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Higher Education and the Labor Market in the State of Idaho

by

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A. E. Research Series No. 99-01

January 1999

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This report summarizes major findings of a study carried out on the structure of Idaho's labor market in relation to higher education. Changes in the types of jobs available, both in terms of industries and occupations, greatly affect the relationship of higher education to the labor market. The nation-wide move from a manufacturing-oriented economy towards an information-based economy has led to a marked increase in the number of jobs requiring a college education. The following information documents that trend and includes projections made for the year 2005. The focus is on future demand and associated earnings premiums for college educated labor force in Idaho.

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1. The Demand for Higher Education in Idaho

→ When Idaho's labor force is classified by educational attainment, the biggest portion of that labor force is made up of people who attended some college or earned an associate degree (36 %). Workers holding a high school diploma are the next biggest group (30 %). The proportion of workers holding a college degree (either bachelor's or graduate) make up approximately 19 % of the total labor force (less than most western states and the U.S. average (Figure 1).

→ Administrative support occupations, together with professional and technical occupations represent the largest share of the Idaho labor force, followed by service occupations and operators, fabricators and laborers (Figure 2). These top occupations ranked at opposite ends of the educational spectrum. While the first two occupations demand mostly workers with at least some college attendance (or more in the case of professional occupations), service occupations and operators, fabricators, and laborers demand mostly workers with only high school diplomas or less (Figures 3 and 4).

→ In 1990, the services sector¹ led other types of industries in Idaho in terms of employment, followed by the retail trade and manufacturing sectors. These three sectors accounted for over 62 % of total employment (Figure 5).

→ Both in absolute and in relative terms, the services sector demanded more college trained labor force than other sectors. This sector alone employed 46.5 % of the workers holding a college degree (bachelor's or graduate). The public sector and the financial, investment and real estate sectors followed as important employers of college graduates.

¹ Service occupations and the services sector, as defined in this report, represent two different concepts and group different types of workers. Service occupations include mostly workers in the area of private household occupations (housekeepers, etc), protective service occupations (law enforcement personnel, firefighters, etc) and food preparers and servers, among others. The services industry group has workers in

The agriculture, forestry and related industries sector ranked at the bottom of the scale (Figure 6).

all occupations that work in businesses related to any type of services (hotels and lodgings, auto repair and parking, motion pictures, legal, social and educational services, medical services etc.)..

II. Projections for the year 2005

Where will future needs be?

- The total number of jobs in the state of Idaho is projected to grow in the period 1990-2005 by 199,800 jobs (a total increase of 36 %). There will be about 70,000 more jobs for people with bachelors and graduate degrees and about 186,000 more jobs for people with some college attendance or an associate degree. However, there will be about 56,100 fewer jobs (- 23 %) for people with educational attainment levels of high school or less (Figure 7).

- In 1990, about 309,000 out of a total of 549,000 people employed in Idaho (56 %) had at least some college attendance or an associate degree. A projected 565,000 out of 748,000 workers (76 %) will be required to have at least some college attendance or an associate degree in the year 2005.

- The services sector is projected to continue leading other sectors in terms of employment in Idaho. It is projected to have the biggest growth in total sector employment (to 2005) out of all industries (70,600 new positions), followed by the retail trade and public sectors (39,300 and 22,200 new positions, respectively). These three sectors also lead in terms of absolute growth of college-educated workers demanded. (Figure 8).

- The fastest projected growth (expressed as percent change in industry employment in the period 1990-2005) is in the services and construction industries, sectors with big disparities in educational requirements. The services sector will demand, by the year 2005, 67 % of their workers to have at least some college attendance, while the construction sector will demand only 6 % of their workers to have at least some college education.

→ Sales occupations are projected to see the largest growth among all occupations between 1990 and 2005 (an increase of 49,600 positions), followed by professional and technical specialties (41,500 new jobs). Service occupations and administrative support occupations follow those in importance (with 29,000 and 23,600 new jobs respectively).

→ Now, and in the future, major demand of workers holding college degrees are (will be) highly concentrated in professional and managerial occupations (Figure 9). These two types of occupations will account for 62 % of the workers holding college degrees in the year 2005.

III. The earnings Premium attached to College Education in the State of Idaho

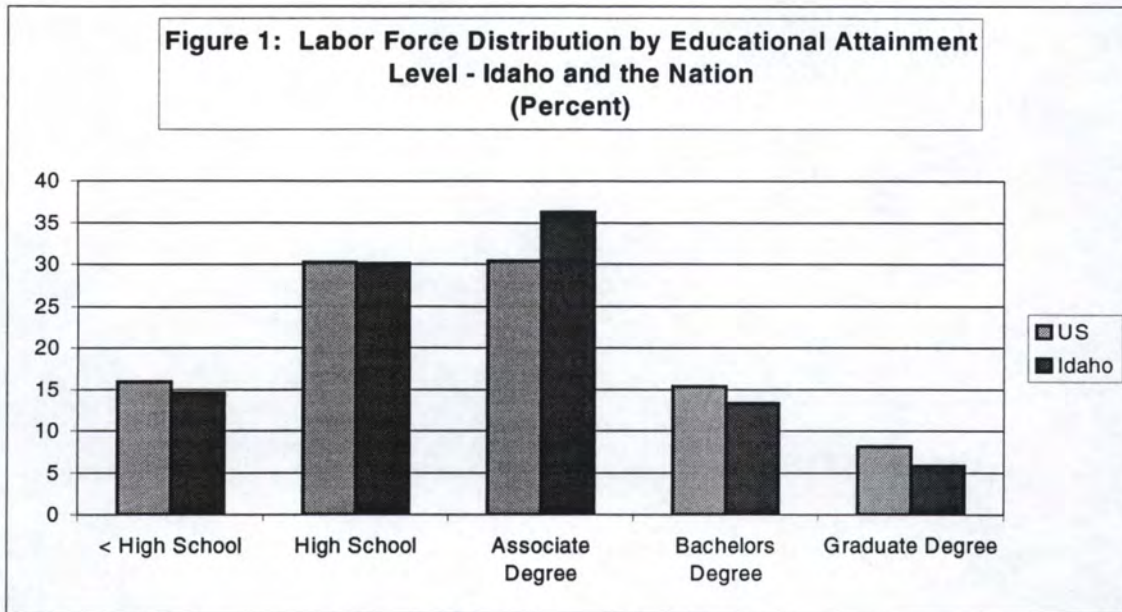
- According to the 1990 Census, there are in the state of Idaho big pay-offs to college education, both to the workers that invest in it and to Idaho's economy, where the jobs occur. Earnings for workers with bachelor's and graduate degrees are 32 % more (on the average) than if they only had a high school diploma and 22.4 % more than if they had only attended some college or earned an associate degree. At the same time, earnings for workers with some college attendance or an associate degree are 7.5 % more than the ones for workers holding only a high school diploma (Table 1).

- Workers in different occupations receive different earnings premiums due to their college education. In Idaho, workers with college degrees (both bachelor's and bachelor's and graduate) in professional and technical specialties showed bigger pay-offs than workers in any other occupations. This finding is consistent with the fact that those occupations show the biggest proportional increases (from 1990 to 2005) in college-educated workers demanded (Table 2).

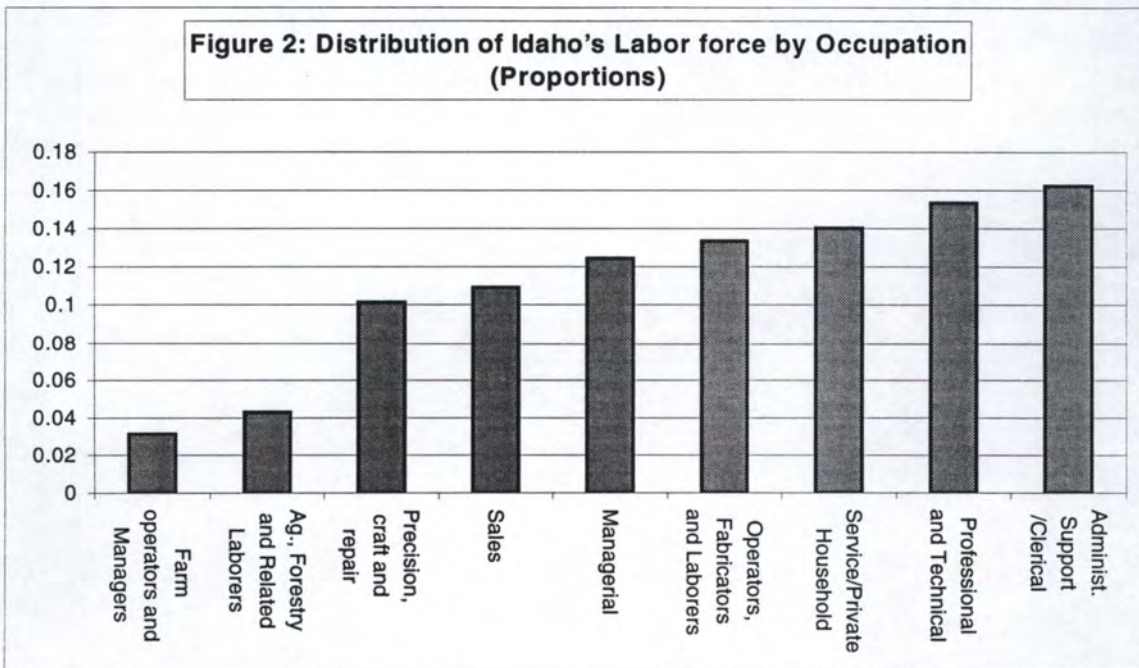
- The earnings premiums for college education in Idaho's economy in 1990 accounted for about 9 % of the total state earnings for that year.

- If these differential earnings remain constant (in percentage terms) to the year 2005, and if the projected increased demand for higher education is fulfilled, total earnings in Idaho (in real terms) will be 42 % more than in the year 1990. This increase can be attributed not only to an increase in total employment but also to higher earnings received by a more educated labor force. It is notable, however, that for this increase to occur, colleges and universities must meet the expected increase in demand for higher education.

Figures and Tables

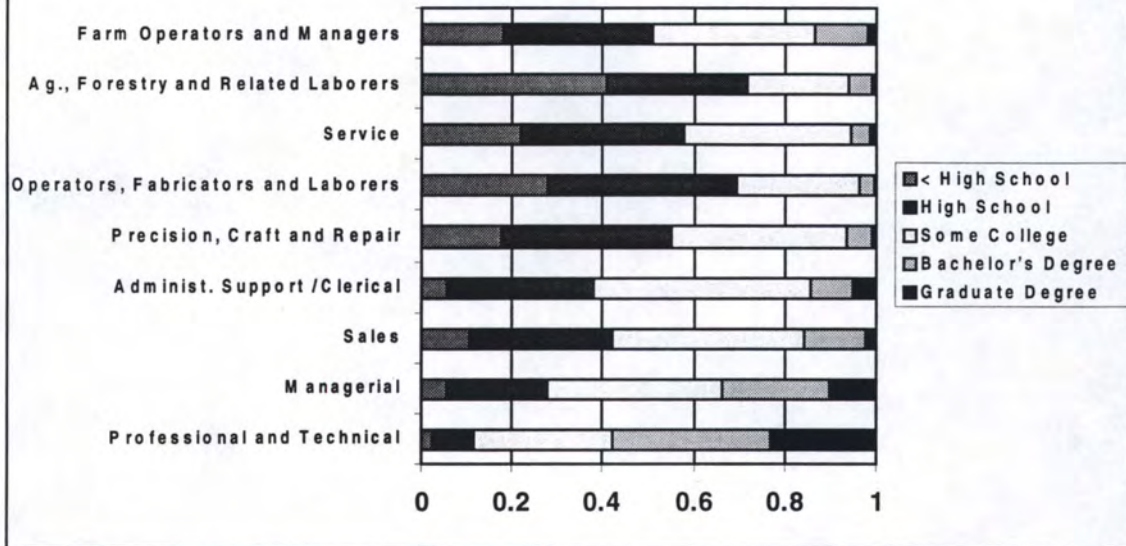


SOURCE: US Bureau of Census, 1990.



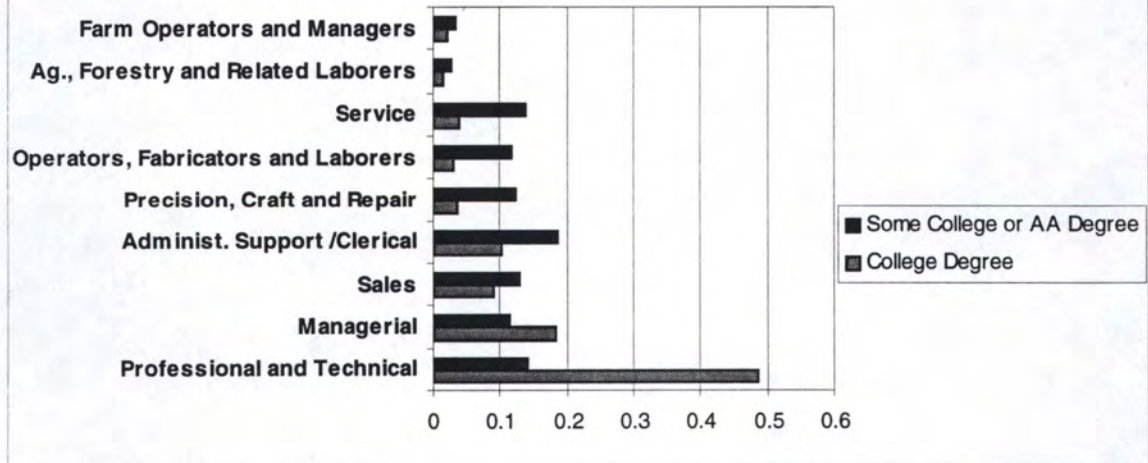
SOURCE: US Bureau of Census, 1990.

Figure 3: Educational Attainment Levels of Idaho Workers by Occupation (Proportions)



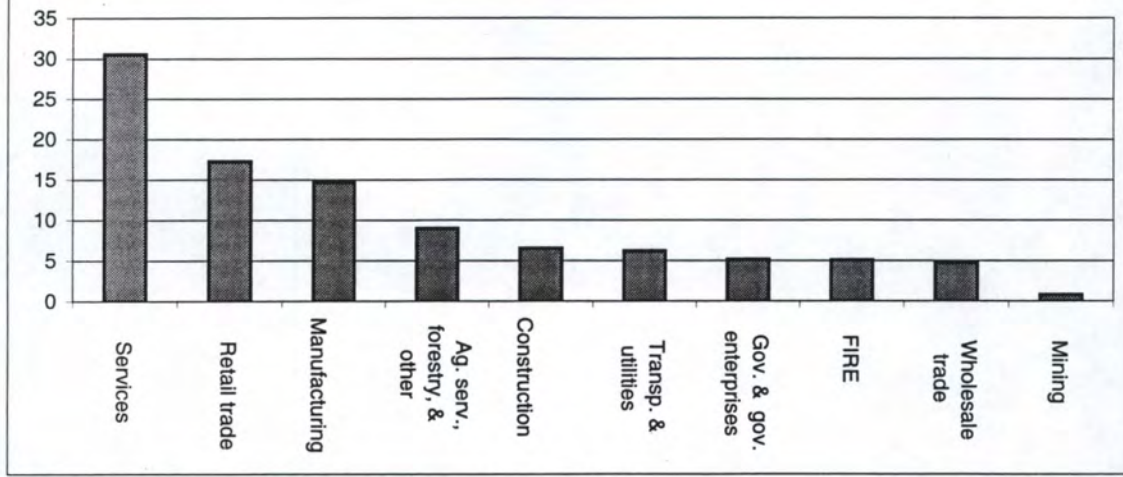
SOURCE: US Bureau of Census, 1990.

Figure 4: Proportions of Idaho Workers with College Backgrounds, by Occupations



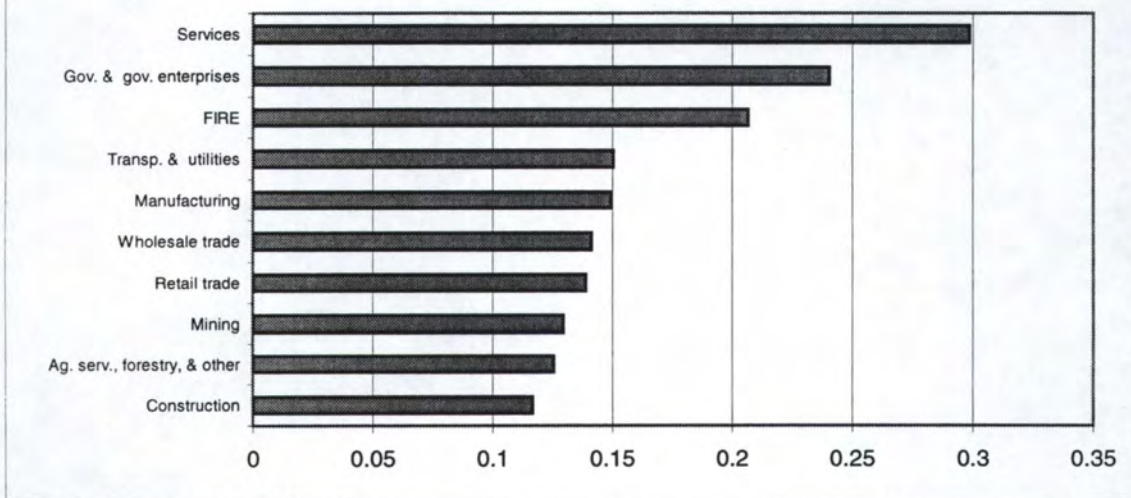
SOURCE: US Bureau of Census, 1990.

Figure 5: Distribution of Idaho Labor Force by Industry (Percent)



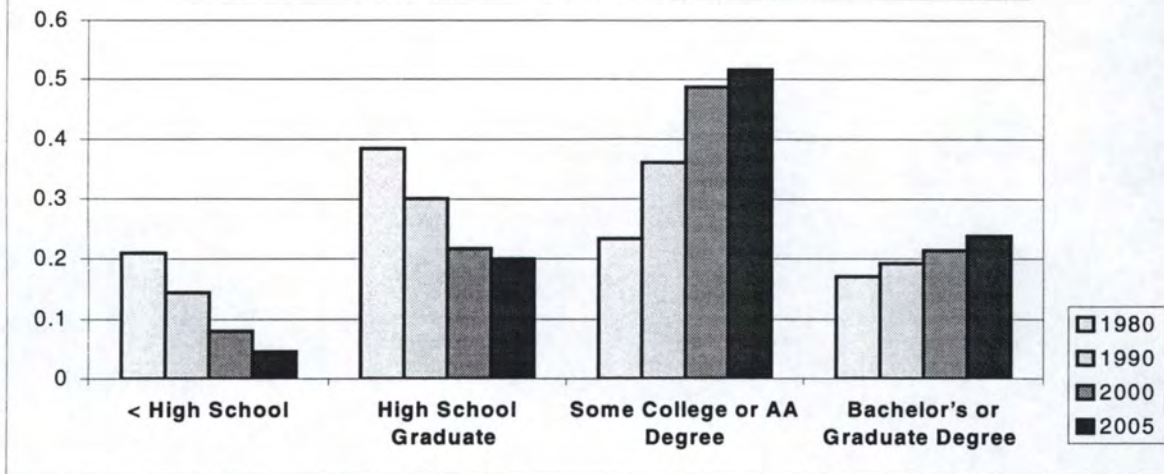
SOURCE: US Bureau of Census, 1990.

Figure 6: Proportions of Idaho Workers with College Degrees, by Industry



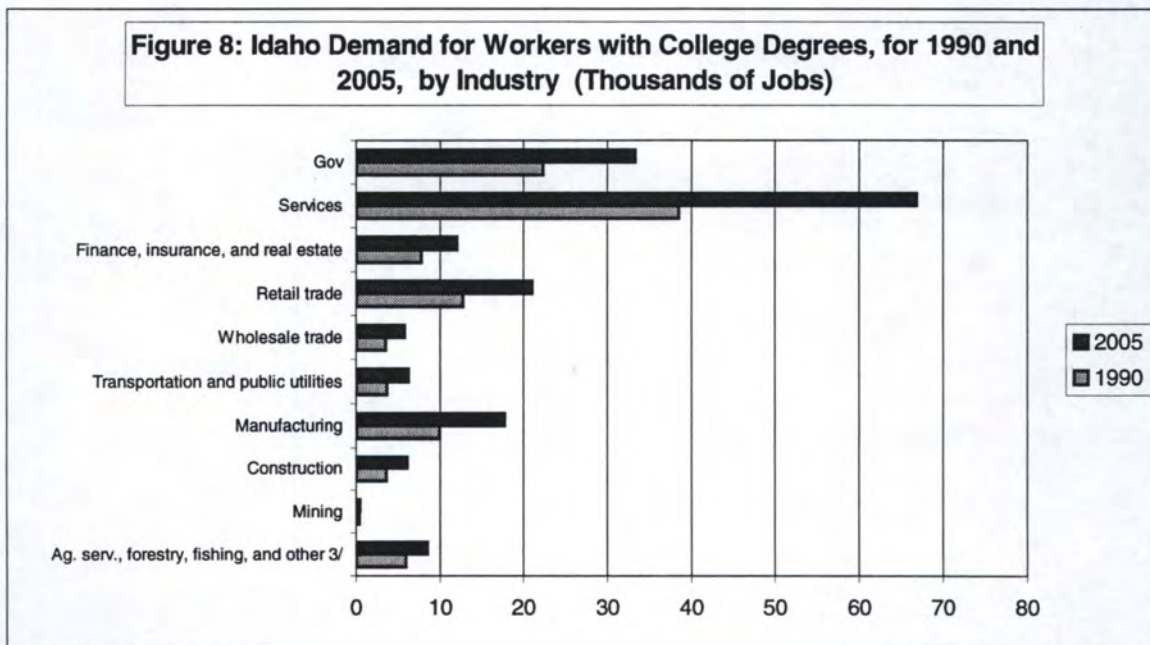
SOURCE: US Bureau of Census, 1990.

Figure 7: Trends in the Distribution of Idaho's Employment by Educational Attainment (Proportions)

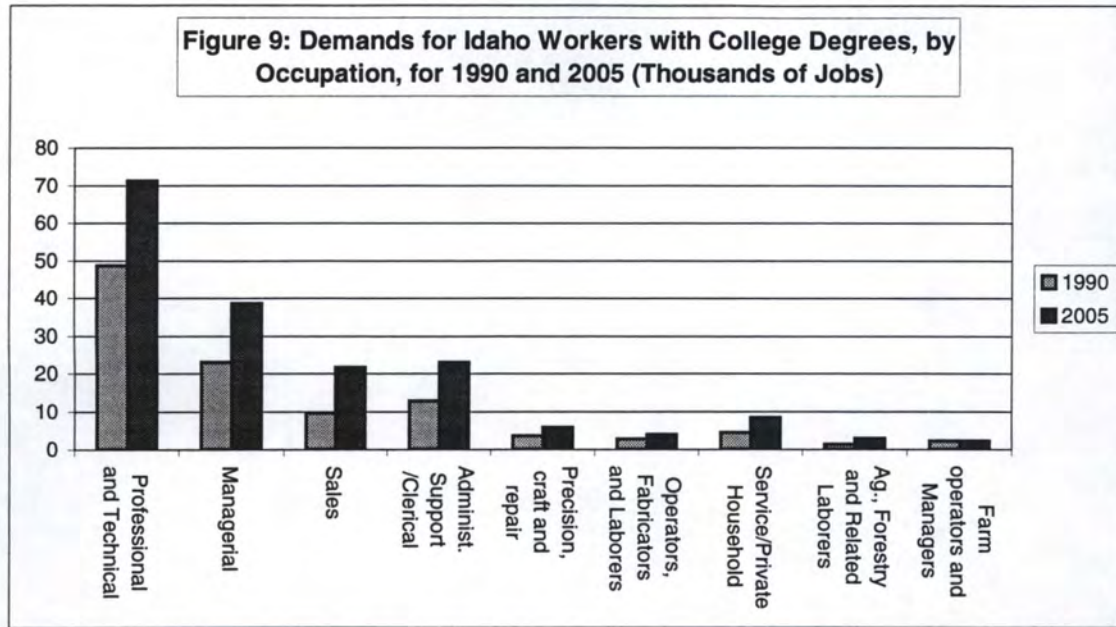


SOURCE: US Bureau of Census and Bureau of Economic Analysis (Different Years).

Figure 8: Idaho Demand for Workers with College Degrees, for 1990 and 2005, by Industry (Thousands of Jobs)



SOURCE: US Bureau of Census and Bureau of Economic Analysis (Different years).



SOURCE: US Bureau of Census and Bureau of Economic Analysis (Different Years)

Table 1: Mean Annual Earnings of Idaho's Labor Force by Educational Attainment (All Ages, 1989 Dollars).

	Mean Annual Earnings (\$)	Difference (%)
Less than High School	12,491	---
High School Degree	15,258	22.15
Some College or AA Degree	16,396	7.45
Bachelor's or Graduate Degree	20,075	22.44

SOURCE: US Bureau of Census, 1990.

Table 2: Differential Earnings (Different College Categories versus High School Diploma) of Idaho Workers by Occupation in 1989 Dollars and Expressed as Ratios.

	Some College (\$)	Ratio SC/HS	Bachelor's Degree (\$)	Ratio B/HS	Graduate Degree (\$)	Ratio G/HS
Professional and Technical	1073	1.06	6047	1.37	14293	1.87
Managerial	1330	1.07	6533	1.34	9772	1.51
Sales	274	1.02	4702	1.29	10947	1.68
Adm. Support /Clerical	146	1.01	1099	1.07	7646	1.49
Precision, Craft and Repair	390	1.02	871	1.05	6657	1.4
Operators, Fabricators and Laborers	450	1.03	-966	0.93	3504	1.24
Service/Private Household	1045	1.09	2406	1.21	4409	1.38
Ag., Forestry and Related Laborers	1875	1.15	723	1.06	1114	1.09
Farm Operators and Managers	3659	1.26	4675	1.33	2263	1.16

SOURCE: US Bureau of Census, 1990.