Chapter 12
The Effect of Google Data Centers on City Competitiveness

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ABSTRACT
The decision by Google several years ago to begin building major data center campuses prompted economic-development officials nationwide to vie to have their communities chosen as a Google Data Center site. They hoped the facilities would bring hundreds of jobs, lure other technology companies and help create technology hubs in their areas. However, this study of three of the communities where Google built major data centers -- Goose Creek, South Carolina; Lenoir, North Carolina; and Council Bluffs, Iowa—shows that the centers haven’t always lived up to expectations. The author interviews economic development officials in each of the three communities.

INTRODUCTION
Google data centers are a source of fascination both in and out of the tech environment. Technology industry professionals for years have wondered about the contents and operations of the centers, which are reputed for their efficiency and which Google believes is key to the company’s competitive advantage. Google’s secrecy about the location and make up of its centers has served to fuel the aura of mystery surrounding the facilities.

Among those who have been fascinated by the centers are economic-development officials and city leaders, many of whom believe that Google’s brand presence and technological benefits can give them a competitive advantage over other cities. For example, in early 2010, when Google announced it would select an American city where
it would build an ultra-high-speed broadband network, city leaders throughout the country vied to have their community selected. To stand out in the competition for Google’s attention, city leaders turned to outlandish stunts. The mayor of Duluth, Minnesota, submerged himself in the icy waters of Lake Superior. The mayor of Sarasota, Florida, swam in a tank – with sharks. The mayor of Topeka, Kansas, renamed the city Google for a month (Helft, 2010).

The competition to be chosen as the site for a Google data center hasn’t been as sensational, but many city leaders have pursued the data centers with substantial vigor. Some have been willing to offer millions of dollars in incentives to lure the facilities. They’ve done so with the hope and expectation that the facilities would directly create hundreds of jobs, help lure other tech businesses to the area and transform their communities into high-tech hubs.

The interest in luring Google data centers is part of a broader interest by many cities to upgrade their connection to the information highway in order to gain a competitive edge over other communities. Many community leaders now believe that broadband and information connectivity is the essential utility of our times, on par with having energy sources and good roads. This interest comes from the realization that broadband is not only creating new companies, but also new industries. By getting on the information highway, companies can export their knowledge and skills around the globe, and industries can utilize Web-based tools and services (Bell, 2008).

Luring a name-brand technology company such as Google, some economic-development officials believe, brings the double benefit of having a trophy company located in one’s city as well as the possibility of having that company enhance the area’s broadband infrastructure – which, in turn, could lure even more technology companies (J. Sousa, personal communication, April 13, 2010).

However, a study of three communities where Google built three of its largest and most recent data centers shows that those hopes and expectations have been mostly unfulfilled. The effect of Google Data Centers on city competitiveness, as measured by the number of jobs they created, ability to lure other technology companies to the area, and impact on local technology education and training, has been mixed. Two of the three communities – Goose Creek, South Carolina; Lenoir, North Carolina; and Council Bluffs, Iowa – instead have found that economic recessions impact even emerging industries, such as technology. And unlike industries, such as manufacturing, that help spring new businesses because of the need for suppliers and large amounts of labor, the Google data centers so far have done little to bring about an economic-domino effect. The exception is Lenoir, NC, where the presence of a Google data center, combined with an aggressive approach to luring new companies, is producing results.

THE DATA CENTER

Think of the early years of computing and many people imagine large, cable-filled rooms full of complex machinery and devices – all designed to help computers do their jobs properly. Data centers are the modern-day equivalent of those rooms. During the dot-com bubble of the 1990s, large numbers of businesses began relying on Internet connectivity, which prompted the need for large data facilities. The larger businesses could afford to develop their own Internet data centers, which required specialized staffs, large amounts of space and sophisticated equipment. However, smaller businesses could not afford the expense of having their own data centers. As a result, private data centers were created to meet the needs of smaller businesses. Today large data centers may exist as a private enterprise that provides access to smaller businesses or they may exist as the property of a