

# General Structure/Architecture of State Level Higher Education Funding Models

Data for Informed Decisions: Who is in the Driver's Seat?

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### Session Overview

- Introduction of Panelists
- Funding Model Background and Concepts
- Review of General Types of Models
- Uses and Limitations of Each type
- Role of Institutional Research
- Questions and Answers



## Why Does IR Care?

- What do Funding Models Have to do with IR?
  - Models are Typically Data Intensive
  - Likelihood of IR Involvement in Analytical Support
  - Growing Trend in Accountability and Performance Measurements



- Major Components of State Level Funding Models:
  - Multipurpose Component
    - Fund Core Mission and Direct Support Functions
    - Examples:
      - Incremental
      - All-Inclusive
      - Functional
      - Peer Based
  - Single-purpose Component:
    - Performance Funding,
    - Initiative Funding
    - Special Program Funding
  - Most States Have Both



(continued)

#### Figure 1

#### **Funding Model Architecture**

Institutional Resource Requirements

#### **Core Component**

"Funds Recurring Core Mission and Support programs" (i.e. Education and General Activities

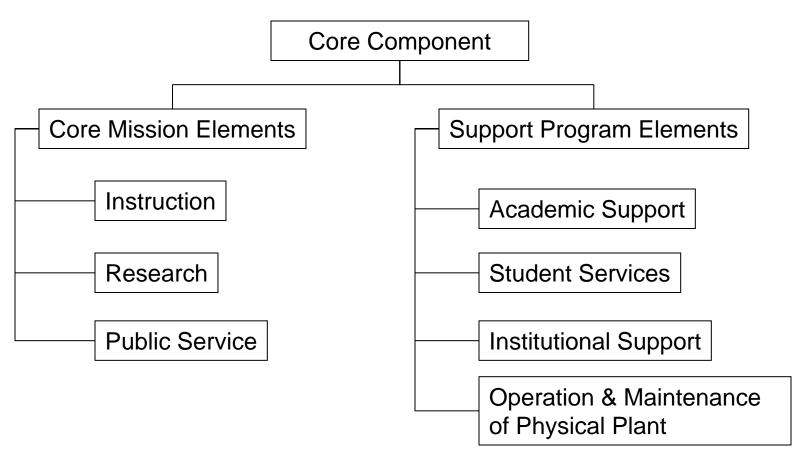
## Special Purpose Component

"Funds Performance, Incentive Based Initiatives, and Unique Program Offerings



(continued)

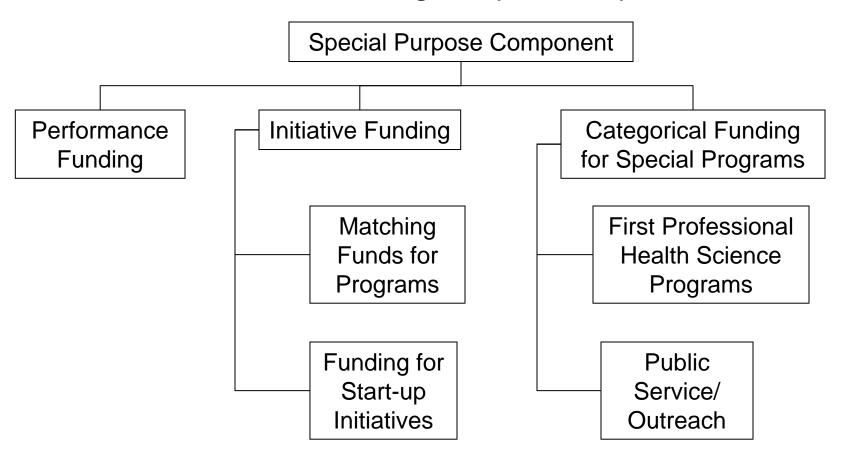
Figure 1 (Continued)





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Figure 1 (Continued)





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- The Missouri Experience
  - Functional Model Early 1970's to Mid-1980's
  - Modified Functional Model Mid-1980's to 2000
  - Funding For Results (FFR) 1990's
  - Mission Enhancement 1990's
  - Incremental 2000's On
  - What Next?



## Four Approaches to Allocating Funds

- Incremental
- All-Inclusive
- Functional
- Peer Based



## All-Inclusive Funding Model

- Goal fund core mission and support functions
  - Only State Support
  - Single Formula
- Student Count as a Base Factor:
  - Headcount
  - FTE or SCH
  - Weighted FTE Weighted (by Level and/or Discipline)
- Excludes:
  - Special Purpose Components, e.g. Dentistry, Medicine, COOP/Extension
  - Performance and Initiative Funding



## All-Inclusive Funding Model

(continued)

- Model Stabilization
  - Buffering: insulate appropriations from sudden enrollment shifts
  - Threshold: Allows Appropriations to Increase or Decrease by a Maximum Amount
  - Corridor: Use of a set Percentage Range in Which Appropriations Can Change.



### All-Inclusive Funding Model

(continued)

### Advantages:

- Vertical and Horizontal Equity
- Transparent and Easy to Understand
- Enrollment Sensitive
- Fairly Valid and Reliable Data
- Can be made to be Relatively Stable
- Can Help Limit the Role of Politics

### Disadvantages:

- Unresponsive to Internal and External Changes
- Fails to Address Issue of Adequacy
- Does Not Address Research and Public Service
- Limited linkage to State-wide Goals



# Functional Funding Model by Expenditure Classification

- Structured According to Functional Expenditure Categories (NACUBO)
- Use of Program Classification Structure (PCS)
  - Instruction
  - Research
  - Public Service
  - Academic Support
  - Institutional Support
  - Operation and Maintenance of Physical Plant
  - Not Included:
    - Scholarships/Fellowships
    - Auxiliary enterprises
    - Hospitals
    - Mandatory Transfers



## Functional Funding Model

(continued)

#### Calculations

- Rate per Base factor
- Percentage of Base Factor
- Base Factor-Position with Salary rates

#### Base Factors:

- Student headcount
- Full-time Equivalent (FTE)
- Student Credit Hour
- Number of Faculty and/or Staff Positions
- Square Footage or acreage



# Functional Funding Model by Expenditure Classification

#### Instruction

- Examples:
  - » Rate per student/faculty ratios by level and discipline
  - » Rate times a weighted SCH or FTE

#### Research

- Examples:
  - » Percent of External Sponsored Research
  - » Percent of Instruction and Academic Support

#### Public Service

- Examples:
  - » Percent of Instruction and Academic Support
  - » Base plus Percent of Instruction

#### Academic Support

- Examples:
  - » Percent of Instruction
  - » Base Plus per SCH Computation



### Functional Funding Model

(continued)

- Student Services
  - Examples:
    - » Percent of Instruction
    - » Base Plus per SCH Computation
- Institutional Support
  - Examples:
    - » Base Plus Percent of E&G (less institutional support)
    - » Percent of E&G (less institutional support)
- Operation and Maintenance of Physical Plant
  - Examples:
    - » Flat Rate per Square Foot
    - » Differentiated Rates by Category of Facility



# Economies of Scale and Scope

#### Institutional Differentiation

- Horizontal and Vertical Equity
- Economies of Scale and Scope

#### Relative Institutional Sizes May Cause Variations in Per Unit Costs

- Carnegie Foundation Thresholds
  - 1,000 to 1,300 FTE for Comprehensive Institutions
  - 5,000 to 5,500 FTE for Research Institutions
- Most Pronounced in Institutional Support, Student Services, and Physical Plant

#### Responses

- Fixed Cost Factors (i.e. Minimum Guaranteed Funding)
- Differentiated Funds for Complex Institutions



## Functional Funding Model

(Continued)

- Advantages
  - Comprehensive in Design
  - Horizontal and Vertical Equity
  - Flexibility to Control Support Functions
- Disadvantages
  - Complexities
  - Data Intensive
  - Data Validity and Reliability
  - Leveling of Institutional Mission



## Peer-Based Funding Model

- 8 States use some form of the Peer-based Model
  - Examples: Kentucky, Oklahoma, West
     Virginia, South Carolina
- Tend to be Linked to Explicit Plans for Improvement



## Peer-Based Funding Model

(Continued)

- Use of Comparative Benchmarks
  - For Example,015 cm/l3f



## Peer-Based Funding Model

(Continued)

- Peer Selection Methods
  - Cluster Analysis
  - Hybrid Approach
  - John Minter Process
  - Panel Review



### Peer-Based Model

(Continued)

### Advantages

- Transparency
- Ease of Understanding
- Highlight the Levels of State Support for Higher Education
- Can Directly Address Funding Gaps

### Disadvantages

- Peer Selection Process and Politics: Athletic
   Conference, Competitors, Aspirations, Similarity
- Hard-to-Find Peers



### Role of Institutional Research

- Data Requirements to Support Funding Models
  - All-Inclusive Model
    - Student Credit Hours (SCH) or Full-time Equivalency (FTE)



## Role of Institutional Research

(continued)

- Data Requirements to Support Funding Models
  - Functional Model
    - Discipline Weighting
    - Instructional or Student Level Weighting
    - E&G Expenditures by Classification of Instructional Program Structure (CIP)
    - Student/Faculty Headcounts
    - Plant Square Feet and/or Replacement Value



## Role of Institutional Research

(continued)

- Data Requirements to Support Funding Models
  - Peer Based Model
    - Determination of Peers Perils of Peer Selections
    - IPEDS Peer Analysis System
    - Estimation of Peer Funding Gaps Per FTE



# Level and Discipline Weightings

- National Study of Instructional Costs and Productivity ("Delaware Study")
- Methodology
- Use of Clusters for Greater Simplification



## Level Weightings Example: Texas 2008-2009

http://www.thecb.state.tx.us/reports/PDF/1419.PDF

#### **Formulas**

Discipline	Lower Division	Upper Division	Masters	Doctoral	1st Prof
Liberal Arts	1.00	1.77	4.01	9.94	-
Fine Arts	1.50	2.51	5.65	9.78	-
Pharmacy	1.75	3.85	14.90	22.27	5.13
Engineering	2.45	3.51	7.39	17.05	-

#### Formula \* Weight (\$59.02)

Discipline	Lower Division	Upper Division	Masters	Doctoral	1st Prof
Liberal Arts	\$59.02	\$104.47	\$236.67	\$586.66	-
Fine Arts	\$88.53	\$148.14	\$333.46	\$577.22	-
Pharmacy	\$103.29	\$227.23	\$879.40	\$1,314.38	\$302.77
Engineering	\$144.60	\$207.16	\$436.16	\$1,006.29	-



### What Should IR Do?

- Funding Models And IR?
  - Many Models are Data Driven
  - Analytical Support
  - Growing Trend in Accountability and Performance Measurements



# Questions and Further Discussions



### Thank You for Your Time



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