

# Statistical Analysis of Library Budgets

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ARL Survey Coordinators and  
SPEC Liaisons Meeting

2014 ALA Midwinter Meeting

**Slides available at**

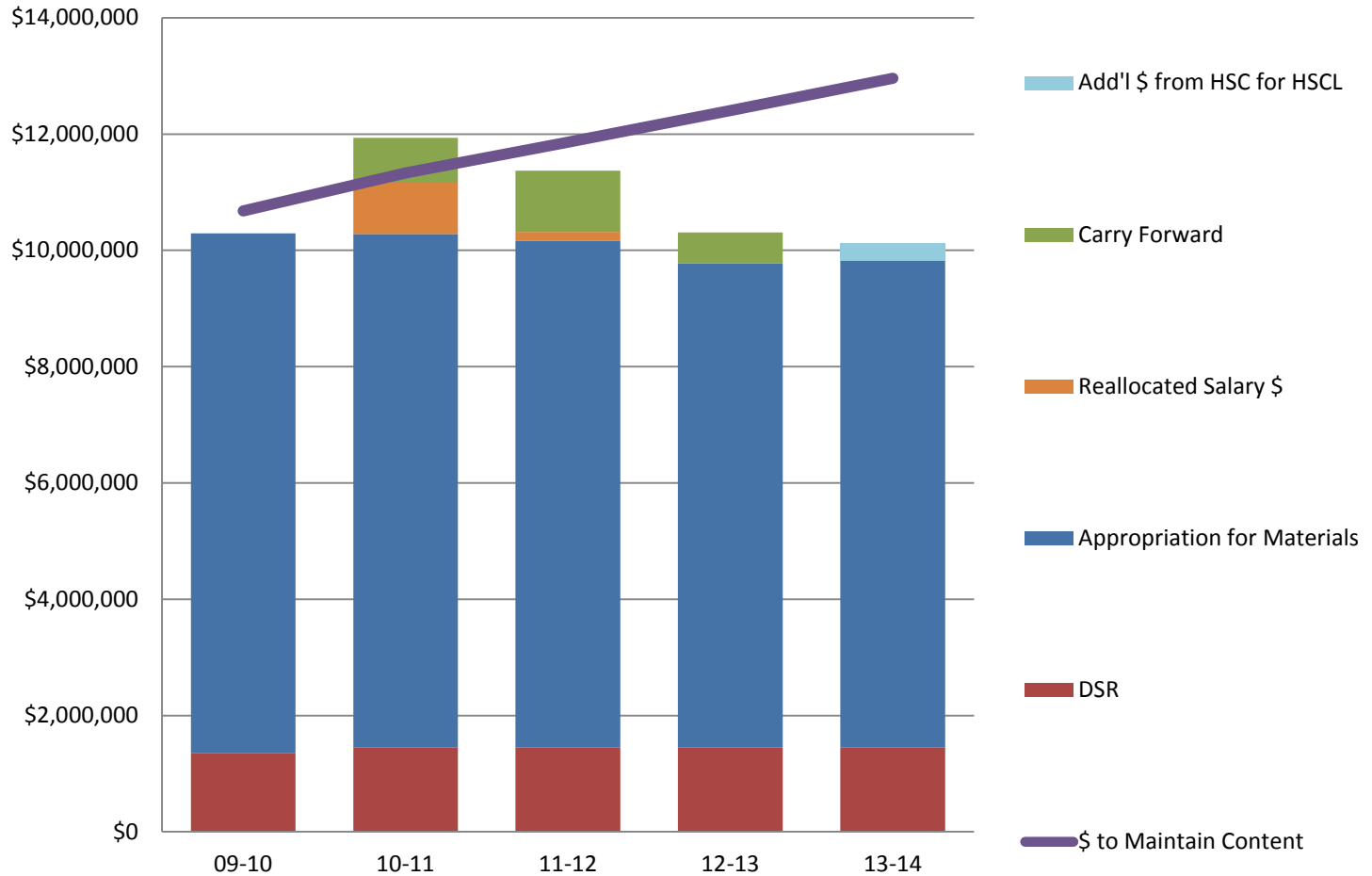
**<http://ufdc.ufl.edu/AA00019455>**

## Background

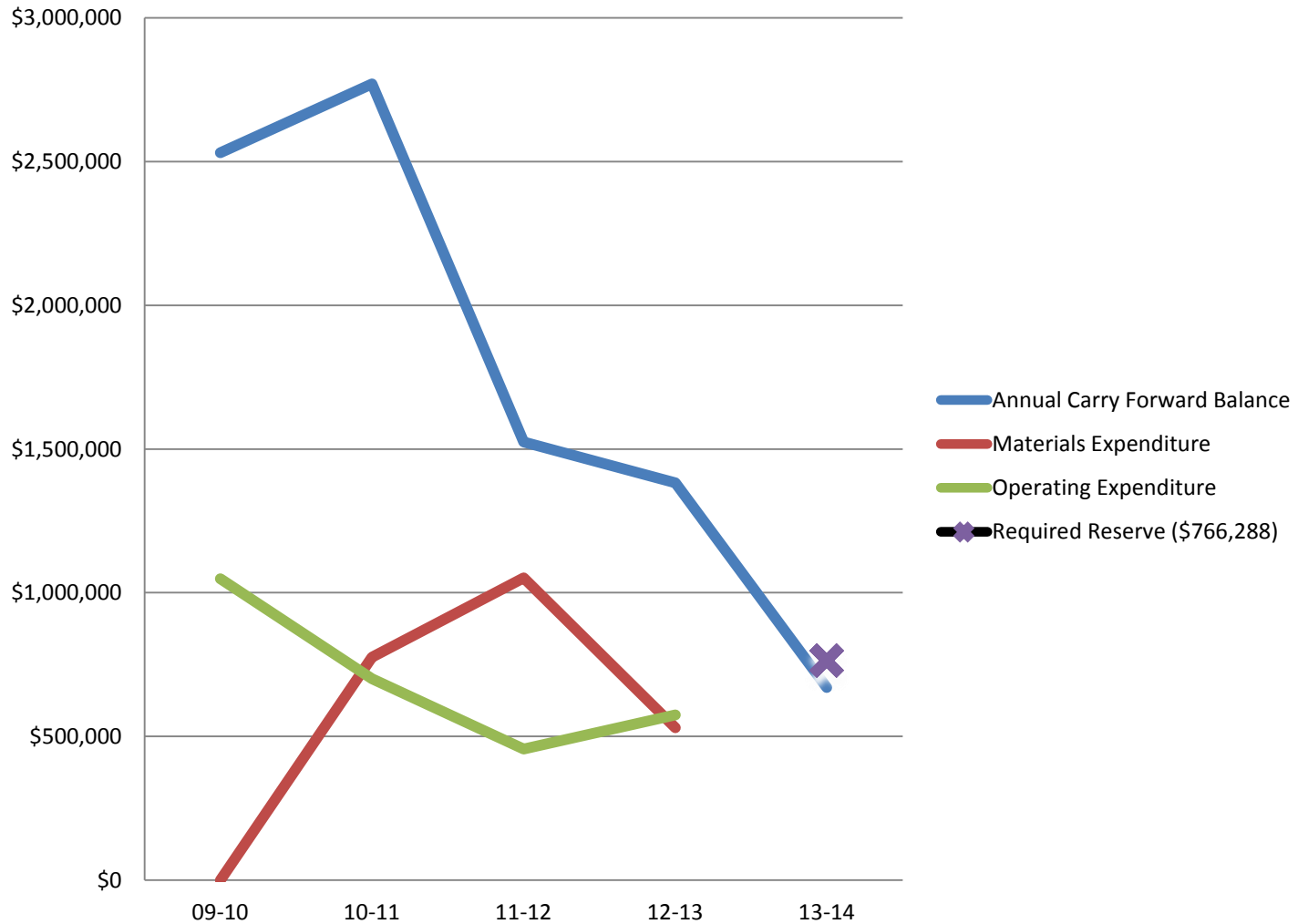
- In 2011, the University of Florida (UF) adopted RCM budgeting and financial management.
- The UF libraries entered RCM chronically underfunded and facing escalating materials costs.
- RCM was implemented at UF at a time of severe budget reductions, including steep cuts in state appropriations.

# RCM Budget Review for the George A. Smathers Libraries

## Gap In Expenditures for Materials



# RCM Budget Review for the George A. Smathers Libraries Carry Forward Generation and Use



## Background

- In this environment, the UF libraries had to develop effective methods for communicating its budget circumstances and what appropriate funding levels should be in order to adequately serve UF's faculty, students and researchers.

## Approach

- The UF libraries have engaged in an ongoing analysis of how the resources of the libraries and the demands of the university compare to peer institutions using data from Integrated Postsecondary Education Data System (IPEDS) and ARL Statistics.

## Findings

- There is a considerable and statistically significant gap between the scale of UF programs and populations, and the resources of the library system that is not explained simply by the size of the large institution, but truly reflects a funding issue.



# PEER ANALYSIS 2010

- **Compared UF to 8 Public AAU Universities**
  - All with 4 or more Health Colleges
  - All with a College of Law
  - All with *U.S. News* Ranking above 30
  - All members of the Association of Research Libraries (ARL)
  - 4 are land grant universities

# PEER ANALYSIS, 2010

- **Peer Universities**

- University of Michigan (#4)
- University of North Carolina, Chapel Hill (#5)
- University of Wisconsin, Madison (#9)
- University of Washington (#11)
- **University of Florida (#15)**
- Ohio State University (#18)
- University of Pittsburgh (#20)
- University of Minnesota (#22)
- Michigan State University (#29)

# PEER ANALYSIS

- ARL data for 7 factors that report library **RESOURCES** for materials and staff (2008)
- NCES data for 7 university factors that correlate with **DEMAND** for library resources & services (2008)

<b>LIBRARIES</b>	<b>Avg. Excluding UF</b>	<b>UF as % of Non-UF Avg.</b>
<b>EXPENDITURES</b>		
Library Materials Expenditures	\$14,820,857	84%
Total Library Expenditures	\$39,116,382	73%
<b>PERSONNEL-SALARIES</b>		
Salaries & Wages Professional Staff	\$9,602,922	63%
Total Salaries & Wages	\$18,656,818	75%
<b>PERSONNEL-FTE</b>		
Professional Staff (FTE)	149	68%
Support Staff (FTE)	192	99%
Total Staff (FTE)	454	84%

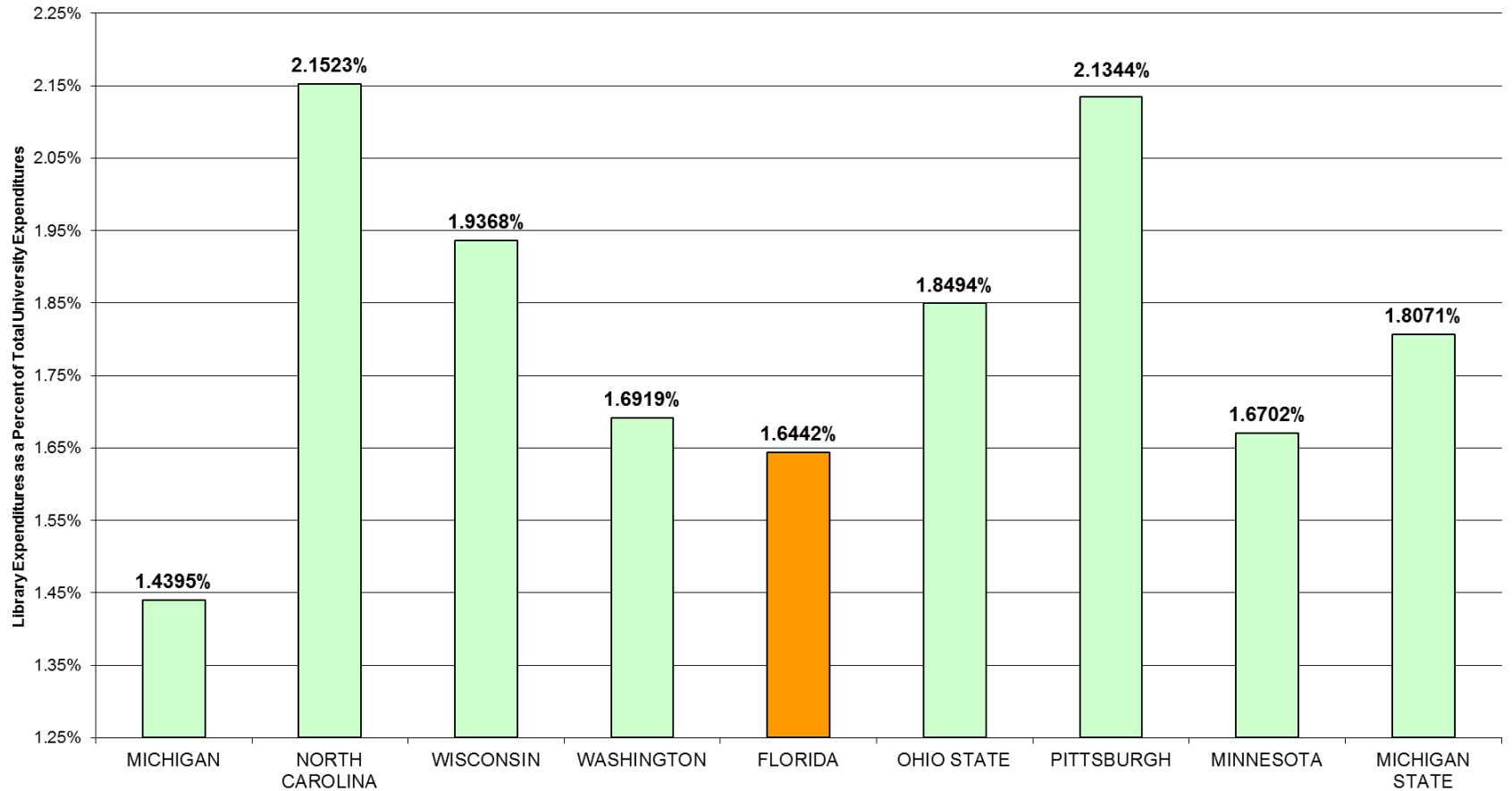
<b>UNIVERSITY</b>	<b>Avg. Excluding UF</b>	<b>UF as % of Non-UF Avg.</b>
<b>PhDs Awarded</b>	635	135%
<b>Prof Degrees Awarded</b>	626	200%
<b>Total PhDs and Prof Degrees</b>	1,261	167%
<b>PhD Fields</b>	95	131%
<b>Faculty (Full-Time)</b>	3,449	128%
<b>Total Student Enrollment</b>	43,195	119%
<b>Total Graduate &amp; Prof Students</b>	12,579	134%

# PEER ANALYSIS, 2010

- UF Libraries are **BELOW** average for every library **RESOURCE** factor for materials and staffing
- UF is **ABOVE** average for every university factor correlating with **DEMAND** for library resources and services

# PEER ANALYSIS, 2010

RCM Budget Review for the George A. Smathers Libraries  
Library Expenditures as a Percentage of Total University Expenditures



# PEER ANALYSIS, 2010

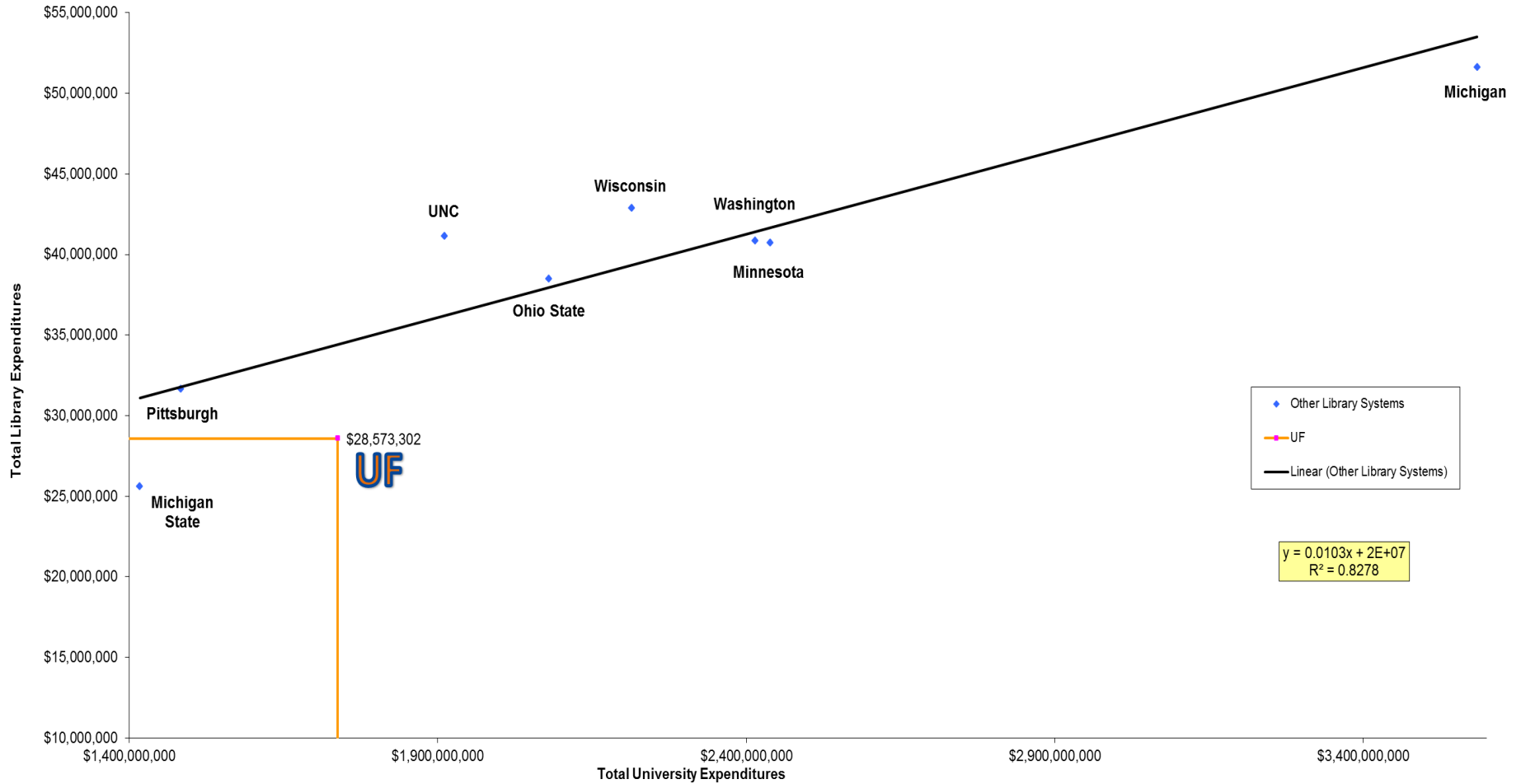
- Average library expenditures as % of university budget (8 peers without UF): **1.8352%**
- Library expenditures as % of university budget (UF): **1.6442%**



# PEER ANALYSIS, 2010

- More useful comparison by accounting for differences in scale at the peer institutions
  - Analyzed correlations between ARL data on library expenditures and NCES data on university factors
- The highest correlation was with total university budget ( $R^2 = 0.8278$ )

## RCM Budget Review for the George A. Smathers Libraries Total Library Expenditures as a Function of Total University Expenditures



# PEER ANALYSIS, 2010

## Application of Linear Regression Formula to UF

Total UF Expenditures	Projected Library Expenditures	Actual Library Expenditures	Difference
\$1,737,832,000	\$37,899,670	\$28,573,302	\$9,326,368

Data from 2008

# PEER ANALYSIS, 2013

## Application of Linear Regression Formula to UF Using 2009 Data

Total UF Expenditures	Projected Library Expenditures	Actual Library Expenditures	Difference
\$2,121,460,000	\$41,851,038	\$28,147,202	<b>\$13,703,836</b>

# PEER ANALYSIS, updated

<b>PROPORTION OF LIBRARY EXPENDITURES</b>	<b>Materials and Operations</b>	<b>Staffing</b>
Median for Peers	50%	48%
Average for Peers	54%	46%
University of Florida	53%	47%

# Smathers Libraries Staffing

## Decrease in Smathers Libraries Staffing 2009-2010 Through 2011-2012

	Faculty & Other Professionals	Non-Professional Staff	Total
2010	97	186	283
2011	85	172	257
2012	81	167	248

# PEER ANALYSIS, 2014

## Top 10

ILLINOIS, URBANA  
MICHIGAN  
NORTH CAROLINA  
PENNSYLVANIA STATE  
VIRGINIA  
WISCONSIN

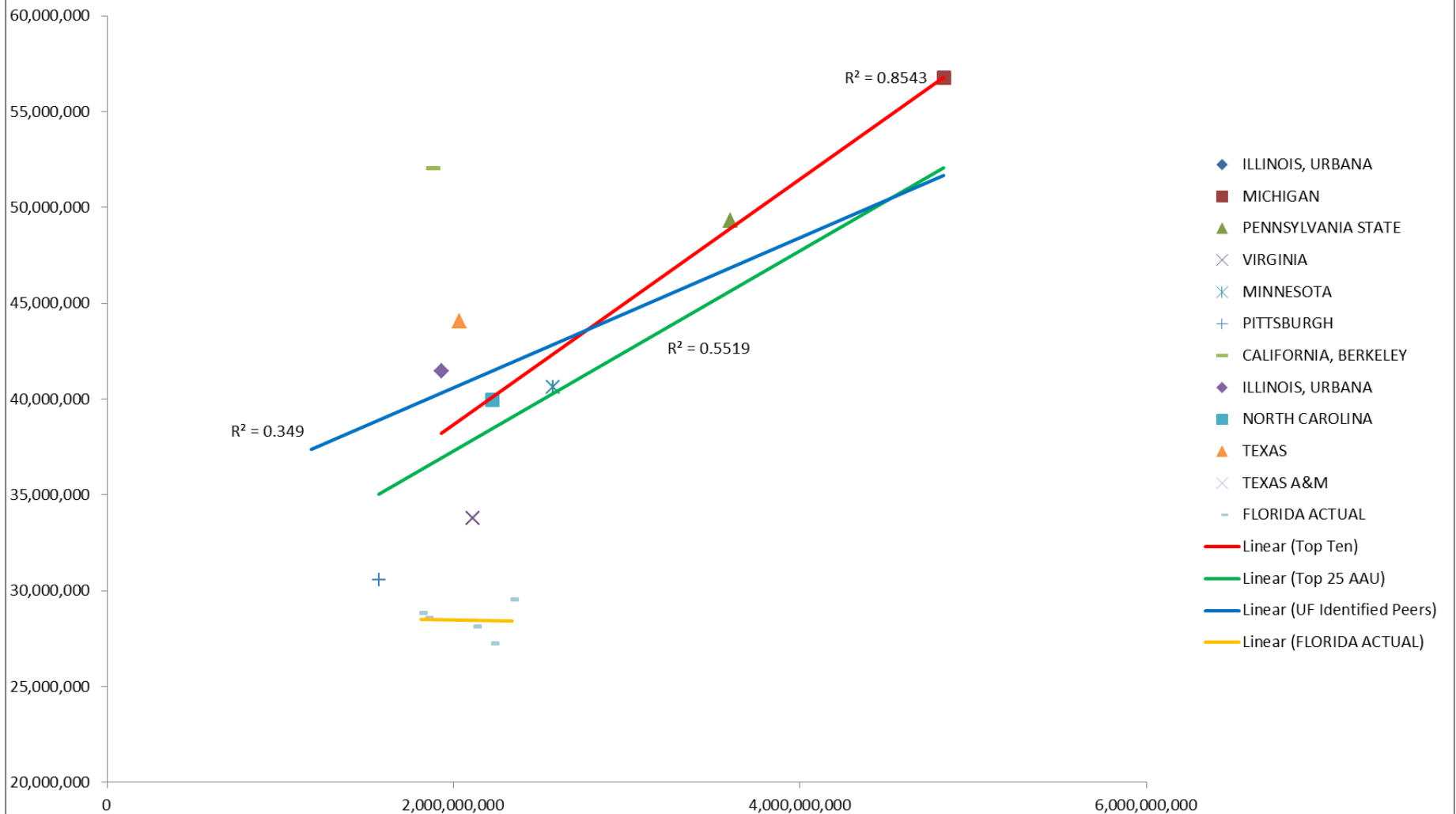
## Top 25 AAU

MICHIGAN  
MINNESOTA  
NORTH CAROLINA  
OHIO STATE  
PENNSYLVANIA STATE  
PITTSBURGH  
TEXAS  
VIRGINIA  
WASHINGTON  
WISCONSIN

## UF Identified Peers

CALIFORNIA, BERKELEY  
ILLINOIS, URBANA  
INDIANA  
MICHIGAN  
NORTH CAROLINA  
OHIO STATE  
PENNSYLVANIA STATE  
TEXAS  
TEXAS A&M  
VIRGINIA  
WISCONSIN

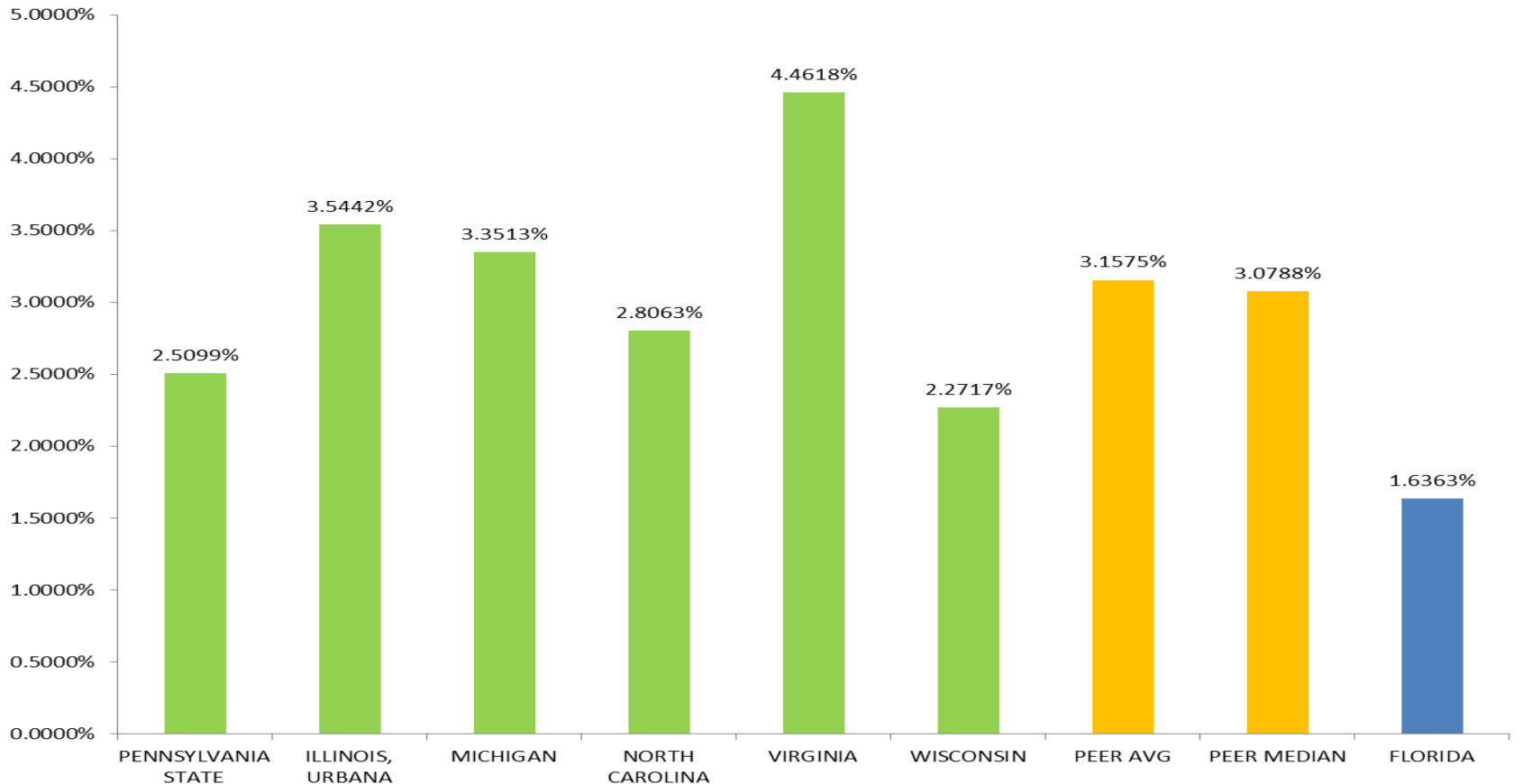
## 2007-2011 AVG. Total Library Exp. v. AVG. Total University Exp.





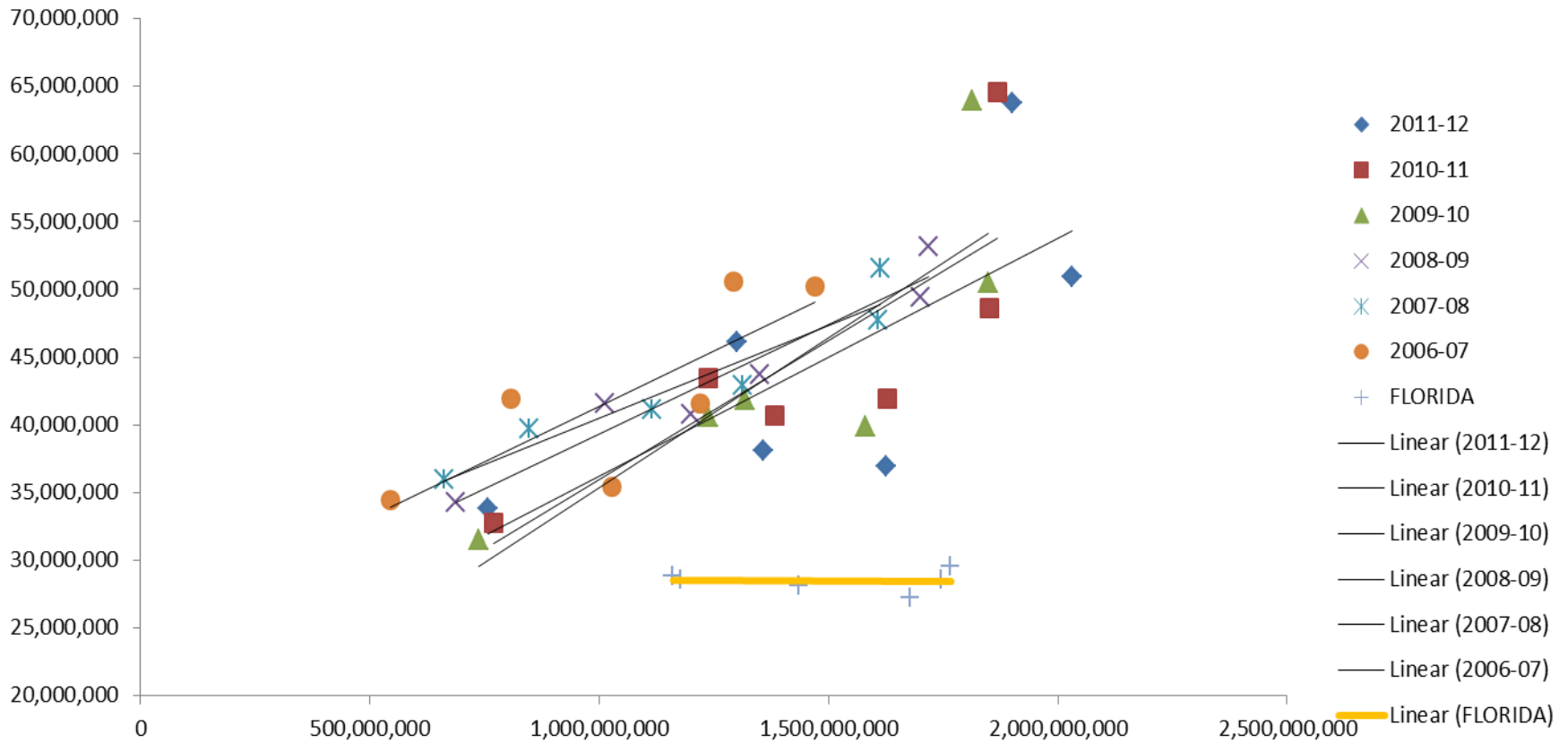
# PEER ANALYSIS, 2014

Library Exp. as a Percentage of University Inst., Res. & PS Exp.  
2011-12



## Univ Inst., Res. & PS Exp. v. Library Exp.

### Top Ten Publics - Exc. U of Californias, William and Mary and G. Tech



# PEER ANALYSIS, 2014

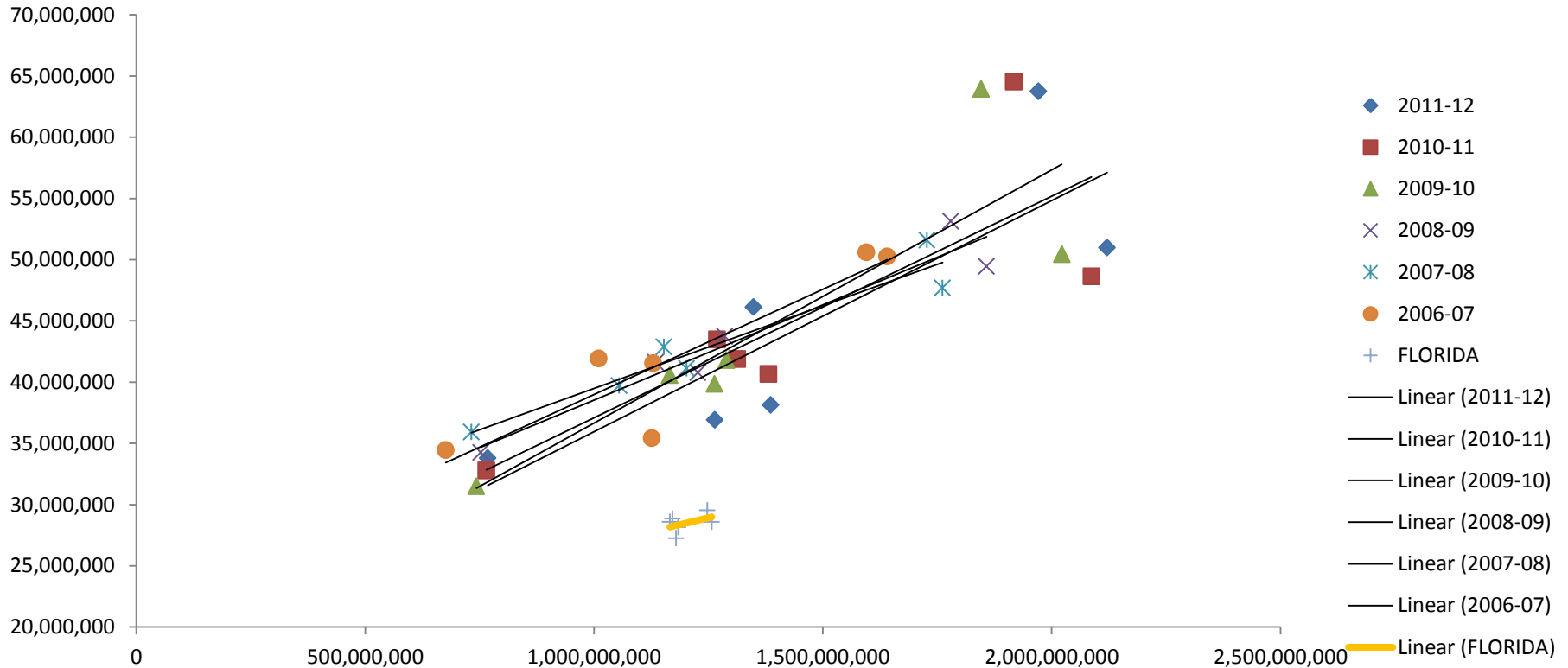
## Univ. Inst., Res. & PS Exp. v. Library Exp. Top Ten Publics

Exc. U of Californias, William and Mary and G. Tech

2011-12	2010-11	2009-10	2008-09	2007-08	2006-07
$R^2 = 0.5252$	$R^2 = 0.642$	$R^2 = 0.6806$	$R^2 = 0.9317$	$R^2 = 0.9068$	$R^2 = 0.6373$

# Univ Tuition, Fees, State App, and Fed Grants Income v. Library Exp.

## Top Ten Publics - Exc. U of Californias, William and Mary and G. Tech



# PEER ANALYSIS, 2014

Univ. Tuition, Fees, State App. & Fed Grant Inc.

v. Library Exp.

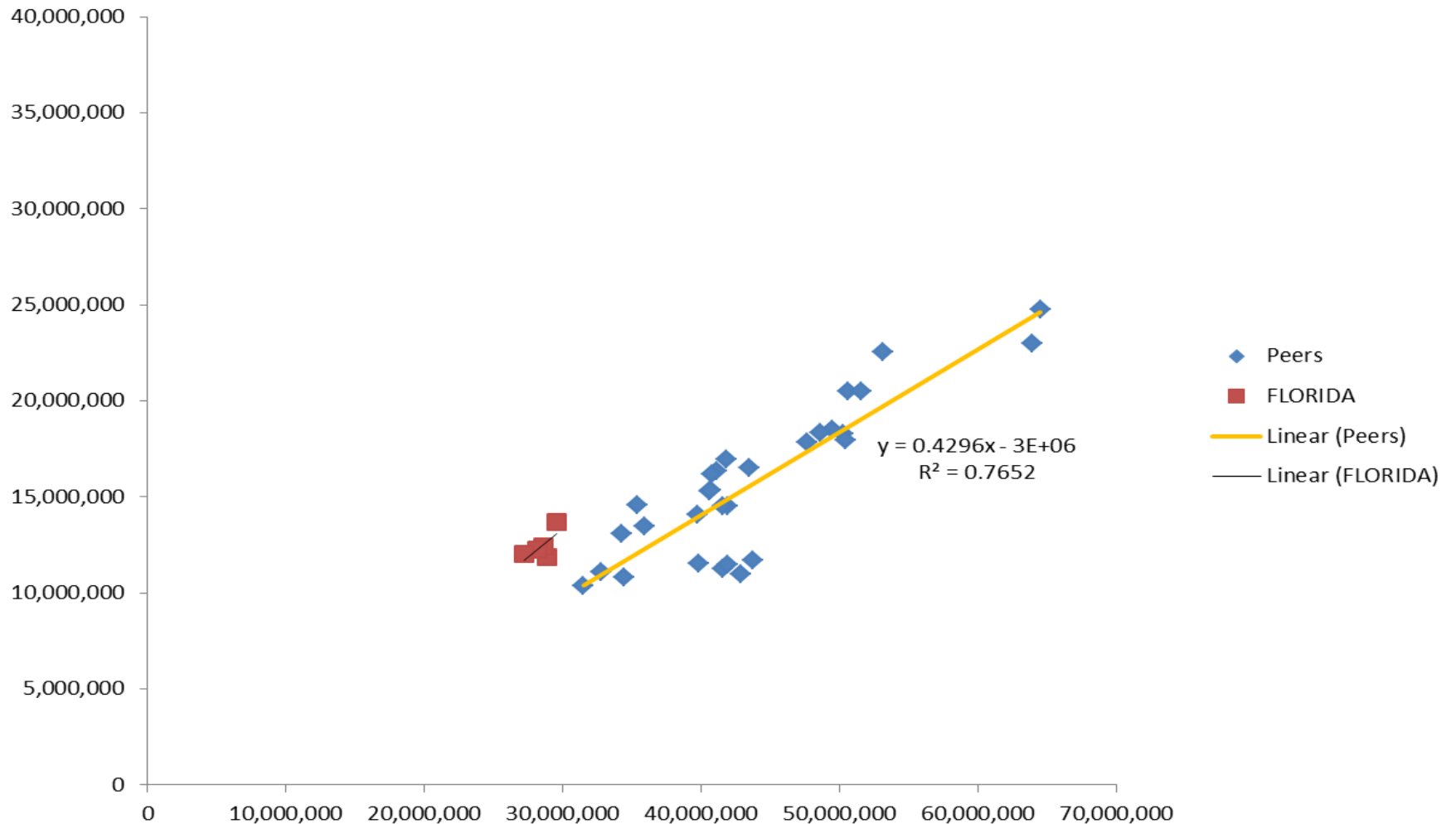
Top Ten Publics

Exc. U of Californias, William and Mary and G. Tech

2011-12	2010-11	2009-10	2008-09	2007-08	2006-07
$R^2 = 0.701$	$R^2 = 0.6558$	$R^2 = 0.7511$	$R^2 = 0.9313$	$R^2 = 0.9199$	$R^2 = 0.8201$

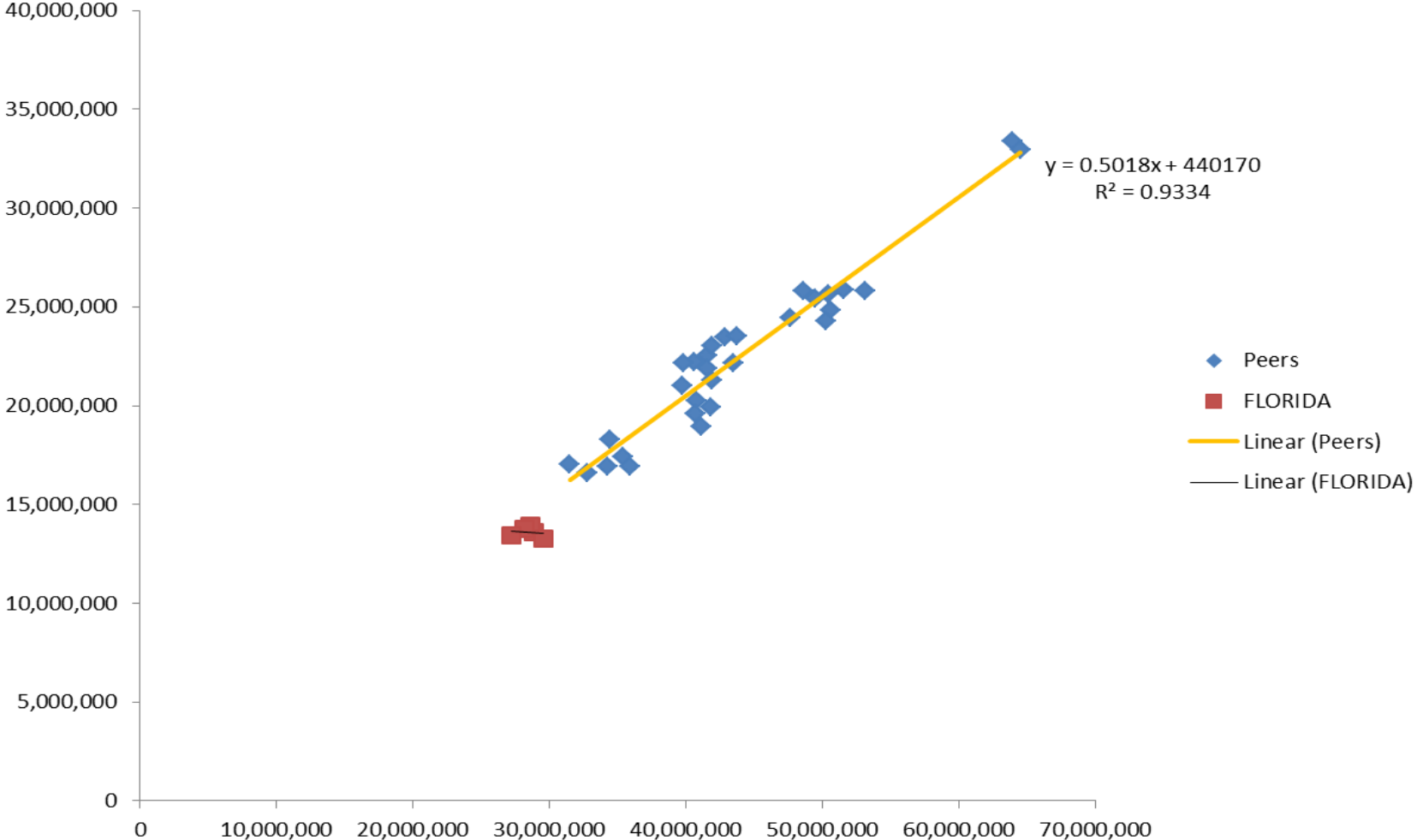
# Library Materials Exp. v. Total Library Exp. (2007-2011)

## Top Ten Publics - Exc. U of Californias, William and Mary and G. Tech



# Library Payroll Exp. v. Total Library Exp. (2007-2011)

Top Ten Publics - Exc. U of Californias, William and Mary and G. Tech



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