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Patience Is A Virtue: The Effect Of Students' Time Preferences On Their Academic Results

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Patience is a Virtue: The Effect of Students’ Time Preferences on Their Academic Results

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Let’s do a survey 😊

• Read the information sheet
• Now do the survey

What does the survey reveal?

• Consistency?
  – Once the switch is made, it stays
  – Some of us switch early
    • On or before statement 5
    • On or before statement 10
    • Paid 7 months from now: $x for all statements
  – Some of us switch later
    • On or before statement 15
    • On or before statement 20
  – Some of us never switch
    • Paid one month from now: $54 for all statements

What does this mean?

• Switching early:
  – high discount rate
  – high rate of time preference
  – impatient
• Switching later:
  – low discount rate
  – low rate of time preference
  – patient

What does this mean for our students?

• Expect that:
  – Students with high discount rates will get lower marks
    • More impatient
    • Procrastinate
    • Attend fewer classes
  – Students with low discount rates will get higher marks
    • More patient
    • Get on with tasks
    • Attend more classes
### Let’s test this

**Data**

- Semester one and two 2011
- Economics 1 students
- Lecture 13 in Semester 1 and lecture 4 in Semester 2
- Two metropolitan campuses
- \( N = 412 \)
  - 191 completed the survey
  - 163 were consistent

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<table>
<thead>
<tr>
<th>Switch Item</th>
<th>Survey</th>
<th>Number of the statement at which a switch in the response pattern occurs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consistent</td>
<td>Derived from Survey</td>
<td>If the subject’s choices switch between “Paid one month from now” to “Paid seven months from now” at most once (1); else (0)</td>
</tr>
<tr>
<td>Discount Rate</td>
<td>Derived from Survey</td>
<td>The annual discount rate implied by the decision to switch</td>
</tr>
<tr>
<td>Parents Education</td>
<td>Survey/Student Information Database</td>
<td>Parents’ highest level of education: High School Year 12 or below (0); Bachelor Degree or above (1)</td>
</tr>
<tr>
<td>Age</td>
<td>Student Information Database</td>
<td>Age as at 3 Jun 2011</td>
</tr>
<tr>
<td>Course</td>
<td>Student Information Database</td>
<td>Enrolled course of study: Bachelor of Business (BBus) (1); Other (0)</td>
</tr>
<tr>
<td>Course Average</td>
<td>Student Information Database</td>
<td>Weighted average mark for course of study</td>
</tr>
<tr>
<td>Campus</td>
<td>Student Information Database</td>
<td>JO (1) or ML (0)</td>
</tr>
</tbody>
</table>

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**Comparison of students who completed the survey \( n = 191 \) with those who didn’t \( n = 221 \)**

**Students who completed the survey:**

- Were slightly older
  - \( F = 8.85; p = 0.0031 \)
- Had higher mark (55% cf 37%)
  - \( F = 60.40; p = 0.000 \)
- Had higher course average (60% cf 48%)
  - \( F = 42.39; p = 0.000 \)
- Attended more tutorials (on average 10 cf 6)
  - \( F = 140.75; p = 0.000 \)
- Had parents with less education (43% cf 59%)
  - \( \text{chi sq} = 8.3518; p = 0.004 \)

**Comparison of consistent surveys \( n = 163 \) with inconsistent surveys \( n = 28 \)**

**Students who completed consistent surveys:**

- Had higher final marks (58% cf 42%)
  - \( F = 18.49; p = 0.000 \)
- Had a higher course average (68% cf 48%)
  - \( F = 24.00; p = 0.000 \)
- Lived at an address with a higher socio-economic index (IRSAD) score
  - \( F = 5.85; p = 0.017 \)
- Were more likely to be studying part-time
  - \( \text{chi sq} = 3.0927; p = 0.079 \)
- Were more likely to be domestic students
  - \( \text{chi sq} = 8.3288; p = 0.004 \)
### Bivariate Results

- Females, on average, have lower discount rates, interpreted as being more patient.
- Tutorial attendance is negatively correlated with discount rates (higher attendance with lower discount rates).
- Differences in discount rates across other student characteristics are not statistically significant.

### Multivariate results

The regression results show that:
- The discount rate is positively correlated with final marks - procrastination is a virtue??
- Enrolment type influences final marks with full-time students having poorer marks on average
- Tutorial attendance influences final marks with final marks increasing with attendance

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**The Grasshopper and the Ants by Aesop**

One fine day in winter some Ants were busy drying their store of corn, which had got rather damp during a long spell of rain. Presently up came a Grasshopper and begged them to spare her a few grains, “For,” she said, “I'm simply starving.”

The Ants stopped work for a moment, though this was against their principles. “May we ask,” said they, “what you were doing with yourself all last summer? Why didn’t you collect a store of food for the winter?” “The fact is,” replied the Grasshopper, “I was so busy singing that I hadn't the time.” “If you spent the summer singing,” replied the Ants, “you can't do better than spend the winter dancing.” And they chuckled and went on with their work.