs" (UNWCED 1987, p. 8). Sustainable marketing, then, "is marketing within, and supportive of, sustainable economic development" (van Dam and Apeldoorn 1996, p. 46). The sustainability movement may be viewed as bringing together a diverse group of social activist organizations, whose goals, policies, ideologies, and action plans share a common "worldview" (Bridges and Wilhelm 2008). This worldview incorporates ecological

(environmental), social (equity), and financial (economic) sustainability, which are often referred to as the "three Es" that constitute the "triple bottom line" (Savitz and Weber 2006). Consistent with the triple bottom line, Peattie (2001) maintains that sustainable economic development poses major challenges for marketing. These challenges concern futurity, equity, and needs/wants. The *futurity* challenge, he argues, is to focus not only on delivering satisfaction to customers and profits to investors in the current generation, but also to future generations. The *equity* challenge is to encourage a fair distribution across nations of the costs and benefits of economic development. The *needs/wants* challenge is to focus more on goods and services that meet the "basic survival needs" of poor nations instead of the "wants" of wealthy nations.

Consider the equity and needs/wants challenges stressed by Peattie (2001) (which are incorporated in the equity and economic aspects of the triple bottom line). There are at least two major ways that these challenges can be met. First, the present wealth and future income of developed nations can be redistributed to poor countries. Second, poor countries can create their own wealth by growing their economies. As to the redistribution option, experience suggests that, though redistributing wealth may temporarily alleviate hunger and address other survival needs, such wealth-transfers do not create sustainable, self-supporting societies. Rather, they result in countries that are permanently dependent on the largesse of wealthy nations. As to the second option, Peattie (2001, p. 141) argues that, though one might expect that "more growth and more trade will help to ease the plight of the world's poor . . . experience suggests that it will not." As he points out, for the past half-century the economic growth of poor countries has been much lower than that of (already) wealthy nations.

This article focuses on the equity and needs/wants challenges of sustainable development. Specifically, it argues that public policies and programs (of wealthy nations, poor countries, or bodies such as the United Nations) can improve economic equity by promoting the economic growth of poor countries. A major reason why past efforts to promote the economic growth of poor countries have so often failed is that such (allegedly) pro-growth policies have been guided by an impoverished theory of economic growth. There are two major, radically different, theories of economic growth: (1) neoclassical, static-equilibrium growth theory (e.g., Solow 1956, 1957) and (2) dynamic competition growth theory (e.g., Ellig 2001). Neoclassical theory maintains that the key to economic growth is increased investment. In contrast, dynamic competition theory, as exemplified by resource-advantage (R-A) theory (e.g., Hunt 2000b), maintains that (1) growth results from the innovations that stem from the process of competition and (2) the dynamic process of competition that promotes economic growth is facilitated by institutions that foster economic freedom. I argue that the reason that past efforts to improve economic equity by fostering economic growth have so often failed is that such efforts were guided by the wrong theory of economic growth, that is, neoclassical growth theory.

Therefore, this article's recommendation that economic equity be addressed by policies that promote economic growth requires an understanding of the two major theories of economic growth. My discussion is organized as follows. First, I discuss the dynamic process of competition identified by R-A theory and show seven ways in which the concepts and approaches found in discussions of sustainable marketing intersect with the structure and foundations of R-A theory. The seventh way, I argue, provides an additional reason for those who promote sustainability to promote the economic growth of poor societies. Then, I provide a brief review of neoclassical growth theory and develop four predictions (or theses) from it: (1) the capital-labor ratio dominates technological progress in fostering economic growth, (2) investment *causes* economic growth, (3) technological progress is exogenous to competition, and (4) growth is institutions-neutral. I then develop R-A theory's view that economic growth is endogenous to the process of competition and show how it makes four predictions that are opposite to those of neoclassical growth theory. The article then explores the empirical evidence regarding the four theses.[1]

The resource-advantage theory of competition

Resource-advantage 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 1997a, 1999, 2000b, c, 2001, 2002a, b; Hunt and Arnett 2001, 2003, 2004; Hunt and Derozier 2004; Hunt and Madhavaram 2006a, b; Hunt and Morgan 1995, 1996, 1997, 2005; Morgan and Hunt 2002), 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 Arnett 2006; Hunt and Duhan 2002).[2] R-A theory is

---

[1] This article's analysis of economic growth draws heavily on Hunt (1997b, c, d, 1998, 2000b, 2007) and Hunt and Arnett (2001, 2003). Readers are encouraged to review these sources for more detailed analyses of some of the issues discussed in this article.

[2] 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.

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 resource-advantage 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 firm's objective is superior financial performance.
P5:   The firm's information is imperfect and costly.
P6:   The firm'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.

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). Resource-advantage 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, firms and consumers have imperfect information, and 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 firms 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 firm (see premises P1, P6, and P7).[3] 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. Contrasted with the view that the firm is a production function that combines homogeneous, perfectly mobile "factors" of production, resource-based theory holds that the firm 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 firms within the same industry.

As diagrammed in Figs. 1 and 2, R-A theory stresses the importance of (1) market segments, (2) heterogeneous firm 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 firm that enable it to produce efficiently and/or effectively a market offering that has value for some market segment(s). Thus,

---

[3] Given that both the resource-based view (RBV) and R-A theory see firms as combiners of heterogeneous, imperfectly mobile resources, what are the differences between RBV and R-A theory? The differences are numerous. For example, works on RBV generally (1) view RBV as exclusively a theory of the firm, (2) view innovation as exogenous to the firm, (3) view competition among firms 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 firm as seeking "economic rents" (and, by implication, view firms' 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 firm, (2) views innovation as endogenous to the process of firms' competing, (3) views competition among firms 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 firm 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).

10

J. of the Acad. Mark. Sci. (2011) 39:7–20

Figure 1 A Schematic of the Resource-Advantage Theory of Competition. Read: 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).

resources are not just land, labor, and capital, as in neoclassical 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

Figure 2 Competitive Position Matrix. Read: The marketplace position of competitive advantage identified as Cell 3A, for example, in segment A results from the firm, 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).

- Relational (e.g., relationships with suppliers and customers).

Each firm in the marketplace will have at least some resources that are unique to it (e.g., very knowledgeable employees, efficient production processes) that could constitute a comparative advantage in resources that could lead to positions of competitive advantage (i.e., cells 2, 3, and 6 in Fig. 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 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 firms within the same industry are significantly heterogeneous and relatively immobile. Therefore, analogous to nations, some firms 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.

Specifically, as shown in Fig. 1 and further explicated in Fig. 2, when firms 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 firms have a comparative disadvantage in resources they will occupy positions of competitive disadvantage, which will then produce *inferior* financial performance. Therefore, firms 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 Fig. 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 firms 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 firms 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 innovation that is directly prompted by the learning process of firms' 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.

Firms (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 Fig. 1 show, firms learn through competition as a result of the feedback from relative financial performance signaling relative market position, which in turn signals relative resources. When firms competing for a market segment learn from their inferior financial performance that they occupy positions of competitive disadvantage (see Fig. 2), they attempt to neutralize and/or leapfrog the advantaged firm(s) by acquisition and/or innovation. That is, they attempt to acquire the same resource as the advantaged firm(s) and/or they attempt to innovate by imitating the resource, finding an equivalent resource, or finding (creating) a superior, nonsurpassable resource. Here, "superior" implies that the innovating firm'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.[4]

Firms 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 firm'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 firms for comparative advantages in resources that will yield marketplace positions of competitive advantage and, thereby, superior financial performance. Once a firm'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 firm 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.

---

[4] Most resource-based theorists focus on inimitable resources. This may be because most resource-based theorists still rely on the neoclassical tradition in economics, in which innovation is exogenous to competition. The idea of "nonsurpassable resources" is uniquely associated with R-A theory.

12

J. of the Acad. Mark. Sci. (2011) 39:7–20

Sustainable marketing and R-A theory

Most of the works developing sustainable marketing are normative, yet R-A theory is a positive theory of competition. How, then, can the positive, R-A theory relate to normative, sustainable marketing theory? Note that many owners, executives, managers, and employees of firms, as well as many consumers, often act in accordance with the prescriptions of sustainable marketing theory. I argue that many of the concepts, strategic approaches, and behaviors in discussions of sustainable marketing are consistent with the structure and foundations of R-A theory. Indeed, sustainable marketing intersects with R-A theory in several ways.

First, much of sustainable marketing focuses on the "green consumer" as a market segment to be analyzed, encouraged, and cultivated. Similarly, R-A theory maintains that competition is not industry-wide, but segment, by segment, by segment. Therefore, unlike neoclassical theory, the process of competition in R-A theory is compatible with focusing on the green consumer segment.

Second, note that human motivation in R-A theory is viewed as constrained self-interest seeking. To be taken seriously, any theory of human motivation must acknowledge self-interest seeking. Therefore, the theory acknowledges the obvious fact self-interest seeking motivates much individual behavior. However, for R-A theory, alone among theories of competition, the self-interest seeking of consumers is constrained by their personal moral codes. As a consequence, when the personal moral codes of some consumers place a high value on protecting the environment, such consumers can constitute a green consumer segment. Therefore, by virtue of its human motivation premise, R-A theory can explain the existence of green segments.

Third, like consumers, the owners, executives, managers, and employees of for-profit firms are also motivated by constrained, self-interest seeking. It is true that the owners, executives, managers, and employees of for-profit firms expect to receive financial (and other) rewards for their investments and services. However, it is also true that their personal moral codes may prompt them to sacrifice some financial rewards for the purpose of achieveing socially and environmentally desirable outcomes. Therefore, R-A theory, alone among theories of competition, can explain the existence of noncoerced, socially responsible behavior associated with sustainability.

Fourth, there are times when a market offering is more valuable to consumers not because it is intrinsically more "green," but because it is produced by "green" production processes. Therefore, for R-A theory, the strategy of positioning a firm as engaging in sustainable production processes, when such a positioning is successful, may provide the firm with a *resource* that contributes to the firm's ability to produce market offerings that are viewed as more valuable than competitors' offerings. Thus, R-A theory accommodates not only the strategy of producing inherently "green" market offerings, but also the strategy of producing offerings by "green" means.

Fifth, sustainable marketing is associated with firms having employees with personal moral codes that are opposed to the ethical egoism of utility maximizing. As argued in detail in Hunt (1997d), consider two firms, A and B, that are competing for the same market segment. Assume that A has (primarily) employees who are guided by ethical egoism, whereas B has screened its employees in such a manner that they are, again primarily, guided by deontological ethics. In such a situation, A will have transformational costs (e.g., costs associated with shirking, cheating, stealing, monitoring, and free riding) that B avoids. In R-A theory's terms, the fact that B's employees, guided by deontological ethics, are trustworthy results in an intangible, comparative-advantage producing resource for B, when competing with A. *Ceteris paribus*, B will then occupy a marketplace position of competitive advantage (see Fig. 2) *vis-à-vis* A. Therefore, R-A theory, alone among theories of competition, can show the mechanism by which firms can achieve competitive advantage by focusing on hiring employees whose personal moral codes are consistent with the ethics of sustainable marketing.

Sixth, note that for R-A theory the firm's primary objective is assumed to be superior financial performance. Consistent with the self-interest seeking dimension of human behavior, superior financial performance is argued to be the firm's primary objective because superior rewards flow to the owners, executives, managers, and employees of firms that produce superior financial results. However, note also that the accomplishment of superior financial performance can also *enable* firms to pursue other objectives, such as those emphasized in sustainable marketing, for example, contributing to social causes and protecting the environment. For-profit organizations differ from their not-for-profit cousins in that the former, but not the latter, are *for profit*. Indeed, prolonged inferior performance threatens the firm's survival and prevents the accomplishment of secondary objectives. Bankrupt firms protect and promote no interests, including environmental interests. Another way to phrase the foregoing is that wealthy firms are more likely to promote sustainable marketing than are poor firms, which implies that the cause of sustainable marketing is furthered by promoting wealthy firms.

Seventh, for R-A theory, nations are like firms. Indeed, the original label for R-A theory, was the "comparative advantage theory of competition" (Hunt and Morgan 1995), which drew on international trade theory.[5] The implication of viewing nations as like firms is that, just as wealthy firms

---

[5] The label "R-A theory" was adopted in Hunt (1995) because we discovered that readers found "comparative advantage theory" to be confusing.

are more likely to favor sustainability, so are wealthy nations. It is no accident that the sustainability cause is strongest in prosperous nations. It is a truism that poor societies are less likely than wealthy societies to make the present sacrifices required for the purpose of not "compromising the ability of future generations to meet their own needs" (UNWCED 1987, p. 8). Therefore, it is not just the objective of economic equity that makes the poverty of the nations of the underdeveloped world a concern for sustainability advocates; it is that when poor societies become prosperous they are more likely to themselves promote the kind of development that does not compromise future generations.

Therefore, sustainable marketing intersects with R-A theory in several ways. In the seventh way, sustainable marketing is tied to sustainable development; sustainable development is tied to the wealth of nations; and the wealth of nations is tied to economic growth. Turning now to our discussion of promoting the cause of sustainability by promoting economic growth, we begin with neoclassical growth theory.

Neoclassical growth theory

The neoclassical model of economic growth is strongly associated with the works of Solow (1956, 1957), whose seminal efforts earned him the Nobel Prize in 1987. Using the notation of Romer (1994), a simple version of the neoclassical model of growth starts with an aggregate production function of the Cobb-Douglass form:

$$Y = A(t)K^{1-\beta}L^{\beta} \tag{1}$$

In this equation, Y is net national product, A is the level of technology, K is the stock of capital, L is the stock of labor, and β denotes the share of output attributable to labor. Because neoclassical theory assumes perfect competition, β is also the share of total income *paid* to labor. $A(t)$ signals the standard assumption in neoclassical theory that, though technology is changing through time, it is changing for reasons outside the model. Specifically, technology is an exogenously provided public good that changes not through the efforts (purposive or otherwise) of competitors, but from the basic science conducted by such entities as government or universities.

Economic growth, for neoclassical growth theory, can result from increases in labor (L), capital (K), the capital/labor ratio (K/L), and from the productivity increases resulting from changes in $A(t)$. Increases in the K/L ratio are referred to as "capital deepening," and increases in $A(t)$ are referred to as "technological progress." Therefore, economic growth can come from movements along the

existing, aggregate production function (by increases in L, K, and the K/L ratio) or from a shift to a new production function (by increases in technological progress).

Because the growth rate of L and $A(t)$ are both exogenous in neoclassical growth theory, it focuses on K and K/L. In a closed economy, if s is the fraction of total output saved by consumers each year, then s is also the ratio of net new investment to net national product. Therefore, sY is the rate of growth of capital stock K. If $y = Y/L$ signifies output per worker, $k = K/L$ denotes the available capital per worker, and a "^" over a variable signifies its exponential rate of growth, then the growth in income per worker in an economy can be stated as:

$$\widehat{y} = (1-\beta)\widehat{k} + \widehat{A} \tag{2}$$

If n is the exogenous growth rate of the labor force, then substituting in Eq. 2 an expression for $\hat{k}$ in terms of s, n, $A(t)$, and y yields:

$$\widehat{y} = (1-\beta)\left[sA(t)^{1/(1-\beta)}y^{(-\beta)/(1-\beta)} - n \right] + \widehat{A} \tag{3}$$

Equations 2 and 3 imply both a theory of economic growth and a procedure for partitioning the overall growth of income per worker into its components. The implied theory of economic growth maintains that economies with a low K/L ratio will have a high marginal product of capital. Therefore, if, for example, a constant fraction s of the income generated by new investment is saved, then the gross investment in new capital goods may not only offset depreciation but also exceed the amount necessary to equip new entrants to the workforce. The increase in the K/L ratio results in increases in income per worker, or what is referred to as *extensive growth*. In short, economic growth is a resource re-allocation problem in that re-allocating resources from consumer goods to capital goods results in extensive growth.

For neoclassical growth theory, as K/L rises through time, the marginal product of new capital decreases, that is, there are decreasing returns to capital as a result of *capital deepening*. Eventually, the savings accruing to new additions to capital decrease to the point where they are just sufficient to cover depreciation and equip new entrants to the workforce (e.g., adding one tractor to a field increases labor productivity greatly; the second tractor increases it less). At this point, the economy is at long run equilibrium, economic growth stalls, and the standard of living stagnates.

Neoclassical growth theory: assumptions, implications, predictions

Neoclassical growth theory assumes that (1) an aggregate production function and its associated level of technology is

14

J. of the Acad. Mark. Sci. (2011) 39:7–20

available to economies as a whole, and (2) economies may be viewed as producing national income by combining homogenous capital and labor. However, the assumption that economies can usefully be viewed as "aggregated, production-function firms" is not our focus here. Rather, four specific assumptions of neoclassical growth theory and their associated implications and predictions need to be highlighted.

First, Eq. 2 implies that increases in the capital-labor ratio, which result in capital deepening, are key for explaining economic growth. Capital deepening is the *main* cause of growth. Increases in technological progress, in contrast, are subsidiary. Therefore, the prediction of neoclassical growth theory is that most of the variance in per capita economic growth across nations should be accounted for by differences in the *K/L* ratio and little variance accounted for by technological progress.

Second, the policy implication of neoclassical growth theory is that low growth nations should save more to fund additional investment (e.g., Sachs 2005). The increased investment will, in turn, increase the capital-labor ratio and stimulate economic growth. That is, the assumption of neoclassical growth theory is that increases in savings and investment *cause* economic growth; it is not just that investment and growth are correlated. In time series analyses, therefore, the prediction is that increases in investment should *precede* increases in economic growth.

Third, neoclassical growth theory assumes that technological progress is exogenous and not a result of the profit-driven actions of firms competing with each other. Indeed, because the theory assumes perfect competition, which is a zero economic profit (but not a zero *accounting* profit) situation, firms cannot have any profits to invest in output-augmenting research and development. Therefore, the prediction is that most of the technological progress that influences economic growth stems from the "basic science" conducted by such institutions as government and universities; little or no technological progress stems from the actions of profit-driven firms.

Fourth, neoclassical growth theory is institutions-neutral. As in neoclassical theory in general, there is no provision in Eq. 2 for different societal institutions to affect economic growth. The prediction, therefore, is that, if increases in investment are controlled for, differences in nations' societal institutions will explain only small amounts, if any, of the variance across nations in economic growth per capita.

The preceding four predictions or theses of neoclassical growth theory we may refer to as (1) the *K/L* ratio dominates technological progress, (2) investment causes economic growth, (3) technological progress is exogenous, (4) growth is institutions-neutral. Later in the article, we shall examine the empirical evidence on the four theses. Before doing so, however, we need to explicate the R-A theory approach to economic growth.

Economic growth and R-A theory

Resource-advantage theory maintains that economic growth is produced by the *process* of vigorous R-A competition.[6] That is, economic growth results from the constant struggle for comparative advantages in resources that leads not only to increases in the efficient allocation of scarce, tangible resources but also—and more importantly—to innovations that result in the creation of new tangible, intangible, and "higher order" resources.

Because of its premise that firms seek superior financial performance (e.g., the drive for more profits than last year, for a higher rate of return than one's competitors), the status quo is always unsatisfactory in R-A competition. The implication is that the economic stagnation implied by general equilibrium is not inevitable. In terms of Fig. 2, there is a constant drive to move upward and to the right, to become more efficient and more effective. R-A competition prompts both efficiency-enhancing and effectiveness-enhancing innovations. In the aggregate, these productivity-enhancing, proactive and reactive innovations produce new resources and increases in capital, technological progress, and economic growth. "Capital," as discussed later, is a much richer concept in R-A theory than just neoclassical theory's physical capital.

Recall that R-A theory (1) defines resources as the tangible and intangible entities that enable a firm to efficiently and/or effectively produce market offerings that have value for some market segment(s) and (2) views firms as combiners of heterogeneous and imperfectly mobile resources. Therefore, the relationship between a firm's output and its resources may be expressed as:

$$\text{Output} = f\left(FR, PR, LeR, HR, IR, RR, OR\right) \qquad (4)$$

In Eq. 4, "Output" refers to the quantity and attributes of the firm's market offerings, *FR* stands for financial resources, *PR* for physical resources, *LeR* for legal resources, *HR* for human resources, *IR* for informational resources, *RR* for relational resources, and *OR* for organizational resources.

Total firm revenues derive from the prices that the attributes of the firm's offerings command in the marketplace and the quantity of the offerings produced and sold. Total firm costs derive from the costs of the seven forms of resources that, collectively, produce the firm's output. Firm growth (e.g., increases in sales and profits), therefore, can result from numerous kinds of efficiency-enhancing and effectiveness-enhancing innovations.

---

[6] See Hunt (1997b) for how R-A theory provides a theoretical foundation "new growth theory," in general, and endogenous growth models, in particular.

For example, extant firms can grow and/or new firms can be formed by nine forms of innovation: (1) increasing the perceived value of the attributes of the firm's offerings by the better use of extant resources, (2) increasing the perceived value of the firm's offerings through adding to the quantity or quality of extant resources, (3) decreasing the cost of the firm's market offerings through the better use of extant resources, (4) decreasing the cost of the firm's market offerings through adding to the quantity and quality of extant resources, (5) identifying through entrepreneurship new market opportunities for the firm's extant resources, (6) identifying through entrepreneurship unserved market opportunities that require additions to or improvements in the quantity and quality of the firm's stock of resources, (7) identifying through entrepreneurship market opportunities unserved by extant firms and then forming new firms by acquiring and/or developing the resources to produce new market offerings, (8) increasing the quantity of the firm's offerings by the better management of extant resources, and (9) increasing the quantity of the firm's extant offerings by adding to the quantity or quality of the firm's extant resources.

In R-A theory, because of its premises of heterogeneous products, imperfect information, and heterogeneous resources, any or all of the preceding nine forms of innovation can (1) result from the quest for superior financial performance, (2) produce growth in output of extant firms, and (3) produce growth in output by adding new firms. In contrast, because neoclassical growth theory adopts perfect competition and its assumptions of homogenous products, perfect information, and homogenous resources, it restricts itself to the "innovation" of adding to the quantity of resources, which is identified as a *portion* of the ninth form of innovation (improving the quality of resources is an innovation not available to the neoclassical firm because of perfect information). Specifically, because neoclassical theory limits itself to those resources that have a marginal product (i.e., one can take the first derivative of an equation—the production function—in which the resource appears), neoclassical growth theory limits itself to the "innovation" of increasing the quantity of homogenous physical resources and homogenous labor.

The concept of an economy's private sector "capital," therefore, in neoclassical growth theory refers to the aggregate of the homogenous physical resources of the firms in an economy, sometimes augmented by "human capital." In contrast, R-A theory expands the concept of private sector capital to refer to the aggregate of the financial, physical, legal, human, informational, relational, and organizational resources of the firms in an economy.

R-A theory can adopt an expanded, richer view of capital because it is not committed to neoclassical theory's position that a zero economic profit for firms is optimal and all resources must have a marginal product. The premise of R-A theory that firms seek superior financial performance, plus its acknowledgement that superior financial performance is possible, when combined with its position that entities need not be capable of being in a differential equation in order to qualify as a resource, enable it to accommodate an important fact: firms, through the process of competition, accumulate, develop, and create the various kinds of tangible, intangible, and "higher order" resources that collectively constitute an economy's private-sector capital.

We now return to the four predictions or theses of neoclassical growth theory. In each case, R-A theory makes the opposite prediction.

Technological progress vs. *K/L* ratio

First, because (1) it focuses on the role of proactive and reactive innovations in promoting increases in productivity, and (2) it expands the concept of capital to include not only physical capital but also human, informational, relational, and organizational capital, R-A theory predicts that what is labeled "technological progress"—the residual in cross-country regressions—will account for most of the variance in per capita economic growth. Much less variance will be accounted for by differences in the *K/L* ratio.

Investment

Second, recall that neoclassical growth theory posits that increases in investment in physical capital cause economic growth. In contrast, R-A theory provides that all nine of the efficiency-enhancing and effectiveness-enhancing forms of innovation can result in firm growth or new firms and, hence, can contribute to economic growth. Furthermore, though some forms of innovations result in increases in physical capital investment that, in turn, increase output, most do not. Indeed, in most cases, increases in output result in increases in physical capital investment. Therefore, for R-A theory, though some increases in physical capital may precede or be concomitant with economic growth, the *main case* in time series analyses should be that economic growth precedes increases in physical capital investment.

Endogenous technological progress

Third, recall that neoclassical growth theory predicts that little or no technological progress stems from the actions of profit-driven firms. In contrast, because of its focus on the proactive and reactive innovations prompted by the process of competition, R-A theory predicts that most of the technological progress that drives economic growth stems from the actions of profit-driven firms.

Institutions-neutral

Fourth, R-A theory is not institutions-neutral. For example, adopting the historical tradition's view that firms are historically situated in space and time (Chandler 1990), R-A theory—unlike neoclassical theory—incorporates the institution of private property. Furthermore, note that R-A theory posits that the process of competition is significantly influenced by six environment factors: societal resources, societal institutions, the characteristics of competitors, the characteristics of suppliers, consumers, and public policy. For R-A theory, these environmental factors influence the process of competition and how well the process *works*. Therefore, R-A theory predicts that, after increases in investment are accounted for, differences in societal institutions across nations will explain significant variance in economic growth per capita.

To conclude this section, neoclassical growth theory and R-A theory make empirically testable, opposite predictions on four key issues concerning economic growth. We now focus on the empirical evidence on the theses.

Empirical evidence

Does the *K/L* ratio dominate technological progress?

The first major test of neoclassical growth theory was by Robert Solow, himself (1957). He develops (a version of) Eq. 2 and seeks to apply it to the growth of the U.S. economy from 1909 to 1949. After calculating the technical change index for each year from 1909 to 1949, he concludes that "8 cents of the 65 cent increase [from 1909 to 1949] can be imputed to increased capital intensity [increases in the *K/L* ratio], and the remainder to increased productivity" (1957, p. 316). In percentage terms, "87½% of the increase [is] attributable to technical change and the remaining 12½% to increased use of capital" (p. 320).

Since Solow's (1957) original estimate that technological progress accounts for 87½% of economic growth and the *K/L* ratio only 12½%, numerous studies have documented that technological progress dominates the *K/L* ratio (e.g., see Denison 1985). Because "technological progress" is a catchall residual in empirical studies, efforts have focused on identifying variables that reduce the size of the residual. Levine and Renelt (1991) review 41 growth accounting studies that attempt to explain average annual growth rate per capita (GYP) and reduce the "Solow residual." They find that the economic growth per capita across 101 economies appears to be related to initial income (negatively), population growth (negatively), human capital (positively), and investment (positively). Important for our purposes, even when measures of human capital, popula-

tion growth, and initial income are added to investment, the resulting R^2 is only 0.46. That is, "technological progress," the label given to the residual, still accounts for over half the variance in growth rates in GDP per capita across economies.

In conclusion, as to the first thesis, the empirical evidence indicates that technological progress dominates the *K/L* ratio in economic growth. Neoclassical growth theory makes the wrong prediction; dynamic, R-A theory predicts correctly.

Does investment cause economic growth?

The policy implication of neoclassical growth theory is that low growth nations should save more to fund additional investment because increases in savings and investment *cause* economic growth. In time series analyses, therefore, the prediction is that increases in investment should precede increases in economic growth. In contrast, for R-A theory, though some increases in physical capital may precede or be concomitant with economic growth, the main case in time series analyses should be that economic growth precedes increases in physical capital investment.

Blomström et al. (1996) conduct a series of regressions with real growth in GDP per capita in each time period as the dependent variable and five independent variables often used in growth accounting studies. They find in all the regressions that growth appears to precede, not follow, investment. Blomström et al. (1996, p. 276) conclude:

> Thus, we find no evidence that fixed investment (or equipment investment) is the key to economic growth. This conclusion is in line with the last 25 years of research in development economics, which shows that the path to growth and development is much more than simply raising saving and investment rates from 5 to 15%, as Arthur Lewis, Walter Rostow, and others suggested in the 1950s. Institutions, economic and political climate, and economic policies that encourage education, inflows of direct investment, lower population growth, and the efficient use of investment seem to be the chief foundations for economic growth.

The findings of Blomström et al. (1996) have been replicated by Barro (1997). He uses three-stage, least squares estimation techniques on panel data for roughly one hundred countries over three time periods: 1965–1975, 1975–1985, and 1985–1990. When the period-average investment ratio for the *preceding* five years is entered into multiple regressions with eleven control variables (and real, per capita GDP growth rates are used as the dependent variable), the beta coefficient for investment is not statistically significant. However, when *contemporaneous* investment is entered, its coefficient is positive and

significant. Barro (1997, p. 33) concludes: "These findings suggest that much of the positive estimated effect of the investment ratio on growth in typical cross-country regressions reflects the reverse relation between growth prospects and investment."

In conclusion, as to the second thesis, the empirical evidence indicates that the main case is that increases in economic growth cause increases in investment in physical capital, not the reverse. Neoclassical theory makes the wrong prediction; dynamic, R-A theory predicts correctly.

Is technological progress exogenous?

Neoclassical growth theory assumes or predicts that most of the technological progress that influences economic growth stems directly from the basic science conducted by institutions such as government and universities; little or no technological progress stems from the innovations of profit-driven firms. In contrast, because of its focus on the proactive and reactive innovations prompted by the process of competition, R-A theory predicts that most of the technological progress that drives economic growth stems from the actions of profit-driven firms.

As to whether the basic science conducted by government and universities drives technological progress, Schumpeter (1950, pp. 106, 110; italics added) was prescient:

> What we have got to accept is that it [the imperfect competition of large corporations] has come to be the most powerful engine of ...the long-run expansion of total output...In this respect, perfect competition is not only impossible but inferior, and has not title to being set up as a model of regulation of industry... [Is] not the observed [high growth] performance due to that stream of inventions that revolutionized the technique of production rather than to the businessman's hunt for profits? The answer is in the negative. The carrying into effect of those technological novelties was of the essence of that hunt. And even the inventing itself...was a function of the capitalist process...It is therefore quite wrong...to say... that capitalist enterprise was one, and technological progress a second, distinct factor in the observed development of output; they were essentially one and the same thing, as...the former was the *propelling force* of the latter.

Since the time of Schumpeter (1950), studies of innovation routinely stress the role of profit-oriental firms. Studies of innovations in such industries as machine tools (Rosenberg 1963), aircraft (Constant 1980), synthetic chemicals (Freeman 1982), metallurgy (Mowery and Rosenberg 1989), and semiconductors (Dosi 1984) all support the view that the profit motive stimulated innovations.

In conclusion, as to the third thesis, the innovations that constitute technological progress and drive economic growth are endogenous to the process of competition. Neoclassical theory makes the wrong prediction; dynamic, R-A theory predicts correctly.

Is growth institutions-neutral?

Recall that the equations that constitute neoclassical growth theory imply that growth is institutions-neutral. The empirical prediction, therefore, is that, if increases in investment are controlled for, differences in societal institutions will explain only small amounts, if any, of the variance across nations in economic growth per capita. In contrast, R-A theory maintains that wealth-creation, that is, increases in productivity and economic growth, stems from the vigorous R-A competition that, in turn, requires a favorable institutional environment (see Fig. 1). Therefore, R-A theory predicts that, if increases in investment are accounted for, differences in societal institutions across nations will explain significant variance in economic growth per capita. That is, because R-A theory is a substantive theory, not a series of equations, it is not institutions-neutral.

If the central economic lesson of the 20th century is that market-based economies are generally more productive than command economies, why aren't all market-based economies wealthy? The analyses of economic growth, by a wide variety of scholars working within many different research traditions, all agree that the answer lies in institutional factors. Working within the historical tradition, North (1990, p. 9) finds that societies that have become wealthy over time have become so "because the underlying institutional framework persistently reinforced incentives for organizations to engage in productive activity." In contrast, he notes, "in many Third World countries today, . . . the opportunities for political and economic entrepreneurs . . . overwhelmingly favor activities that promote redistributive rather than productive activity, that create monopolies rather than competitive conditions, and that restrict opportunities rather than expand them" (p. 9).

If wealthy nations are wealthy because they have evolved sets of institutions that protect property rights and hence are efficient in creating economic growth, how do poor societies, often with political "lock-ins," go about creating institutions that encourage productivity? North (1990, p. 140) identifies the goal that policy-makers should adopt: "One gets *efficient* institutions by a polity that has built-in incentives to create and enforce efficient property rights." He notes, however, that the serious study of institutions that can further this goal has been long neglected in economics. Furthermore, he laments, the dominant, neoclassical research tradition represents a serious, perhaps insurmountable, obstacle for anyone attempting to understand how societies can create efficient institutions because the

tradition is "locked-in" to being a series of equations that are institutionless.

Buttressing North's conclusions is the empirical work of Knack and Keefer (1995). They focus on the on the influence on economic growth of institutions that protect property rights, using two indices provided by private international investment risk services: the International Country Risk Guide (ICRG) and the Business Environmental Risk Intelligence (BERI). These indices focus on institutions such as: (1) quality of bureaucracy (e.g., autonomy from political pressure), (2) corruption in government (e.g., bribes and other illegal payments), (3) the rule of law (e.g., an independent judiciary), (4) expropriation risk (e.g., risk of confiscation and forced nationalization), (5) repudiation of contracts by government (e.g., risk of modification of contracts by or new government), and (6) infrastructure quality (e.g., quality of transportation and communications).

To explore the relationship between the protection of property rights and economic growth, Knack and Keefer (1995) run several regressions on economic growth data for 1974–1989. Important for our purposes, when they use average GDP per capita growth as the dependent variable, the beta coefficients for both ICRG and BERI in the regression are positive and significant. Knack and Keefer (1995, p. 223) conclude: "institutions that protect property rights are crucial to economic growth and investment."

Barro (1997) provides an extensive analysis of the empirics of economic growth and uses a panel of approximately 100 countries for three time periods, 1965–1975, 1975–1985, and 1985–1995. His methodology, therefore, enables him to explore for both cross-sectional (between-country) and time series (within country) effects, with the latter being important for the issue of causality. Thus, a key issue is whether measures of independent variables should precede economic growth or be concurrent with it. Barro (1997) argues that causality implies that six of his variables should be measured in time-periods that *precede* the growth period to be explained: (1) log GDP, (2) log of fertility rate, (3) government consumption rate, (4) Gastil democracy index, (5) Gastil democracy index squared, and (6) investment. That is, for each of these six variables, he inputs measures for 1960–1964 to explain 1965–1975 growth, 1970–1974 to explain 1975–1985 growth, and so on.

Barro's (1997) final equation for GDP per capita growth in the three time periods explains 60%, 52%, and 47%, respectively, of the variance. Important for our purposes, the final equation shows that the three measures that specifically relate to the protection of property rights are significant predictors of GDP per capita growth. In contrast, the preceding time-period's investment is *not* a significant predictor of growth. The ICRG rule of law index is positive and significant; the democracy index is positive and

significant; and the democracy index squared is negative and significant. Barro (1997, pp. 58–59) speculates as to why there is a positive linear effect of democracy on economic growth but a negative quadratic effect:

> One way to interpret the results is that in the worst dictatorships, an increase in political rights tends to increase growth and investment because the benefit from limitations on governmental power is the key matter. But in places that have already achieved a moderate amount of democracy, a further increase in political rights impairs growth and investment because the dominant effect comes from the intensified concern with income redistribution.

As a final example of empirical works on institutions and economic growth, Gwartney et al. (1996) and Gwartney and Lawson (1997) explore the role of packages of institutions in promoting economic growth, using their *Index of Economic Freedom*. For this index: "Individuals have economic freedom when (a) property they acquire without the use of force, fraud, or theft is protected from physical invasions by others and (b) they are free to use, exchange, or give their property to another as long as their actions do not violate the identical rights of others" (Gwartney et al. 1996, p. 12). The *Index* is a package of seventeen components that fall into four major groupings: (1) money and inflation, (2) government operations and regulations, (3) takings and discriminatory taxation, and (4) restraints on international exchange. Important for our purposes are the relationships Gwartney et al. (1996) find between the *Index* and both wealth and economic growth. When they grade nations A, B, C, D, F, and F- based on 1995 level of economic freedom, the average 1994 GDP per capita for each group (in 1985 dollars) was $15,800, $13,700, $7,900, $3,800, $3,100, and $1,700, respectively (p. xxii). That is, economically free nations have much more productive economies. When they compute the average growth rate of GDP per capita (1980–1994) for the same groupings, the percentages are 3.3, 2.0, 1.5, 1.3, 0.8, and −1.3, respectively (p. xxii). That is, the more economically free a nation is, the faster the economy grows. When they compare the average growth rates (1980–1994) of the ten countries with the largest *increases* in economic freedom to the ten with the largest *decreases*, the averages were 2.7% and −1%. That is, increasing economic freedom produces increased growth; decreasing economic freedom depresses growth (p. xxvii). These striking results do not appear to be an artifact of how the *Index* is constructed. Indeed, there is nothing in the way the indexes are calculated that would prevent them from having no correlation whatsoever with such completely independent numbers as per capita GDP and the rate of growth of GDP (Friedman 1996, p. viii).

Why the strong relationships between economic freedom, productivity, and economic growth? Gwartney, et al. (1996, pp. 89–90) argue:

> If people are not permitted to keep what they produce and earn, they will have little incentive to either upgrade their skills or invest in structures and machines designed to enhance future productivity ... if individuals are not allowed to try new ways of doing things, innovation and improvements in technology will be stifled.... [In contrast], if an economy's institutions are consistent with economic freedom, it will be easier for people to cooperate with each other, specialize in areas where they have a comparative advantage, and realize gains from trade and entrepreneurship.

In conclusion, as to the fourth thesis, some societal institutions promote economic growth, others do not. R-A theory—alone among extant theories of competition—can explain the empirical findings: formal institutions promoting economic freedom promote R-A competition, which, in turn, promotes efficiency, effectiveness, and the innovations that drive economic growth. Neoclassical theory makes the wrong prediction; dynamic, R-A theory predicts correctly.

Conclusion

Sustainable economic development poses major challenges for marketing with regard to futurity, equity, and needs/wants. The challenge of economic equity is to work toward ensuring that poor countries, not just wealthy nations, participate in the costs and benefits of economic development. This article argues that, rather than redistributing wealth from wealthy societies to poor societies, the best way to approach this challenge is to promote the economic growth of poor countries. In addition, because prosperous nations are more likely than poor nations to promote the kind of development that does not compromise future generations, the sustainability cause itself is furthered by promoting the economic growth of poor nations.

However, past efforts to promote economic growth of poor countries have failed because such policies have been guided by an impoverished theory of economic growth: neoclassical growth theory. Economic growth does not result from increases in investment, as neoclassical economic theory maintains. Rather, it results from the process of dynamic competition, as predicted by R-A theory. Indeed, the empirical evidence is unequivocal: economic growth results from the innovations that spring from dynamic competition. The policy implications are also clear: societies seeking economic growth should not focus their public policy attention on increasing investment. Rather, they should focus on institutions that favor economic freedom and dynamic, R-A competition. Sustainable development requires meeting the economic equity challenge. This challenge can be met by fostering economic growth and promoting economic freedom.

The citizens of impoverished nations are poorly served by impoverished economic theories. Sustainable marketing is tied to sustainable development; sustainable development is tied to the wealth of nations; the wealth of nations is tied to economic growth; economic growth is tied to economic freedom and R-A competition. Therefore, sustainable marketing is tied to economic freedom and R-A competition.

References

Arnett, D. B., & Hunt, S. D. (2002). Competitive irrationality: The influence of moral philosophy. *Business Ethics Quarterly, 12*(3), 279–303.

Barro, R. J. (1997). *Determinants of economic growth*. Cambridge: MIT Press.

Blomström, M., Lipsey, R. E., & Zejan, M. (1996). Is fixed investment the key to economic growth? *The Quarterly Journal of Economics, 111*, 269–276.

Bridges, C. M., & Wilhelm, W. B. (2008). Going beyond green: The 'Why and How' of integrating sustainability into the marketing curriculum. *Journal of Marketing Education, 30*(1), 33–46.

Chandler, A. D. (1990). *Scale and scope: The dynamics of industrial capitalism*. Cambridge: Harvard University Press.

Constant, E. W. (1980). *The origins of the turbojet revolution*. Baltimore: Johns Hopkins University Press.

Denison, E. F. (1985). *Trends in American economic growth, 1929–1982*. Washington: The Brookings Institution.

Dosi, G. (1984). *Technical change and industrial transformation*. London: Macmillan.

Elkington, J., & Hailes, J. (1988). *The green consumer guide*. London: Victor Gollancz.

Ellig, J. (Ed.). (2001). *Dynamic competition and public policy: Technology, innovation, and antitrust issues*. Cambridge: Cambridge University Press.

Freeman, C. (1982). *The economics of industrial innovation* (2nd ed.). London: Francis Pinter.

Friedman, M. (1996). *Essays in positive economies*. Chicago: University of Chicago Press.

Grengs, C. M. (2006). *Verizon v. Trinko*: From post-Chicago antitrust to resource-advantage competition. *Journal of Law, Economics, & Policy, 2*(1), 105–144.

Gwartney, J., & Lawson, R. (1997). *Economic freedom of the world 1997*. Vancouver: The Fraser Institute.

Gwartney, J., Lawson, R., & Block, W. (1996). *Economic freedom of the world: 1975–1995*. Vancouver: The Fraser Institute.

Henion, K. E., & Kinnear, T. C. (1976). *Ecological marketing*. Chicago: American Marketing Association.

Hodgson, G. M. (1993). *Economics and evolution*. Ann Arbor: University of Michigan Press.

Hunt, S. D. (1995). The resource-advantage theory of competition: Toward explaining productivity and economic growth. *Journal of Management Inquiry, 4*, 317–332.

Hunt, S. D. (1997a). Competing through relationships: Grounding relationship marketing in resource advantage theory. *Journal of Marketing Management, 13*, 431–445.

Hunt, S. D. (1997b). Evolutionary economics, endogenous growth models, and resource-advantage theory. *Eastern Economic Journal, 23*(4), 425–439.

Hunt, S. D. (1997c). Resource-advantage theory: An evolutionary theory of competitive firm behavior? *The Journal of Economic Issues, 31*, 59–77.

Hunt, S. D. (1997d). Resource-advantage theory and the wealth of nations. *The Journal of Socio-Economics, 26*(4), 335–357.

Hunt, S. D. (1998). Productivity, economic growth, and competition: Resource allocation or resource creation? *Business and the Contemporary World, 10*(3), 367–394.

Hunt, S. D. (1999). The strategic imperative and sustainable competitive advantage: Public policy and resource advantage theory. *Journal of Academy of Marketing Science, 27*(2), 144–159.

Hunt, S. D. (2000a). The competence-based, resource-advantage, and neoclassical theories of competition: Toward a synthesis. In R. Sanchez & A. Heene (Eds.), *Competence-based strategic management: Theory and research* (pp. 177–208). Greenwich: JAI Press.

Hunt, S. D. (2000b). *A general theory of competition: Resources, competences, productivity, economic growth*. Thousand Oaks: Sage Publications.

Hunt, S. D. (2000c). A general theory of competition: Too eclectic or not eclectic enough? Too incremental or not incremental enough? Too neoclassical or not neoclassical enough? *Journal of Macromarketing, 20*(1), 77–81.

Hunt, S. D. (2000d). Synthesizing resource-based, evolutionary and neoclassical thought: Resource-advantage theory as a general theory of competition. In N. J. Foss & P. Robertson (Eds.), *Resources, technology, and strategy* (pp. 53–79). London: Routledge.

Hunt, S. D. (2001). A general theory of competition: issues, answers, and an invitation. *European Journal of Marketing, 35*(5/6), 524–548.

Hunt, S. D. (2002a). *Foundations of marketing theory: Toward a general theory of marketing*. Armonk: M.E. Sharpe.

Hunt, S. D. (2002b). Marketing and a general theory of competition. *Journal of Marketing Management, 18*(1–2), 239–247.

Hunt, S. D. (2002c). Resource-advantage theory and Austrian economics. In N. J. Foss & P. Klein (Eds.), *Entrepreneurship and the Firm: Austrian perspectives on economic organization* (pp. 248–272). Cheltenham: Elgar.

Hunt, S. D. (2007). Economic growth: Should policy focus on investment or dynamic competition. *European Business Review, 19*(4), 274–291.

Hunt, S. D., & Arnett, D. B. (2001). Competition as an evolutionary process and antitrust policy. *Journal of Public Policy and Marketing, 20*(1), 15–25.

Hunt, S. D., & Arnett, D. B. (2003). Resource-advantage theory and embeddedness: Explaining R-A theory's explanatory success. *Journal of Marketing Theory and Practice, 11*(1), 1–16.

Hunt, S. D., & Arnett, D. B. (2004). Market segmentation strategy, competitive advantage, and public policy: Grounding segmentation strategy in resource-advantage theory. *Australasian Marketing Journal, 12*(1), 7–25.

Hunt, S. D., & Arnett, D. B. (2006). Does marketing success lead to market success? *Journal of Business Research, 59*(7), 820–828.

Hunt, S. D., & Derozier, C. (2004). The normative imperatives of business and marketing strategy: Grounding strategy in resource-advantage theory. *Journal of Business and Industrial Marketing, 19*(1), 5–22.

Hunt, S. D., & Lambe, C. J. (2000). Marketing's contribution to business strategy: Market orientation, relationship marketing, and resource-advantage theory. *International Journal of Management Reviews, 2*(1), 17–44.

Hunt, S. D., & Duhan, D. F. (2002). Competition in the third millennium: Efficiency or effectiveness? *Journal of Business Research, 55*(2), 97–102.

Hunt, S. D., & Madhavaram, S. (2006a). Teaching marketing strategy: Using resource-advantage theory as an integrative theoretical foundation. *Journal of Marketing Education, 28*(2), 93–105.

Hunt, S. D., & Madhavaram, S. (2006b). The service-dominant logic of marketing: Theoretical foundations, pedagogy, and resource-advantage theory. In R. F. Lusch & S. L. Vargo (Eds.), *The service-dominant logic of marketing: Dialog, debate, and directions* (pp. 85–90). Armonk: M.E. Sharpe.

Hunt, S. D., & Morgan, R. M. (1995). The comparative advantage theory of competition. *Journal of Marketing, 59*, 1–15.

Hunt, S. D., & Morgan, R. M. (1996). The resource-advantage theory of competition: Dynamics, path dependencies, and evolutionary dimensions. *Journal of Marketing, 60*, 107–114.

Hunt, S. D., & Morgan, R. M. (1997). Resource-advantage theory: A snake swallowing its tail or a general theory of competition? *Journal of Marketing, 61*, 74–82.

Hunt, S. D., & Morgan, R. M. (2005). The resource-advantage theory of competition: A review. In N. K. Malhotra (Ed.), *Review of marketing research, volume 1* (pp. 153–205). Armonk: M.E. Sharpe.

Kassarjian, H. H. (1971). Incorporating ecology into marketing strategy: The case of air pollution. *Journal of Marketing, 35*, 61–65.

Knack, S., & Keefer, P. (1995). Institutions and economic performance: Cross-country tests using alternative institutional measures. *Economics and Politics, 7*, 207–227.

Levine, R., & Renelt, D. (1991). *Cross Country Studies Of Growth And Policy: Some Methodological, Conceptual, And Statistical Problems*. World Bank Working Paper Series No. 608.

Morgan, R. E., & Hunt, S. D. (2002). Determining marketing strategy: A cybernetic systems approach to scenario planning. *European Journal of Marketing, 36*(4), 450–478.

Mowery, D. C., & Rosenberg, N. (1989). *Technology and the pursuit of economic growth*. Cambridge: Cambridge University Press.

North, D. C. (1990). *Institutions, institutional change, and economic performance*. Cambridge: University of Cambridge Press.

Peattie, K. (2001). Towards sustainability: The third age of green marketing. *The Marketing Review, 2*(2), 129–146.

Romer, P. M. (1994). The origins of endogenous growth. *Journal of Economic Perspectives, 8*, 3–22 (Winter).

Rosenberg, N. (1963). Technological change in the machine tool industry: 1840–1910. *Journal of Economic History, 23*, 414–446.

Sachs, J. (2005). *The end of poverty: Economic possibilities for our times*. New York: Penguin Press.

Savitz, A. W., & Weber, K. (2006). *The triple bottom line: How today's best-run companies are achieving economic, social and environmental success—and how you can too*. New York: John Wiley.

Schumpeter, J. A. (1950). *Capitalism, socialism, and democracy*. New York: Harper and Row.

Solow, R. M. (1956). A contribution to the theory of economic growth. *Quarterly Journal of Economics, 70*, 65–94.

Solow, R. M. (1957). Technical change and the aggregate production function. *Review of Economics and Statistics, 39*, 312–320.

United Nations World Commission on Environment and Development. (1987). *Our common future*. Oxford: Oxford University Press.

van Dam, Y. K., & Apeldoorn, P. A. C. (1996). Sustainable marketing. *Journal of Macromarketing, 16*(2), 45–56.