Cognitive Mechanisms: Which Ones Allow Corporate Entrepreneurs to Obtain Start-Up Funding?

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Research Question

Do corporate entrepreneurs who are successful in obtaining start-up funding have different cognitive abilities?
Agenda

- Research Focus
- Previous Research Evaluating Strategic Factors
- Cognitive Mechanisms
- Intervention
- Results
- Conclusions
Research Focus

★ Senior Management Initiatives
  ▶ HP’s calculator championed by President, W. Hewlett
  ▶ Sony’s Walkman championed by Chairman A. Morita

★ Ordinary New Product Development
  ▶ Logical incremental and platform extensions of current product portfolio
    Typically receive resources during the annual review process

★ Autonomous Business Creation
  ▶ Separate Business Venture Group not in line with traditional business units
    Typically are supported by senior management
Research Focus

“Initiative from below*”

- Employee initiative from within the organization
- Not planned
- Out of sequence with the funding cycle
- Serendipitous

Research Question

Do corporate entrepreneurs who are successful in obtaining start-up funding for “initiative from below projects” have different cognitive abilities?
Previous Research

Using similar intervention found*:

- Critical Factors
  - Strategic Fit
  - Teams Business Acumen
  - Understanding the Market Place

But these factors DID NOT discriminate between funded and unfunded projects.

Previous Research

Using a similar intervention found factors which did discriminate between funded and unfunded projects:

- Support of executive champion
- Favorable corporate culture
- Low initial funding
  - Needed to legitimize project
- Credible Teams were important to projects receiving over one million
Current Research

However, are there also cognitive differences between funded and unfunded groups?
Cognitive Mechanisms

- Predevelopment Meticulousness
- Social Influence
- Risk Aversion
- Learning Motivation
Cognitive Mechanisms

- **Predevelopment Meticulousness**
  - Importance attributed to the level of up-front planning
  - Detail Orientation

- **Hypothesis I** - Predevelopment Meticulousness is positively related to the funding level.
Cognitive Mechanisms

- **Social Influence**
  - Ability to persuade others to change their attributes, beliefs or behavior

- **Hypothesis II** - The greater the teams adeptness with respect to persuasion and techniques for exerting their social influence the greater their funding level.
Cognitive Mechanisms

- **Risk Aversion**
  - Tendency for team member to avoid risk

- **Hypothesis III** - The higher the risk aversion the lower the teams’ level of funding.
Cognitive Mechanisms

➤ **Learning Motivation**

- Desire to learn, accomplish difficult tasks and excel at doing things.

➤ **Hypothesis IV** - The higher the teams’ learning motivation the greater the funding level.
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Intervention

Corporate Employees

Intervention
- Given over a 13 week period
- Meeting 2½ hr/week
**Intervention**

Cognitive surveys done before the start of the intervention

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**Project Criteria**
- Not in company’s pipeline
- Not a simple line extension

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13 weeks

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Unfunded
Intervention

Foundation

- Understand the key issues which affect corporate venturing and new product development success and failure
  - Review corporate venturing studies
  - Review key new product development success/failure studies
  - Provide participants with key business planning skills
Intervention

Culture

- **Understand** the key issues associated with corporate culture, organizational issues and structures
  - Review of published studies
  - Case studies to evaluate culture in company
- **All projects require an executive champion**

Business Plan

- **Presentation trial run - draft**
- **Team presents business plan to executives**
Intervention

Corporations Participating

Engelhard, Ethicon, Hitachi, Honeywell, JP Morgan, Lucent, L3 Communications, MITRE, Motorola, Nabisco, the US Army Communications – Electronic Command Research and Development Center, and Visitalk.com
Intervention

**Outcome**

- 6 UnFunded
- 10 Funded

**Start-Up Funding**
- $25,000 to $500,000
- Mean of $83,000
Intervention

Project Mix

High Risk
New to World and Company

Low Risk
Improvements, Reposition and Cost Reductions

Funded
Unfunded
Results

Predevelopment Meticulousness
\[ a = 0.767; r^2 = 0.74***; \beta = 0.80** \]
Hypothesis Supported

Social Influence
\[ a = 0.861; r^2 = 0.40*; \beta = 0.44** \]
Hypothesis Supported

Risk Aversion
\[ a = 0.749; r^2 = -0.27; \beta = -0.25** \]
Hypothesis Supported

Learning Motivation
\[ a = 0.821; r^2 = -0.32; \beta = -0.23 \]
Hypothesis NOT Supported

Funding Level
\[ \text{Adjusted } r^2 = 0.874 \]
\[ p = 0.000 \]

*p<0.05; **p<0.01; ***p<0.001
Results

**Small Size Limitation?**
- Utilized a resampling technique* to address the small sample (Analyzed the data 16 times, each time holding out a case)
- Regression remained significant (p<0.05) in all 16 cases
- Predevelopment meticulousness, social influence and risk aversion remained significant (p<0.05) in 15 of the 16 cases

**Conclusion:**
- Results remain robust in spite of the small sample size

Discussion

- **Results are robust**
  - Lack of post hoc rationalization and recall biases
    - Cognitive portion of survey was obtained at beginning of intervention
  - Lack of Screening Biases
    - All were actual projects with the successful ones receiving actual funding
  - Survey Respondents
    - Complete survey responses were received from 77 of the 82 participants (93%)
Discussion

Predevelopment Meticulousness
(+ relationship to funding)
※Teams who were more detailed oriented
※Better able to answer questions on market, business and competitive advantage

Social Skills
(+ relationship to funding) =
※Better able to persuade and convince

Better able to convince Executive Champion
※Key discriminate for getting funding

Results may apply to only lower risk projects where details are known and less “breakthrough” thinking is required
Discussion

- Risk Aversion (\(-\) relationship to funding)
  - Teams who were not afraid of taking risk received more funding

- Learning Orientation (\(-\) relationship to funding)
  - Would have expected a positive relationship with funded teams more willing to learn and take on difficult tasks

However:
- May only apply to lower risk projects
- Larger sample size may be needed to validate results.
Discussion

- Are these the cognitive characteristics of high performance teams?
- Are the teams with the wrong cognitive skills predestined to fail?
- Can these cognitive skills be taught?

**CAUTION**

- Small sample size
- Low risk projects
- Intervention is a controlled depiction of the general world.