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NORTH CAROLINA IN THE GLOBAL ECONOMY: A VALUE CHAIN PERSPECTIVE ON THE STATE'S LEADING INDUSTRIES

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In many ways, North Carolina is a microcosm of the U.S. economy. The main industries in the state are remarkably diverse: traditional manufacturing, such as textiles, apparel, and furniture; a variety of knowledge-intensive industries, including information technology (semiconductors, laptop and mainframe computers, customized and open-source software), biotechnology (pharmaceuticals, biomanufacturing, medical devices), and nanotechnology; business services, like banking and finance; and agriculture and resource-based sectors, such as tobacco and hog farming. To be successful, each of these industries has required supportive government policies, strong and visionary corporate leadership, and dynamic labor markets in order to adjust to the rapid pace of economic change in recent decades.

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Mission Statement

To establish a high quality forum relevant to the needs of global industry and higher education that will provide leadership in the timely dissemination of information dealing with all aspects of textile and apparel, technology and management.



Globalization has profoundly affected North Carolina, as it has other parts of the United States and indeed every region of the world. The growth of international trade has meant greater competition from imports, but also increased export opportunities; direct foreign investment has been a boon to the growth of our technology-oriented industries, and it also has been a conduit for many North Carolina firms to expand their overseas operations; and immigration has attracted both low-wage and high-skilled workers and professionals, which have helped to fuel the state's economic growth while placing additional demands on educational and social service institutions.

To sort out the complex effects of globalization on the North Carolina economy, Duke University has created a North Carolina in the Global Economy (NCGE) website http://www.soc.duke.edu/NC_GlobalEconomy/ that has grown in scope and sophistication over the past several years. Initially launched in 2004 by Gary Gereffi,

Professor of Sociology and Director of the Center on Globalization, Governance & Competitiveness at Duke, the NCGE website offered an opportunity to bridge Gereffi's own research on global industries (using a global value chains approach) with class projects for undergraduate students in Duke's Markets & Management Studies Program. From the outset, the NCGE website was focused on providing systematic and comparable information about the main firms, employment trends, patterns of industrial organization, and public policies in some of North Carolina's most important industries. Currently, seven industries are highlighted: textiles and apparel, furniture, information technology, biotechnology, banks and finance, tobacco, and hog farming.

During the summer of 2007, a major upgrade of the NCGE website was undertaken by the Center on Globalization, Governance & Competitiveness (CGGC) at Duke University <http://www.cggc.duke.edu>, with assistance from Duke's Center for Instructional Technology. Under the rubric "Visualizing Economic Development," this project is using new visualization tools to enhance the display of the data contained on the website. In addition, the NCGE website is supplementing the employment statistics it uses from state sources, such as the Employment Security Commission of North Carolina, with establishment-level data available via Reference USA, which has detailed information on 10.5 million businesses across the United States in terms of company name, ownership, products made, size, location, and other relevant variables.

The most distinguishing methodological feature of the NCGE website is its focus on global value chain analysis. A favorite tool of many economic development specialists in the past was cluster analysis, whereby concentrations of firms providing similar goods or services were identified in terms of geographic proximity. The main idea was that economic development prospered when "clusters" of related and supporting industries could be established. The global value chain approach has a different premise: most industries today are globally organized and geographically fragmented, and the keys to economic development often depend on capturing or retaining the high-value activities in these industries, such as advanced manufacturing, research and development, design, branding, or logistics (for more information about this approach, see <http://www.globalvaluechains.org/>). In the NCGE website, a core contribution is to show how North Carolina is positioned in terms of its areas of relative strength in each industrial value chain, nationally and globally, and how these have changed over time.

One of the most significant improvements to the NCGE website in our "Visualizing Economic Development" project has been to define the value chains for each of North Carolina's major industries in a more rigorous and empirically grounded fashion. The CGGC research team, led by Ryan Denniston, Stacey Frederick and Ryan Ong, expanded on work carried out by Duke undergraduates in their Markets & Management Studies capstone courses with Professor Gereffi in the 2006-07 academic year, and linked NAICS (North American Industrial Classification System) codes to each segment of the value chains for the North Carolina industries in the NCGE website. This permits us to identify with relative precision the main economic characteristics of North Carolina's industries, including where firms and employment are located in the value chain. This also allows us to systematically compare North Carolina's industries with its main competitors elsewhere in the United States and around the world. (These latter two research areas will be added to the NCGE website in 2008.)

The mapping section of the NCGE website was also overhauled. First, using our new firm-level data on the spatial distribution of economic activity according to NAICS codes, color coded North Carolina county maps will plot where various types of industry activity take place and also show how the distribution of firms and employment has changed over time. Second, we will utilize Google Earth and Google Maps to facilitate access to our data in a cost-effective manner. By including Google Earth files, users will be able to filter results and generate new maps based on customized preferences.

In sum, the NCGE website is part of an ambitious undertaking that will allow researchers and policymakers in the future to better understand how North Carolina can adjust to and more fully exploit ongoing changes in the global economy. If indeed North Carolina is a microcosm of other regions in the United States and around the world, then this website offers a mechanism to share our experiences and learn from others as well.

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