



Industry/University  
Cooperative  
Research Centers

*A Multivariate Study of Graduate Student  
Satisfaction and Other Outcomes Within  
Cooperative Research Centers*

Thesis Research

by

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# *Purpose of Research*

- To explore current graduate students' benefits, experiences, and satisfaction within cooperative research centers
- To identify key center mechanisms needed to achieve those educational benefits
- To develop a tool for providing centers with immediate feedback from graduate students
  - Centers would benefit by more real time feedback from graduate students, providing a better understanding of which center components may assist in a better education/training of graduate students

# *Research Questions*



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1. What formal center training mechanisms do center's offer?
2. What are the main factors that define the student's center experiences?
3. To what extent are individual and center characteristics significantly related to graduate students' outcomes (satisfaction, perceived benefits, organizational commitment, scholarly achievements, and career goals)?
4. To what extent are the formal center training mechanisms, center experiences, interactions, and thesis or dissertation committee significantly related to graduate students' outcomes (satisfaction, perceived benefits, organizational commitment, scholarly achievements, and career goals)?
5. After controlling for individual and center characteristics, to what extent are formal center training mechanisms, center experiences, interactions, and thesis or dissertation committee significantly related to graduate students' outcomes (satisfaction, perceived benefits, organizational commitment, scholarly achievements, and career goals)?

# Individual Center Mechanisms to Outcomes



## Predictors

## Process/Outcomes

Individual  
Center

### Center Characteristics

- Size, Operating budget, Age

### Center Mechanisms

- Center Role
- Formal Center Training Activities
- Thesis/Dissertation Committee
- Center Experiences
- Interactions

### Individual Characteristics

- Funding, Department, Degree sought, GPA, Gender, Age, Ethnicity, Citizenship

Satisfaction

Perceived Benefits

–Skills

»Non-technical and  
Technical

–Career Advantage

Organizational Commitment

Scholarly Achievement

Career Goals

# *Methodology*



- Anonymous, web-based questionnaire
  - Sent to 33 Centers early November
  - Approximately 500 graduate students
- Results for 32 out of the 33 Centers
  - Current number of responses = 162 graduate students
  - Current response rate = 32.4%
- Still in Progress
  - Reminders
  - 1 center has just recently received the survey
  - Sample size changes: old/irrelevant email addresses
- Follow Ups
  - Desire at least 200 responses

# *Preliminary Data: Predictors*



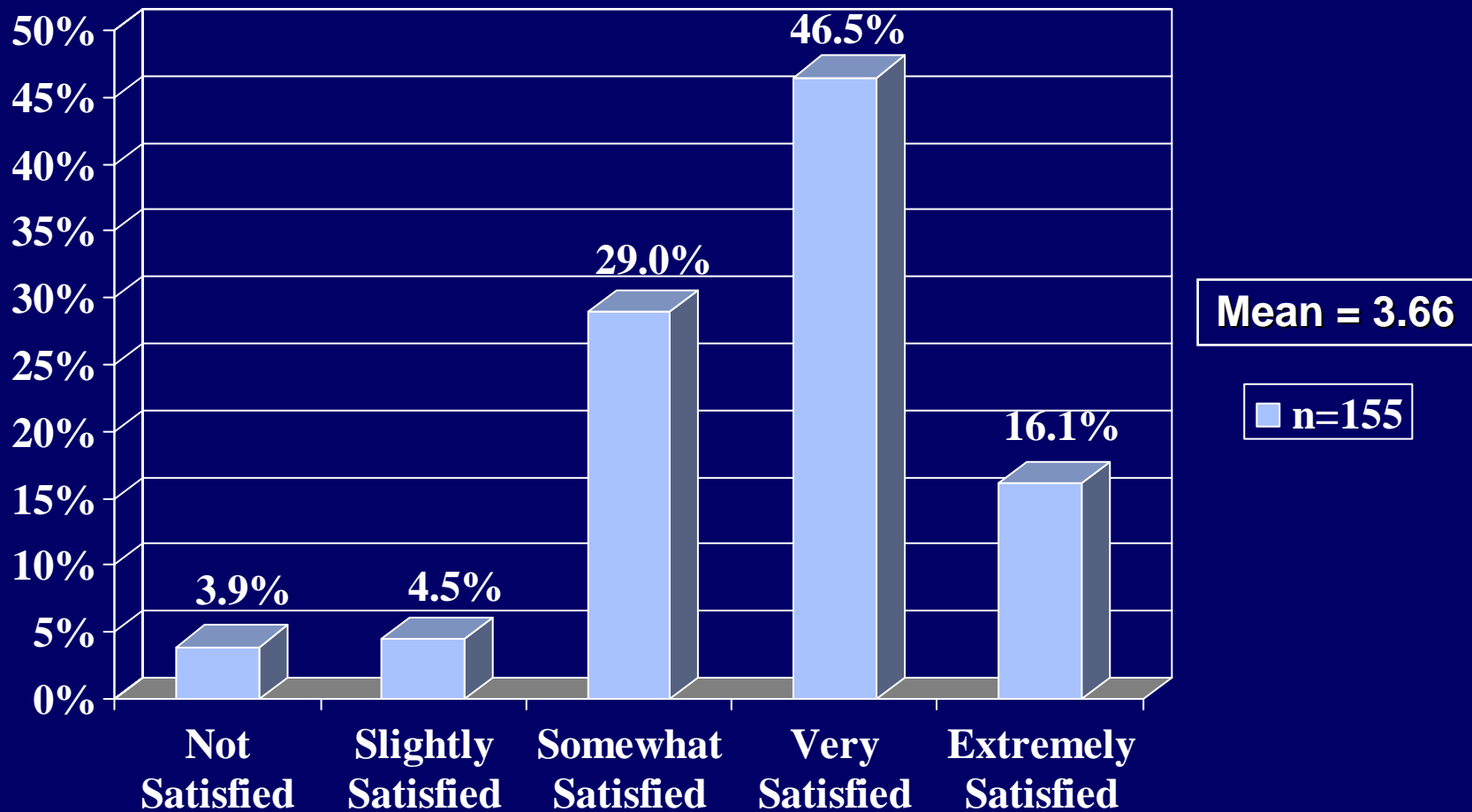
- Individual Characteristics
  - Gender: 75% Male; 25% Female
  - Citizenship: 52.9% U.S. Citizenships; 47.1% Non-U.S. Citizenships
  - Degree Sought: 88.3% are pursuing and/or plan to pursue their PhD
- Center Mechanisms
  - Interactions
    - » Over a third of the students (38%) have visited an industry or government member site for Center purposes
  - Thesis/Dissertation Committee
    - » The majority (84.6%) of participants are (or plan on) doing their thesis/dissertation project on Center research
    - » Mean # of departments on committee = 2.69
    - » Mean # of Center industry members on committee = 1.66

# *Preliminary Data: Outcomes*



- Career Goals
  - Almost half of the participants plan to seek a job in industry (48.1% industry; 29% academia)
- Benefits
  - Career Advantage
    - » Almost two-thirds of participants (62.8%; mean = 3.74) “agree” or “strongly agree” with the statement:
      - » My Center experiences will give me a competitive edge over other students seeking similar jobs or education following graduation
- Satisfaction

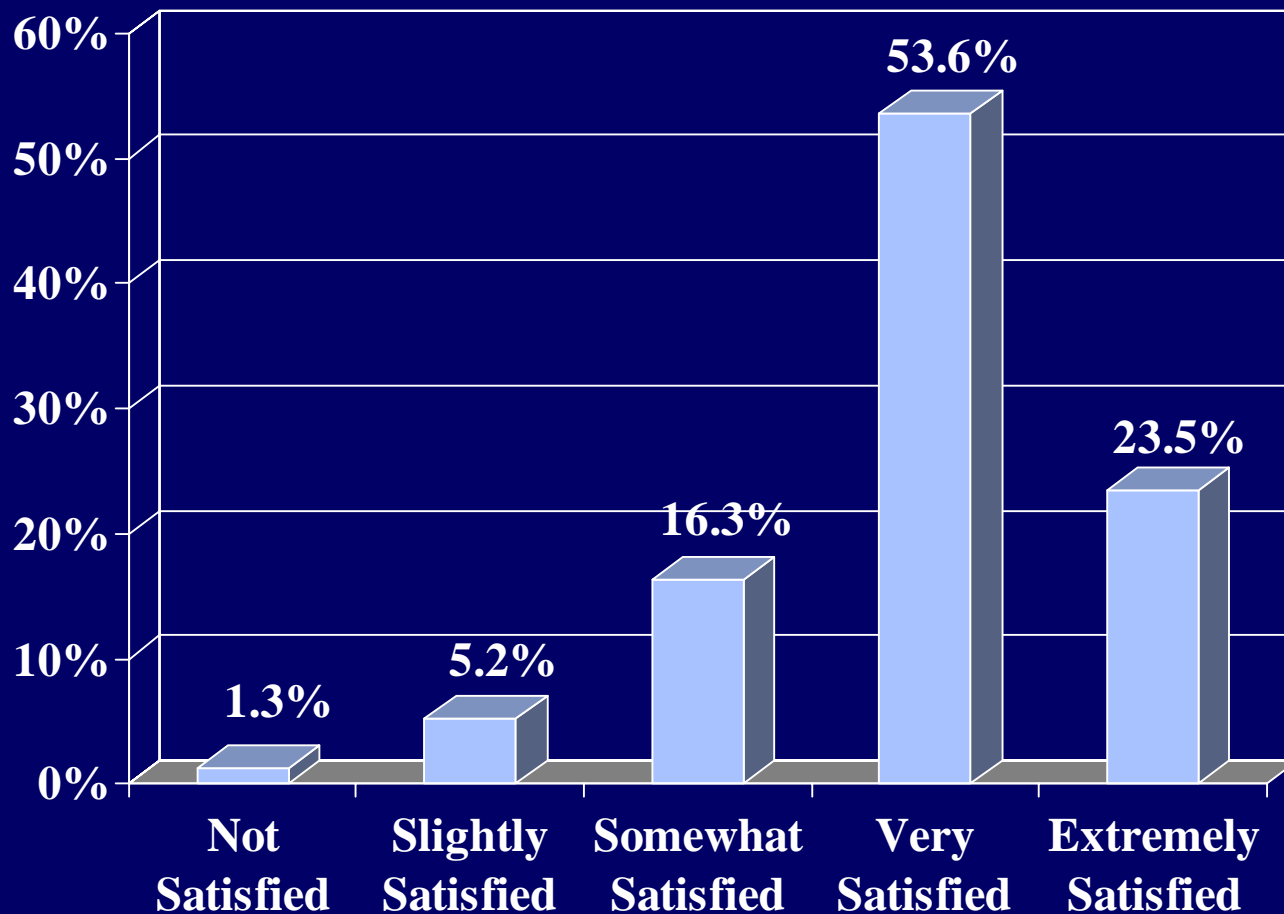
# *Satisfaction:* *Center management/administrative* *operations*





# Satisfaction:

## Degree of autonomy and independence on thesis/dissertation projects



Mean = 3.93

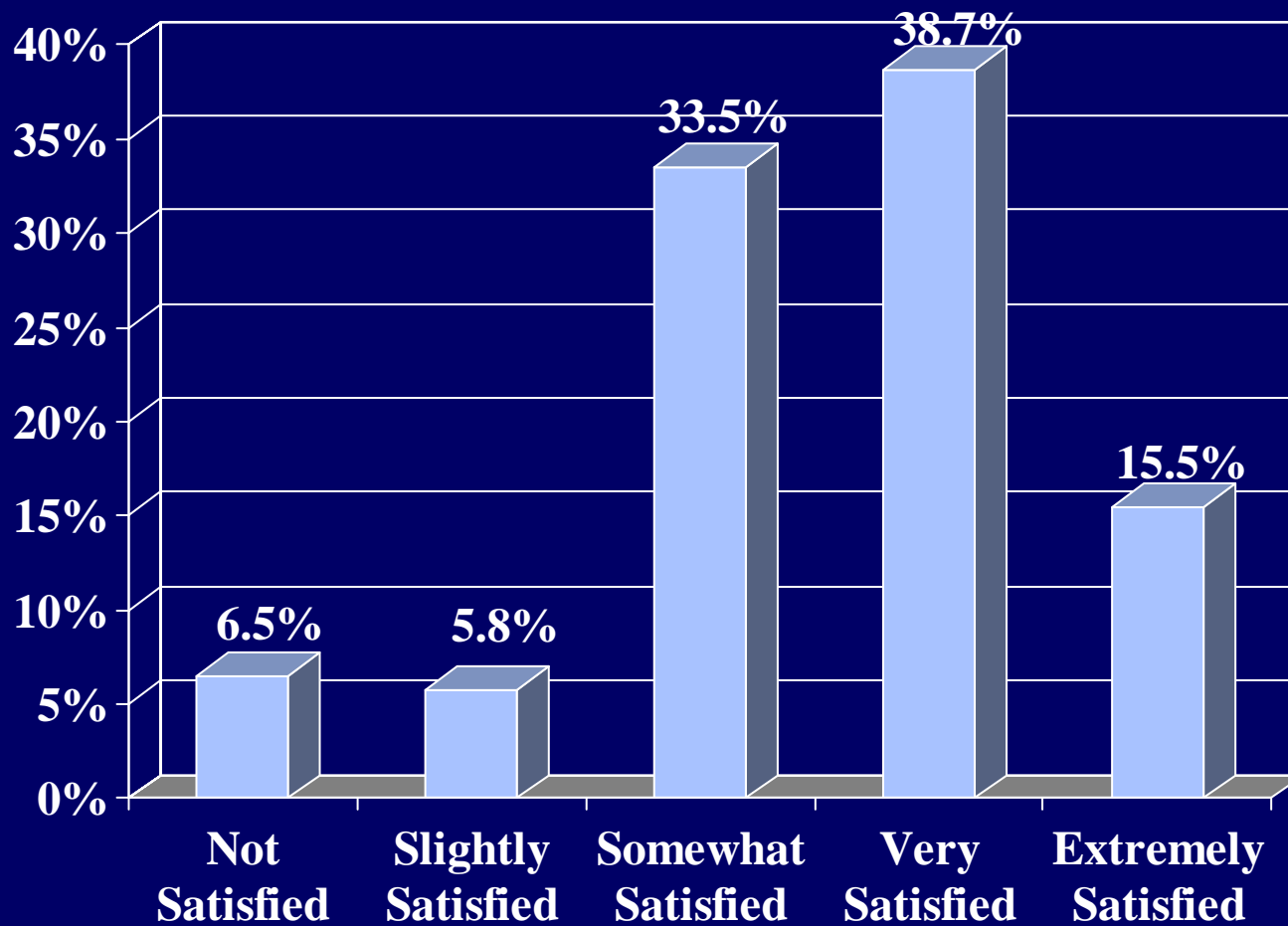
n=153

# Satisfaction:

## Opportunities to interact with industry and other non-academic researchers



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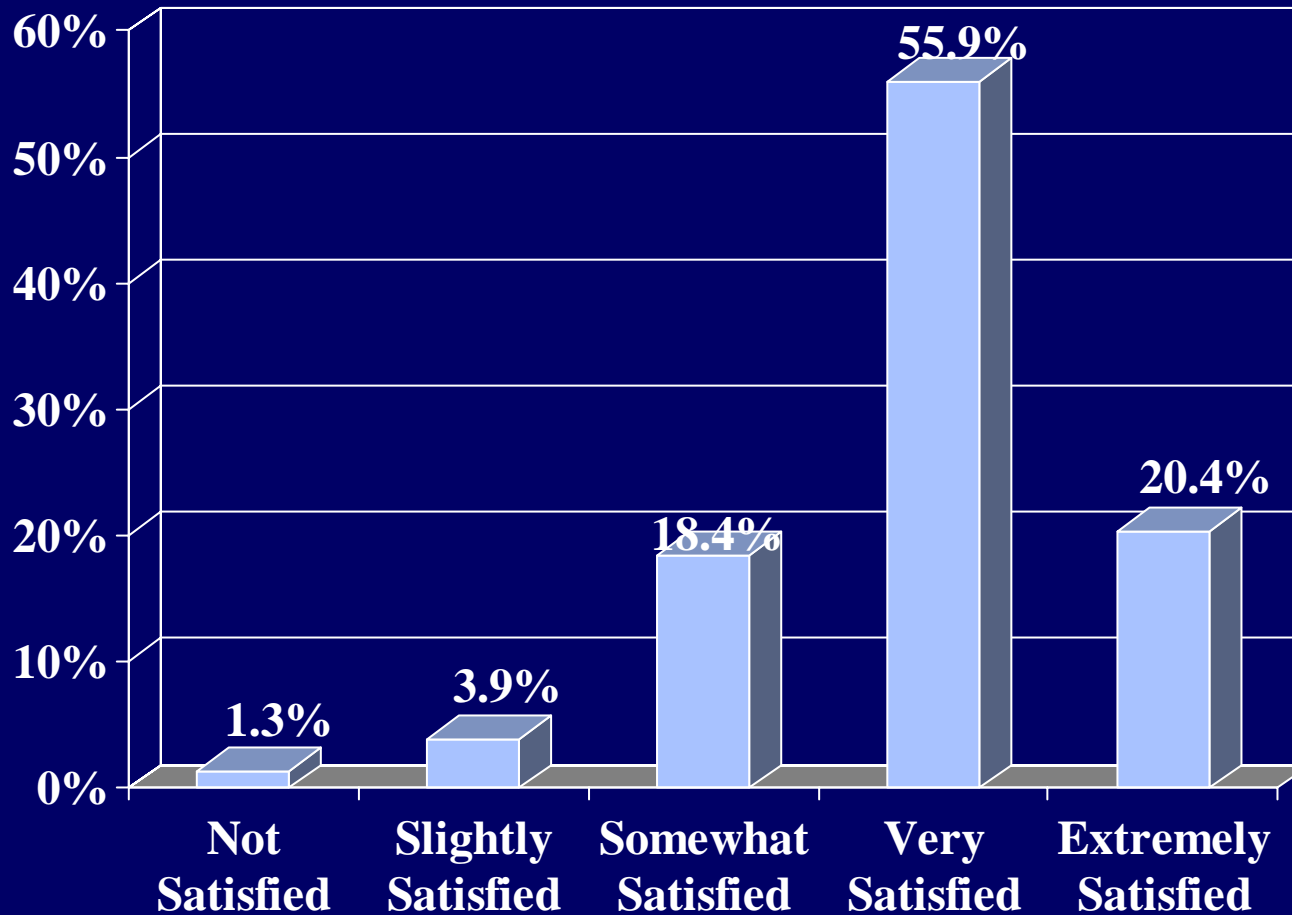
Mean = 3.51

■ n=155

# *Satisfaction: Overall Center Experience*



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Mean = 3.90

n=152

# Timeline



| Jan '06| Feb '06 | March '06| April-May '06 | June '06 |

Finish  
Data Collection 

Analyses and Write Up 

Thesis Defense 

June Data Presentation  
& Center Reports 