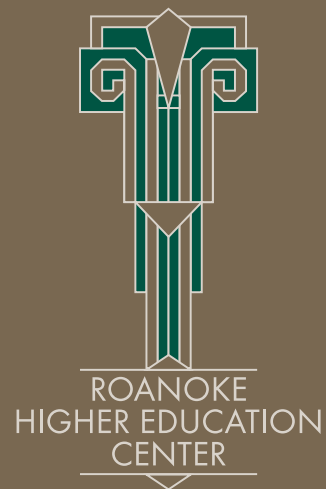




THE ECONOMIC IMPACT OF THE ROANOKE HIGHER EDUCATION CENTER ON THE REGIONAL ECONOMY



Roanoke
Valley
Alleghany
Regional
Commission

PREPARED BY
THE ROANOKE VALLEY ALLEGHANY REGIONAL COMMISSION
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E X E C U T I V E S U M M A R Y

The Roanoke Higher Education Center opened ten years ago with a vision of serving the workforce training and higher learning needs of the region by providing the region's residents with convenient access to educational opportunities.

The opening of the Center was the culmination of ten years of efforts to meet workforce training and higher learning needs in the Roanoke region and a capital campaign that resulted in over \$19 million of local, state, federal, historic tax credits, and private capital to renovate the former Norfolk and Western Railroad headquarters. Since opening, 5,901 students have completed programs offered by the institutions operating in the Center. The Center itself has become a catalyst for downtown redevelopment and for the revitalization of the Gainsboro neighborhood.

With its ten year anniversary approaching, the Center commissioned this study by the Roanoke Valley – Alleghany Regional Commission to quantify the economic benefits and overall contribution to the region of its annual operation. Staff of the Roanoke Valley – Alleghany Regional Commission worked with staff from the Roanoke Higher Education Center to field an institutional survey and surveys of current students as well as alumni. The results were used to derive an estimated direct impact that was then entered into a regional input-output model to determine the indirect and induced impacts represented by the economic stimulus introduced by the RHEC.

The Roanoke Higher Education Center and the operations of its institutional members directly support 103.1 jobs throughout the regional economy. The induced and indirect impacts add an additional 35.4 jobs. The total impact of the Center's operations and those of its institutional members represents a \$13.4 million dollar impact on regional sales (output).

The spending of students induced through participation at the Center's programs adds an additional \$2.3 million and supports roughly 35 service sector jobs.

Finally, the survey sought to quantify the increase in personal earnings attributable to completion of one of the Center's academic programs. The spending of these increased earnings among alumni who remain in the region contributes an additional \$16 million and over 135 jobs.

The total impact is an annual stimulus of nearly \$32 million. This activity supports nearly 310 jobs earning an average of \$35,142 per year. This is quite an impressive impact considering that it is generated from a base of \$9 million, which represents the total budget of the Center and the budgets of its institutional member's operations within the Center.



I N T R O D U C T I O N

Ten years ago, the Roanoke Higher Education Center opened its doors to its first class of students. The opening of the Roanoke Higher Education Center was the culmination of over ten years of efforts to meet workforce training and higher learning needs in the Roanoke region. A total of \$19 million from state, local government, federal and state historic tax credits, and private capital were used to transform the former headquarters of the Norfolk and Western Railroad, a 1931 Art Deco building, into a state-of-the-art facility for learning.

Programs at the Roanoke Higher Education Center serve a variety of people each with their own educational goals from adults needing job training and retraining and lifelong learning opportunities to undergraduate and graduate instruction.

The Roanoke Higher Education Center has been a cornerstone of downtown development and revitalization of the historic Gainsboro Neighborhood. It is a key asset in the region's overall economic development strategy.

With its ten year anniversary approaching, the Center commissioned this study by the Roanoke Valley – Alleghany Regional Commission to quantify the economic benefits and overall contribution to the region of its annual operation. Staff of the Roanoke Valley – Alleghany Regional Commission worked with staff from the Roanoke Higher Education Center to field an institutional survey and surveys of current students as well as alumni. The results were used to derive an estimated direct impact that was then entered into a regional input-output model to determine the indirect and induced impacts represented by the economic stimulus introduced by the RHEC.

The following pages seek to quantify the impact and contributions of the Roanoke Higher Education Center upon the Roanoke Region.

M E T H O D O L O G Y

Surveys were produced by the Roanoke Higher Education Center and by the Roanoke Valley – Alleghany Regional Commission working collaboratively. The Roanoke Higher Education Center led efforts to develop the institutional survey and the Roanoke Valley – Alleghany Regional Commission staff primarily undertook development of student and alumni surveys. The institutional survey was distributed by Roanoke Higher Education Center staff to its members directly providing educational services within the Center's structure. Members were asked to report financial and enrollment information. Members were also asked to promote completion of the student and alumni surveys through their mailing lists.

Institutional surveys were completed by Averett University, Bluefield College, James Madison University, Hollins University, Mary Baldwin College, Old Dominion University, Radford University, TAP/This Valley Works, the University of Virginia, Virginia Tech, Virginia Western Community College. In addition, 193 responses were collected from program completers at the Higher Education Center, and 262 responses were collected from current students of the Center.

The study area for this analysis was defined as the Roanoke Metropolitan Statistical Area, which is composed of the Counties of Botetourt, Craig, Franklin, and Roanoke; and the Cities of Roanoke and Salem.

Survey responses from institutions were used to determine the amount of funds attracted from outside the region by the institutional members. Budgets for members whose main locations are outside the MSA were included in the direct effect because attendance by local students in these schools amounts to import substitution in that those individuals are spending local dollars on higher education services locally that would otherwise leave the region if the Center were not operating. Survey responses from alumni were analyzed specifically to determine the increase in wages experienced by those who took advantage of educational programs at the Center. Survey responses from current students were analyzed to determine direct spending impacts on local businesses in the retail and service sectors directly as a result of attendance in programs at the Center.

The IMPLAN economic impact model for the Roanoke Metropolitan Statistical Area (using 2007 IMPLAN data for the study region and utilizing Social Accounting Matrix multipliers) was employed to estimate the amount of regional economic activity originating and resulting from operation of the Roanoke Higher Education Center.

IMPLAN (IMPact Analysis for PLANning) is an economic input-output modeling software package first developed jointly by the University of Minnesota and the US Forest Service in the 1970's and later expanded upon by the Minnesota IMPLAN Group. The modeling software and the IMPLAN proprietary data set is currently maintained by the Minnesota IMPLAN Group, a private company based in Stillwater, Minnesota. IMPLAN is widely used by a number of universities, economic consultants, economic development professionals, and others involved in estimating economic impacts of programs and events. IMPLAN models the flow of expenditures through industries and institutions of a regional economy that result after an initial economic stimulus is made in a given economy. More information on the IMPLAN model and data set can be obtained at <http://www.implan.com>.

S U M M A R Y R E S U L T S

The institutional survey was conducted by the Roanoke Higher Education Center. The student and alumni surveys were both conducted electronically and promoted by each member of the Center.

The eleven participating institutions reported 2010 budgets totaling \$6,663,527. The Roanoke Higher Education Center also has an operating budget for administration of the Center and its functions apart from those served directly by the member institutions. The Center's 2010 budget totals \$2,317,272. This brings the total budgets to \$8,980,799 in 2010.

There are many sources which constitute the budgets of the Center's institutional members. Approximately, \$4,805,969 is from tuition payments, \$444,494 is from state sources, \$814,000 is from federal sources (this amount is mostly from job training funding programs), \$599,064 is from miscellaneous other sources.



The Center's own operating budget also is made up of a variety of sources. Operating revenues which are mostly member leases, facility usage fees, and miscellaneous services totals \$1,120,341. The non-operating revenues which are a mix of public support and investment income totals \$1,196,931.

The following table is a summary of the budget information. The budget items that were deemed local recirculation were totaled separately from outside funds (state, federal grants) and from amounts deemed to be representative of local import substitution activity¹.

BUDGET SUMMARY	
Member Budgets	\$6,663,527
RHEC Operating Budget	\$2,317,272
Total RHEC Budgets	\$8,980,799
Local Recirculation	\$2,153,129
Outside Funds	\$2,453,687
Local Import Substitution	\$4,373,983
Total Budget to be Counted	\$6,827,670
Students Attending Per Term	2,900

¹ Those institutions located outside of the immediate study area which also operate in the Roanoke Higher Education Center allow local residents to utilize of higher educational services locally rather than traveling to another region to utilize those same services. This "import substitution" activity is enabled solely by the operation of the Roanoke Higher Education Center and are therefore counted towards the Center's impact.

In regards to employment, the institutions reported employment of 26 full-time professionals and 16 part-time professionals working in their offices at the Center. Note that this does not reflect full and part-time staff of the Center itself nor does it reflect all faculty which may split time between the main campus and the Higher Education Center and, thus, are partly supported by the operations at the Center.

Institutions were asked to report enrollment for their 2009 year. The results are summarized in the tables below. On average, 2,860 students attend the fall and spring term, and 907 attend summer term. The average enrollment for all three terms is 2,209 students. Students at the Center completed 5,163 credit hours per term on average between fall, spring, and summer term.

ENROLLMENT SUMMARY	
Spring 2009	3,076
Summer 2009	907
Fall 2009	2,645
Average	2,209

Students were surveyed as to their spending behaviors associated with their attendance at the Higher Education Center. Students were asked, for instance, for an average weekly expenditure on meals, snacks, and parking that result solely as a result of attendance at the Center. Students were also asked for annual average expenditures on supplies and electronics in local retail establishments.

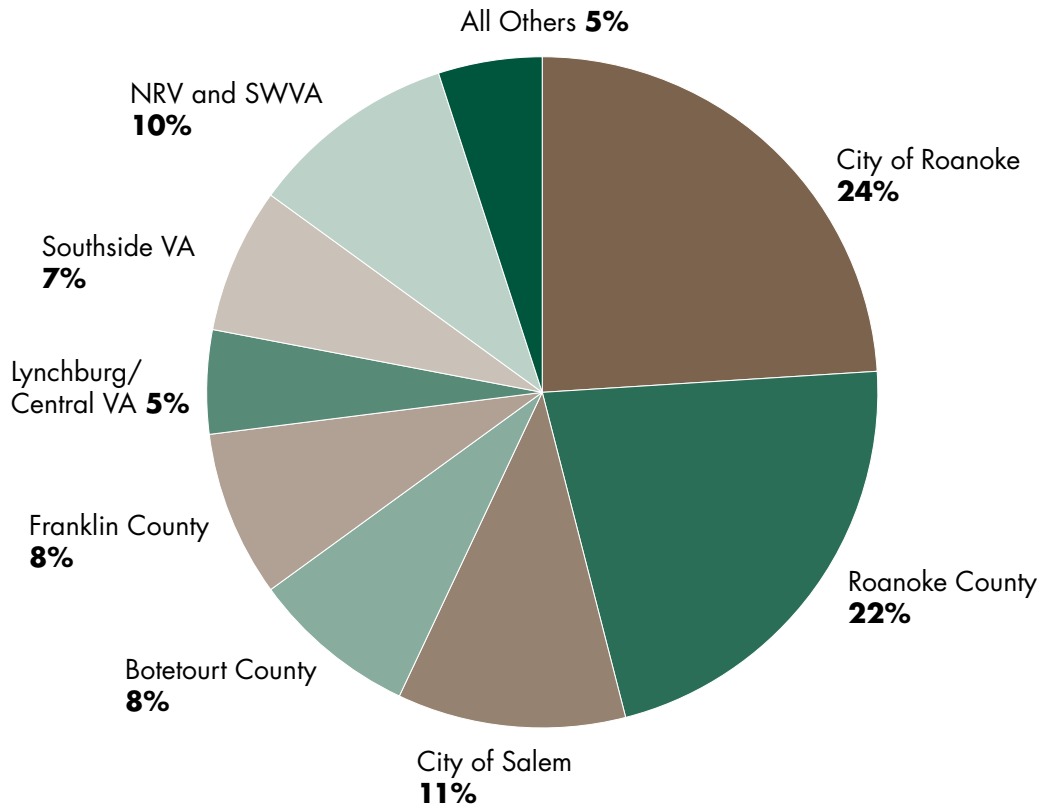
The following are average annual spending figures per student. These figures were used as direct inputs into the model².

ANNUAL AVERAGE DIRECT SPENDING BY STUDENTS SURVEYED	
Spending Category	Annual Spending Per Student
Supplies	390
Beverages	247
Snack Foods	252
Meals	773
Parking	215

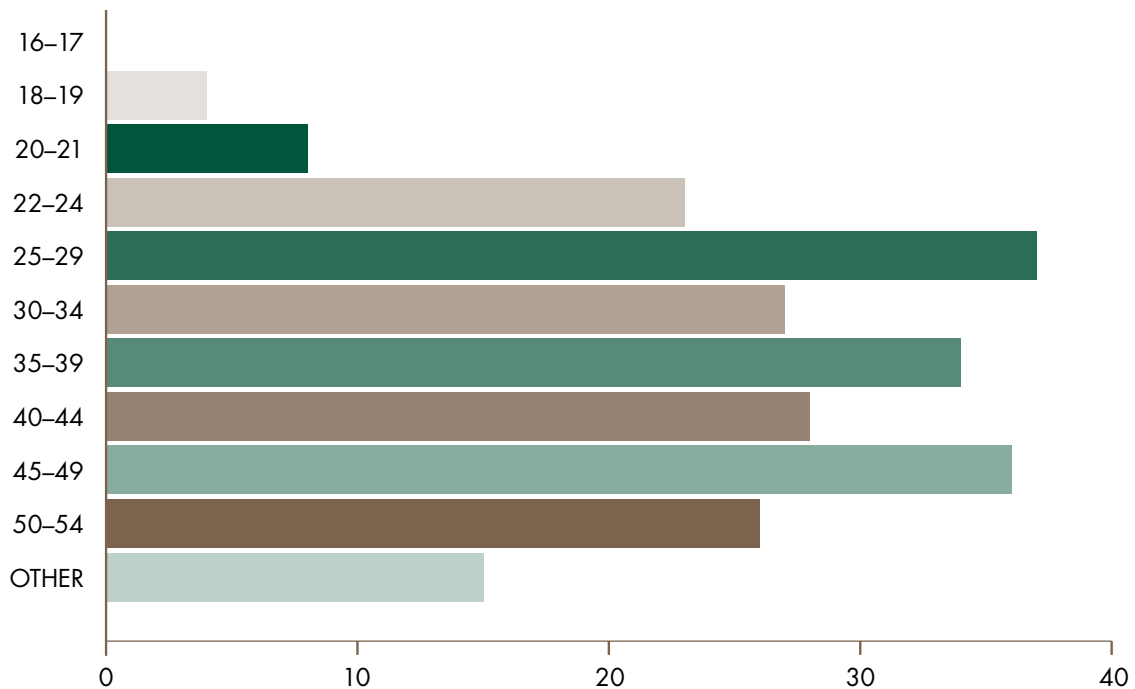
Students were also surveyed as to their locality of residence and their age. As expected, most students are from the localities within the Roanoke Metropolitan Statistical Area. And, as one might expect, the ages of students skew higher than many higher educational institutions' traditional populations given the Center's focus on providing job training and additional educational opportunities for career professionals in addition to serving the traditional college student.

² Please note that all retail-based transactions were margined. That is to say that only the retail margin was included in the model as an input since the actual manufacturing and much of the good's transportation cost occurs elsewhere and, therefore, is a form of leakage and is not an impact felt locally.

RHEC STUDENT: LOCALITY OF RESIDENCE



WHAT IS YOUR AGE CURRENTLY?



Alumni were surveyed in regards to age upon completion of their chosen program at the Center, their locality of residence upon entering the Center and upon completing their program at the Center, and finally increases in income as a result of completing their program.

Interestingly, 62% lived in the Roanoke Metropolitan Statistical Area while attending classes at the Center. The remaining students lived in the New River Valleys, Alleghany Highlands and Lexington/Rockbridge region, and the Southside region of Virginia with only a very few students living in far Southwest Virginia. The same group of alumni reported on their current locality of residence. Currently, 55.4% live in the Roanoke MSA. Nearly 5% now live out of state and a significant proportion now live further away in other metropolitan areas in the Commonwealth of Virginia.

A majority of alumni reported that they completed their degree between the ages of 35 to 39. Alumni reported on increased wages as a result of completing their program of study at the Roanoke Higher Education Center. In general, it was found that among those who completed teacher licensure at the Center, salaries increased an average of \$14,000 per year. Those who completed bachelor's degrees saw an average increase in wages of \$17,477. Those who completed Master's and Doctorate degrees saw increased per annum wages of \$10,145 and \$16,166 respectively.

Applying these survey-derived averages to the total number of completers at the Higher Education Center since 2001 shows that wages have increased an estimated \$35 Million per year as a result of the Center's programs. Further adjusting this number by the proportion of alumni surveyed who live in the MSA results in an estimate of \$19.7 Million in the study region each year.

	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	TOTAL	AVG. SALARY INCREASE	TOTAL INCREASED ANNUAL INCOME
High School Diplomas	0	0	0	3	3	0	0	0	0	6	NA	NA
GEDs	102	105	85	92	93	76	68	89	77	787	NA	NA
Certificates	179	144	160	367	66	63	598	28	36	1641	NA	NA
Licensure	0	0	0	0	0	14	0	0	21	35	14,266	49,9310
Associates	0	11	3	142	138	201	198	183	160	1036	NA	NA
Bachelors	37	66	115	186	151	237	230	228	225	1475	17,477	25,778,575
Masters	34	97	140	88	104	92	96	136	102	889	10,145	9,018,905
Education Specialist	0	0	10	1	8	4	0	9	0	32	16166	517,312
Total	352	423	513	879	563	687	1190	673	621	5901	12711	35,814,102
Adjust by 55% Current Estimated Residence												19,697,756

E C O N O M I C I M P A C T

Three components of economic impact were considered in completing this report. First, the budgets of the Roanoke Higher Education Center and its institutional members were compiled and examined for either outside funds attracted to the region or evidence of import substitution. Second, the spending of current students on local goods and services that is induced as a result of attendance at the Center was considered. Finally, we sought to examine increases in household spending as a result of increased wages made possible through completion of a degree at the Center.

Please note that all figures are figured on an annual basis. In other words, the impacts quoted are not simply one-time impacts but occur each year. Of course, impacts may vary slightly from year to year depending upon budgetary adjustments and changes. These figures reflect the 2009–2010 academic year at the Center.

The following is an impact table reflective of the Center’s budget and those of its members alone.

IMPACT TYPE	EMPLOYMENT	LABOR INCOME	VALUE ADDED	OUTPUT
Direct Effect	103.1	\$3,827,338	\$4,344,842	\$8,980,799
Indirect Effect	17.5	\$717,231	\$1,392,556	\$2,343,577
Induced Effect	17.9	\$645,124	\$1,224,780	\$2,093,626
Total Effect	138.5	\$5,189,693	\$6,962,178	\$13,418,002

It is estimated that the Center and its institutional members support an estimated 103.1 jobs³. An additional 35.4 positions are supported through the region’s economy as a result of indirect and induced spending⁴. There is an estimated increase of value-added, which is best explained as new regional wealth or profits, of roughly \$6.9 Million and the total impact on sales revenues (output) throughout the region is roughly \$13.4 Million.

The following impact table is the result of entering direct student spending into the model for analysis.

IMPACT TYPE	EMPLOYMENT	LABOR INCOME	VALUE ADDED	OUTPUT
Direct Effect	28.8	\$516,028	\$805,825	\$1,611,711
Indirect Effect	3.0	\$141,735	\$237,834	\$425,827
Induced Effect	2.8	\$99,494	\$188,890	\$322,888
Total Effect	34.6	\$802,257	\$1,232,549	\$2,360,425

Spending by students of the Higher Education Center on snacks, drinks, meals, and supplies contributes an additional \$2.4 Million to the regional economy and supports roughly 35 jobs.

³ Please note that this total includes full and part-time positions, faculty which might spend only a portion of their total instructional time at the center, and also some contract services which might be supported through the budgets including security services, janitorial staff and maintenance, etc.

⁴ Please note that direct impacts are those that result from the direct infusion of funds into the region (in this case the budgets of the Center and its members). Indirect impacts are those impacts that result from suppliers to the Center and its members spending and hiring in the regional economy. Finally, induced impacts result from household spending (employees of the Center, its members, and its suppliers) making household purchases in the regional economy. Successive rounds of spending are included in the indirect and induced phases until leakage is 100% and no spending remains in the local economy.

The following table is an estimate of increased household spending as a result of increased wages after completion of academic programs at the Center.

IMPACT TYPE	EMPLOYMENT	LABOR INCOME	VALUE ADDED	OUTPUT
Direct Effect	99.1	\$3,412,321	\$6,692,511	\$11,331,620
Indirect Effect	20	\$878,741	\$1,523,124	\$2,695,650
Induced Effect	16.9	\$610,975	\$1,159,955	\$1,982,814
Total Effect	136	\$4,902,037	\$9,375,590	\$16,010,084

The increased wages directly support 99 jobs and result in an increase in local revenue of \$11.3 Million. The total impact of increased spending is an approximated \$16 Million annually which supports 136 jobs in the economy each year.

The following table is the summary impact table and includes all three components of impact analyzed. It is best interpreted as an estimated annual impact on the local economy.

IMPACT TYPE	EMPLOYMENT	LABOR INCOME	VALUE ADDED	OUTPUT
Direct Effect	231	\$7,800,687	\$11,843,178	\$21,924,130
Indirect Effect	41	\$1,737,707	\$3,153,514	\$5,465,054
Induced Effect	38	\$1,355,593	\$2,573,625	\$4,399,328
Total Effect	310	\$10,893,987	\$17,570,317	\$31,788,511

In total, the Roanoke Higher Education Center, through its operations, the spending of its students, and the spending of alumni who remain in the region, generates \$32 Million in annual sales activity and supports nearly 310 jobs earning an average of \$35,142 per year. This is quite impressive considering that this annual impact is generated from a base annual budget of \$9 Million (of the Center and its member institutions).

The economic impact analysis provided in this report was generated using an economic impact model calibrated for a specific study area using standard regional data sets. The results are to be interpreted as a best estimate of economic impact based on the assumptions and/or data provided by the client.

The Roanoke Valley – Alleghany Regional Commission does not guarantee the accuracy of data or assumptions supplied by the client or of any other source, nor does it advocate or guarantee the success of any particular policy change, course of action, or any decision that may be ultimately based on the information in this report.

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