The Evolution of Research on Doctoral Student Success at UM

Higher Education Applied Research (HEAR) seminar
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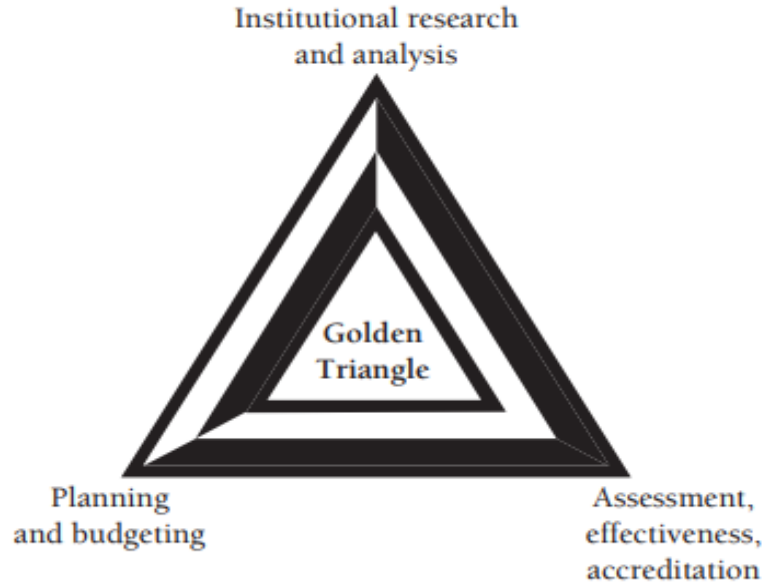
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The Golden Triangle of Institutional Research

Figure 1.2. Golden Triangle

Volkwein, J. F. (2008), The foundations and evolution of institutional research. New Directions for Higher Education, 2008: 5–20. doi:10.1002/he.289

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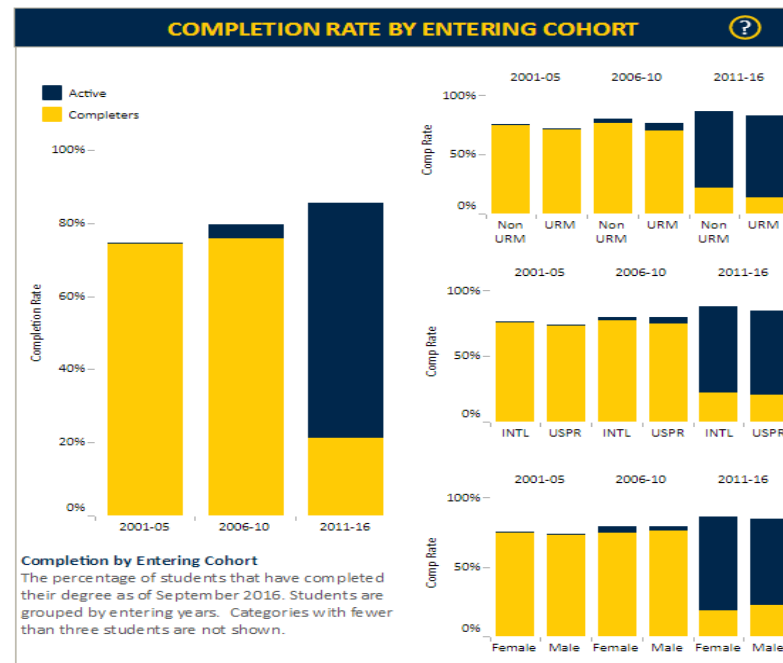UNIVERSITY OF MICHIGAN

Perspective Matters

Case Study 1: Descriptive Metrics

- More than 5300 PhD students (and over 8500 total graduate students) are enrolled in Rackham across 18 schools and colleges

- Rackham spends more than $60 million annually supporting graduate students and programs

- Completion rates continue to improve (~75% of PhD students graduate) but disparities remain

- Questions remain unanswered about many aspects of the graduate experience and Rackham's impact in that experience

Case Study 1: Descriptive Metrics

- Descriptive metrics derived from institutional data; often broken down by standard demographics

- Part of standard reporting but often lacking context

- Uncontrolled for unobserved/exogenous factors

COMPLETION RATE BY ENTERING COHORT

Completion by Entering Cohort
The percentage of students that have completed their degree as of September 2016. Students are grouped by entering years. Categories with fewer than three students are not shown.

Case Study 2: Post Hoc Analysis

- We combine institutional data with data collected from surveys

- Post-hoc, we examine relationship between particular outcomes and certain hypothesized indicators

Case Study 2: Post Hoc Analysis

Ph.D. Experience Study (2009-2012)

Goals of the Study

- To monitor the impact of the change in registration policy implemented in Fall, 2010

- Provide detailed information about the experiences of doctoral students.

- Topics include: satisfaction with graduate experience; funding; relationship with primary advisor, relationship to other faculty members and peers; professional preparation activities; time use; work-life balance; suspension of work on doctoral program; individual life situations

- Samples of Rackham doctoral students who were beyond their first year of doctoral study

Case Study 2: Post Hoc Analysis
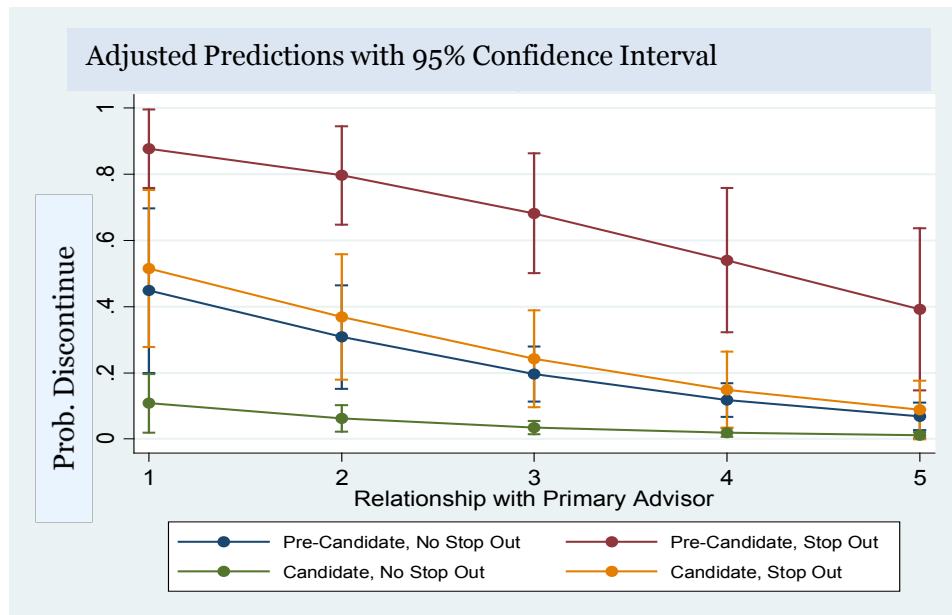## Exploratory Analysis of Discontinuation

Using survey data from 2009, a logistic regression was run to see what factors predict whether a student later discontinued from their doctoral program. There were three variables, in addition to candidacy status, that significantly affected the likelihood of discontinuing.

Factors that reduced the likelihood of discontinuing

- Having a **more** constructive and supportive relationship with their primary advisor
- Receiving constructive feedback from other faculty

Factors that increased the likelihood of discontinuing

- Students who have suspended work on their doctoral program previously

Adjusted Predictions with 95% Confidence Interval

Case Study 2: Post Hoc Analysis

Limitations

- Post-hoc analyses are narrowly-targeted given the design of the available data

- Existing data are inadequate for holistically understanding the doctoral student experience
  - Operationalization of success is binary
  - Data is mostly cross-sectional
  - Analytic window is too narrow
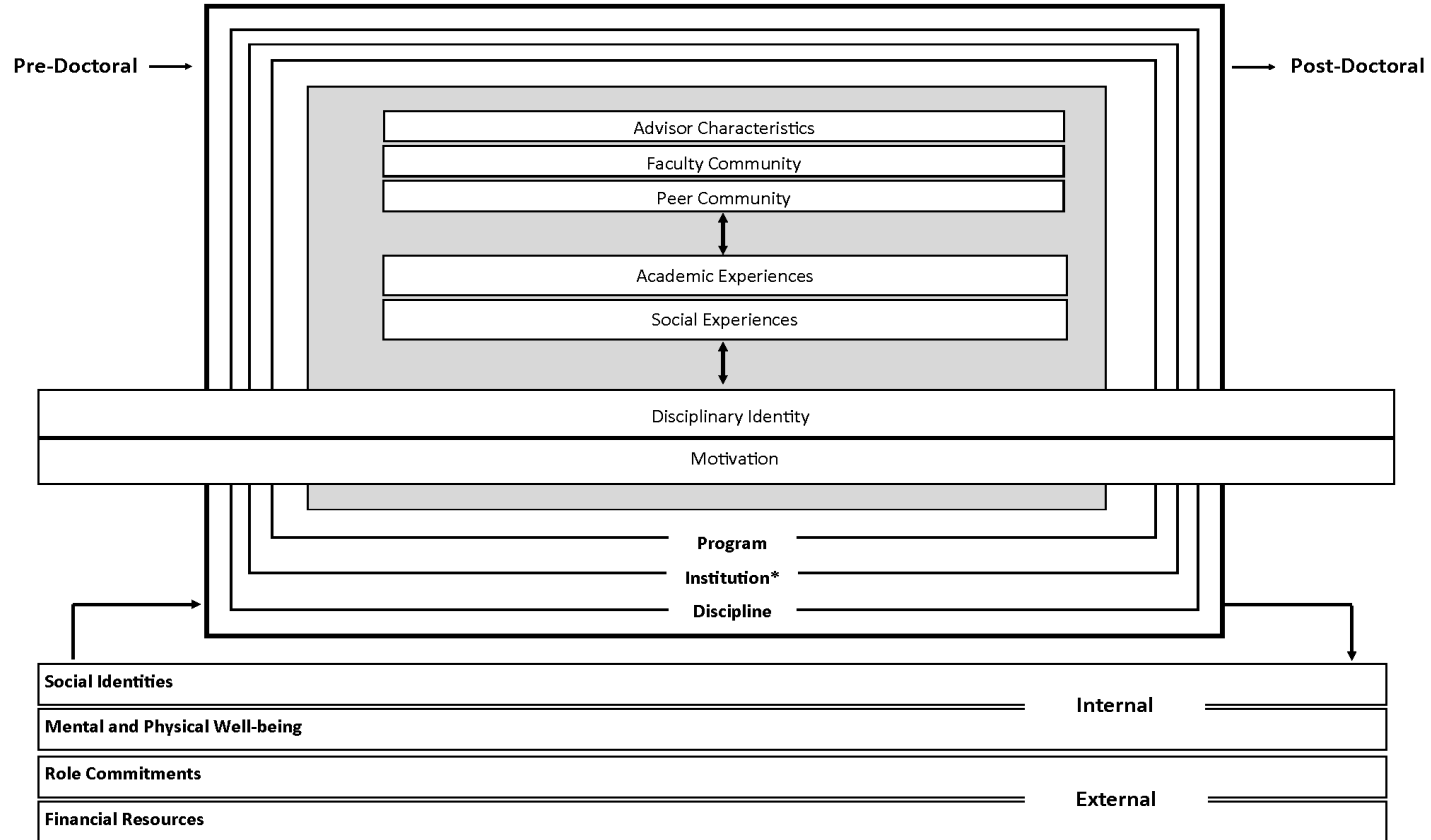
Case Study 3: Rackham Research Agenda

Research Agenda Qualities

- **Broad**, so it is informative about many aspects of the doctoral experience
- **Longitudinal** , so we can study the *process* of doctoral education
- **Theory-driven,** which allows us to understand the mechanisms behind student success

Pre-Doctoral →   → Post-Doctoral

Advisor Characteristics

Faculty Community

Peer Community

Academic Experiences

Social Experiences

Disciplinary Identity

Motivation

Program

Institution*

Discipline

Social Identities

Internal

Mental and Physical Well-being

Role Commitments

External

Financial Resources

Case Study 3: Rackham Research Agenda

Michigan Doctoral Experience Study [MDES]

- Five year longitudinal survey of 5 doctoral cohorts at UM

- Wave 1 fielded in September 2017

- Response rate: 77% *(n=792)*

- Measures:

  – Pre-socialization experiences and expectations

  – Identification with social groups and roles

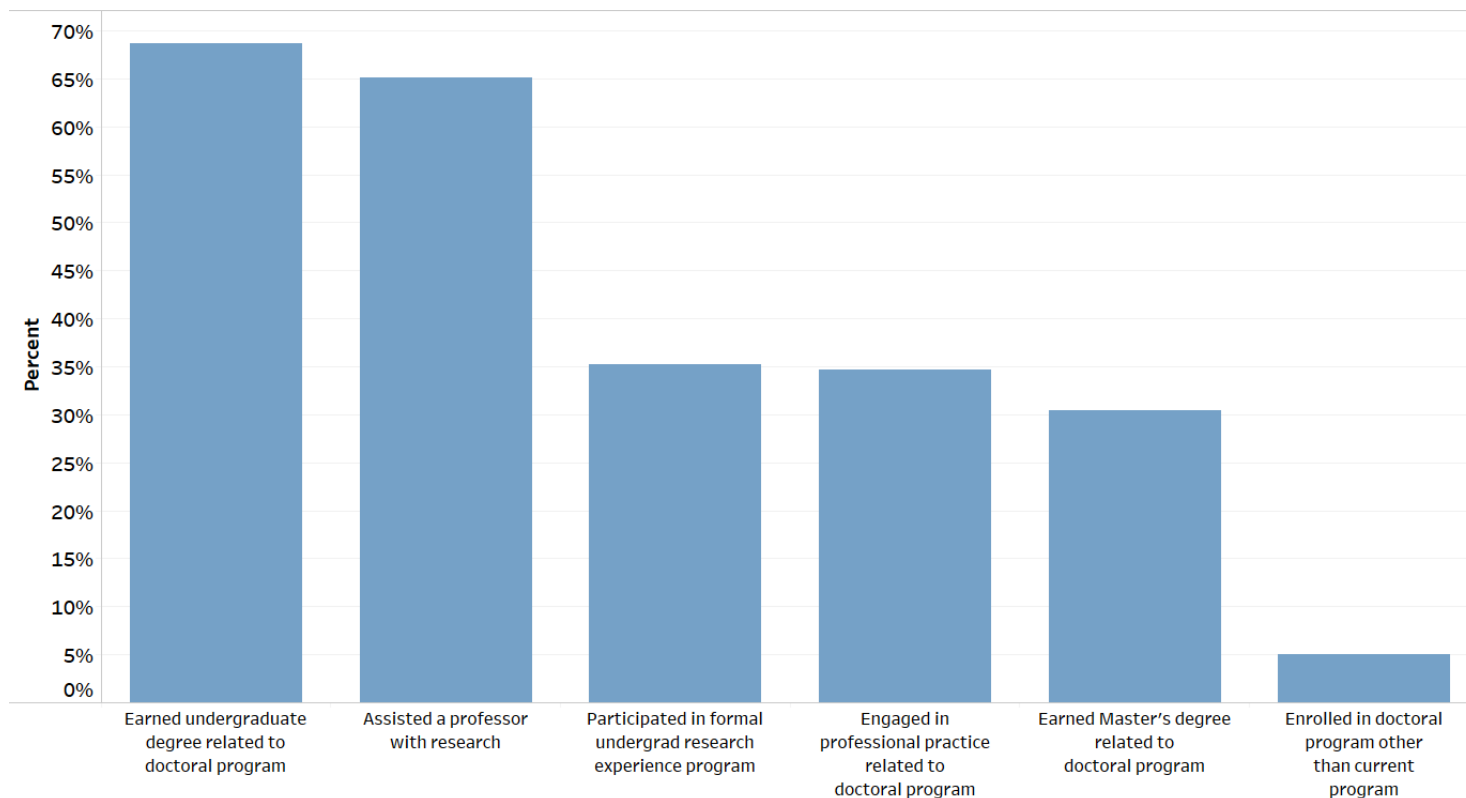 – Baseline disciplinary identity and motivation

Case Study 3: Rackham Research Agenda

Please indicate how true the following statements are at this stage in your program:
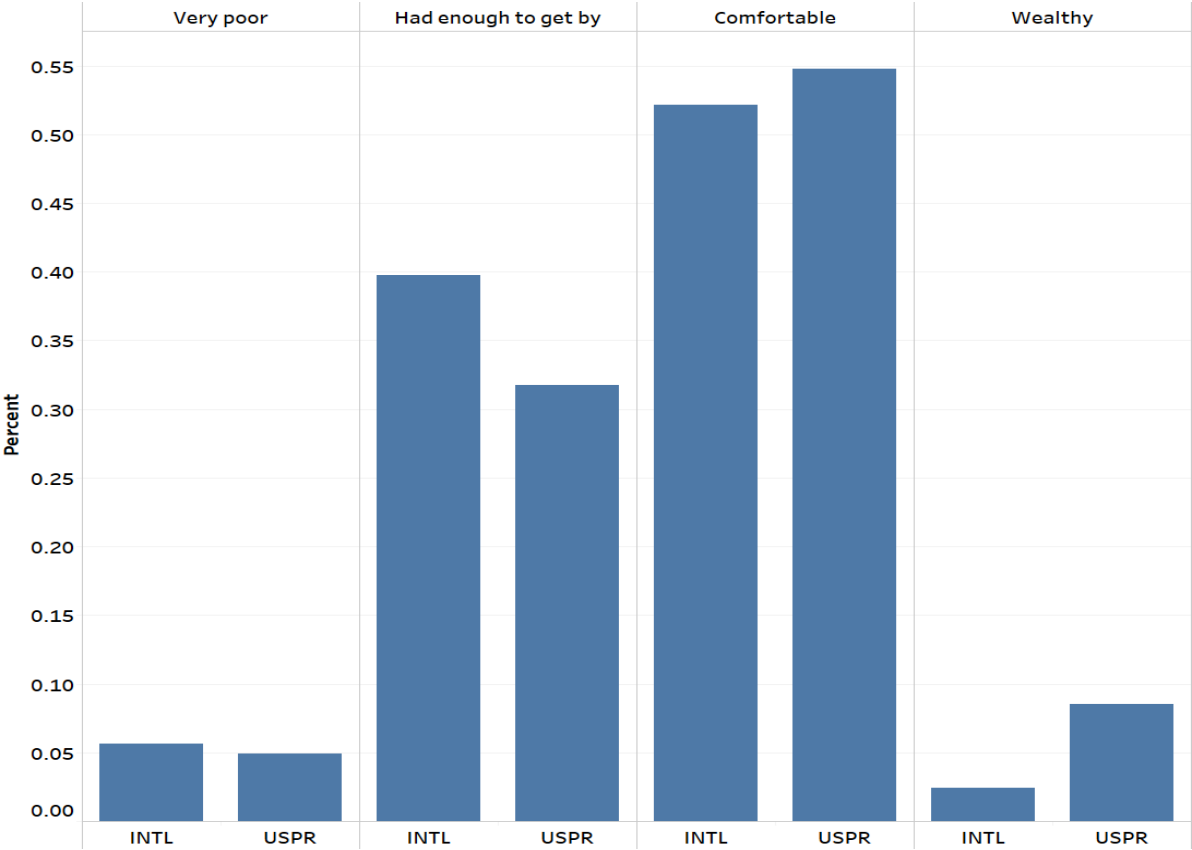
	Not at all true	Slightly true	Moderately true	Very true	Extremely true
The work I plan to do after leaving U-M will advance scholarship in my discipline	◯	◯	◯	◯	◯
I feel like I'm part of an intellectual community composed of faculty and professionals in my discipline	◯	◯	◯	◯	◯
Being a scholar in my discipline is more than just what I do and what I know, it is who I *am*	◯	◯	◯	◯	◯

Please indicate whether you had the following experiences prior to the start of the Fall 2017 term

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Which of the following best describes your family's financial situation most of the time when you were growing up?

Golden Ratio of Institutional Research