

Economic Impact Study – Lake Wales Center

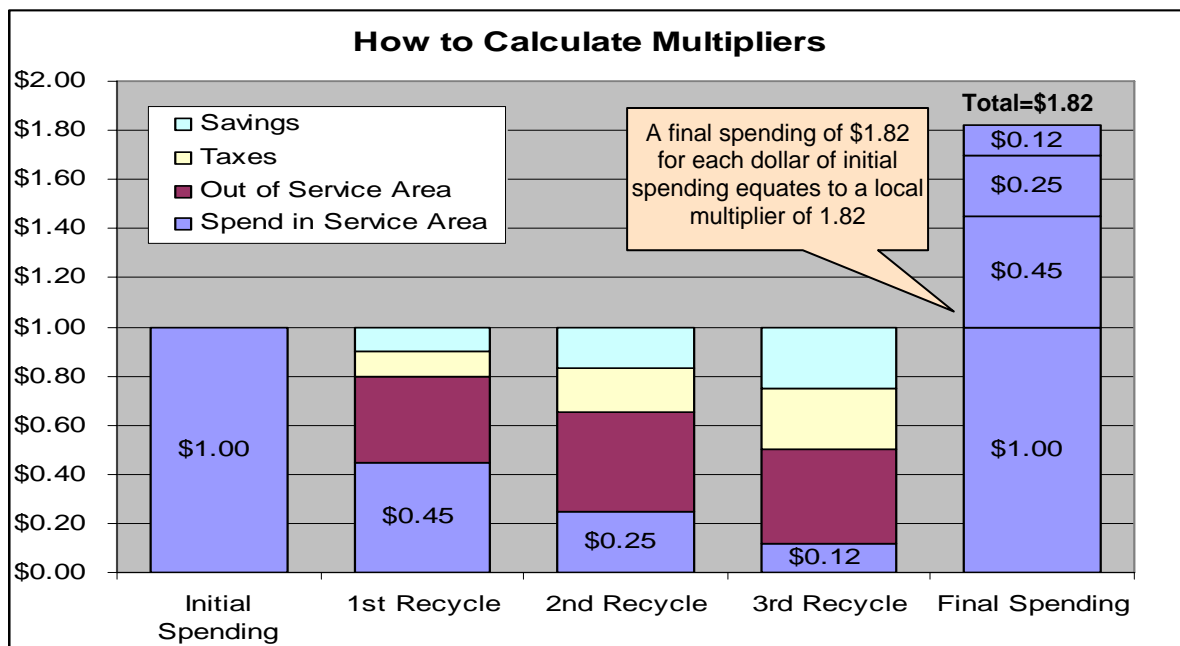
Estimated Impact of PCC’s Proposed New Center on the Lake Wales Economy

Methodology

The most frequently used model to measure the economic impact of a college or university was developed by John Caffrey and Herbert Isaacs in 1971 for the American Council on Education. In terms of methodology, the Caffrey & Isaacs model merges financial and multiplier analysis by using numerous variables like faculty, staff, and student data, college expenditures, socio-economic information about the community/county, and regional input-output multipliers (RIMS) to estimate indirect economic impact.

The multiplier effect used by Caffrey & Isaacs is based upon the notion that a portion of any local expenditure results in additional jobs and services. It presumes that dollars spent by one source will be spent again in the purchase of goods or services by another source within a declared geographical region. While a certain amount of every dollar spent by community residents in local businesses is returned to the spenders as income, the remaining amount is spent by the businesses for supplies and services from other businesses. A portion of this, again, is spent on additional supplies and services, and this cycle continues, with diminishing returns each time. The multiplier is the ratio of total spending over initial spending.

In the current study we will apply the Caffrey & Isaacs model and its reconceptualization by Jeremiah Ryan in 1981 to better fit the contextual conditions of community colleges. Also reflected are further refinements proposed by the Two-Year College Committee of the Eastern Association of College and University Business Officers (EACUBO) in 1989. In the following analysis an extremely conservative multiplier for postsecondary EIS models (1.82) was used and reflects the recommendation of the U.S. Department of Commerce’s list of final demand multipliers for the Lakeland-Winter Haven region (see also table below).



Model Components

This study includes six basic areas of projected college-induced economic impact upon the Lake Wales community:

1. Construction expenditures are projected for 18 months of construction time and it was assumed that about 10% of the total construction budget of \$4.6 million will be invested locally. Local expenditures of non-local contracts were estimated at a \$50 per diem rate per worker, including local operational expenditures by the employer (for gas, supplies, etc.). The right column shows the total economic impact using a multiplier of 1.82.

	Est. Expenditures	Total Impact
Local Construction Expenses	\$ 374,932	\$ 682,376.80
Disposable Income Local Labor	\$ 62,648	\$ 114,018.94
Local Spending by Non-Local Labor	\$ 217,800	\$ 396,396.00

2. Operational expenditures of PCC are shown in the table below and do not include payroll expenditures for staff and faculty. Since many supplies and other services are purchased college-wide, we applied the following proportions to arrive at the local spending within each category: 20% for Materials/Supplies and Utilities; 55% for Contract Services, and 35% for Other Services & Expenses.

	Total Annual Budget	Local Annual Share
Materials & Supplies	\$ 56,600	\$ 11,320
Contract Services	\$ 141,333	\$ 77,733
Other Services & Expenses	\$ 198,093	\$ 69,333
Utilities	\$ 56,870	\$ 11,374
Total Operational Expenditures	\$ 452,896	\$ 169,760

3. Employee expenditures reflect the local proportion of the total payroll. We expect that 65% of the 8 positions associated with proposed center can be filled locally. Since it is hard to project the local spending of commuters between campuses, we've omitted a respective estimate. The disposable income was established at 73.6% of the net pay.

	Total Annual Budget	Local Annual Share
Payroll	\$ 512,500	\$ 225,000
Disposable Income	\$ 165,699	\$ 107,704

4. Recurring local spending by students is based on a 60% proportion of local students and a 40% proportion of students from neighboring areas. Calculated expenditures are based on the Student Expense and Resources Survey (SEARS) by the *CollegeBoard*. To keep measures conservative, we've applied only fractions of the lowest average 9-month spending rate established (24% for residents and 15% for non-residents).

Student Cohort	N	Local Spending per Student per Year	Total Expenditures per Group per Year
Living In Area	315	\$ 2,319.75	\$ 730,721
Living in Neighboring Area	210	\$ 1,546.50	\$ 324,765

5. Estimated local spending by out-of-area visitors to students and events is based on very conservative per diem rates and a careful estimate of site utilization for meetings and community and college events. Out of area proportions have been assessed by using numbers based on similar events at other college facilities. Visitors to students have been only included for the local proportion of the annual student cohort based on the notion that local study activities lead to more time spend locally, which in return leads to additional opportunities for out-of-area visitors. Staying conservative we assumed an additional visit from 2 people once a year or one person twice a year in this calculation.

EVENT	Annual N of Events	Attendees per Event	% Out of Area	Average Spending per Day	Totals per Event Category
College Events	5	120	65%	\$ 10	\$ 3,900
College Meetings	10	20	80%	\$ 5	\$ 800
Community Meetings	12	40	20%	\$ 5	\$ 480
Visit to Students	315	2	100%	\$ 35	\$ 44,100

6. Economic contributions as earning power of local alumni are mainly recognized via the annual income difference between a 2-year college graduate and a high-school graduate. We've used a \$15,152 income differential established for 2003 since later & higher estimates recently came under suspicion to be somewhat inflated. The current estimate is based on a 24% rate of AA graduates remaining local and does not include those that might receive a 4-year degree with an even higher income differential. Furthermore, we assumed that only 25% of the income differential will be fully realized during any given year. This leads to an average annual economic contribution of local PCC alumni of \$3,788 per capita. Accumulative effects over time are not included!

Annual Income Gap Based on Initial Quarterly Earnings					
Alumni	HS Graduate	AA Grad.	Difference	Applied Difference	Annual Total
126	\$ 16,092	\$ 31,244	\$ 15,152	\$ 3,788	\$ 477,288.00

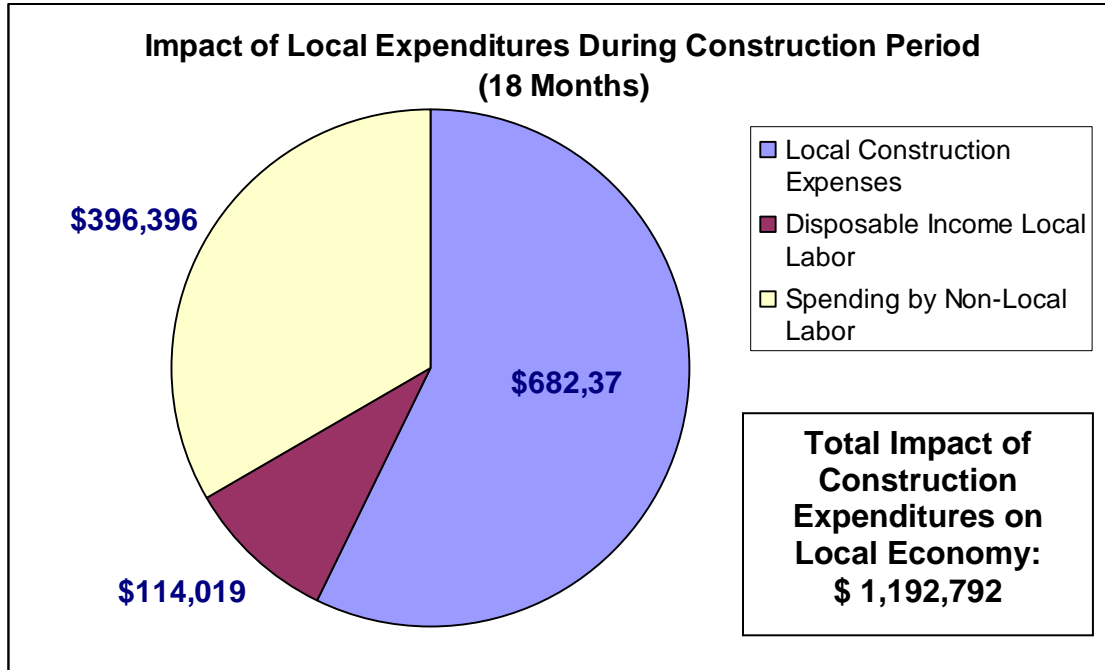
Statistical Summary

After having established baseline or initial spending values for the key measures of PCC's potential economic impact in Lake Wales, the *Total Impact* (table below) of each component can be calculated by applying a local multiplier of 1.82. The table shows also the *Initial Values* as the estimated amount of original spending and the *Multiplier Effect* as the additional value accumulated thru subsequent circulation of the *Initial Value*. Please note that this calculation has been done separately for the construction phase in *Section 1* of the previous chapter.

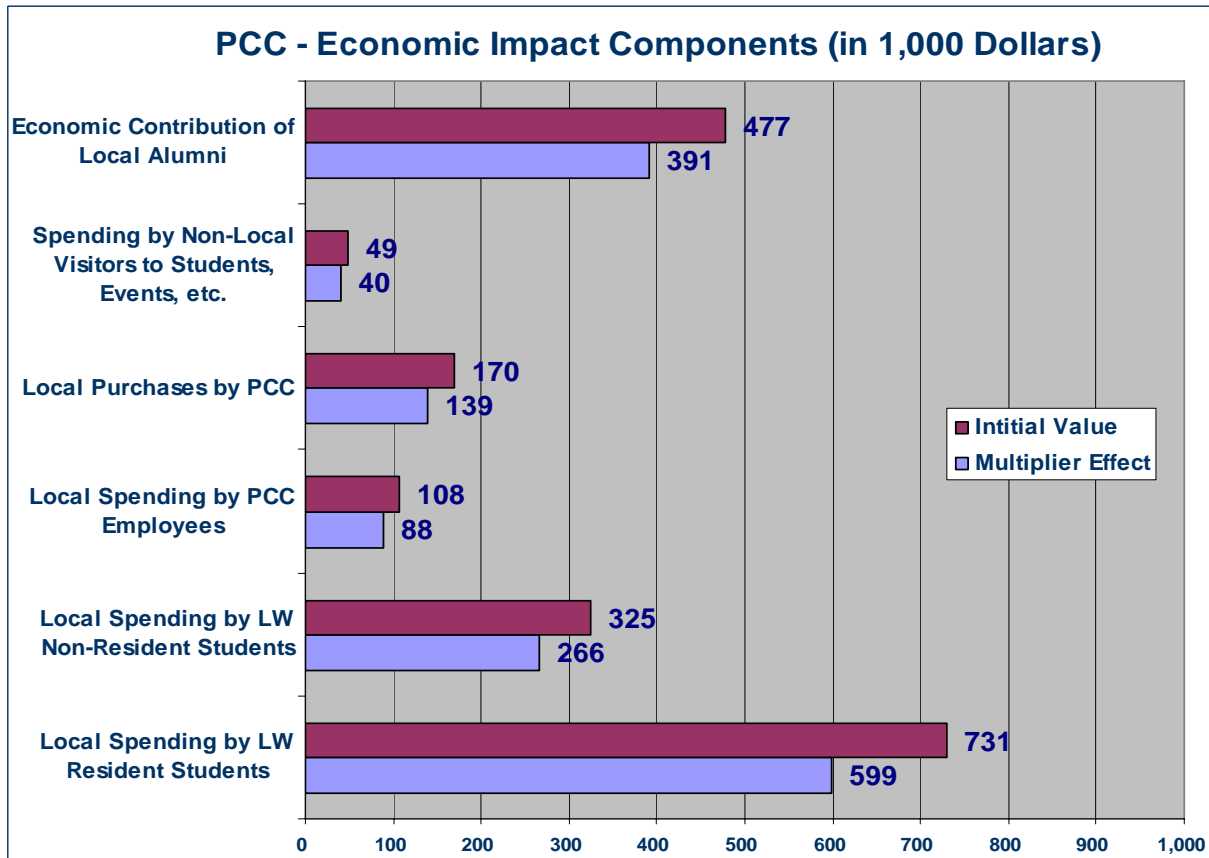
Category	Initial Value	Multiplier Effect	Total Impact
Spending by Local Students	\$ 730,721.25	\$ 599,191.43	\$ 1,329,912.68
Spending by Non-Local Students	\$ 324,765.00	\$ 266,307.30	\$ 591,072.30
Spending by PCC Employees	\$ 107,704.23	\$ 88,317.47	\$ 196,021.70
Local Purchases by PCC	\$ 169,759.70	\$ 139,202.95	\$ 308,962.65
Spending by Visitors to Students, Events, etc.	\$ 49,280.00	\$ 40,409.60	\$ 89,689.60
Economic Contribution of Local Alumni	\$ 477,288.00	\$ 391,376.16	\$ 868,664.16
Total	\$ 1,859,518.18	\$ 1,524,804.91	\$ 3,384,323.09

Data Charts

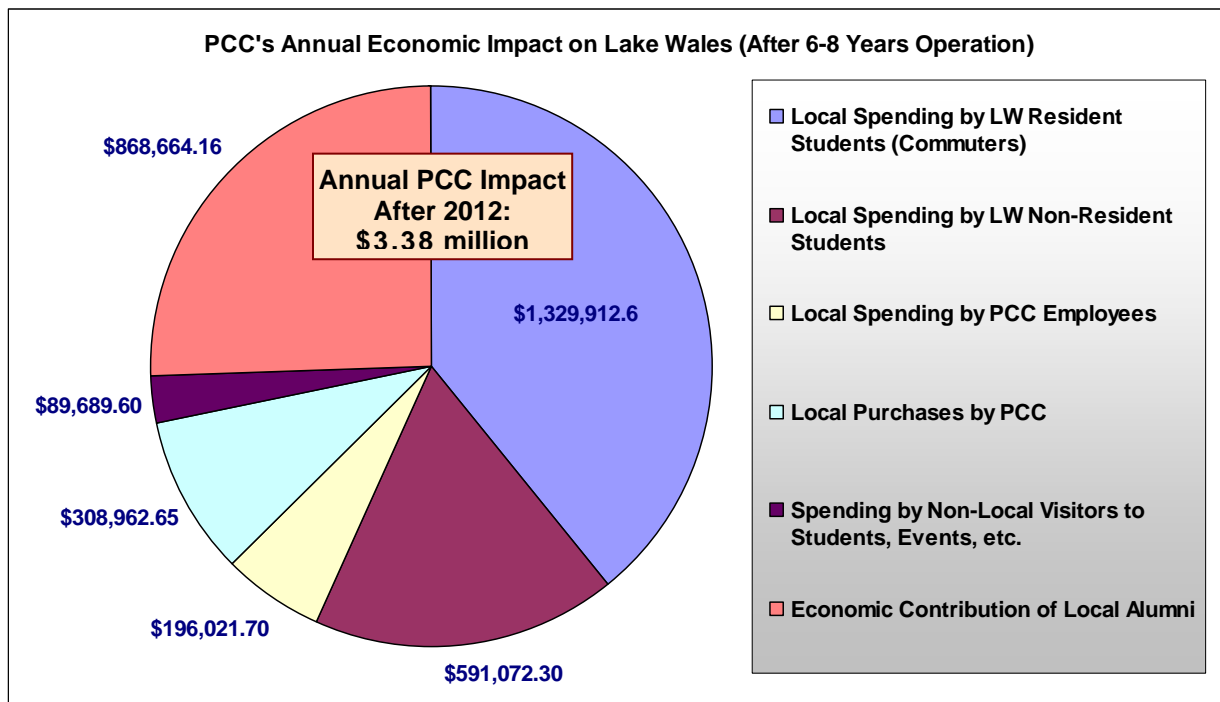
The chart below shows the estimated local economic impact during the construction phase.



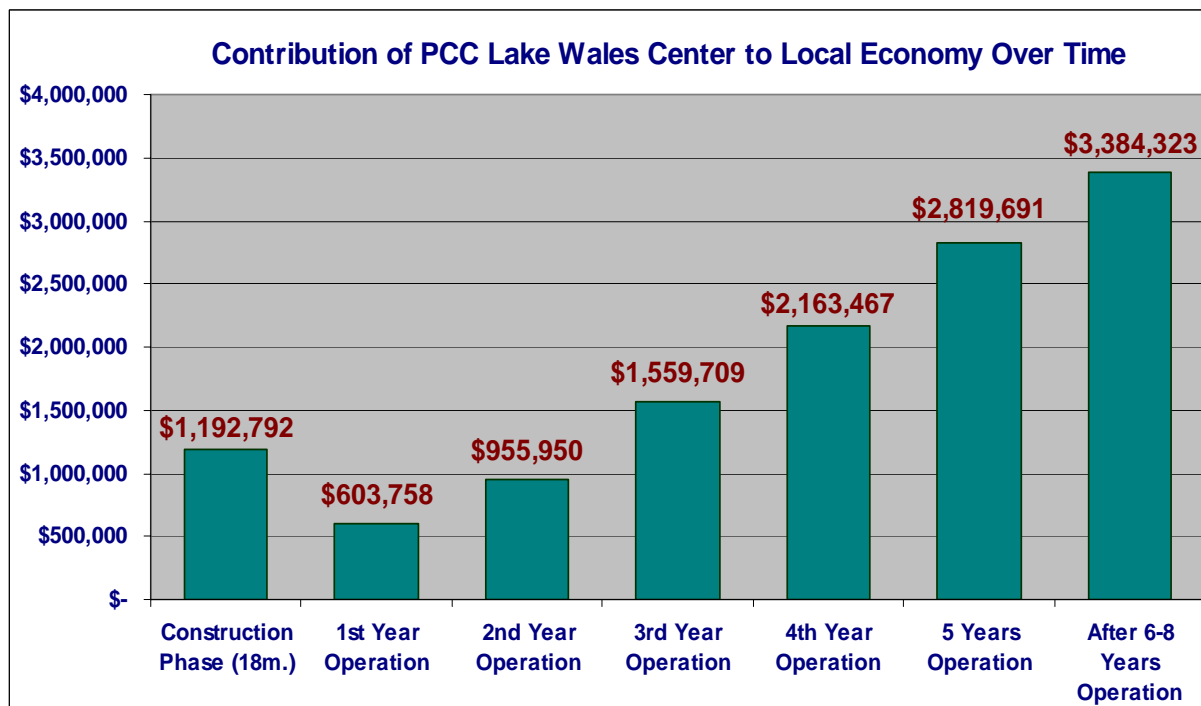
The next graph shows the initial amount paired with the multiplier portion in dollars of business volume for the local economy after the Center has started to operate at full capacity.



The sum of initial and multiplier effect into values that summarize the various aspects of the college's potential economic contribution to the local economy is shown in the pie chart below.



The last graph shows how the initial economic impact grows over time to arrive at the values above. This assumes that the Center will be operating at full capacity during the 5th year of operations. Please also view the disaggregated detail in the table on the next page



The data detail summarized in the previous graph is provided in the table below. Values for *Percent of Maximum Capacity* estimates are derived from the average enrollment projections for the respective year. Potential variations of associated costs that are not a linear function of student enrollment have been considered too insignificant to validate a different approach. Maximum enrollment and subsequent economic impact could be over 12% higher.

	Construction (18 months)	1st Year	2nd Year	3rd Year	4th Year	5 Years	After 6-8 Years
Average Annual Student Headcount	-	125	200	325	450	525	525
Percent of Maximum Capacity	0%	24%	38%	62%	86%	100%	100%
Local Spending LW Resident Students		\$ 319,179	\$ 505,367	\$ 824,546	\$ 1,143,725	\$ 1,329,913	\$ 1,329,913
Local Spending Non-Resident Students		\$ 141,857	\$ 224,607	\$ 366,465	\$ 508,322	\$ 591,072	\$ 591,072
Local Spending by PCC Employees		\$ 47,045	\$ 74,488	\$ 121,533	\$ 168,579	\$ 196,022	\$ 196,022
Local Purchases by PCC		\$ 74,151	\$ 117,406	\$ 191,557	\$ 265,708	\$ 308,963	\$ 308,963
Spending by Non-Local Visitors		\$ 21,526	\$ 34,082	\$ 55,608	\$ 77,133	\$ 89,690	\$ 89,690
Economic Contribution of Local Alumni						\$ 304,032	\$ 868,664
Total	\$ 1,192,792	\$ 603,758	\$ 955,950	\$ 1,559,709	\$ 2,163,467	\$ 2,819,691	\$ 3,384,323

As a result we find that the aggregate economic impact of PCC on the Lake Wales economy could be very substantial and is estimated to grow annually by a significant amount to reach \$3.38 million after 2012. This business volume is also associated with a total additional employment of potentially over 50 jobs (8 at PCC, 47 in other industries) as a result of PCC's presence in the local economic value chain.

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