Factors Affecting the Retention of Transfer Students at Linfield College

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I. Abstract

Building on the work of Tyler (2011), this paper analyzes the factors that affect the decision by transfer students at Linfield College to return for a second year. Data was obtained for transfer students from the Department of Institutional Research at Linfield College from 2009 to 2013. We estimate the logit probabilities of retention likelihood as a function of net price, pre-enrollment engagement, curricular engagement, extra-curricular engagement, choice of major and demographic characteristics. We find that pre-enrollment engagement, curricular engagement, institutional commitment, and choice of major variables may be significant factors in the retention of transfer students at Linfield College. The estimated effects and the resulting conclusions must be interpreted cautiously due to our small sample size. However, a discussion of the results show that Linfield may be able to improve retention of transfer students through a higher level of pre-enrollment engagement, increased curricular engagement and greater departmental awareness.

II. Empirical Model and Variables (1)

\[ E(\text{RET} = 1) = (\text{FNP}, \text{AQH}, \text{FC}, \text{SC}, \text{CD}, \text{BM}, \text{NM}, \text{EM}, \text{TPS}, \text{LA}, \text{GI}, \text{RA}, \text{GEN}, \text{FE}, \text{LL}) \]

Financial Variables

Net Price (NP): Calculated as sticker price minus grant aid. Net Price is hypothesized to have a negative effect on a transfer student’s probability of retention.

Pre-Enrollment Engagement Variables

Admissions Qualifying Number (AQH): The admission qualifying number in a point system to approximate the level of interest expressed by an applicant at Linfield through the admissions process. Every interaction adds points including campus visit, talking to a counselor, etc. It is hypothesized that the admissions qualifying number has a positive affect on the probability of retention.

Curricular Engagement Variables

Full Credits (FC): The number of credits that the student registered for their full semester. It is hypothesized that a larger course load in the fall has a positive effect on the probability of retention.

Spring Credits (SC): The number of credits that the student registered for their spring semester. (See explanation above)

Courses Dropped (CD): The number of courses that a student dropped while attending Linfield. It is hypothesized that the number of courses dropped negatively affects the likelihood of a transfer student’s retention.

III. Empirical Model and Variables (2)

Choice of Major

Business Major (BUS): Variable equal to 1 if the student intended to major in business, 0 for all other majors.

Nursing Major (NUR): Variable equal to 1 if the student intended to major in nursing, 0 for all other majors.

Education Major (EDU): Variable equal to 1 if the student intended to major in education, 0 for all other majors.

It is hypothesized that a transfer student intending to major in Nursing, Nursing, or Education has a higher probability of being retained than a transfer student intending any other major, this may be due to a “vocational” or “preprofessional” orientation.

Extra-curricular Engagement Variables

Enrollment in the Term (ENR): Dummy equal to 1 if the student enrolled in a January term class at Linfield.

Participation in Linfield Athletics (ATH): Dummy equal to 1 if the student participated in NCAA Division III Athletics. Non-student Organization (NSO): Dummy equal to 1 if the student was recruited by a fraternity or sorority.

It is hypothesized that any extra-curricular engagement, which is determined to consist ties to both the college and fellow students, increase the likelihood of a transfer student being retained.

Personal Characteristics

Race (RA): Dummy variable equal to 1 if student identified as white, 0 if student identified as non-white.

Gender (GEN): Dummy variable equal to 1 if student identified as male, 0 otherwise.

In-Country Student (CS): Dummy variable equal to 1 if student is the first in his/her family to attend school beyond high school, 0 otherwise.

Linfield Legacy Student (LL): Dummy variable equal to 1 if one or more of the student’s parents attended Linfield.

The hypothesis of the effect on the likelihood of retention for race, gender, and first generation variable is theoretically indeterminate. It hypothesized that transfer students with a “Linfield legacy” is more likely to be retained than a transfer student without. This is due to familial institutional ties.

IV. Data

- Cross sectional data set of 368 transfer students over the five academic years 2009-2013.

Source

Data was compiled from Linfield admissions records by the Office of Institutional Research. (Special thanks to Jennifer Ballard.)

Challenges and Limitations

- Academic Ability
  - Academic ability was not controlled for due to insufficient transfer student data.

- Sample Size
  - Only 50 observations or more. Our sample size falls short of this standard, which complicates the interpretation of our results.

- Missing Data
  - Complication is caused by missing segments of data in certain categories further reduces our sample size to 297.

V. Empirical Results

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<tr>
<th>Model 1</th>
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<tbody>
<tr>
<td>Included Observations (after admiss)</td>
</tr>
<tr>
<td>Dependent Variable</td>
</tr>
<tr>
<td>Financial Variables</td>
</tr>
<tr>
<td>Net Price (NP)</td>
</tr>
<tr>
<td>Pre-Enrollment Engagement Variables</td>
</tr>
<tr>
<td>Admissions Qualifying Number (AQH)</td>
</tr>
<tr>
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</tr>
<tr>
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<tr>
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</tr>
<tr>
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</tr>
<tr>
<td>Linfield Legacy Student (LL)</td>
</tr>
<tr>
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<tr>
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<td>Gender (GEN)</td>
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VI. Conclusions

- Model Performance
  - Our model correctly predicts 97.34% of transfer students who were retained and 37.14% of transfer students who were not retained, for a total of 87.89% of transfer student retention decisions correctly predicted.

- Significant Results
  - A ten point increase in the admissions qualifying number, such as a visit to campus or a meeting with a counselor, results in about a 1% increase in the probability of retention.

  - A one credit increase in a transfer student’s spring course load increases that student’s likelihood of retention by about 7.8%.

  - A transfer student that “comes from a Linfield family” is 29.8% more likely to be retained than a student who does not.

  - Our model consistently and significantly estimates that transfer students who come with the intention of studying business are 44.4% less likely to be retained than a transfer student intending on any other major.

- Implications
  - Results show that Linfield may be able to improve retention of transfer students through a higher level of pre-enrollment engagement, increased curricular engagement, and greater departmental awareness.