



Follow the Money: How the State Allocation Works

September 13, 2009

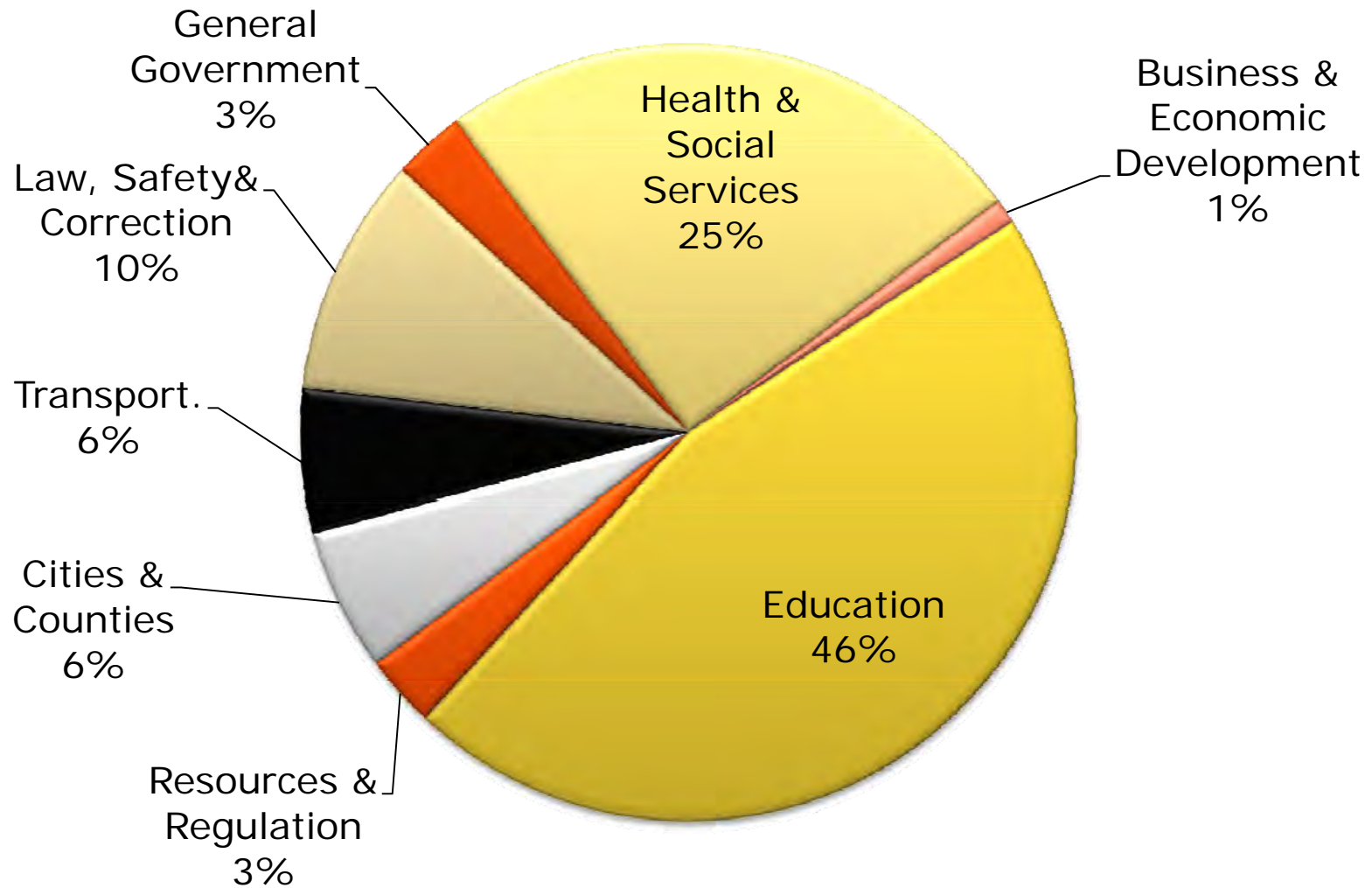


Formula

$$\begin{aligned} &(((.01 * instr) + (.125 * as) + ((ug / total \text{ fac units}) * instr \\ & * .20) + (is * .10) + (GSF * RPSF(5.14)) + (port \text{ bldgs} * pbr \\ & (2.57) + (oldsf * oldsfr(1.71) + ar + 3.11 * sqft = \text{utilities} + \\ & asb + infl + (.10 * quip \text{ inv}) + ps + salary \text{ infl} * total \text{ faculty} \\ & \text{units} + clerical(.25 * basic \text{ instr})) * (infl)) * .60) = \text{basic} \\ & \text{request} + \text{perf score} * .0545 * \text{basic request} + \text{access \&} \\ & \text{diversity} + \text{legislative initiatives} = \mathbf{FINAL \text{ NEED}} \end{aligned}$$



Where State Tax Dollars Go (all state funds)



FY 2010 Recommended Budget



Fund Types

Fund
General Fund
Transportation
Debt Service
Capital Outlay
Facilities Revolving
Cities and Counties (SST)

- General Fund**
- General Government
- Education
- Health & Social Services
- Law, Safety & Correction
- Resources & Regulation
- Business & Econ. Dev.



Education Funding

General Fund
General Government
Education
Health & Social Services
Law, Safety & Correction
Resources & Regulation
Business & Econ. Dev.

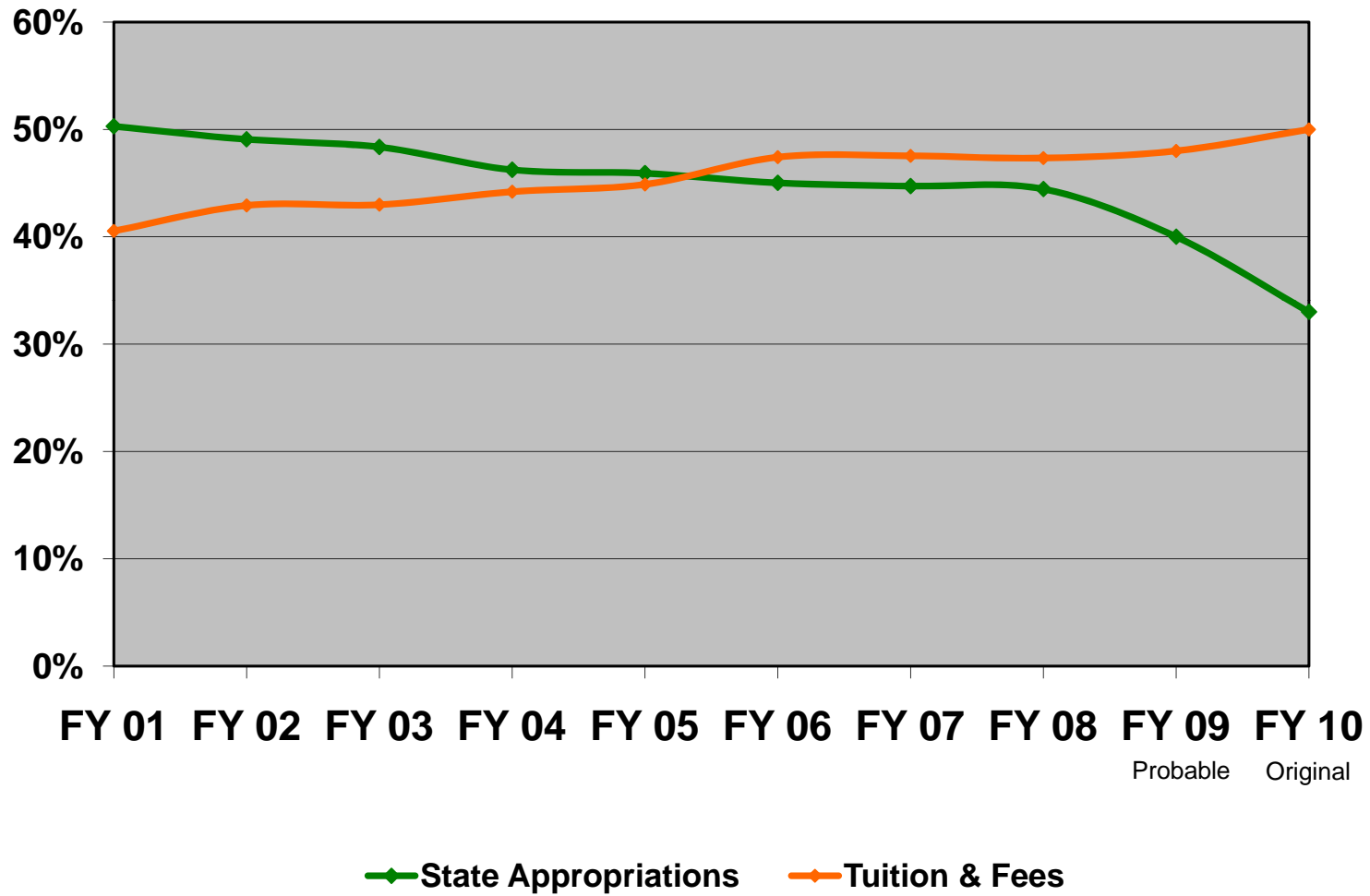
Education	
Lottery Programs	311M
K-12	3.8B
Higher Education	1.1B
TOTAL	5.2B

Facts...

- TN is served by 9 Universities, 13 Community Colleges, and 26 Technology Centers
- State support for Higher Education in TN is \$1.1 billion for FY 2010. This amount was \$1.2 billion in FY 2005
- K-12 state support is \$3.8 billion in FY 2010.
- TN ranks 40th in state appropriations to Higher Education per capita (*Grapevine, 2009*).



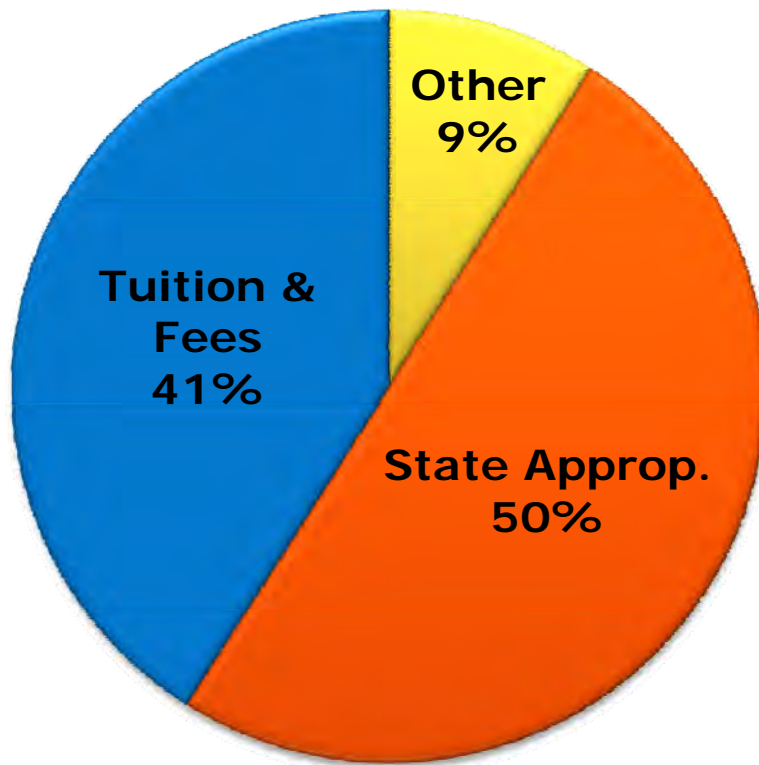
Tuition and State Appropriations As Percent of Total Revenues UTK Unrestricted E&G



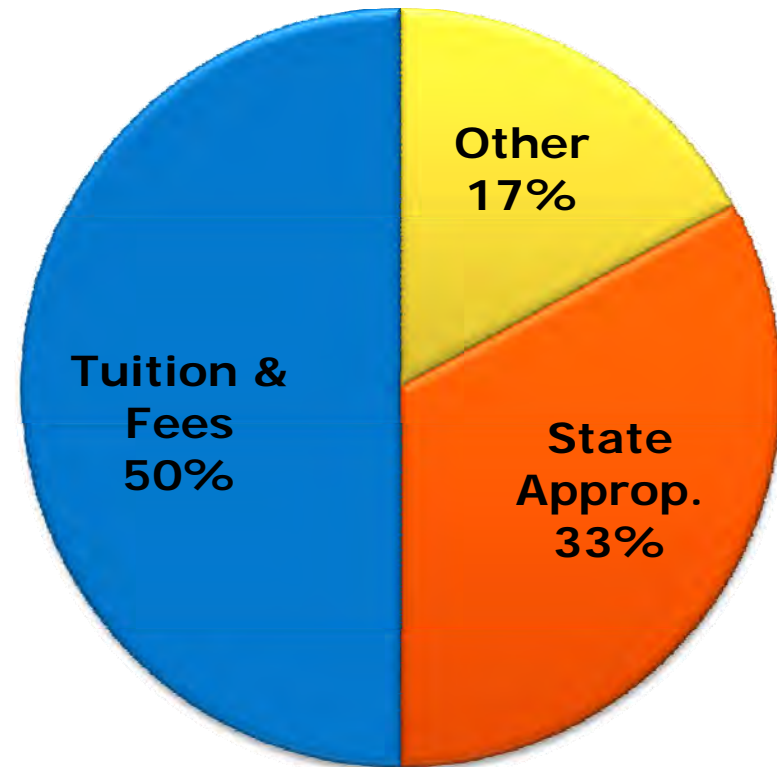


Unrestricted Revenues

FY 2001

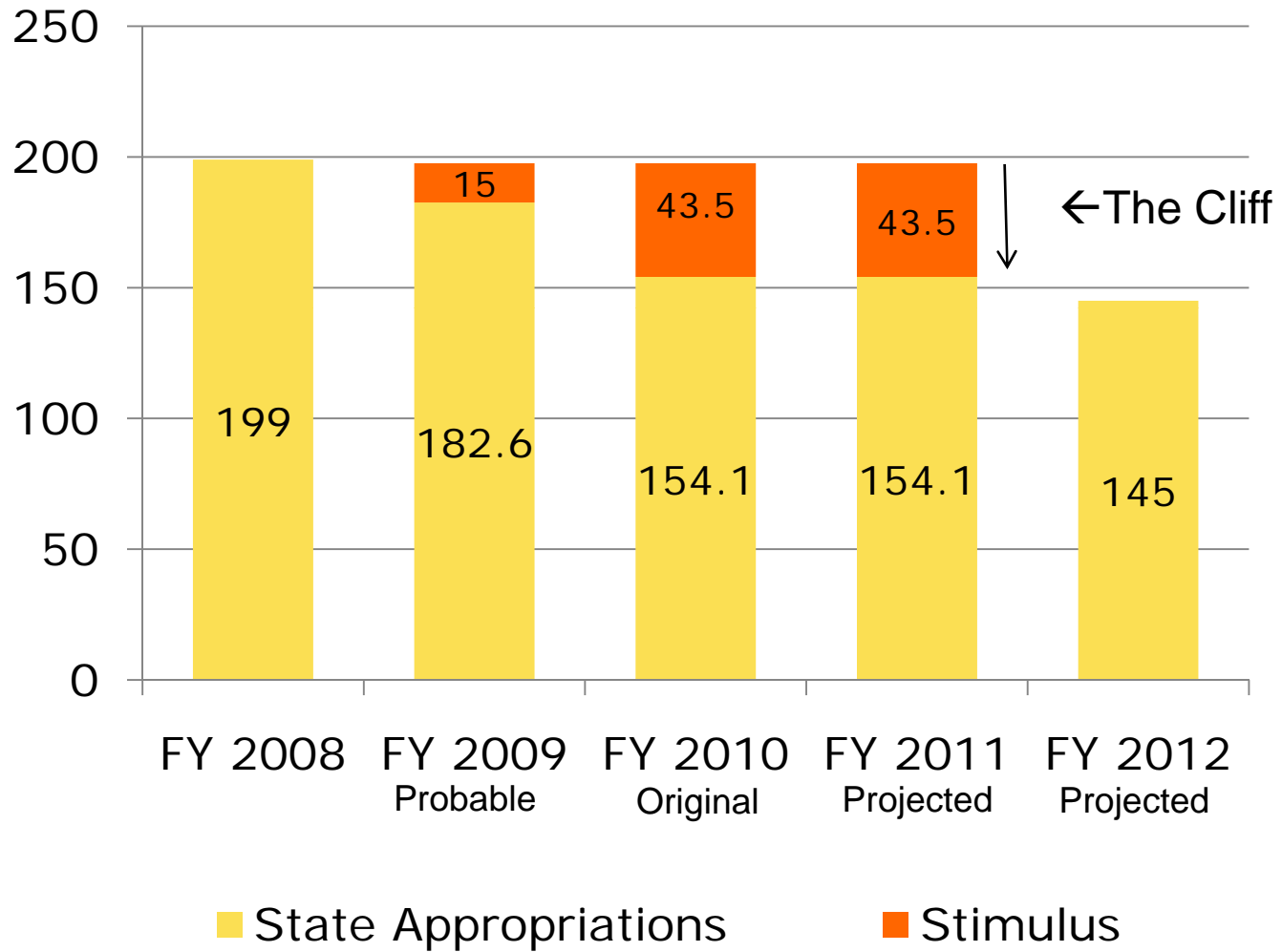


FY 2010





State Appropriations Projection With ARRA and MOE Funds





Formula Timeline





Formula
vs.
Non-formula



Statutory Language

TCA 49-7-202 (c)(2)

1. Develop policies and formulae or guidelines for fair and equitable distribution and use of public funds.
2. Take into account enrollment projections, recognizing institutional differences as well as similarities in function, services, academic programs, and levels of instruction.
3. Support and enhance regional collaboration and student access through financial aid, while being mindful of the funding capacity of the state;



True or False?



True or False?

The formula produces an institutional budget or spending plan.

False



True or False?

The Formula rewards
student retention and graduation.

True



True or False?

All student FTE are created equal.

True and False



The Formula as a Policy Instrument

- To construct a comprehensive funding recommendation for higher education.
- Designed to determine the state's share of the responsibility of funding higher education's needs.



The Formula as a Policy Instrument

- Formulae are usually not sensitive to the state's current political or economic conditions.
- Ideally a funding formula should reflect statewide policy.



The Funding Formula...

- ❖ Calculates total revenue need.
- ❖ Cost sharing policy divides the need between the state and the student.
- ❖ Does not produce an institutional budget or spending plan.
- ❖ Not a base-plus system; zero base



Formula Components

- Instruction
- Research
- Public Service
- Academic Support
- Student Services
- Institutional Support
- Maintenance and Operation
- Staff Benefits
- Equipment Replacement
- Inflation Factor
- Performance Funding



Components Calculated as Percent of Instruction

Calculations are based on actual data and the desired proportion of the total recommendation to be allocated to these areas.

- Public Service = 1%
- Academic Support = 12.5%
- Student Services = 20%
- Institutional Support = 10%



Other Component Calculations...

- Staff benefits = actual expenditures
- Inventory = actual equipment inventory times replacement rate of 10%.
- Inflation (2-3%) added onto final need before the split
- Maintenance & Operations – based on sq. footage



Instruction: Primary Funding Drivers

- ❖ Enrollment numbers
- ❖ Enrollment distribution



Basic Instruction Calculation

Total Faculty Units x Average Peer Salary x Inflation Rate

Basic Instruction: $1,620.4 \times 87,206 \times 1.033 = \146 million

Clerical & Support: 25% of instruction
 $.25 \times \$146\text{M} = \36.5 million



Enrollment Numbers

Enrollment base calculation:

- ❖ A 3-year moving average of actual fall enrollments plus summer enrollment supplements
- ❖ Student Credit Hours (SCH).



Enrollment Distribution

- SCH are distributed by:
 - ❖ Classification of Instructional Programs (CIP)
 - ❖ Program Cost Factors
 - ❖ Student Level
 - Level 1 – Freshman
 - Level 2 – Sophomore
 - Level 3 – Junior
 - Level 4 – Senior
 - Level 5 – Masters
 - Level 6 – Doctoral



Enrollment Distribution

- ❖ **Student-Faculty Ratio (Weight)** is established by academic area and student level
- ❖ **Program cost factors** are used to adjust ratio to reflect additional needs for higher cost academic programs and unique nature of some programs, such as Health Professions
- ❖ **Faculty Funding Units** are calculated by academic program and student level



Enrollment Distribution

- SCH are converted to FTE Students
 - ❖ 15 Undergraduate SCH = 1 FTE
 - ❖ 12 Graduate SCH = 1 FTE



Student-Faculty Ratios (Weights)

Reflects number of students per one faculty unit. Decreasing number by student level provides more faculty units for higher level students.

Fr	So	Jr	Sr	Masters	Doc
30	21	19	18	12	4

Increased

For 100 FTE:

Value of:

Fr $100/30 = 3.3$ faculty

So $100/21 = 4.7$ faculty

Jr $100/19 = 5.3$ faculty

Sr $100/18 = 5.5$ faculty

43%

11%

6%



Program Cost Factors

Student-Faculty Weights (Number of students per one faculty unit)

Adjustments to reflect program cost factors reduce number of students per one faculty unit for programs with higher costs for salaries and operating

- High Cost Factor = 0.667
- Medium Cost Factor = 0.833
- Low Cost Factor = 1 (No impact)

Example: $80 \text{ FTE}/30 = 2.7 \text{ Faculty}$

$80 \text{ FTE}/20 (30 \cdot .667) = 4.0 \text{ Faculty}$



Program Cost Factors

Student-Faculty Weights Cost Factor Adjustments

Undergraduate Program Cost Factors	
High Cost	0.667
Medium Cost	0.833
Low Cost	1

Fr	So	Jr	Sr	Masters	Doc
30.0	21.0	19.0	18.0	12.0	4.0
20.0	14.0	12.7	12.0	12.0	4.0
25.0	17.5	15.8	15.0	12.0	4.0
30.0	21.0	19.0	18.0	12.0	4.0



Calculation of Faculty Funding Units

Example: Calculation of faculty funding units for Level 4, Senior students, in Engineering, a high cost program

1. Student Credit Hours \div undergraduate full-time rate = FTE
 $3,700 \div 15 = 246.7$ FTE
2. Student Faculty Weight * Cost Factor = Student-Faculty Weight
 $18 \times 0.667 = 12$ Student-Faculty Weight
3. FTE \div Student-Faculty Weight = Faculty Funding Units
 $246.7 \div 12 = \underline{20.6}$ Faculty Funding Units



Basic Instruction Calculation

Total Faculty Units x Average Peer Salary x Inflation Rate

Basic Instruction: $1,620.4 \times 87,206 \times 1.033 = \146 million

Clerical & Support: 25% of instruction
 $.25 \times \$146\text{M} = \36.5 million



Research

- Each university has a research base rate that is determined by Carnegie classification.

UTK, UM – 11%

ETSU, MTSU, TSU, TTU, UTC – 5%

APSU, UTM – 3%



Research

- Research base rate is determined by Carnegie classification.

$$\text{UTK} = 11\%$$

- Doctoral Production Rate

$$250/10000 = 2.50\%$$

- Total Research – Research Base Rate + Doctoral Production Rate x Total Instruction

$$11\% + 2.50\% = 13.50\%$$

$$13.50\% \times \$182.5\text{M} = \$24.6\text{M}$$



Maintenance and Operation

- E&G Square Footage x M&O Rate
\$5.49/sq ft.; \$2.74/sq ft for portable bldgs; 1.83/sq ft for 20+ yr old bldgs
- M&O rate is calculated using regional peer data
- Rent Requests for approved leases
- Estimated Utilities



Cost Sharing Policy - State

In-state Reduction (60/40 split of total need)

State Share Reduction:

- **Out-of-state tuition** is deducted since it is intended to replace the state subsidy that a resident student would receive.

State Share Additions:

- **Performance funding** (Score x Rate x Basic Request)
- **Legislative Initiatives**



Performance Funding

Five Standards

1. Student Learning Environment and Outcomes
2. Student Satisfaction
3. Student Persistence
4. State Master Plan Priorities
5. Assessment Outcomes



Performance Funding

- Score is based on selected assessment areas
 - 60% devoted to student performance and satisfaction
 - 40% focused on academic program and institutional indicators
- Can receive up to 5.45% over and above the formula generated appropriations
- Example: Score x Rate x Basic Request

$$.925 \times .0545 \times \$243M = \$12.25M$$



Final Funding Data

- Final Total Institutional Revenue Need
Formula Components + Inflation Factor + Performance Funding +
Legislative Initiatives
- Final State Appropriation Recommendation
(Formula Components + Inflation Factor * 60%) + Performance Funding +
Legislative Initiatives



FY 2010 Formula Inputs

Formula Functions	(in millions)	Percent of Formula
Instruction	182.5	41.4
Research	24.6	5.6
Public Service	1.8	0.4
Acad. Support	22.8	5.2
Student Services	23.4	5.3
Inst. Support	18.2	4.1
Maint. & Oper.	70.3	15.9
Benefits	83.1	18.8
Equipment	14.2	3.2
Total	440.9	100%



FY 2010 Formula Inputs

	(in millions)
Calculated formula need	440.9
Add: inflation (3.3%)	11.8
Subtotal	452.7
60% - state share	271.6
Less: out-of-state tuition	-28.9
Total	242.7
Add: Performance Funding	12.2
Total Recommended Appropriation	254.9



Questions for thought...

- Formula construction?
- Principles?
- Enrollment - primary component?
- Distribution methodology?
- Retention or graduation rates – what role should they play?