

5
358



GRANT COUNTY OREGON:

Structure of the County Economy

Special Report 358
May 1972

Extension Service
Oregon State University
Corvallis

Logic. Experi. Station.

Grant County: Structure of the County Economy

Ancel Haroldsen and Russell Youmans*

Introduction

The Grant County economy was studied in considerable depth for the calendar year of 1964.^{1/} The motivation of the study was to analyze the impact of changes in federal grazing fees and allowable timber cuts upon the economy of the county.

The present report updates the dollar values from the original 1964 figures to estimates of the level of business activity in 1970. The major change has been the inclusion of household salaries and wages and the business transactions of local governmental units as integral sectors of the economy. The original study considered these sectors as representing a loss to further local economic activity. In this report these activities are viewed as contributing to increasing local economic activity in the county, of course a portion of household and local government expenditures is consumed and results in stopping further expansion of business activity.

If direct comparisons are made between the numbers reported in this publication and those in the original study, the differences result from changes in price levels, levels of business activities, and the explicit inclusion of households and local government in the estimating model. The

* Graduate student in Agricultural Economics; Extension Economist, Community Development, both at Oregon State University.

^{1/} D. W. Bromley, G. E. Blanch, and H. H. Stoevener, "Effects of Selected Changes in Federal Land Use on a Rural Economy", Station Bulletin 604, Agricultural Experiment Station, Oregon State University, March 1964.

basic interrelationships among economic sectors remain the same as estimated from the 1964 economy.

The Impact of Economic Change

Change in a local community frequently results in controversy. This controversy may, in part, result from differing economic and social effects from the change as felt by various segments of the community. Only impact of an economic nature is reported here; however, it is realized that many other types of impact contribute to the controversy. An attempt is made to provide a framework through which the economic impact resulting from change can be traced and analyzed throughout the community. It is in this manner, through following economic stresses, that the economic portion of the controversy associated with change can be identified.

The idea behind this study is simple: a working description of the Grant County economy is constructed from local information and then used to simulate the impact of change on this economy. This model is made by assembling information on sales that take place within the local economy. The sales include those to households, businesses, local governments, fraternal organizations, people in businesses outside the local areas; in short, an attempt is made to capture information on all the business transactions within the community. This was accomplished by sampling a large number of businesses in the county. When this detail is complete, it is possible to follow the changes of dollar values of economic activity initiated at any point in the local economy. Thus, the magnitude and distribution of the impact from actual or proposed economic changes in the

local community can be traced. The distribution of the impact, negative or positive, is felt to be important in influencing the community attitude about economic change.

These characteristics of the study method make it potentially useful to a community when considering prospective economic changes. For example, if it is possible to identify the economic effects of change from a new dam, an industrial park, a housing project, changes in allowable timber cut, grazing fees, loss of saw mill, etc. the economic effects of these changes can be followed through the community by simulating the economic change in the business community. This would appear useful as the community considers a number of economic opportunities. This report is intended to stimulate local people to seek more information for decision-making about the economic impact of change and to provide a framework to use this information in evaluating the impact of changes in the future. Although the study is about Grant County, Oregon specifically, other western counties with similar characteristics may be able to draw some useful information in comparison.

Sectors of the Grant County Economy

An input-output model is constructed by grouping similar firms together in business "sectors". The model is a mathematical "picture" of the economic interrelationships among sectors within the local economy; in the case of Grant County it is composed of 18 business "sectors".^{2/} In this

^{2/} See Appendix Table 1 for complete list of sectors. Sectors 1-13 are Business sectors, 14 is the Household sector, Sectors 15-18 represent Local Government.

report households and local government have been explicitly added and are included as a part of the local economy. Thus, economic changes which affect the economy through the household sector or local government sector are considered. In the original report households and local government were considered as consumption sectors making their impacts similar to exports, more recent studies indicate the possibility of including the effects of these sectors on the economy. The explicit inclusion of the household and local government sectors allows the model to evaluate the impact of the economic activities of these sectors on the remainder of the economy. Households provide labor and capital to local business sectors, and local government expenditures for goods and services paid out of tax revenues likewise generate local business. These activities contribute to local business and need to be included if a more accurate picture of the total amount of economic activity generated in an economy is desired.

The Basic Structure of the Grant County Economy

The distribution of purchases (Table 1) gives a "picture" of the interrelationships that exist among sectors within the Grant County economy. This distribution indicates the origina and destination of purchases of each sector within the county. For example, ranches and farms (agricultural sector) spend 3.7 percent or 3.7 cents out of each dollar of their total business for purchases from other ranches and farms (row 1, column 1), 4.9 percent of the purchases are for feed, seed and farm machinery from the farm supply sector (row 6, column 1); 24.9 percent is spent for gas, oil, auto repair, tires, etc. from firms in the automotive sector (row 7, column 1);

and so on down the column. This procedure can be followed to determine purchasing patterns for any of the sectors listed across the top of the table. The sum of the first 18 rows in any column indicates that part of the economic activity from the sector of interest is spent within Grant County. "Purchases" from the local governmental units are a reflection of local taxes paid.

The remaining expenditures listed in rows 19, 20, and 21 link the Grant County economy with the economic activity of the state and nation. The trade coefficients in the first 18 rows in Table 1 can be interpreted as measures of economic interdependence within the county. For example, the agricultural sector makes 72 percent of its purchases within Grant County while the automotive sales and services sector spends 26 percent within the county. Thus, the automotive sales and services sector must make a larger part of its purchases outside Grant County than the agricultural sector.

In addition to the direct effects reported in Table 1 indirect effects appear as the recipient businesses (those who were sellers) react in meeting a change of economic activity. Table 2 summarizes the total of direct and indirect economic effects that exist within the community. Our interest is to discover the total impact in the economy of a change of \$1.00 of business in any sector. This means that we need to account for all the local business activity generated as a result of this dollar change. The purchasing power of a dollar may be exchanged in the community many times; as this buying power circulates, it increases the total economic activity

of the community.^{3/} As an example, a \$1.00 change in the agricultural sector results in \$2.37 change (the sum of column 1, Table 2) in total economic activity in the community after both direct and indirect effects are taken into account. This is illustrated by adding the figures from the agricultural column in Table 2. The \$1.00 of new business plus the effects of the trade within the agricultural sector account for \$1.04 in additional business. Cafe and tavern business would change by \$0.01 as a result of an increased \$1.00 business by agriculture (row 5, column 1). Farm supply revenue would change by \$0.05 (row 6, column 1). Automotive sales and services business changes by \$0.38. Household income would change by \$0.34; this is usually of special interest, as changes in the household row (row 14) indicate the changes in personal income in the county from a dollar change in the sales. The total of these changes are greater than the original \$1.00 change in business. Again a similar experience can be practical on other sectors to review impacts of business change.

Household Income

The income output coefficients in Table 3 indicate the effects on household income from a \$1.00 change in business. The numbers represent the changes in local salaries and wages resulting from changes in economic activity. As an example, a dollar change in lumber is estimated to produce a resulting change of \$0.42 in household income after all economic reper-

^{3/} Coppedge, R. O. and R. C. Youmans, "Income Multipliers in Economic Impact Analysis", Cooperative Extension Service, Oregon State University, Special Report 294, June 1970.

TABLE 3

Income-Output Coefficients* for Economic
Sectors of Grant County, Oregon. 1970.

<u>Sector</u>	<u>Coefficients</u>
[1] Agriculture	.34
[2] Lumber	.42
[3] Mining	.36
[4] Lodging	.35
[5] Cafes and Taverns	.46
[6] Farm Supply	.13
[7] Automotive Sales & Services	.15
[8] Communication & Transportation	.55
[9] Professional Services	.59
[10] Finance	.19
[11] Construction	.56
[12] Retail & Wholesale Trade	.13
[13] Retail Services	.52
[14] Households	na
[15] Schools	.83
[16] Roads	.49
[17] Police	.95
[18] Other Local Government	.61

* The Income-Output Coefficient reflects the change in household income with a \$1.00 change in revenue in a given sector.

cussions have been felt. This figure accounts for direct wage and salary changes in the lumber sector plus wages and salaries changed indirectly by other sectors adjusting to lumber changes. The same analysis applies to the other figures.

Multipliers

The business multiplier (Table 4) indicates the change in revenue for all sectors in the model with a \$1.00 change in revenue in a given sector from sales outside the economy. For example, a \$1.00 change in revenue in the agricultural sector results in a total economic change of \$2.37 across the entire community. These multipliers are reported earlier at the bottom of Table 2, this earlier table indicates how the multipliers are calculated.

The following item is frequently misinterpreted, note the focus is on wages and salaries alone and not on total business.

The household income multipliers (Table 4) reflect the changes in total county household income from a \$1.00 change in wages and salaries paid by a given sector. For example, if wages and salaries in agriculture increased by \$1.00, total household income in the county was found to increase by \$2.78 (\$1.00 in agricultural household income plus \$1.78 in household income in the remaining 17 sectors = \$2.78).

Two figures have been presented to reflect impact on household income: 1) income-output coefficient (Table 3), and 2) household income multiplier (Table 4). The income-output coefficient relates total household income in the county to changes in total business in a specific sector. The

TABLE 4

Business Multipliers for Economic
Sectors of Grant County, Oregon. 1970.

<u>Sector</u>	<u>Business Multiplier</u> ^{1/}	<u>Household Income Multiplier</u> ^{2/}
[1] Agriculture	2.37	2.78
[2] Lumber	2.10	1.40
[3] Mining	2.01	1.84
[4] Lodging	2.26	2.00
[5] Cafes and Taverns	2.51	1.52
[6] Farm Supply	1.31	1.36
[7] Automotive Sales & Services	1.49	1.51
[8] Communication & Transportation	2.30	1.32
[9] Professional Services	2.17	1.20
[10] Finance	1.41	1.34
[11] Construction	2.36	1.30
[12] Retail & Wholesale Trade	1.34	1.41
[13] Retail Services	2.14	1.28
[14] Households	2.25	
[15] Schools	2.71	1.21
[16] Roads	2.38	1.56
[17] Police	3.01	1.22
[18] Other Local Government	2.39	1.29

^{1/} The Business Multiplier or output multiplier reflects the change in revenue in all sectors in the model with a \$1.00 change in revenue for a sector from sales outside the economy.

^{2/} The Household Income multiplier reflects the total change in household income in all households with a \$1.00 change in household income in a specific sector.

household income multiplier is much more restrictive relating changes in total household income in the county only to changes in household income in a specific sector.

Total Output and Exports

In 1970 the total business in the county amounted to an estimated \$78 million (Table 5). This \$78 million cannot be compared to the Gross National Product (GNP), as GNP attempts to measure only the value of final goods and services produced. The \$78 million figure for Grant County includes all the intermediate transactions necessary to produce the goods and services. This study explicitly attempts to double account for the intermediate economic activity to understand more about the distribution and magnitude of the impacts of economic change.

The total output of each sector in the Grant County economy is reported in Table 5. These figures provide a rough indication of the importance of the various sectors.

County exports (Table 5) simply indicate the magnitude and distribution of sales made outside the county. Included here are the obvious sales of logs, timber, and cattle, but also are sales of lodging to visitors, wages paid to county people from non-county employers, and transfer payments from outside governmental agencies.

Use of the Study

The results presented here are hopefully interesting to residents of Grant County, and perhaps to people in similar economic areas in the

TABLE 5

Total Output and County Exports by Economic
Sectors for Grant County, Oregon. 1970.*

<u>Sector</u>	<u>County Exports^{1/}</u> <u>(1,000 dollars)</u>	<u>Total Output</u> <u>(1,000 dollars)</u>
[1] Agriculture	\$ 5,685,	\$ 5,993,
[2] Lumber	15,884,	17,384,
[3] Mining	448,	448,
[4] Lodging	469,	520,
[5] Cafes and Taverns	383,	956,
[6] Farm Supply	54,	481,
[7] Automotive Sales & Services	1,921,	10,049,
[8] Communication & Transportation	682,	1,363,
[9] Professional Services	226,	1,390,
[10] Finance	759,	1,155,
[11] Construction	629,	977,
[12] Retail & Wholesale Trade	2,691,	12,788,
[13] Retail Services	62,	1,255,
[14] Households	6,513,	19,176,
[15] Schools	473,	1,478,
[16] Roads	515,	515,
[17] Police	9,	73,
[18] Other Local Government	50,	387,
Total	\$37,453,	\$78,388,

* Output and final demand are based on 1964 estimates by Bromley adjusted for price changes by use of the consumer price index.

^{1/} County Exports represent sales or revenue from outside the local economy from sale of goods and services outside the county or transfers from state or federal government to local government units.

western United States. However, the information reported is limited to descriptive relationships. The potential usefulness will materialize when the people of Grant County ask for further use of this study. This work is simply a report that an economic model is available to Grant County for use in evaluating future economic change. Potentially there is no end to this work if Grant County is interested and finds it useful to continue to analyze economic changes.

The earlier study by Bromley, et. al., analyzed the impact of proposed changes in grazing fees and allowable timber cut. The present model is available to provide estimates of the impact of these and other economic opportunities of interest in the county. Not all economic questions can be analyzed, of course, but many questions may be of interest, i.e., impact of water development, effects of range or timber improvements, impact of gaining or losing a timber operation, expansion of the tourist business, etc.

Certainly additional work is required. It will be necessary to estimate the direct impact of economic changes in the county. But after that information is prepared, the cost of acquiring the more complex information on total effects, including the distribution of effect throughout the economy, will be low.

APPENDIX TABLE 1

Sectors & Subsectors of Grant County Economy, 1970

	<u>Sector</u>	<u>Subsector</u>
[1]	Agriculture	Farms and ranches
[2]	Lumber	Lumber mills, logging, and lumber trucking
[3]	Mining	
[4]	Lodging	Hotels, motels, trailer parks, apartments and resorts
[5]	Cafes and Taverns	
[6]	Farm Supply	Feed, seed, and farm machinery
[7]	Automotive Sales & Services	Gas and oil distributors, service stations, auto repairs, auto sales, tires, auto supplies, and machine shops
[8]	Communication & Transportation	Radio stations, newspapers, trucking, Western Union, T.V. cable, busses, railroads, telephones, and aircraft
[9]	Professional Services	Physicians, dentists, attorneys, and optometrists, accountants, hospital services and veterinarians
[10]	Finance	Banks and loan agencies
[11]	Construction	Lumber (retail), contractors, and hardware
[12]	Retail & Wholesale Trade	Groceries, furniture, department and variety, florists, jewelers, electric and gas, clothing and shoes, appliances, drug stores, machinery dealers, office supplies, etc.

<u>Sector</u>	<u>Subsector</u>
[13] Retail Services	Barber and beauty shops, insurance and real estate, laundry and cleaning, non-profit organizations (churches, Elks Club, etc.), entertainment (movies, golf, bowling), saddlemaker, garbage disposal, other repairs (gunsmith, etc.), undertaking, and all other (credit bureau, Chamber of Commerce)
[14] Households	Private individuals who are Grant County residents
[15] Schools	Includes six school districts and intermediate education district
[16] Roads	Includes county road department and city street department, and street lights. Does not include maintenance department expenditures.
[17] Police	Includes County Sheriff's office, City Police departments, Justice Courts, Circuit Court, and District Attorney's office.
[18] Other Local Government	Includes County and City Administrative Departments, Fire Departments, City Maintenance Departments, Cemetery Districts, Rural Fire Districts. Does not include funds of County Welfare Department furnished by the State or Federal Governments.

Table 1. Percentage Distribution of Purchases by Economic Sectors, Grant County, Oregon, 1970.

Sales sector	Agriculture		Timber		Mining		Lodging		Restaurants		Farm supply		Automotive		Communication & transportation		Professional services		Financial services		Construction		Retail & wholesale trade		Retail services		Streets & roads		Police		Other local government					
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]						
Agriculture	3.72	0.32	0	0.14	0	0.45	0	0	0	0	0.06	0.10	0.63	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Timber	0	8.32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Mining	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Lodging	0	0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Restaurants	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Farm Supply	4.93	0.32	8.38	3.61	0	2.23	13.88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Automotive	24.92	7.84	2.82	20.52	2.96	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Communication & Transportation	0.05	0.32	0.19	0.97	0.47	0.80	1.24	2.01	2.01	1.12	0.51	0.92	1.48	1.32	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37		
Professional Services	2.39	0.08	0	0.64	0.31	0	0.10	0.27	0.27	0.04	0.10	0.20	0.85	4.88	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03		
Financial Services	3.01	0.52	0	0.38	0.21	0	0	0.86	0.86	0	0	0.13	0.62	0.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Construction	0.83	0.02	0.48	0	0.75	0	0	0	0.02	0	0	0.03	0	0.91	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13		
Retail & Wholesale Trade	5.13	5.40	1.64	11.39	45.56	1.38	0.82	4.54	4.54	1.57	0.42	5.37	4.29	47.40	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08	
Households	3.39	0.63	0	7.94	4.94	0.03	0.21	0.08	0.08	0.38	0.04	0.31	0	3.64	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03		
Education	12.30	30.11	19.81	17.49	30.54	9.37	9.98	42.01	42.01	49.08	14.52	9.29	40.23	0.20	68.56	68.56	68.56	68.56	68.56	68.56	68.56	68.56	68.56	68.56	68.56	68.56	68.56	68.56	68.56	68.56	68.56	68.56	68.56	68.56	68.56	
Streets & Roads	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Police	0.53	0.03	0.64	0.25	0.03	0.03	0.02	0.14	0.14	0.02	0.11	0.03	0.10	0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Other Local Government	2.77	0.15	3.33	1.27	0.17	0.17	0.10	0.73	0.73	0.12	0.57	0.18	0.53	0.28	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	
Percentage Local Purchases	72.39	54.55	47.39	68.46	86.47	17.33	26.64	62.59	62.59	52.70	18.09	17.39	53.26	80.41	78.98	78.98	78.98	78.98	78.98	78.98	78.98	78.98	78.98	78.98	78.98	78.98	78.98	78.98	78.98	78.98	78.98	78.98	78.98	78.98	78.98	
State & Federal Government	0.65	0.56	0	1.90	0.14	0.21	0.05	6.32	6.32	0.29	0.61	2.39	1.42	12.24	5.79	5.79	5.79	5.79	5.79	5.79	5.79	5.79	5.79	5.79	5.79	5.79	5.79	5.79	5.79	5.79	5.79	5.79	5.79	5.79	5.79	
County Imports	7.97	41.76	0	2.83	11.49	82.46	72.50	21.05	21.05	39.50	80.95	77.36	35.41	7.35	15.23	15.23	15.23	15.23	15.23	15.23	15.23	15.23	15.23	15.23	15.23	15.23	15.23	15.23	15.23	15.23	15.23	15.23	15.23	15.23	15.23	15.23
Depreciation & Negative Investment	18.99	3.13	0	26.81	1.90	2.34	0.81	10.04	10.04	7.51	0.35	2.86	9.91	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

1/ Estimates reported in this table are frequently referred to as trade or direct coefficients.

Table 2. Direct and Indirect Effects of One Dollar Change in Business Within Grant County, Oregon, 1970.

Sales sector	Agriculture		Timber		Mining		Lodging		Restaurants		Farm supply		Automotive		Communication & transportation		Professional services		Financial services		Construction		Retail & wholesale trade		Retail services		Streets & roads		Police		Other local government			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]				
Agriculture	\$1.0395	\$0.0042	\$0.0008	\$0.0026	\$0.0013	\$0.0048	\$0.0002	\$0.0006	\$0.0006	\$0.0008	\$0.0017	\$0.0013	\$0.0071	\$0.0012	\$0.0009	\$0.0008	\$0.0007	\$0.0006	\$0.0006	\$0.0008	\$0.0017	\$0.0017	\$0.0017	\$0.0013	\$0.0009	\$0.0008	\$0.0008	\$0.0008	\$0.0008	\$0.0010	\$0.0010	\$0.0010		
Timber	0.0011	1.0920	0.0011	0.0011	0.0014	0.0004	0.0005	0.0017	0.0017	0.0014	0.0004	0.0004	0.0016	0.0004	0.0004	0.0006	0.0018	0.0018	0.0018	0.0018	0.0017	0.0017	0.0017	0.0013	0.0026	0.0026	0.0026	0.0026	0.0026	0.0026	0.0026	0.0026		
Mining	0	0	1.0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lodging	0.013	0.0012	0.0009	1.0007	0.0009	0.0003	0.0003	0.0022	0.0022	0.0009	0.0003	0.0003	0.0010	0.0003	0.0003	0.0004	0.0011	0.0011	0.0011	0.0011	0.0007	0.0007	0.0007	0.0003	0.0017	0.0017	0.0017	0.0017	0.0017	0.0017	0.0017	0.0017	0.0017	
Restaurants	0.0102	0.0126	0.0109	0.0105	1.0139	0.0038	0.0045	0.0166	0.0166	0.0009	0.0009	0.0009	0.0058	0.0009	0.0009	0.0007	0.0007	0.0007	0.0007	0.0007	0.0009	0.0009	0.0009	0.0003	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009	
Farm Supply	0.0516	0.0042	0.0842	0.0366	0.0006	1.0004	0.0002	0.0007	0.0007	0.0006	0.0004	0.0004	0.0002	0.0002	0.0002	0.0002	0.0007	0.0007	0.0007	0.0007	0.0009	0.0009	0.0009	0.0003	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009	
Automotive	0.3822	0.1892	0.1183	0.3201	1.365	0.0550	1.1945	0.2308	0.2308	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0009	0.0009	0.0009	0.0003	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009	
Communication & Transportation	0.0157	0.0153	0.0132	0.0245	0.0215	0.0117	0.0184	1.0355	1.0355	0.0251	0.0100	0.0132	0.0282	0.0282	0.0282	0.0251	0.0251	0.0251	0.0251	0.0251	0.0282	0.0282	0.0282	0.0282	0.0282	0.0282	0.0282	0.0282	0.0282	0.0282	0.0282	0.0282	0.0282	0.0282
Professional Services	0.0435	0.0227	0.0191	0.0257	0.0282	0.0067	0.0089	0.0312	0.0312	1.0305	0.0110	0.0089	0.0352	0.0352	0.0352	0.0305	0.0305	0.0305	0.0305	0.0305	0.0352	0.0352	0.0352	0.0352	0.0352	0.0352	0.0352	0.0352	0.0352	0.0352	0.0352	0.0352	0.0352	0.0352
Financial Services	0.0335	0.0080	0.0020	0.0064	0.0055	0.0009	0.0009	0.0116	0.0116	0.0030	1.0010	0.0022	0.0092	0.0092	0.0092	0.0030	0.0030	0.0030	0.0030	0.0030	0.0092	0.0092	0.0092	0.0092	0.0092	0.0092	0.0092	0.0092	0.0092	0.0092	0.0092	0.0092	0.0092	0.0092
Construction	0.0131	0.0045	0.0096	0.0040	0.0124	0.0014	0.0015	0.0059	0.0059	0.0058	0.0021	0.0167	0.0053	0.0053	0.0053	0.0058	0.0058	0.0058	0.0058	0.0058	0.0053	0.0053	0.0053	0.0053	0.0053	0.0053	0.0053	0.0053	0.0053	0.0053	0.0053	0.0053	0.0053	0.0053
Retail & Wholesale Trade	0.2503	0.2852	0.2191	0.3146	0.7293	0.0827	0.0904	0.3425	0.3425	0.0904	0.1080	1.1269	0.3194	0.3194	0.3194	0.1080	0.1080	0.1080	0.1080	0.1080	0.3													