Institutional Research and Enrollment Management Practices at the University of Texas System

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Office of Strategic Initiatives, The University of Texas System

February 2014
Agenda

• Overview of the UT System
• Organizational Structure, the IR Function, and Using Data
  – Campus Overview
  – UT System Office of Strategic Initiatives (OSI)
• Demonstrate the UT System Dashboard and other tools
Overview of The University of Texas System

- 15 institutions
  - 9 academic institutions
  - 6 health institutions
- 213,000 students enrolled (Fall 2013)
  - 76% undergraduate
- Conferred 51,000 degrees (AY 2012-2013)
  - 33,000 baccalaureates
  - 1,800 Ph.D.s
  - 1,800 Professionals, including 1,400 medical professionals
- Annual operating budget of $14.6 billion (FY 2014)
- More than $2.5 billion in research funding (FY 2013)
UT System: A Decentralized Model

• Like the overall UT System structure, the institutional research (IR) function is decentralized
• UT institutions generate and own the data, using it to drive planning and decision making for their own campus
• UT System Administration aggregates that data and conducts and presents research that supports larger, system-wide strategic priorities
At the Campus Level

Organizational Structure, IR Function & Using Data
About UT San Antonio

• 28,623 students enrolled (Fall 2013)
  – 86% undergraduate
• Conferred 5,856 degrees (AY 2012-2013)
  – 4,461 baccalaureates
  – 1,296 master’s
  – 99 doctorates
• Annual operating budget of $513.8 million (FY 2014)
• $51 million in research expenditures (FY 2013)
UT San Antonio Example: Organizational Structure

President

Provost and VP for Academic Affairs

VP for Student Affairs

Institutional Effectiveness

Admissions

Registrar

Student Financial Aid

Institutional Research

- Evaluations and Surveys
- Reporting
- Analysis and Certification

Enrollment Management
UT San Antonio Example: Enrollment Management and the IR Function

- IR reports to the Provost
- Admissions, Registrar, and Financial Aid report to the VP for Student Affairs
- Enrollment Management team that includes representatives from all the Colleges, Graduate School, Admissions, Financial Aid, IR, etc.
- UTSA is in the midst of significant institutional changes, one being a more sophisticated look at enrollment management, in which IR will have a key role
UT San Antonio Example: Role of Institutional Research

- Provide interested persons with reliable and consistent information to inform decision making
- Serve as consultants in program evaluation to assist departments in designing informative measures for program success
UT San Antonio Example: Using Data to Inform Policy & Practice

Using data to make evidence-based decisions about academic advising

• Had previously advised first-year students to enroll in 12 semester credit hours (SCH)
• IR analyzed the data and found that students who enroll in at least 15 SCH earn higher GPAs and complete a higher percentage of the hours attempted, regardless of high school rank
• This has led to a change in advising
About UT Austin

• ~52,059 students enrolled (Fall 2013)
  – 77% undergraduate
• Conferred 13,616 degrees (AY 2012-2013)
  – 9,207 baccalaureates
  – 3,901 graduate (master’s: 3,018; doctoral-research: 883)
  – 508 professionals (law, pharmacy, audiology)
• Annual operating budget of $2.5 billion (FY 2014)
• $595 million in research expenditures (FY 2013)
UT Austin Example: Organizational Structure

President

EVP and Provost

VP for Student Affairs

Institutional Research

Admissions

Registrar

Student Financial Services

Enrollment Management
UT Austin Example  
Using Data to Inform Policy & Practice

- In 2011, UT Austin President calls for “Increase four-year graduation rates from 51% to 70% in the next five years”
  - Starting with the 2012 First Time in College Cohort
- Strategy: Construct a longitudinal data set to conduct predictive analytics to improve retention and graduation of the entering 2012 cohort and beyond
UT Austin Example
Using Data to Inform Policy & Practice

• Goal: to create a tool (dashboard) that will allow decision makers to use scholarships/grants/loans strategically to increase the likelihood that academically competitive students would attend UT Austin
  – Increase the likelihood of attendance
  – Increase 1st year retention
  – Increase 4-year graduation rates
UT Austin Example
Using Data to Inform Policy & Practice

• Outcomes:
  – Reshaped the profile of entering cohort (more academically competitive students)
  – Understood better why students were not attending the institution (using Student Tracker data)
  – Provided personalized admissions messages to students
  – Created academic support programs for students needing them

• Policy changes:
  – Created new ways to use discretionary money
Enrollment Management & Organizational Structure: 2 Models

• UT San Antonio: The Student Affairs Model
  – Pros: student experts; pull in all aspects of student life
  – Cons: weaker tie to IR offices/function; can be an inability to influence policy

• UT Austin: The Provost/Academic Affairs Model
  – Pros: lends credibility to policy efforts; stronger tie to IR office/function; more streamlined
  – Cons: separate from student affairs; disconnect from student expectations and needs
At the System Level

Organizational Structure, IR Function & Using Data
UT System Office of Strategic Initiatives
The Big Picture: How System Is Different from Campus

• Collects data from campuses
• Aggregates that data
• Looks for patterns and connections that are relevant across multiple campuses
• Leverages information for strategic purposes
UT System Office of Strategic Initiatives
Organizational Structure
UT System Office of Strategic Initiatives
Roles of Institutional Research

• Generates research and analysis to support decision making, policy analysis, and strategic planning
• Develops and maintains data tools
• Provides current data, trends over time, and benchmarking capabilities across a variety of metrics in support of decision and policy making via Web-based business intelligence system
• Maintains the Explore More Visualization online tool, providing analytics for measuring the productivity, efficiency, and impact of the UT System
• Regularly adds data and metrics to tools to increase their power and utility
• Continually works to develop new mechanisms to increase transparency and to support informed decision making
UT System Office of Strategic Initiatives
IR Function in Assessing Progress Towards Goals

Framework for Advancing Excellence

1. Undergraduate Student Access & Success
2. Faculty/Administrators/Staff Excellence
3. Research
4. Productivity and Efficiency
5. Enhance Philanthropic Success
6. Ph.D. Programs
7. The Health of Texas
8. Expanding Educational and Health Opportunities in South Texas
UT System Office of Strategic Initiatives
Using Data: Best Practices in Benchmarking

• Benchmarking
  – Benchmarking is the process where policymakers compare the performance, practices, and policies of institutions or groups of institutions to gain insight

• Why is Benchmarking Important?
  – So that policymakers can more accurately answer questions such as, “What are the characteristics that allow for superior institutional performance?” “How can we improve institutional performance?” “All else being equal – why do some institutions outperform others?”
UT System Office of Strategic Initiatives
Using Data: Peer Selection

• Using Data to Select Peers
  – Baseline Peers – institutions statistically similar to you now
  – Aspirational Peers – institutions that are now what you plan to be in the long-term (10 to 15 years)

• Goal-Setting
  – Top quintile of baseline performers as mid-range goals (2020)
  – Long-term goals set at bottom quintile of aspirational peers (2025)

• Benchmarking is critical to evaluating institutional performance
• Benchmark as starting point (you must know where you started so you can evaluate how far you have come)
• Benchmark as context (performance relative to what)
Using Data: Goal-Setting

UT Austin: 4-Year Graduation Rates Performance Targets
for students graduating in 2015, 2020, 2025 (from the same institution)

- Peer Top Quintile, 73%
- Peer Average, 57%
- Peer Bottom Quintile, 42%
- Austin, 44.8%

- Most recent actual data
- ◆ 2015 goal
- × 2020 goal
Using Data: Benchmarks

Putting Metrics in Context: The Importance of Peer Comparisons

Peer Comparison: The Old Way
- Manual Graphs
- Single Metric
Visualizing Benchmarks
Data Delivery: Online Tools

- BI/Information Delivery Portal [data.utsystem.edu](http://data.utsystem.edu)
  - Dashboards
  - Web reports
  - Online, publicly accessible

- Visual Analytics [exploredata.utsystem.edu](http://exploredata.utsystem.edu)
  - Data visualizations
  - Analytics
  - Mobile BI, publicly accessible
  - Online, publicly accessible
Using Data: Making Connections Outside the University

- Texas Workforce Commission
  - Employment outcomes (state; average salary; and, within Texas, industry)
- National Student Clearinghouse
  - Fill in the gaps after graduation, particularly for students who attend graduate school out of state
  - Where do undergraduates go if they don’t go to UT?
A New Tool for Students

• Follows students over time (currently 5 years)
• Provides earnings in the context of average loan debt, by major
• Offers ability to compare earnings and debt by various majors side-by-side
• Goes beyond the median to show various percentiles
• Indicates the percent of students who continue their education beyond the BA
• Includes integrated view of labor market demand by occupation (BLS) – state, regional, and national
TOP FIVE SALARIES FOR UT SYSTEM GRADUATES WITH BACHELOR’S DEGREES IN STEM FIELD OF STUDY

- Petroleum Engineering: $110,713
- Geological and Earth Sciences: $101,803
- Physician Assistant: $94,599
- Chemical Engineering: $77,000
- Geophysics and Seismology: $71,776

Header Goes Here

It can be hard to predict exactly how the choices you make today can impact your future. The UT System's new data tool seekUT can help you. It can't predict the future. But it can tell you what the loan amounts and earnings of past UT graduates have been and help you make the decisions about your education that are right for you and your family.
**How much did UT students graduating with a bachelor’s degree earn in Texas? How much did they owe in student loans?**

1. I am interested in:
   - Business, Management, Marketing, And Related Support Services

2. I am interested in attending:
   - UT Arlington, UT Dallas, UT El Paso, UT San Antonio
   - UT Austin
   - UT Brownsville, UT Pan American, UT Permian Basin, UT Tyler

3. In my area of interest, I might want to major in:
   - Accounting
   - Actuarial Science
   - Banking and Financial Support Services
   - Business Administration and Management, General
   - Business/Commerce, General
   - Business/Managerial Economics
   - Entrepreneurship/Entrepreneurial Studies
   - Finance, General
   - Human Resources Management/Personnel Administration, General
   - International Business/Trade/Commerce
   - Management Information Systems, General
   - Management Science
   - Marketing/Marketing Management, General
   - Operations Management and Supervision
   - Real Estate
   - Sales, Distribution, and Marketing Firms (General)

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### Program Description, Median 1-Year Earnings, Median 5-Year Earnings and Average Student Loan Debt

<table>
<thead>
<tr>
<th>Degree Major</th>
<th>Description</th>
<th>1st-Year Median Earnings</th>
<th>5th-Year Median Earnings</th>
<th>Average Student Loan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting</td>
<td>A program that prepares individuals to practice the profession of accounting and to perform related business functions. Includes instruction in accounting principles and theory, financial accounting, managerial accounting, cost accounting, budget control, tax accounting, legal aspects of accounting, auditing, reporting procedures, statement analysis, planning and consulting, business information systems, accounting research methods, professional standards and ethics, and applications to specific for-profit, public, and non-profit organizations.</td>
<td>$44,569</td>
<td>$58,844</td>
<td>$20,065</td>
</tr>
<tr>
<td>Business Administration and</td>
<td>A program that generally prepares individuals to plan, organize, direct, and control the functions and processes of a firm or organization.</td>
<td>$39,223</td>
<td>$50,089</td>
<td>$18,623</td>
</tr>
</tbody>
</table>
What Does the Student Do?

• Step 1: Selects a broad field → Business

• Step 2: Selects institution → UT Arlington, UT Dallas, UT El Paso, UT San Antonio

• Step 3: Selects specific degree majors to narrow the focus (optional) →
  
  Accounting
  Business Administration
  Marketing
What Does the Report Show?

Chart

- 1st-year median earnings (blue)
- 5th-year median earnings (green)
- Average student loan debt (red)

Table provides another view of the data and adds helpful descriptions.
How much did the earnings of UT graduates in Texas vary within a major?

1. I am interested in:
   Business, Management, Marketing, and Related Support Services

2. I am interested in attending:
   - UT Arlington, UT Dallas, UT El Paso, UT San Antonio
   - UT Austin
   - UT Brownsville, UT Pan American, UT Permian Basin, UT Tyler

3. In my area of interest, I might want to major in:
   - Accounting
   - Actuarial Science
   - Banking and Financial Support Services
   - Business Administration and Management, General
   - Business/Commerce, General
   - Business/Management, General
   - Entrepreneurship/Entrepreneurial Studies
   - Finance, General
   - Human Resources Management/Personnel Administration, General
   - International Business/Trade/Commerce
   - Management Information Systems, General
   - Management Science
   - Marketing/Marketing Management, General
   - Operations Management and Supervision
   - Real Estate
   - Sales, Distribution, and Marketing Operations, General
   - Tourism and Travel Services Management

What do the percentiles mean?

10th percentile - those had earnings at the lower end; 10% had earnings less than this; 90% had higher earnings

Median - this is the 50th percentile; 50% had earnings less than this; 50% had higher earnings

90th percentile - those had earnings at the higher end; 90% had earnings less than this; only 10% had higher earnings
Which jobs in Texas will have the most growth? What do people working in those jobs in Texas earn?

1. I am interested in
   - Business and Financial Operations Occupations

2. I would like to find out more about
   - (missing value)
   - All Business and Financial Operations Occupations
   - Business Operations
   - Financial Specialists

Filter on Education Requirements
   - Typical Education Requirements

Occupations Outlook for Texas (Statewide)

<table>
<thead>
<tr>
<th>Occupation Title</th>
<th>TX Median Annual Wage</th>
<th>TX Jobs 2010</th>
<th>TX Jobs 2020</th>
<th>Texas Job Growth</th>
<th>National Job Growth</th>
<th>Typical Education Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accountants and Auditors</td>
<td>$63,180</td>
<td>99,480</td>
<td>110,950</td>
<td>22.0%</td>
<td>15.7%</td>
<td>Bachelor's degree</td>
</tr>
<tr>
<td>Appraisers and Assessors of Real Estate</td>
<td>$57,650</td>
<td>6,330</td>
<td>7,430</td>
<td>16.3%</td>
<td>7.4%</td>
<td>High school diploma or equivalent</td>
</tr>
<tr>
<td>Budget Analysts</td>
<td>$64,930</td>
<td>4,120</td>
<td>5,680</td>
<td>33.3%</td>
<td>10.4%</td>
<td>Bachelor's degree</td>
</tr>
<tr>
<td>Credit Analysts</td>
<td>$59,050</td>
<td>4,770</td>
<td>6,190</td>
<td>29.8%</td>
<td>19.7%</td>
<td>Bachelor's degree</td>
</tr>
<tr>
<td>Credit Counselors</td>
<td>$38,300</td>
<td>4,060</td>
<td>5,600</td>
<td>34.4%</td>
<td>20.3%</td>
<td>Bachelor's degree</td>
</tr>
<tr>
<td>Financial Analysts</td>
<td>$47,070</td>
<td>4,060</td>
<td>5,600</td>
<td>33.3%</td>
<td>20.3%</td>
<td>Bachelor's degree</td>
</tr>
</tbody>
</table>
Which Texas regions will see the most job growth by occupation?

I'm interested in this region of Texas

- Dallas

I'm interested in

- Business and Financial Operations Occupations

I'd like to find out more about

- Accounting and Auditors
- Appraisers and Assessors of Real Estate
- Budget Analysts
- Credit Analysts
- Credit Counselors
- Financial Analysts
- Financial Examiners
- Financial Specialists, All Other
- Insurance Underwriters, All Other
- Loan Officers
- Personal Financial Advisors
- Tax Examiners and Collectors

Filter on Education Requirements

- Type of Education Required

Occupation Outlook in Texas Regions

<table>
<thead>
<tr>
<th>Occupation Title</th>
<th>First Annual Job Openings</th>
<th>Jobs in 2010</th>
<th>Jobs in 2020</th>
<th>Job Growth</th>
<th>Typical Education Required</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accountants and Auditors</td>
<td>725</td>
<td>18,900</td>
<td>20,400</td>
<td>23.2%</td>
<td>Bachelor's degree</td>
<td>Dallas</td>
</tr>
<tr>
<td>Appraisers and Assessors of Real Estate</td>
<td>45</td>
<td>1,180</td>
<td>1,370</td>
<td>15.1%</td>
<td>High school diploma or equivalent</td>
<td>Dallas</td>
</tr>
<tr>
<td>Budget Analysts</td>
<td>20</td>
<td>510</td>
<td>610</td>
<td>19.8%</td>
<td>Bachelor's degree</td>
<td>Dallas</td>
</tr>
<tr>
<td>Credit Analysts</td>
<td>55</td>
<td>1,050</td>
<td>1,380</td>
<td>31.4%</td>
<td>Bachelor's degree</td>
<td>Dallas</td>
</tr>
<tr>
<td>Credit Counselors</td>
<td>40</td>
<td>790</td>
<td>970</td>
<td>22.8%</td>
<td>Bachelor's degree</td>
<td>Dallas</td>
</tr>
<tr>
<td>Financial Analysts</td>
<td>10</td>
<td>220</td>
<td>270</td>
<td>22.7%</td>
<td>Bachelor's degree</td>
<td>Dallas</td>
</tr>
<tr>
<td>Financial Examiners</td>
<td>45</td>
<td>60</td>
<td>69</td>
<td>15.0%</td>
<td>Bachelor's degree</td>
<td>Dallas</td>
</tr>
<tr>
<td>Financial Specialists, All Other</td>
<td>85</td>
<td>130</td>
<td>160</td>
<td>23.1%</td>
<td>Bachelor's degree</td>
<td>Dallas</td>
</tr>
<tr>
<td>Insurance Underwriters, All Other</td>
<td>29</td>
<td>40</td>
<td>45</td>
<td>17.9%</td>
<td>Bachelor's degree</td>
<td>Dallas</td>
</tr>
<tr>
<td>Loan Officers</td>
<td>135</td>
<td>210</td>
<td>260</td>
<td>26.2%</td>
<td>Bachelor's degree</td>
<td>Dallas</td>
</tr>
<tr>
<td>Personal Financial Advisors</td>
<td>40</td>
<td>55</td>
<td>60</td>
<td>12.5%</td>
<td>Bachelor's degree</td>
<td>Dallas</td>
</tr>
<tr>
<td>Tax Examiners and Collectors</td>
<td>55</td>
<td>55</td>
<td>55</td>
<td>0.0%</td>
<td>Bachelor's degree</td>
<td>Dallas</td>
</tr>
</tbody>
</table>
What do people earn in other states?

Annual Median Wage: State vs National

Occupational Outlook - State vs National

<table>
<thead>
<tr>
<th>Occupation Category</th>
<th>Occupation Title</th>
<th>Florida</th>
<th>National</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Operations</td>
<td>Agents and Business Managers of Artists, Performers, and Athletes</td>
<td>$21,540</td>
<td>$33,760</td>
</tr>
<tr>
<td></td>
<td>Buyers and Purchasing Agents, Farm Products</td>
<td>$35,540</td>
<td>$46,670</td>
</tr>
<tr>
<td></td>
<td>Claims Adjusters, Examiners, and Investigators</td>
<td>$35,060</td>
<td>$54,510</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Occupation Category</th>
<th>Occupation Title</th>
<th>Florida</th>
<th>National</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Employment in the Occupation in the State</td>
<td>1,019</td>
<td>1,53</td>
</tr>
<tr>
<td></td>
<td>Jobs In State vs Out of State</td>
<td>1.53</td>
<td>14.9%</td>
</tr>
<tr>
<td></td>
<td>National Median</td>
<td>$33,130</td>
<td>$54,220</td>
</tr>
<tr>
<td></td>
<td>National Job Growth</td>
<td>14.9%</td>
<td>5.5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Occupation Category</th>
<th>Occupation Title</th>
<th>Florida</th>
<th>National</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Employment in the Occupation in the State</td>
<td>300</td>
<td>0.52</td>
</tr>
<tr>
<td></td>
<td>Jobs In State vs Out of State</td>
<td>0.52</td>
<td>5.5%</td>
</tr>
<tr>
<td></td>
<td>National Median</td>
<td>$48,090</td>
<td>$54,220</td>
</tr>
<tr>
<td></td>
<td>National Job Growth</td>
<td>5.5%</td>
<td>5.5%</td>
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</tbody>
</table>
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Explore More Data Visualizations exploredata.utsystem.edu
Follow us on Twitter @UTFactsOnline
OSI website at www.utsystem.edu/offices/strategic-initiatives
Using Data: Best Practices

• Be Data Smart
  – Data is just data
  – Research and analysis transform the data into information
  – Visualization and presentation make that information consumable

• Beware Data Marketing
  – Data should tell a story, but only in the sense that the visualizations presented should accurately reflect underlying patterns
  – Not all data consumers are data savvy
  – Use good data practices and be consistent
Cultivating UT’s Data Culture: Lessons Learned

• Start small
• Change is hard. Expect resistance
• Demonstrate success and value and build on that
• Give them what they want – but show them what’s possible
• Make the hard sell
  – And then do it again
  – And again
Thank You

Productivity Dashboard data.utsystem.edu
Explore More Data Visualizations exploredata.utsystem.edu
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OSI website at www.utsystem.edu/offices/strategic-initiatives