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**Regional Linkages and Economic Activity in Idaho  
Implications for 1998-99**

by

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Extension Economist

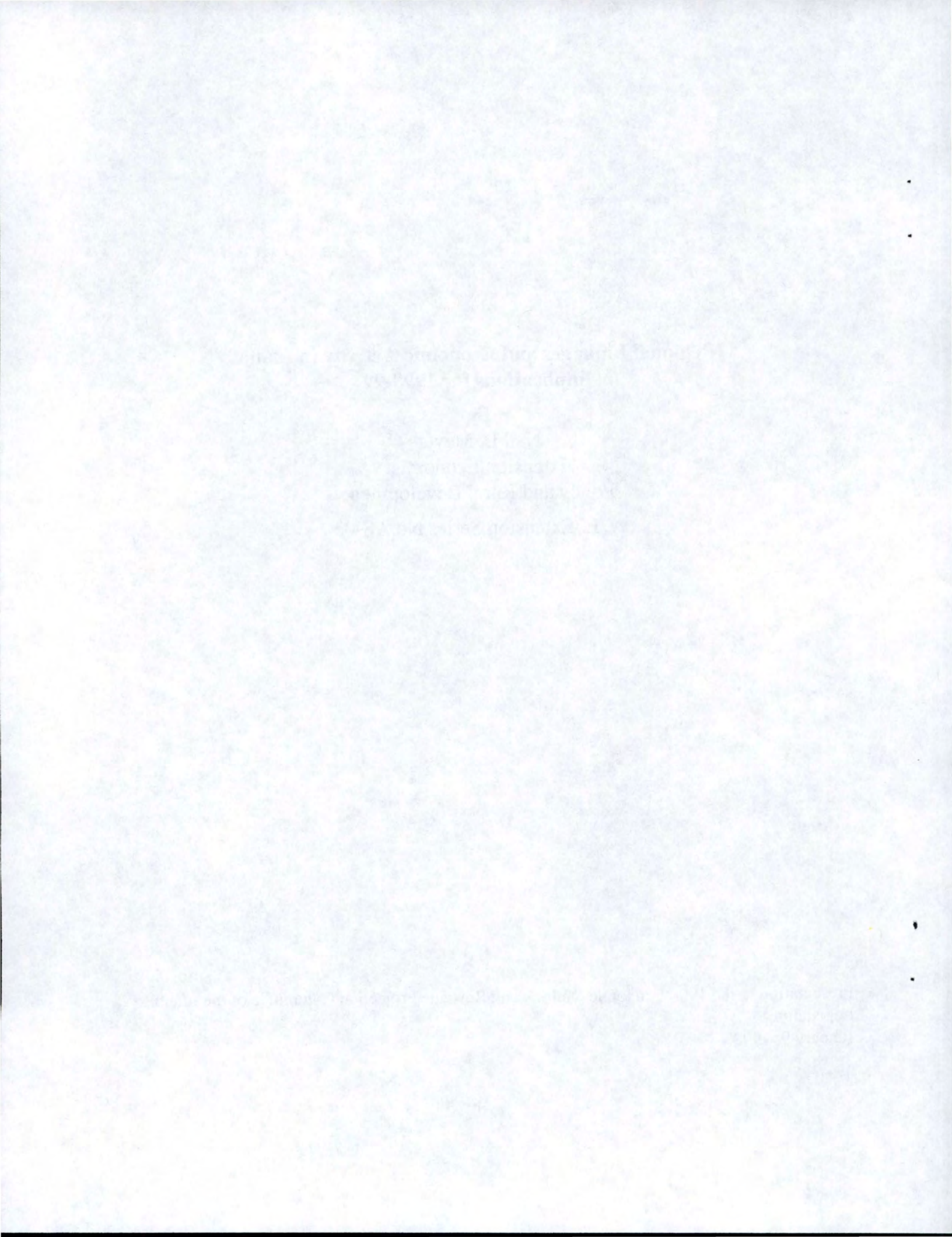
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Regional Linkages and Economic Activity in Idaho for 1998-99.  
AEE 98-3

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Extension Economist  
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**Introduction.**

Performance of Idaho's economy is affected by sector linkages within the state, linkages to sectors in other states and linkages to the world economy. When sectors buy from each other, economic activity expands. When sector purchases are reduced or stopped, economic activity declines. Actions in one sector affect other parts of the economy locally, nationally or internationally are because of linkages.

In the case of products with inelastic demand such as food, people use a certain amount no matter what the price. A small change in supply causes large changes in prices. For food products, small demand increases or supply decreases cause large price increases. On the other hand, increases in supply or declines in demand can cause large decreases in prices, thereby affecting profitability of Idaho businesses and their contributions to state revenues.

Begin with some definitions that are key to understanding economic linkages.

**Value added** is the addition to total value that Idaho businesses provide to a product or service. For example, fertilizer is combined with tubers, pesticides, machine services, power, water and labor to produce a potato crop. The potatoes can be sold for consumption or be input into the food processing sector for frying, chipping or dehydrating. Storing, shipping and delivery to the ultimate consumer are all additional value added services which can be provided by potatoes to the Idaho economy. The same is true in the manufacture of computer chips. Those parts of the final product produced in Idaho such as labor, engineering services, accounting services, legal services or raw materials provided are included in value added (Figure 1). In retail sales, factors imported such as automobiles, fuel or chemicals are not included. Services such as financing, dealer preparations, sales commissions are value added in an auto sale. These are a small proportion of the sales price.

**Linkages** are the purchases and sales of one sector to or from another in the economy. Backward linkages relate to purchases of goods and services needed to produce. Forward linkages relate to what receivers of factor payments (goods or services provided in adding value) purchase with the payments received. Wage earners and proprietors purchase housing, food, clothing, recreation, transportation and other goods and services. Capital owners make the same types of purchases with their dividends.

**Proprietor's income** is the profit of owner operated businesses. Most agricultural operators in Idaho, as well as many business in the rural communities, are in this category.



**Personal income** is the summation of net earnings (wage, salary and proprietor's income), transfer payments (payments for social security, Medicare, pension, and government interest), and DIRT (dividends, interests and rents).

Figure 1. The multiplier concept of local respending patterns.

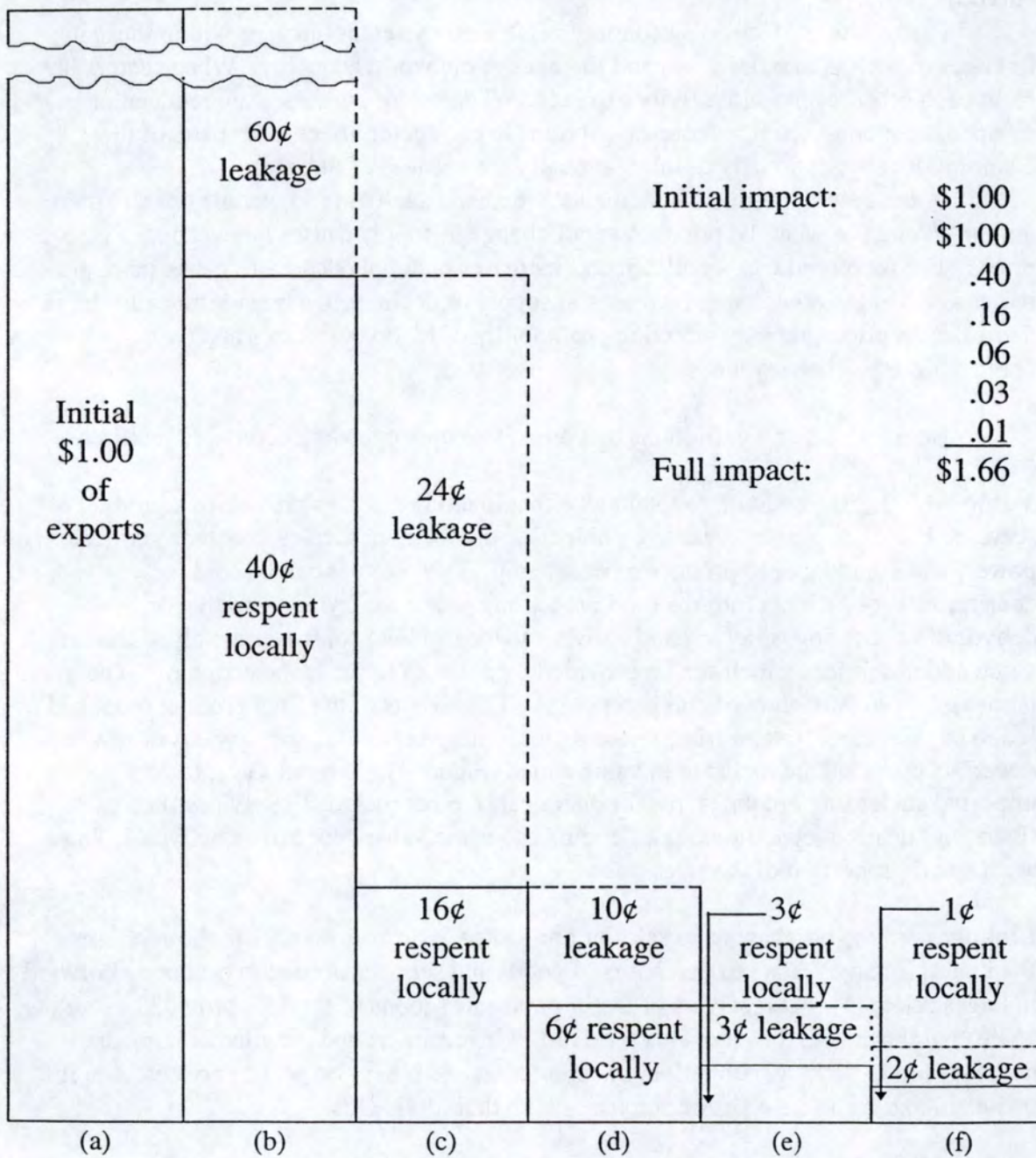




Table 1. Economic Importance and Regional Source of Idaho's Regional Income and Jobs.

Economic Contribution and Regional Source of Gross State Product  
Regional Source of Statewide Base (Pct.)

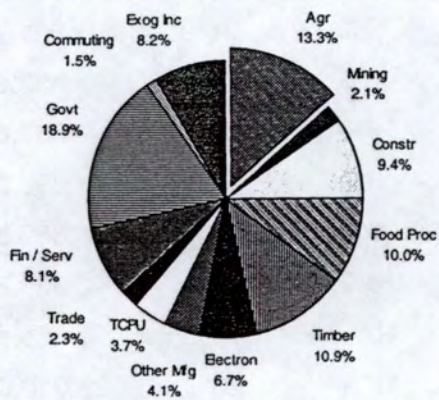
	Southwest Idaho	North Idaho	Magic Valley	Eastern Idaho	Baseline Contrib (\$MM)	Pct of Total by Base
Agr	19%	16%	26%	39%	3,102.48	13%
Mining	12%	34%	7%	47%	485.10	2%
Constr	53%	18%	11%	17%	2,165.46	9%
Food Proc	50%	4%	41%	5%	2,327.02	10%
Timber	27%	70%	2%	1%	2,531.95	11%
Electron	96%	1%	0%	3%	1,547.05	7%
Other Mfg	47%	24%	9%	21%	961.76	4%
TCPU	45%	14%	8%	33%	852.68	4%
Trade	49%	27%	13%	11%	534.69	2%
Fin/Serv	43%	12%	8%	37%	1,890.55	8%
Govt	44%	18%	9%	30%	4,388.38	19%
Commuting	47%	15%	8%	30%	336.81	1%
Exog Inc	35%	21%	10%	34%	1,886.10	8%
Regional Contrib to GSP	43%	21%	13%	23%	23,010.03	100%

Economic Contribution and Regional Source of Total Jobs  
Regional Incidence of Statewide Base (Pct.)

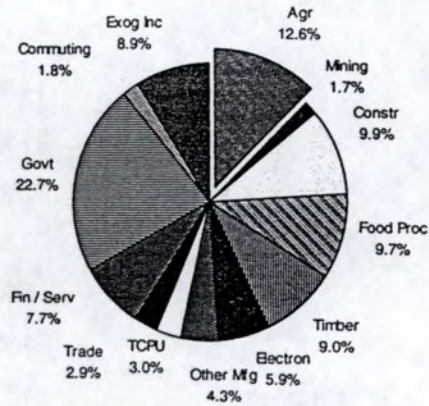
	Southwest Idaho	North Idaho	Magic Valley	Eastern Idaho	Baseline Contrib (Jobs)	Pct of Total by Base
Agr	21%	15%	27%	38%	78,533	13%
Mining	12%	35%	7%	47%	10,385	2%
Constr	51%	20%	12%	18%	61,442	10%
Food Proc	50%	3%	41%	5%	60,672	10%
Timber	27%	70%	2%	1%	55,984	9%
Electron	96%	1%	0%	3%	36,575	6%
Other Mfg	48%	24%	9%	18%	26,711	4%
TCPU	44%	15%	9%	31%	18,813	3%
Trade	42%	31%	15%	12%	18,345	3%
Fin/Serv	43%	12%	8%	38%	47,800	8%
Govt	40%	19%	9%	31%	141,617	23%
Commuting	44%	16%	9%	31%	11,056	2%
Exog Inc	32%	22%	11%	36%	55,686	9%
Regional Contrib to GSP	42%	21%	14%	24%	623,618	100%



Figure 2. Economic Base of Idaho, 1993



Contribution to Gross State Product, State of Idaho



Contribution to Total Jobs, State of Idaho

Agr	- Production Agric. Ag Serv.
Mining	- Mining
Constr	- Construction
Food Proc	- Food Processing
Timber	- Timber and Wood Products
Electron	- Electronics
Other Mfg	- Other Mfg

TCPU	- Transport, Communic., Publ. Util.
Trade	- Wholesale and Retail Trade
Fin / Serv	- Finance and Services
Govt	- Federal Govt., State and Local Govt enterprise exports
Commuting	- In - Commuting
Exog Inc.	- Exogenous income and borrowing

Figure 3. Functional Economic Areas of Idaho

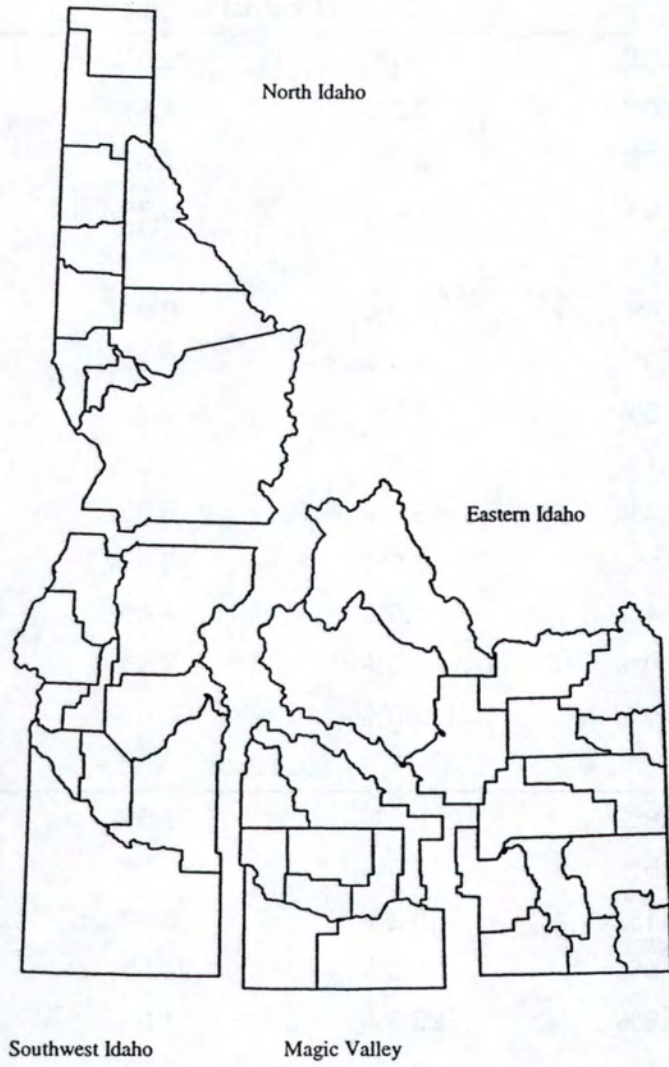




Table 2. Economic Base of Idaho's Regions

Sector	Southwest Idaho	North Idaho	Magic Valley	Eastern Idaho
	Gross Regional Income			
Agr	6.5%	10.1%	29.0%	22.5%
Mining	0.6%	3.3%	1.1%	4.1%
Constr	11.7%	8.2%	7.8%	6.8%
Food Proc	10.0%	1.4%	26.7%	1.8%
Timber	6.9%	35.9%	1.7%	0.4%
Electronics	16.4%	0.3%	0.0%	0.9%
Other Mfg	4.3%	4.4%	2.8%	4.3%
TCPU	4.5%	2.8%	2.7%	5.7%
Trade	3.1%	3.5%	2.9%	1.3%
Fin/Serv	9.4%	5.4%	5.9%	15.7%
Govt	16.3%	13.5%	10.5%	20.0%
Commuting	2.4%	1.5%	1.4%	2.6%
Exog Inc	8.0%	9.5%	7.5%	13.9%
Total	100.0%	100.0%	100.0%	100.0%
	Total Jobs			
Agr	6.8%	9.2%	27.5%	20.1%
Mining	0.5%	2.6%	0.8%	3.0%
Constr	12.1%	9.2%	8.4%	6.9%
Food Proc	9.9%	1.3%	24.5%	1.6%
Timber	5.8%	29.3%	1.5%	0.3%
Electron	14.1%	0.4%	0.0%	0.7%
Other Mfg	4.6%	4.7%	3.0%	3.7%
TCPU	3.6%	2.5%	2.3%	4.1%
Trade	3.5%	5.1%	3.6%	1.6%
Fin/Serv	9.4%	5.3%	5.4%	15.6%
Govt	18.4%	17.1%	12.7%	23.4%
Commuting	2.8%	2.0%	1.7%	3.2%
Exog Inc	8.7%	11.4%	8.6%	15.7%
Total	100.0%	100.0%	100.0%	100.0%



## **Idaho's Economy**

Table 1 and Figure 2 of Idaho's economy show that overall it has a broad base. Total value added (gross state product) in 1993 was slightly over \$23 billion. That production is distributed in relatively equal parts across 14 sectors. Gross state product has expanded about \$1.5 billion annually since 1989. That implies gross state product would be about \$30.1 billion for calendar year 1998. A geographic map of the functional economic areas of Idaho is shown as Figure 3. The distribution of economic activity around the four geographic regions of Idaho is shown in Table 2. Note that production agriculture is important in all regions with the greatest activity in the Magic Valley and in Eastern Idaho (Fresh potato packing is included in production agriculture). Food processing is concentrated in the Magic Valley with an important part on Southwest Idaho. Construction is important in all regions of Idaho. Timber and wood products are very important in northern Idaho and important in southwest Idaho. Electronics is very important in southwest Idaho. Government, which includes local government and schools, state and federal government employees, is important in all regions but most important in eastern Idaho. The data show the importance of INEEL in eastern Idaho as well as Mountain Home Air Base and the Idaho State Capitol in Southwestern Idaho.

The proportions different sectors contribute to Gross State Product are shown in Table 1. For example, the Food Processing sector contributed 10% of the total base. That 10% was distributed among the regions with 50% in southwest Idaho, 4% in northern, 41% in the Magic Valley and 5% in Eastern Idaho. In the case of the Electronics sector, it contributes 7% of gross state product. That 7% is distributed 96% in southwest, 1% in north, and 3% in eastern Idaho. The contributions of different sectors of the economy to gross state product generally do not change rapidly. Therefore even though Bureau of Economic Analysis (BEA) data is 2 years old, because it is based on filed tax returns, it still gives guidance as to the structure and interconnectedness of Idaho's economy.

Employment follows about the same proportions. If the employment proportion is greater than the value added number, it implies wages paid per job in that sector are below the state average. In spite of the broad economic base statewide, some industries such as electronics are focused in mainly 3 counties. Timber and timber processing also is focused in a limited number of counties.

## **Wages and proprietors incomes**

Personal income in Idaho has continued to grow over the past 5 years. In fact it has grown faster than the national average narrowing the gap between Idaho average per capita personal income and that of the nation. In fact, Idaho personal income has increased over 22% in the past 5 years (Table 3, IDAHO ECONOMICS, Nov., 1997.). Economic conditions for individuals have improved. Personal income is made up of net earnings (wage, salary and proprietors income), transfer payments, and proprietors income. Net earnings have grown 23.5% while transfer payments have grown 24.1%. The proprietors have not done as well. Nonfarm proprietors have shown a much lower rate of income growth. In the case of farm proprietors, the effects of declining beef, dairy and potato prices strongly forced proprietors income down.(Figure 4, IDAHO



Table 3: Employment, Proprietors, and Average Adjusted Earnings for State of Idaho, 1991 to 1995.

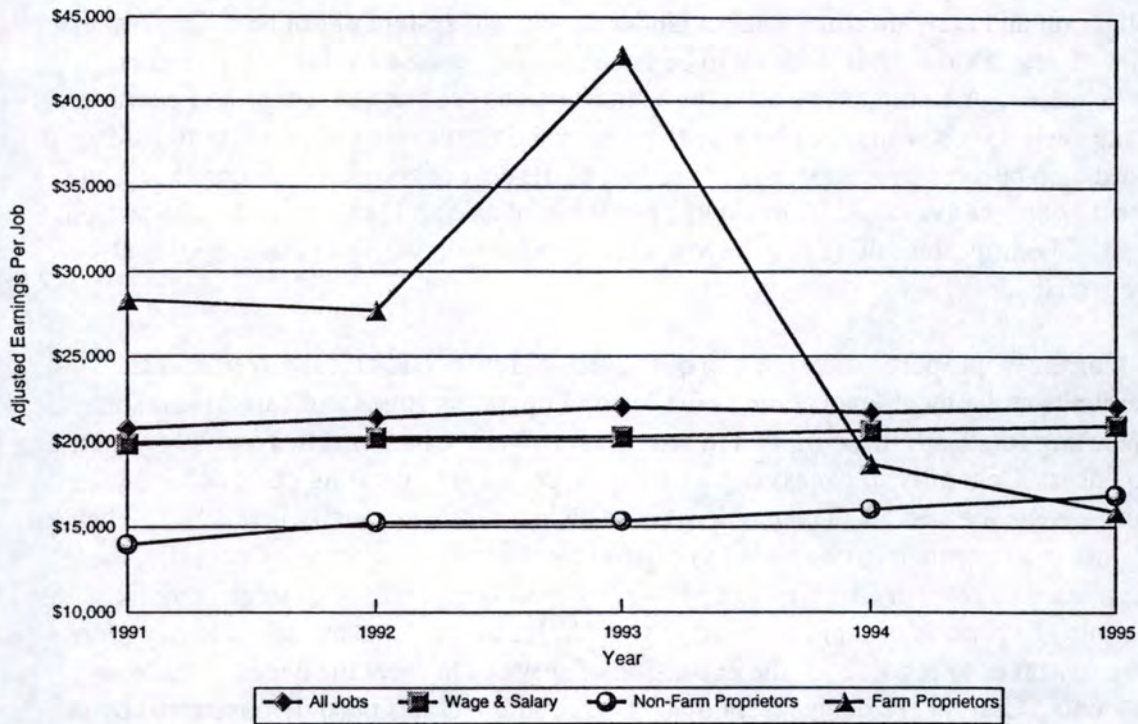
	1991	1992	1993	1994	1995	% Change 1991-1995
<b>Total full- and part- time employment</b>	572,739	592,529	620,445	647,519	667,511	16.5%
Wage and salary jobs	442,129	460,903	481,471	505,108	522,084	18.1%
Number of proprietors	130,610	131,626	138,974	142,411	145,427	11.3%
Number of non-farm proprietors	108,981	110,362	118,362	122,027	124,047	13.8%
Number of farm proprietors	21,629	21,264	20,612	20,384	21,380	-1.2%
<b>Total Personal Income ('000)</b>	\$16,760,174	\$17,660,267	\$18,872,634	\$19,590,172	\$20,481,793	22.2%
Net Earnings	\$11,253,960	\$11,989,941	\$12,912,379	\$13,261,868	\$13,899,115	23.5%
Transfer Payments	\$2,608,391	\$2,789,275	\$2,926,244	\$3,063,614	\$3,236,297	24.1%
Dividends, Interest, Rent	\$2,897,823	\$2,881,051	\$3,034,012	\$3,264,690	\$3,346,380	15.5%
<b>Proprietors' income ('000)</b>	\$2,134,551	\$2,273,817	\$2,693,277	\$2,336,491	\$2,429,388	13.8%
Non-farm proprietors' income ('000)	\$1,521,828	\$1,684,285	\$1,812,996	\$1,956,147	\$2,089,933	37.3%
Farm proprietors' income ('000)	\$612,723	\$589,532	\$880,281	\$380,344	\$339,456	-44.6%
<b>Average earnings per job (dollars)</b>	\$20,763	\$21,387	\$21,977	\$21,687	\$22,022	6.1%
Wage & salary earnings per job	\$19,829	\$20,202	\$20,238	\$20,617	\$20,916	5.5%
Average earnings per confirm proprietor	\$13,964	\$15,261	\$15,318	\$16,031	\$16,848	20.7%
Average earnings per farm proprietor	\$28,329	\$27,724	\$42,707	\$18,659	\$15,877	-44.0%

Notes:

1. Source: Regional Economic Information System, Bureau of Economic Analysis, U.S. Department of Commerce. Washington, D.C., August, 1997: on CD-ROM. [This data is derived mostly from Federal income tax returns.]
2. All dollars are adjusted for inflation using GDP deflator (1992=100).



Figure 4. Average Annual Adjusted Earnings for Jobs and Proprietors, 1991 to 1995.



ECONOMICS, November 1997). Dairy prices remain low and the effects of the disastrous 1996 potato prices are still with us. Beef prices have improved somewhat. Still, agricultural proprietors income is expected to be down in 1998 (Guenther and Laughmiller).

#### Response to specific issues raised by Economic Outlook and Revenue Assessment Committee.

##### General :

No one enjoys paying taxes. However, everyone benefits from some services of government at some level. Discussions generally center around:

- what services should government provide?
- what level should selective services be provided?
- how should they be paid for?

Goods or services provided by government are wanted by some members, but not all, of society. The difficult part is making decisions concerning what to provide citizens and paying for it in an equitable manner. The perception of FAIRNESS is extremely important in tax assessment. To assess taxes more fairly a number of things need to change.



### **Property Taxes:**

1. Although the state of Idaho does not set or collect property taxes, they are an important part of the local government finance equation. The state sets the rules for property tax collection and here are some issues. Under the current system of not reporting real estate sales at actual value, it is difficult to be fair in setting assessed value and therefore assessments. A stamp tax on all sales or transactions such as existed at the Federal level in the early 1960s would be one way to get actual data on value of property transfers. It could also be a revenue source to cover part of the cost of courthouse record keeping. Another alternative could be mandated reporting of sale and price to make transactions legal. The important thing is to have a valid data base on which to make appraisal decisions.

2. Currently, property taxes are a major source of revenue for local governments. Demands at the local level come in the form of operating funds and capital investments. Operating funds are those needed to provide for salaries, fuel, utilities and other operating expenses. Generally, if excess capacity exists, per capita operating costs decline when more people are served. The problem comes when serving capacity is reached. Then capital investments must be added to expand local service provision. Generally, these infrastructure investments are "lumpy". They must be purchased in large units like schools. In periods of rapid population growth, Idaho residents are asked to pay more property taxes to provide for the expansion of services to meet the needs of the new residents. Current residents resent that. This resentment has been demonstrated by the tax limiting initiatives which have been presented to voters at various times over the past 20 years. In reality, when people migrate to Idaho communities that lack infrastructure, ALL RESIDENTS are asked to pay more taxes to accommodate the new residents. Essentially all local residents are taxed to make up for revenue shortfalls due to service demands from new residents. After a period of continued growth, they resent it and support tax limitation measures.

### **Income and Sales Taxes**

Income and sales taxes, which are collected by state government, respond much more rapidly to population changes. In times of growth, new income and sales tax revenue is collected almost immediately, helping to finance new demands on state government. The effect in Idaho has been revenue surpluses at the state level from sales and income tax collections. New demands for services and infrastructure at local level must be financed by property taxes and impact fees (school are not eligible) which do not immediately respond. If this disparity is to be reduced or eliminated, the formulas to redistribute funds from the state level to growing communities need to be revised. That is a difficult but important task the legislature needs to address if they want to resolve the problem.

In recent years income tax collections have been 2.63% of GSP and sales tax collections have been about 2.18% of gross state product. Total state income and sales tax collections have been 4.81% of GSP. Assuming that relationship holds, as long as the Idaho economy continues to expand, revenues to state government should expand at the same rate.



**Demographics:**

Based on a study by Salant and others, entrepreneurs moving into the state in both urban and rural areas are expected to have the same effect as opening a new factory that employs an equal number of persons. The advantage of entrepreneurs is that they are dispersed and spread the demand for public goods and services. Therefore they are less likely to over stress existing infrastructure. In effect, they improve the efficiency of existing services and infrastructure. Being dispersed, they do not create the agglomeration and synergism effects on one location.

**Industry Specific Questions:**

**Recreation** The hospitality, travel and recreation service sectors are an important part of Idaho's economy. The real question most rural areas need to ask is "what is purchased in our region?" Today's recreations purchases most of their needs at home. With the loss of timber revenues (By law 25% of timber harvest value from public lands goes to local roads and schools) and the reductions in Forest Service staff, many rural areas find themselves with less revenue. Property taxes must be raised to cover expenses. That is to pick up the garbage, find lost persons, provide emergency services, control the fires and maintain road systems. Additional revenues must be found or rural residents will be asked to raise their property taxes to help take care of the visitors. A report on visitor impacts in an eastern Idaho county will be available from UI Ag Econ Extension in the spring of 1998.

**Services:** The exemption of the service industry from sales taxes shifts the burden to goods providers and users.

**Agriculture:** Most farm operators are considered proprietors. Another group of farmers are incorporated and their income is considered under corporate income. The products of one group of producers are inputs into another agricultural enterprise. Examples of this include forage production for livestock and supplies for food manufacturing such as fish, potatoes, sugar beets, barley and milk. In rural communities, agricultural land also pays a major share of property taxes (Hartmans and Meyer) which are part of the total tax base supporting state and local government.

**Food and Kindred Products:** Adding value to food products is key to the economies of rural areas. As a mature industry its importance is likely to continue at about the current level. In a number of rural counties it is a very important source of manufacturing employment (Bingham, Minidoka, Payette, Cassia, Canyon). Thus, it is a major sources of wage employment and retail demand, particularly in the Magic Valley area.

**Factors on the Horizon for Idaho's Economy:**

Because food demand is generally inelastic (slight changes in supply cause large changes in price) the economic situation in Asia could have important implications for Idaho producers. If demand fades, price declines like we witnessed in the mid-1980s are



possible. Loss of faith and trust in Asian economies will strengthen the dollar, pricing our exports out of the international markets, increasing domestic supplies and depressing prices. No one knows what will happen but the situation warrants attention.

The above situation re-enforces the need for agricultural research because we will need to be low cost high quality producer to compete in those markets. In addition, low cost imports will be confronting our producers in domestic markets. Both situations could have important effects on the Idaho. economy.

#### **Summary:**

Idaho's economy has a broad base depending on many sectors. Some are more important in one part of the state, others more important in another part of the state. Idaho producers buy and sell in a national and international market. To maintain competitive, we must have research and infrastructure to keep production costs low and to deliver our products to national and world markets. We must also deal with the vulgarities of weather and world politics. Asian market turmoil will make the dollar strong limiting our ability to export and provide lower cost imports to compete with domestic production. My estimate is that profits will be lower for agriculture in 1998, tax revenue generated will also be reduced.

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