ORGANIC FOOD INDUSTRY, MANAGERIAL RESPONSIVENESS, & CORPORATE ACQUISITIONS

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Theoretical Foundations:

Edith T. Penrose (1959)

The Theory of the Growth of the Firm
Managers Interacting with Resources


- Firm growth can be studied as a dynamic process of *management interacting with resources* (Tan & Mahoney, 2005)

  “As management tries to make the best use of resources available, a truly “dynamic” interacting process occurs which encourages continuous growth but limits the rate of growth” (Penrose, 1959, p.5)

- Resources versus productive services (resources can render)

- The catalyst for this conversion process is the resource of management (Mahoney, 1995)
Managers Interacting with Resources

- Firm as a unique bundle of resources
  → Firm-specific managerial experience

- Intimate and tacit knowledge of the firm’s resources, capabilities, organizational structures, standard operating procedures, unique historical conditions, and personnel, including human capital asset specificity (Williamson, 1996)

- Managers with tacit knowledge of the firm’s capabilities and organizational routines may envision a superior “subjective productive opportunity” set for the firm (Penrose 1959, p. 42)
Firm-Specific Managerial Experience

- **Proper matching** of resources and capabilities with opportunities
- **Identifying and creating** appropriate productive opportunities unique to a firm

- **Effectively allocating** human and financial resources to seize these opportunities can create entrepreneurial growth and competitive advantage
  - Matching employee skills to projects and employees to each other in team settings (Prescott and Visscher, 1980)
  - With tacit understanding of the firm’s technology knowledge bases, effective allocation of funds to projects in which the firm is more likely to become competitive (Kor and Mahoney, 2005)
Managers Interacting with Resources

There are both value-adding and counter-productive effects of managerial experience in the firm.

Long tenured managers are inclined to invest less in research and development (Kor, 2006). However, they are able to make superior investment decisions, shown by superior returns to R&D (Kor and Mahoney, 2005).

While the firm may suffer from an R&D under-investment problem, experienced management can generate higher returns for every dollar invested in R&D.
Counter-Productive Effects of Managerial Experience

- Entrenchment in a specific view of the firm and the industry results in tunnel vision and inability to perceive critical shifts in the industry (Finkelstein & Hambrick, 1996)

- Meaning and implications of firm-specific managerial experience

- Implications of different types of managerial experience – where the context is important – and the bundle of experiences matter
Research Questions

1. What are the roles played by *managerial experience* in firm’s strategic renewal under dynamic environmental contexts?
   1. Firm-specific managerial experience
   2. Cosmopolitan managerial experience (versatility of experience)
   3. Interactions (bundling effects) (to be looked at)

2. How does a firm’s *existing exploration strategies* affect responsiveness to environmental shifts?

3. How do firm’s existing managerial resources and exploration strategies interact and influence responsiveness to environmental shifts? (to be looked at)
Hypotheses

H1a/b: Firm-specific managerial experience $\rightarrow$ responsiveness to an emerging industry opportunity

- **Alternative hypotheses** (Positive/Negative effects)
  - H1a (+)
    - Managerial knowledge of the firm’s resources and capabilities resulting in envisioning superior (subjective) productive opportunity set and more efficient resource allocation -- resulting in a positive effect

- H1b (-)
  - Entrenchment in the existing business model and strategy and commitment to status quo – resulting in negative effect
Hypotheses

H2: A cosmopolitan repertoire of managerial experience \(\rightarrow\) responsiveness to an emerging industry opportunity

- **H2a (+):** Number of other firms where CEO had significant managerial experience
- **Versatile knowledge** of the other firm business models and mental models

- **H2b (+):** Number of industries CEO had managerial experience outside of the focal industry domain

- **H2c (+):** CEO years of international management experience
Hypotheses

H3: The firm’s existing exploration strategies → responsiveness to an emerging industry opportunity

- H3a (+): Level of product diversification
- H3b (+): Degree of internationalization

- Exploration strategies as an indication of presence of or potential development of resources and competencies that can be leveraged
- Excess capacity of resources may facilitate entry into new industry domains
Context and Sample

- U.S. Food Manufacturing Industry
- Responsiveness to organic food trend and legislation

Responsiveness through acquisitions of firms with organic products and greenfield entry into organic segment

- U.S. Organic food industry - $28.4 billion in 2012 (estimated to be $35 billion in 2014)
- Approx. 4% of total food sales (fruits-vegetables, drinks, packaged foods)
- Approx. 2% of packaged food and dairy products - Food manufacturing
- 2/3rd of U.S. consumers bought an organic food item – starting to get into the mainstream
- Price premium: e.g., organic milk – private label (60%+), branded (100%+)
Context and Sample

- 1997 -- Organic Food Product Act appeared in Federal Register (organic certified)
- 2002 -- Rule was enacted and implementation began
- Legislation enabled the consumers to be able to distinguish between “genuine” organic products and those without the backing of organic practices
- Data range: 1997-2007 – 11 years

- 100% organic (all ingredients organic, excl. water & salt)
- Organic (at least 95% of ingredients are organic)
- “Made with organic ingredients” (at least 70% organic ingredients)
  - Less than 70% - cannot use the term organic anywhere on the principal label, but can list organic ingredients
- Organic farming → No genetically engineered crops/seeds, no sewage sludge
- Approved national list of synthetic substances; list of prohibited non-synthetic substances
Organic Production

- Organic production is based on a system of farming without the use of toxic and persistent pesticides and fertilizers.
- Organically produced foods must be produced without the use of antibiotics, synthetic hormones, genetic engineering and other excluded practices, sewage sludge, or irradiation.
- Organic foods are minimally processed without artificial ingredients, preservatives, or irradiation to maintain the integrity of the food.

- Organic growers and handlers need to be certified by third-party state or private agencies or other organizations that are accredited by USDA.
- Consumers can look for the “USDA Organic” seal or other approved labeling. Products labeled “100% Organic” and carrying the “USDA Organic” seal have to contain all organically produced ingredients.
Sample and Data

- Data range: 1997-2007 – 16 years
- Number of food manufacturing firms – 42 public firms
- Number of firms that made organic acquisitions – 12 (28%)
- Number of firms that made greenfield entry into organic – 10 (24%)
- Total number of firms that responded to the opportunity – 16 (38%)

Food processing firms were identified in Compustat and their acquisitions were identified in SDC database.

Using Factiva and company websites -- we identified cases where the target firm had presence in organic food category (acquisitions), and the cases where the firm introduced an organic product (greenfield entry).
Variables

- **Dependent Variable (0 or 1):** Entry into the organic category through an acquisition or greenfield entry

- **Independent Variables:**
  - **CEO firm-specific experience:** years of managerial experience in the focal firm (mean=16.18 years; std=10.98)
  - **CEO other firm experience:** # of other firms where CEO had 7 or more years of managerial experience (mean=0.34 firms; std=.59)
  - **CEO industry experience outside of the focal industry domain**
    - Number of **related** industries where CEO had at least three years of managerial experience (mean=0.17 firms; std=0.38)
    - Number of **unrelated** industries where CEO had at least three years of managerial experience (mean=0.22 firms; std=0.41)
  - **CEO years of international mgmt experience** (mean=0.71; std=3.03)
Variables

- **Independent Variables:**
  - Exploration strategies:
  - Degree of product diversification: Herfindahl index $H = \sum_{i=1}^{N} s_i^2$
    (mean=0.16; std=0.25)
  - Degree of internationalization: Foreign sales ratio (as a % of total sales)
    (mean=0.11; std=0.20)

- **Control Variables:**
  - Firm size (total assets)
  - Firm age
  - ROA
  - Prior organic experience (prior to 1997)
Method

The hypotheses were tested using an event-history approach.

This approach captures the probability that a firm will enter into the organic food segment during the time interval from \( t \) to \( t + \), given that it has yet to make an entry (i.e., it is ‘at risk’) at time \( t \).

Our dependent variable is a concept of “entry probability” in a given time period, given that a firm did not enter in the previous time period. A positive coefficient of a variable in the analysis means that this variable increases the likelihood of a firm entering early into the segment (i.e., early managerial response).
Results

• H1b supported (negative effect): CEO’s firm-specific managerial experience leads to slower entry into the organic food segment.

• H2a/H2c are supported (positive effects): CEO cosmopolitan experience (i.e., multiple firm experience, international experience) facilitates fast entry into the organic food segment.

• H2b: CEO’s # of related industries where s/he had 3+ years of experience – negative effect – opposite finding

• H3 not supported (positive effects): the firm’s existing explorative strategies, i.e., international expansion and product diversification, lead to slower entry into the organic food segment.
Implications

- **CEO’s firm-specific experience** – Counter-productive effects on responsiveness to an emerging industry opportunity

- This finding is more consistent with the entrenchment story – CEO with long tenure in the firm is clinging to the status quo strategy and reluctant to experiment with a new category

- Mean value = 16 years (std=10 years) (1997-2007)

- **CEO cosmopolitan experience** (experience in multiple firms, international experience…) results in earlier response to the emerging industry opportunity

- CEO experience in multiple firms: mean=2.08 (std=1.34)

- CEO # of firms with 7+ years of experience = 0.29

- CEO international experience: mean=0.71 years (std=3.03)
Implications

- **CEO cosmopolitan experience**

- Important attribute to have especially for an industry that is going through change (emerging opportunities and threats)

- Also very important for a historically stable industry like food industry that is becoming more dynamic

- Dynamism from consolidation (efforts to capture scale and scope economies) – 1/3 of 42 firms were acquired between 1997-2007

- Industry dynamism – caveat – mature industries can be fiercely competitive due to low growth opportunities (room for efficiency and need for innovation)

- Increased organizational complexity due to international entry

- Thus, there can be high value added from a CEO with cosmopolitan experience even in a seemingly stable industry
Implications

- CEO firm-specific experience
  - Hurts firm’s early responsiveness to emerging industry opportunities and threats

- However, there is a caveat here too

- Firm-specific experience can still be valuable for the successful management of existing businesses
- Organic food segment is still a small niche

- This suggest very delicate balancing of the firm- and industry-specific experience of manager with more cosmopolitan experiences
Implications

- Exploration Strategies such as product diversification and Internationalization negatively affects early responsiveness to emerging industry opportunities.
- This result suggests potential competition for resources and managerial attention.
- Consistent with previous evidences (e.g., Kumar, 2009; Mayer et al., 2014; Meyer, 2006) that a firm does not pursue different growth paths (international and product diversification) simultaneously.
- We predicted that these exploration strategies would have broadened the firm’s experience and capability repertoire – leading to better perceptiveness and ability to new industry opportunities.
- However, these firms are already over stretched and prefer to commit resources to these new domains (i.e., deepening their efforts in the product categories and geographical markets they entered).
Future Research

- Both CEO experience repertoire and firm’s exploration strategy repertoire matter to firm’s early responsiveness to emerging industry opportunities.

- Bundling effects – interactions among different CEO experience attributes (synergistic and non-synergistic combinations).

- CEO and TMT effects.

- Interactions between CEO/TMT effects and exploration strategies.
Method

The proportional hazards model developed by Cox (1972) was used for analysis.

If a firm’s entry probability with respect to the time interval is defined as $\lambda(t)$, then the model assumes that:

$$\lambda(t) = \lambda_0(t)e^{\beta'X}$$

where $\lambda_0(t)$ is the baseline entry probability; $X$ is a vector of covariates (i.e., the firm and CEO characteristics); and $\beta$ is a vector of regression coefficients.
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