

The Economic Impact of the College of Business at East Carolina University



Technical Report for Fiscal Year 2022 – 2023

Study conducted by:

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Executive Summary

The purpose of this study is to quantify the economic impact of the College of Business (COB) at East Carolina University (ECU). The primary drivers of the college's economic impact include the direct impacts of COB expenditures on local, regional, and state economies; the impacts produced by the increased incomes of COB graduates; and the added value of student projects on local, regional, and state businesses. The study finds that the COB creates a statewide economic impact of more than \$118 million. Considered in relation to the COB's annual expenditure of almost \$25 million, the COB is yielding an economic return of approximately 372%.

Key Findings

Impact of COB Expenditures: In the 2022-23 fiscal year, COB's total expenditure of \$24,614,137 significantly influenced the local, regional, and state economies. This study reveals a direct economic output of \$31.7 million and an indirect/induced output of approximately \$38.2 million, resulting in 221 new jobs and \$10.7 million in personal salaries for North Carolina residents.

Gains in Income from Earned Degrees: COB graduates' degrees translate into higher incomes, with a Bachelor's degree contributing approximately \$30,000 more annually compared to those with only a high school diploma, and a Master's degree adding an extra \$11,000 per year compared to Bachelor's degree holders. COB graduates collectively generate an estimated \$34.7 million in additional spending power.

Economic Impacts of COB Graduates: Assuming that COB graduates spend their increased income within North Carolina, the study projects substantial positive impacts on local, regional, and state economies. These impacts include an increased GDP of \$34.2 million, additional personal income of \$9 million, and the creation of 212 new jobs at the local level.

Economic Impact of Student Work Projects: COB's student work projects, involving 1,961 students and faculty, add significant value to the community. The projects generate an estimated \$1.7 million in added value for local businesses and organizations.

About East Carolina University

East Carolina University is a public research university located in Greenville, North Carolina. Founded in 1907 as a teacher training school, it has since evolved into a comprehensive university with a diverse range of academic programs and a strong commitment to education, research, and community engagement.

ECU's main campus is situated in Greenville, a city in the eastern part of North Carolina. The campus spans over 1,600 acres and includes a mix of historic and modern buildings. ECU offers over 100 undergraduate programs, more than 70 master's programs, and several doctoral programs, including those in education, health sciences, engineering, business, and the arts and sciences.

ECU is classified as a research university with high research activity (R2) by the Carnegie Classification of Institutions of Higher Education. It supports a wide range of research initiatives, including those related to health disparities, business, coastal studies, engineering, and more.

About the College of Business

The College of Business at East Carolina University has had a significant impact on various stakeholders, including students, faculty, the local community, and the business sector at large. The COB is deeply connected to its community and is committed to outreach and service. The college plays a significant role in the economic development and well-being of eastern North Carolina through various initiatives and partnerships.

The COB offers state-of-the-art facilities, including modern classrooms and research labs. The COB is home to the Miller School of Entrepreneurship and the Isley Innovation Hub. The Miller School is ranked in the top 40 of the Princeton Review's list of entrepreneurship programs. The Isley Hub features 15,000 square feet of ideation and makerspace and is the only place on campus that brings together students to develop ideas, create early-stage prototypes, identify potential team members, and connect with additional entrepreneurial resources.

The college has a strong and active alumni network of more than 30,000 graduates spanning various professions and industries. Many graduates go on to have successful careers and continue to contribute to their communities.

Here are some areas where the College of Business has made an impact:

Education and Student Development: The COB delivers a quality education and equips students with the knowledge and skills necessary to succeed in the business world. It offers a wide range of undergraduate and graduate programs, including majors in accounting, finance, marketing, management, and more. The college's curriculum emphasizes experiential learning, internships, and professional development opportunities, preparing students for their future careers.

Research and Innovation: The COB fosters research and innovation. Faculty members engage in cutting-edge research, contributing to advancements in various business disciplines. This research enhances the knowledge base in fields like entrepreneurship, supply chain management, information systems, among others. The college's research endeavors also create opportunities for collaboration with industry partners, promoting innovation and economic growth.

Partnerships with the Business Community: The COB collaborates closely with the local business community, building strong partnerships with industry leaders, organizations, and alumni. These connections provide students with valuable networking opportunities, internships, and job placements. The college's advisory boards, composed of business professionals, offer insights and guidance, ensuring that the curriculum remains relevant and aligned with industry needs.

Entrepreneurship and Economic Development: The COB actively supports entrepreneurship and economic development initiatives. It provides resources, mentorship, and support to aspiring entrepreneurs through programs such as the Miller School of Entrepreneurship. By nurturing innovative ideas and fostering an entrepreneurial mindset, the college contributes to the growth of local businesses, job creation, and overall economic prosperity.

Community Engagement and Outreach: The COB is committed to giving back to the community. Faculty, staff, and students participate in outreach programs, volunteer activities, and community partnerships. Through initiatives such as financial literacy programs, consulting services for local businesses, and workshops for entrepreneurs, the college contributes to the development and well-being of the community.

Overall, the College of Business at East Carolina University has a positive impact on students, faculty, the local community, and the business world by providing quality education, fostering research and innovation, nurturing entrepreneurship, engaging with the business community, and actively participating in community outreach.

Study Objectives and Scope

This economic impact study aims to assess and quantify the various ways in which the COB contributes to the local, regional, and state economies. Examples of these contributions include Direct Economic Impact, Indirect Economic Impact, Induced Impact, Employment Effects, and Student Work Projects.

By achieving these objectives, this economic impact study provides COB stakeholders, including the college's administration, government entities, and the local community, with valuable insights into the economic significance and contributions of the college. It helps inform strategic decisions, resource allocation, fundraising, and policy development to maximize the positive economic outcomes associated with the college's operations.

The study analyzed data from the 2022-2023 Fiscal Year. The data were not restricted to a geographic region, but the state-level impacts were highlighted.

Methodology

To estimate the economic impacts of spending or additional income, IMPLAN (*IM* pact Analysis for *PLAN*ning) software was used. IMPLAN is a widely used academic, governmental, and corporate tool. IMPLAN's analytical method uses nationally normalized production functions and means-adjusted consumption functions based on national, state, and local economic and demographic data¹ to create input-output models. Economic activities in a region are typically a combination of direct or indirect spending by individuals and can be tracked through the Input-Output model. The expenditures of the COB on its employees have been estimated in order to identify the economic impact of the COB on the *output*, *income*, and *employment* in local, regional, and state economies. Similarly, the local, regional, and state-level economic impacts of the increased spending power of COB graduates as a result of their improved marginal incomes is also estimated in this report.

The regional economies are specified at the local² and regional³ levels based on the counties in the region served directly by ECU and the COB.

¹ The IMPLAN software obtains annual data from federal and state agencies such as the Bureau of Economic Analysis, Bureau of Labor Statistics, and the Bureau of the Census. The latest available data year is 2021 but the numbers in our analysis have been adjusted for 2023 values.

² Local Region: Beaufort, Craven, Edgecombe, Greene, Lenoir, Martin, Pitt, Wilson Counties

³ Regional (East North Carolina): Beaufort, Bertie, Bladen, Brunswick, Camden, Carteret, Chowan, Columbus, Craven, Cumberland, Currituck, Dare, Duplin, Edgecombe, Franklin, Gates, Granville, Greene, Halifax, Harnett, Hertford, Hoke, Hyde, Johnston, Jones, Lenoir, Martin, Nash, New Hanover, Northampton, Onslow, Pamlico, Pasquotank, Pender, Perquimans, Pitt, Robeson, Sampson, Scotland, Tyrrell, Vance, Wake, Warren, Washington, Wayne, Wilson Counties

Here are the types of effects estimated using IMPLAN:

Direct Effects

Direct effects are the set of expenditures applied to the Input-Output multipliers for an impact analysis. It is one or more production changes or expenditures made by producers/consumers as a result of an activity or policy. Direct effects can be positive or negative.

These initial changes are determined by an analyst and demonstrate the result of an activity or policy being analyzed. Applying these initial changes to the multipliers in IMPLAN will then display how a region will respond economically to them.

Indirect Effects

Indirect effects are the business-to-business purchases in the supply chain taking place in the region that stem from the initial industry input purchases. As the industry specified spends their money in the region with their suppliers, this spending is shown through the indirect effect.

Induced Effects

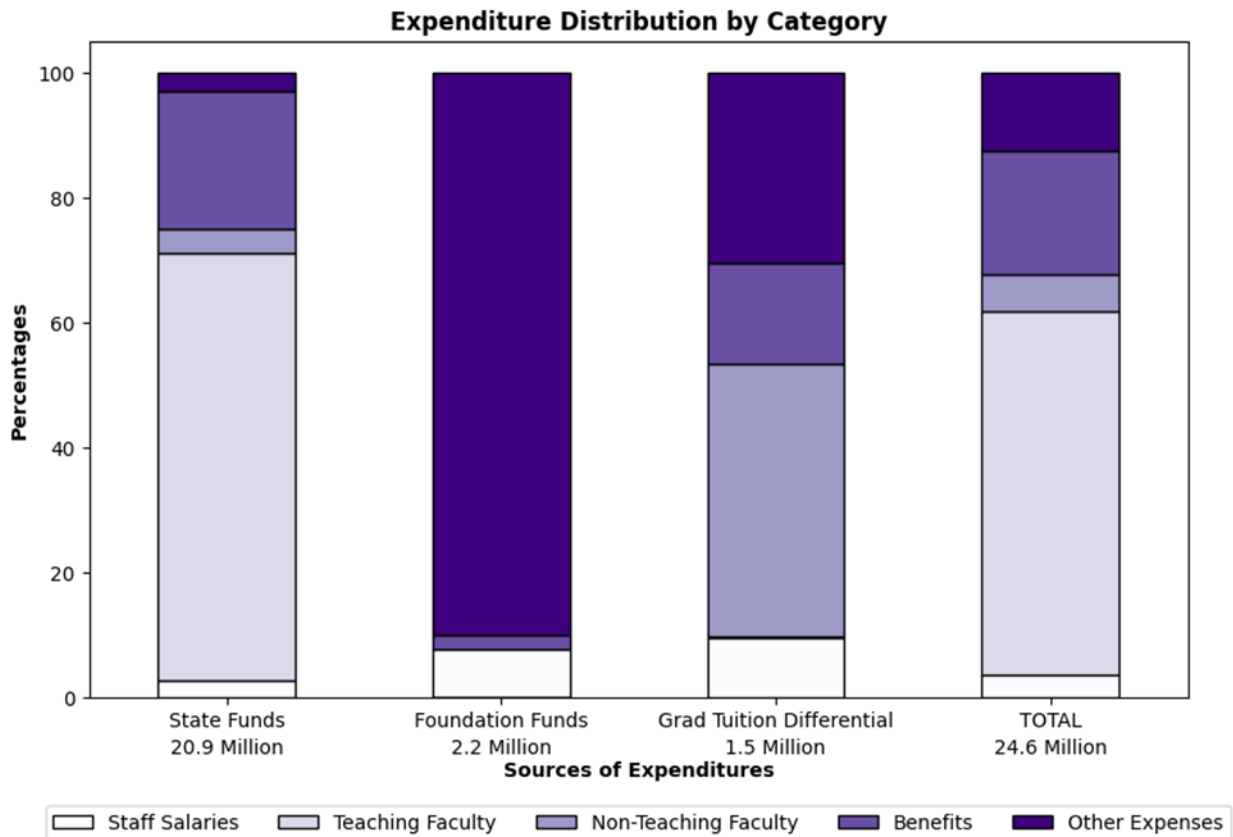
Induced effects are the values stemming from household spending of labor income, after removal of taxes, savings, and commuter income. The induced effects are generated by the spending of the employees within the business' supply chain.

Impact of Expenditures at the COB

For the fiscal year 2022-2023, total expenditures of the COB were \$24,614,137 of which Faculty Salaries, Staff Salaries, Non-teaching Salaries and Other Operational Expenses were the main categories. There were 130 faculty teaching in Fall and 136 teaching in Spring Semesters, 24 Non-Faculty in Fall and 23 in the Spring and a total of 15 staff members who worked both semesters. Based on these numbers the annual salaries can be estimated based on 136 faculty members, 24 non-faculty members, and 15 staff members who work in the COB. Figure 1 shows the distribution of the expenditures and Table 1 shows the Expected Economic Impact of the expenditures in the community, assuming that the 175 total employees are either locally or regionally living in North Carolina.

Based on the available data from the COB, there were a total of 175 employees who were paid a total of \$16,623,685 in personal income from ECU during the year 2022-23. By applying this information in the IMPLAN software, one can estimate how these employees spending their incomes in the local, regional, and state economies can create indirect or induced impacts that go beyond just the salaries. Their household expenditures in turn can set off a chain reaction that impacts the business sector with increased economic activity and employment. These impacts are measured in terms of output, additional employment generated, and additional incomes of other people because of the value added of their dollars in the economies.

Figure 1. COB Expenditure Distribution by Category for 2022-23



The net direct output from the \$16.6 million in salary expenditures by the COB is \$31.7 million and the total indirect or induced output in the local, regional, and state economies is around \$38.2 million. There is also an added benefit of 221 total new jobs as well as \$10.7 million in personal salaries of North Carolina residents, of whom the local residents see the largest growth with 46 new jobs and \$4.3 million in personal salaries.

Table 1. Total Expenditures and their Direct and Indirect Impacts

	TOTAL	Employee Numbers
Teaching Faculty	\$14,317,736	136
Staff Salaries	\$874,155	15
Non-Teaching Faculty	\$1,431,794	24
Other Expenses	\$7,990,452	
TOTAL	\$24,614,137	175

	Employment	Personal Income	Value Added	Output
Total Direct Impact	175	\$16,623,685	\$20,910,475	\$31,740,730
Indirect or Induced Impacts				
<u>Local Impacts</u>				
<i>Indirect</i>	46	\$1,900,665	\$3,228,494	\$8,034,615
<i>Induced</i>	55	\$2,408,868	\$4,735,382	\$8,333,359
<u>Regional Impacts (beyond local)</u>				
<i>Indirect</i>	5	\$452,391	\$1,165,044	\$1,803,332
<i>Induced</i>	22	\$1,415,278	\$2,649,433	\$4,494,457
<u>State Impacts (beyond Regional)*</u>				
<i>Indirect</i>	29	\$1,259,948	\$1,945,367	\$4,924,848
<i>Induced</i>	64	\$3,299,938	\$6,109,239	\$10,648,676
Total Indirect Impact	221	\$10,737,087	\$19,832,960	\$38,239,288

*State impacts are calculated as the difference between impacts for full state and the net difference between regional and local impacts.

Gains in Income from Earned Degrees

The Bureau of Labor Statistics publishes quarterly estimates of weekly earnings for employed full-time workers who earn wages/salaries, excluding incorporated self-employed workers in all industries and occupations in the United States. Based on this data, the estimated Annual Earnings for those with High School Diploma (or equivalent) only are \$44,356, for those with a Bachelor's Degree are \$74,464, and for those with a Master's degree or higher are \$86,372. This information is presented in Table 2. The marginal value of a Bachelor's degree is approximately \$30,000 per year (as compared to those that only have a High School Diploma) and the marginal value of a Master's degree is approximately \$11,000 per year (as compared to those that have a Bachelor's degree only). Note that annual earnings are based on expected salary increase over time versus starting salary.

Table 2. Median Usual Weekly Earnings in Current Dollars

	BLS Data*					
	Weekly for Q2 2023			Annual Estimates		
	Male	Female	TOTAL	Male	Female	TOTAL
High School Diploma	\$984	\$764	\$853	\$51,168	\$39,728	\$44,356
Bachelor's Degree	\$1,662	\$1,280	\$1,432	\$86,424	\$66,560	\$74,464
Master's or above	\$2,068	\$1,591	\$1,661	\$107,536	\$82,732	\$86,372

*<https://data.bls.gov/pdq/SurveyOutputServlet>

Degrees Awarded

Based on data provided by the COB, the number of graduates in fiscal year 2022-2023 in each of the degrees and majors are shown in Table 3. It is important to note that 33 students who were enrolled in dual degrees have been considered only once, and have been assigned the degree which is expected to have a higher wage return in the market.⁴ Moreover, those students that were enrolled in certificates have not been considered in this analysis. Of the 1273 unique graduates from the COB, 319 graduated with a Master's degree and the remaining 954 students obtained a Bachelor's degree. Within the Master's degrees, the MBA was the most popular degree with 82.1% of the students obtaining an MBA whereas the dominant major among the bachelor's degrees was Management (34.7%) followed by Marketing (24%) followed by the others.

Table 3. Bachelor's and Master's Degree Graduates 2022-23 from College of Business

Bachelor's Degrees		Students	Percentage
Entrepreneurship		27	2.8%
Finance		108	11.3%
Hospitality Management		47	4.9%
Management		331	34.7%
Management Accounting		84	8.8%
Management Information Systems		91	9.5%
Marketing		229	24.0%
Supply Chain Management		37	3.9%
TOTAL		954	
Master's Degrees			
MS in Sustainable Tourism and Hospitality		5	1.6%
MS in Accounting		52	16.3%
Master's in Business Administration (MBA)		262	82.1%
TOTAL		319	

An important factor to consider in the COB graduate dataset is the presence of individuals who are First Generation college graduates. The term "First Generation" refers to an individual whose parents (and grandparents) do not have a college degree. Of the 954 undergraduates that got their BS/BSBA degrees in 2022-23 at COB, 276 were First Generation graduates. The short-term and long-term economic impacts on these graduates go beyond just the increase in their incomes. For the sake of brevity, only their increased income has been considered in this analysis, but it is important to note that 29% of COB undergraduates are going to have a future for themselves and their families that is likely to be at a higher economic level than their parents or grandparents had.

Earnings

The marginal additional values can be calculated based on the estimates obtained in Table 1. However, with the dominance of the MBA degree in the COB, it is essential to take into account

⁴ Based on National Association of Colleges and Employers (NACE) data, the business majors associated with highest average starting salaries (and offered at COB) are Management Information Systems, Supply Chain, Finance, Accounting, Marketing, and Business Administration/Management, in that order. https://careers.unc.edu/wp-content/uploads/2022/02/NACE-Salary-Survey_Winter-2022.pdf

the market returns on an MBA as compared to other master's degrees. The National Association of Colleges and Employers (NACE) Survey indicates that the average MBA starting salary is around \$87,966⁵ whereas the US News & World Report estimates an average starting salary for MBAs to be around \$95,000 base and \$105,684 including bonuses⁶. One can compare the average salary for advanced degrees found in Table 2 and notice that the MBA has higher returns than the other Master's degrees. For the sake of remaining conservative with the estimates, it would not be unreasonable to estimate that the average earnings of a new MBA are \$95,000 per year, or about \$9,000 higher than the other master's degrees. There was one individual who had a double-master's degree and has been allocated to the MBA group since the MBA has a higher wage rate than the other Master's degrees.

To estimate the marginal contribution of the degrees that the students obtained from the COB, the difference in expected earnings from their current degree and the expected earnings from their previously earned degree can be estimated. The COB Bachelor's degree expected annual earnings were compared with the expected annual earnings for those who only have a High School Diploma (Table 2). The COB Master's in Accounting or Sustainable Tourism and Hospitality degrees expected annual earnings were compared with the expected annual earnings for those who only have a Bachelor's degree (Table 2). However, the Masters in Business Administration students were considered separately as shown in Table 4, based upon the observation that MBA degrees tend to have higher returns as compared to other master's degrees.

While the standard practice is to consider earnings after three years to avoid the potential downward bias of relatively low paid entry-level positions, given the uncertainty in the marketplace and the expectation that students might not necessarily live locally in the North Carolina area within or beyond three years, it is reasonable to consider the average growth of income for the current year. If one were to take the three-year estimates, it would actually make more sense to consider lifetime earnings options; but it can inflate the data and not help with calculating local or state-level impacts of the graduating class.

To estimate the spending by graduates, one can link the number of degrees obtained (Table 2) with the higher income associated with their degree (Table 4). The marginal value is calculated as the difference between degree earned and the earnings for prior degree held. The total gains (see Table 3, last column) are the product of the number of degrees conferred in the current year and their marginal values. The sum of these Total Gains is approximately \$34.7 million and represents the expected increased spending power of COB graduates which can have economic impacts on the locality, region, state, and even the nation.

⁵<https://www.naceweb.org/uploadedfiles/files/2021/publication/executive-summary/2021-nace-salary-survey-winter-executive-summary.pdf>

⁶ <https://www.usnews.com/education/best-graduate-schools/top-business-schools/articles/mba-salary-jobs>

Table 4. Average Expected Annual Earnings by Degree

Degree Attained	Graduates (#)	Expected		
		Annual Earnings	Marginal Earnings	Total Gains (marginal) x (#)
High School Diploma		\$44,356		
BSBA/BA	954	\$74,464	\$30,108	\$28,723,032
MS	57	\$86,372	\$11,908	\$678,756
MBA	262	\$95,000	\$20,536	\$5,380,432
				\$34,782,220

Economic Impacts of COB Graduates

Assuming that COB graduates spend their higher income (see Table 4) in North Carolina, one can estimate the indirect or induced positive impacts on the local, regional, and state economies by using the IMPLAN model. The assumption is that their consumption expenditures increase due to a higher marginal household income obtained as a result of getting their degrees. This in turn triggers a chain reaction of spending in the local or regional economies, creating more growth and generating employment opportunities for others as well. These impacts, in the form of *Output* (increased GDP), *Personal Income* (additional personal income generated for others in the area), and *Employment* (additional employment opportunities for others in the area) are aggregated and reported in Tables 5, 6, and 7 below.

Local Area

Output Effects: The additional \$28.7 million income earned by COB bachelor’s degree recipients in 2023 is expected to generate economic activity that yields around \$28.3 million in increased GDP for the local economy. The additional income from the Master’s degree recipients in the amount of \$678,756 and MBA recipients in the amount of \$5.4 million are expected to generate an additional GDP in the local economy worth \$668,315 and \$5.3 million, respectively. The combined local GDP effect of COB graduates is expected to be around \$34.2 million.

Table 5. Economic Impacts of AY2022-23 COB Graduates on the Local⁷ Economy

Graduates' Degree	Output	Personal Income	Employment
Bachelor's	\$28,281,205	\$7,446,173	175
Master's	\$668,315	\$175,961	4
MBA	\$5,297,668	\$1,394,826	33
LOCAL TOTAL	\$34,247,188	\$9,016,960	212

Income Effects: The additional spending power of the graduates also generates additional personal income for other people in the local economy (see Table 5, third column). The contribution of the Bachelor’s degree holders is an increase of \$7.4 million, of Master’s degree holders is an increase of \$175,961 and of MBA degree holders is an increase of \$1.4 million to others’ personal incomes in the economy. The combined local personal income effect of COB graduates is expected to be around \$9 million.

⁷ Beaufort, Craven, Edgecombe, Greene, Lenoir, Martin, Pitt, Wilson Counties

Employment Effects: Another method of quantifying the positive impacts of these 1273 new graduates is to estimate the number of new jobs that their increased spending power would generate or support in the economy. The Bachelor's degree holders are expected to generate or support 175 new jobs, the Master's degree holders are expected to generate or support 4 new jobs and the MBA degree holders are expected to generate or support 33 new jobs in the local economy for a total of 212 new jobs created.

Eastern North Carolina Region

The expected expenditure increase of COB graduates drives an increase in the Output, Personal Incomes, and Employment in the Eastern North Carolina Region. Table 6 indicates that the net effects of COB graduates in the Eastern North Carolina Region were an increased output of \$47.4 million, increased personal incomes of others by \$12.9 million, and increased employment opportunities of 267 new jobs⁸.

Table 6. Economic Impacts of AY2022-23 COB Graduates on the Regional⁹ Economy

Graduates' Degree	Output	Personal Income	Employment
Bachelor's	\$39,162,764	\$10,673,203	220
Master's	\$925,458	\$252,219	5
MBA	\$7,336,015	\$1,999,317	41
REGIONAL TOTAL	\$47,424,236	\$12,924,740	267

State of North Carolina

There are also statewide economic impacts arising from the increased expected incomes and subsequent spending patterns of COB graduates as seen in Table 7. The net addition to the state GDP is expected to be around \$45.7 million, to the personal incomes of North Carolina is expected to be around \$13.4 million and to the job market is expected to be around 250 jobs¹⁰.

Table 7. Economic Impacts of AY2022-23 COB Graduates on the State Economy

Graduates' Degree	Output	Personal Income	Employment
Bachelor's	\$37,790,083	\$11,105,773	206
Master's	\$893,020	\$262,441	5
MBA	\$7,078,883	\$2,080,346	39
STATE TOTAL	\$45,761,986	\$13,448,561	250

Summary Impacts of COB Graduates

Table 8 represents the summary of Tables 5-7. The expectation that COB graduates will spend their higher incomes in the NC economy, the outputs will increase by \$34 million in the local

⁸ Note that the regional estimates include the local estimates as well. In order to isolate the impacts, one can deduct the Local numbers from the regional estimates.

⁹ Beaufort, Bertie, Bladen, Brunswick, Camden, Carteret, Chowan, Columbus, Craven, Cumberland, Currituck, Dare, Duplin, Edgecombe, Franklin, Gates, Granville, Greene, Halifax, Harnett, Hertford, Hoke, Hyde, Johnston, Jones, Lenoir, Martin, Nash, New Hanover, Northampton, Onslow, Pamlico, Pasquotank, Pender, Perquimans, Pitt, Robeson, Sampson, Scotland, Tyrrell, Vance, Wake, Warren, Washington, Wayne, Wilson Counties

¹⁰ Note that the total number of the State benefits are lower than the regional economy. This can be explained as the result of expected contributions where the regional and local economy calculations take into account the use of the corresponding tax revenues to the regional/local economies directly.

economy, \$47 million in the regional economy, and \$45.7 million in the state economy. In addition to their own employment (1273 employed graduates), the higher spending will support other jobs as well as personal incomes of others at all levels of the economy.

Table 8. Total Economic Impacts of AY2022-23 COB Graduates on North Carolina

Economic Area	Output	Personal Income	Employment
Local	\$34,247,188	\$9,016,960	212
Eastern NC	\$47,424,236	\$12,924,740	267
NC	\$45,761,986	\$13,448,561	250

Economic Impact of Student Work Projects

One of the key distinguishing factors in the COB is the availability of Student Work projects in various undergraduate and graduate classes. Table 4 lists the classes that were offered in the COB within various departments in the fiscal year 2022-23 to students and the number of students that enrolled in those classes. A total of 1961 students participated in student work projects and the descriptions for these projects range from volunteering in community projects to working with small businesses in the community and providing consulting services by solving pressing problems for businesses to improve the outcomes of these businesses.

A total of 57,358 hours of work were provided by the students serving a total of 932 organizations during the 2022-23 fiscal year. Given that the expected number of students in each class is 25, the total number of classes offered for 1961 students is approximately 78 classes. Note that this does not mean that 78 different faculty members were involved, since these classes are often taught by the same instructors. The estimate of 78 refers to the approximate total number of work project classes that were offered during the year led by a faculty member who spent at least 40 hours of their time organizing and assisting students with projects in each class.

Table 9. Student Work Projects at COB Year 2022-23

Department	Classes	Students Involved	Organizations Served	Hours	Rate	Added Value
Management UG	BUSI 2200	882	114	8657	\$15	\$129,855
MIS UG	MIS 4123, 4163, 4173	264	59	10707	\$25	\$267,675
MIS Grad	MIS 6843, 6743	35	13	1128	\$40	\$45,120
Hospitality Leadership UG	HMGMT 3800, 4650	70	4	2878	\$25	\$71,950
Finance UG	FINA 4500, 4700	28	3	128	\$25	\$3,194
Marketing UG	MKTG 4562, OMGT 4863	205	8	1820	\$25	\$45,500
Marketing Grad	MKTG 6822	104	4	1700	\$40	\$68,000
Entrepreneurship UG	ENTR 4272, 4500, 4262	373	727	30340	\$25	\$758,500
TOTAL		1961	932	57358		\$1,389,794
Faculty Involvement		78		3138	\$100	\$313,760
						\$1,703,554

For the sake of conservative estimations and to ensure that there are no unnecessary extrapolations about the true impact of this type of student work, one can make a few assumptions to calculate the net value added of these projects by considering what each hour of student and faculty involvement time would be worth in the marketplace if they were paid by the businesses that they assisted. For the volunteer type of work performed by BUSI 2200 students, who are likely to be Freshmen or Sophomores, the rate is placed at a wage rate of \$15 per hour. For the other

undergraduate classes, since the students have not yet graduated with their bachelor's degrees one can consider the hourly approximation of \$25, which is the wage-rate of people with only High School Diplomas (see Table 2). Similarly, one can approximate the hourly wage-rate at \$40 for Master's degree students who have not yet completed their degrees based on the Bachelor's degree holder rate (see Table 2). Individuals with doctorate degrees can earn anywhere between \$125 to \$250 as business consultants¹¹. However, considering that these faculty members are providing these services to assist their students, a conservative estimate of \$100 per hour can be applied.

Table 9 shows that the added value of the student work in the community is worth \$1.39 million and the added value of faculty involvement in these projects adds up to \$313,760 for a total added value of \$1.7 million provided to the community.

Conclusion

In this comprehensive economic impact study, the multifaceted contributions of East Carolina University's College of Business to the local, regional, and state economies during the 2022-23 fiscal year were thoroughly examined. Various factors, including expenditures, degrees awarded, and the economic influence of COB graduates, were analyzed to provide valuable insights into the significant role this institution plays in driving economic growth and prosperity.

The COB creates a statewide economic impact of more than \$118 million as compared to its \$25 million in expenditures per year. The main categories are the direct impacts of COBs expenditures on local, regional, and state economies, the impacts produced by the increased incomes of graduates from COB in the amount of \$35 million, and the added value of student projects on local, regional, and state businesses.

The analysis of COB's expenditures in the 2022-23 fiscal year, with significant portions allocated to faculty salaries, staff salaries, non-teaching salaries, benefits, and other operational expenses, revealed profound implications for the local, regional, and state economies. Furthermore, the study explored the economic benefits that COB graduates bring to the table by comparing the earnings of individuals with different levels of education. This analysis highlighted a substantial income disparity where the COB makes an impact. Additionally, the study projected the positive economic effects of COB graduates channeling their higher incomes within North Carolina, leading to increased GDP, personal income growth for others, and the creation of new employment opportunities at local, regional, and state levels.

The economic impacts of College of Business graduates are significant across various levels of the economy. Assuming that these graduates invest their increased income within North Carolina, this results in positive effects on local, regional, and state economies. This ripple effect of higher spending power triggers economic growth, generating increased GDP, personal income, and employment opportunities. COB graduates' higher incomes drive economic growth at all levels of the economy, benefiting not only themselves but also the broader community.

¹¹<https://insight.ieeeusa.org/articles/2021-ieee-usa-consultants-fee-survey-report-median-billable-rates-up-covid-affecting-short-and-long-term-business/>

Lastly, this study examined the unique contribution of the COB's student work projects. These projects, involving nearly 2,000 students and faculty, demonstrated the college's commitment to community engagement and practical learning. The calculated added value of these projects included both student and faculty involvement. This economic impact illustrates the tangible benefits these projects provide to local organizations and communities.

In conclusion, the economic impact of East Carolina University's College of Business extends far beyond its campus walls. COB's investments, graduates, and community engagement initiatives have a significant and positive influence on the local, regional, and state economies. This study provides stakeholders with valuable insights to inform strategic decisions, fundraising, resource allocation, and policy development, ultimately maximizing the positive economic outcomes associated with the COB's operations. As the COB continues to evolve and grow, its contributions to economic development and prosperity in North Carolina are likely to expand, further solidifying its role as a vital asset to the region.

About the Researchers

William J. Rowe, PhD

Dr. Rowe serves as Director of the Bureau of Business Research at East Carolina University and is an Associate Professor in the Department of Marketing and Supply Chain Management in the College of Business. He has extensive experience conducting both academic and industry research using various methodologies to gain meaningful insight for both scholars and practitioners. Dr. Rowe consults with industry and government on issues related to business and community development, supply chain resiliency, and strategic growth through mergers and acquisitions. He has successfully completed grant funded research including a study of the aerospace industry for the United States Government, a study of the commercial seafood supply chain in North Carolina, and a study of aquaculture development in Virginia and North Carolina.

Dr. Rowe's research has been presented at regional, national, and international conferences including the Association of Consumer Research, Society for Marketing Advances, and the Association for University Business and Economic Research (AUBER). Additionally, his research has been published in a variety of peer-reviewed journals including Industrial Marketing Management, Journal of Marketing Theory and Practice, Journal of Services Marketing, International Journal of Productivity and Performance Management, among others. He earned his Ph.D. in Business Administration from the Gatton College of Business and Economics at the University of Kentucky. In addition to his PhD, he has a Bachelor of Business Administration degree and a Master of Business Administration, both from Marshall University.

Dennis H. Barber III, PhD

Dr. Barber is the Chesnutt-Bond Distinguished Scholar of Entrepreneurship in the Miller School of Entrepreneurship in the College of Business at East Carolina University. He has experience using multiple statistical modelling approaches and specializes in applied economic research. His research remains applicable in academia, private industry, and policymaking. He has worked on grant-funded research projects for the Small Business Administration, the New Mexico Children,

Families, and Youth Department, and private foundations. He acts as a keynote for business succession, economic impact, and rural entrepreneurship. Dr. Barber consults industry experts, municipal leaders, and policymakers on rural economic development, rural entrepreneurship, labor market trends, business transitions, and demographic analysis. He has experience conducting qualitative and quantitative analysis and employs secondary and primary research. Dr. Barber's research has been presented at regional, national, and international conferences including the United States Association for Entrepreneurship and Small Business, the Academy of Management, the Global Consortium for Entrepreneurship Centers, and the Small Business Institute®. Additionally, his research has been published in a variety of peer-reviewed journals including the Journal of Small Business Management, Journal of Business Venturing Insights, Theoretical and Applied Economics, among others. He earned his PhD and MA in Economics from the University of New Mexico. In addition to his PhD, he has a Bachelor of Science in Business Administration degree from East Carolina University.