

What's in YOUR toolbox?



THE APPLICATION OF ADELMAN'S STUDY TO A LOCAL INSTITUTION

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Inspiration



- **What this is not**
 - Critique
 - Replication

- **What it is**
 - What if?
 - Verification of milestones
 - Exploration

Difference From Toolbox



- **Datasets**
 - **Adelman**
 - ✦ NCES transcript-based grade cohort study
 - ✦ Cooperative Institutional Research Project (CIRP)
 - ✦ NCES Beginning Postsecondary Students (BPS) Survey
 - **Martinez**
 - ✦ State MIS data
 - ✦ Local administrative system
 - ✦ Local assessment database
 - ✦ National Student Clearinghouse
- **Decision rules**
- **Type of regression**

Analytic Steps: Adelman



1. Demographic background
2. High school history
3. Postsecondary entrance
4. 1st postsecondary year history
5. Financial aid
6. Postsecondary attendance patterns
7. Extended postsecondary performance

Analytic Steps: Martinez



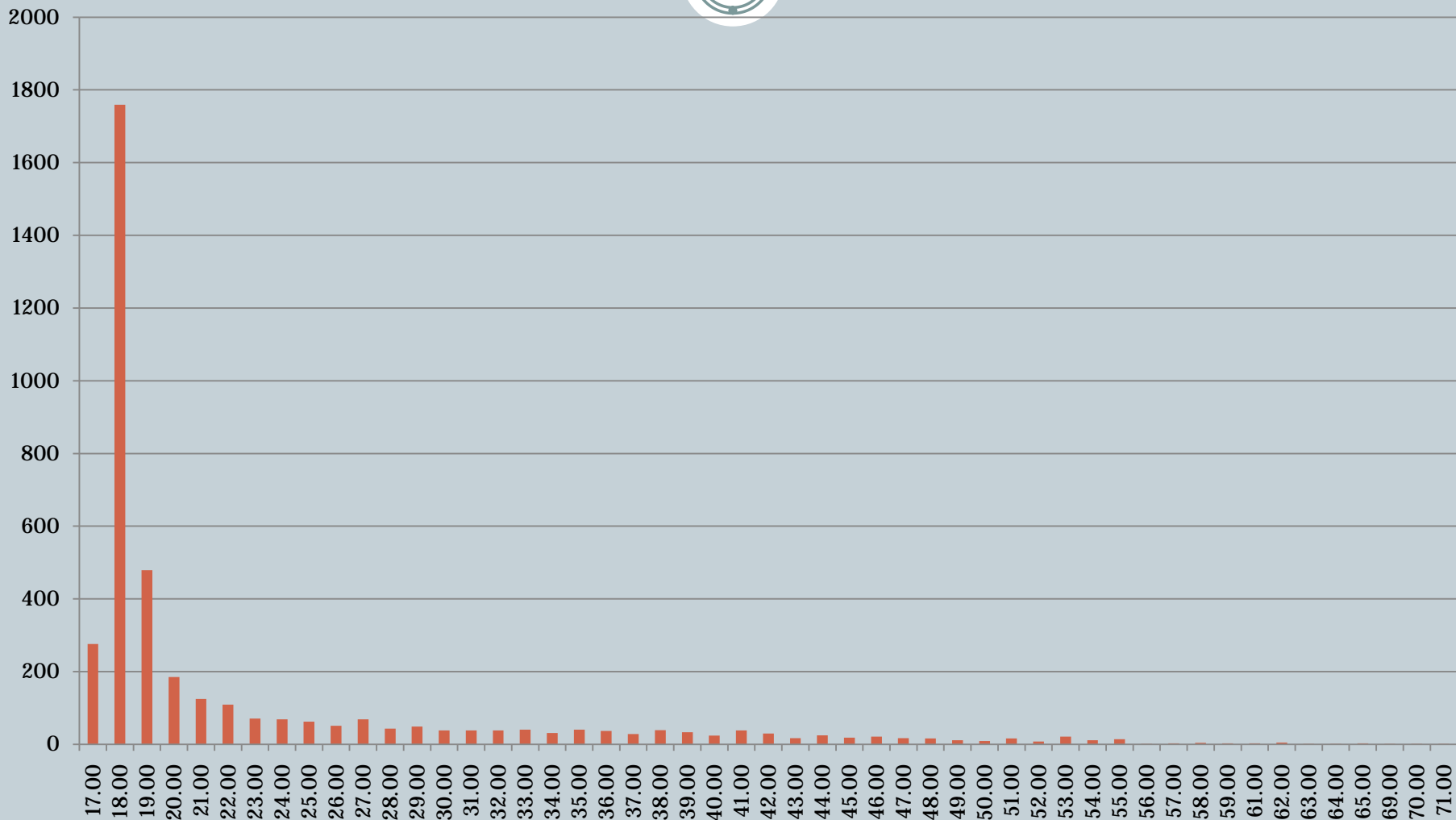
1. Demographics
2. High school history
3. 1st semester performance
4. 1st year performance
5. Extended postsecondary performance
6. Continuous enrollment

Population



- **First time students (self-reported) in Fall 2002**
- **Prior enrollments used to verify**

Age Distribution



Population



- **First time students (self-reported) in Fall 2002**
- **Prior enrollments used to verify**
- **Age < 20**
- **High school graduates**

Demographics



- **Gender**
- **Ethnicity**
 - White
 - Black
 - Latino
- **Age**
- **1st generation**
 - FG2
 - FG4

High School History



- **Placement test scores**
 - English
 - Math/Math test
 - Reading
- **Self-reported high school information**
 - English grade
 - Highest level of math
 - Grade in highest level of math
 - Time since last math class
 - Geometry
 - HS GPA

1st Semester Performance



- Units attempted
- Units earned
- GPA
- Delay
- Time of day

1st Year Performance



- **Units attempted**
- **Units earned**
- **GPA**
- **Units earned in transfer level math**
- **Units earned in transfer level English**

Extended Postsecondary Performance



- Overall GPA
- Transfer units
- Developmental education units
- Summer enrollment
- Winter enrollment
- Part-time
- Financial aid
- Withdrawals
- Repeats

Final Step



Continuous enrollment

Completer



- Tracked for 6 years
- 2 year degree or certificate
- 4 year degree
- Transfer to a 4 year school

The Analyses



Step 1: Demographics



What was entered:

- Gender
- Ethnicity
 - White
 - Black
 - Latino
- Age
- 1st generation
 - FG2
 - FG4

Step 1: Demographics



What survived:

- Gender
- Latino
- Black
- Age
- 1st generation

Step 1: Demographics



What survived:

- Gender
- Latino
- Black
- Age
- 1st generation

$R = .198$
 $R^2 = .039$

Step 2: High School History

What was entered:

- Gender
- Latino
- Black
- Age
- 1st generation

Followed by:

- Placement test scores
 - English/Math/Math test/Reading
- Self-reported high school information
 - English grade
 - Highest level of math
 - Grade in highest level of math
 - Time since last math class
 - Geometry
 - HS GPA

Step 2: High School History



What survived:

- Gender
- Black
- 1st generation
- Placement Test: Reading
- HS: Grade in English
- HS: Highest level of math
- HS: Grade in highest level of math
- HS: Geometry

Step 2: High School History



What survived:

- Gender
- Black
- 1st generation
- Placement Test: Reading
- HS: Grade in English
- HS: Highest level of math
- HS: Grade in highest level of math
- HS: Geometry

$R = .332$
 $R^2 = .110$

Step 3: 1st Semester Performance



What was entered:

- Gender
- Black
- 1st generation
- Placement Test: Reading
- HS: Grade in English
- HS: Highest level of math
- HS: Grade in highest level of math
- HS: Geometry

Followed by:

- Units Attempted 1st
- Units Earned 1st
- GPA 1st
- Delay
- Time of day

Step 3: 1st Semester Performance



What survived:

- Gender
- 1st generation
- HS: Highest level of math
- HS: Grade in highest level of math
- HS: Geometry
- Units earned 1st
- GPA 1st

Step 3: 1st Semester Performance



What survived:

- Gender
- 1st generation
- HS: Highest level of math
- HS: Grade in highest level of math
- HS: Geometry
- Units earned 1st
- GPA 1st

$R = .430$
 $R^2 = .185$

Step 4: 1st Year Performance



What was entered:

- Gender
- 1st generation
- HS: Highest level of math
- HS: Grade in highest level of math
- HS: Geometry
- Units earned 1st
- GPA 1st

Followed by:

- Units attempted year
- Units earned year
- GPA year
- Units earned in transfer level math
- Units earned in transfer level English

Step 4: 1st Year Performance



What survived:

- Gender
- 1st generation
- HS: Highest level of math
- HS: Grade in highest level of math
- HS: Geometry
- Units earned 1st
- GPA 1st
- Transfer level English units

Step 4: 1st Year Performance



What survived:

- Gender
- 1st generation
- HS: Highest level of math
- HS: Grade in highest level of math
- HS: Geometry
- Units earned 1st
- GPA 1st
- Transfer level English units

$R = .442$
 $R^2 = .195$

Step 5: Extended Postsecondary Performance



What was entered:

- Gender
- 1st generation
- HS: Highest level of math
- HS: Grade in highest level of math
- HS: Geometry
- Units earned 1st
- GPA 1st
- Transfer level English units

Followed by:

- Overall GPA
- Transfer units
- Developmental education units
- Summer enrollment
- Winter enrollment
- Part-time
- Financial aid
- Withdrawals
- Repeats

Step 5: Extended Postsecondary Performance



What survived:

- Gender
- 1st generation
- HS: Highest level of math
- HS: Grade in highest level of math
- HS: Geometry
- Units earned 1st
- Transfer level English units
- Summer enrollment

Step 5: Extended Postsecondary Performance



What survived:

- Gender
- 1st generation
- HS: Highest level of math
- HS: Grade in highest level of math
- HS: Geometry
- Units earned 1st
- Transfer level English units
- Summer enrollment

$R = .497$
 $R^2 = .247$

Step 6: Continuous Enrollment



What was entered:

- Gender
- 1st generation
- HS: Highest level of math
- HS: Grade in highest level of math
- HS: Geometry
- Units earned 1st
- Transfer level English units
- Summer enrollment

Step 6: Continuous Enrollment



What was entered:

- **Gender**
- **1st generation**
- **HS: Highest level of math**
- **HS: Grade in highest level of math**
- **HS: Geometry**
- **Units earned 1st**
- **Transfer level English units**
- **Summer enrollment**

Followed by:

- **Continuous enrollment**

Step 6: Continuous Enrollment



What survived:

- Gender
- 1st generation
- HS: Highest level of math
- HS: Grade in highest level of math
- HS: Geometry
- Units earned 1st
- Transfer level English units
- Summer enrollment
- Continuous enrollment

Step 6: Continuous Enrollment



What survived:

- Gender
- 1st generation
- HS: Highest level of math
- HS: Grade in highest level of math
- HS: Geometry
- Units earned 1st
- Transfer level English units
- Summer enrollment
- Continuous enrollment

$R = .501$
 $R^2 = .251$

What Remains



- **Demographics**
 - Sex
 - 1st generation
- **High School Performance**
 - Highest level of math
 - Grade in highest level of math
 - Geometry
- **Units Earned 1st**
- **Transfer level English units**
- **Summer enrollment**
- **Continuous enrollment**

What's NOT Here



- **Ethnicity**
- **Placement test scores**
- **Developmental education**
- **Part-time enrollment**
- **Financial aid**
- **Withdrawals**
- **Repeats**
- **20 units milestone**

Implications



- Effectiveness of placement tests needs to be examined
- Milestone research may not be applicable to local institutions
- 1st generation data needs to be utilized

Limitations/Future Research



- **Not disaggregated by student characteristics**
- **Measures could be strengthened**
- **Identify gateway courses and investigate their impact on student achievement**