

A Strategy Typology and Application to E-commerce

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Introduction

This article identifies, analyzes, evaluates and proposes an action plan and a set of recommendations specifically for E-commerce strategy decisions. It focuses on the current trends in E-commerce relative to the impact on strategy decisions. Both strengths and weaknesses, opportunities and threats in E-commerce are reviewed in order to provide a balanced view of E-commerce strategy today. The work is undertaken in light of existing academic thought on E-commerce strategy. A general typology is presented for categorizing academic thought and various current strategy tools. That typology describes the conditions under which certain tools are useful when considering strategy including E-commerce strategy, and provides the framework for academicians and practitioners considering new strategy tools and theories.

Nature of the Strategy Questions for E-commerce

E-commerce is simultaneously described as different from, and similar to, traditional business environments (Amit & Zott, 2001; Porter, 2001). It is Michael Porter (2001, p. 63) who cautions against considering the Internet as "rendering all the old rules about companies and competition obsolete". Amit and Zott (2001), on the other hand, put forth the notion that issues central to E-business are not yet detailed.

Now that E-business has followed a path of enthusiasm in the late 1990s to one of more realism, a recent *Business Week* article points to the fact that 40% of publicly held Internet companies were profitable in 2002 (*Business Week*, 2003). Those companies using the Internet are slashing costs, innovating and increasing productivity, but as many as fifty business models may exist for business on the Internet (Lam & Harrison-Walker, 2003).

Questions remain about which, if any, of the strategy tools available today might apply to E-commerce in terms of positive business outcomes, and which new tools might be applicable in this more realistic E-commerce environment. This article provides a typology for conceptualizing a potential fit for the strategy tools available today, and also provides a framework for considering new tools and theories. At the same time, it identifies, analyzes, evaluates and proposes an action plan and a set of recommendations specifically for E-commerce strategy decisions.

Academic Review

This section of the article covers the meaning and differences between business models and strategy and explains the role of typologies. Specific journal and text citations support the view that strategy includes the business model but is much broader in scope.

Typology for Strategy Choices

Typologies are used to bring the tacit understanding about phenomena to explicit conceptualization. “Essentially, it is a mental map of classification that allows for easier recognition of complex subjects and enables readers to classify them into fewer categories,” maintain Lam and Harrison-Walker (2003, p. 18). With there being as many as 50 E-business models (Lam & Harrison-Walker, 2003), those considering E-business for the first time, or those evaluating historical E-business decisions, need strategic tools that succinctly address specific concerns. Those tools are for the ultimate purpose of leading to positive business outcomes.

Role of Business Models

First, business models are the plans a firm has for making money, or providing its services in a non-profit environment, and a conceptualization of where the firm lies in the value chain (Chesbrough & Rosenbloom, 2002; Rappa, 2004). According to Chesbrough and Rosenbloom (2002, p. 536), “the business model mediates between the technical and economic domains.”

Some of the popular business models for E-commerce mimic those models in traditional business environments, such as the bargain discounter, brand builders, buyer cooperatives, and dealer support organizations among others. Some of the popular business models for E-commerce are unique to the Internet environment, such as the following: bundlers, offering online and offline products in a group to create more value for the users; collaborative designers, where several firms use the Internet on a real-time, or near real-time basis, to collaborate on design issues; the library where free library services are provided; the freeware provider who gives away software; or virtual malls where multiple firms may provide content on a single web site (Afuah & Tucci, 2001; Bambury, 1998; Chen, 2003; Eisenmann, 2002; Lam & Harrison-Walker, 2003; Rappa, 2004a; Rappa, 2004b; Strauss and Frost, 2001).

In choosing one business model, all other choices are constrained, and certain options are literally impossible (Chesbrough & Rosenbloom, 2002). In some cases, the E-commerce business model choice is referred to as the Internet strategy (Smith & Manna, 2004), but in fact is a strategic choice rather than a business strategy. Organizational consideration is but one category of broader strategy issues (Hodgetts, 1999) not addressed in business models or by strategic choice. There are also strategic alliances, strategic analysis, strategic control, strategic decisions, strategic management, and strategic planning, just to name a few (Pearce & Robinson, 2003).

Strategy

Strategy is that resulting product of strategic management where “strategic management is the set of decisions and actions that result in the formulation and implementation of plans designed to achieve a company’s objectives” according to Pearce and Robinson (2003, p. 17).

Strategy includes the business model choice but is larger than a model decision. With such a large area of concern, consideration of all tools available is important. How, then, does an enterprise use the strategy tools available to evaluate business model and strategic choice alternatives as well as all other strategic issues?

Strategy Tools

There are many strategy tools available to the academician and practitioner for evaluating traditional business concerns, and many have been applied to the E-commerce environment (Kim, Nam, & Stimpert, 2004; Porter, 2001). Michael Porter (2001) uses the Five Forces Model to describe the influence of the Internet on industry structure. Kim, Nam and Stimpert (2004) use the framework of generic strategies to evaluate fit for E-business firms. Eid, Trueman and Ahmed (2002) use key success factors to evaluate the impact of business-to-business (B2B) alternatives. Still, there is no overall typology to consider a broader range of issues important for E-commerce strategy.

Summary of the Academic Review

This section of the research paper covered the meaning and differences between business models and strategy. Specific journal and text citations supported the view that strategy includes the business model but is much broader in scope.

Methodological Issues and Tools

This portion of the article addresses the means of assessing strategy from a practical and applied perspective. A typology for use in this article is presented and forms the basis of the remaining evaluation.

Strategy Typology and Tool Fit

In general, Pearce and Robinson (2003) offer one model in which to consider traditional business strategy. By extension, the model may be applied to Internet and E-commerce considerations. Li and Chang (2004, p. 44) describe a framework that is “holistic, dynamic and dialectical”, but includes only E-business properties and not those that fit broader categories. Thompson and Strickland (2001) offer useful information about business models in the Internet economy, but no typology for larger consideration.

Building upon Pearce and Robinson (2003), concerns for firm characteristics, including its history, its vision and mission, are important. Likewise, the internal corporate environment including financial concerns and people issues, among others, are critical to strategy. The firm’s position in the industry and within the external environment is also important. Understanding the strengths and weaknesses, opportunities and threats, evaluating gaps and determining, or

recommending, strategic choices to implement are some of the pieces of strategy for businesses, including E-commerce businesses. This leads to a broader conceptualization of important issues.

Many tools already discussed, and many others, are available to the practitioner and academician with which to evaluate the current climate for E-commerce within this typology. Figure 1 provides a pictorial representation of a proposed typology with only some of the strategy tools of importance shown.

The Firm Tools

The initial considerations for business, including E-commerce pure play and otherwise, are the firm characteristics (Pearce & Robinson, 2003). While not limited to the following, it includes the firm's history, its mission and vision for the long-term.

The Internal Tools

Next, consideration of the internal resources, especially the strengths and opportunities, and the gaps caused by weaknesses and threats are evaluated. Again, not limiting the internal evaluation tools to only the following, it includes use of tools like Kaplan and Norton's Balanced Scorecard Methodology (1992), The Resource Based View (Wernerfelt, 1984), Ansoff's Matrix (1956) and Value Chain Analysis (Porter, 1985).

The Industry Tools

Industry evaluation may be performed through use of tools like the Five Forces Model (Porter, 2001) and key success factor identification much like Eid, Trueman and Ahmed (2002) did with their evaluation of B2B alternatives. Clearly, industry competitors are at the core of Porter's Five Forces Model. While industry tools might be considered part of the external environment since external issues may be evaluated, in this typology, external issues are considered independently and take on a more global framework.

The External Tools

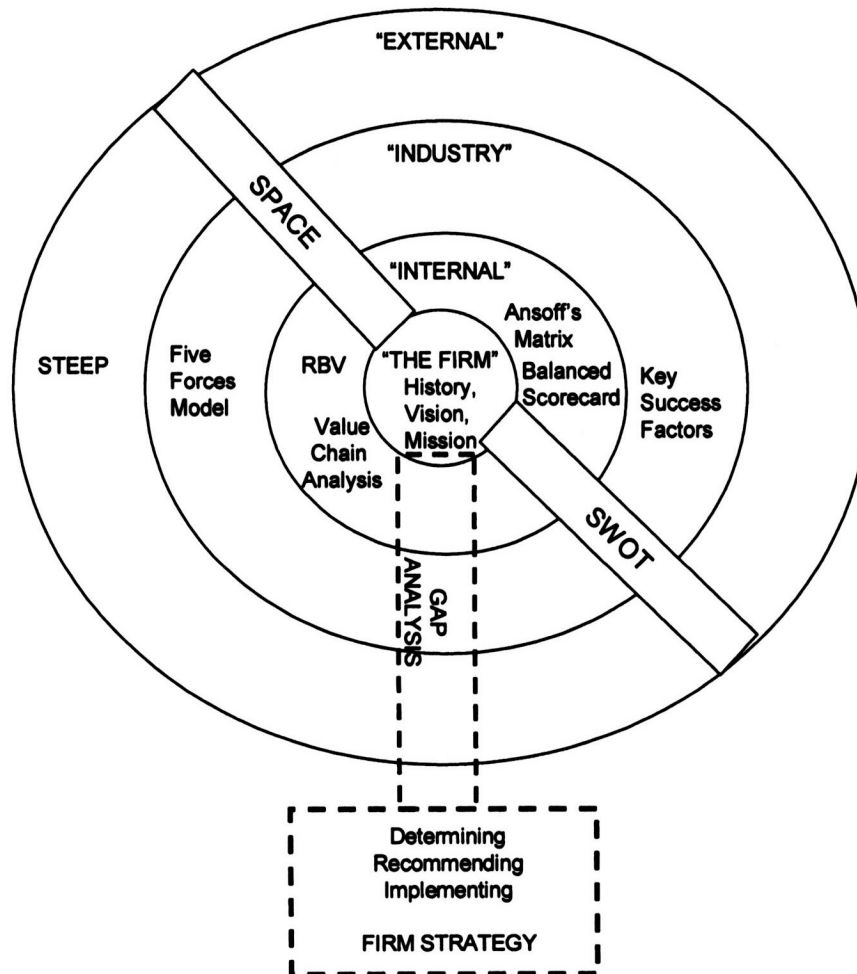
One external tool of note is STEEP (Laczniak & Lusch, 1986), which considers the social, technological, economic, ecological and political factors affecting the enterprise. Social factors include trends, beliefs, values and lifestyles. Technological factors affect the entire industry but may be even more global in that they may affect the rapid introduction of substitutes. Economic factors include trends, credit, and interest rates. Ecological factors may include citizenship responsibilities. Political factors include the legal and regulatory concerns of the enterprise.

Span Tools

The Strategic Position and Action Evaluation (SPACE) matrix (Rowe, Mason, & Dickel, 1982) is a tool that may span multiple rings as shown in Figure 1. Of note, SPACE uses two internal and two external dimensions to determine strategic position.

SWOT analysis (Learned, Christensen, Andrews & Guth, 1965) may be one of the longer lived tools in the typology, along with Ansoff's matrix for growth strategies (1956), but both are still often used. With SWOT, strengths and weaknesses, opportunities and threats may be evaluated across the entire typology.

Figure 1 Ring Typology



Summary of Methodological Concerns

This portion of the research paper addressed the means of assessing strategy from a practical and applied perspective. A typology for use in this article, and other research, has been presented.

Results, Gap Analysis and Determining, Recommending and Implementing

This article proceeds on the foundation set in earlier sections by using the typology, and specific tools within the typology, to consider impacts on E-commerce. Gaps and analysis of holes resulting from that review are further discussed in terms of opportunities, recommendations and implementation for bridging the divide between current and optimal strategy conditions.

Gap Analysis Tools

While to this point, the typology has focused on the use of existing tools, it is the analysis of the holes found as a result of using the tools, the gaps, that lead to determination of problems to be addressed, recommendations to bridge the gaps, and implementation of a strategy for the firm that is most important (Pearce & Robinson, 2003). This gap analysis and solutions section of the typology is clearly important for practitioners and consultants and provides additional areas of research for academicians. To begin addressing the use of the typology, the next section of this article uses the framework described here to address the issues of E-commerce through current research streams.

E-commerce and Strategy Typology

Beginning with the outer ring of the typology, this article first addresses E-commerce strategy in terms of STEEP (Laczniak & Lusch, 1986). Next, key success factors are reviewed as part of an industry review, and then concluding the section is Porter's Five Forces review of Internet influences on industry structure (2001).

To choose only three tools leaves many of the important strategy tools out of the discussion. J. D. Waldman (2002) states that at least the following are almost always necessary for strategic analysis: Porter's Five Forces, environmental scanning and forecasting, strategic mapping, SPACE matrix, weighted lists or tables, and SWOT. Additionally, Waldman also lists six other tools often necessary for strategic analysis.

E-commerce and STEEP

Social Factors. Considering first the social factors within the STEEP model, Stafford, Stafford and Schkade (2004) list three uses and gratifications for the Internet from media use theory. Content and process gratifications refer to the messages carried and the actual use of the technology. The third type of gratification that they detail is social usefulness, which drives consumer Internet use.

One gap identified is that social gratification measures and dimensions of the Internet have not been described nor captured in research according to Stafford, Stafford and Schkade (2004). Still, the Stafford, Stafford and Schkade (2004) work does point to important

considerations in social usefulness. To bridge the gap, practitioners and consultants must be aware of media use theory and the concern for three types of gratification. Testing for important issues that fine-tune customer access methods for E-commerce is important.

Technological Factors. Thompson and Strickland (2001) offer three gaps of importance related to the technological factors with E-commerce. First, usually the low cost technology is deployed: not always the best choice. Second, there is no standard as to which technology is the best causing incompatibility among providers of servers and sites. Third, building parallel systems to overcome the lack of standards is cost prohibitive.

Thompson and Strickland (2001) further detail three solutions and implementation strategies to overcome the gaps previously mentioned. They suggest the following (p. 234):

- Invest aggressively in R&D to win the technological race against rivals;
- form strategic alliances;
- acquire other companies with complementary technological expertise;
- hedge the company's bets by investing sufficient resources in mastering one or more of the competing technologies.

Economic Factors. Then, there are economic factors affecting E-commerce strategy. Although no portion of E-commerce business is immune from the effects of economic factors, none may feel the effects more than traditional businesses. The following alternatives are described as means of overcoming the gaps according to Thompson and Strickland (2001, p. 243):

- Using Internet technology to communicate and collaborate closely with suppliers and distribution channel allies;
- Revamping company and industry value chains;
- Making greater use of build-to-order manufacturing and assembly;
- Building systems to pick and pack products that are shipped individually;
- Using the Internet to give both existing and potential customers another choice of how to interact with the company;
- Adopting the Internet as an integral distribution channel for accessing new buyers and geographic markets;
- Gathering real-time data on customer tastes and buying habits, doing real-time market research, and using the results to respond more precisely to customer needs and wants.

Ecological Factors. Depending on the business model chosen, certain key problem areas or gaps may arise which could be considered ecological factors affecting E-commerce stakeholders. Examples which point to both the gaps and the implementation solutions include situations like the following: pure Internet business models which must create brand awareness; business-to-business market types that must learn to integrate with the buyers' systems; and those free revenue model E-commerce businesses which must manage to generate revenue from other sources (Chen, 2003).

Political Factors. Larger political issues may be addressed by individuals or by groups of interested parties. Joining appropriate forums is one means of implementing a strategy to offset

various gaps. Ramin Communications Pty. Ltd. (1998, p. 1) offers the following commentary on the gaps in political areas:

National governments need to develop policy, regulatory and legislative frameworks which are adaptable, enforceable, to the use of E-commerce. The provision of national Health and Education services need to balance community values, competitive priced services and accessibility. Governments will also be keen to monitor and balance the effect of E-commerce on taxation revenue streams and opportunities for laundering the proceeds from criminal activities.

Key Success Factors and E-commerce

Thompson and Strickland (2001) suggest that success in E-commerce revolves around the following key factors: an innovative business model; capability to adjust the company's model quickly; focusing on a limited set of competencies; employing the latest technology; using innovative means to produce a profit by reaching the targeted population; and, ensuring a value chain that lowers costs or provides better value.

Eid, Trueman and Ahmed (2002) contend that critical success factors are those areas of business where things must go right to ensure competitive performance. They further suggest that several techniques may be used to identify the success factors including environmental scanning and industry structure analysis, competitor analysis and others.

These researchers provide clear targets against which an E-commerce business may measure its operation to determine gaps. Once the gaps are identified for any individual participant, then strategies to overcome the shortfall may be established.

Five Forces and Internet Influences on Industry Structure

Michael Porter (2001) provided detailed information on both positive and negative impacts of the Internet on industry structure within the context of the Five Forces Model. When discussing the threat of substitutes, he pointed to implementation which expands the market by making the industry more efficient overall. He also mentioned that it is just this expansion that leads to new substitution threats which are unanticipated today. Porter talks about the shift in bargaining power of the consumer, and how elimination of the powerful traditional channels improves bargaining power for the business. He details how information is less proprietary allowing competitors to know more about each other than ever before. Also, he discusses how new entrants have flooded into the E-commerce space.

To offset some of the gaps mentioned above, Porter (2001) offers six principles of strategic positioning. These serve as implementation goals for E-commerce applications. First, superior long-term return on investment is the goal. Second, a value proposition that is different from the competition is required. Third, a distinctive value chain must be employed. Fourth, trade-offs in product offerings or value chain must be evaluated. Fifth, a clear definition of how

all parts of the company fit together defines success. Finally, continuity of direction is needed such that sometimes foregoing certain opportunities must be considered.

Summary to Gap Analysis and Recommendations

This article proceeded on the foundation set in earlier sections by using the typology, and specific tools within the typology, to consider impacts on E-commerce. Gaps and analysis of holes resulting from that review were discussed in terms of opportunities, recommendations and implementation for bridging the divide between current and optimal strategy conditions. Specifically, tools within the industry and external rings of the typology were used including STEEP, key success factors and Five Forces Model.

Implications for Managers

There are many books and tools available to the practitioner interested in delving further into the firm's strategy as it exists, but this article begins to pull that vast amount of data into a concise and understandable typology. This article offers the practitioner a framework for understanding strategy concepts and tools for reviewing the firm's strategy. From this framework, the practitioner can expand her current understanding of the firm using tools that target specific areas of concern or interest, such as the firm, internal, industry or external environments. The article and the typology specifically make the point for managers that the tools are useful in considering the environment, but it is the gap analysis and resolution of those gaps that provides the benefits in recognizing and establishing firm strategy. Beyond that, an example using E-commerce shows managers how they might apply the strategy typology and some of the tools at their disposal to begin the continuous evaluation of firm strategy.

Conclusion

This article identified, analyzed, evaluated and proposed an action plan and a set of recommendations specifically for E-commerce strategy decisions. It has focused on the current trends in E-commerce relative to the impact on strategy decisions. An academic approach formed the basis of the review on E-commerce strategy. A general typology was presented for categorizing academic thought and various current strategy tools. That typology described the conditions under which certain tools are useful when considering strategy including E-commerce strategy, and provided the framework for academicians and practitioners considering new strategy tools and theories. Future research may consider other applications of the typology in practical situations and in consulting assignments as well as fitting other analytic strategy tools into the typology.

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