Issues and Opportunities in E-Business Research: A Simonian Perspective

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ABSTRACT

The third industrial revolution, combining Internet technology with globalization, produces an increasingly complicated e-business environment. There is no wonder that skew distributions, a striking empirical regularity in the hypercompetitive digital economy, have attracted the attention of many researchers recently. Little known by many, Herbert Simon had studied similar regularities in the industrial economy and developed empirically grounded, explanatory theories to help guide strategic decision making in the evolutionary processes of organizations. In this paper, we draw upon five seemingly unrelated research areas of Simon (skew distributions, near decomposability, causal reasoning, effectual reasoning, and attention management) and propose a holistic framework of attention-based information systems for firms to frame an enduring competitive strategy in the digital economy. As an ongoing project, the framework is applied to model Netchising, an emerging research topic in global e-business.

Keywords: attention management; causal reasoning; e-business; effectual reasoning; nearly decomposable systems; netchising; skew distributions

INTRODUCTION

The third industrial revolution, combining Internet technology with globalization, produces increasingly complicated e-business issues and opportunities. Tackling these new challenges requires multifarious skills, which are becoming inextricably interwoven. In his last public speech, Herbert Simon (2000), Nobel laureate in economics in 1978, pointed out that we have “very little experience” to deal with these challenges: “Current developments in electronics, notably the development of the World Wide Web and e-markets, and the enhanced abilities of organizations to manage geographically dispersed activities, provide new opportunities of unknown magnitude for coordination at a distance. Today, we have very little experience with these new developments, both in their current forms and their potential.”

As an attempt to tackle these complicated e-business issues and opportuni-
ties, Simon drafted four papers (2002a, 2002b, 2002c, 2002d) documenting his views of what modern organizations ought to do in the digital economy to survive and thrive. It turns out that the four drafts were the last “four unpublished manuscripts by Herbert A. Simon” (Dosi & Teece, 2002, p. 581). Examining the four papers closely, one may find that they were based on Simon’s decades of research in the following four areas (with key papers and books referenced) of strategic decision making.

1. organizational evolution and near decomposability (Sarasvathy & Simon, 2000; Simon, 1962, 1995; Simon & Ando, 1961)
3. entrepreneurship and effectual reasoning (Sarasvathy & Simon, 2000);

Like many of Simon’s pioneering research works, the four areas lay out as a groundbreaking source of inspiration for e-business researchers seeking to address the new challenges, issues, and opportunities. There are rich treasures hidden in Simon’s thought processes. Instead of reinventing wheels, it makes much sense to draw upon Simon’s research works and develop theories to advance our understanding of the e-business economy. Specifically, we first review Simon’s perspective on business research based on the first three areas above. Following it is the review of Simon’s perspective on information systems research. Strategic implications of Simon’s perspectives for e-business research are then discussed. Finally, we conclude the paper with an ongoing project of Netchising, which combines the power of the Internet for global demand-and-supply processes and international franchising arrangements for local responsiveness (Davenport, 2000). The intent is to illustrate how Simon’s thought processes are useful for addressing issues and opportunities in an emerging global e-business research area.

SIMON’S PERSPECTIVE ON BUSINESS RESEARCH

Simon’s view of business research was guided by the following empirically grounded process of scientific discovery (Simon, 1977a).

1. Start with the analysis of empirical data, not theories.
2. Make simple generalizations that approximate striking features of the empirical data.
3. Manipulate the influential variables to seek for limiting conditions that will improve the approximation.
4. Conduct simple mechanisms to explain the simple generalizations.
5. Propose explanatory theories that go beyond the simple generalizations and make experiments.

As an illustrative example of how the discovery process works, let us consider Simon’s perspective on how businesses compete.

Skew Distributions in Business Competition

Start with the Analysis of Empirical Data, not Theories

What kinds of data can we get regarding business competition? An immediate answer may be market shares of the
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