Economic Development Committee Memorandum
Board of Regents, State of Iowa

Subject: Higher Education and the Iowa Economy: A Presentation by Staff from the National Center for Higher Education Management Systems

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Recommended Action: Receive the report.

Executive Summary:

In response to an invitation from Dr. Barak, staff from the National Center for Higher Education Management Systems (NCHEMS) provided a presentation to the Iowa Coordinating Council for Post-High School Education in May, 2004. The presentation, attached, covers some factors in the relationship between education and economic prosperity in Iowa. It is organized with respect to four major categories: 1) workforce; 2) college participation and completion; 3) net gain/loss of Iowa residents; and 4) the economy. In most cases, the slides allow for comparisons between Iowa and the other states. The data in the slides is drawn from a unique combination of data sources, including the U.S. Census Bureau, the Bureau of Economic Analysis, Postsecondary Education Opportunity, and NCES-IPEDS. Most of the slides present 2000 data.

The presentation indicates that Iowa outperforms most other states on many measures related to educational performance. For example, Iowa’s workforce is relatively well-educated; the state compares favorably in terms of postsecondary enrollment and graduation statistics; and the state’s postsecondary institutions are addressing demand for educated workers in key fields.

The presentation also suggests that Iowa nevertheless faces many challenges in assuring that education leads to well-paying jobs for Iowans and a strong state economy. For example, the state’s workforce is relatively low-paid; over a recent five-year period Iowa lost well over three times as many educated residents aged 22-29 than it gained; and, during the period covered in the presentation, the state performed well below the top tier in attracting external research dollars.

Analysis:

Below is a summary of the four categories of the presentation.
Iowa’s workforce is relatively well-educated and relatively low-paid.

Workforce
The slides having to do with the Iowa workforce present a fairly mixed picture. On most indicators related to the educational attainment of the Iowa workforce—for example, the percentage of 18-24 year-olds with at least a high school diploma—Iowa fares well by comparison to other states. On indicators having to do with the earnings and income of the workforce, however, Iowa tends to trail the U.S. average. Two factors contribute to this state of affairs for earnings and income: earnings of Iowa workers tend to be lower than those of workers in other states in the same job categories; and, Iowa workers are fairly disproportionately employed in relatively low-income job categories.

College Participation and Completion
The graphs pertaining to college participation and completion concern such matters as enrollment, graduation, and patterns in the awarding of degrees.

Iowa performs well on many enrollment and graduation indicators
In comparison to other states, Iowa does well with respect to enrollment in postsecondary education. Iowa ranks particularly well with respect to the college-going rate of freshmen directly out of high school. Iowa is also a net importer from other states of first-time freshman college students, and indeed, ranks high in attracting freshmen to attend college in the state. Looked at in a slightly different way, Iowa residents tend to find it attractive to attend college in the state. In 2000, Iowa ranked sixth among the states in the percentage of bachelor’s degree-seeking students graduating within six years.

Iowa’s schools and postsecondary institutions form a relatively efficient educational pipeline
Graduation rates are a component of the state’s performance in moving students through the educational pipeline; i.e., from the beginning of high school through college graduation. The percentage of 9th graders in Iowa high schools who go on to complete a postsecondary degree within 150% of the conventional length of time for completing the degree (i.e., six years for completing the bachelor’s degree) equals that of the best performing state.

Iowa postsecondary institutions attend to the demand for educated workers
Several slides in the presentation concern the awarding of degrees in fields associated with relatively high-paying or high-demand occupations. These include the fields of engineering, engineering technology, computer science, registered nursing, health technology, and education. With respect to the number of bachelor’s degrees per 1,000 occupations in a field, Iowa performs well above the U.S. average in all fields and, in many instances, in the top quartile of states.

Many of Iowa’s educated young people leave the state
Net Gain/Loss of Iowa Residents
During the period 1995-2000, Iowa experienced a net loss of residents aged 22-64. During this period, the state was a net gainer of residents whose highest level of educational attainment was a high school diploma or less. But these gains were far offset by the out-migration of Iowa residents whose educational attainment included an associate’s, bachelor’s, graduate, or professional degree. For example, among 22-29 year-olds, Iowa was a net gainer of some 5,000 residents whose highest level of educational attainment was less than a high school diploma. However, Iowa lost roughly 19,000 residents in the same age group, or well over three times as many, whose educational attainment included some form of postsecondary degree.
The Iowa economy partly explains the state's net loss of educated residents.

Economy

The economy of Iowa, on the average, rewards postsecondary degree earners less than do the economies of nearly all other states. The slides at the bottom of page 9 in the attachment indicate that, across the country, median earnings for people whose highest level of educational attainment is the high school diploma are significantly lower than median earnings for people with postsecondary degrees. But in Iowa the difference in median earnings between postsecondary degree earners and non-degree earners is less than the difference for residents in all but three other states.

The state’s ability to do advanced research is linked with a strong economy

The presentation data having to do with research and development expenditures speaks to the state’s ability to generate advanced research, which is associated with strong economies and high-paying jobs. Iowa performs fairly well on a per-capita basis in research and development expenditures generally. However, and more importantly, Iowa does far less well in attracting federal research and development dollars specifically, i.e., in attracting dollars from external sources. According to the NCHEMS website, HigherEdInfo.org, “One step toward achieving this goal [of attracting external R&D dollars] is to increase the ability of institutions to attract and retain the best and brightest research faculty.”

Follow-up meeting in spring, 2005

Staff from NCHEMS have been invited by the ICCPHSE leadership to join a discussion of this and other data at the spring, 2006 ICCPHSE meeting.

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Piecing It All Together

Using Data from www.higheredinfo.org

Iowa

Patrick J. Kelly

May 5, 2004

Educational Attainment—Iowa Attainment and U.S. Rank, 2000

Iowa Per Capita Personal Income as a Percentage of U.S. Average, 1960-2000
College Participation and Completion
Graduation Rates—Percent of Associate Students at Two-Year Colleges Graduating Within Three Years, 2000

All Credentials Awarded (2-Year and Less) at Two Year Colleges as a Percent of Enrollment in Two Year Colleges (%) - 2002

Student Pipeline

Bachelor's Degrees Awarded in Engineering Per 1,000 Engineering Occupations

Source: NSC/PEO, Completion Rate Survey, U.S. Census Bureau

Source: ACT, NELS/PEO, Graduation Rate Survey, U.S. Census Bureau

Source: NSC, PEO, Completion Rate Survey, U.S. Census Bureau
Net Gain/Loss of Iowa Residents

ECO 5 Attachment
Federal R&D Expenditures as a Percent of Total R&D, 2001

State and Local R&D Expenditures as a Percent of Total R&D, 2001

States' Ability to Produce Graduates vs. Ability to Keep and Attract Graduates

These data are available at:
http://www.higheredinfo.org

ECO 5 Attachment