SECTION 1: EXECUTIVE SUMMARY

Background
The Panama Canal expects to complete the construction of a third deepwater waterway in 2015. This should change global shipping lanes in ways that the shipping industry cannot predict yet. Many experts predict that this change will increase shipping towards the East Coast ports, particularly for shippers from the US’s major trading partners in Asia. As a result, several of the major ports on the East Coast have already invested billions of dollars into upgrading their port infrastructure to accommodate these changes. Additionally, the manufacturing sector’s rebound from both structural and cyclical changes gives ports further reason to believe that their investments will reap benefits.

North Carolina’s port infrastructure, natural geography, and capabilities lag behind its surrounding competing ports of Charleston, Savannah, and Norfolk. Because of these deficiencies, North Carolina struggles to serve its import and export markets with its ports. For example, many industries in Charlotte ship through Charleston, and many industries in Raleigh ship through Norfolk. However, not all trade will be conducted on large Post-Panamax (and larger) ships, giving North Carolina hope that it can capture some of the spillover from other ports. This project expects the canal expansion to increase port traffic in North Carolina’s two ports, thus affecting the state’s import and export supply chains.

Methods
We conduct multiple regressions for both the Port of Wilmington and the Port of Morehead City to predict the level of trade volume in increments of five years into the future. Once arriving at this data, we convert it to trade value and then use IMPLAN economic impact modeling software to obtain economic value-added numbers. In short, the Port of Wilmington’s trade volume almost consistently increases, whereas the Port of Morehead City’s growth stagnates. In order to encapsulate the uncertainty of the Panama Canal effect on the North Carolina ports, we conduct a sensitivity analysis at 10%, 20%, and 30% effect sizes for each port individually before combining the results.

Results
Using past years as the predictor, we expect the state of North Carolina’s port activity to add $30.6 billion worth of economic impact in 2014 across the state of North Carolina. By 2029, we predict the total economic impact to be $41 billion, assuming that the Panama Canal has zero effect on global shipping. This number swells to $45.1 billion for a 10% Panama Canal shipping bump, $49.1 billion for a 20% bump, and $53.2 billion for a 30% bump. Today the North Carolina ports contribute approximately 184,000 jobs in the state. They also provide $2.1 billion worth of revenue for the state from the economic activity generated by the ports.

Conclusions and Implications
North Carolina faces many impediments to achieving its maritime shipping potential. Crumbling infrastructure, geography, delayed construction of the canal, and competing
ports could thwart progress at the ports. The North Carolina ports operate much closer to their total capacity than do their competing ports. Even holding constant the effect of the Panama Canal expansion, North Carolina can expect to outgrow its ports in 20 years. The state should invest in the surrounding infrastructure to supplement and catalyze the growth of their ports.