capsee

CENTER FOR ANALYSIS OF
POSTSECONDARY EDUCATION
AND EMPLOYMENT

What About the Non-Completers?
Labor Market Returns to Progress in
Community College

Clive Belfield
Queens College, CUNY
Matt Zeidenberg (Abt Assoc.) and **Marc Scott** (NYU)

September 2014 | CAPSEE Conference | Washington, DC

Importance of Non-Completion

- We know a lot about the labor market returns to CC students who complete awards:
  - Program: Associate, then diploma, then certificate
  - Field: Nursing and health… …humanities

- But two-thirds of CC students have no award:
  - What programs are they in? What fields?
  - Does differential program/field failure influence returns?
  - Does it matter if they are in a program/field?

Classifying Non-Completion

1. ## Stated preference
   - Not all students declare a major
   - Declared major only matches actual major 70%
   - Intent / goal based on closed-form questions
   - Confusion, ignorance

2. ## Revealed preference
   - Number of credits: but not all are created equal
   - Algorithm based on course-taking across all completers

Analysis

Data:

- State-wide administrative data from FTIC community college students 2002-2005 (n = 250,000)
- Transcript records merged with UI earnings data for 2011
- Exclude those who transfer and get a BA degree
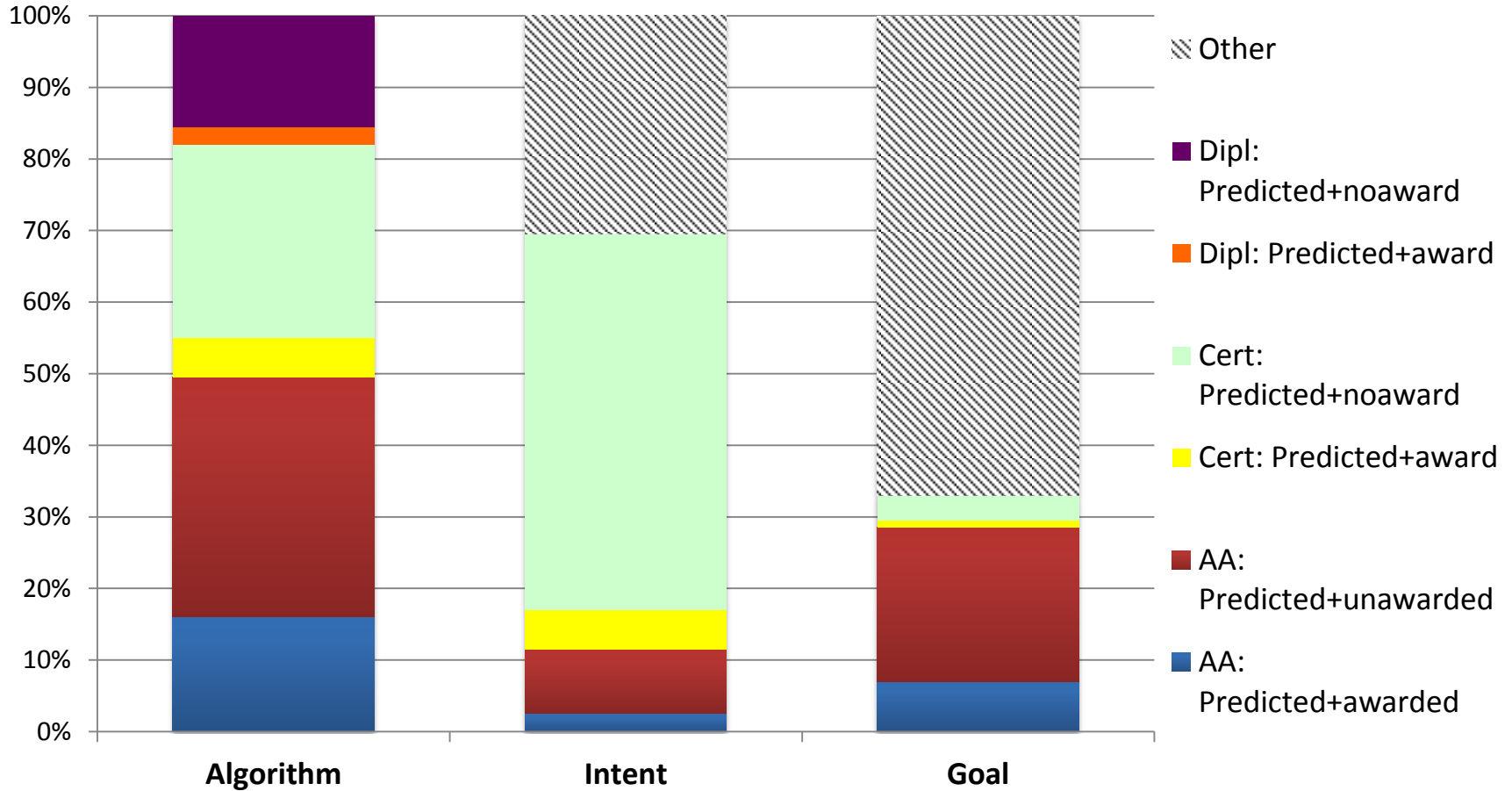
Method:

- Mincerian earnings functions (control for student/college characteristics; by gender)
- Identify *ex ante* returns:

$$R_{ExAnte} = \beta R_{Comp} + (1 - \beta)R_{Noncomp}$$
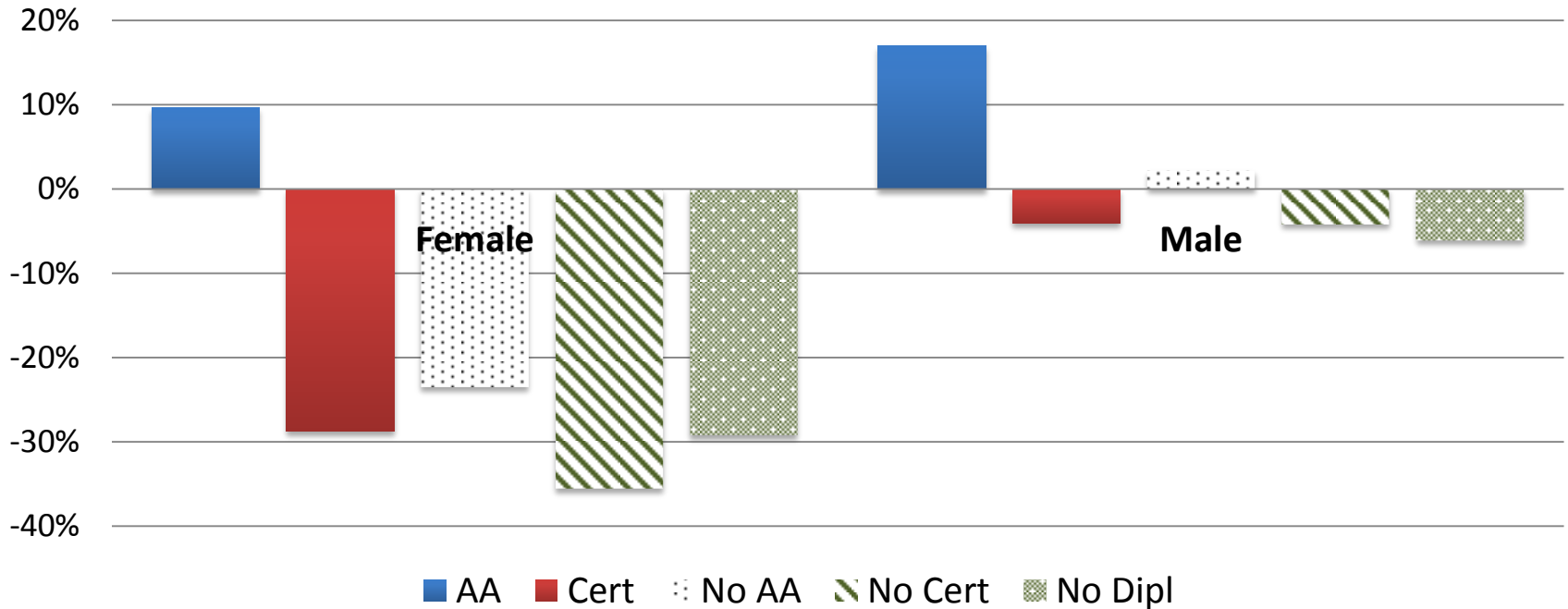
Non-Completion Classifications

1. Intent: Associate degree (vs. occupational award)

2. Goal: Associate degree (vs. skills upgrading)

3. Algorithm based on course-taking across all completers
   - Naïve-Bayes algorithm assigning non-completers to closest pattern for completers by program and then by program field
   - Derive "progression" as % of relevant credits of completers earned by non-completers

Assignment of Students to Programs

Legend:
- Other
- Dipl: Predicted+noaward
- Dipl: Predicted+award
- Cert: Predicted+noaward
- Cert: Predicted+award
- AA: Predicted+unawarded
- AA: Predicted+awarded

Categories: Algorithm, Intent, Goal

capsee

Result 1: Non-Completion Penalties Vary

Returns Over Diploma-holder

Legend: ■ AA ■ Cert ⋮ No AA ⧅ No Cert ⊠ No Dipl

Female, Male

Result 2: New Variation for *Ex Ante* Returns

Relative to diplomas:	R_{Comp}	β	$R_{Noncomp}$	Effect
AA degree	>	>	>	Returns even <u>greater</u> after adjusting for non-completion
Certificates {females}	<	<	<	Returns even <u>lower</u> after adjusting for non-completion
Certificates {males}	<	>	>	Lower *ex post* returns fully offset by higher completion and returns to non-completion

- Values are quite different using intent or goal measures

Result 3: Compressed Returns to Subjects *Ex Ante*

Versus AA degrees in unknown subjects
female {male} returns are:

Non-completers (any subject)	-6%	{-8%}
Nursing awards	+270%	{191%}
Health awards	+46%	{29%}

Assigning non-completers to predicted
subject groups:

Nursing awards	+203%	{127%}
Health awards	+30%	{9%}

capsee

Result 4: No Returns to "Progression" for Non-Completers

- Credits are positively correlated with earnings

- Similar for completers and non-completers

- R per credit ~=0.3%

- Controlling for credits, "progression" is *negatively* associated with earnings for non-completers

- R per credit unaffected

- Specialization <u>not</u> more valuable than generalization

- Buffet beats combo-meal?

Conclusions and Implications

- Lots of non-completers; many ways to classify them

- Ways matter for:
  - Program graduation rates
  - Program returns
  - Variance in returns to subjects

- Game rates through assigning non-completers?

- Need to improve stated and revealed preference approaches

- For non-completers, much work to be done on: what courses to take; what options to have at different momentum points

Visit us on the web at capseecenter.org

We're also on Facebook and Twitter.

Center for Analysis of Postsecondary Education and Employment
Teachers College, Columbia University
525 West 120th Street, Box 174, New York, NY 10027
capsee@columbia.edu
212.678.3091