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The Future of the Telecommunications Industry in New Jersey

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Welcome and Overview

Dr. Carl Van Horn, Professor and Director of the Heldrich Center, welcomed the attendees, and described the Center's interest in the changing economic and workforce needs of New Jersey's leading industries. Recent projects have focused on the emerging skill needs of vital sectors, such as pharmaceuticals and utilities. In addition, the Center seeks to facilitate dialogue among leading policymakers on the challenges these industries face. He remarked on both the distinguished nature of the audience and the large number of attendees. In particular, Dr. Van Horn thanked U.S. Senator Jon Corzine for his participation.

Senator Corzine spoke briefly, highlighting the importance of the telecommunications industry in the United States and New Jersey; it is the foundation for many other industries in the state. He observed that there is still major confusion surrounding the provisions of the Telecommunications Act of 1996. That confusion needs to be resolved, but in a manner that does not alienate the companies in the industry. There also is a need to create a level playing field for all companies.

The Senator thanked the Center for highlighting the special concerns of important New Jersey industries such as telecommunications, and expressed appreciation for Dean James Hughes' efforts in support of improved public policy in the state.

Following Senator Corzine's remarks, the session focused on 1) the changing structure of the telecommunications industry in both New Jersey and the nation, 2) the economic state of the industry and the impact of current federal regulations, and 3)a proposal for enhancing New Jersey's reputation as a location for leading telecommunications companies.

The Changing Structure of the Telecommunications Industry in New Jersey

Presented by: Dr. Ken Dautrich, Institute of Public Affairs, University of Connecticut

Dr. Dautrich thanked the Heldrich Center for commissioning him to write and present this paper.

There are many ways to measure the recent performance of the telecommunications industry in New Jersey in terms of products and services, consumers, regulatory requirements, and labor. Dr. Dautrich chose to examine labor market trends and employment opportunities in the industry's wired and non-wired (wireless, cable, satellite) companies.

The telecommunications industry established firm roots in New Jersey decades ago and enjoyed major growth for years. Dr. Dautrich's paper traced recent changes in the telecommunications industry as reflected in the labor market. Some findings include:

- The telecommunications industry is extremely important to New Jersey. Other states would love to have the telecommunications investment and infrastructure that New Jersey has. Two of the top four employers in the state are in the telecommunications industry.

- Dramatic structural changes within the past 10 years include a significant shift in economic activity from wired companies to wireless companies.

- New Jersey needs a plan to protect the vitality of the telecommunications industry in the state. The state is losing its national market share in this sector.

1996 to 2001 was a boom period in the nation. Telecommunications employment growth was roughly 5% each year. By 2001, 1.3 million workers were employed in the industry. The most dramatic increases in recent years have been in the non-wired sectors of the industry. In contrast, New Jersey's wired companies had a 6.5% drop in employment, even during the boom period. These were early signs of a dramatic shift from wired companies to wireless companies.

By **2001**, there was a dotcom sector bust and other problems in the economy, including recession. The result was a 17% decrease in employment in the telecommunications industry nationwide. Most employment gains achieved during the boom were virtually wiped out. Wired companies saw significant drops in employment, with many job losses at AT&T and Lucent Technologies. Wireless companies saw a very slight increase. Trends indicate a continued advantage for wireless companies over wired companies.

Current environment nationally and in New Jersey. Since 2003, decreases in employment in the telecommunications industry have slowed. Layoffs/discharges are currently at their lowest level in three to four years. The industry seems to be turning around. Another positive sign is the number of new hires. Nationally, there were about 70,000 new hires in 2004 as compared to 60,000 in 2003. The effects of recession were worse in New Jersey but the state has enjoyed a quicker economic rebound than in other regions.

Telecommunications has one of the highest growth rates of any major industry in New Jersey, but there will be a continued shift of employment toward non-wired companies in the state. This critical trend is being shaped by new technologies.

Nationally, non-wired companies jumped from 300,000 to 500,000 employees in a period of five to six years, beginning in the mid-1990s. In New Jersey, non-wired companies jumped from 10% of the telecommunications industry in 1990 to 35% of the industry in 2003.

Not only are there significant numbers of telecommunications jobs in the state, but they often command high wages and excellent benefits. Salaries can be lucrative — much higher than in other states.

Yet New Jersey is now losing its share of the nation's telecommunications jobs to states such as Pennsylvania, Arizona, Colorado, Virginia, Florida, and Texas. The state had 6% of the country's telecom employment in 1990, but only 4% by 2003/2004.

Policy changes are clearly needed to keep New Jersey competitive in the industry.

The View from Wall Street

Presented by: Michael Balhoff, Balhoff & Rowe, LLC

Mike Balhoff offered a financial viewpoint of the telecommunications industry for policymakers. His slides are available on the Heldrich Center Web site. (www.heldrich.rutgers.edu)

Balhoff acknowledged New Jersey's prominence in telecommunications — with both AT&T and Lucent located in the state. He also sought to identify the underlying trends reshaping the industry and suggested the need for revising basic policy rules, especially the current regulatory framework.

Rural telecommunication companies have done well in recent years. The rest of the picture is ugly.

Wireless and long distance are both down. Many of the major companies are in trouble, including AT&T, Sprint, Bells, etc.

The structure of the telecommunications industry has changed in the past 20 years. The concentration of telecommunications began dissolving with the breakup of AT&T, the creation of the Baby Bells, and Lucent's spin-off from AT&T in 1996. More recently, the local carriers have been permitted to offer long distance services, and non-wired companies are beginning to offer traditional long distance services using newer technologies.

The technology platform is also dissolving, with the Internet changing voices services as it has gradually changed data services. Major shifts are occurring in residential markets as opposed to business markets.

Technology is changing the entire landscape. The subscriber base is evolving. There are more wireless connections than wired connections in the United States at this time. Major growth has occurred in wireless and broadband services in recent years, creating a very competitive environment. The key policy challenge is to prevent a new monopoly for broadband/wireless. We need continued competition, not a monopoly.

Future policy issues for both the United States and New Jersey (see PowerPoint presentation) include understanding the financial and competitive pressure in the industry. Regulators should have a better grasp of arbitrages and how they affect the industry in the long term.

The sector is moving toward a better-coordinated relationship between policymakers, consumers, the financial community, and cross-industry participants. Outdated roles and systems need to be reexamined, with state and federal officials looking at ways to downsize their regulatory role.

Retaining and Expanding New Jersey's Telecommunications Sector

Presented by: Carl Van Horn, John J. Heldrich Center for Workforce Development, Rutgers, The State University of New Jersey

Dr. Van Horn observed that government is not organized efficiently to understand, or make decisions about, telecommunications. Typically, telecom service providers have to visit six or seven agencies and multiple places in the governor's office to get anything accomplished.

Solving the problems of this sector starts with governance. There should be a centralized point of contact with policymakers who understand the industry.

Ways we might foster dialogue in New Jersey:

- Understand the needs and challenges of the industry. We are entering a period of change, but the state isn't prepared to cope with those changes.

- Organize government decision-making to anticipate and respond to industry needs. Decisions must balance the interests of the companies and the citizens of New Jersey.

- Develop strategies and continuing education programs to meet education and training needs of companies and workers. There is a real mismatch between the needs of the telecommunications industry and the institutions that can help train workers to aid the industry. State, private, and community colleges can play a major role here.

- New Jersey can use its purchasing power to strengthen telecommunications firms based in the state. We are not advocating a simplistic "Buy New Jersey" policy — but believe there are ways for the government to support telecom firms based in the state.

- Level the playing field in both tax and regulatory policies. New Jersey should not tax and regulate companies differently. It's not fair and makes no sense, especially from a state policy point.

A proposal:

- Support industry-wide initiatives in research and development. Bell Labs is an important asset in the state. Universities need to step in to fill the Research & Development gap and provide a supply of trained engineers and professionals.

- Universities also need to expand continuing education efforts to keep pace with the substantive changes taking place in the industry.

- New Jersey needs to leverage its purchasing power to support its companies and leverage regulatory and taxing policies to sustain and revitalize the industry. New Jersey has lost its position as a leader as a telecommunications developer. Yet, the state retains an incredible base to coordinate and spearhead this kind of development.

Discussion with Audience

Question: What are the major challenges to the telecommunications industry?

Most important issue: universal service. Industry needs to organize itself to deal with old technology and the transition to VOIP (Voice-Over-Internet Protocol). This will make it more confusing, and people are skeptical about new technologies. Yet, there is tremendous enthusiasm over it. Another factor: Wireless. What we've seen up till now is nothing compared to what we're going to see. The whole picture will change substantially. There will be a need to develop solutions to resolve the various legacy systems that are rapidly becoming obsolete.

Question: Which is more difficult for the industry — inter-carrier competition or jurisdictional issues?

Intercarrier competition is more difficult. One carrier pays the other and so on and then pays the universal services. As we move away from measured minutes, traditional carriers are at risk. There is more openness being demonstrated for creative solutions to **jurisdictional** issues.

Question: What is the impact of broadband on power lines?

This technology only adds to the confusion. Verizon, Comcast, etc. will push for capacity to maintain market share. What we've seen now is nothing compared to what is coming. New technologies will continue to cause stress for policymakers.

Question: Have you examined the kind of jobs that are created in the non-wired sector at the expense of the wired jobs?

Dautrich: We haven't unpeeled the onion yet. The data here was taken from the state and from the federal Bureau of Labor Statistics. Getting to the next level to analyze data is more difficult and we haven't gotten to it yet. Clearly, the workforce needs to be better educated to cope with jobs in the wireless field that are more complex.

Van Horn: What's key is not whether the change is desirable, but how to adapt to the change. The fact is… a shift is happening. We can't remain with the status quo; we need to adapt to these changes. It is not just about incumbent workers, but also those who have lost their jobs and have been displaced. We are doing a decent job of retraining in New Jersey, but we can do better. It is still easier for workers to make a transition **within** an industry rather than change careers completely.

Question: In what ways can New Jersey improve the telecommunications industry? Are any other states doing exemplary work?

Not really. New Jersey is beginning to pioneer some important steps, but just needs to do a better job. Not every institution of higher education in New Jersey holds the view that this industry is important, thus we need a shift in policy that hopefully can lead to a shift in opinion.

Question: Are software development numbers included in the data Ken spoke about? Software development is a huge part of the telecommunications industry. Do we have a picture showing how we are in comparison to Virginia, Silicon Valley, and the North Carolina Research Triangle?

Dautrich and Van Horn: Current data do not present those distinctions.

Balhoff: Strategically, we don't know where the industry is headed. We need to think about how to retool and what to do. Rigorous thinking needs to happen.

An important issue for New Jersey is to understand the changes this industry has gone through and understand where the risks are. A real issue exists for investors in terms of their potential return on investment.

Closing Remarks

Dr. Van Horn thanked everyone for coming.

He encouraged policymakers to commit to a better understanding of the needs and changes in the telecommunications industry.

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