Who will join and who will decline?

An analysis of factors predicting a firm’s decision to join a university-based industrial consortium

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The Question

Why (and how) do organizations decide to join university-based CRCs?

- Marketing & recruiting practices
- Decision process
- Evaluation criteria

IUCRCs ↔ Organizations
The Method

1. Center Director Surveys
   - What you told us.
2. Organization Interviews
   - How they explained it.
3. Organization Surveys
   - What’s most important.
IUCRCs tend to follow a relationship marketing model.

Directors reported 70% of leads coming from existing ties: 55% of surveyed organizations reported prior interactions.

Directors estimated: 20%

- Surveyed organizations who said ‘No’:
  - 28% not likely to join in the foreseeable future (termination)
  - 17% said they would seriously consider next year (development)
  - 55% said they might consider later (dormant)
Case: Chemical Mfr.

“We tend to have a lot of relationships, because we have people involved in program committees at most of the major conferences. They all have contacts in certain areas of research.” (Case 2)

1 center and firm meet at conference
2 center invited to present research at firm
3 center follows up with email containing center info
4 firm discusses membership with the center
5 internal project at firm consider too uncertain to justify investment
Case: Government Agency

“I remember sitting down with my head of the finance division saying, ‘My job is to make a technical decision on what’s a good investment. This is a good investment: My branch chief supports it; my division chief supports it. You’re job is to tell me if we have the money to do it, or where the money is or what else we have to cut to make money available.’” (Case 1)

Center and agency staff have 10 yr history
1 co-director asks section mgr to review proposal
2 section mgr promotes center internally
3 section mgr convinces higher-ups to join
4 section mgr goes to Finance to verify funds
Multiple Influences

- Factors affecting the decision are multiple and interacting

“So we have to go to the table with everybody else… where you’ve got a group that decides on these kinds of things and people who want to do them bring them to the table and make some kind of pitch as to why it’s important to the company, because of course there’s more things people want to do than there’s money.” (Case 11)

“See the big problem with [Center] is that we’re not there yet. We’re not doing a whole lot ourselves, so our decision was, “OK, let’s start it by ourselves and do a little bit of work so we understand it better, then in a couple years we’ll try them out.” (Case 6)
Decision Process

- Decision making on CRC membership is a dynamic and varied process across organizations.

Who gives financial approval for CRC membership?

- Me
- Not me

How many had influence in the decision?

- Mean: 4.37
- Std Dev: 2.33
Decision Process

- 34% had at least some financial authority, with a median approval limit of $25k.

- Informants said their decision process could be described to a moderate or great extent by:
  - 62%: Primary focus on demonstrating ROI
  - 55%: Multiple and escalating levels to reach a decision
  - 46%: Internal competition for funding $
  - 32%: Obtaining $$ support for multiple depts/budgets
**Champions & Antagonists**

- 3 in 4 cases reported a champion emerged
- 1 in 4 cases reported an antagonist emerged

<table>
<thead>
<tr>
<th>Champion?</th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joined</td>
<td>58%</td>
<td>74%</td>
</tr>
<tr>
<td>Declined</td>
<td>42%</td>
<td>26%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Antagonist?</th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>75%</td>
<td>56%</td>
</tr>
<tr>
<td>Declined</td>
<td>25%</td>
<td>44%</td>
</tr>
</tbody>
</table>

100% 100% 100% 100%
Open Comments on Joining

“The major reason was the waiving of University overhead, so that our research dollars would mostly go directly to the project work.”

“Access to technology that is key to our business and interaction with potential customers.”

“Access to graduate students for possible recruitment. Opportunities directly sponsor projects for my organization.”
Open Comments on Not Joining

“The research projects proposed and enacted were much more academic and theoretical where we were looking for more directly applied research.”

“We need more time for our management to fully understand all the benefits. We also need our business levels to improve, and we will need to plan for membership in our budgeting process.”

Limited alignment: 37.9%
Financial: 27.6%
Not applied enough: 17.2%
Internal barriers: 13.8%
Not open to consortia: 10.3%
Absorptive capacity: 6.9%
## Empirical Findings

<table>
<thead>
<tr>
<th>Domain</th>
<th>Study factors</th>
<th>Influencing variables</th>
<th>Influence (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRC-related factors</td>
<td>Center size, funding; Tech/non-tech characteristics; alignment</td>
<td>Strategic fit, member fee amount, financial leverage</td>
<td>43%</td>
</tr>
<tr>
<td>Sub-organization factors</td>
<td>Decision process complexity; org climate and absorptive capacity</td>
<td>Champion; opposition (-); expertise; interest</td>
<td>23%</td>
</tr>
<tr>
<td>Individual factors</td>
<td>Experience; role behaviors; position and authority</td>
<td>Internal role orientation (-)</td>
<td>11%</td>
</tr>
<tr>
<td>Organization factors</td>
<td>Size, Financial conditions, R&amp;D intensity</td>
<td>Financial conditions</td>
<td>4%</td>
</tr>
<tr>
<td>Industry factors</td>
<td>Sector, appropriability conditions</td>
<td>[Limited influence]</td>
<td>0%</td>
</tr>
</tbody>
</table>

Note: The percentages represent the relative influence of each factor. The values in parentheses indicate a negative relationship.
Some Take-aways

• Things Directors can influence:
  – Relationship marketing
  – Alignment of research program
  – Perceived ROI
  – Information employed by the liaison or champion

• Things Directors should be aware of:
  – Absorptive capacity
  – Financial conditions
  – Liaison’s orientation (internal vs external)
  – Key actors: antagonists, financial stakeholders

Yeah, so if I spent $200,000 on a research project, that’s not a lot of money…but I know what the result is. It’s very easy to justify what the end result is. It’s hard for me to go and justify “networking” as an end result. (Case 15)
Special Thanks to these IUCRCs for their contributions to this research

- Advanced Studies in Novel Surfactants
- Berkeley Sensor & Actuator Center
- Biocatalysis & Bioprocessing of Macromolecules
- Center for Advanced Processing & Packaging Studies
- Center for High-Performance Reconfigurable Computing
- Children's Injury Prevention Science
- Composite & Ceramic Materials
- Computational Materials Design
- Engineering Logistics and Distribution
- Friction Stir Processing
- Fuel Cell Center
- Information Protection
- Intelligent Maintenance Systems
- Nondestructive Evaluation
- Particle Engineering Research Center
- Plasmas & Lasers in Advanced Manufacturing
- Power Systems Engineering
- Precision Forming
- Precision Metrology
- Repair of Buildings and Bridges with Composites
- Silicon Solar Consortium
- Silicon Wafer Engineering and Defect Science
- Smart Vehicle Concepts
- Wireless Internet Center for Advanced Technology