

Name: _____ Instructor: _____

Help Wanted: The Changing Geography of Jobs

► ACTIVITY 1: REGIONAL ECONOMIC SPECIALIZATION

Before we can investigate how economic activities vary over space and time, we need to define the different kinds of activities. With the passage of the North American Free Trade Agreement (NAFTA), a new classification system was developed jointly by the United States, Canada, and Mexico to provide comparability in statistics about business activity across North America. The North American Industry Classification System (NAICS) will reshape the way we view our changing economy. The NAICS system replaces the Standard Industrial Classification (SIC) codes that had been used for decades. NAICS is an improvement over SIC not only because it is uniform across major North American trading partners but also because it more closely reflects today's deregulated Information Economy. For instance, the new Information category (NAICS group 51) combines data processing and broadcasting with activities such as telecommunications (formerly classified as a public utility) and publishing and sound recording (formerly classified as manufacturing).

1.1. What do you think are the *top 5* economic categories in terms of employment in your state or province? Rank your choices from 1 to 5. This question will not be graded, so *do it solely based on your preconceptions*. Do not look up these figures; just make an educated guess.

Economic Category	Rank (1 to 5 only, where 1 = the highest)
Agriculture, Forestry, Fishing, and Hunting (NAICS 11)	_____
Mining and Oil/Gas Extraction (NAICS 21)	_____
Construction (NAICS 23)	_____
Manufacturing (NAICS 31–33)	_____
Public Utilities, Wholesale, Transportation, and Warehousing (NAICS 22, 41, 48, 49) (the category <i>utilities</i> includes electric power generation and distribution, natural gas, and water and sewer systems; <i>wholesaling</i> refers to the intermediaries (distributors) between manufacturing and retailing; <i>transportation</i> includes road, rail, water, air, and pipeline modes for passengers and freight; <i>warehousing</i> is inventory management and storage)	_____
Retail Trade (NAICS 42) (includes stores, gas stations, vending machines, and mail-order catalogs)	_____
Information (NAICS 51) (includes publishing, motion pictures, sound recording, TV and radio broadcasting, telecommunications, information services, and data processing)	_____
Finance, Insurance, and Real Estate (NAICS 52–53)	_____
Producer Services (NAICS 54–56) (includes legal, architectural, accounting, engineering, management consulting, employment agencies, advertising, copying, janitorial, credit, collection, travel agents, telemarketing, waste management and remediation, etc.)	_____
Educational Services (NAICS 61) (includes schools, vocational training, colleges, and testing; in the U.S. data, this category is private education only; in the Canadian data, this category includes public and private education)	_____
Health Care and Social Assistance (NAICS 62) (includes doctors, dentists, mental health, diagnostics, ambulance, hospitals, nursing homes, day care, shelters, child/youth/family services, etc.)	_____
Entertainment, Lodging, and Food Services (NAICS 71–72) (includes performing arts, spectator sports, amusement parks, museums, historical sites, skiing, golf, gambling, hotels, RV parks, camps, bars, restaurants, etc.)	_____
Public Administration (NAICS 91)	_____

1.2. Table 6.2 shows the percentage of total employment for the major economic categories for each state and for the United States as a whole in 2000. Table 6.3 does the same for Canada in 2001, using Canadian provinces. Fill in the percentages in columns A and B of the following table. Leave column C blank for now.

	A	B	C = A/B
Economic Category	Your State or Province	U.S. or Canada	Ratio
Agriculture, Forestry, Fishing, and Hunting	_____	_____	_____
Mining and Oil/Gas Extraction	_____	_____	_____
Construction	_____	_____	_____
Manufacturing	_____	_____	_____
Public Utilities, Wholesale, Transportation, and Warehousing	_____	_____	_____
Retail Trade	_____	_____	_____
Information	_____	_____	_____
Finance, Insurance, and Real Estate	_____	_____	_____
Producer Services	_____	_____	_____
Educational Services	_____	_____	_____
Health Care and Social Assistance	_____	_____	_____
Entertainment, Lodging, and Food Services	_____	_____	_____
Public Administration	_____	_____	_____

Notes about the data.

The U.S. employment data were estimated from two separate sources. The 2000 data were based on the Census Bureau's County Business Patterns NAICS data. The County Business Patterns (CBP) database, however, is for private, nonfarm firms, excluding sole proprietors and government employees. Therefore, agriculture and public administration employment data were estimated from the Department of Commerce's Regional Economic Information System (REIS) database, which includes farmers, sole proprietors, and government employees but in 2000 had a very simplistic breakdown of economic activities based on neither SIC nor NAICS categories. The 1969 CBP database has not yet been converted to NAICS categories, so these categories were reconstructed from REIS and CBP data. For these reasons and because the "Other Services" category was excluded, the employment totals for each state, province, and country may not add up to 100 percent.

U.S. employment statistics are classified according to each establishment's final product, not by the job of the employee (e.g., assembly-line workers, truck drivers, and computer specialists for a manufacturing firm are all classified as manufacturing employees). The overall numbers, therefore, may not reflect the true occupational breakdown.

Canadian data are derived from Statistics Canada's table, "Total Labour Force 15 Years and Over by Industry." The data were based on 20 percent (2001) and 33 percent (1971) samples of the population. Canadian data for 1971 are not grouped by NAICS categories, so these had to be reconstructed from more detailed industrial categories. Canadian data for 1971 do not include the province of Nunavut, which was part of the Northwest Territories at the time.

The category of educational services includes public and private education in the Canadian data, but only private education in the U.S. data.

These data were estimated for the purpose of this book only and should not be used for research or policy purposes.

TABLE 6.2 U.S. State and National Employment Percentages by Industry, 2000

USA, 2000	AL	AK	AZ	AR	CA	CO	CT	DE	DC	FL	GA	HI	ID
Primary													
11 Agriculture, forestry, fishing and hunting#	3.48	4.72	2.38	5.62	3.75	2.83	1.50	0.87	0.00	3.03	2.53	2.91	7.67
21 Mining and oil and gas extraction	0.36	2.60	0.44	0.26	0.13	0.54	0.04	0.08	0.00	0.08	0.16	0.03	0.42
Secondary													
23 Construction	5.25	4.94	7.33	4.06	4.90	6.90	3.74	5.00	1.05	5.08	4.84	3.95	6.96
31-33 Manufacturing	16.35	3.78	8.80	19.66	11.37	7.25	13.04	9.44	0.39	5.69	12.40	2.48	11.87
Tertiary													
22,41,48,49 Pub. util., wholesl. transp. warehse	7.16	9.04	7.29	8.11	8.29	7.16	6.84	6.56	1.95	7.47	8.53	7.47	7.16
44-45 Retail trade	11.25	11.17	11.17	11.28	9.67	10.98	10.70	11.66	2.88	12.35	11.12	10.60	12.37
51 Information	1.94	2.02	2.08	1.87	3.42	4.03	2.90	1.89	3.76	2.37	3.34	1.40	1.96
52-53 Finance, insurance, and real estate	4.74	3.25	6.71	3.75	5.83	6.34	8.49	11.19	3.91	6.10	5.33	5.46	3.89
54-56 Producer services	10.86	7.88	15.75	9.39	16.31	15.34	13.74	15.64	17.02	19.39	15.08	9.59	10.92
61 Educational services	0.98	0.89	1.07	0.92	1.70	1.23	3.06	1.30	6.02	1.30	1.53	2.21	1.18
62 Health care and social assistance	9.89	10.46	8.76	11.02	8.57	8.32	11.97	9.70	8.81	10.13	8.19	8.44	9.38
71-72 Arts, ent. recr, lodging, & food svcs	7.05	8.10	10.39	7.00	8.81	10.56	7.68	7.59	7.15	10.14	7.94	15.88	9.09
91 Public administration#	15.97	23.33	12.87	13.72	12.91	12.91	11.31	12.84	32.52	12.16	14.14	21.61	14.55
	IL	IN	IA	KS	KY	LA	ME	MD	MA	MI	MN	MS	MO
Primary													
11 Agriculture, forestry, fishing and hunting#	2.27	3.06	7.03	5.65	6.07	2.93	4.00	1.73	1.27	2.28	3.93	5.06	4.50
21 Mining and oil and gas extraction	0.14	0.17	0.13	0.47	1.08	2.06	0.01	0.07	0.03	0.14	0.25	0.32	0.18
Secondary													
23 Construction	4.15	4.92	4.29	4.92	4.59	6.72	4.48	6.18	3.50	4.29	4.29	4.45	4.97
31-33 Manufacturing	13.33	20.74	16.12	13.62	15.81	8.07	13.29	6.16	11.23	17.23	13.56	17.96	12.14
Tertiary													
22,41,48,49 Pub. util., wholesl. transp. warehse	9.23	7.63	7.46	7.50	8.12	7.78	6.07	6.35	6.82	6.65	8.23	6.12	8.71
44-45 Retail trade	9.96	11.48	12.12	10.88	11.90	11.62	12.88	11.05	9.97	11.45	10.92	11.54	11.09
51 Information	2.23	1.55	2.62	3.04	1.61	1.50	1.93	2.76	3.68	1.96	2.05	1.59	2.88
52-53 Finance, insurance, and real estate	6.71	4.71	6.11	4.82	4.48	4.88	4.98	6.01	7.39	4.69	6.16	3.51	5.83
54-56 Producer services	16.05	9.46	8.18	10.52	8.81	9.57	9.06	16.18	14.69	14.51	13.92	7.10	11.38
61 Educational services	1.89	1.52	2.09	1.17	1.36	1.62	2.12	2.10	4.66	1.18	1.73	1.20	2.04
62 Health care and social assistance	9.88	10.36	11.79	10.99	11.11	11.60	14.49	10.09	12.66	10.28	11.64	10.07	11.30
71-72 Arts, ent. recr, lodging, & food svcs	7.48	8.48	8.23	7.85	8.17	9.52	8.21	7.64	7.94	7.99	8.32	9.86	8.57
91 Public administration#	12.06	11.70	13.02	15.58	14.71	16.91	13.51	16.66	11.07	12.05	11.64	17.87	13.28
	MT	NE	NV	NH	NJ	NM	NY	NC	ND	OH	OK	OR	PA
Primary													
11 Agriculture, forestry, fishing and hunting#	7.56	6.93	1.50	1.86	1.23	3.64	1.28	3.03	9.58	2.37	5.96	5.16	2.17
21 Mining and oil and gas extraction	1.14	0.12	0.98	0.06	0.06	1.78	0.04	0.08	1.19	0.19	1.66	0.14	0.28
Secondary													
23 Construction	4.89	4.73	7.99	4.16	3.95	5.92	3.60	5.45	4.45	4.25	4.14	4.92	4.34
31-33 Manufacturing	5.50	11.90	3.70	14.74	9.30	5.14	7.99	17.72	7.35	16.97	11.07	12.47	13.60
Tertiary													
22,41,48,49 Pub. util., wholesl. transp. warehse	7.37	7.87	6.38	6.85	11.12	5.71	7.82	7.11	8.82	7.40	7.00	8.22	7.52
44-45 Retail trade	13.66	12.04	10.47	14.66	10.56	12.28	9.55	10.90	12.81	11.06	11.05	11.90	11.39
51 Information	2.07	2.98	1.86	2.18	3.13	1.82	3.57	1.86	2.05	2.00	2.27	2.06	2.30
52-53 Finance, insurance, and real estate	4.94	6.88	4.99	4.69	6.35	4.40	8.45	4.52	5.30	5.40	4.77	5.45	5.92
54-56 Producer services	7.55	10.71	11.06	11.72	17.15	10.86	13.90	11.11	6.72	12.58	10.82	11.64	12.56
61 Educational services	1.29	1.71	0.39	3.53	1.85	1.29	3.34	1.54	1.42	1.61	1.12	1.98	3.34
62 Health care and social assistance	12.64	11.02	6.42	10.95	10.08	10.12	13.38	9.53	14.41	11.12	11.09	9.53	12.67
71-72 Arts, ent. recr, lodging, & food svcs	12.08	7.83	29.83	9.06	7.05	10.92	7.04	7.70	9.00	8.19	8.24	9.18	7.52
91 Public administration#	15.25	13.67	10.19	10.80	12.66	19.48	14.06	15.02	15.99	11.97	15.84	12.71	11.16
	RI	SC	SD	TN	TX	UT	VT	VA	WA	WV	WI	WY	USA
Primary													
11 Agriculture, forestry, fishing and hunting#	1.35	2.51	8.64	3.95	3.54	2.30	4.04	2.45	4.06	3.37	4.00	5.54	3.15
21 Mining and oil and gas extraction	0.04	0.09	0.32	0.15	1.09	0.67	0.24	0.28	0.11	2.60	0.10	6.82	0.33
Secondary													
23 Construction	3.89	5.88	4.33	4.68	5.33	5.71	4.67	5.36	5.59	4.14	4.38	6.27	4.80
31-33 Manufacturing	13.94	16.86	12.36	16.93	9.92	10.94	14.77	9.71	11.20	10.44	20.29	4.07	12.04
Tertiary													
22,41,48,49 Pub. util., wholesl. transp. warehse	6.14	5.84	6.68	8.33	8.41	8.14	5.94	5.57	7.57	6.30	7.52	6.10	7.72
44-45 Retail trade	10.77	11.28	13.11	11.09	10.48	11.06	12.53	10.74	11.14	12.92	11.43	11.88	10.85
51 Information	2.11	1.54	1.88	1.86	2.52	2.43	2.22	3.43	3.16	1.86	1.84	1.56	2.59
52-53 Finance, insurance, and real estate	5.87	4.11	7.05	4.85	5.45	5.18	3.93	5.10	5.28	4.04	5.51	4.15	5.78
54-56 Producer services	11.16	11.82	5.51	12.69	15.32	15.18	7.43	15.70	11.24	7.21	9.40	5.63	13.76
61 Educational services	3.78	1.08	1.87	1.54	1.16	2.17	4.02	1.39	1.39	1.32	1.56	0.55	1.85
62 Health care and social assistance	13.98	8.67	13.60	10.15	9.46	7.45	11.76	8.19	10.01	14.35	10.79	10.66	10.31
71-72 Arts, ent. recr, lodging, & food svcs	8.59	8.92	9.77	7.84	8.18	8.29	11.63	7.74	8.76	8.56	8.16	11.59	8.50
91 Public administration#	13.11	16.64	13.64	11.96	13.97	14.55	12.96	18.22	15.35	17.10	11.73	19.22	13.58

Source: U.S. Department of Commerce, Bureau of the Census, County Business Patterns 2000: <http://www.census.gov/ipeds/cbp/view/cbpview.html>
Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System 2000 (CD ROM). Washington, DC: U.S. Government Printing Office.
The raw numbers underlying these percentages are based mainly on 2000 Regional Economic Information System data.
All percentages in the table are based on denominators combining County Business Patterns and REIS data.
Numbers do not add to 100% due to rounding and omission of the All Other Services category.

TABLE 6.3 Canada National Employment Percentages by Industry, 2001

	NFLD	PEI	NS	NB	QUE	ONT	MAN	SASK	ALTA	BC	YUK	NWT	NUN	CANADA
Primary														
11 Agriculture, forestry, fishing and hunting	6.68	12.96	5.18	5.59	2.79	2.06	6.48	14.43	5.03	3.90	1.61	1.47	1.16	3.64
21 Mining and oil and gas extraction	2.12	0.29	0.76	0.89	0.45	0.35	0.73	2.87	5.11	0.70	2.43	6.95	2.33	1.09
Secondary														
23 Construction	6.47	7.23	6.05	6.39	4.62	5.54	4.97	5.40	7.73	5.89	7.93	7.49	6.66	5.64
31-33 Manufacturing	10.33	10.63	9.99	12.56	17.58	16.43	11.78	5.83	8.02	9.65	2.18	1.30	1.72	13.96
Tertiary														
22,41,48,49 Public utilities, wholesale, transportation, & warehousing	7.12	6.28	8.047	7.973	9.867	10.08	9.413	8.794	9.808	8.765	4.557	5.165	3.728	9.58
44-45 Retail trade	12.65	10.69	12.35	11.22	11.38	11.21	10.49	10.66	10.88	11.56	10.98	8.94	12.26	11.27
51 Information	2.03	1.76	2.40	1.97	2.63	2.87	2.09	2.17	2.33	3.09	3.93	2.59	2.14	2.68
52-53 Finance, insurance, and real estate	3.05	2.78	4.66	4.05	5.13	6.70	4.98	5.02	5.01	6.06	3.23	3.26	3.68	5.75
54-56 Producer services	6.18	6.23	8.94	8.28	9.38	11.58	7.26	5.93	10.98	10.88	7.56	7.59	4.10	10.29
61 Educational services	7.19	5.94	7.16	6.60	6.61	6.19	7.38	7.26	6.48	6.93	6.68	7.64	13.42	6.55
62 Health care and social assistance	12.32	10.26	11.09	11.05	10.21	8.87	12.41	11.04	8.92	9.93	8.97	9.79	9.74	9.70
71-72 Arts, entertainment, recreation, lodging, & food services	7.58	9.82	9.06	8.23	7.88	8.38	8.55	8.78	9.19	10.59	12.17	7.42	7.08	8.67
91 Public administration	8.77	9.67	8.55	7.81	6.29	5.16	6.97	6.21	4.60	5.60	21.14	21.10	23.95	5.81

Source: Statistics Canada, *Census of Canada*, "Total Labour Force 15 Years and Over by Industry—1997 North American Industry Classification System—20% Sample Data."

1.3. Now rank the actual top five economic categories for your state or province.

1 _____ 2 _____ 3 _____
4 _____ 5 _____

1.4. a. What, if any, economic categories were actually larger than you thought they would be in Question 1.1?

b. What economic categories were actually smaller than you thought they would be in Question 1.1?

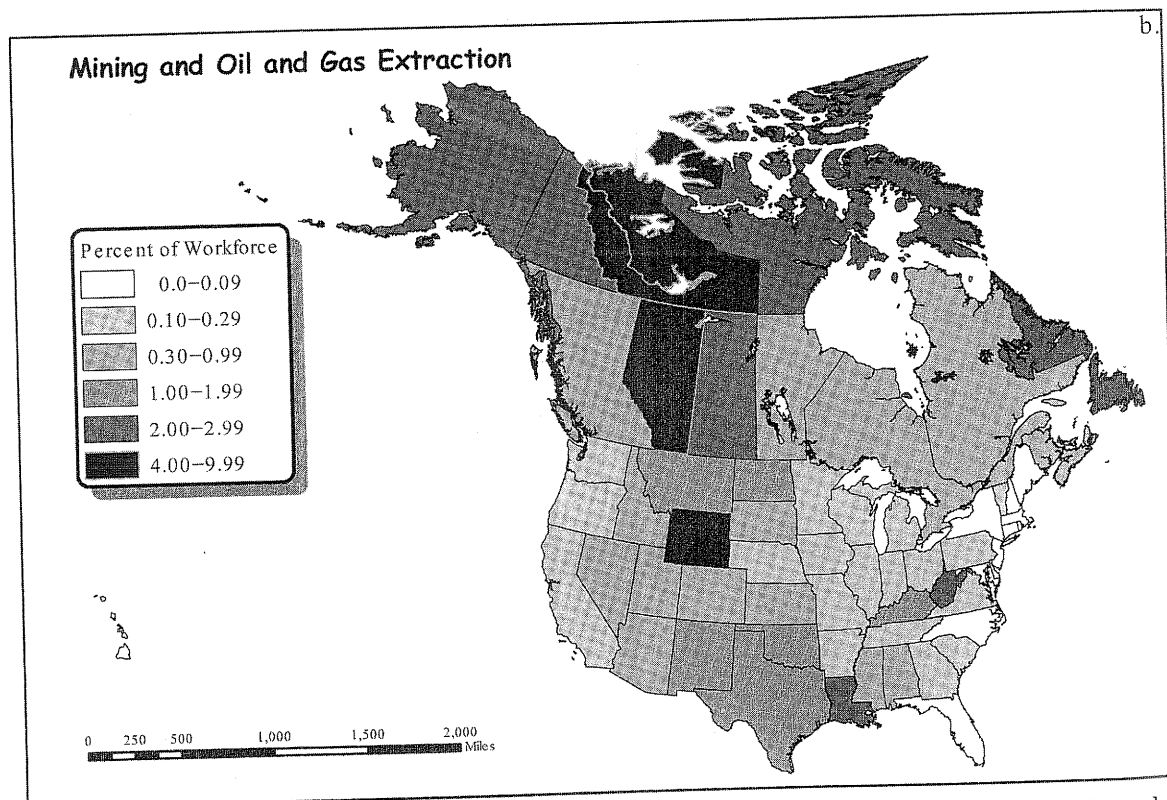
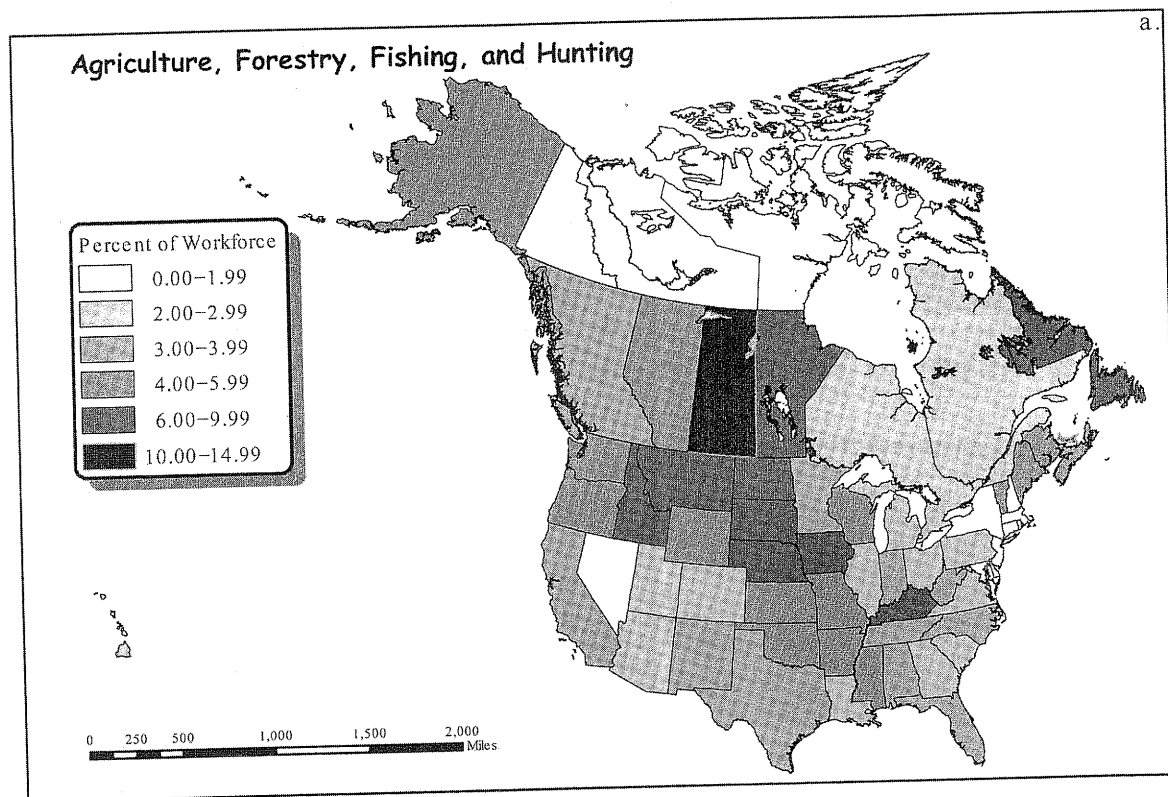
1.5. Compare the share of employment in your state or province with that of the entire United States or Canada in Question 1.2. In which two economic categories does your state or province greatly exceed the national average in *ratio* terms? Divide Column A by Column B and write the result in Column C (you need to do this only for categories in which your state or province exceeded the national percentage). This ratio tells you *how many times larger* your state's or province's employment percentage is than the national percentage (see the following box on interpreting ratios). For the two economic categories with the highest ratios, discuss *why* you think your state or province specializes in those activities. Factors to think about include raw materials availability, labor cost, education levels, the demand of large urban markets, agglomeration economies, political factors, and economic growth or decline.

Interpreting Ratios

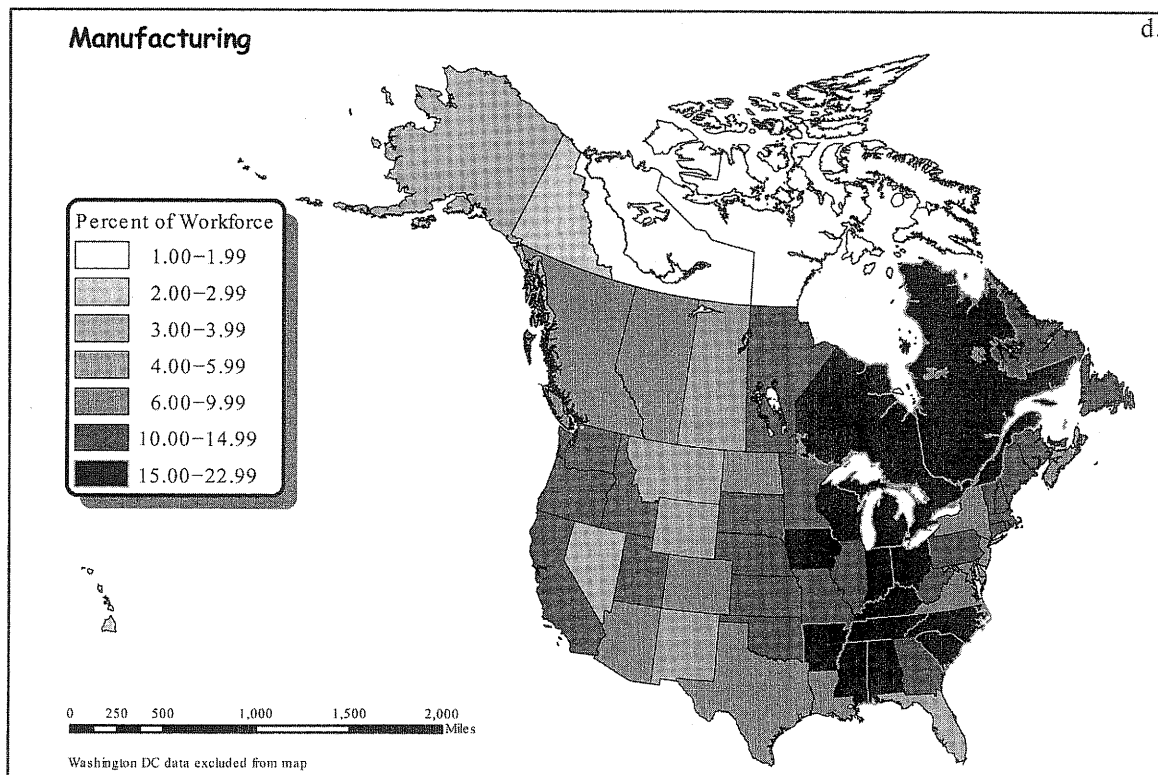
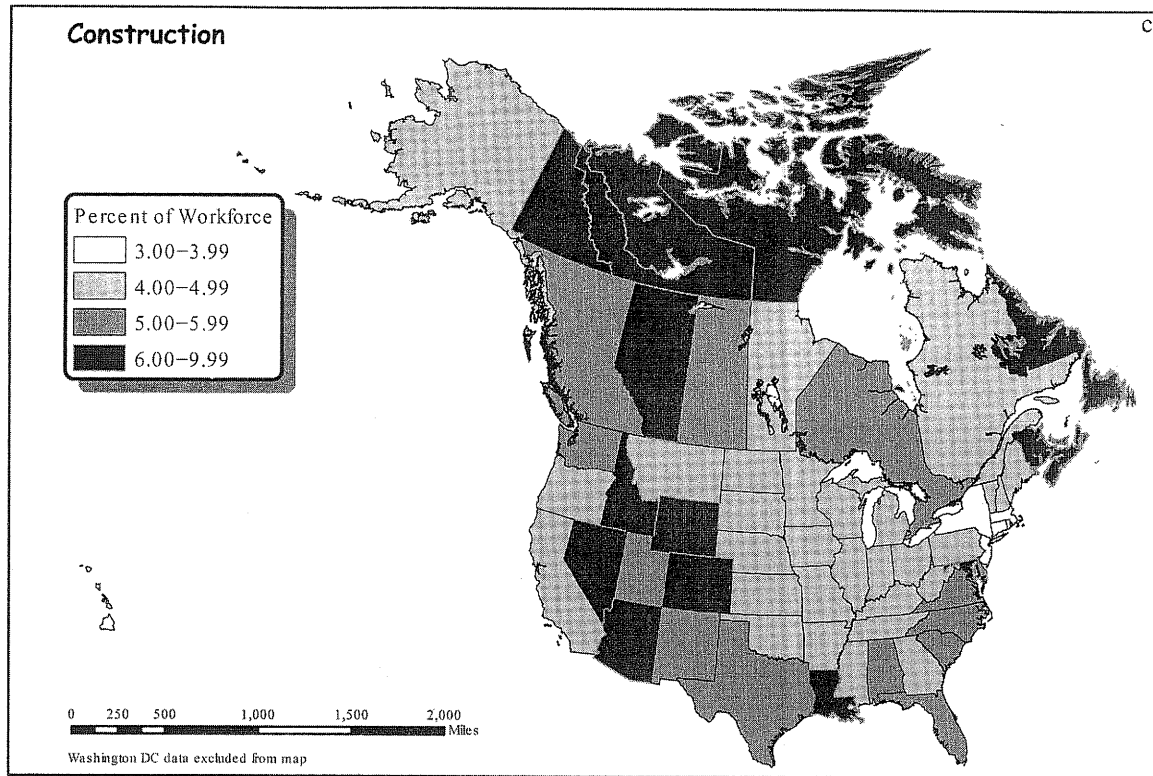
Suppose your state's employment percentage in a certain category is 3 percent, compared with the national percentage of 2 percent. Then 3 divided by 2 equals a ratio of 1.50, or 50 percent higher than the national average. This is a more significant difference than if your state percentage was 12 percent versus a national share of 10 percent: 12 divided by 10 equals 1.20, or only 20 percent higher. What about ratios greater than 2? A state percentage of 5 percent compared with a national percentage of 2 percent gives a ratio of 2.50, or two and a half times larger (150 percent larger).

1.6. Look at the choropleth maps of employment in each of the 13 economic categories (Figure 6.13). Which other states or provinces have high employment in each of the two economic specializations that yours does (identified in Question 1.5)?

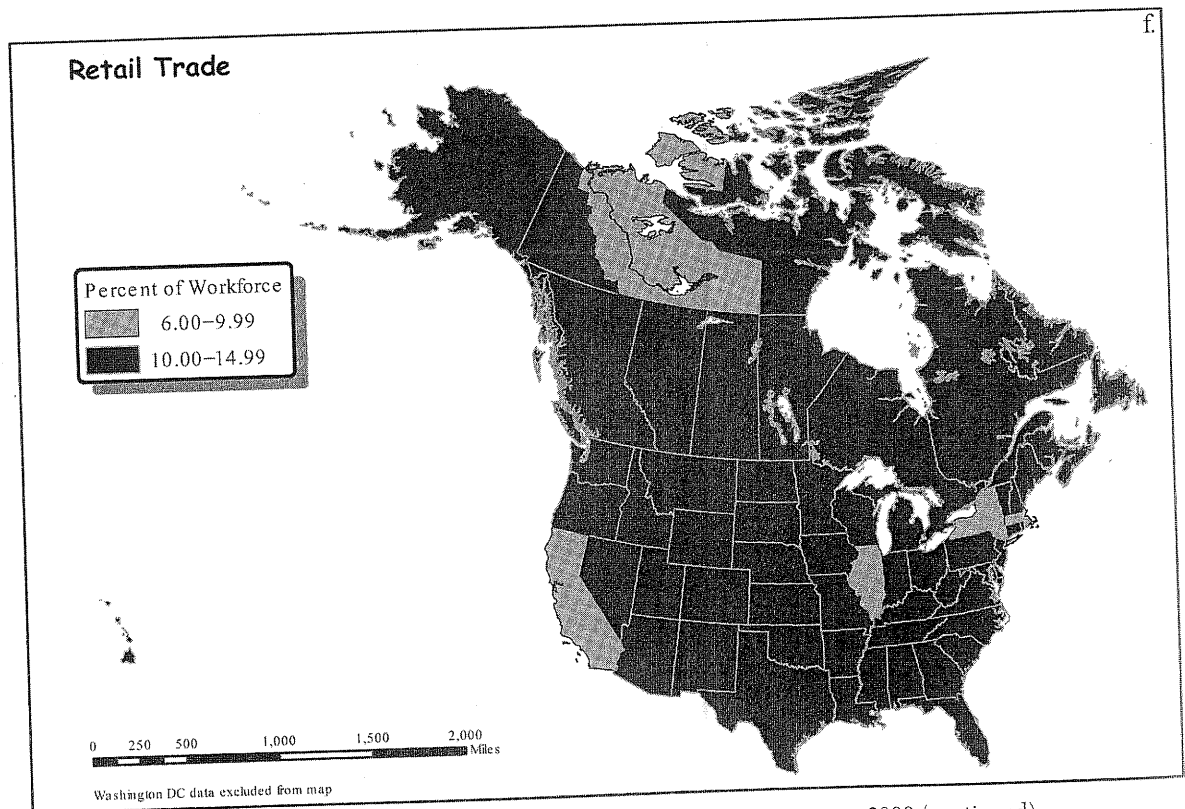
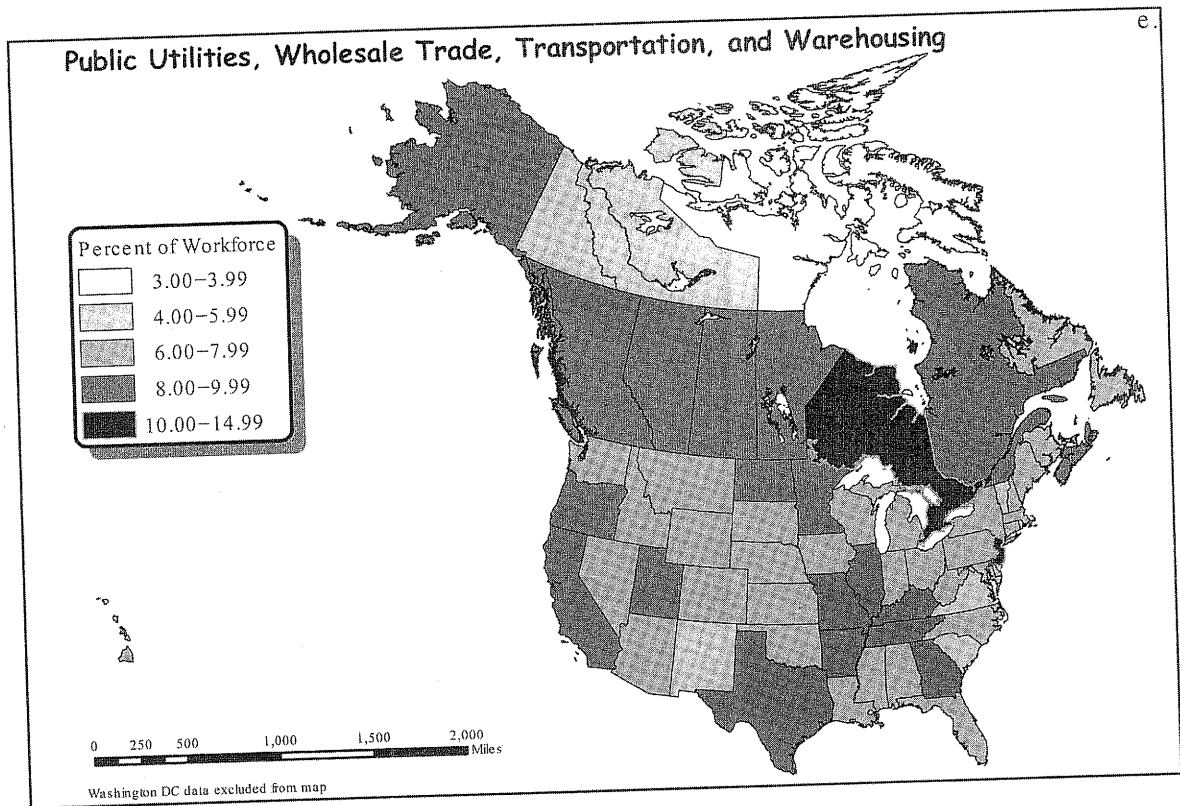
1.7. Some of the maps in Figures 6.13a–6.13m show a strong regional concentration of particular industries, with the high-percentage states clustered together, whereas maps of other categories do not show this. Which economic categories are strongly regionalized, and in which parts of the United States and Canada? Why do you think these economic categories might be concentrated in those particular regions?



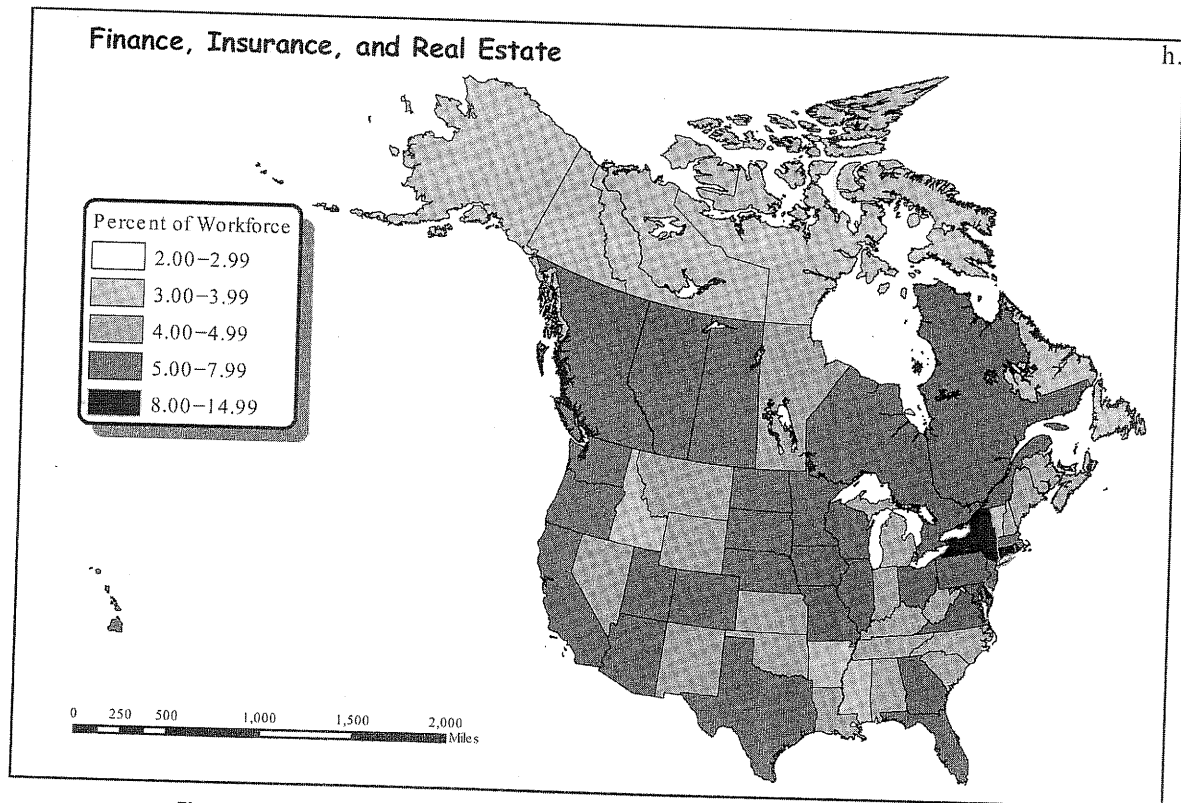
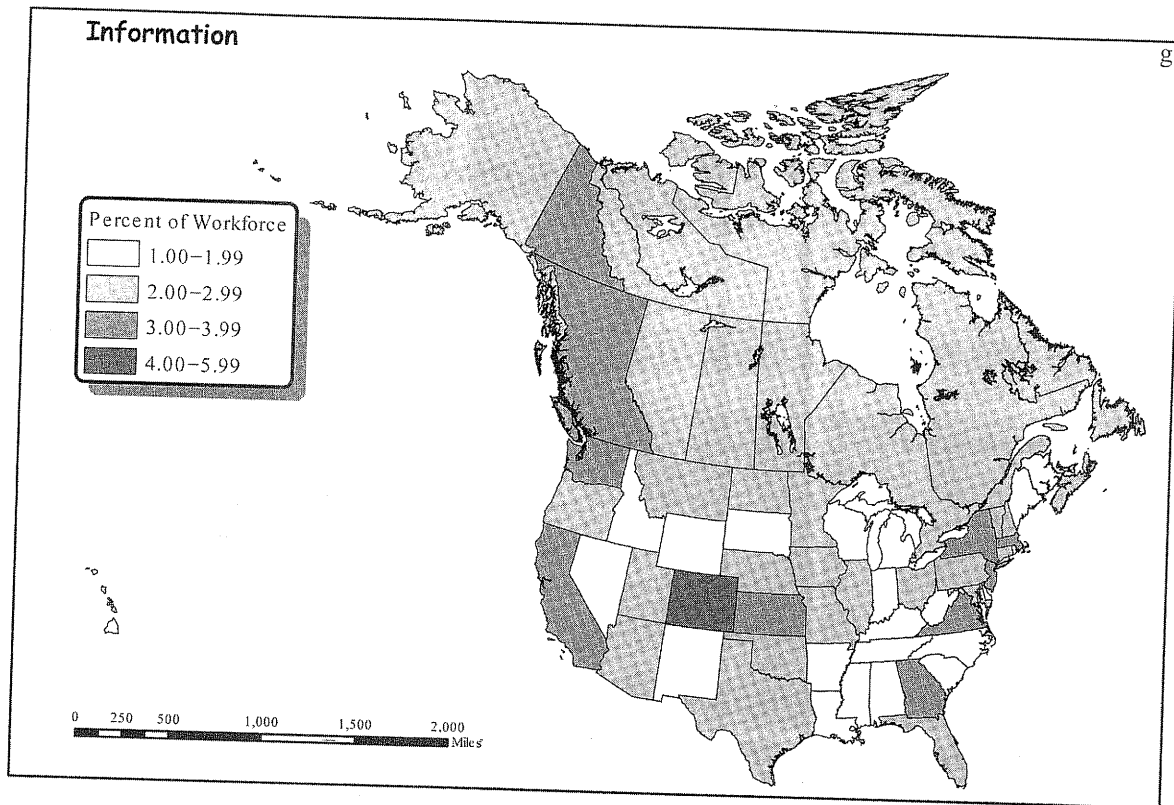
Figures 6.13a and 6.13b Percentage employed by economic sector, 2000 (USA) and 2001 (Canada).
(Figure continues on following pages.)



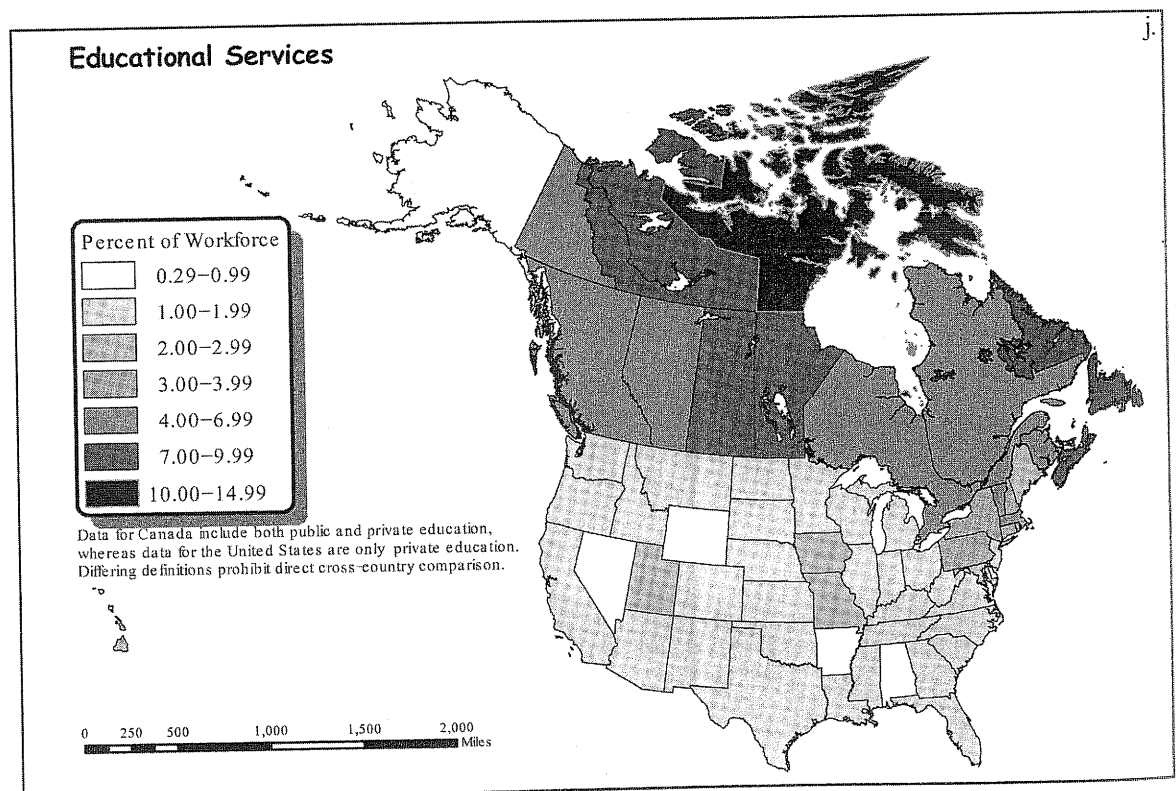
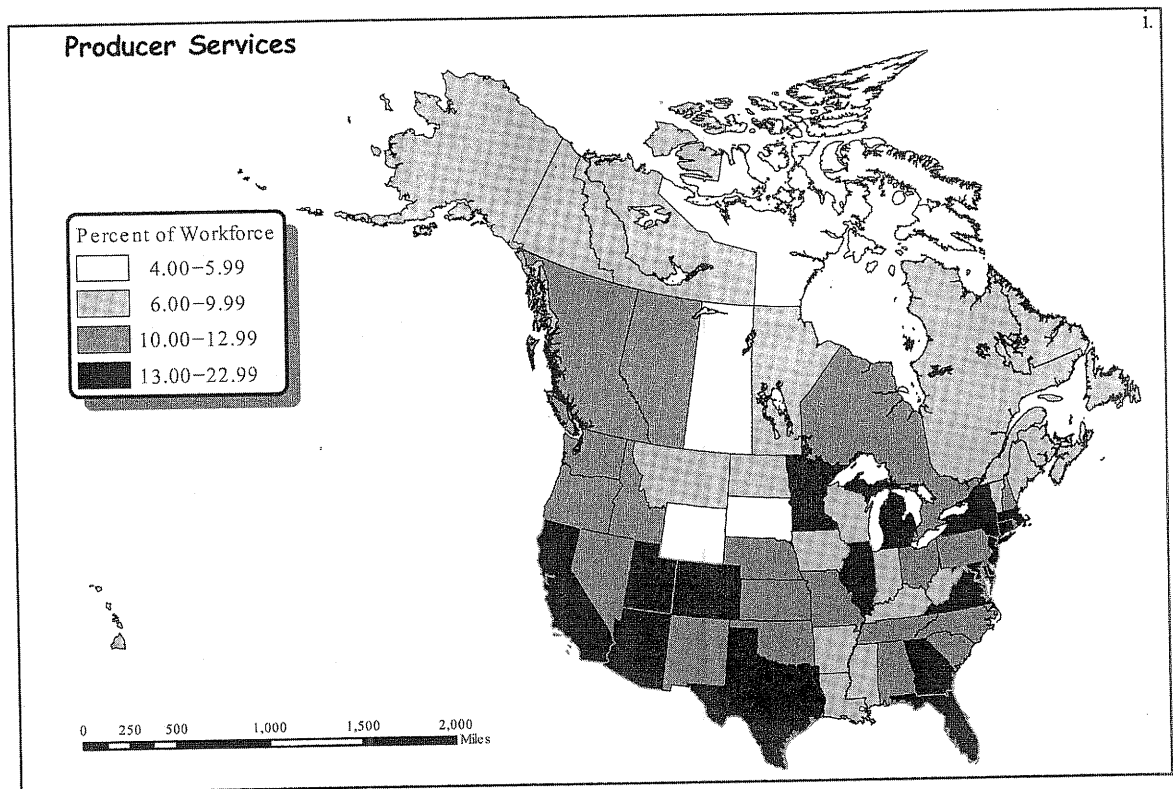
Figures 6.13c and 6.13d Percentage employed by economic sector, 2000 (continued).



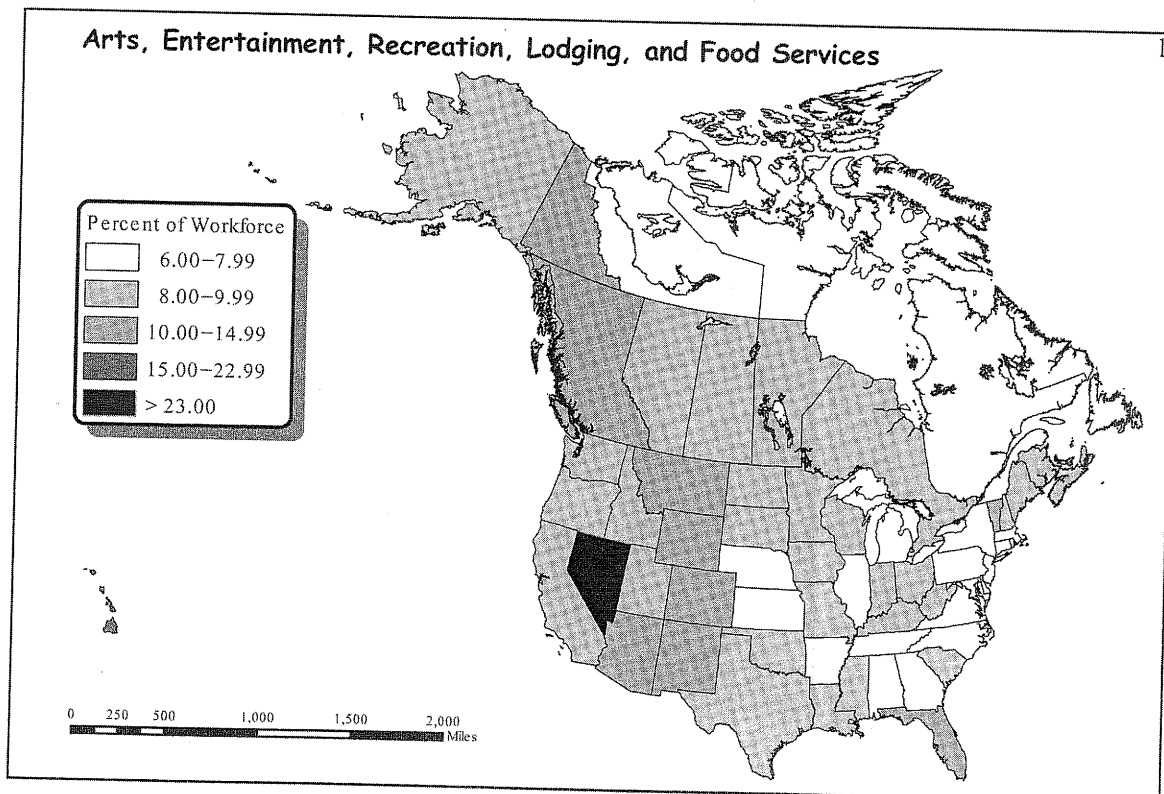
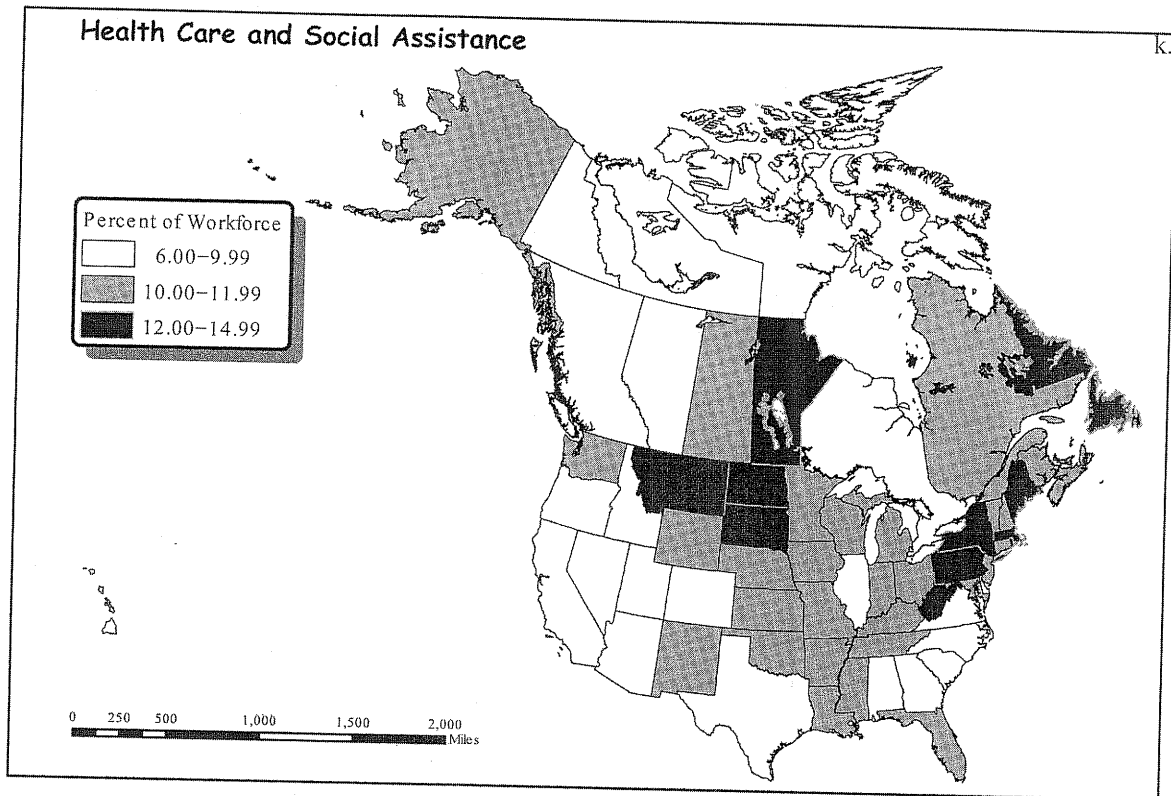
Figures 6.13e and 6.13f Percentage employed by economic sector, 2000 (continued).



Figures 6.13g and 6.13h Percentage employed by economic sector, 2000 (continued).



Figures 6.13i and 6.13j Percentage employed by economic sector, 2000 (continued).



Figures 6.13k and 6.13l Percentage employed by economic sector, 2000 (continued).

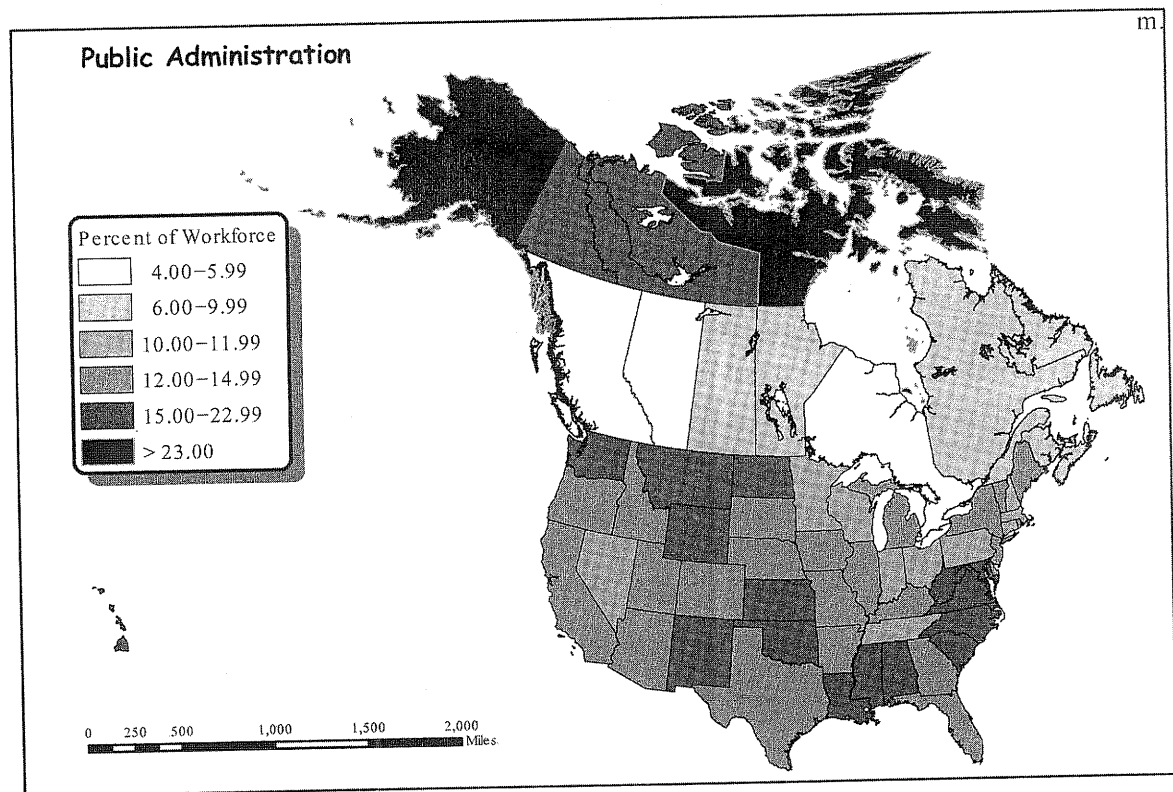
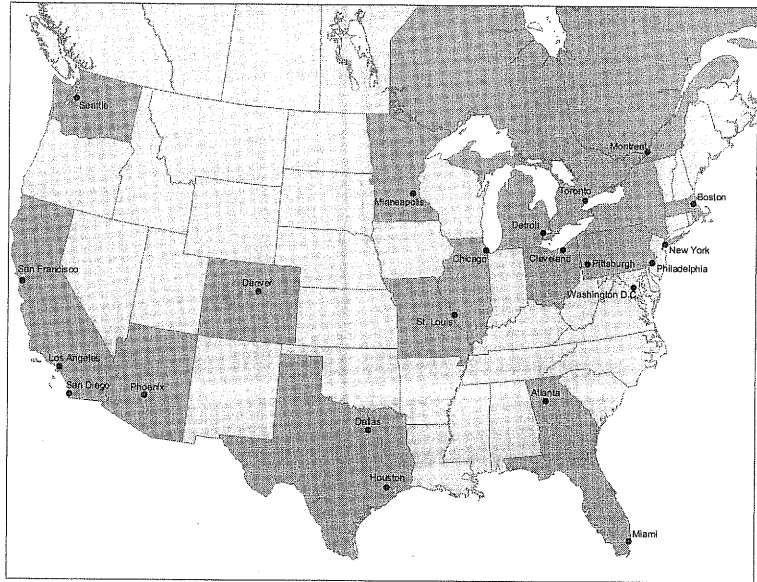


Figure 6.13m Percentage employed by economic sector, 2000 (continued).

Sources: U.S. Department of Commerce Bureau of the Census. *County Business Patterns 2000*: <http://www.census.gov/epcd/cbp/view/cbpview.html>. U.S. Department of Commerce, Bureau of Economic Analysis, *Regional Economic Information System, 2000*. Statistics Canada, Census of Canada, "Total Labour Force 15 Years and Over by Industry—1997 North American Industry Classification System—20% Sample Data."

1.8. Certain economic categories thrive in the states or provinces with the largest metropolitan areas, shown here in size order for your convenience (both lists are cut off at the 2.35 million mark):

Rank	United States	Canada
1	New York, NY	Toronto
2	Los Angeles, CA	Montreal
3	Chicago, IL	
4	Washington, DC– Baltimore, MD	
5	San Francisco, CA	
6	Philadelphia, PA	
7	Boston, MA	
8	Detroit, MI	
9	Dallas, TX	
10	Houston, TX	
11	Atlanta, GA	
12	Miami, FL	
13	Seattle, WA	
14	Phoenix, AZ	
15	Cleveland, OH	
16	Minneapolis, MN	
17	San Diego, CA	
18	St. Louis, MO	
19	Denver, CO	
20	Pittsburgh, PA	



Compare each map with the map above. Which economic categories thrive in states and provinces with the largest cities and don't do as well in states without big cities? Why do these activities concentrate in major cities?

1.9. Which economic categories are spread fairly evenly across the nation, with little difference between the highest and lowest states, and why?

1.10. Now look at the percentage of employment in the major economic categories several decades ago (Table 6.4: 1969 for the United States; Table 6.5: 1971 for Canada). Fill in the percentages in Column A of the following table for your state or province and then copy the 2001 (Canada) or 2000 (U.S.) values for your state or province from Question 1.2 (Column A) into Column B. Calculate Column C for all economic categories by dividing Column B by Column A. A ratio such as 2.5 (larger than 1.0) means that the percentage *grew* 2.5 times larger. A ratio such as 0.5 (smaller than 1.0) means that the later year's percentage *shrank* to be only half as large as the earlier percentage.

	A	B	C = B/A
Economic Category	Your State in 1969 (or Province in 1971)	Your State in 2000 (or Province in 2001)	Ratio of Change
Agriculture, Forestry, Fishing, and Hunting	_____	_____	_____
Mining and Oil/Gas Extraction	_____	_____	_____
Construction	_____	_____	_____
Manufacturing	_____	_____	_____
Public Utilities, Wholesale, Transportation, and Warehousing	_____	_____	_____
Retail Trade	_____	_____	_____
Information	_____	_____	_____
Finance, Insurance, and Real Estate	_____	_____	_____
Producer Services	_____	_____	_____
Educational Services	_____	_____	_____
Health Care and Social Assistance	_____	_____	_____
Entertainment, Lodging, and Food Services	_____	_____	_____
Public Administration	_____	_____	_____

TABLE 6.4 U.S. State and National Employment Percentages by Industry, 1969

	AL	AK	AZ	AR	CA	CO	CT	DE	DC	FL	GA	HI	ID
Primary													
11 Agriculture, forestry, fishing and hunting	7.68	3.55	4.67	13.68	1.85	5.27	1.35	3.49	0.34	4.60	4.95	3.80	14.67
21 Mining and oil and gas extraction	0.60	2.57	2.87	0.83	0.41	1.70	0.08	0.04	0.03	0.29	0.35	0.02	1.25
Secondary													
23 Construction	4.78	5.61	5.98	5.28	4.13	5.22	5.04	5.84	3.04	7.04	4.94	6.12	4.79
31-33 Manufacturing*	23.15	4.66	12.99	21.16	20.14	11.19	33.03	27.41	1.72	11.22	22.55	5.63	12.93
Tertiary													
22,41,48,49 Pub. util., wholesl, transp, warehse*	7.13	7.35	6.60	6.82	8.18	8.52	6.31	6.31	5.96	8.70	8.66	8.36	7.40
44-45 Retail trade*	10.62	7.10	12.37	11.52	11.26	11.81	11.65	12.44	7.03	13.19	11.00	8.81	12.21
51 Information*	1.62	1.93	2.21	1.81	2.82	2.39	2.07	1.44	3.97	2.21	1.88	1.69	2.09
52-53 Finance, insurance, and real estate	4.19	3.41	7.08	5.17	7.76	8.43	6.94	5.92	6.54	7.79	5.82	9.10	5.70
54-56 Producer services*	6.90	5.99	7.25	4.06	10.36	8.41	7.14	12.05	14.18	9.63	7.47	7.55	6.26
61 Educational services*	0.93	0.77	1.05	0.73	1.19	1.49	2.21	0.99	5.39	1.31	1.14	1.70	0.13
62 Health care and social assistance*	3.93	3.59	5.54	4.91	5.22	6.84	5.11	4.18	4.80	0.45	2.60	3.85	5.00
71-72 Arts, ent, recr, lodging, & food svcs*	3.30	4.39	8.12	4.74	6.11	7.00	4.19	4.68	5.63	9.48	4.60	10.21	6.59
91 Public administration	19.88	49.42	20.72	14.88	20.15	22.88	12.74	17.52	42.81	18.33	20.47	33.80	18.87
	IL	IN	IA	KS	KY	LA	ME	MD	MA	MI	MN	MS	MO
Primary													
11 Agriculture, forestry, fishing and hunting	3.17	5.38	14.22	11.05	11.27	5.75	5.68	2.28	1.00	3.15	8.45	12.33	7.78
21 Mining and oil and gas extraction	0.53	0.40	0.34	1.85	2.19	3.92	0.08	0.16	0.06	0.39	0.91	0.88	0.47
Secondary													
23 Construction	4.51	4.94	4.94	4.84	5.69	6.60	5.14	5.99	4.77	4.46	5.01	4.76	4.59
31-33 Manufacturing*	26.55	31.86	17.10	13.90	18.72	12.39	25.99	16.51	24.85	32.39	19.15	18.46	20.84
Tertiary													
22,41,48,49 Pub. util., wholesl, transp, warehse*	10.01	7.13	7.25	7.74	6.92	10.42	6.56	7.49	7.97	7.28	9.16	5.50	10.11
44-45 Retail trade*	11.93	11.80	13.12	12.57	11.32	11.80	12.00	12.95	12.57	11.76	12.23	10.50	11.95
51 Information*	2.56	2.26	2.44	2.42	1.79	1.81	2.02	2.06	2.38	1.90	2.10	3.53	2.27
52-53 Finance, insurance, and real estate	6.52	5.34	6.36	6.07	4.74	4.81	4.55	6.29	6.69	5.61	6.70	3.92	7.08
54-56 Producer services*	8.48	4.33	4.47	4.15	4.60	8.58	3.25	10.89	9.15	6.93	7.28	5.02	7.17
61 Educational services*	1.39	1.14	1.52	0.99	1.24	1.39	1.57	1.77	3.47	0.79	1.24	0.71	1.63
62 Health care and social assistance*	4.33	3.75	6.40	6.52	5.18	4.55	6.31	4.77	6.28	4.94	6.39	3.12	5.06
71-72 Arts, ent, recr, lodging, & food svcs*	5.06	4.96	5.50	5.55	4.79	5.28	4.38	4.79	5.05	4.89	5.50	4.02	4.87
91 Public administration	13.90	13.16	14.12	20.21	18.10	19.75	18.95	24.34	14.47	13.71	15.09	20.58	15.04
	MT	NE	NV	NH	NJ	NM	NY	NC	ND	OH	OK	OR	PA
Primary													
11 Agriculture, forestry, fishing and hunting	13.25	13.03	2.07	2.56	1.06	6.11	1.24	8.68	22.03	2.66	9.04	6.51	2.09
21 Mining and oil and gas extraction	2.37	0.41	1.79	0.13	0.15	4.83	0.13	0.17	0.84	0.51	4.58	0.20	0.83
Secondary													
23 Construction	4.89	5.20	5.52	6.09	4.77	5.44	3.83	5.25	4.34	5.13	5.05	4.78	4.82
31-33 Manufacturing*	8.10	12.15	3.04	28.85	29.05	5.06	21.18	29.57	3.01	31.26	11.67	19.97	29.87
Tertiary													
22,41,48,49 Pub. util., wholesl, transp, warehse*	7.82	7.84	6.16	5.32	9.59	6.90	10.43	6.78	7.41	7.91	8.02	9.19	8.49
44-45 Retail trade*	12.46	13.35	11.04	12.51	11.75	12.02	10.76	10.08	12.57	11.90	11.53	11.78	11.69
51 Information*	2.78	2.76	2.59	1.91	2.26	2.77	3.22	1.46	2.43	2.23	1.84	2.16	2.24
52-53 Finance, insurance, and real estate	6.47	6.19	5.79	5.14	5.76	5.57	9.93	4.64	4.91	5.71	5.78	7.36	5.48
54-56 Producer services*	4.24	5.87	7.15	3.53	9.19	13.08	12.58	4.48	2.44	6.76	5.80	6.39	6.74
61 Educational services*	0.84	1.45	0.22	2.81	1.19	1.13	1.89	1.42	1.02	1.00	0.75	1.12	1.93
62 Health care and social assistance*	8.48	6.73	2.59	5.16	4.25	4.99	4.70	2.98	11.44	4.61	5.99	5.95	4.93
71-72 Arts, ent, recr, lodging, & food svcs*	6.73	6.53	31.03	6.50	4.44	6.35	5.29	3.48	5.58	5.23	5.10	6.30	4.87
91 Public administration	20.14	17.67	19.49	14.79	15.02	28.11	15.20	16.83	22.93	12.75	22.40	16.49	13.21
	RI	SC	SD	TN	TX	UT	VT	VA	WA	WV	WI	WY	USA
Primary													
11 Agriculture, forestry, fishing and hunting	1.07	6.75	21.26	8.08	6.50	5.37	7.04	5.20	5.52	4.92	8.08	9.94	4.92
21 Mining and oil and gas extraction	0.05	0.16	0.97	0.40	2.75	2.95	0.58	0.71	0.13	7.45	0.19	8.27	0.81
Secondary													
23 Construction	4.36	5.35	4.09	5.03	6.05	4.26	6.48	5.47	4.76	5.27	4.61	5.67	4.91
31-33 Manufacturing*	28.93	29.36	5.21	26.00	14.96	11.88	21.15	17.16	18.07	20.18	26.53	4.36	21.53
Tertiary													
22,41,48,49 Pub. util., wholesl, transp, warehse*	6.64	5.09	6.60	7.82	9.45	8.83	5.69	6.56	8.17	8.62	7.08	7.95	8.32
44-45 Retail trade*	11.13	9.26	12.80	10.34	12.32	12.08	11.57	10.81	10.97	11.87	12.78	11.95	11.58
51 Information*	1.71	1.41	1.96	2.11	1.96	2.29	2.62	1.69	2.15	2.31	2.04	2.62	2.40
52-53 Finance, insurance, and real estate	5.05	3.71	5.99	5.92	6.30	6.28	5.21	5.49	7.37	4.30	5.06	4.83	6.50
54-56 Producer services*	5.36	5.36	2.43	6.76	7.96	5.67	3.27	6.55	7.47	3.79	4.87	4.17	5.89
61 Educational services*	2.14	0.96	1.65	1.55	1.15	1.65	4.77	1.48	0.91	0.78	1.19	0.35	1.46
62 Health care and social assistance*	5.92	2.55	9.25	3.81	4.62	5.49	7.03	4.41	5.68	5.32	6.03	4.06	4.84
71-72 Arts, ent, recr, lodging, & food svcs*	4.57	3.73	6.08	3.92	5.26	5.49	8.49	4.26	5.40	4.48	5.73	8.92	4.79
91 Public administration	21.19	20.99	20.67	15.14	18.03	25.69	14.51	28.19	22.69	16.40	14.04	23.22	17.41

Source: U.S. Department of Commerce, Bureau of Economic Analysis. *Regional Economic Information System 1969* (CD ROM). Washington, DC: U.S. Government Printing Office.

Source: U.S. Department of Commerce, Bureau of the Census. *County Business Patterns 1969*. Washington, DC: U.S. Government Printing Office.

* These numbers adjusted with 1969 County Business Patterns data to provide additional detail comparable to 1997 NAICS categories.

Numbers do not add to 100% due to rounding and omission of All Other Services category.

TABLE 6.5 Canadian Provincial and National Employment Percentages by Industry, 1971

	NFLD	PEI	NS	NB	QUE	ONT	MAN	SASK	ALTA	BC	YUK	NWT	CANADA
Primary													
11 Agriculture, forestry, fishing, and hunting	7.62	20.50	5.88	7.65	4.88	4.44	12.35	29.25	13.83	6.44	1.47	5.03	7.23
21 Mining and oil and gas extraction	3.59	0.11	2.29	1.53	1.28	1.29	2.00	2.12	4.13	1.74	16.29	12.38	1.73
Secondary													
23 Construction	11.28	7.14	8.01	7.38	6.03	6.53	5.73	5.15	8.15	7.54	7.69	4.72	6.70
31-33 Manufacturing	12.50	10.30	14.80	17.01	24.80	25.27	13.85	5.24	9.19	16.58	1.68	3.36	20.62
Tertiary													
22,41,48,49 Public utilities, wholesale, transportation, and warehousing	17.04	11.75	12.58	14.64	12.27	11.33	15.18	11.60	12.62	14.74	17.97	12.85	12.46
44-45 Retail trade	11.35	9.97	11.55	11.81	9.49	10.82	10.92	9.91	10.68	11.59	8.67	7.92	10.57
51 Information	2.14	1.67	2.32	2.09	2.16	2.32	2.58	2.06	2.42	2.75	3.50	2.78	2.32
52-53 Finance, insurance, and real estate	1.96	2.18	3.41	3.10	4.68	5.12	4.18	3.12	4.17	5.12	2.80	1.15	4.62
54-56 Producer services	1.39	1.04	1.67	1.53	2.60	2.93	1.86	1.29	2.65	3.04	1.40	1.05	2.60
61 Educational services	7.42	6.99	7.31	7.03	7.54	6.64	6.35	6.80	7.50	6.04	5.59	7.97	6.91
62 Health care and social assistance	6.41	6.58	6.64	6.49	6.54	6.19	6.88	6.54	6.61	6.22	4.27	5.72	6.39
71-72 Arts, entertainment, recreation, lodging, and food services	4.04	4.87	4.27	3.91	4.81	4.67	4.99	4.37	4.94	6.46	10.49	4.77	4.88
91 Public administration	8.57	12.01	14.34	10.51	7.06	7.85	8.73	7.59	8.42	6.73	14.48	26.01	7.96

Source: Statistics Canada, *Census of Canada, "Persons 15 Years and Over in the Experienced Labour Force, by Detailed Industry Canada, Provinces and Territories," 1971 Census (33% Sample Data).*

Note: These categories were derived to match the 1997 NAICS categories.

1.11. Which *two* economic categories experienced the greatest growth over this time period (in ratio terms) and why? What types of industries and which particular companies contributed to the rapid growth of this category in your state or province?

1.12. Which two categories experienced the greatest decline over the time period (in ratio terms) and why? What types of particular industries or particular companies in this category contributed to this decline in your state?

Name: _____ Instructor: _____

Help Wanted: The Changing Geography of Jobs

► ACTIVITY 2: REGIONAL MULTIPLIERS

In Activity 1 of this chapter, you saw the ways in which your state or province mirrors the economic structure of the nation and the ways in which it differs. In particular, in Question 1.5, you identified the economic categories in which the employment of your state or province exceeds the national average for that category. These are regional specializations of your state or province. Their share of employment exceeds the national average because your state or province is exporting these goods or services to other states or provinces and countries. In other words, they are the economic base or basic industries for your state or province.

The basic industries of a state or province are the driving forces of its economic growth. When the basic industries grow, they create additional jobs in other non-basic industries, as explained in the Introduction section of this chapter. One way to determine how many additional nonbasic jobs will be created by job growth in a basic economic category is to calculate a regional multiplier.

We can define a regional multiplier as

$$k = E_t/E_b$$

where:

k = regional multiplier

E_t = total regional employment

E_b = regional employment in basic jobs

This is equivalent to the relationship

$$E_t = kE_b$$

which shows that total regional employment is an outcome of basic employment times k , the regional multiplier.

2.1. Region A has a total labor force of 1,000. Of these jobs, 400 are in the basic sector, and 600 are nonbasic. What is the size of the regional multiplier?

2.2. General Motors plans to build a new parts factory in Region A employing 200 new people in basic jobs. Using the regional multiplier calculated in Question 2.1, how many total new jobs will be created in Region A?

2.3. Region B has a total workforce of 800, of which 400 are basic jobs. Region C has 500 total workers, 300 in the basic sector. Calculate each region's multiplier; then calculate the total number of new jobs in each region if a new plant located there with 100 new basic jobs. Which region will get more new jobs?

2.4. Lockheed announced on June 27, 1995, that it would close a defense contract plant in Tucson, Arizona, laying off 385 workers. If all of these jobs were basic and the Tucson region has a regional multiplier of 2.3, how many total jobs did Tucson lose?

► DEFINITIONS OF KEY TERMS

Agglomeration Economies Cost savings resulting from location near other firms.

Basic Industry An industry producing goods or services for sale to other regions.

Break of Bulk The stage of transportation when a bulk shipment is broken into smaller lots and/or different modes of transportation.

Capital Goods Goods used to produce other goods.

Cost Minimization An industrial location strategy that seeks to minimize what the firm pays to produce and distribute its products or services.

Division of Labor The specialization of workers in particular tasks and different stages of the production process.

Economic Base Model A demand-driven model in which exports to other regions drive regional development.

Economies of Scale Lower production costs as a result of larger volume of production.

Externalities Effects that extend beyond any single company. External economies of scale, for instance, are cost savings due to a larger volume of production in the region as a whole rather than a large volume within any one company.

Industrial Economy The dominant mode of production and consumption of the late nineteenth and early twentieth centuries, emphasizing large domestic corporations engaged in food processing, heavy equipment manufacturing, and energy products.

Labor Productivity Amount produced per worker per hour.

Localization Economies Savings resulting from local specialization in a particular industry.

Maquiladora An export assembly plant in Mexico that relies on cheap labor to assemble imported components that are then re-exported as finished goods.

Market Oriented The tendency for an industry to locate near population centers in order to save on transport costs, which usually occurs when the final product is more expensive to transport than the raw materials.

Nonbasic Industry An industry producing goods or services for sale within the local region.

Outsourcing An arrangement in which a service or a manufacturing process that was previously produced in-house is subcontracted to an outside company.

Postindustrial Economy The emerging mode of production and consumption of the late twentieth and early twenty-first centuries, featuring huge transnational corporations and localized agglomerations that produce and/or utilize information technology and telecommunications, with greater employment in tertiary and quaternary services.

Primary Activity An economic activity that directly extracts or harvests resources from the earth.

Producer Services Services provided by businesses to other businesses. Also known as *business services*.

Quaternary Activity Highly skilled, information-based services.

Raw Material Oriented The tendency for an industry to locate near the source of raw materials in order to save on transport costs, which usually occurs when raw materials lose weight in the production process.

Regional Multiplier A numerical relationship showing the number of total jobs created for each new basic job in a region.

Secondary Activity An economic activity that transforms raw materials into usable products, adding value in the process.

Services Tasks done for consumers or businesses for a fee.

Spatial Division of Labor The specialization of different regions in different stages of the production process.

Technological Spillovers Leakage of technological know-how to other people and firms usually located in close proximity.

Tertiary Activity An economic activity that links the primary and secondary sectors to the consumers and other businesses either by selling goods directly or by performing services utilizing those goods.

Transaction Costs The unseen costs of doing business; the costs required for gathering information about, negotiating, and enforcing contracts in the exchange of a product or service.

Ubiquitous Available nearly everywhere.

Urbanization Economies Savings resulting from locating in or near urban areas that have a large and diverse labor pool, large markets, developed infrastructure, and availability of a wide variety of goods and services.

► FURTHER READINGS

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