Using Library and University Statistics to Create an Effective Funding Narrative

Brian W. Keith

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BACKGROUND

• The University of Florida (UF) is a major, public, comprehensive, land-grant, research university.
• It is one of only 17 public, land-grant universities that belong to the Association of American Universities, and is one of the largest universities in the nation, with more than 50,000 students.
BACKGROUND

• The UF Libraries form the largest information resource system in the state. The UF Libraries consist of seven libraries; six are in the system known as the George A. Smathers Libraries. These include the Health Science Center Libraries (HSCL).

• The Smathers Libraries is an active member of the Association of Research Libraries (ARL).
BACKGROUND

• In 2011, UF adopted Responsibility Centered Management (RCM) for budgeting.
• Under RCM, the colleges became Responsibility Centers (revenue generators) and the Libraries became one of the numerous Support Units (non-revenue generating units primarily providing services to Responsibility Centers). The fundamental premise of RCM is to move decisions and resulting revenues to the colleges.
BACKGROUND

- RCM, decreased UF appropriations and lost purchasing power for library materials have increased pressure (internally and externally) to assess library funding and expenditures
BACKGROUND

• In 2014, UF launched *UF Rising* – a five-year initiative to elevate the University to among the nation’s top public universities.

• A combined $950 million is aimed at hiring new midcareer and eminent professors, adding new endowed professorships, and to upgrading and adding facilities.
The QUESTION

• What should the funding be for the UF Libraries?

The Goal

• Reflecting equitable opportunities for UF faculty and students
• Reflecting UF’s aspirations to become a top public university

What is the variance from that GOAL?
INVESTIGATION

• Began by exploring the available data:

  • National Center for Education Statistics (NCES) data for university characteristics that correlate with DEMAND for library resources & services

  • ARL data for characteristics that reflect library RESOURCES relating to materials and staff
PEER ANALYSIS

• Compared UF to Three Groups of AAU Public Universities
  – Group B: 10 of Top 25 from US News (Comprehensive Universities with Law & 2 or more Health Colleges)
  – Group C: UF Identified Peers

• Used a wide variety of statistics and using several statistical processes
• Linear regression

A model of the relationship between two variables:

1. Explanatory variable
   (e.g. a university budget)

2. Dependent variable
   (e.g. a library’s budget)

MAY serve to predict a variable if the other variable is known
• **R-squared or Coefficient of Determination**
  Indicates the proportion of the change in one variable that is predictable from another

\[
0 \leq r^2 \geq 1
\]

Reprsents the percent of variation in a variable that can be explained by the relationship between the two
2008-2012 Peer Averages & UF Actual
Total Library Expenditures v. Total University Expenditures

<table>
<thead>
<tr>
<th>Group A</th>
<th>Group B</th>
<th>Group C</th>
<th>UF Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>$R^2 = 0.8637$</td>
<td>$R^2 = 0.6398$</td>
<td>$R^2 = 0.445$</td>
<td>$R^2 = 0.0258$</td>
</tr>
</tbody>
</table>
2008-2012
Total Library Expenditures v. University Tuition & Appropriations

Library Expenditures

University Income

UF Actual
Linear (2008)
Linear (2009)
Linear (2010)
Linear (2011)
Linear (2012)
PEER ANALYSIS

• Linear regression line formula

\[ Y = a + bX \]
### PEER ANALYSIS

**Application of Linear Regression Formulas to Estimate Appropriate Funding for UF Libraries**

<table>
<thead>
<tr>
<th></th>
<th>UF Tuition &amp; Appropriations</th>
<th>UF Projected</th>
<th>UF Actual</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>$855,300,000</td>
<td>$43,231,307</td>
<td>$28,573,302</td>
<td>($14,658,005)</td>
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<td>2009</td>
<td>$849,955,000</td>
<td>$43,249,625</td>
<td>$28,147,202</td>
<td>($15,102,423)</td>
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<td>2010</td>
<td>$797,569,000</td>
<td>$42,536,788</td>
<td>$27,242,279</td>
<td>($15,294,509)</td>
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<tr>
<td>2011</td>
<td>$855,234,000</td>
<td>$43,650,863</td>
<td>$29,537,452</td>
<td>($14,113,411)</td>
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<tr>
<td>2012</td>
<td>$848,376,000</td>
<td>$42,701,203</td>
<td>$28,581,160</td>
<td>($14,120,043)</td>
</tr>
</tbody>
</table>
RESULT

• Linear regression showed there exists an ongoing, positive and predictive relationship between university and library funding at these top institutions
• We have a statistically valid and communicable basis for assessing the funding for UF libraries as compared to peers
• The UF funding is atypical