Linking Project Management with Business Strategy
BNS06

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Contact: sabin@etm.pdx.edu, Session# BNS05, Monday October 23, 2006
Agenda

- Introduction & Research Overview
- Literature Review & Gap Identification
- Research Design & Implementation
- Findings
  - Nature of the Resulting PM/ Business Strategy Alignment
  - Process Used to Achieve the PM/ Business Strategy Alignment
- Contributions, Limitations, Implications & Future Research
Introduction

- Recognition of the strategic importance of project management (PM) in the corporate world is rapidly **accelerating**

- Yet, empirical literature that offers advice on how to achieve the PM-business strategy alignment is **scanty**
Research Objective

- Empirically develop a theoretical framework regarding the alignment of project management (PM) with the business strategy
  - The *nature* of the resulting PM/ business strategy alignment
  - The *process* used to achieve the PM/ business strategy alignment
Research Questions

- **Research Question 1**: How does the business strategy influence the *configuration* of project management elements (strategy, organization, process, tools, metrics, and culture)?

- **Research Question 2**: How is the *process* of aligning project management with the business strategy performed?
A Theoretical Framework: Process used to achieve the alignment

The competitive attributes of business strategy impacting nature:

- Time-to-market
- Schedule-driven
- Quality-driven
- Cost reduction
- Cost-driven
- Tailored to support Schedule-driven focus
- Tailored to support Quality-driven focus
- Tailored to support Cost-driven focus

Project Management Elements:

- P1*: Strategy
- P2*: Org.
- P3*: Process
- P4*: Tools
- P5*: Metrics
- P6*: Culture
- P7*: representing stage gates

* Propositions represents a feedback loop (emergent approach) when a project is required to change or is rejected at the stage gates.
Research Process Overview

Literature

- Review of Related Literature
- Literature Gaps

Research

- Research Objective
  - Research Question 1
  - Research Question 2
- Research Methodology: Case study research
- Guiding Proposition A
- Guiding Proposition B
- Characteristics of Theoretical Frameworks

Findings

- Data Gathering
- Data Analysis
  - Not saturated
  - Saturated
- Final Case Report
- Expert Validation & Literature Checks

A Theoretical Framework
- Alignment Nature
- Alignment Process

Literature review in parallel with all activities
Methodology Overview

- Case study research
- Overlapped data collection and data analysis phases
- The theoretical sampling & theoretical saturation
- Eight case studies across different industries
- Within- and cross-case analysis
- Expert Panel
Literature Review
Hierarchy of Strategies

- Corporate strategy: the business positions or areas in the industry
- Business strategy: the plan for how to deal with competition
- Functional strategy: the establishment of actions, approaches, practices, policies, and procedures for operating particular departments or business functions
Porter’s Generic Strategies (1980)

- To achieve a sustainable competitive advantage, the organization’s chosen strategy needs to be reinforced.
- **Cost Leadership**: being a lowest cost producer in the industry.
- **Differentiation**: providing unique values (e.g., fast time-to-market, superior services) with the premium price.
- **Best-Cost**: combining cost and differentiation focuses.
Project Management

• Project management (PM) is the means, techniques, and concepts used by the project managers and team members in making decisions and taking actions throughout the course of the project (Poli and Shenhar, 2003)

• PM elements: strategy, organization, process, tools, and spirit (culture) are defined as critical success factors (Shenhar, 1999)

• Metrics are added
Gap Identification

**GAP 1:** The **nature** of the PM-business strategy alignment has been little empirically researched

**GAP 2:** The **process** of the PM-business strategy alignment has been little empirically researched
Research Design and Implementation

Research Design

- Research Objective
- Research Question 1
- Research Question 2
- Research Methodology: Case study research
- Guiding Proposition A
- Guiding Proposition B
- Characteristics of a Theoretical Framework

Research Implementation

- Data Gathering
- Data Analysis
  - Not saturated
  - Saturated
- Final Case Report
- Expert Validation & Literature Checks

Characteristics of a Theoretical Framework

Guiding Proposition A

Guiding Proposition B
Research Methodology

<table>
<thead>
<tr>
<th></th>
<th>Survey</th>
<th>Case Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing Literature</td>
<td>Relatively more reliance</td>
<td>Relatively less reliance</td>
</tr>
<tr>
<td>Extent of Control over Actual Behavior</td>
<td>Relatively high control</td>
<td>Relatively low control</td>
</tr>
</tbody>
</table>
Guiding Proposition A

Research question 1: How does the business strategy influence the configuration of PM elements?

Proposition A: Business strategy drives the configuration of PM elements through the business objectives
Guiding Proposition B

Research question 2: How is the process of PM-business strategy alignment performed?

Proposition B: Specific processes are used during strategic planning and the various phases of the project life cycle help to ensure the alignment.

Characteristics of a Theoretical Framework
Characteristics of Theoretical Frameworks in General

- Variables/units of analysis
- Interaction
- Boundaries
- Propositions
Data Collection

- Case selection criteria
  - Theoretical sampling
  - Project’s frame of reference
  - Experience of participant
  - Location
  - Industry
  - Type of business strategy
  - Project success
## Sampling Dimensions

<table>
<thead>
<tr>
<th>Case #</th>
<th>Geo. location</th>
<th>Business unit (or department)/industry</th>
<th>Business strategy (Porter’s generic strategies)</th>
<th>Project success (# of project)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Successful project</td>
</tr>
<tr>
<td>Case A</td>
<td>Beaverton</td>
<td>NPD in Manufacturing</td>
<td>Differentiation</td>
<td>1</td>
</tr>
<tr>
<td>Case B</td>
<td>Beaverton</td>
<td>NPD in Software</td>
<td>Differentiation</td>
<td>1</td>
</tr>
<tr>
<td>Case C</td>
<td>Portland</td>
<td>IT in Health Care</td>
<td>Best-cost</td>
<td>1</td>
</tr>
<tr>
<td>Case D</td>
<td>Portland</td>
<td>IT in Manufacturing</td>
<td>Best-cost</td>
<td>1</td>
</tr>
<tr>
<td>Case E</td>
<td>San Jose</td>
<td>Government</td>
<td>Best-cost</td>
<td>1</td>
</tr>
<tr>
<td>Case F</td>
<td>San Jose</td>
<td>Government</td>
<td>Best-cost</td>
<td>1</td>
</tr>
<tr>
<td>Case G</td>
<td>Portland</td>
<td>Construction</td>
<td>Best-cost</td>
<td>1</td>
</tr>
<tr>
<td>Case H</td>
<td>St. Helens</td>
<td>Conventional Manufacturing</td>
<td>Cost Leadership</td>
<td>1</td>
</tr>
</tbody>
</table>
Data Sources

• **Interviews**: Executives, project management officers, project managers, assistance project managers, team members, and customers

• **Review of related documents**: Project charter, project status reports, risk logs, meeting minutes, company website, etc.
## Examples of Data Collection Strategy

<table>
<thead>
<tr>
<th>Data source</th>
<th>Case (Examples)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>E</td>
</tr>
<tr>
<td>Interview</td>
<td>1</td>
</tr>
<tr>
<td>Aver. length of interview (mins)</td>
<td>90</td>
</tr>
<tr>
<td>Related documents</td>
<td>Process flow document, project status reports, risk logs, meeting minutes, company website, etc.</td>
</tr>
</tbody>
</table>

**Legends:** E-Executive, PMO-Project Management Officer, PM-Project manager, T-Team member, C-Customer
Measurements (Example)

• Self-typing
  – Executives were asked to select one of the descriptions in the questionnaire that most closely described their business units
  – Porter’s generic strategies were used to analyze the study
Data Analysis

- Transcripts (15-20 pages per interview)
- Within-case analysis: case study (30-40 pages per case)
- Coding
- Condensation
- Cross-case analysis
Reaching Closure

- Theoretical saturation
- Final case report
- Expert validation
Findings: **Nature** of the Resulting PM/Business Strategy Alignment
The Influence of Business Strategy on the Configuration of Project Management

- Porter’s generic strategies were used to illustrate the impact of the business strategy on the composition of PM elements
- Inductive logic was applied to generalize patterns of the configuration of PM elements across different Porter’s generic strategies
- Propositions were developed and refined into typology-free
- In total, the study consists of two differentiation, one cost leadership, and five best-cost strategy organizations
An Overview of Propositions

<table>
<thead>
<tr>
<th></th>
<th>Project strategy (1)</th>
<th>Project organization (2)</th>
<th>Project process (3)</th>
<th>Project tools (4)</th>
<th>Project metrics (5)</th>
<th>Project culture (6)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Differentiation</strong></td>
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<tr>
<td>Case A</td>
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<tr>
<td>Case B</td>
<td></td>
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<tr>
<td><strong>Best-cost</strong></td>
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<tr>
<td>Case C</td>
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<tr>
<td>Case D</td>
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<td>Case E</td>
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<tr>
<td>Case F</td>
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<tr>
<td>Case G</td>
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<td></td>
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<tr>
<td><strong>Cost Leadership</strong></td>
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<td></td>
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<tr>
<td>Case H</td>
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</tr>
</tbody>
</table>

Differentiation (D1-D6)  
Best-cost (BC1-BC6)  
Cost Leadership (C1-C6)
Generalization

PM elements’ specific

Proposition 1

Proposition 2

Proposition 3

Proposition 4

Proposition 5

Proposition 6

Generic

Porter’s and PM elements’ specific

Proposition D1

Proposition D2

Proposition D3

Proposition D4

Proposition D5

Proposition D6

Proposition BC1

Proposition BC2

Proposition BC3

Proposition BC4

Proposition BC5

Proposition BC6

Proposition C1

Proposition C2

Proposition C3

Proposition C4

Proposition C5

Proposition C6
Differentiation Strategy

Project Strategy used when Differentiation Strategy is the Business strategy

Project Process used when Differentiation Strategy is the Business strategy
### Differentiation: Project Strategy (D1)

<table>
<thead>
<tr>
<th>Differentiation strategy</th>
<th>Project strategy: Customer-driven</th>
<th>Pattern: Focus and Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case A: Time-to-market Differentiation</td>
<td>Fast time-to-market products</td>
<td>Creating <strong>specific competitive attributes</strong>, that are aligned with the particular Differentiation strategy</td>
</tr>
<tr>
<td>Case B: Quality Differentiation</td>
<td>Superior product quality</td>
<td></td>
</tr>
</tbody>
</table>

**Proposition D1:** A Differentiation business strategy generally drives the focus and content of project strategy on the basis of the competitive attributes of that Differentiation.

**Project strategy** refers to an approach, position, and guidelines of what to do and how to do it to achieve the best value from the project.
**Proposition D3**: A Differentiation business strategy generally drives the focus and content of project process on the basis of the competitive attributes of that Differentiation

<table>
<thead>
<tr>
<th>Differentiation strategy</th>
<th>Project Process: Customer-driven</th>
<th>Pattern: Focus and Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case A: Time-to-market Differentiation</td>
<td>A flexible process with the aim to speed up projects (overlapped phases, combined phases, etc.)</td>
<td>Having a flexible process with the aim to achieve specific competitive attributes, that are aligned with the particular Differentiation strategy</td>
</tr>
<tr>
<td>Case B: Quality Differentiation</td>
<td>A flexible process with the aim to maintain the high level of product quality (sequential iterative phases)</td>
<td></td>
</tr>
</tbody>
</table>

**Project process** is a sequence of tasks meant to create value for customers
Examples of how PM elements are configured per Porter’s strategies

<table>
<thead>
<tr>
<th></th>
<th>LOW</th>
<th>HIGH</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cost Leadership Strategy</strong></td>
<td><em>(C1 to C6)</em></td>
<td><strong>Differentiation Strategy</strong></td>
</tr>
<tr>
<td></td>
<td>The focus and content of project management elements are cost-driven with the aim to achieve <em>cost reduction goals</em></td>
<td><em>(D1 to D6)</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>The focus and content of project management elements are defined to achieve <em>Differentiation’s competitive attributes</em></td>
</tr>
<tr>
<td><strong>Best-cost Strategy</strong></td>
<td><em>(BC1 to BC6)</em></td>
<td><strong>High</strong></td>
</tr>
<tr>
<td></td>
<td>The focus and content of project management elements are defined to achieve a particular level of <em>quality with the minimum cost</em></td>
<td><strong>Low</strong></td>
</tr>
</tbody>
</table>

**DEGREE OF DIFFERENTIATION**

<table>
<thead>
<tr>
<th>HIGH</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOW</td>
</tr>
</tbody>
</table>

COST

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Propositions

The competitive attributes of business strategy drive the focus and content of:

**Proposition 1**: project strategy

**Proposition 2**: project organization

**Proposition 3**: project process

**Proposition 4**: project tools

**Proposition 5**: project metrics

**Proposition 6**: project culture
Definitions of Terms in Propositions

- **Competitive attributes**: A source or sources of advantage (*time-to-market, quality, cost, etc.*)
- **Focus of PM elements**: A priority or priorities set for an individual PM element by the business strategy in order for its specific competitive attribute to be accomplished (*schedule-driven, quality-driven, cost-driven, etc.*)
- **Content of PM elements**: Configuration of PM elements compatible with the focus and competitive attributes (*flexible process, standardized process, etc.*)
A Theoretical Framework: The Alignment Nature

**Propositions**

- Proposition P1*:
  - Time-to-market
  - Schedule-driven
  - Tailored to support Schedule-driven focus

- Proposition P2*:
  - Quality
  - Quality-driven
  - Tailored to support Quality-driven focus

- Proposition P3*:
  - Cost reduction
  - Cost-driven
  - Tailored to support Cost-driven focus

- Proposition P4*:
  - Feature
  - Feature-driven
  - Tailored to support Feature-driven focus

**Project Management Elements**

- Strategy
- Org.
- Process
- Tools
- Metrics
- Culture

**Project Success**

- Project objectives, time-to-market, value to customers, gross margin, profitability index, etc.

* Propositions
Generic Proposition

Generic Proposition: The competitive attributes of business strategy drive the focus and content of project management elements.
Superior quality
Time-to-market
CompetitiveAttributes

Project Management Elements - SPACE

Focus of PM element

<table>
<thead>
<tr>
<th>Focus of PM element</th>
<th>Content of PM element (Examples)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schedule-driven</td>
<td>• (Strategy) Dropping features if necessary in a tradeoff situation, spending additional money to recover projects if they slip</td>
</tr>
<tr>
<td></td>
<td>• (Org.) Building a flexible structure to facilitate the speed for project execution</td>
</tr>
<tr>
<td></td>
<td>• (Process) Overlapping and combining phases, milestones and activities</td>
</tr>
<tr>
<td></td>
<td>• (Tools and Metrics) Focusing on schedule tools and metrics</td>
</tr>
<tr>
<td></td>
<td>• (Culture) Building schedule-oriented project culture (e.g., rewarded speed)</td>
</tr>
<tr>
<td>Quality-driven</td>
<td>• (Strategy) Slipping schedule if necessary in a tradeoff situation</td>
</tr>
<tr>
<td></td>
<td>• (Org.) Building a flexible structure to ensure the quality level of the product</td>
</tr>
<tr>
<td></td>
<td>• (Process) Having sequential iterative process</td>
</tr>
<tr>
<td></td>
<td>• (Tools and Metrics) Focusing on scope/ risk tools and metrics</td>
</tr>
<tr>
<td></td>
<td>• (Culture) Building quality-oriented project culture (e.g., rewarded quality)</td>
</tr>
</tbody>
</table>
Findings: **Process** Used to Achieve the PM/ Business Strategy Alignment
Patterns of the Alignment Process

- **Inductive logic** was applied to generalize patterns of the alignment process
- Mediating processes were developed and divided into three levels
  - The strategic level
  - The project level
  - The corrective emergent approach level
Level 1: Mediating Processes at the Strategic Level

• Strategic plans
  – Cases A, C, D, E, F, and H: Formal & 3-year planning horizon
  – Case B: Short-term planning (1-year horizon)
  – Case G: Informal

• Roadmaps
  – Product roadmap: Cases A & B
  – IT roadmap: Case D
**Level 1: Mediating Processes at the Strategic Level**

- A project portfolio process

<table>
<thead>
<tr>
<th>Case</th>
<th>Formality</th>
<th>Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case A</td>
<td>Formal and recognized</td>
<td>Project selection and prioritization, risk balance, strategic alignment, and capacity management</td>
</tr>
<tr>
<td>Case B</td>
<td>Informal and not recognized (a term is not used)</td>
<td>Project selection</td>
</tr>
<tr>
<td>Case C</td>
<td>Informal but recognized</td>
<td>Project selection</td>
</tr>
<tr>
<td>Case D</td>
<td>Informal but recognized</td>
<td>Project selection and prioritization</td>
</tr>
<tr>
<td>Cases E and F</td>
<td>Informal and not recognized (a term is not used)</td>
<td>Project selection</td>
</tr>
<tr>
<td>Case G</td>
<td>Informal and not recognized (a term is not used)</td>
<td>Project selection and prioritization, and risk balance</td>
</tr>
<tr>
<td>Case H</td>
<td>Informal and not recognized (a term is not used)</td>
<td>Project selection and prioritization</td>
</tr>
</tbody>
</table>
Level 2: Mediating Processes at the Project Level

• Project Life Cycle
  – Project planning: varied across cases
  – Project monitoring: project metrics, internal coordination mechanisms (e.g., PMO), sign-off, stage gates
Level 3: Mediating Processes at the Emergent Strategic Feedback Level

- **Stage gates** represent filters for projects and provide the opportunities for them to be realigned to the requirements set by the companies.

- Stage gates evaluate the project status (Cases A-H), staffing level (Case A), and market shift (Case A)
A Reciprocal Relationship

• A feedback loop is resulted from the emergent approach
• The operating conditions of reviewed projects are expected to support the business strategies by helping adapt the business strategy and its competitive attributes because of environmental changes

Proposition 7: Project management elements may impact business strategy based on operating conditions of reviewed projects
A Theoretical Framework: The Alignment Process

**Mediating Processes**

- **Strategic Level**
  - Strategic Planning
  - Desired products or services
  - High Level Analysis
  - Projects are selected
  - Project Portfolio Management
  - Portfolio review

- **Project Level**
  - Conceptual
  - Planning
  - Execution
  - Closing
  - Rejected/ killed

**Emergent Strategic Feedback Level**

- Propositions
  - Represents stage gates
  - Represents a feedback loop (emergent approach) when the project is required to change or is rejected at the stage gates

**Project Management Elements**

- Strategy
- Org.
- Process
- Tools
- Metrics
- Culture

**Project Success**

- Project objectives, time-to-market, value to customers, gross margin, profitability index, etc.

**Business Strategy**

- The competitive attributes of business strategy

**Project Portfolio Management**

- Strategic Level
- Portfolio review

- Project Level
- Closing
- Rejected/ killed

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Contingency Approach of the Framework

**Strategic and extension projects**
(internal customers, for the purpose of making money)

- Mediating process at the Strategic Level
  - Strategic Planning
  - Project Portfolio Management

**Utility projects**
(internal customers, spending money to support a business unit)

- Mediating process at the Strategic Level
  - Business Unit
  - Functional Strategic Planning
  - Project Portfolio Management

- Profit center
  - Cost center
Characteristics of the Proposed Theoretical Framework

- **Variables**: Business strategy, PM elements
- **The laws of interaction**: A two-way influence of business strategy and PM through a formal or informal alignment process
- **Boundaries**: Business units in the organization (PM/ business strategy alignment)
- **Propositions**
Research Contributions

• Comprehensive
• Empirically established and validated
• Contingent
Research Limitations

• A relatively small number of cases, but as required by the methodology
• Bias of company management views and researcher opinions
Managerial Implications (Examples)

• Identification of appropriate PM focus and content
  – Adapt PM focus and content based on the competitive attributes of the business strategy

• Establishment of an alignment process
  – Have a clear business strategy and articulate it throughout the projects
  – Pay attention to the project plan review and project strategy
  – Iteratively monitor projects
Future Research

• The relationship between the PM/ business strategy alignment and project success
• The degree of alignment needed under different circumstances to assure project and business success
• Different business strategy typologies (e.g., Miles and Snow’s & Treacy and Wiersema’s) and different PM elements
• A large sample study (survey)