How does TMT prior experience shape strategy? A routine-based framework based on evidence from founding teams

Anne S. Miner, Yan Gong, Ted Baker, and Jay O'Toole

The top management team (TMT) literature and upper echelons perspective (Hambrick and Mason, 1984) rest on the premise that executives' influence on their organizations is a product of their experiences (Carpenter et al., 2004; Hambrick, 2007). This body of work argues that executives' experience will influence their fields of vision, selective perceptions, and interpretation of environmental and organizational stimuli. These in turn then drive strategic choices (Hambrick and Mason, 1984). Considerable evidence exists for the link between TMT experiences, strategic choices, and firm performance (e.g., Eisenhardt and Schoonhoven, 1990; Boeker, 1997; Carpenter et al., 2001; Kor, 2003). In this chapter we propose an additional causal pathway for how and why executive experience influences organizational actions and outcomes. Specifically, we propose that prior experience exposes TMT members to specific organizational routines that they automatically or mindfully deploy in ways that shape strategy and outcomes.

Our focus is on organization-level routines, sets of coordinated and repetitive organizational activities (Miner, 1991). To develop our framework, we first report an inductive study of how founding top management teams draw on prior experience to create organizational routines. In this study we uncovered that top management teams replicate routines from their own previous experiences in several ways. They integrate routines between TMT members and network partners and use routines from real-time experiences while creating and growing new businesses. We discovered five ways that top management teams shape the creation of organizational routines that directly affect organizational action. Specifically, they (1) automatically import routines from their prior experience, (2) selectively import routines, (3) redeploy prior routines for new purposes, (4) recombine routines from diverse prior organizations, and (5) recombine routines from informal advisory networks.

To begin, we provide a basis for an alternative causal pathway to the standard cognitive assumptions of the upper echelon perspective. Next we report on what we discovered: TMTs draw on their experiences to enact routines. The following section explicates these processes and considers how routines represent an alternative pathway to the cognitive premises of the upper echelons perspective. We clarify specific pathways for prior results from existing research. This chapter then offers several ways to differentiate between the cognitions and organizational routines pathways, describes how the two competing models imply different outcomes, and presents testable propositions to be explored in future research. Lastly, we discuss the implications of our alternative model to the top management team literature and organizational entrepreneurial learning (Kim et al., 2009).

Our chapter seeks to make two important contributions. First we offer a potentially
fruitful additional causal pathway by which TMT prior experience shapes crucial strategic actions and outcomes. The existence of this pathway implies different types of effects of prior experience than those already assumed in the TMT literature. More broadly it expands the vision of how TMTs themselves influence change, as well as continuity in organizations. Second, by building on inductive research on founding top management teams in particular, the chapter contributes to the literature on founding teams and builds the case for several ways in which prior experience influences the early years of an organization’s life.

THEORETICAL CONTEXTS: TMT EXPERIENCE AND ORGANIZATIONAL ROUTINES

Impact of TMT Prior Experience

Substantial attention has been paid to the upper echelons perspective and the study of the importance of top management teams since Hambrick and Mason (1984) originally emphasized this using observable managerial characteristics to predict organizational outcomes. Figure 8.1, adopted from their classic paper, lists potential observable characteristics that they argue will be correlated with cognitive biases and lenses that will shape important strategic activity. Prior experience of TMT members stands as one important observable feature hypothesized to shape cognition and values and strategic actions. In this paper, we focus specifically on the potential impact of TMT experience.

Broadly speaking, the original upper echelons model proposes that the career experiences of the top management team have a significant effect on strategic choices and organizational outcomes through “their cognitive and emotional givens” (Hambrick and Mason, 1984, p. 200). For example, executives who have already worked in an international firm might take it for granted that international activity is both possible and likely to work out, without this even being the subject of explicit thought. We propose that above and beyond values and perceptions, executive experiences will expose them to specific organizational routines. This then shapes their later action, less from cognitive biases than from automatic importation of such routines without much deliberation, or through the deliberate replication of routines out of convenience rather than primarily cognitive processes. Our framework supplements the traditional cognitive approach, and highlights the additional causal pathway shown in the lower left-hand corner of adapted Figure 8.1.

The most extreme version of our framework would imply that in some cases, executives simply replicate routines from prior settings without any reference to mental processes or values. Prior work in the behavioral theory of the firm tradition emphasizes that considerable organizational activity occurs through enacting routines without strong cognitive involvement. Such action occurs partly on “automatic pilot” with its impact probably underestimated in much management research. Our framework is also consistent, however, with routines encountered in prior settings being used deliberately as tools to implement cognitive approaches also derived from those settings. In this version of our causal framework, the presence of routines in prior experience can enhance other prior experience impact, because they offer immediate tools to use in pursuit of TMT
The objective situation (external or internal)

Upper Echelon Characteristics
- Psychological
  - Cognitive base
  - Values
- Observable
  - Age
  - Functional tracks
  - Other career experiences
  - Education
  - Socioeconomic roots
  - Financial position
  - Group characteristics

Strategic Choices
- Product innovation
- Unrelated diversification
- Related diversification
- Acquisition
- Capital intensity
- Plan and equipment newness
- Backward integration
- Forward integration
- Financial leverage
- Administrative complexity
- Response time

Performance
- Profitability
- Variations in profitability
- Growth
- Survival

Causal Pathway
- Organizational routines

Source: Based on "Figure 2 An Upper Echelons Perspective of Organizations" (Hambrick and Mason, 1984).

Figure 8.1 Organizational routines as an additional pathway to psychological pathways.
biases or values. The core idea is that in all cases, exposure to and access to organizational routines gained in prior experience offers a crucial mediating step in the link between experience and strategic action. While this possibility has been noted in prior work, the pervasive causal theory to date in the TMT theoretical framework has emphasized more cognitive processes, making it useful we believe, to develop a routine-based causal pathway.

**Organizational Routines**

To develop this framework, it's important to start with a clear construct of organizational routines. Over the past decades, organization scholars have built on the intuition behind standard operating procedures (Cyert and March, 1963) to develop multiple versions of organizational routines. Despite the widely varying views on definitions of routines, on close examination, coordination and repetition of behavior have been at the core of most definitions used by evolutionary and learning theorists (e.g., Nelson and Winter, 1982; Miner, 1991; Feldman, 2000). We define organizational routines as coordinated, repetitive sets of activities in organizations (Cyert and March, 1963; Miner, 1991; Ocasio, 1997; Feldman, 2000; Feldman and Pentland, 2003). Crucial features of this definition include that they are organizational, something that goes beyond individual beliefs or values or even skills. They can guide collective activity in areas as varied as marketing, manufacturing, acquisition behavior, administration, financial activity, or new product development. They are also not one-time actions devised for a particular context. Prior research on organizational inertia suggests that once in place, routines will often persist even if their origins or even value are no longer clear.

Routines are sometimes characterized as being history dependent and originating as a result of shared organizational experience (Levitt and March, 1988; Phillips, 2002, 2005), although for purposes of our framework their origins are less important than their potential for shaping ongoing behavior. Penrose (1959) argued that organizational resources including organizational routines play a key role in strategies and outcomes, the perspective taken here. Some routines are ceremonial without specific outcomes, but one stream of research sees routines as central to organizational capabilities (Nelson and Winter, 1982; Teece, et al., 1997; Winter, 2000). These capabilities can play a fundamental role in firm performance (Barney and Arikan, 2001; Knott, 2003; Ray et al., 2004). See Martin for a discussion of dynamic capabilities in multi-business teams in Chapter 10 of this volume. Organizational routines are often associated with stored knowledge and organizational memory (Day, 1994; Moorman and Miner, 1997). They embody what the organization has learned from its own prior activities when the organization routinizes activities that appeared to be successful, generating a memory that transcends any individual's memory (Walsh and Ungson, 1991).

Overall then, organizational routines can affect action and in some cases enhance performance in many ways, including when they support capabilities in a specific function, embody lessons from the organization's prior trial and error learning, help establish organizational stability, and boost efficiency under conditions of scarce managerial attention. Our goal here is to consider whether and how the impact of TMT experience involves organizational routines, above and beyond cognitive biases and values.
EVIDENCE FROM THE FIELD: FOUNDING TMTs AND ORIGINS OF ORGANIZATIONAL ROUTINES

Our core notion that TMT prior experience can shape organization behavior through routines springs from an inductive study we conducted on new firms. We explored the simple question of how new firms acquire organization specific routines at all. As a respondent reported in one of our interviews when asked whether his firm has some formal procedures to handle advertising, “Well, I knew that we don’t have a ... , we’re new. How do we have a routine in anything?”

By definition, new firms cannot start with organization-specific routines based on their own limited experience. As new firms they do not actually have lengthy histories of experience distinct to themselves. Thus, the standard idea that a routine develops through a firm’s institutionalization of apparently useful activities, or even accidental routinization of its own prior actions, does not apply in this setting. We were interested in whether new firms did somehow actually enact routines, and if so, where they came from. As part of a larger study of start-ups, we collected data on young knowledge-based firms’ life histories, yielding more than 1725 pages of transcripts in addition to field notes. As described below, we followed standard inductive data analysis procedures to examine data that related to the origins of routines in these organizations. In this section, we report the study itself and its implications for how founding TMTs can shape the routines at work in their own organizations.

The study’s core findings imply that the founding team members’ own prior experience can have a major influence on routines they implement and there are several different pathways through which this can occur. The routines involve many areas of the organizations and include those with strategic impact. The study implies, then, that these founding TMTs’ prior experience shapes their new organizations’ strategic action in part through the routines they draw on, from prior experience, in various ways. This is the inductive and theory-building study on which our broader framework for a routine-based TMT causal pathway is built.

Study Sample

Our sample of 60 young knowledge-based firms in a specific region was drawn from three archival sources: the Dun and Bradstreet database (D&B), Creating High-Tech Business Growth, a list of firms published by an important local group, and the 2001 Directory of High Technology Companies published by the local utility company. We also reviewed our list with local experts who had information about new, knowledge-based firms at their earliest stages. We used a stratified random sampling approach to pick firms to interview, using several filters. The goal was to generate a sample of knowledge-based young firms operating in the same geographic area, with a mixture of firms with and without direct roots to the nearby research university, a type of firm we wanted in our sample for the larger study of which this was a part. Our sample contains firms that were in the focal county, began operating no earlier than 1 January, 1995, with at least three employees as of November, 2001, and operating within the drug, biotech, or IT industries (SICs 283, 737, 873). These filters generated a sample that included 147 firms.

From these 147 firms, we interviewed founding top management team members from
60 companies. No firm refused our request that they participate in the study, and every firm allowed us to tape our interviews. During the interview process, we discovered that two firms actually started before 1 January, 1995, and two other firms operated in a line of business different from their SIC description. Table 8.1 provides a descriptive summary of our sample.

**Data and Analysis**

Our data collection and analysis followed standard grounded theory-building techniques (Ragin, 1989; Denzin and Lincoln, 1998; Strauss and Corbin, 1998). A project team member contacted a member of the founding TMT by phone and introduced us as university researchers investigating management practices in knowledge-based firms, and scheduled a time to visit the firm and conduct interviews. We conducted pilot interviews, which permitted us to improve our protocol and study how the interview materials and interview style affected respondents' reporting behavior. We developed refined protocols for formal semi-structured interviews that began with open-ended questions but then moved toward standardized probes. These included written instruments completed during and after the interviews.

At least two and sometimes more members of the project team conducted each interview. The typical interview lasted two-and-a-half to three hours, with some lasting much longer. All interviews were taped and transcribed by a professional transcription service. An advantage of studying firms of this type is that members of the founding TMT are typically involved in all key aspects of the business and consequently have first-hand knowledge of the firm's day-to-day activities. Our respondents were generally able to offer very detailed responses to our questions, and to provide detailed timelines and histories for their firms. We encouraged respondents to refer to their own archival records for clarification and documentation when necessary.

We collected detailed information on employee hiring, and on specific individuals who were not employed by the firms, but whom the members of the founding TMT reported as having influenced the top management team in the strategic development or day-to-day operations of the firm. The interview and documentation process generated over 1725 pages of transcripts, plus detailed field notes.

The possibility of retrospective bias by informants is a potential threat to the quality of our data. However, because we studied young firms and because we asked our respondents to describe specific events without providing them with a framework with which to evaluate and interpret their answers, we believe that this threat is minimized.

None of our systematic questions explicitly asked informants to reflect on the processes through which the firms acquired routines or flagged this as an important issue in the research. This helps protect our work from several possible sources of bias. Our  interviews did not ask informants to provide their own informal theories about where organizational routines come from or how their experience influences them. In addition, as the informants described firm histories, it is very unlikely they were framing their reports in ways designed to match ideas about possible interviewer expectations related to organizational routines. It also seems unlikely they would have shaped their reports to match ideas about what “good” managers would do or not do related to routines, thereby distorting the factual reports of organizational histories. Overall then, we
How does TMT prior experience shape strategy?

Table 8.1 Descriptive summary of sample

<table>
<thead>
<tr>
<th>Type</th>
<th>Year of Founding</th>
<th>No. of Employees</th>
<th>No. of Founders</th>
<th>No. of Interviews</th>
<th>Length of Transcripts</th>
<th>University Start-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software</td>
<td>1999</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>45</td>
<td>N</td>
</tr>
<tr>
<td>Internet</td>
<td>1998</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>43</td>
<td>N</td>
</tr>
<tr>
<td>Electronics</td>
<td>1996</td>
<td>7</td>
<td>1</td>
<td>1</td>
<td>29</td>
<td>N</td>
</tr>
<tr>
<td>Software</td>
<td>1999</td>
<td>7</td>
<td>1</td>
<td>1</td>
<td>23</td>
<td>Y</td>
</tr>
<tr>
<td>Instrument</td>
<td>1980</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>16</td>
<td>Y</td>
</tr>
<tr>
<td>Biotech</td>
<td>1997</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>12</td>
<td>Y</td>
</tr>
<tr>
<td>Biotech</td>
<td>1984</td>
<td>7</td>
<td>4</td>
<td>1</td>
<td>16</td>
<td>Y</td>
</tr>
<tr>
<td>Biotech</td>
<td>2000</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>41</td>
<td>Y</td>
</tr>
<tr>
<td>Software</td>
<td>1999</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>23</td>
<td>Y</td>
</tr>
<tr>
<td>Recycling</td>
<td>1999</td>
<td>9</td>
<td>2</td>
<td>1</td>
<td>24</td>
<td>Y</td>
</tr>
<tr>
<td>Coating</td>
<td>1996</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>34</td>
<td>N</td>
</tr>
<tr>
<td>Internet</td>
<td>1996</td>
<td>14</td>
<td>4</td>
<td>1</td>
<td>31</td>
<td>N</td>
</tr>
<tr>
<td>Software</td>
<td>1996</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>18</td>
<td>Y</td>
</tr>
<tr>
<td>Biotech</td>
<td>2001</td>
<td>8</td>
<td>2</td>
<td>1</td>
<td>16</td>
<td>Y</td>
</tr>
<tr>
<td>Engineering</td>
<td>1997</td>
<td>4</td>
<td>6</td>
<td>1</td>
<td>26</td>
<td>Y</td>
</tr>
<tr>
<td>consulting</td>
<td>Internet</td>
<td>1999</td>
<td>7</td>
<td>1</td>
<td>28</td>
<td>Y</td>
</tr>
<tr>
<td>Internet</td>
<td>1995</td>
<td>6</td>
<td>3</td>
<td>1</td>
<td>30</td>
<td>N</td>
</tr>
<tr>
<td>Engineering</td>
<td>1997</td>
<td>13</td>
<td>1</td>
<td>1</td>
<td>27</td>
<td>Y</td>
</tr>
<tr>
<td>Software</td>
<td>1997</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>30</td>
<td>Y</td>
</tr>
<tr>
<td>IT consulting</td>
<td>1996</td>
<td>22</td>
<td>1</td>
<td>1</td>
<td>36</td>
<td>N</td>
</tr>
<tr>
<td>Engineering</td>
<td>1998</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>16</td>
<td>N</td>
</tr>
<tr>
<td>consulting</td>
<td>Engineering</td>
<td>1996</td>
<td>6</td>
<td>6</td>
<td>11</td>
<td>Y</td>
</tr>
<tr>
<td>consulting</td>
<td>Software</td>
<td>1999</td>
<td>5</td>
<td>1</td>
<td>33</td>
<td>N</td>
</tr>
<tr>
<td>Internet</td>
<td>1999</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>36</td>
<td>N</td>
</tr>
<tr>
<td>Internet</td>
<td>1999</td>
<td>10</td>
<td>2</td>
<td>1</td>
<td>19</td>
<td>N</td>
</tr>
<tr>
<td>Biotech</td>
<td>1998</td>
<td>35</td>
<td>4</td>
<td>1</td>
<td>31</td>
<td>N</td>
</tr>
<tr>
<td>Internet</td>
<td>1998</td>
<td>6</td>
<td>2</td>
<td>1</td>
<td>23</td>
<td>N</td>
</tr>
<tr>
<td>Internet</td>
<td>1998</td>
<td>18</td>
<td>3</td>
<td>1</td>
<td>42</td>
<td>N</td>
</tr>
<tr>
<td>Biotech</td>
<td>1997</td>
<td>30</td>
<td>3</td>
<td>1</td>
<td>20</td>
<td>Y</td>
</tr>
<tr>
<td>Internet</td>
<td>1995</td>
<td>6</td>
<td>1</td>
<td>1</td>
<td>41</td>
<td>N</td>
</tr>
<tr>
<td>Internet</td>
<td>2000</td>
<td>22</td>
<td>5</td>
<td>1</td>
<td>44</td>
<td>N</td>
</tr>
<tr>
<td>Software</td>
<td>1996</td>
<td>7</td>
<td>3</td>
<td>1</td>
<td>52</td>
<td>N</td>
</tr>
<tr>
<td>IT consulting</td>
<td>1998</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>27</td>
<td>N</td>
</tr>
<tr>
<td>IT consulting</td>
<td>1999</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>33</td>
<td>N</td>
</tr>
<tr>
<td>Biotech</td>
<td>1998</td>
<td>6</td>
<td>1</td>
<td>1</td>
<td>26</td>
<td>Y</td>
</tr>
<tr>
<td>IT consulting</td>
<td>2001</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>27</td>
<td>N</td>
</tr>
<tr>
<td>IT service</td>
<td>1998</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>26</td>
<td>N</td>
</tr>
<tr>
<td>Biotech</td>
<td>1990</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>16</td>
<td>Y</td>
</tr>
<tr>
<td>IT consulting</td>
<td>2000</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>37</td>
<td>N</td>
</tr>
<tr>
<td>Biotech</td>
<td>1998</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>21</td>
<td>Y</td>
</tr>
<tr>
<td>Biotech</td>
<td>1997</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>20</td>
<td>Y</td>
</tr>
</tbody>
</table>
believe that interview demand effects related to routines are extremely unlikely in our data.

Although we did not systematically ask about routines, our initial reviews of transcripts revealed a wealth of data on a variety of processes and patterns that appeared to strongly influence the presence of routines. These data were ancillary to the primary research questions of the original study, but are central to our current focus on patterns and processes of routine development by founding top management teams.

We studied the transcripts, starting with the basic research question of where routines come from in young firms. Through discussions among members of the project team and with colleagues outside the team, we developed an initial framework for organizing the relevant data and characterizing the events and processes. Through multiple iterations between our developing theoretical framework and the data, we first generated a large number of themes and apparent patterns. We compiled and reviewed individual descriptions for each type of process we hypothesized might be at work. We then subjected these apparent themes and patterns to stringent scrutiny, re-reading transcripts, and challenging whether the data consistently supported the proposed observation. Eventually, a limited number of themes and patterns withstood this scrutiny and were demonstrated to have robust support in our data. We described the findings in the section below, drawing on transcript materials as illustrations.

<table>
<thead>
<tr>
<th>Type</th>
<th>Year of Founding</th>
<th>No. of Employees</th>
<th>No. of Founders</th>
<th>No. of Interviews</th>
<th>Length of Transcripts</th>
<th>University Start-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biotech</td>
<td>1995</td>
<td>36</td>
<td>3</td>
<td>1</td>
<td>17</td>
<td>Y</td>
</tr>
<tr>
<td>IT consulting</td>
<td>1999</td>
<td>52</td>
<td>1</td>
<td>1</td>
<td>27</td>
<td>N</td>
</tr>
<tr>
<td>Optical fiber</td>
<td>1999</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>27</td>
<td>N</td>
</tr>
<tr>
<td>Internet</td>
<td>1996</td>
<td>8</td>
<td>1</td>
<td>1</td>
<td>39</td>
<td>N</td>
</tr>
<tr>
<td>Internet</td>
<td>2000</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>31</td>
<td>N</td>
</tr>
<tr>
<td>IT consulting</td>
<td>1995</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>20</td>
<td>N</td>
</tr>
<tr>
<td>IT consulting</td>
<td>1999</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>42</td>
<td>N</td>
</tr>
<tr>
<td>Biotech</td>
<td>1997</td>
<td>11</td>
<td>3</td>
<td>1</td>
<td>31</td>
<td>Y</td>
</tr>
<tr>
<td>Software</td>
<td>1996</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>42</td>
<td>N</td>
</tr>
<tr>
<td>Biotech</td>
<td>1997</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>18</td>
<td>Y</td>
</tr>
<tr>
<td>Software</td>
<td>1996</td>
<td>12</td>
<td>3</td>
<td>1</td>
<td>31</td>
<td>Y</td>
</tr>
<tr>
<td>Biotech</td>
<td>1996</td>
<td>11</td>
<td>2</td>
<td>1</td>
<td>40</td>
<td>Y</td>
</tr>
<tr>
<td>IT consulting</td>
<td>1996</td>
<td>54</td>
<td>2</td>
<td>1</td>
<td>26</td>
<td>N</td>
</tr>
<tr>
<td>Electronics</td>
<td>1995</td>
<td>55</td>
<td>1</td>
<td>1</td>
<td>12</td>
<td>Y</td>
</tr>
<tr>
<td>Engineering</td>
<td>2000</td>
<td>10</td>
<td>1</td>
<td>1</td>
<td>36</td>
<td>N</td>
</tr>
<tr>
<td>Internet consulting</td>
<td>1997</td>
<td>17</td>
<td>5</td>
<td>1</td>
<td>36</td>
<td>N</td>
</tr>
<tr>
<td>IT consulting</td>
<td>1997</td>
<td>49</td>
<td>1</td>
<td>1</td>
<td>42</td>
<td>N</td>
</tr>
<tr>
<td>Biomedical</td>
<td>1991</td>
<td>135</td>
<td>2</td>
<td>1</td>
<td>21</td>
<td>Y</td>
</tr>
<tr>
<td>Software</td>
<td>1996</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>24</td>
<td>N</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>60</td>
<td>1725</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Findings

We observed five primary sources of routines in our sample: (1) automatic importation from experience with prior employers, (2) selective importation from prior employers, (3) redeployment of prior routines for distinctly different purposes, (4) recombination of routines based on TMT prior experience, and (5) recombination based on experience with external networks. These pathways are illustrated in Figure 8.2.

Automatic importation from experience in prior organizations

We found instances in which founding teams transferred organizational routines from their repertoire of routines gained through experience with prior employers by exact replication or automatic importation. In many cases, automatic importation was a quick, simple, and effective solution to enact organizational routines in the new ventures. For example, we observed that one founding team member drew from his experience working with insurance salespeople to establish clear expectations and goals with new salespeople hired for the marketing firm he started. This was very effective and led to better human resources strategies and marketing outcomes. The enactment of this routine in the new setting was not accompanied by explicit theories of what to do, or values about how to do things. Instead, it was a way of doing things in terms of written procedures, timing of interactions, reporting requirements, and other subroutines that made up a higher-level routine of accountability imported into the new firm.

We observed, however, that automatic importation of organizational routines across very different operating environments could also trigger unexpected organizational outcomes. For example, members of one founding team had worked as employees of a music business entrepreneur and later founded a software consulting firm. Following a routine that they had learned and taken for granted in the music business, they used a potential partner’s intellectual property on their website. This automatic importation of a standard organizational routine from a different setting resulted, to their great surprise, in a devastating lawsuit by that partner.

In another case, we noted that founding TMT members with prior experiences in university settings often imported university-based, non-profit organizational routines into their for-profit business setting. One such university organizational routine involved a pattern of following a research path wherever it seemed to lead and the pursuit of multiple technical and research objectives simultaneously. One academic scientist described his automatic importation of this routine in a new start-up during the founding process:

So I started the process essentially by myself, sitting at a desk and a computer and just typing out five or six, seven concepts basically of products. What would be things that we were working on that could be products. They were agricultural, they were pharmaceuticals, they were nutraceuticals, etc. And I made a binder that was divided up into seven. And each one was a product that had a description what it was, a description of what kind of patent protection either we had or would be required.

The diffused product development planning execution routine stood in stark contrast with the value of having focus in new venture development. In this instance, the scientist’s eyeing six or seven “one billion dollar markets” drained limited resources and stretched the company to the brink of bankruptcy. He simply imported a standard and
Figure 8.2 Sources of organizational routines in new ventures

Source: Authors.
fruitful organizational routine from his prior experience into the new venture, but in this case the imported routine was destructive.

Selective importation of routines based on prior experience
In contrast to the automatic carryover of procedures and routines from prior settings, some founding teams made use of mindful knowledge of prior routines to engage in a very calculated process of selection during which some organizational routines were imported while others were explicitly rejected. We label this process "selective importation," a more deliberate and selective process of importing routines from prior experience to a new firm. Selective importation sometimes appeared to be a slower process than automatic importation.

In one case, two of the three founders of an IT firm became unhappy with their experiences of how organizational routines focusing specifically on human resource practices had evolved in the old firm. Because of this, they left with three employees to found another firm offering competing services. Early experiences with their old firm were engineer-centered, aiming "to have fantastic engineers and we’re going to make sure that they are growing and have a great place to thrive." However, gradually the organizational routine for attracting and nurturing engineers was supplanted by routines focusing explicitly on generating short-term financial returns and an IPO. The previously nurturing environment for engineers became an environment in which engineers were tightly managed, with routines that engineers are required to fill out spreadsheets for tracking working hours and activities, and with rewards closely tied to these tracking sheets.

With their deep experience of the prior firm’s organizational routines, and a desire to avoid replicating the prior firm’s failure, the five future founders met on a weekly basis and carefully planned which routines they would and would not transplant, even before embarking on the new venture. As one member of the founding TMT of the new firm put it:

And then (we) got together and talked about, you know, what are we going to do with our company? And we looked at a lot of, at what G (the previous company) had done right in the beginning and then we used a lot of examples of what G had started doing wrong. And so we had a great, it’s like we'd all been involved since almost the beginning at G and seeing them go from, you know, a few people to 120 people. And so we got to ride in that cycle and be part of it. And we got to see it then go wrong. So it was a great lab for us.

With deliberation and planning, the founders selectively imported the early engineer-centered organizational routines and stayed away from the set of routines on close monitoring and controlling. The founders believed that they had been able to learn about possible routines and practices from their experience with failures of their prior firm. This, they felt, allowed them to build a business that not only fit their values better, but was also able to out-compete the old firm. The old firm eventually entered bankruptcy, and the new firm was able to take over and retain most of the old firm’s accounts. Essentially, prior experience served as a source of trial-and-error learning of the nature and impact of various organizational routines. The TMT picked out the organizational routines from their prior experience that they concluded had the most value.
Radical redeployment

New firms in our sample also extended existing routines to new domains, which we label "redeployment," as illustrated by Figure 8.2. For example, in some cases, members of the founding TMTs started their businesses with technical or scientific expertise but little or no business experience and/or few useful business contacts. In such cases, the founding team sometimes relied on the crude redeployment of existing routines from a very different context, but with which they were familiar, as a way to deal with business challenges. While this failed in some cases, in other cases such redeployment seemed to create idiosyncratic and useful routines.

In one case, a firm, founded by a group of software engineers with little business experience, faced a new challenge of how to bill customers efficiently in cases where they had no substantial relationship with a customer, but the customer called up and requested small or simple services. The founders had no experience with billing systems or common business routines for billing. Instead of asking someone to help them develop a billing routine, or buying an off-the-shelf billing and accounts receivable package, they used their experience in web design to develop their own web-based system for billing minor customers for minor requests, drawing on organizational routines from web design in other contexts.

The founders believed that their approach allowed them to optimize customer management during a time when they really couldn't afford to say "no" to any customer. One founder explained it this way:

But on the profit side of things, we would never have said that if a client's going to call you once a month for $200, that's not worth your time. Instead we developed a system to make it very efficient to capture that $200... right, they call you... on their web page. You know, you talk to them. You do what they need, hit a button on their web page. They get billed, period, end of story.

They were later able to further extend this innovative billing routine to other business domains. They believe that the information generated by their system - an unintended outcome - has allowed them to do much better systematic strategic planning. As one founder put it:

We have records from, god, 1990, mid-1997 to the present, of every single hour billed, of every single minute billed to every single client and what was being done (for) that client. And we used that in our analysis last year to restructure the business. And we said, big... okay. What's our work really worth? What's the part of the work that we want to do among various classes and things we've been doing? And what's that part really worth? What will the market bear? How much of it will come? You know, if you do a $20000 project for somebody, how much more could you get in the next year, and who can do it, you know? What does that person need to get paid?

Thus, the initial redeployments based on their technical expertise in web designs created a ripple effect across multiple business domains, and helped build organizational capabilities on billing system and strategic planning as well.
Recombination of routines from founding team experience

In some cases, firms generated routines by combining elements of routines brought to the firm by different founders or by members of its external network, including for example, advisors, bankers, suppliers, and customers. We label this process “recombination,” as illustrated in Figure 8.2.

In some instances, this process seemed to work quite smoothly. For example, founding TMT members of an applied genetics company recombined organizational routines associated with cloning cows learned through prior experiences to enact routines to clone pigs. These new technical routines had very important strategic value to the firm, and represented valuable capabilities that supported the firm’s prosperity and survival.

In other cases, however, the recombination process generated confusion and even struggle. For example, when business people and scientists jointly formed a new start-up, the scientists frequently had no intellectual knowledge on a sound business model, while the business people had no or little familiarity with the nature of scientific development. As a result, the recombination was often characterized by a lack of a common conceptual framework, which can erect significant barriers to an effective recombination of splintered routines from individual founders. In these cases, substantial give and take and adjustments took place and the members of the founding TMT engaged in substantial evaluation and adjustment of their diverse knowledge structures before the adoption of collective routines.

In one instance, a scientist had a single patent for which he perceived multiple potential product applications in the pharmaceutical industry, including a promising cancer drug. His three business partners proposed a routine they had followed before, which involved focusing their resources on exploiting one relatively easy application and using this to generate cash flow for financing the development of other applications. However, the scientist continued to insist on following his previously successful routine of pursuing multiple simultaneous research paths, though couching his preferences in business terms. In the scientist’s words, “So I thought well, okay, so maybe, I’m not a table slammer or anything like that, but I continued to be fairly strongly, we need to develop these. This product right here, you’re telling me this is a billion dollar market. We can’t just let that sit.” For four years, the scientist continued investing resources in multiple projects simultaneously but none of the projects reached the stage where it might be commercialized. The product that eventually showed the most promise was not the one that any of the other three founders would have chosen to focus upon initially. Over time, the scientist began to appreciate the potential value of focused business routines, while the business partners started to see some value in keeping multiple scientific options open. The firm ended up with a firm-level development routine in which the most promising short-term projects would become the primary scientific focus, while other applications would be given less immediate attention. Instead of developing multiple potential drug development lines, the firm concentrated on applying its patent to treating a specific medical condition resulting from chemotherapy while keeping some work on other possibilities alive. Overall, the difficult and lengthy process of evaluating and integrating founders’ knowledge of very different routines resulted in a new “recombination” routine that the founders viewed as contributing to their firm’s success.
Recombination of routines known through advisors or partners

The members of the founding TMT were not limited to their own experience as sources of routines. Young firms rely on a wide variety of outside advisors and stakeholders as they emerge, and these same groups represent potential sources for the new firm's routines. Among all potential network members, an advisor plays an integral role in facilitating routine development in new firms. The network of advisors can be very informal, but nonetheless provide a support and governance function much like a formal board of directors in an established corporation. As one member of the top management team for an academic-based firm put it: “I never do things on my own, simply because I don't know it all. I make decisions with my five mentors. There are times where three people will say yes and two people will say no, I being one of the two people. It's kind of like a marriage. Sometimes you can lose on a one-to-one vote.”

In this instance, the academic scientist founding team member had limited experience on most aspects of business operation, so she relied heavily on the experience of her five business advisors for developing new routines in her areas of responsibility. Whenever she attempted to build new routines in the young firm, she always went to the five advisors for their inputs. For example, the founding team member hired her best friend for marketing, but it turned out to be a total failure: her friend met only two potential customers in six months and spent most of her work time on private emailing and vacation. Entangled in the cross-fire of personal and professional relationship, she brought the issue to her advisors for a solution. By piecing together inputs from her five mentors, she successfully set up new routines on recruiting, which included, but were not limited to, a formal background check and group job interviews. This produced a general overall hiring routine, which was made up of lower-level subroutines for recruiting, evaluation, selection, and formal appointment. The recombination of routines drawn from her advisor network experiences, she believes, brought consistency to the new firm, “When I fired her, [the friend hired for marketing] it was objective, versus when I hired her, it was subjective.”

SUMMARY: PRIOR TMT EXPERIENCE AS INFLUENCE ON ROUTINES IN NEW FIRMS

Taken as a whole, the data from the histories of these new firms suggested that prior experience represented a crucial source of routines for the organizations we studied. Founding TMT prior experience influenced firm strategies in product mix, sales force management, human resources strategies, strategic planning, and product development strategies.

Qualitative data of the sort we developed cannot test theories of causality, but can provide important evidence of the existence of a given phenomenon, and can reveal different types of a focal process. In this instance, the field data not only revealed that prior experience could lead to routines in a new organization, but also revealed several different pathways through which this can occur. The impact of prior experience, then, does not represent a single replication process in which routines simply move across organizational boundaries. At one extreme, it involves a quite automatic and relatively fast process in which TMT members enact routines with little reflection in new settings.
At another, it involves deliberate choices to pull in routines from prior settings into a new context.

**Declarative and procedural knowledge and processes through which prior TMT experience impacts routines in a focal organization**

Our data show different pathways through which prior experience affects the organizational routines enacted in the focal firm. However, they cannot answer the question of why different processes unfold at different times. We speculate that one important factor relates to the type of knowledge founders accumulated in their prior experience, relative to the routines in question. In some cases, members of the founding TMT had actually been the people responsible for performing routines at prior workplaces, rather than the people responsible for developing routines or deciding how or when to implement them. In other cases, members of the founding TMT had participated primarily in decision making or oversight of specific routines at prior firms, but had little actual “hands-on” knowledge of the performance of the routines. In this situation, one would predict that the TMT members previously involved in implementation would have acquired considerable procedural knowledge. This type of knowledge can be seen as “know how” and involves an ability to carry out specific actions. Procedural knowledge differs from declarative knowledge, sometimes seen as “know why.” It involves theoretical and informational knowledge, or the “understanding of the principles that govern a domain and of the interrelations between units of knowledge in a domain” (Rittle-Johnson et al., 2001, pp.346–7). One key difference between these two types of knowledge is that procedural knowledge is typically tied to specific problem types and therefore is not widely generalizable, while declarative knowledge is more flexible and generalizable.

Procedural knowledge is closely associated with skills and habits, and it becomes automatic or accessible unconsciously over time (Cohen and Bacdayan, 1994; Moorman and Miner, 1998). When the members of the founding TMT have only procedural knowledge, routines from previous employers can be automatically activated with a simple cue from the environment. In the cases of automatic importation of organizational routines, we often observe the presence of a high level of procedural knowledge, combined with a lack of declarative knowledge within the founding team. In other words, if founding team members had strong procedural knowledge, simple cues might prompt them to enact a routine in a new setting, without strong links to cognitive activity or frameworks. Importation could be triggered by some weak, or even wrong, cues from the operating environment. This in turn implies that prior TMT experience influences later strategic behavior by the firm in some cases relatively automatically.

In summary, we conclude that evidence from TMT founding teams provides considerable support for the claim that one way prior experience shapes organizational strategic action is through the importation of organizational routines, enacted by both deliberate and emergent or automatic processes. These processes, we suggest, supplement and are not the same as the traditional TMT focus on cognitive biases and frameworks. Further, we suggest that the same core processes unfold not just in new firms, but in existing organizations. TMT members, we propose, accidentally and deliberately import routines (and combinations of routines) from prior organizational contexts in ways that shape firm strategies and outcomes. In the following section, we illustrate how our framework
would interpret evidence about the impact TMT prior experience in top large-scale systematic research on TMTs with an eye to checking the plausibility of our framework given the rich existing literature on TMT impact.

COMPATIBILITY WITH EVIDENCE ON THE IMPACT OF TMT PRIOR EXPERIENCE

Substantial attention in the TMT literature has been paid to the importance of executives' international experiences on globalization (e.g., Reuber and Fischer, 1997; Tihanyi et al., 2000; Carpenter and Fredrickson, 2001; Carpenter et al., 2001). The results from these studies provide considerable support for the link between TMT international experience and firm performance (Carpenter et al., 2001), degree of internationalization (Reuber and Fischer, 1997), and firm global strategic posture (Carpenter and Fredrickson, 2001).

In this section we describe specific evidence that prior TMT experience shapes later firm-level behavior, flag more traditional explanations, and describe how the routines perspective would predict the same results. In addition, we suggest that the routines perspective is consistent with some of the apparent anomalies in these prior studies. We focus on the link between prior international experience and later outcomes because it is a well-established area of strong work with fairly robust findings.

Evidence that International TMT Experience Shapes Later International Firm Behavior in Existing Firms

In an examination of 54 US-based Fortune 500 multinational manufacturing corporations, the mean number of years each executive on the TMT spent abroad on assignment was shown to relate positively to both the percentage of foreign sales to total sales (FSTS) and the percentage of foreign assets to total assets (FATA; Sambharya, 1996). The proportion of TMT members with some international experience was also found to relate positively to both FSTS and FATA. Another study of 126 firms operating in the US electronic industry between 1986 and 1988 provided further support for the positive link between top management team international experience and key international organizational outcomes. The average degree of international experience of the TMT members, based on an executive's international education and work experience, predicted the degree of international diversification, a composite of a firm's average FSTS and average number of foreign countries with subsidiary operations, after controlling for other important firm (size, prior performance) and TMT (average age, tenure, elite education, and various aspects of TMT heterogeneity) variables (Tihanyi et al., 2000).

Similarly, an examination of 49 Canadian software product firms found that TMTs for which CEOs had experience working outside of Canada and/or other TMT members possessed experience selling outside Canada, predicted the number of non-Canadian headquartered strategic partners and the firm's degree of internationalization, a composite of FSTS, percentage of employees who spend over half their time on international activities, and the geographic distance of sales (Reuber and Fischer, 1997). In another important study, Carpenter and Fredrickson (2001) studied 207 US industrial firms from 1984 to 1996 and examined the effects of TMT demographic characteristics on firms'
global strategic posture, a composite measure varying slightly from Sullivan’s (1994) measure and incorporating FSTS, FATA, and the presence of subsidiaries in cultural zones. The analyses support previous research demonstrating positive associations between international experience and internationalization.

**Evidence Concerning New Firms**

The link between international experience of top management teams and internationalization is not constrained to existing firms. In a sample of 61 venture capital-backed IPO firms from 1991, the number of TMT members with international work experience positively related to percentage of primary value chain activities (Porter, 1998) that a firm at least partially engaged in internationally (Bloodgood et al., 1996). McDougall et al. (1994) reported results that indicate firms characterized as international from birth are more often founded by management teams with international experience.

**Causal Processes**

Early upper echelons perspective research typically assumes that TMTs influence organizational outcomes through the cognitive biases, values, and perceptions developed over time through past experience (Hambrick and Mason, 1984). This traditional perspective offers rich possibilities about cognitive or individual-level processes through which prior experience shapes observed later actions. For example, TMT members can develop general cognitive frameworks in which they are aware of the possibility of international activities. It can also make international action seem more natural, feasible, and likely to have positive value.

Our framework differs because it focuses on organizational routines as a key potential pathway between executive experiences and organizational outcomes that can be distinguished from the cognitive influences. The organizational routines framework suggests that in addition to mental or personal cognitive assumptions or values, prior international experience exposed the TMT members to organizational routines specifically related to firm-level internationalization. In this causal pathway, the same types of processes described in our report of founding teams will shape firm behavior through different forms of importation and deployment of international-related activity. This idea is not foreign to the TMT literature, of course. For example, prior work has suggested that prior experience helps build knowledge related to coordination of routines in alliance-based international strategies (Barkema et al., 1997). However, prior work does not tend to clearly separate these processes, and does not differentiate between different pathways through which routines are imported or deployed.

The routine-based approach, however, offers an additional palette of different ways in which prior experience can shape future behavior, and would also explain the results described above. For example, a TMT member can automatically import international-related routines from prior experience into a new setting. Even micro-routines may affect firm-level behavior. A manager with prior experience may have standard marketing analysis software tools or reporting formats that include international issues and data sources, have communication patterns that automatically contact international sales outlets, have recruiting sources that involve international sources, or accounting...
processes that are set up to deal with international manufacturing partners. The TMT member can automatically use these micro-routines in executing various tasks, which will in turn enhance the chances of international action by the firm, even with no special mental biases. The existence of these routines might not only change the chances that the firm would take international action, but speed up its chances, since the operation of the new routines would not require thinking and planning. These processes could operate with relatively little linkage to deliberate higher-level planning in some cases.

In addition, selective importation of international routines offers another causal pathway. TMT members might more deliberately replicate subroutines within areas such as international marketing, production, shipping and sales routines that seemed to work in prior settings, while leaving behind others that did not. The existence of the original, apparently successful routines would shape behavior by offering immediate tools for taking action that look field tested. This behavior clearly could often take place after a decision to pursue international goals has occurred. We suggest, however, that the prior involvement with such routines can also trigger action, whether through automatic action or through increasing the chances of a positive international decision. Again, the routine-based part of the process would also affect the pace of action, because to assemble a combination of prior routines would presumably take less time than constructing completely new sets of systems.

Finally, TMT members could combine routines from their varied experience or networks with which they interact. For example, a TMT might move into certain countries with certain market sequencing strategies by combining country choice routines from one prior setting with market entry routines from another prior firm or setting. Or, the combined routines could come from interaction with advisors. The final action in these instances would not look like the automatic importation of a given routine, but a bundle of actions that combines routines from prior experience. The combination could involve subroutines within a given area—for example, manufacturing or marketing—or could combine routines from different operational areas. The possibility that the TMT draws on external partner routines to compose its own approaches seems consistent with research that indicates that the use of foreign strategic partnerships mediated the relationship between TMT international experience and the firm's degree of internationalization (Reuber and Fischer, 1997).

**Moderation for the Effect of TMT International Experience**

In addition to offering a potential additional pathway through which TMT experience directly influences firm strategic action, the routines pathway may lead to important moderation processes. Prior findings in these areas may even be more consistent with a routines-based pathway in some cases than a pure cognitive viewpoint.

For example, Hambrick and Mason (1984) argued that executive cognitions should influence organizational outcomes more when uncertainty is greater than when it is lower. Carpenter and Fredrickson (2001) examined the role uncertainty plays in the relationship between top management team characteristics and global strategic posture. Environmental uncertainty moderated the relationship between TMT demographics such as functional experience, educational and firm tenure heterogeneity, and global strategic posture. However, TMT international experience failed to display patterns
consistent with the cognitive underpinnings of the upper echelons perspective. The pattern of results may be more consistent with a routines-based causal process in which the impact of the prior international experience occurred heavily through routines-based processes.

Summary

The routines-based pathway provides an alternative and additional set of micro-processes through which prior TMT international experience should enhance later international firm-level actions. From that viewpoint, the routines pathway provides a plausible rival interpretation of the prior literature on the impact of TMT experience on firm-level action. In addition we suggest that the routines pathway offers a window for interpreting some apparent anomalies in prior work, an area for further depth of inquiry.

We note that the cognitive and routines pathways are not mutually exclusive. As shown in our field reports, in some cases the routines pathway can dominate and trigger action. In others, routines and cognition intertwine in terms of core causality. In other cases, decision making follows standard patterns of goals and planning, and routines appear primarily as potential tools at hand. In these cases, the impact of prior routines known to TMT members may have greater impact through their influence on the timing or nature of specific actions. In theory one might even see the two pathways as potentially interactive themselves; it seems theoretically possible that the presence of prior routines and cognitive frameworks in combination might enhance each other's impact, so that their presence would be more than additive.

Importantly, however, at this point one cannot truly rule out either a cognitive or routines-based causal pathway as a major driver for the existing findings about TMT experience and strategic action and outcomes. Thus, we cannot falsify either approach through the findings reported above. This, we suggest, points to the importance of developing propositions grounded in the routines-based framework for two reasons. First, it will be important to look for areas in which the cognitive and routines-based approaches will generate contrasting predictions. Second, it will be important to explore ways that the routines framework has nonobvious implications for important strategic issues such as the speed of strategic action.

SAMPLE PROPOSITIONS FOR RESEARCH ON THE ROUTINES-BASED FRAMEWORK

In this section we offer six propositions based on the routines framework. We do this for two reasons. First, testing these propositions should help tease out the relative contribution of routines-based processes versus a purely cognitive approach. Second, these propositions should help probe the potential theoretical value of the routines framework to generate different predictions based on which type of importation process is involved (automatic, selective, redeployment, recombination from prior employment or recombination from networks). We relate each proposition to the two general types of processes (primarily cognitive versus routines-based) and then develop implications of different routine-based pathways.
Similarity Between Routines in New and Prior Firms

If prior experience shapes general attitudes and goals, one would expect that the specific routines used in later contexts would match the specific demands of those contexts. The early experience would work through the goal of internationalization. The TMT members would pick action routines that reflect current aspirations or rational analysis of what should work best in a specific setting. In contrast, routines-based pathways should lead the later firm to enact specific routines imported or recombined from a prior setting. This similarity might be visible in artifacts such as handbooks, checklists, vendor directories, required operational procedures in manufacturing, and other quite distinct features of operational routines. If the impact of prior experience is broader, these specific artifacts would not be expected to closely resemble the prior setting's routines, but rather the functional demands of the new one. The routine-based viewpoint implies, then:

Proposition 1: TMTs enact identifiable specific routines used in prior settings in a focal firm.

Type of Routine Importation Process and Degree of Similarity in New and Prior Firms

The degree of similarity between the focal firm's international activities, such as using the same partners for foreign strategic alliances, should vary depending on whether the organizational routines are automatically or selectively imported from past experiences, redeployed, or recombined. Organizational routines automatically or selectively imported are most likely to be similar to firms that previously employed members of the focal firm. Organizational routines recombined or redeployed are less likely to be similar, because the actions executed will combine parts of prior routines. They are still more likely to be similar, however, than if prior experience worked solely through cognitions. Therefore, the similarity between firm behavior of the focal firm and firms that previously employed TMT members will likely be moderated by how the organizational routine is enacted:

Proposition 2: Automatically and selectively imported routines have greater similarity to routines in the site of prior TMT experience than routines involving recombination or redeployment.

Speed of Implementation

If a firm has a new TMT member with international experience, both cognitive and routines-based pathways predict greater chances of international action. This may also occur of course, because the executive was put on the team precisely to promote internationalization, not because of the prior experience itself.

There is little reason to believe however, that having more international experience will necessarily amplify an executive's cognitive urgency to attend to issues of globalization. However, strategic decisions to internationalize will be implemented faster when top management teams have more international organizational routines to consider and the time to the first international sale should decrease accordingly. As discussed in
the section on founder importation, procedural knowledge embedded in routines typically can have faster execution than other types of knowledge. Having more experience increases the breadth of organizational routines available to the TMT. Notice our prediction differs from prior studies linking international experience to the speed at which a first international sale occurs (e.g., Reuber and Fischer, 1997) because we focus on the length of exposure to international experience. Therefore:

**Proposition 3:** The degree of international experience of new top management team members enhances the speed at which a first international sale occurs.

**Type of Routine Importation Process and Speed of Implementation**

Depending on whether or not the organizational routines are automatically or selectively imported from past experiences or recombined or redeployed, the time to the first international sale should vary. Decisions to automatically import organizational routines require less time and are easier than recombining or redeploying organizational routines. Selectively importing organizational routines requires more decision-making time than automatically importing organizational routines, which is the fastest way to use routines to solve problems. Recombining and redeploying organizational routines takes more time to implement than selectively importing because they require more coordination. Therefore:

**Proposition 4:** The type of organizational routine enacted affects the speed to the first international sale: firms with automatically and selectively imported routines have the shortest time to first international sale and recombined and redeployed routines have the longest times.

**Impact of Variation in Prior Employment Affiliation**

If prior experience merely influences the attention and field of vision of top management team members, the firm backgrounds of the TMT members would not affect the specific routines implemented in the new firm. Routines used would match the unique demands of the new context without regard to prior knowledge with the simple goal of internationalization. However, routines are embedded in prior managerial experiences and employee mobility is a key mechanism by which routines are passed from one firm to another (Phillips, 2005). TMT members are likely to carry with them organizational routines from their prior employers that are implemented in their existing firm. TMT members with common firm backgrounds possess a shared understanding and knowledge of how to get things done. The common prior experience at the same firm provides TMT members with procedural knowledge of specific organizational routines. The routines-based pathways should lead TMT members with common firm backgrounds to enact organizational routines by automatically and selectively importing routines from their prior common employment with little to no need to make any adjustments because of the shared experience. Firms with TMT members possessing common prior company affiliations often adopt exploitative behaviors by utilizing their shared firm-specific knowledge including available routines (Beckman, 2006).
In contrast, TMT members that come from different firm backgrounds are more likely to possess a broader repertoire of routines from which to draw upon when implementing routines in the new firm. TMT members with international experience, but without common firm backgrounds, may have shared declarative knowledge regarding internationalization. When routines are implemented it will be more difficult for the TMT to automatically and selectively import routines. Rather, the TMT will likely implement routines that represent a recombination of existing routines from their varied employment experiences. Therefore:

**Proposition 5a:** Given that there is prior international experience in the top management team, the degree to which the top management team shares the same firm background increases the likelihood that they automatically or selectively import routines.

**Proposition 5b:** Given that there is prior international experience in the top management team, the degree to which the top management team comes from different firm backgrounds increases the likelihood that they recombine routines.

**Impact of Variation in Prior Employment Affiliation and Speed of Implementation**

If Proposition 5 is supported, TMTs with common firm backgrounds are more likely to automatically and selectively import routines, which requires less time and are easier to implement than recombining routines. The shared procedural knowledge gained from the common employment experiences allows for easier and faster routinization of activities in the new firm, which leads to shorter times to the first international sale. TMT members with a variety of firm backgrounds are more likely to recombine routines to develop new routines. This process of recombination requires more coordination, decision making, and time for implementation. Therefore:

**Proposition 6:** Given that there is prior international experience in the top management team, the degree to which the top management team shares the same firm background increases the speed to the first international sale: firms with top management teams that share firm backgrounds have shorter times to first international sale than firms with top management teams from a variety of firm backgrounds.

**DISCUSSION AND CONCLUSION**

This chapter contributes to the top management team literature by proposing a distinct theoretical causal pathway through which TMT experience shapes organizational strategies and outcomes. We argue that executives’ experiences can spur the use of organizational routines that in turn alter key firm outcomes. This process can work in addition to and even separately from cognitive biases and dispositions. We first report a study of founding top management teams that revealed five specific ways in which prior experience led to organizational routines in new firms. We then argued that such processes provide a plausible causal pathway consistent with important empirical results in the TMT literature. Finally, we developed six testable propositions that point to ways
How does TMT prior experience shape strategy?

in which our proposed causal mechanisms can generate distinct outcomes that either complement or contrast with the results predicted by standard cognitive pathways. Different routines-based processes will generate different strategic actions and—through these—predictably different outcomes. In work in progress, we are developing additional implications for outcomes in terms of strategic actions taken, speed of action, and performance implications of routine-based causal pathways.

Contributions to Other Literature

Research exploring these processes will contribute to strategy research that emphasizes path dependence and the role of routines (Phillips, 2005; Beckman, 2006; Beckman and Burton, 2008). If our routine-based framework has explanatory power, it implies cross-organizational path dependence in the development of key firm actions. In addition, the routines perspective has implications for the important outcomes of speed of strategic action. More broadly, the routine-based causal processes can be seen as forms of bricolage—defined as using and combining resources at hand (Baker et al., 2003; Baker and Nelson, 2005). The routines and TMT prior experience framework implies that bricolage may occur when a TMT combines routines across time, from varied prior settings, in addition to combining routines from varied members of a current network (Baker et al., 2003). Unlike prior work in bricolage, this perspective portrays bricolage as a process that may be actively negotiated among stakeholders—in the current case among members of the TMT. The routine-based causal processes can also be seen as forms of improvisation, “making it up as you go along” formally defined as “the deliberate and substantive fusion of the design and execution of novel production” (Miner et al., 2001, p. 314). It is easy to envision improvisation as a tactical activity designed to pursue larger goals. The routine-based framework developed here implies that improvisational action may have lasting and strategic impact. This advances prior work that proposed strategic improvisation in young firms but did not develop the strategic viewpoint at length in the context of existing firms (Miner et al., 2001; Baker et al., 2003; Gong, 2007).

The routines framework has practitioner value in addition to theoretical promise. If the propositions are supported, for example, they would have implications for a focal firm hiring new members of a TMT to promote internationalization. They imply that when firms consider new TMT candidates, they should inquire about a candidate’s experience and knowledge of specific implementation practices (routines) encountered in prior settings, not just about general international experience. A firm seeking to internationalize rapidly could be better off adding new TMT members coming from a single prior employer, rather than from varied employers, to enhance the chances of shared routines being deployed without negotiation or other delays. Beyond issues of internationalization, the implications would hold more generally any time a firm sought to move into any new area or set of tasks and was considering new TMT members.

CONCLUSION

Our speculation regarding the potential impact of different forms of importing routines from prior settings offers a promising line of work, we hope, for the TMT literature. We
see the work as theory building and exploratory, and invite others to both challenge and deepen the framework as it develops.

REFERENCES


