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# The Pennsylvania State System of Higher Education: Economic Impact on the Commonwealth of Pennsylvania

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**March 17, 2011**

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# The Economic Impact of Pennsylvania State System of Higher Education

## *Introduction*

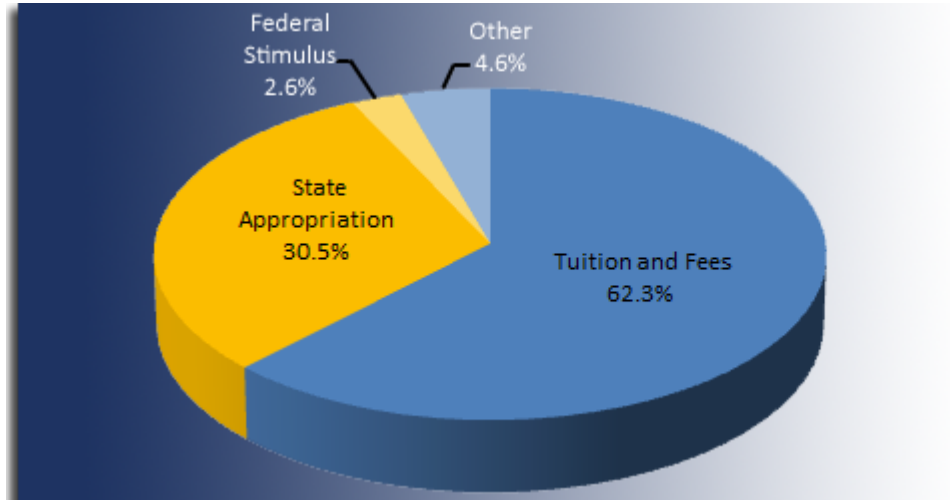
This report is provided in response to the proposed cut of more than 50% of the state appropriation to the Pennsylvania State System of Higher Education (PASSHE). As the public Universities of the Commonwealth of Pennsylvania (Commonwealth), the 14 Universities of the Pennsylvania State System of Higher Education (PASSHE) are responsible for providing high quality education at the lowest possible cost to the students. The 14 PASSHE universities offer the **lowest -cost four-year baccalaureate degree programs** in the state. Annual tuition increases have been below the rate of inflation in four of the last six years. Current annual in-state tuition is \$5,804.

With a record enrollment of nearly 120,000 students, PASSHE is the state's largest higher education provider. More than 90% of the students enrolled at PASSHE universities are from Pennsylvania and 80% of their graduates remain in the State. The impact of quality higher education on economic growth is widely documented, this is particularly important in a very highly competitive global environment. PASSHE universities educate students who go on to become successful and productive members of the Commonwealth and the nation, the majority of whom would not have the opportunity to continue higher education without access to PASSHE universities. More than 500,000 PASSHE alumni live in Pennsylvania, serving as community leaders in the business, healthcare, public administration and non-profit sectors while generating an aggregate annual income of \$7 billion. Its 14 Universities offer more than 250 degree and certificate programs in more than 120 areas of study. In addition to providing

quality higher education at affordable cost, PASSHE's 14 universities, the Dixon Center, and various branch campuses and research centers have become vital economic partners as well as centers of innovation and entrepreneurship. PASSHE is the 13th largest employer in the state, with more than 12,150 professional and support staff.

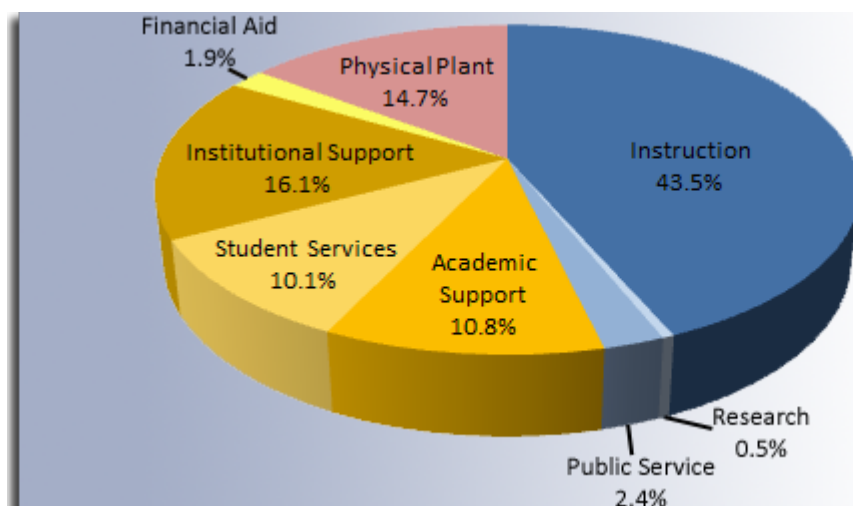
### ***Sources of Revenue and Expenditures***

Sources of revenue for PASSHE's 2009-2010 budget of \$1,816.873 include more than 62% from tuition and fees, 30.5% from State Appropriation, 2.6% from Federal Stimulus, and 4.6% from other sources.



The study time frame is the fiscal year 2011. PASSHE 2010-2011 budget of \$2.0839 billion consists of 43.5% for instruction; 16.1% for Institutional Support, 10.8% for Academic Support, 10.1% for Student Services, 14.7% for Operation and Maintenance

of Plant, 2.4% for Public Service, .5% for Research, and 1.9% for financial aid.



Source: Pennsylvania State System of Higher Education

### ***Purpose of the Study***

In addition to its primary role of increasing human capital and intellectual wealth, critical to economic growth and prosperity, the Pennsylvania State System of Higher Education (PASSHE) through its fourteen universities has served as a main economic engine within the Commonwealth of Pennsylvania. PASSHE universities currently enroll nearly 120,000 students, the majority of whom are first generation college students. The universities within the system produced more than 500,000 alumni of which the majority have chosen to remain in Pennsylvania.

Through direct spending by employees, spending on purchases of goods and services, spending of students, capital expenditures, and enhancing the labor force income, PASSHE universities have a significant economic impact on the State of Pennsylvania. The purpose of this study is to estimate the economic impact of Pennsylvania State System of Higher Education on the State economy. The total economic impact encompasses direct expenditures by PASSHE universities as well as the longer-term

economic benefits of the earnings gains and higher productivity of an educated highly skilled labor force. The literature and methodology have evolved over time, and consistently demonstrate that in addition to adding value to people's lives and the collective quality of life, it promotes a more robust economy through greater productivity and job creation. This study estimates the economic impact of PASSHE universities relevant direct expenditures. Though not measured, this study also highlights the more intangible returns that are by-products of investment in education.

### ***Methodology***

The economic impact is typically measured in terms of economic gain/losses to an area in the presence or loss of a program or entity. It is based on the premise that any change in autonomous spending will result in a multiplied effect in an "area" with implications for additional output and employment for the area. Common examples of economic impact studies include analyzing the implication of closing a military base on the local and state economy, effects of an opening or closing decision of a big manufacturing/retailing facility such as the Volvo plan to expand operation in Shippensburg, and the economic impact of colleges and universities. Basically, the impact studies revolve around spending to address the question as to what would be the economic impact in a region and/or state if an entity or a program did not exist.

This methodology is used to measure the economic impact of PASSHE. The impact is measured in terms of short-term prospect and calculated in terms of tangible or intangible benefits on the State economy. The long-term benefit is measured in terms of the area's stock of human capital and its consequences on economic development through an enhancement of productivity of workers, development of new technologies,

solving social/economic/health problems, etc. The intangibles include the private and social benefits (externalities) of education, such as the refinement of the human race, improvement in the quality of life of a community, enjoyment and the appreciation of the arts, reading, an increase in cultural/religious tolerance among various groups, reduction in crime, etc. The long-term as well as the intangible benefits, although real, are harder to measure and are not included in this study. Most studies have focused on measuring the impact of colleges and universities from the short-term tangible benefits.

## **Direct Impacts**

The Economic Impact falls into three categories; direct, indirect, and induced impacts. Direct impacts are resulted from the share of PASSHE universities spending by employees, operational expenditures, spending by students, capital expenditures, and enhancement of labor force skills. The additional spending will result in related increase in employment and labor force compensations.

### ***Direct Impact of PASSHE Operating Expenditures***

The direct impact of PASSHE's operating expenses of was assessed from non-personal and personal expenditures for general operation of the system universities. The aggregation of operating and other related expenses yields as estimated direct economic impact of **\$1.6** billion per year.

### ***Direct Economic Impact of PASSHE Students***

The direct impact of students is based on a daily spending on non-college related items of \$2 for soda and other beverages, \$1.5 for candy and snacks, \$3 for gasoline, and \$8 for eating out per day, per student. It is also estimated that on average there are 200

days per year. The direct impact of 120,000 students attending PASSHE universities equal to approximately **\$324** million per year.

### ***Direct Economic Impact of PASSHE Capital Expenditures***

The direct economic impact of capital expenditures on new structures and renovations is estimated as **\$200** million per year on the basis of a 5-year average of capital expenditures excluding housing construction.

## **The Multiplier Impacts**

Output and employment multipliers are needed to capture the full impact of the initial spending related to the Pennsylvania State System of Higher Education. The major portion of the economic impact analysis is performed using the IMPLAN input/output model. The IMPLAN model was initially developed in 1979 by the United States Forest Service, and then privatized to the Minnesota IMPLAN Group Incorporated (MIG Inc.). The model contains three basic components: the direct impact, indirect impact, and induced impact. Analysis can be done by State, by County, or by a region.

The direct spending related to PASSHE universities will result in additional impacts in terms of indirect and induced effects. Indirect impacts are the impacts resulting from industries purchases from each other to satisfy the additional demand caused by expenditures related to PASSHE. Induced impacts are the multiplier effects of the direct and indirect impacts on household incomes and increase in population.

The IMPLAN model is used to estimate the economic impact of PASSHE on the local economy. These include the impacts of expenditures from purchases, employees, student expenditures, and capital expenditures. The model is used to estimate the total employment, output, and labor income.



The followings are the results of the study:

## LOCAL MULTIPLIER IMPACT

### *The Economic Impact of PASSHE Operating Expenditures, Employees, and Students*

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	28,260.8	1,485,695,572.3	1,723,221,605.1	2,058,436,717.1
Indirect Effect	1,108.8	63,489,468.8	107,631,702.4	202,869,043.7
Induced Effect	11,675.3	509,802,543.2	896,324,199.4	1,490,199,403.8
Total Effect	41,045.0	2,058,987,584.3	2,727,177,506.9	3,751,505,164.7

Output shows the contribution of PASSHE to the Gross Domestic Product of Pennsylvania, while value added shows the compensation to employees, taxes, and imports less subsidies.

The top 10 industries impacted by PASSHE’s 14 universities are as follows:

Description	Employment	Labor Income	Value Added	Output
Employment and payroll	24,161	1,354,651,941	1,538,904,007	1,581,710,049
Food services and drinking places	4,206	86,410,952	121,503,955	240,984,434
Real estate establishments	720	9,080,820	67,551,285	92,091,066
Private hospitals	691	45,905,517	49,012,950	98,910,986
Offices of physicians, dentists, and other health practitioners	638	50,384,562	53,739,956	87,395,649
Wholesale trade businesses	495	39,451,877	67,730,014	95,749,235
Retail Stores - Food and beverage	442	12,438,640	20,177,874	23,331,919
Nursing and residential care facilities	420	15,739,923	16,992,988	27,821,935
Retail Stores - General merchandise	350	9,124,599	14,841,504	17,067,842
Civic, social, professional, and similar organizations	273	8,326,368	8,400,285	15,596,125

### ***Fiscal Impact***

PASSHE’s 14 universities provide more than \$4 million dollar of contribution to state social insurance taxes, \$97 million of indirect business taxes, more than \$52 million of taxes paid by households, and more than \$15 million of corporate taxes paid per year to the State of Pennsylvania and municipalities.

The following table shows the contribution to the State and local taxes.

Description	Employee Compensation	Indirect Business Tax	Households	Corporations
Dividends				\$9,600,734
Social Ins Tax- Employee Contribution	\$1,158,041			
Social Ins Tax- Employer Contribution	\$2,876,425			
Indirect Bus Tax: Sales Tax		\$39,725,294		
Indirect Bus Tax: Property Tax		\$42,665,869		
Indirect Bus Tax: Motor Vehicle Lic		\$858,653		
Indirect Bus Tax: Severance Tax		\$0		
Indirect Bus Tax: Other Taxes		\$11,589,538		
Indirect Bus Tax: S/L Non Taxes		\$2,623,297		
Corporate Profits Tax				\$6,110,907
Personal Tax: Income Tax			\$42,460,011	
Personal Tax: Non Taxes			\$6,351,473	
Personal Tax: Motor Vehicle License			\$1,928,851	
Personal Tax: Property Taxes			\$989,859	
Personal Tax: Other Tax (Fish/Hunt)			\$926,651	
Total State and Local Tax	\$4,034,467	\$97,462,651	\$52,656,844	\$15,711,641

### ***Labor Market Impact***

The students at PASSHE universities enhance the labor force in the area by providing relatively high skills especially for part-time employment. In addition, more than 500,000 alumni of PASSHE universities who remain in Pennsylvania have had significant economic impact on the state and the nation. This impact is not included in calculating the economic impact of PASSHE.

## ***Intangible Impacts***

There are a number of intangible impacts that can be associated with a college or university such as affordable public education specifically to enhance skills of labor force in the area, cultural events, use of facilities for civic events, use of resources at below market costs, sports activities, visitors, and revitalization of a part of the community. PASSHE provides a variety of services to the State which should be recognized.

## **Summary**

Pennsylvania State System of Higher Education economic impact on the State is highly significant and ongoing. The local economy receives a significant inflow of external funds from state and federal sources annually to operate the University and from time to time significant funds to construct new facilities.

At the current level of enrollment, PASSHE's 14 universities more than **\$3.7 billion** of annual output, and 41,000 full- and part-time jobs. The total number of additional full and part-time jobs created as a result of PASSHE universities is equal to 28,000. Given that the Pennsylvania State System of Higher Education receives \$465 million in annual state appropriations, **the taxpayers awarded with a return of 6 times their investment (added value)**. More than 500,000 PASSHE alumni live in Pennsylvania, serving as community leaders in the business, healthcare, public administration and non-profit sectors while generating an aggregate annual income of \$7 billion. In addition to the tangible economic benefits and enhancing the skills of workforce in the area, PASSHE contributes to improving the quality of life in Pennsylvania. As illustrated, Pennsylvania taxpayers are getting their money's worth in multiple terms.

