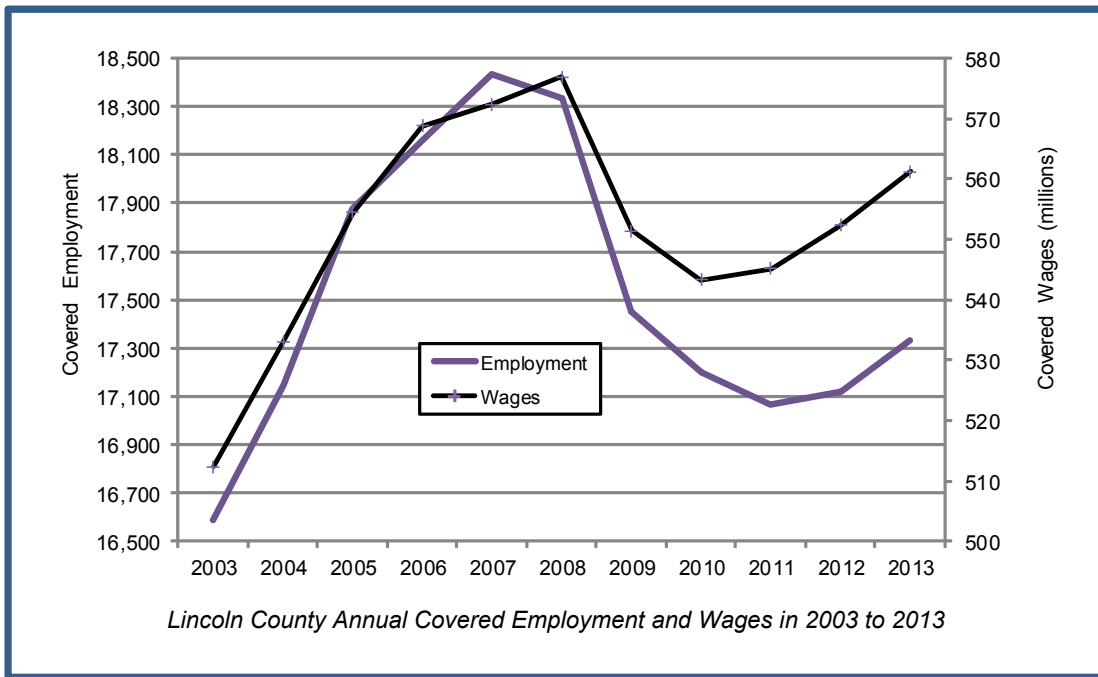




Ten Year Update on Lincoln County, Oregon's Economy



Lincoln County Board of Commissioners

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prepared by

The Research Group, LLC
Corvallis, Oregon

prepared for

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Newport, Oregon

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Preface

This report was prepared by the Research Group, LLC (TRG), Corvallis, Oregon, for the Lincoln County Board of Commissioners. The report contains findings from a 10 year period analysis of economic and social indicators in Lincoln County, Oregon. The explanations for the indicators' change during this 10 year period build upon data published in 2006 by the Oregon Coastal Zone Management Association (OCZMA) which utilized data year 2003. The OCZMA (2006) report covered all of the counties on the Oregon Coast. This report only covers Lincoln County.

Shannon Davis at TRG is the primary author. Mr. Davis was greatly assisted by Kari Olsen. Special thanks are extended to Gil Sylvia, Ph.D., Director of the Coastal Oregon Marine Experiment Station for his input. Erik Knoder, Regional Economist, Oregon Employment Department is complimented for providing his understandings. Hans Radtke, Ph.D. natural resource economist Yachats, Oregon provided valuable insights. Caroline Bauman, Executive Director of the Economic Development Alliance of Lincoln County (the Alliance) provided important information from a recently completed study the Alliance prepared that outlines the marine business economic development strategy. Each identified industry grouping (or sector) examined in this report had its own cadre of contacts/experts. We thank them anonymously only because we did not secure their permission to recognize their contributions before this report was issued. Lincoln County Commissioner Terry Thompson needs to be recognized for leading the effort to secure funding for this study from the Lincoln County Commission. Commissioner Thompson's colleagues, Commissioner Bill Hall and Commissioner Doug Hunt, also understood how important it is to have locally relevant economic information to improve local government decision making and aid in economic development efforts.

To make the report more readable, the authors adopted a less technical writing style. As such, the narrative is not interrupted with large numbers of literature citations or communications with others. The authors also assume readers are somewhat familiar with economic base modeling. A glossary has been included, but not all of the modeling and assessment terms are defined. In addition, to gauge economic trends the authors integrated many of the findings from the OCZMA (2006) report.

The report contains methodologies that are technically sound and defensible. Where judgment calls became necessary, conservative interpretations were applied. This approach allowed us to develop useful descriptions of Lincoln County's economic and social situation. Like the previous economic coast-wide economic studies TRG prepared for OCZMA, this report has several practical purposes. From an economic development perspective, this report helps leaders in Lincoln County understand the economic trends. That, in turn, informs decisions about economic development in Lincoln County. In addition, this report gives grant writers in Lincoln County a resource of demographic and economic data broken down for Lincoln County. Several disclaimers are necessary.

The interpretations and recommendations by the authors should be valuable for decision making. But, no assurances are given that decisions based on this study's information will fulfill the expectations of market demands or achieve financial projections. Government legislation and

policies, market circumstances and other events will impact the basis of assumptions in unpredictable ways. As circumstances change, people using this report are urged to challenge its underlying assumptions. Neither the Lincoln County Board of Commissioners, nor the author, nor any person acting on their behalf, makes any warranty of representation, expressed or implied, with respect to the accuracy, completeness or usefulness of the information contained in this document, or that the use of any information, apparatus, method, or process disclosed in this document may not infringe on privately owned rights.

Table of Contents

	<u>Page</u>
Preface.....	i
Table of Contents.....	iii
Glossary.....	vi
Executive Summary.....	viii
I. INTRODUCTION.....	1
A. Background.....	1
B. Purpose.....	1
C. Scope.....	2
D. Report Contents.....	4
II. SOCIAL TRENDS.....	5
A. Population.....	5
B. Labor Force.....	5
C. Firm Size.....	7
D. Housing Stock.....	7
E. Income.....	7
III. ECONOMIC TRENDS.....	15
A. Methods.....	15
B. Economic Base Modeling Results.....	16
1. Commercial Fishing Sector	
a. Summary	
b. Commercial Fisheries Onshore Deliveries	
c. Aquaculture and Mariculture	
d. Distant Water Fisheries	
e. Seafood Processing and Distribution	
f. Economic Contributions	
g. Outlook	
2. Agriculture Sector	
a. Background	
b. Economic Contributions	
c. Outlook	
3. Timber Sector	
a. Background	
b. Economic Contributions	
c. Outlook	
4. Tourism Sector	
a. Background	
b. Economic Contributions	
c. Outlook	

Table of Contents (Cont.)

	<u>Page</u>
5. Other Identified Industries Sector	
a. Background	
b. Economic Contributions	
c. Outlook	
6. Transfer Payments and Investments Income Sector	
a. Background	
b. Economic Contributions	
c. Outlook	
C. Retiree Income Effects.....	29
IV. TRENDS DISCUSSION.....	35
A. Sectors Summary.....	35
B. Implications for Economic Development.....	36
V. BIBLIOGRAPHY.....	38

List of Tables

Table ES.1: Lincoln County Sources of Total Personal Income by Sectors in 2003 and 2012.....	xv
Table II.1: Population Percent Change During 1970 to 2010 for U.S., Oregon, Coast, and Lincoln County.....	9
Table II.2: Lincoln County and Oregon Firm Type Distribution.....	9
Table II.3: Intra-County Distributional Differences.....	10
Table III.1: Oregon Study Areas Commercial Fishing and Aquaculture Volume, Value, and Economic Contribution in 2012.....	31
Table III.2: Zoning by Acres for Lincoln County.....	32
Table III.3: Retiree Effect With and Without Out-of-Area Purchase Adjustment in 2003 and 2012.....	32

List of Figures

Figure ES.1: Lincoln County Sources of Total Personal Income in 2003 and 2012.....	xvi
Figure II.1: Age of Population for U.S., Oregon, Coast, and Lincoln County in 2010.....	11
Figure II.2: U.S., Oregon, and Lincoln County Unemployment Rate and Civilian Labor Force by Month in 2003 to 2013.....	11
Figure II.3: Lincoln County Annual Covered Employment and Wages in 2003 to 2013.....	12

Table of Contents (Cont.)

	<u>Page</u>
Figure II.4: Second Homes as a Percent of Total Housing Units for Oregon and Lincoln County in 1990, 2000, and 2010	12
Figure II.5: Sources of Personal Income to Lincoln County, Oregon, and U.S. in 2012	13
Figure II.6: Coastal Counties Total Personal Income in 2003 and 2012	13
Figure II.7: Lincoln County and Statewide Population and Per Capita Total Personal Income in 1995 to 2012	14
Figure III.1: Lincoln County Gross Farm Sales in 1976 to 2012	33
Figure III.2: Oregon Statewide and Lincoln County Timber Harvests in 1962 to 2012	33
Figure III.3: Lincoln County Tourism Industry Total Personal Income by Purchase Sector in 2012	34
Figure III.4: Lincoln County Retiree Effect Economic Contributions in 2003 and 2012	34
Figure IV.1: Lincoln County Trends in Personal Income From Net Earnings, Industry Sectors, Investments, and Transfers in 1987 to 2012	37

Appendix

- A. Sources of Total Personal Income for U.S., Oregon, and Coastal Counties in 2003
- B. Population, Housing, Geographic, Health, and Social Characteristics in 2012
- C. Personal Current Transfer Receipts

Glossary

Covered employment	Wage and salary employment that has mandatory unemployment compensation insurance coverage.
Economic value	Economic value attempts to measure the net benefits from using a resource and the value people place on the resource. Economic contribution measures how much money is "stirred up" in an economy by using or enjoying a resource.
GDP	Gross Domestic Product
HMSC	Hatfield Marine Science Center
MOC-P	The NOAA Marine Operations Center-Pacific (MOC-P) serves as a homeport for NOAA research and survey ships and provides administrative, engineering, maintenance and logistical support for NOAA's Pacific fleet.
NOAA	National Oceanic and Atmospheric Administration
OCZMA	Oregon Coastal Zone Management Association
Personal income	Income accruing to households in the form of transfer payments, returns on investments, and net earnings. Current and historical estimates are provided by the U.S. Bureau of Economic Analysis. Compilations are for place of residence.
Transfer payments	Transfer payments are to persons for which no current services are performed. It consists of payments to individuals and to nonprofit institutions by federal, state, and local governments and by businesses. Principal categories of transfers are income maintenance (such as family assistance payments, Supplemental Nutrition Assistance Program formerly known as the food stamp program, worker's compensation, etc.), unemployment insurance payments, and retirement payments (such as Social Security, medical payments - mainly Medicare and Medicaid, veterans benefits, Bureau of Indian Affairs benefits, payments to nonprofit organizations that serve individuals, etc.). Business payments to persons consist primarily of liability payments for personal injury and of corporate gifts to nonprofit institutions. Transfer payments exclude payments by the federal government for work under research and development contracts.
Investments	Personal income from private investments (sometimes called property income) has sources for rent, interest, and dividends. Private pension payments are in this source of income.
Net earnings	Personal income from net earnings is receipts from wages and salaries, and proprietorship net income. Payers can be private businesses and government.

- Regional economic impact (REI) Economic contribution and REI are separate/different concepts. But in this report the two terms are used interchangeably. The term "impact" usually refers to an economic activity that is subtracted or added to an economy. It is the share of the regional economy supported by the expenditures made by the industry being analyzed. It can be expressed in terms of a variety of economic metrics. A stricter use of the term "contribution" would be for an economic activity that exists rather than an activity that is a change. The measurement for economic contribution and REI in this report is personal income and it includes the "multiplier effect."
- Multiplier effect The multiplier effect results from re-spending within the regional economy which is afforded by business activities that have sales outside the regional economy. The recipients of the direct expenditures made within the regional economy spend that money to purchase necessary goods and services for an indirect-multiplier effect. The beneficiaries of the direct and indirect spending in turn spend that revenue on unrelated goods and services, which generates an induced-multiplier effect. There is only so much goods and services that can be bought within the regional economy and eventually the original sales money all leaks to outside economies.

EXECUTIVE SUMMARY

Background

An analysis of economic and social changes in Lincoln County over the last 10 years was prepared. Starting in the early 1990's the Oregon Coastal Zone Management Association (OCZMA) commissioned a series of economic analysis and social implications studies about the Oregon Coast. The studies documented the basic industries that drove the coastal economy. Over time, those reports became widely-used sources of information on the Oregon Coast's economy. The most recent OCZMA study whose report was published in 2006 was based on data from 2003. The Lincoln County Commissioners funded an update of the OCZMA (2006) study solely for Lincoln County. The purpose is to develop locally relevant economic information to improve local government decision making and aid in economic development efforts.

The regional economic base model used in the earlier OCZMA (2006) study was re-calibrated using currently available data. The current year data are sometimes 2010 data when decennial census compilations are referenced, and years 2012 or 2013 when U.S. Bureau of Economic Analysis (BEA), Bureau of Labor Statistics (BLS) information, or other data sources are utilized. During the 10 year period a major recession took place starting in 2008. It follows that two snapshots of Lincoln County's economy, one from 10 years ago and another from today, would not show what really happened in Lincoln County over the last 10 years. For example, the economy performance indicator unemployment rate for Lincoln County was 39 percent less in 2007 and 19 percent greater in 2010 than what it was in 2003. As Lincoln County moved out of the recession the unemployment rate figure returned to approximately the same level in late 2013 that it was in 2003.

The economic base model uses the measurement for annual personal income to explain what drives the County's economy. Personal income is what individuals and households receive from all sources of income in a year. The measurement of personal income is the most concrete and least abstract of many economy performance metrics. Everyone can identify with the dollar origins of their own household. Also, the measurement of personal income can be translated to a job equivalent number using county wide average earnings period. The inflation adjusted average earnings per job (full/part time and proprietorships) is \$36 thousand in Lincoln County, which is approximately the same in 2012 as it was in 2003.

The main three classifications for personal income are: (1) wage and salary, and proprietorship net earnings, (2) transfer payments, and (3) returns from private investments. Personal income from *transfer payments* originate from many sources. The three principal categories are income maintenance, unemployment insurance payments, and government supported retirement programs. Sources for personal income from *private investments* (a.k.a. property income) include rent, interest, and dividends. Private pension payments are considered private investment income.

Personal income from *net earnings* is modeled using six primary basic sectors. Each sector contains the portion of non-basic sector activity it supports. Examples of non-basic sectors are

retail and wholesale trade; business services; local government including agencies, and K-12 and community college schools; etc. The net earnings primary basic sectors for Lincoln County are: a) commercial fishing, b) agriculture, c) timber, d) tourism, and e) two sectors for other export industries. The other export industries category is comprised of "other identified industries" and "not identified industries." The "not identified industries" sector is a residual calculation after all other sectors' economic contributions are accounted for in total net earnings. The two sectors, therefore, serve as miscellaneous categories of economic activity. They capture varied economic activities that don't fall within a major Standard Industrial Code (SIC) such as forestry or agriculture.

This Lincoln County study differs from the earlier OCZMA (2006) economic study in one important respect. The economic contributions for a marine science and education subsector within the "other identified industries" primary sector are itemized. In doing so, a new slice within the pie of Lincoln County's economy is created. The marine science and education subsector includes the Hatfield Marine Science Center (HMSC) employment; Oregon Coast Aquarium's research and management staffing; community college special marine education curriculum staff; cooperative fishery research activity; NOAA Marine Operation Center - Pacific (MOC-P); County located research and development activity for ocean energy; and, County located other ocean observing programs. The remaining "other identified activity" is: pulp and paper, marine cargo and shipping, heavy equipment manufacturing, communications, federal/state government, and military. Military expenditures in Lincoln County are mainly Coast Guard personnel and operations.

Key Findings

Key findings from the Lincoln County study follow.

- A. There has been a modest County population (BEA estimates) increase from 44,421 in 2003 to 46,151 in 2012. This is a four percent change in nine years. Lincoln County's two largest urban areas are the cities of Newport and Lincoln City. The City of Newport (population 10,030 in 2010) increased by five percent between 2000 and 2010. The City of Lincoln City (population 7,935 in 2010) increased by nine percent in the same period (U.S. Bureau of Census estimates). The proportion of population in the unincorporated areas (U.S. Bureau of Census definition) slightly increased in the County between 2000 and 2010 by one percent.
- B. Table ES.1 and Figure ES.1 show the inflation adjusted total personal income sources in 2003 and 2012. Overall personal income increased by about 12 percent during the period. Explanations about trends in the *net earnings* income sources follow.
 1. Between 2003 and 2012 the percent changes in primary basic sectors economic contributions (adjusted for inflation) are: commercial fishing +37 percent, timber +38 percent, agriculture +50 percent, and tourism +18 percent. The "other identified" sector, including the marine science subsector, increased by +47 percent. So, all of the six primary basic sectors identified in 2003 with the exception of "not identified

sector" have strengthened since 2003. (Remember though, within this 10 year period, there have been up and down years, due to the recession starting in 2008).

2. Each of the primary basic sectors has its own important trending story. The following short narratives only touch upon the leading influences for the changes that occurred between 2003 and 2012. The descriptions are in regard to whether the influences are the result of production activity and/or real price changes. While production activity (for example timber harvests and fisheries landings) may decrease, increased prices (for example timber stumpage prices and commercial fishing harvest prices) will compensate for the income realized from the decreased activity.
 - a. **Commercial fishing** has had, in recent years, some outstanding Oregon fisheries' landings. Real prices for onshore landings have generally increased across the board for all seafood species. The Newport port group (includes Depoe Bay and Waldport) serves as a regional fisheries center. It hosts a very active home-port harvesting fleet, many large seafood processors, and numerous service and provisioning suppliers. Local fishing vessels also participate as catcher vessels in the at-sea Pacific whiting fishery. Income that flows into Lincoln County from participants in distant water fisheries, such as in Alaska, continues to grow. Local boat building and repair facilities as well as supplier companies are kept busy with both local vessels and vessels that fish in Alaska.
 - b. The **timber** sector economic contributions have increased. This sector is mainly comprised of activity associated with timber management and logging services. Timber harvest has increased since the early 2000's. If one compares stumpage prices from 2003 and 2014 those prices appear stable. During the recession, stumpage prices decreased and then increased back up to 2003 levels. (There are measurement unit issues for this indicator that may not make it a comparable metric over years.) There is only one small dimension cut mill and no veneer mills in the County. One record keeping explanation for this sector increase is that the measurement is for income by residence. There is anecdotal information that some Lincoln County residents commute to mills in western Benton County. Moreover, forestry experts note that an enormous volume of timber in Lincoln County on private lands has reached or is about to reach a harvestable stage. As such, looking ahead, we can project that there will be a steady and sustainable increase in timber harvest activities in Lincoln County. Depending on foreign market conditions, the harvest may become log exports from the recently renovated Port of Newport International Terminal.
 - c. **Agriculture** continues to be a small percentage of the overall economy in Lincoln County. The increase in growth came from crops farm-gate sales. Real prices for crop products from Lincoln County have increased.
 - d. The **tourism** sector increased over the last 10 years, even though visitor spending was impacted by decreased levels of disposable income following the 2008 recession. The increase in spending can't be attributed to the

opening of a new attraction or tourist destination in Lincoln County. The Chinook Winds Casino was already open in 2003, although the adjacent 227 room hotel opened in 2005. Some destination visitor counts are down such as at the Oregon Coast Aquarium. But, other destinations in Lincoln County are up, such as the public parks. There is no evidence that tourism businesses rolled-back their prices to stimulate demand.

- e. The ***other identified industries*** sector increased dramatically during the last 10 years. An obvious expanding business activity to residents and visitors at Yaquina Bay comes from the marine science and education subsector. The impressive array of NOAA's oceanographic vessels docked at NOAA's facility has changed the look and feel of the lower Yaquina Bay. An already bustling waterfront became an even more compelling place. Full MOC-P relocation was concluded during 2012. State and federal employment other than associated with marine science and education are included in this sector. Overall local, State, and federal employment has decreased since 2008. The pulp and paper industry is included in this sector. The Toledo mill (owned by Koch Industries) is operating at high capacity. However mechanization improvements at the mill lowered job counts since the early 2000's. Vessel building and repair businesses are included in this sector. Vessels active in Alaska fisheries are causing continued demand for these businesses. The Port of Newport's marine cargo dock (a re-development) was completed in 2013. Several businesses from outside Lincoln County have expressed a strong interest in using the marine cargo dock to ship raw logs to foreign markets. With or without future log export activity, the cargo dock facilities at the Port of Newport are utilized by large vessels to accommodate transient moorage, fish gear switching, and provisioning of vessels.
 - f. There may be several reasons for the decrease in the ***not identified industries*** sector. The first factor may be record keeping. Some of the smaller miscellaneous businesses may have flourished. As a result, the income they reported is now captured within a recognized business and is accounted for in a primary sector, including being captured in the new marine science and education subsector. Another reason why the "not identified" category decreased in Lincoln County could be the toll of the recession on start-ups and sole proprietorships. Some of those businesses may not have made it through the recession. In addition, the data suggests arts and crafts businesses in Lincoln County did not experience an economic recovery like many other sectors of the state and national economy.
3. ***Transfers personal income*** is one of the principal drivers for the County's personal income increases between 2003 and 2012. Transfer payments account for 62 percent of the County's total personal income increases. Transfers increased by \$113.7 million or 33 percent during the period. Transfers represent 27 percent of total personal income in the County. That compares to 20 percent of total personal income in Oregon and 17 percent in the U.S. Of the three principal categories of transfers, retirement payments in 2012 are a greater proportion of transfers in Lincoln County (88 percent) than the State (84 percent) and U.S. (85 percent). The categories for

income maintenance in the County (nine percent) and unemployment insurance payments in the County (four percent) are slightly less than in the State (11 percent and five percent) and a mixed comparison with the U.S. (11 percent and four percent) for 2012.

4. ***Investments personal income*** in Lincoln County has grown approximately 13 percent over the last 10 years. In data year 2012 it accounted for approximately the same 23 percent share of total personal income in the County as in the 2003 starting year. The Oregon and U.S. share of total personal income for this category is about 18 percent in 2012. In the years leading up to 2008 investment income was increasing in Lincoln County. Then, once the recession hit, investment income decreased (decreased by 27 percent between 2008 and 2010) and since 2011 there has been a modest upswing (increased by four percent between 2011 and 2012).
- C. Lincoln County per capita personal income was less than Oregon and the nation in 2003, but was growing at a faster rate until 2008. The statistic lost some ground to Oregon and the nation due to the recession. However, in the last couple of years there has been rebound in income levels. The percent difference less in per capita income with the State in both 2003 and 2012 was eight percent. The percent difference less in per capita income with the nation in 2003 was 18 percent and 2012 was 22 percent.
- D. Lincoln County's labor force was growing from 2003 up to the recession year 2008. From 2008 through 2013, there has been an overall decrease of four percent in the County's labor force. One contributing factor for the decrease in labor force is the "baby boomers" are aging and evolving into retirement status.
- E. Lincoln County's unemployment rate dropped to about seven percent in January 2014. This rate is only slightly higher than Oregon's rate. There has been continued improvement in the unemployment rate following the start of the 2008 recession. However, even at the worst levels during the recent recession at nearly 11 percent unemployment, it was not as severe as previous business cycles. The County's unemployment rate during most of the early 1980's recession was greater than Oregon's while the County's unemployment rate for much of the recession starting in 2008 was less than or about equal to Oregon's rate. Lincoln County's economic recovery rate for the recent recession followed the recovery rate for the national economy. Thirty years ago, after a recession, Lincoln County's economic recovery rate would have lagged well behind the national economic recovery rate. The data tells us Lincoln County's economy is more diversified and healthier than 10 years ago (and certainly better off than 30 years ago). That's because the local economy is not as dependent upon extractive industries.

The unemployment rate is a ratio calculation with employment in the numerator and labor force in the denominator. In order for the unemployment rate to improve, either employment numbers or those seeking employment must not decrease as much as the decrease in the labor force. Indeed covered employment has slowly increased in the County since 2010. It is a good indicator of a healthy economy if decreasing

unemployment is not explained by discouraged potential workers leaving job seeking status.

- F. While overall covered employment has increased, the rate of increase in inflation adjusted overall covered wages has been even higher. This suggests that the growth in employment has been in higher paying occupations. State and federal employment, including the MOC-P relocated jobs, has been a contributor to this phenomenon. However, all government combined lost payroll from 2010 to 2013 in inflation adjusted wages. The private sector payroll increased with the gains spread around SIC's. Trade and food manufacturing had some of the bigger gains. There were losses in private construction and health care.
- G. There are geographical considerations for income distribution within the County. The highest household median income in 2012 was in Newport at \$47,270 and the lowest was Lincoln City at \$29,686. The County average was \$41,996. The family poverty rate also varies considerably. (Poverty levels are set by the federal government; example family size of two adults and two children is about 50 percent of the median family income.) The number of families at or below the poverty level in 2012 was highest in Siletz at 22.5 percent and the lowest was Yachats at 2.0 percent. The County average was 11.0 percent.
- H. There is a large retirement effect to Lincoln County's economy. This is indicated by a higher proportion of older age population cohort residents. The cohort for 65 and older is about 20 percent of total population as compared to approximately 13 percent in Oregon and the U.S. The positive economic impact of retirees is also indicated by a higher proportion of total personal income from transfers and investments sector.
- I. There is a growing share of second home housing in the County. (The term second home uses the U.S. Census Bureau definition for vacant seasonal, recreational, or occasional use housing units. A housing unit could be a detached dwelling, condominium, etc.) The County share of second home housing units in 2010 was over 25 percent of the entire housing stock, as compared to about three percent in Oregon. The County share grew from 2000 when it was about 19 percent. Within the County, the highest rate was Yachats with 40.0 percent and the lowest in Siletz and Toledo at about one percent. The share of second home housing is an important public services demand indicator. The owners and/or renters who use this housing would not be counted as residents. The actual housing occupancy of second homes will be higher in the summer months. That, along with summer time visitor counts, boost the numbers of people that providers need to anticipate for service supply levels. Public service infrastructure as well as fee schedules for public services need to be calibrated to accommodate these peak capacity levels.

Implications for Economic Development

The economic analysis results provide greater understanding of the economic and social makeup of the region. The analysis results will be useful for public policy deliberations, and especially economic development monitoring, evaluation, and planning.

Compared to many other rural communities, Lincoln County is exceptionally well positioned to meet economic development challenges. Economic development planning has been undertaken by the County ("Economic Development Strategies: Long Range Plan," 2010); Yaquina Bay Economic Foundation ("Establishing Newport, Oregon as a Hub for Ocean Observing Activities in the Pacific Northwest," 2008); and, more recently the City of Newport ("Commercial and Industrial Buildable Lands Inventory and Economic Opportunities Analysis," 2012). Lincoln County's Small Business Development Corporation (SBDC) (affiliated with the Oregon Coast Community College) provides local capacity to help fledgling entrepreneurs. Other Lincoln County cities and ports have updated business and development strategy documents. The Economic Development Alliance of Lincoln County (EDALC) is an engaged and capable economic development coordinating body. EDALC is the local contact for an Oregon Enterprise Zone that encompasses most of Lincoln County's urban areas. There are many business groups in the County spearheading economic development activities, including the chambers of commerce in Lincoln County. This study's documentation and analysis of the changes in the economy and demography in Lincoln County will assist all of these entities in making more targeted and successful economic development activities.

Table ES.1
Lincoln County Sources of Total Personal Income by Sectors in 2003 and 2012

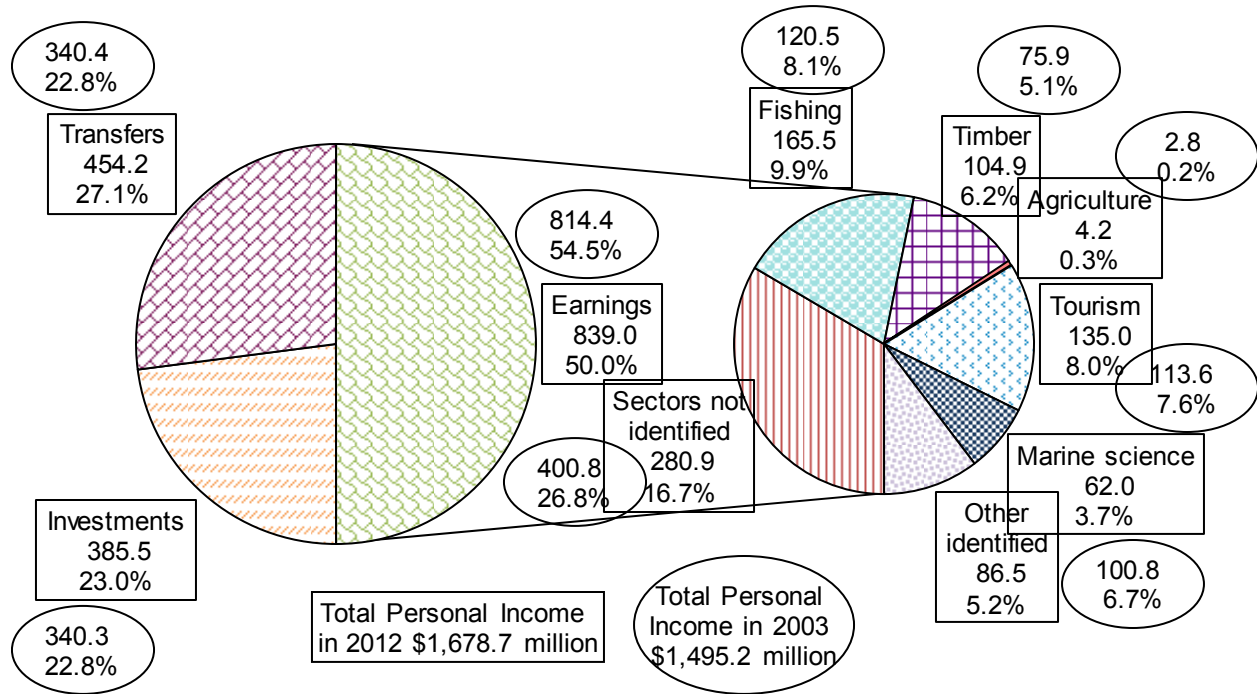
	2003		2012		Percent Change
	Income	%	Income	%	
Total Personal Income	1,495.2	100.0%	1,678.7	100.0%	12.3%
Net Earnings	814.4	54.5%	839.0	50.0%	3.0%
1. Commercial fishing, including distant water, and aquaculture	120.5	8.1%	165.5	9.9%	37.4%
2. Agriculture	2.8	0.2%	4.2	0.3%	50.5%
3. Timber	75.9	5.1%	104.9	6.2%	38.1%
4. Tourism	113.6	7.6%	135.0	8.0%	18.7%
5. Other identified	100.8	6.7%	148.5	8.8%	47.4%
a) Marine science			62.0	3.7%	
b) Other	100.8	6.7%	86.5	5.2%	
i. Paper and paperboard mills	76.2	5.1%	47.7	2.8%	
ii. Water transportation and marine cargo	0.9	0.1%	0.1	0.0%	
iii. Ship building, steel fabric., other heavy const'	1.0	0.1%	2.3	0.1%	
iv. Misc. (state/fed. govt., military, comm.)	22.6	1.5%	36.4	2.2%	
6. Other not identified	400.8	26.8%	280.9	16.7%	-29.9%
Transfers	340.4	22.8%	454.2	27.1%	33.4%
Investments	340.3	22.8%	385.5	23.0%	13.3%

	2003	2012	Change
Total Employment	16,589	17,118	3.2%
Unemployment Rate	9.0	9.3	3.3%
Per Capita Personal Income	33,659	36,374	8.1%
Population	44,421	46,151	3.9%

- Notes:
1. Personal income in millions of 2012 dollars, adjusted using the GDP price deflator developed by the U.S. Bureau of Economic Analysis.
 2. Personal income generated by identified sectors includes direct as well as indirect and induced income. The economic sectors dependent upon the identified sectors, such as retail and service businesses, are included in the identified sectors. This means the "multiplier effect" is included.
 3. The "fishing" sector is commercial fishing and includes the distant water fisheries economic contributions. The "tourism" sector includes economic contributions from recreational saltwater and freshwater fishing.
 4. Marine science and research subsector was added in 2012 because of its emerging prominence. There were economic contributions from this subsector in 2003, but the included activity was scattered in mostly the "other identified" sector categories. The marine science and education subsector includes the Hatfield Marine Science Center (HMSC); Oregon Coast Aquarium; other science spending such as wave energy, community college, and cooperative fishery research; MOC-P, and ocean observing.
 5. Transfers and investment personal income are only direct income, although research shows that the multiplier effect may be more than one for both of these sectors.

Source: Study for sources of personal income in 2012 and TRG (2006) for 2003. Total and per capita personal income, and population from U.S. Bureau of Economic Analysis. Unemployment and covered employment from U.S. Bureau of Labor Statistics.

Figure ES.1
Lincoln County Sources of Total Personal Income in 2003 and 2012



- Notes: 1. Economic contributions are measured as total personal income in millions of 2012 dollars. Adjustment to 2012 dollars made with the GDP price deflator developed by the U.S. Bureau of Economic Analysis. Pie slices that have boxed annotations are 2012 data year and circled annotations are 2003 data year.
2. Table ES.1 applies.

Source: For 2003: OCZMA (2006). For 2012 fishing: TRG (2013). For total personal income, transfers, and investments: U.S. Bureau of Economic Analysis, Table CA04, personal income summary, downloaded March 20, 2014.

I. INTRODUCTION

A. Background

There has been a series of economic analysis and social implications studies completed for Oregon coastal economies.¹ The most recent update was for data year 2003. The reports were well received and have been widely used for planning and policy deliberations. Their heralded usefulness was in the analysis approach. Most descriptive studies are derived from available data for employment in standard industry and occupation categories. These categories cross over economic sectors commonly used to promote and plan for economic development, such as tourism and retirement. The usual approach to resolve the need for understanding the dimensions and trends of economic development sectors is to undertake special studies.² However, the special studies do not compare and contrast one sector with another, and because there are different measurements, it is difficult to compile results to determine how the all sectors add up to show 100 percent of the driving forces behind local economies.

The study series uses an economic performance measure for personal income. The measure is released annually by the U.S. Bureau of Economic Analysis. Combining the latest census demographic (age, housing, etc.) statistics, social wellbeing (health, etc.) statistics, and economic analysis (personal income, etc.) results in one document is helpful to planning and policy makers. Their efforts can focus on goals and objectives for directing and accommodating changes, rather than generating background information. Additional interpretive descriptions are provided to understand the implications of change and how proper planning can sustain coastal economies, protect coastal livability, and manage natural resources.

The Lincoln County Board of Commissioners were interested in what has happened to the regional economy since the data year in the most recent OCZMA study published in 2006 which was based on data year 2003. The most recent data year available for the analysis at the county level is 2012. Census year 2010 tabulations are interpretive studies at the county level are also becoming available from the U.S. Bureau of Census.

B. Purpose

The reason for the new project is to review Lincoln County's regional economy's many changes that have occurred in the last decade. The Coast economy adjusted and grew with a long national business cycle trajectory early in the decade, and then suffered the effects from the world recession starting in 2008. During this analysis time period, new export markets have expanded for goods that can be produced or pass through coastal economies. Federal and state government policies to encourage the development of renewable energy sources, and, advances

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1. A 1987 publication described an economic snapshot of coastal communities in a report titled "The Economic Landscape of the Oregon Coast." Information in this report was partially updated to 1989 in a publication titled "Observations on the 1989 Coastal Economy." The analysis was updated again to data year 1991 in a publication titled "A Demographic and Economic Description of the Oregon Coast." The most recent update is titled "A Demographic and Economic Description of the Oregon Coast: 2006 Update." These four publications are posted on the OCZMA website www.oczma.org.
 2. Example studies are: Dean Runyan Associates (2013) and TRG (September 2013).

in technology, have combined to create the beginnings of a technology development industry for wave energy and offshore wind energy feasible. Federal and state natural resource and land management policies, especially related to timber, resulted in dramatic changes to regional economies. The changes are sometimes brought about by litigation to enforce environmental laws, induced by new science about compatible consumptive uses of natural resources, and/or driven by changes in societal environmental values. New public policies can disrupt an industry's ability to operate. New policies will have significant impact on how timberlands, agricultural lands, and other natural resources are utilized. Conversely, new business opportunities on the Central Oregon Coast have developed. Demographically, the area's population change is transforming from young families raising children to a population dominated by retirees drawn to the quality of life on the Oregon Coast. This aging demographic has profound implications for the general school population and the services that local governments and communities need to provide.

The goal of this project is to assess where Lincoln County has been, where it stands today, and where we are going. Local governments within Lincoln County need to plan with the following planning horizon ranges:

- Services and operations 3-5 years
- Capital improvement plans 5-10 years or more
- Land use planning 10-20 years

A single, overarching study to determine area-wide and local trends is a cost effective approach to accomplishing the planning. By having a comprehensive economic and demographic study for the county, individual communities don't need to prepare their own background and assessments. Moreover, with one comprehensive look at Lincoln County we can be certain the information developed will be consistent. This project systematically focuses on where the changes are taking place in the economic and social fabric of our communities. This provides elected officials and planners the background information to develop management strategies for accommodating impacts to private property, and county and community infrastructure (capital improvements, roads, rail, schools, and other public facilities). The developed locally relevant economic information will improve local government decision making and aid in economic development efforts.

C. Scope

The original study and subsequent updates were completed for the entire Oregon Coast. For this project, Lincoln County will serve as its own geographic region. It is a fortuitous county choice because studying recent economic and population structural changes and developing economic development interpretations for this particular county will exemplify application elsewhere along the Oregon Coast. From an economic analysis methodological perspective, Lincoln County is a defined labor force participation market. Utilizing a county level economic base model should provide reliable estimates for the defined industry sectors within the geographic scope.

The work plan separates the study into two components: (1) economic and social analysis tasks, and (2) interpretive tasks. The economic and social analysis work effort has two subparts: (a) economic base and social analysis, and (b) a special analysis to determine the importance and opportunities from retiree income spending. The county level data used as inputs for the economic analysis modeling are derived from: household personal income from the U.S. Bureau of Economic Analysis; input-output response coefficients from an existing model called IMPLAN; covered employment from U.S. Bureau of Labor Statistics; and economic census data from U.S. Bureau of the Census. The most recent common year for all of the data will be used for the economic analysis benchmark year.³

(1) Economics and Social Analysis Tasks

The economic base model created for the previous 2003 OCZMA studies are updated using the sector information estimates for Lincoln County. The existing sector delineations generally apply 10 years later. However, extra work effort was needed to develop a new industry category for marine science and education. Demographic information from the Year 2010 decennial census is currently being released at a detailed level. Social trends for itemized demographic, health and wellbeing indicators are generated at relevant temporal and spatial scales.

Transfer payments and returns from investments have become a major source of income for Lincoln County. Together, they make up **50 percent** of Lincoln County's total personal income in 2012. Transfer payments and returns from investment constitute 51 percent of total personal income coastwide in 2012. That percentage compares with about **39 percent** for all of Oregon and **35 percent** for the U.S. Jobs traced to these transfer payments and returns from investment may be lower wage consumer service oriented occupations similar to tourism-generated employment. However, we don't know enough about spending patterns to make sound generalizations about the employment-effect of transfer payments and investment income on our economy. A further investigation is needed to study households having these income sources to determine what changes are needed in public policy to be responsive to these economic dynamics.

(2) Interpretive Analysis Tasks

An often overlooked aspect of planning and public policy making is monitoring. Good planning and policy making is often grounded in a clear understanding of how key factors are changing over time. As conditions change, the monitoring of these conditions enables communities to adjust policies to best serve citizens. The only way to monitor what is happening in your economy is to develop and track indicators about economic and social trends. Monitoring indicators are suggested for emerging issues that are a consequence of economic and social trends.

3. The U.S. Bureau of Economic Analysis county level personal income information has about a two year delay, i.e. data that will be released in Year 2014 will be for Year 2012. The economic base model is derived from an economic input-output methodology using coefficients from IMPLAN using data year 2011. This input-output model was originally developed by the U.S. Forest Service and now maintained by IMPLAN Group LLC., Huntersville, N.C.

D. Report Contents

The report is organized in successive chapters matched with the above described two primary workscope tasks. A final chapter discusses the implications for using economic and social information in economic development planning.

II. SOCIAL TRENDS

This chapter describes selected County economic and social characteristics. Tables and figures showing the characteristics are at the end of the chapter. There is additional characteristics data in Appendix B.

A. Population

In the period 1970 through 2010, the population of Oregon grew much faster (83 percent) than the population of the United States (52 percent) (Table II.1). Lincoln County (79 percent) grew almost twice as fast as the rest of the Oregon Coast (39 percent). However, *in the last decade* both the Oregon Coast and Lincoln County grew only about a quarter as fast as Oregon. The Oregon growth statistics are heavily influenced by the fairly rapid growth of the Portland Metropolitan Area. Oregon is becoming more urbanized because of our land use patterns which encourages growth in cities and because of the education and job opportunities in urban areas.

Generally, coastal counties have an overall out-migration of young adults who leave the Oregon Coast to find education and employment opportunities. With these migration patterns alone (the out-migration of young people), coastal areas would experience significant demographic shifts. However, this trend is exacerbated by in-migration patterns. The national population is "aging." There are large population cohorts moving into middle and older age groups. The people in these retirement age cohorts are moving to the Coast (Figure II.1). The trend is the same for all of Oregon, but even more exaggerated for coastal counties. Lincoln County has a higher proportion of the 65 and over cohort than the coastal average.

There has been a modest County population (BEA estimates) increase in Lincoln County from 44,421 in 2003 to 46,151 in 2012. This is a four percent change in nine years. Lincoln County's largest urban areas are the cities of Newport and Lincoln City. The City of Newport (population 10,030 in 2010) increased by five percent between 2000 and 2010 and the City of Lincoln City (population 7,935 in 2010) increased by six percent in the same period (U.S. Bureau of Census estimates). The proportion of population in the unincorporated areas of Lincoln County (U.S. Bureau of Census definition) slightly increased by one percent in the County between 2000 and 2010.

B. Labor Force

The size of the labor force in Lincoln County has been decreasing in Lincoln County since the 2008 recession. However, the unemployment rate during this period has also been decreasing (Figure II.2). The unemployment rate is a ratio calculation with employment in the numerator and labor force in the denominator. In order for the unemployment rate to improve (decrease), either employment numbers or those seeking employment must not decrease as much as the decrease in the labor force. Indeed, covered wage employment (wage and salary employment that has mandatory unemployment compensation insurance coverage) has slowly increased in the County since 2010 (Figure II.3). One can claim an economy is becoming a healthier economy if

decreasing unemployment is not explained by discouraged potential workers leaving job seeking status.

The Lincoln County unemployment rate has dropped to about seven percent in January 2014. This rate is only slightly higher than the statewide rate. There has been continued improvement in the unemployment rate following the 2008 recession. Even at its most severe levels at 10.6 percent following the 2008 recession, it wasn't as bad as the early 1980's recession which was 11.5 percent. The County's unemployment rate during most of the early 1980's recession was greater than Oregon's while the County's unemployment rate for much of the recession starting in 2008 was less than or about equal to Oregon's rate. Lincoln County's economic recovery rate for the recent recession followed the recovery rate for the national economy. Thirty years ago, after a recession, Lincoln County's economic recovery rate would have lagged well behind the national economic recovery rate. The data tells us Lincoln County's economy is more diversified and healthier than 10 years ago (and certainly better off than 30 years ago). Decreased reliance on extractive industries has made Lincoln County's economy less susceptible to national business cycle downturns.

While covered employment has increased, the rate of increase in inflation adjusted covered wages has been even higher (Figure II.3). This indicates that a growth in employment in Lincoln County has been in higher paying occupations. State and federal employment, including the MOC-P relocated jobs, is a significant contributor to this positive trend. However, all government combined lost payroll from 2010 to 2013 in inflation adjusted wages. The private sector payroll increased with the gains spread around SIC's. Trade and food manufacturing had some of the bigger gains. There were losses in private construction and health care.

Oregon's coastal areas, including Lincoln County, have undergone significant economic and demographic transitions. Traditional resource-based industries like timber have declined in relative importance. Trade and service jobs associated with businesses serving tourism and retirees have increased. The major change, however, has been the increase of "other industries" in these counties, which reduced *the relative importance* of natural resource industries. In Lincoln County, some of these other industries are readily known, like the Hatfield Marine Science Center. Many small businesses, combined, are accounting for higher proportions of coastal economies. Later sections in this report discuss this "other industries" category in depth.

The shift towards service sector employment and the rise of the information economy have modified the nation's as well as the Coast's occupational employment structure. Blue-collar/middle class jobs are disappearing. In its place, we see either high paying professional and technical jobs or low paying service or clerical jobs. Communication and information systems require skilled programmers and engineers. Health professions require high levels of technical education. There are a rising number of women working outside of the home. That phenomenon may partially be the result of falling family earnings.⁴ While the fastest growing occupations in

4. The movement of females into the labor force has come about for a variety of reasons. Many married women searched for jobs to provide a second income source for family budgets hard hit by higher costs for food, health care, housing, and higher education. Other women worked to support their families or to pursue individual economic goals. The rising divorce rate and the surge of the number of single, educated women also induced many females to enter the labor force.

the nation include engineers, computer specialists, and health industry workers, the bulk of new jobs are low paying positions such as fast food workers, cashiers, and nurse's aides. With the loss of middle class jobs, the work force is becoming increasingly stratified by skill and wage.

C. Firm Size

Lincoln County has a higher proportion of jobs in sole proprietorships (28 percent) than the State (23 percent) in 2012 (Table II.2). The proportional difference between the County and State has stayed about the same over the last 35 years.

D. Housing Stock

The housing stock for the Oregon Coast is generally older than for the State. This is so despite the growth of second home construction. Monthly housing costs as measured by rent, mortgage payments, and utility costs are lower in the County than the State. Despite being lower, percent of households that are cost-burdened (30 percent or more of the household income is spent on housing costs) is about the same in Lincoln County (40 percent) as in Oregon (39 percent).

The usual statistic to measure housing availability is misleading for the Oregon Coast. Most counties' overall vacancy rates are substantially higher than the State's. This is because the census defined total vacancy rate includes vacant units market ready and vacant units which serve as a second home and coastal counties' housing stock includes a much higher proportion of second homes than the State. (The term second home uses the U.S. Census Bureau definition for vacant seasonal, recreational, or occasional use housing units.)

In Lincoln County, the share of second home housing is growing (Figure II.4). Lincoln County's share of second home housing units in 2010 was over 25 percent of the total housing stock as compared to about three percent in Oregon. Lincoln County's share grew from 2000 when it was about 19 percent. This demand indicator has important implications for public services. The owners and/or renters who use this housing are not counted as residents (or, for that matter, voters). Housing use would likely be higher in the summer months, and along with summer time visitor counts, would swell effective population numbers that providers need to anticipate for service supply levels. Public service infrastructure as well as fee and rate schedules would need to be designed for peaking capacity levels.

E. Income

A significant income trend in Lincoln County is the dramatic increase in *transfer payments* as a percent of total personal income. Between 2003 and 2012, transfer payments accounted for 62 percent of the total personal income increases. Overall, transfers increased by \$113.7 million or 33 percent during the period. Transfers represent 27 percent of total personal income in the County. That compares to 20 percent of total personal income in Oregon and 17 percent in the U.S. Of the three principal categories of transfers, retirement payments in 2012 are a greater

proportion of transfers in Lincoln County (88 percent) than the State (84 percent) and U.S. (85 percent). The categories for income maintenance in the County (nine percent) and unemployment insurance payments in the County (four percent) are slightly less than in the State (11 percent and five percent) and a mixed comparison with the U.S. (11 percent and four percent) for 2012. The transfer payments for unemployment insurance payments increased following the 2008 recession. The increase in transfers is partially a function of the increase in retirees collecting Social Security payments and other government benefits. Social Security payments and other retirement income sources are higher than in the past which affords re-settlement in Lincoln County.

The three main classifications of personal income in Lincoln County, Oregon, and U.S. in 2012 are shown in Figure II.5. The relative size of the three classifications in coastal economies in 2003 and 2012 is shown in Figure II.6. While total personal income has increased in Lincoln County, the share of total personal income that is *net earnings* (i.e., employee compensation and proprietor income) has fallen from 55 percent in 2003 to 50 percent in 2012. This means a lot of the spending that occurs within Lincoln County is not tied to salaries and wages from local businesses or industries.

Per capita personal income is a telling indicator of economic well-being. Per capita personal income is the total of income from all sources - wages, interest earnings, dividends, business profits, and transfer payments - divided by the total population. The per capita total personal income in Lincoln County is well below the State of Oregon. The gap was growing after the 2008 recession, but has been decreasing in recent years (Figure II.7). Measured in real 2012 dollars, the average per capita income in Lincoln County is about \$36 thousand. This compares to Oregon per capita income of \$39 thousand and U.S. of \$44 thousand.

The *net earnings per job* is less in Lincoln County and the Coast than in Oregon.^{5,6} The inflation adjusted average earnings per job (full/part time and sole proprietorships) is \$36 thousand in Lincoln County, which is about the same in 2012 as it was in 2003.

There are geographical considerations for income distribution within the County (Table II.3). The highest household median income in 2012 was in Newport at \$47,270 and the lowest was Lincoln City at \$29,686. The County average was \$41,996. The family poverty rate also varies considerably. (Poverty levels are set by the federal government; example family size of two adults and two children is about 50 percent of the median family income.) The number of families at or below the poverty level in 2012 was highest in Siletz at 22.5 percent and the lowest was Yachats at 2.0 percent. The County average was 11.0 percent.

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5. Net earnings includes wages and salaries; and, net income of proprietorships. The self-employed, agriculture and the commercial fishing industry work forces are specifically *not* included in payroll income. Proprietorships in commercial fisheries includes skippers who are sometimes the vessel owner and crewman.
 6. Jobs include part-time and full time employment. Since one worker may hold more than one job, the two quantities are not equal. Per-job earnings is more than just wages and salaries. It also includes proprietorship earnings. Wages and salaries typically are three quarters of net earnings, proprietor earnings are one fifth, and the balance is employer contribution to pensions. The share of net earnings that are proprietor earnings is generally higher at the Oregon Coast because there are more business units per employee than in the State.

Table II.1
Population Percent Change During 1970 to 2010 for U.S., Oregon, Coast, and Lincoln County

	1970	1980	1990	2000	2010	Percent Change			
						1970-2010	1980-2010	1990-2010	2000-2010
U.S.	203,211,926	226,545,805	248,709,873	281,421,906	308,745,538	52%	36%	24%	10%
Oregon	2,091,533	2,633,105	2,842,321	3,421,399	3,831,074	83%	45%	35%	12%
Coast	148,068	179,351	183,318	199,997	206,350	39%	15%	13%	3%
Lincoln	25,755	35,264	38,889	44,479	46,034	79%	31%	18%	3%

Notes: 1. Cities of Florence and Reedsport represent coastal Lane and coastal Douglas counties, respectively.

Source: U.S. Census Bureau.

Table II.2
Lincoln County and Oregon Firm Type Distribution

	Distribution of Employment by Firm Type				
	1977	1985	1994	2003	2012
Lincoln County	100.0%	100.0%	100.0%	100.0%	100.0%
Wage and salary jobs	72.9%	70.9%	73.7%	73.8%	71.6%
Proprietors	27.1%	29.1%	26.3%	26.2%	28.4%
Nonfarm	25.6%	27.3%	24.8%	24.6%	27.0%
Farm	1.5%	1.8%	1.5%	1.6%	1.4%
Oregon	100.0%	100.0%	100.0%	100.0%	100.0%
Wage and salary jobs	82.2%	79.8%	80.5%	79.5%	77.0%
Proprietors	17.8%	20.2%	19.5%	20.5%	23.0%
Nonfarm	15.3%	17.4%	17.4%	18.6%	21.5%
Farm	2.5%	2.8%	2.1%	1.9%	1.6%

Notes: Employment includes full-time and part-time jobs.

Source: U.S. Bureau of Economic Analysis.

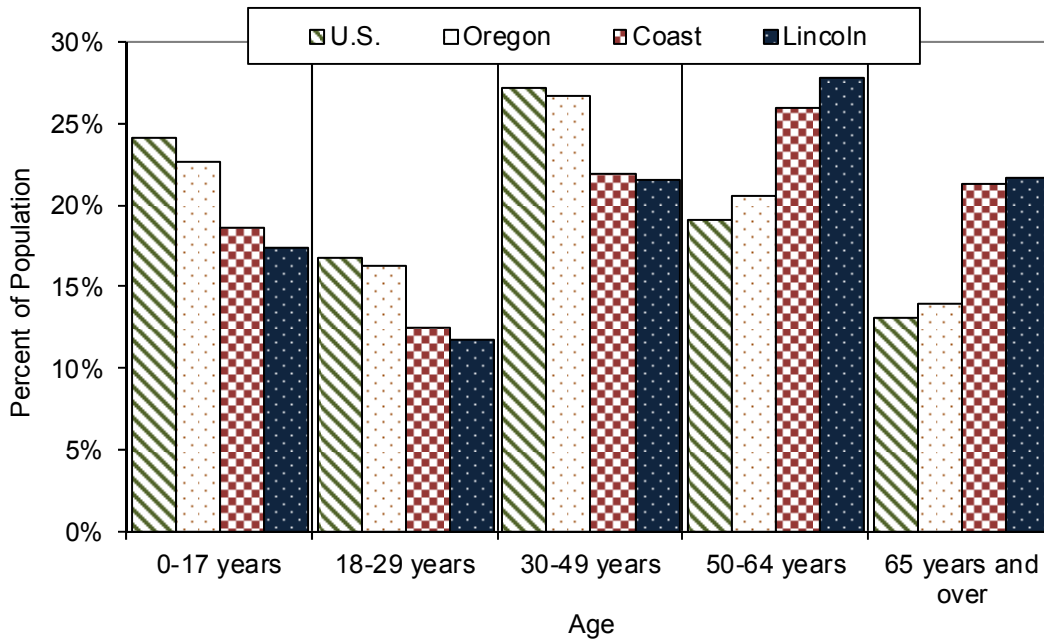
Table II.3
Intra-County Distributional Differences

	Population		Median Income		Families Poverty		Portion of Households (2012)			
	2000	2010	2000	2012	2000	2012	Earnings	SS	Retirement	SNAP
Oregon	3,421,399	3,831,074	\$53,659	\$50,036	7.9%	10.8%	77%	30%	18%	17%
Lincoln County	44,479	46,034	\$42,974	\$41,996	9.8%	11.0%	67%	42%	21%	19%
Newport	9,493	9,989	\$41,961	\$47,270	12.2%	13.6%	72%	36%	18%	19%
Lincoln City	7,307	7,930	\$32,732	\$29,686	12.5%	15.5%	64%	41%	19%	22%
Toledo	3,438	3,465	\$45,248	\$45,230	18.6%	16.3%	84%	27%	8%	30%
Waldport	2,054	2,033	\$43,672	\$35,889	9.4%	10.0%	57%	50%	25%	27%
Depoe Bay	1,188	1,398	\$46,447	\$43,382	5.5%	9.8%	72%	36%	18%	19%
Siletz	1,174	1,212	\$50,545	\$37,188	11.0%	22.5%	72%	36%	12%	28%
Yachats	644	690	\$42,370	\$42,396	12.8%	2.0%	66%	54%	34%	12%

- Notes: 1. Median income for 2000 Census is for 1999 adjusted to 2012 dollars, and for 2012 is ACS based on 2008-2012 aggregations in 2012 dollars.
2. Poverty proportions are from 2000 Census and ACS 2008-2012 aggregations. Poverty thresholds based on family status in both Census and ACS data sources, but methods differ and comparison caution is suggested. Example poverty threshold for a two children and two adult family is about 50 percent median income.
3. Sources of income are from ACS 2008-2012 aggregations (SS – social security, SNAP – food stamp).

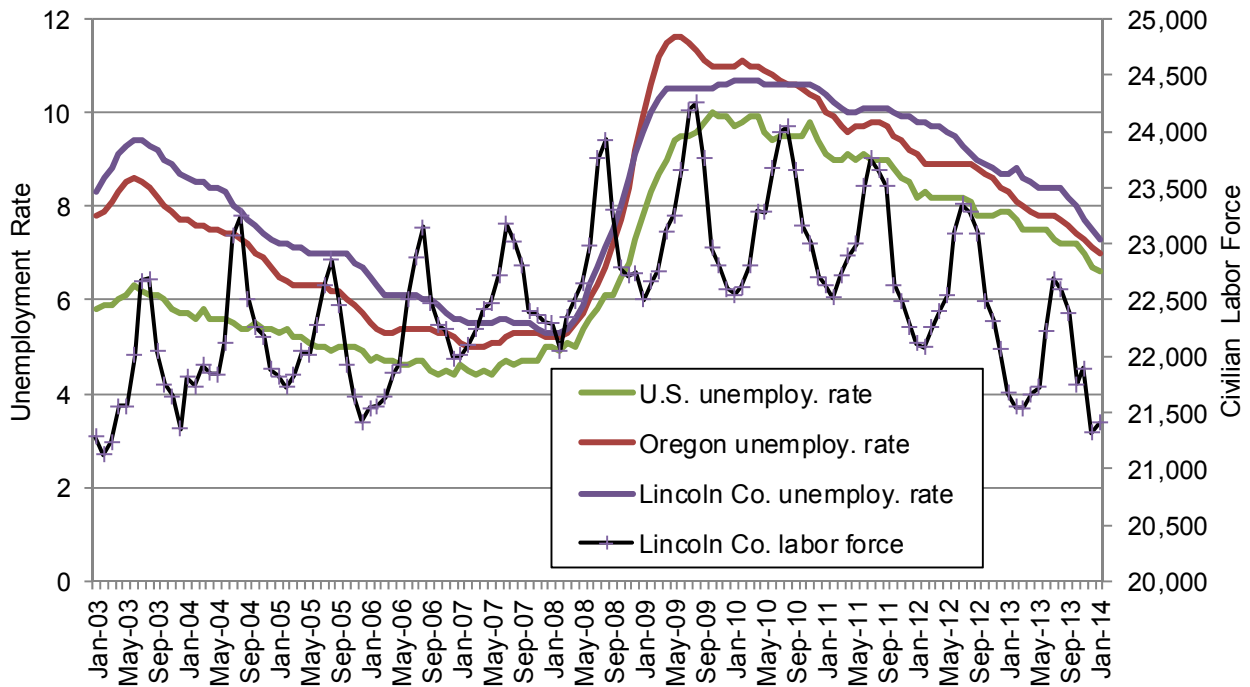
Source: Decennial Census 2000 and 2010, and ACS aggregations for 2008-2012.

Figure II.1
Age of Population for U.S., Oregon, Coast, and Lincoln County in 2010



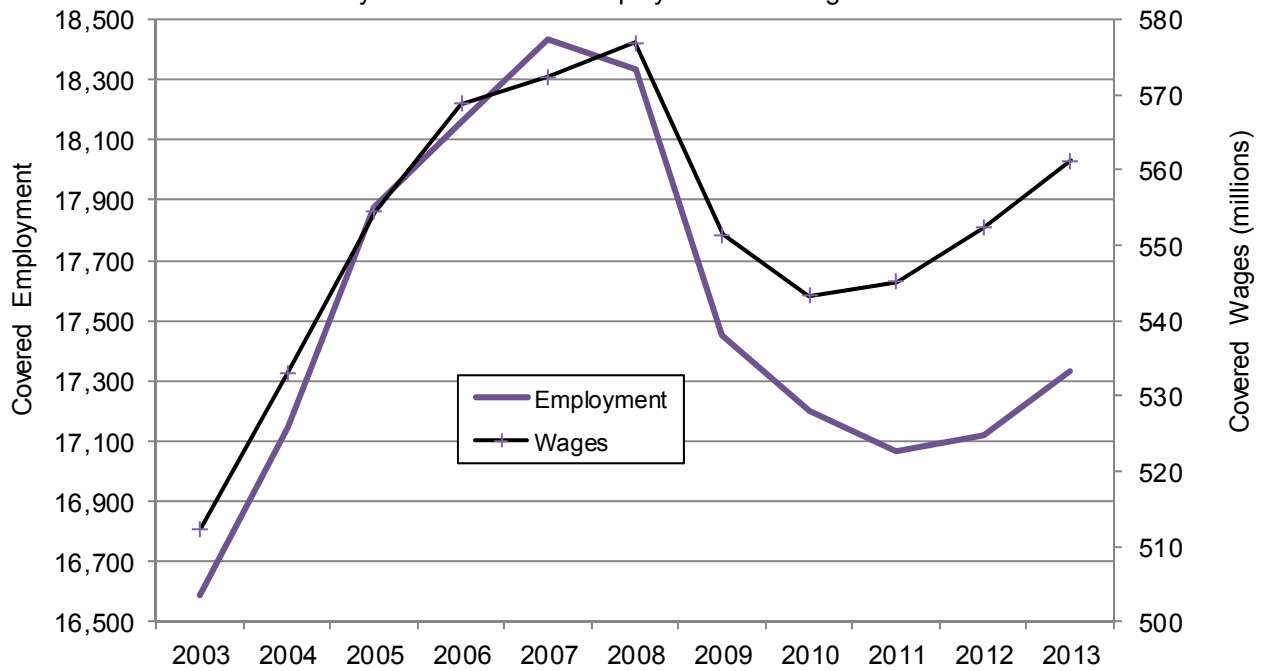
Source: U.S. Census Bureau.

Figure II.2
U.S., Oregon, and Lincoln County Unemployment Rate and Civilian Labor Force by Month in 2003 to 2013



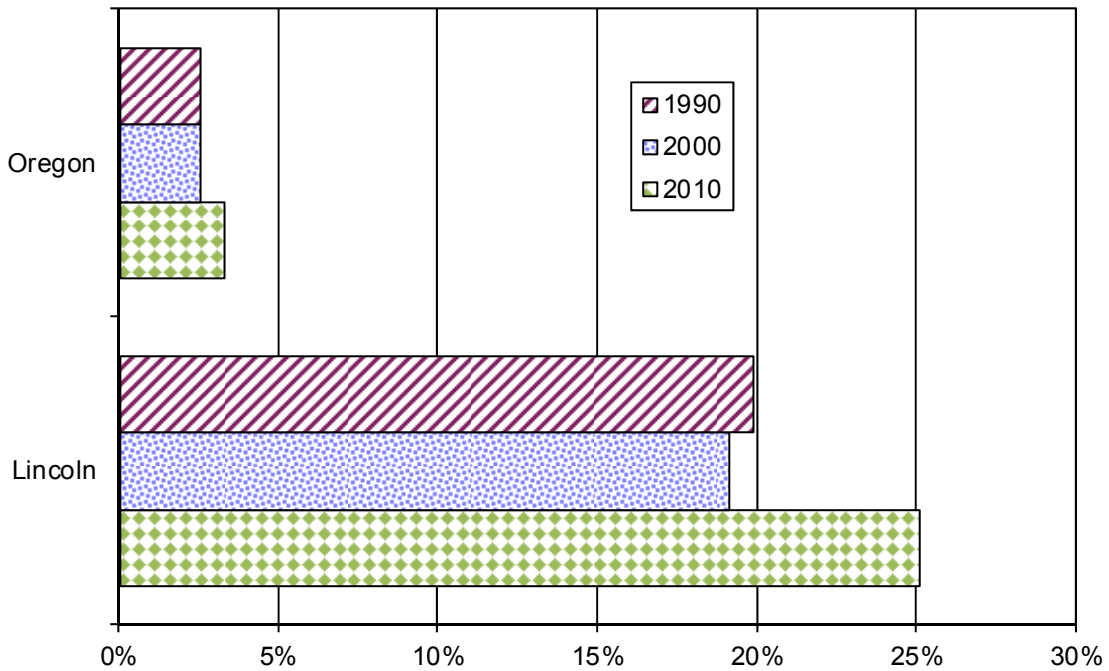
Notes: 1. Seasonally adjusted, except labor force for Lincoln County.
Source: U.S. Bureau of Labor Statistics.

Figure II.3
Lincoln County Annual Covered Employment and Wages in 2003 to 2013



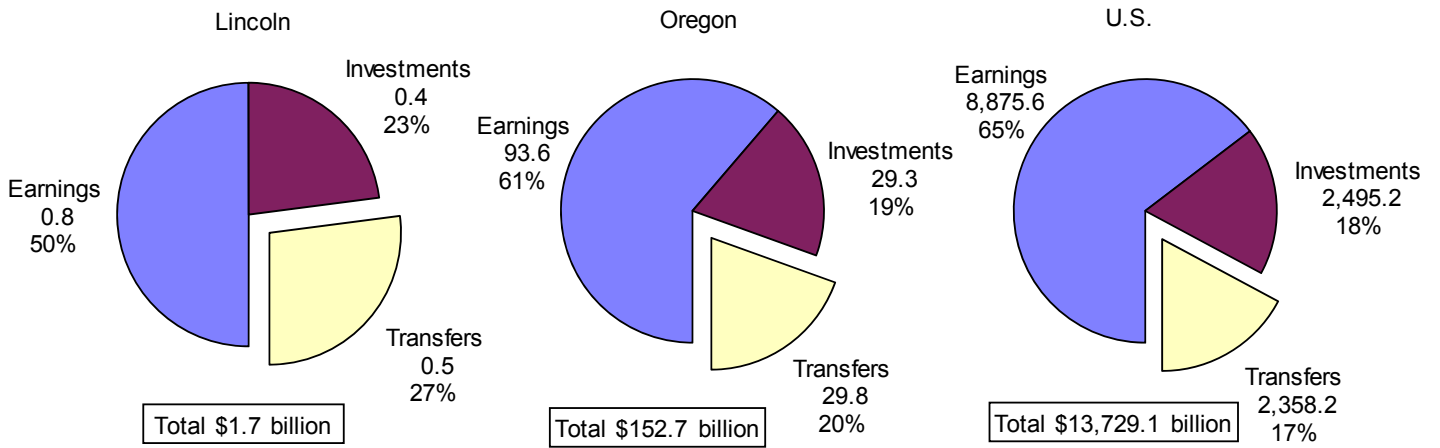
Notes: 1. Covered wages are adjusted to 2013 dollars using the GDP price deflator developed by the U.S. Bureau of Economic Analysis.
Source: U.S. Bureau of Labor Statistics.

Figure II.4
Second Homes as a Percent of Total Housing Units for Oregon and Lincoln County in 1990, 2000, and 2010



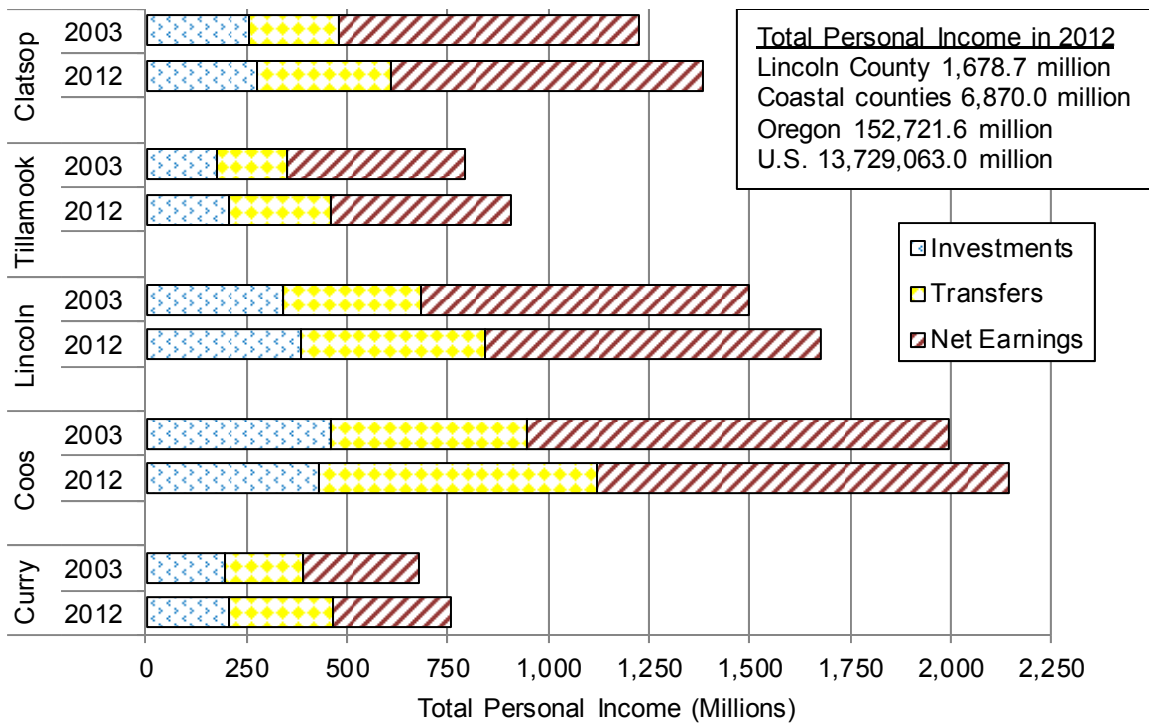
Notes: 1. Second homes is the U.S. Census Bureau definition for vacant seasonal, recreational, or occasional use housing units.
Source: U.S. Census Bureau.

Figure II.5
Sources of Personal Income to Lincoln County, Oregon, and U.S. in 2012



Source: U.S. Bureau of Economic Analysis.

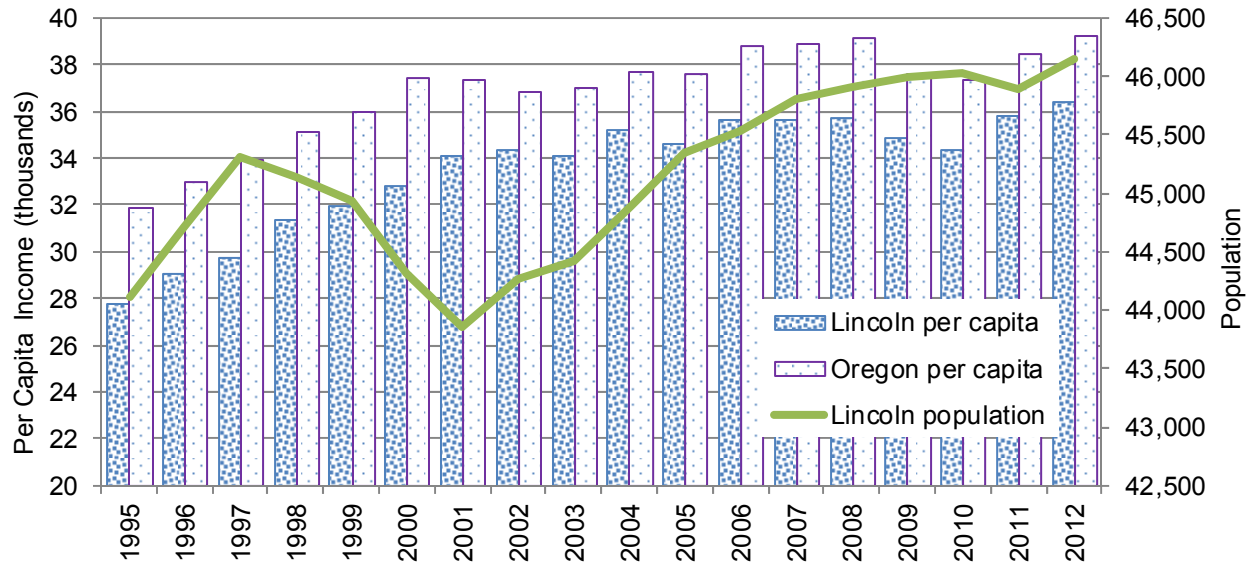
Figure II.6
Coastal Counties Total Personal Income in 2003 and 2012



Notes: 1. Economic contributions are measured as total personal income in millions of 2012 dollars. Adjustment to 2012 dollars made with the GDP price deflator developed by the U.S. Bureau of Economic Analysis.

Source: U.S. Bureau of Economic Analysis.

Figure II.7
Lincoln County and Statewide Population and Per Capita Total Personal Income in 1995 to 2012



Notes: 1. Per capita total personal income in thousands of dollars adjusted to 2012 dollars using the GDP price deflator developed by the U.S. Bureau of Economic Analysis.

Source: U.S. Bureau of Economic Analysis, CA1-3 personal income summary, downloaded March 2014.

III. ECONOMIC TRENDS

A. Methods

One of the study's goals is to measure the relative and absolute economic contributions from six pre-defined economic base sectors. The measurement unit is personal income accruing to households and individuals. The sectors were chosen to be aligned with the previous OCZMA (2006) study so trend analysis could be accomplished. The OCZMA (2006) study used sectors that had high export qualities (traded sector revenue), i.e. brought "outside" money into coastal regions. Appendix A contains the OCZMA (2006) study's summarized results.

The major method points for the economic base model follow. Appendix F in OCZMA (2006) contains a more detailed description of the economic base model design.

- The six primary basic sectors are: commercial fishing, agriculture, timber, tourism, "other identified industries," and "not identified industries." The "other identified industries" sector includes:
 - Marine science and research
 - Paper and paperboard mills
 - Water transportation and marine cargo handling
 - Boat and ship building, steel fabrication, and other heavy construction
 - Other identifiable industries (State and federal government, communication, special education, and military)

The "not identified industries" sector is a residual calculation after accounting for the other five net earnings sectors multiplier effects. The non-earned sources of income for transfer payments (Social Security etc.) and investment (dividend, interest, and rent) combined with the six primary basic sectors will sum to the region's total personal income.

- Each of the primary basic sectors business activity involves the exchange of locally produced goods or services for income from sources outside of the regional or local economies. Transfer payments and investment income represent geographic movement of income that is not always attributable to goods or services provided at the time. It represents a payment for an inter-temporal transfer of services or money.
- Wages and profits are the *direct economic contributions*; purchases made with wages and profits are *indirect economic contributions*. As workers and owners receive wages, salaries, and profits from these expenditures, they spend money for a variety of goods and services in the general economy. The resulting consumer sector income amounts are the *induced economic contributions*. The sum of these impacts is *total personal income*.
- An input/output model called IMPLAN was used to derive personal income response coefficients. The coefficients were applied to production measurements for the six basic sector net earnings sectors. The non-earned incomes were assumed to have a 1:1 multiplier

effect in order to account for total personal income. There was not local consumption data to draw upon to model the multiplier effects for transfer payments and investment incomes.

- Total personal income for each county, provided by the U.S. BEA, is the standard to which each sector's contribution is compared.
- IMPLAN models are available at the county level. When the entire Oregon Coast region is assessed, business activity in the coastal portions of Lane and Douglas counties are included. Basic sector production in the coastal portions of the two counties is expanded using multipliers from Lincoln and Coos counties, respectively. These multipliers should more closely apportion income in the coastal areas, rather than the whole Lane and Douglas multipliers.
- A separate economic analysis was completed for "retiree income effect." It was done to show the importance of non-earned income in the coastal economy attributed to the large proportion of retirement age settlement. The average U.S. transfer and investment income proportion of personal income was used as a base for this calculation.
- All values, prices, and economic contribution estimates have been adjusted to real dollars using the GDP implicit price deflator developed by the U.S. Bureau of Economic Analysis. The real value dollar year is 2012 if the activity occurred in 2012 or previous years, except where noted. All activity after 2012 is nominal, i.e. the dollar year in which the activity occurred.

Economic contribution measurements should not be confused with economic value measurements. Economic value attempts to measure the net benefits from using a resource and the value people place on the resource. Economic contribution measures how much money is "stirred up" in an economy by using or enjoying a resource.

While economic value and economic contributions are two distinct measures, each has usefulness for different purposes. Economic values are important if the goal is to allocate society's resources efficiently. Economic contributions are important in assessing the distributional impacts of different allocation possibilities. It may often be the case that society will choose to invest in a less valuable resource from a national perspective because the local area or economy that holds the resource needs economic development. Nevertheless, having the information on economic value will inform society how much it is sacrificing to achieve the redistribution of economic activity or development.

B. Economic Base Modeling Results

The following sections discuss sector details for the Lincoln County economic modeling results.

1. Commercial Fishing Sector

a. Summary

The Oregon commercial fishing industry is made up of businesses and industries which harvest, process, and distribute finfish and shellfish. Seafood products made from Oregon harvests and aquaculture production are distributed to domestic markets and exported to world markets. The commercial fishery has been an important part of coastal areas' economies in the Pacific Northwest. Oregon fishermen harvested and landed, in Oregon, 225.6 million pounds of fish in 2003, worth a total of \$102.3 million (TRG September 2013). This increased to 306.7 million pounds worth \$126.4 million in 2012. There were 951 Oregon home-port vessels in 2012. Landings at ports in Lincoln County were 27 percent and 30 percent of weight and ex-vessel value respectively in 2012 of the total statewide landings (Table III.1). The home-port vessel share at Newport ports was 23 percent of the total statewide landings in 2012.

b. Commercial Fisheries Onshore Deliveries

Salmon. Salmon are harvested commercially by two major methods: troll (hook and line) and net (gillnet and purse seine). Lincoln County salmon harvests are strictly troll. Due to unfavorable ocean conditions, inland habitat deterioration, and multiple demands for the rights to the salmon resource, the availability of salmon for harvesting has declined steadily along the Pacific Northwest coast. The salmon harvest in Oregon dropped significantly during the 1990's, but increased somewhat in the early 2000's. Commercial salmon landings in Lincoln County were 316 thousand pounds worth \$1.5 million harvest value in 2012.

Tuna. Historically, tuna was one of the major fisheries off the Pacific Northwest's coast. Because of the movement of tuna canneries from the continental U.S., this fishery declined in the late 1970's but increased in the 1990's. An increasing amount of tuna currently harvested by trollers is destined for the specialized fresh or frozen market, however most of the albacore landed in coastal ports are shipped to southern California or overseas to be canned. Landings in Lincoln County in 2012 were 5.0 million pounds with an ex-vessel value of \$7.7 million.

Groundfish. Most groundfish (this category includes a number of species such as lingcod, rockfish, sole, flounders, sablefish (or black cod) and halibut) are harvested by hook and line, pots, and trawlers, which use midwater or bottom trawl nets. The bottom trawlers are often referred to as draggers. Groundfish landings in Oregon have stabilized in recent years to be in the high 20 million pound range with an ex-vessel value of about \$24 million. Lincoln County's landings are 4.2 million pounds worth \$5.8 million in 2012.

Pacific Whiting. Development of the Pacific whiting fishery during the 1990's increased the total volume landed in Oregon by over 150 million pounds. Landings decreased in the early 2000's and the species had an overfished designation for a couple of years. Landings have been quite volatile in the late 2000's as stock abundances have been up and down. Oregon landings were 107.7 million pounds with an ex-vessel value of \$14.6 million in 2012. Lincoln County's onshore landings in 2012 were 55.8 million pounds with a harvest value of \$7.1 million in 2012. There is a large at-sea whiting fishery prosecuted by motherships and catch-processors. A dozen

or so (varies year-by-year) vessels hailing from Yaquina Bay moorages act as catcher vessels for the motherships. Seafood product form for this species early in the fishery development was surimi (fish paste), but has moved towards a whole (headed and gutted) and fillet frozen product in recent years. Prices paid to harvesters have increased dramatically due to seafood processors fetching higher market prices.

Pink Shrimp. Even though shrimp nets and gear are specific to this fishery, many shrimpers also operate in the groundfish and crab fisheries as seasons and profitability dictate. The real prices that fishermen received for shrimp declined from about \$1.43 per pound in 1983 to about \$0.30 per pound in 2003. Prices have bumped up in recent years to \$0.50 in 2012. Statewide landings were 49.1 million pounds worth a harvest value of \$24.7 million in 2012. Landings of this species in Lincoln County were 14.9 million pounds with an ex-vessel value of \$7.6 million in 2012.

Dungeness Crab. Harvesting of crab using pot gear is done with a variety of sizes and vessels from small trollers/crabbers to large trawler/crabbers. Because of the value and the flexibility of the gear by different sizes and classes of vessels, there is significant effort in the fishery. The landings of Dungeness crab set a historical record both in volume and value in the middle 2000's. Harvests for this species are cyclical and decreased to 8.7 million pounds with an ex-vessel value of \$29.1 million statewide in 2012. Lincoln County deliveries were 2.0 million pounds with an ex-vessel value of \$6.8 million in 2012.

Sardines. The sardine resource rebounded off the Oregon coast in the early 2000's. Sardine landings explain much of the overall landings volume increase for the "other" species categories in recent years statewide landings. The harvest volume was 94.0 million pounds with a harvest value of \$9.0 million in 2012. All directed fisheries deliveries for this species are to Astoria area seafood processors.

Other Fisheries. Several other minor volume species are landed at Lincoln County ports. A market for dried hagfish in Korea has been exercised in recent years using landings at Lincoln County ports.

c. Aquaculture and Mariculture

Aquaculture is typically not included in commercial fishery statistics because the product is usually not harvested by commercial fishing boats. These products, however, reach the consumer through the traditional seafood processor channels. Therefore, the economic analysis has included them with commercial fishing.

Until the early 1990's, most oysters were produced in bays and estuaries on State lands. Production from State lands ranges from 19 thousand gallons to 47 thousand gallons. Oyster production in Oregon from State lands peaked at 47,967 gallons of production in 1984. Oyster production from State lands has increased substantially in the Coos Bay area from 1,576 gallons in 1975 to 6,155 gallons in 1994. But by 2003, total production in the Coos Bay area from State lands decreased to 2,606 gallons. The State Department of Agriculture only reports production of oysters from State leased lands. Oyster production also takes place in the Coos Bay area on

Port and County leased lands. Oyster production also occurs in Yaquina Bay, and was 1,172 thousand pounds in 2012 (Table III.1).

d. Distant Water Fisheries

Another important component of Oregon's commercial fishing economy is the "distant water fleet." In the late 1970's and 1980's, some of these boats harvested in "joint venture" with foreign processor boats off the Alaskan as well as the Oregon coast. Some of these boats are now harvesting Pacific whiting for onshore processors as well as for domestic "motherships" processing whiting offshore. Also very important is the long-line fleet that harvests halibut and black cod and the gillnet fleet that fishes for salmon in Alaskan waters such as at Bristol Bay. (There are also some Oregon fishermen that land salmon, tuna, and other species off California, Washington, and in the west Pacific. These revenues are not included because of a lack of data.) The total revenue returned to the coastal communities in Oregon by these distant water fisheries for 2003 is estimated to be about \$90 million per year. This amount has more than doubled statewide in the last 10 years due mostly from the increased value of Alaska fisheries. About 40 percent of the revenue is estimated to be from Lincoln County resident and business participation. The 2012 estimated economic contribution is \$107.2 million for Lincoln County and \$261.3 million for Oregon.

e. Seafood Processing and Distribution

Value added, and therefore personal income, is added to seafood products at each step of harvesting and processing. The value-added amounts differ according to each step of harvesting and processing, and also among seafood products. Some fish products are exported fresh or frozen from Oregon with a minimal amount of processing. Such products include fresh salmon, tuna, and whole crab. Most of the fish products shipped out of Oregon include a fair amount of processing such as filleting. Very intensive processing such as smoking and canning is usually carried out by the smaller processors.

Some individual processors, at the peak of the harvest season, will employ up to 200 employees. There are about four large processors on the Oregon Coast and many small to medium firms that provide a variety of processing services. There were 81 first purchase buyers in Lincoln County. Lincoln County's large seafood processors (purchasing more than \$1.5 million each) had 87 percent of combined purchases in 2012.

f. Economic Contributions

Harvesting and primary processing is included in the economic contribution calculations, because the "exported" product leaves the area as a processed product. The Fishery Economic Assessment Model (FEAM) is used to calculate personal income from harvesting and primary processing in each of the four study areas.⁷

7. Fishery Economic Assessment Model (FEAM) was originally developed for the West Coast Fisheries Development Foundation by Hans Radtke and William Jensen in 1986. The FEAM model uses IMPLAN generated response coefficients to estimate specific expenditure income impact relationships. These coefficients are generated by disaggregating expenditures for specific year and species groupings. The resulting

In 2003, the fishing industry, including effects from distant water fisheries in Oregon, generated a total of \$299 million in terms of total personal income for the Oregon Coast communities. In 2012, the fishing industry generated \$377 million to Oregon Coast communities, \$142 million in the Astoria area, \$165 million in the Newport area, and \$45 million to the Coos Bay area. Distant water fisheries economic contributions in the Newport area are 65 percent of the total commercial fisheries sector economic contribution.

g. Outlook

For fisheries, three current developments are affecting the contribution this industry can make to the coastal areas. First, there are global demand and supplies for all fish products. Global supplies put price pressures on what seafood processors can pay Oregon harvesters. Global demand, however, has been growing in recent years especially due to markets in China. This has contributed to the price increases for Oregon seafood products.

Second are stock abundance issues facing the salmon industry, and more recently the groundfish industry. Because of unfavorable ocean conditions, inland habitat deterioration, and multiple demands for the harvest rights of the salmon resource, the availability of salmon for commercial ocean harvesting has declined steadily along the Oregon and Washington coast. Although there has been an increase in salmon prices, and some depressed populations are recovering, management restrictions to protect populations with ESU listings may not allow "access" to healthy populations. ESU listings or proposals for listings for salmon stocks from the Sacramento River in California to Puget Sound in Washington have been made. Resulting regulations have reduced the Oregon ocean troll harvest to a small share of historic levels. Small ports along the coast have historically relied upon the salmon trolling industry to generate local income and to support vital services such as local marinas and have used the local fishing industry to justify dredging operations by the U.S. Army Corps of Engineers.

Several species of rockfish have been declared "overfished." This means that the allowable harvest of these fish is curtailed in order to rebuild these stocks. Harvest of groundfish in some ports along the West Coast was reduced by over 50 percent. The challenge for the fishing industry is to minimize the harvest of those overfished species while targeting other species. Federal buy-back programs have restructured and reduced the number of vessels involved in fishing several of those fish species.

An important current issue is the expansion of aquaculture. The expansion of fish aquaculture is expected to limit price increases for some seafood products unless the supply of selected Oregon seafood products can be marketed in specialty "niche" markets.

Species abundance available for harvest has probably peaked. There is an expected cyclical downturn in some of the "money" fisheries. New harvest management regimes such as catch shares and individual permit quota programs and continued processor ownership consolidation

coefficients from these expenditure categories are then combined according to the overall revenue to expenditure flows of the harvester and processor groups. The IMPLAN response coefficients are based on 2011 data.

may increase profitability, but will decrease unnecessary capital and labor. This may lead to unequal distributional impacts to coastal communities. There may be new markets for value added processed products, but plant location and related employment does not necessarily need to be located at existing regional fishing centers. There will be good opportunities for exclusive markets demanding quality or other unique attributes of Oregon products. For example, Oregon leads the nation in the number of fisheries (albacore tuna, pink shrimp, Pacific whiting, Dungeness crab, and some groundfish species) certified as sustainable by the Marine Stewardship Council (MSC) (the world's largest independent fishery certifier). This may provide opportunities supporting increased shares and higher processor and/or harvest prices for product sold in selective U.S. and global markets.

2. Agriculture Sector

a. Background

Few areas can rival the diversity of crops and livestock, which can be grown in the coastal counties. This variety includes vegetable crops, livestock, hay, dairy cattle, cranberries, Christmas trees, holly, horticultural crops, and other forest products, such as mushrooms. Agriculture was a common goal of pioneers during westward expansion. By 1852, the first dairy cattle arrived in Tillamook. Small dairies dotted the coastal valleys during the early 1900's. After World War II, improved transportation and marketing developments meant the end of many small dairy processing plants. Agriculture on the Coast is part of a lifestyle and also contributes significantly to diversifying the economy. It also helps provide a buffer to the sometimes cyclical nature of the forest, fishing, and recreational industries. Over the last several years, special forest products, such as mushrooms, greens, and Christmas ornaments have received added attention. Only two percent of Lincoln County is zoned for agriculture (Table III.2). Agricultural lands are found along the narrow river valleys in Lincoln County. For that reason, agriculture will play a relatively small role in Lincoln County's economy.

In Oregon, the farm-gate value of agricultural production in 2012 was \$5.4 billion.⁸ Lincoln County had agricultural sales of about \$18.5 million. The 2012 farm-gate value in Lincoln County is 57 percent higher than the \$11.8 million in 2003 (Figure III.1). An increase in crop production explains most of the growth.

b. Economic Contributions

The growth in farm-gate sales in Lincoln County over the last 10 years has increased economic contribution from \$2.8 million in 2003 to \$4.2 million total personal income in 2012.

c. Outlook

Agriculture in the coastal economies is part of a lifestyle and contributes diversity to the local economy. It also helps provide a buffer to the sometimes cyclical nature of the forest, fishing,

8. The data is from Oregon State University (OSU) Extension Economic Information Office, Oregon State Agricultural and Fisheries Statistics. The data includes sales of timber from small woodlots. The data excludes fisheries since the activity is included in a primary base sector.

and recreational industries. The mild coastal climate is ideal for vegetable, berry and nursery crops, and livestock production for meat and dairy are important sources of income for Lincoln County growers. Local sales of small crop amounts at farmer's markets is a growing opportunity. There are nursery stock business opportunities that have not yet been capitalized by coastal businesses. However, there are no expectations that climate and scale will allow this industry to develop at a large scale.

3. Timber Sector

a. Background

Some of the nation's finest timber grows in the coastal areas of the Pacific Northwest. The forests, a mixture of giant Sitka spruce, Douglas fir, hemlock, alder, and cedar, comprise 80 percent of the land area in the coastal counties. These forests depend on an annual rainfall of 60 to 130 inches for their growth.

Lumber production on a commercial scale began on the Oregon Coast in the late 1880's, declined in the 1890's, and was revived in the first decade of the 20th century. In the accessible estuaries of the Oregon Coast, timber in streamside stands was felled directly into coastal rivers and floated to schooners anchored in protected harbors. Many logs were sent to San Francisco for use as harbor pilings and ship piers. During the latter decades of the 19th century, loggers used teams of oxen to haul logs to tidewater on "skid roads." Around 1900, steam power replaced bull teams; "steam donkeys" were used to haul logs great distances. World War I introduced new logging methods and truck transportation which made untouched forest lands accessible. Private timber companies constructed railroads up many sections of coastal valleys to reach timber stands distant from water. Coastal lumber helped fuel the ship building trade during World War I, and loggers for the U.S. Army's Spruce Division felled straight-grained spruce used to build the first generation of warplanes (Wolf 1993). A postwar housing boom kept demand for coastal lumber strong throughout the 1920's. However, the depression of the 1930's dramatically reduced the demand for lumber products. In addition, three disastrous fires in the 1930's and 40's, which ravaged southern Clatsop and one-third of the forested area of Tillamook County containing 8.7 billion board feet (bbf) of merchantable timber, dealt a staggering blow to northern coastal economies.

During this time, major timber companies, such as the Weyerhaeuser Company, began to consolidate large tracts of timberland. World War II and postwar prosperity revived demand for construction timber. The use of tractors and chainsaws and a network of logging roads opened remaining forest stands to truck logging.

Over the past 25 years, new technologies changed the requirements for labor in logging and wood processing. This reduced the labor input per unit of output. At the same time, it expanded total output by allowing more complete utilization of raw materials. Larger timber companies took advantage of new technologies, while many high-cost and often the more rural mills closed down because they could not reduce their costs.

Oregon lost some of its comparative advantage in lumber production as southern U.S. plywood production increased due to utilization of smaller dimension timber and lower labor cost. These added supplies decreased prices for timber in Oregon. Throughout this 25-year period, decline in long-term harvest levels resulted as producers liquidated old-growth stands of timber at a rate in excess of the current growth rate. Added to these factors is a sensitivity of employment and output to cyclical changes in the national economy, particularly to interest rates and housing starts, as experienced in the early 1980's. Based on these factors (increased productivity and no real increase in timber supply), the long-term employment picture of commercial timber on the Pacific Northwest coast can be described as "up and down, but mostly down." There has been a precipitous decline in timber harvests since 1988 statewide (Figure III.2). It appears that the harvest for Oregon will trend to about four bbf each year.⁹ These harvests may increase as industrial lands harvested in the 1960's and 1970's mature to the point they can support another round of harvest.

Timber harvesting trends in Lincoln County have mirrored statewide trends. Cutting decreased from 2003 levels to about 80 mbf in 2009, but bounced back to about 170 mbf in 2012 (Figure III.2). Real stumpage prices are stable if only the analysis period end years are in the calculation. However, there are measurement unit issues for this indicator that may not make it a comparable metric over years.

b. Economic Contributions

The timber sector includes management and logging services, lumber and wood product processing, and transportation. There is only one small dimension cut mill and no veneer mills in the County. Therefore, the largest portion of the economic contribution in Lincoln County comes from harvesting. The proportion of net earnings in Lincoln County attributed to the timber sector is provided in the Oregon Forest Resources Institute (2012) study. The sector generated \$75.9 million total personal income in 2003 and \$104.9 million in 2013. One record keeping explanation for some of this sector increase is that the measurement is for personal income is by residence. There is anecdotal information that commuting to mills in western Benton County occurs.

c. Outlook

The trend in timber harvests since 1970 for the coastal counties has been a gradual decrease in harvests. All coastal counties, especially Coos County, have experienced cyclical harvests, depending on national demand patterns for fiber and on local availability of timber. However, the harvest volumes in these areas have generally declined since the late 1980's. Most of these counties' timberlands are in private ownership, except Tillamook, where over two thirds of the timberlands are in federal or State ownership.

9. These data and the resulting lumber may not include the "improvements" made in recovery from log scale to lumber sold. For example, recovery has increased in Oregon for sawmills from about a factor of 1.7 to about 2.1. Part of this is due to better technology, but it may also be due to the "scale effect" of cutting smaller trees. The overall board feet equivalent is therefore closer to 5.0 billion per year.

Stumpage prices have increased as final product prices have increased; therefore, transportation costs have become a smaller part of final manufacturing costs. Mills are willing to expand their timbered boundaries. This has resulted in a dramatic reduction in processing capability on the Coast. Most timber in Oregon is now shipped to the major processing centers of Roseburg, Eugene, Albany, or the Portland area. There has been a steady market for raw log shipments to China from private land harvesting in recent years. The Port of Newport's finished marine cargo dock may attract harvesting and shipping business to the Newport area to exploit the market.

Public lands, especially federal forests, are no longer widely available for harvesting. The third generation private property timber is reaching rotation cutting maturity. There are significant volumes of mature timber in this third generation stock. The question is where and how it is to be processed. A lot of second generation timber was shipped overseas as logs, and that may happen again depending on that market's size and quality requirements. Small timber and wood fiber feed into many more products now and large processing facilities exist outside of coastal economies.

4. Tourism Sector

a. Background

The millions of visitors to the State parks and waysides with beach access are a testament to the priceless wilderness and natural beauty to be found along the Oregon Coast. Oregonians, other U.S. residents, and visitors from other countries contribute significantly to the local economy through spending on goods and services such as sleeping accommodations, recreational opportunities, gasoline, and food and beverages.

Tourism represents different things to different people: sightseeing, relaxation, exercise, education, and expansion of horizons. Ocean and river recreational angling is included in the tourism sector. Sometimes these activities are categorized as heritage tourism, eco-tourism, and adventure tourism. For parts of the Oregon Coast in recent years, this also includes visits to casinos. From a business perspective, tourism is an economic opportunity. For this study, tourism is defined as the action and activities of people taking trips to a place or places outside their home communities. The expenditures of visitors in communities other than their own create new income for coastal residents. This section analyzes the personal income impact of such non-local expenditures.¹⁰

Because "tourism" is not defined and reported as one sector, a variety of available reports add to the confusion for evaluating this industry. Dean Runyan Associates (2013) includes all travel related expenditures. So for instance, the yearly increase in tourism estimates does not always match up with other basic data (such as traffic counts). Standard procedures to evaluate the impacts of tourists to places such as the Oregon Coast can be found in Tourism Fact Sheets developed by OSU.¹¹

10. Business related travel expenditures are not separated from pleasure related travel expenditures.

11. WREP 144 The Economic Impact of Visitors to Your Community; WREP 145 Measuring Visitor Expenditures and Their Impact on Local Income; WREP 146 Estimating Visitor Demand and Usage; and WREP 147 Cost-Benefit Analysis of Local Tourism Development.

Since the tourism industry is not well-defined, the economic impacts of tourism are difficult to measure. This study uses data provided by the Oregon Employment Department and economic relationship estimates by OSU. This information is combined with the U.S. Forest Service's IMPLAN model to assess the economic impacts of tourism on the Oregon Coast.

For most other primary basic sectors on the Pacific Northwest coast (fishing, agriculture, timber), statistics are available on the number of units that are produced (in terms of ex-vessel values, farm gate values, or timber harvest values) and "exported" out of the area. For tourism, because these expenditures affect a range of direct industries, there is no data on visitor days, related expenditures, and total sales. As a result, other methods are needed to estimate the scale of such expenditures.

The industries directly affected by visitor expenditures are hotels and lodging places, amusement and recreation services, eating and drinking places, retail establishments and automobile service stations. Covered payroll data is adjusted to account for proprietary and property type personal incomes in these industries. An OSU study collected primary data of businesses selling goods and services to tourists, through interviews of local coastal businesses (Johnson et al. 1989). Businesses in the tourist related industries were asked to provide estimates of sales to local and non-local households. These estimates are then used to define the percentage of total sales (and therefore payroll) generated by tourist related expenditures. The IMPLAN total personal income multipliers of the tourist related industries are then used to estimate the total direct, indirect, and induced impact of these expenditures on the coastal economies.

b. Economic Contributions

Figure III.3 shows the business sources of economic contribution from tourism in Lincoln County. After correcting for sales to in-area residents and for proprietary income, the total estimated personal income generated by these tourist-oriented industries was \$113.6 million total personal income in 2003 in Lincoln County. This increased by 18 percent or \$133.8 million in 2012. The tourism sector increase is despite visitor spending being affected by decreased disposable income following the 2008 recession. There is no particular local facility or program that the tourism increase can be attributed. The Chinook Winds Casino was already open in 2003, although the adjacent 227 room hotel opened in 2005. Some destination visitor counts are down such as at the Oregon Coast Aquarium, but other destinations are up such as public parks.

c. Outlook

Tourism is experiencing a steady growth in coastal economies. The growth of tourism has served to diversify coastal counties' economic bases, but this industry is characterized by low wage rates and seasonal demand for jobs. These characteristics do not assist in ameliorating seasonality effects from the other natural resource based industries. Added value in tourism comes from making Lincoln County a destination. Tourists can be enticed by provision of environmental and cultural based action-oriented and experience opportunities, like surfing, biking, culinary training, etc. New facilities, like the Oregon Museum of Science and Industry (OMSI) purchase of a 29 acre property in close proximity to HMSC for a marine science camp (with lodging and dining facilities for 150 children, families, and school groups) will be an

important new visitor attraction. Proper management of natural resources that provide scenic vistas and fishing opportunities will enhance visitation. Providing expanded and maintaining existing park facilities are needed to cater to an important camper segment of visitors. Local government partnerships with the private sector may be needed to provide convention facilities for the business segment. Promotion marketing to create tourism demand goes hand-in-hand with making sure facilities and programs are available upon arrival. The transient lodging tax imposed by Lincoln County's jurisdictions is an important source of seed funds for promotion programs.

5. Other Identified Industries Sector

a. Background

Traditional sources of employment information (such as from the Oregon Employment Department) do not describe all of the employment or income contributed by the basic industries. Such a description has to be made by investigation of the data, such as provided in before mentioned four primary basic sectors in this chapter. However, not all industries fall neatly into either "export" or maintenance industries. For example, some ship and boat repair is expected as a result of commercial fisheries. Such activities are therefore already included in the multiplier estimates of the commercial fishing sector. However, for some ports, such as Coos Bay and Newport, a larger than usual amount of employment is generated by boat and ship building. This resulting income is therefore included in the basic "exporting" industries.

Water and marine cargo handling is another basic industry that is important, especially for Coos and Clatsop counties. Paper and paperboard mills are also very important to some coastal areas. These industries were not included in the timber industry section because the availability of timber does not seem to be the crucial ingredient in the placement of such paper mills.

There are major industries located in coastal areas whose functions are not directly related to the activities of the natural resource based export industries. Examples are the Job Corps Centers in Yachats, and the Hatfield Marine Science Center (HMSC) in Newport. There are machine and plastic manufacturers in some coastal counties. For example, there is a commercial fishing gear manufacturer in Newport and a kite and accessory manufacturer in Lincoln City; both are export businesses with a national sales base.

There are other small industries and services on the coast that export goods and services and therefore generate income for coastal residents. They may include machine builders, hardware and software computer developers, writers, or manufacturers of small handicrafts. It is beyond the scope of this project to identify all these industries by area. The many business, education programs, and government agencies in this sector have been collapsed into one catch-all category except for one stratification. Given the large presence and future economic development potential for marine science and education related employment, this activity for Lincoln County was extracted for its own subsector.

b. Economic Contributions

The catch-all category employment in pulp and paper mills, water transportation and marine cargo, ship building, steel fabrication, and other specialized exporting construction, State/federal employment in non-marine science related functions, and military generated \$86.5 million total personal income in Lincoln County in 2012.

The new subsector for marine science and education includes the HMSC employment; Oregon Coast Aquarium's research and management staffing, community college special marine education curriculum staff, cooperative fishery research activity; NOAA Marine Operation Center - Pacific (MOC-P); County located research and development activity for ocean energy; and County located other ocean observing programs. The estimated economic contributions from the activities in the subsector are \$62.0 million.

The previous OCZMA study's activity for marine science and research was included mostly in the "other identified industries" sector and some in the "unidentified industries" sector. When the other identified industries sector includes the new subsector for marine science and education, there was a 47 percent increase in economic contributions between 2003 when it was \$100.8 million and 2012 when it was \$148.5 million.

c. Outlook

Observations about businesses represented in this sector deserve mention.

- For some coastal areas, many small manufacturing and service companies export their product. Such industries as plastic wedge manufacturers, plastic water tank manufacturers, computer hardware and software developers, writers, and artists sell products outside the coastal area and bring income back to regional economies for spending. Such small industries are important when summed together. However, they are too dispersed for markets to be analyzed in this study.
- Paper and Paperboard Mills. More than 60 percent of processed paper is from recycling supplies and the share is expected to grow. The locational advantages of the Coast are for providing low cost opportunities for discharging treated effluent rather than providing wood fiber.
- Waterborne Commerce. There should be no expectations in the near-term for a turn-around in industry needing Oregon Coast waterborne commerce facilities other than for niche export shipping such as raw logs and wood fiber.
- Activity in the marine science and education subsector holds promise for growth. This has been recognized by OSU in their announced marine studies campus expansion at the HMSC. Staffing the campus will attract research projects and project spending will benefit local businesses. Some graduates from the campus programs will want to stay in the area. This skilled labor pool will be attractive to new businesses that have the capability for locating in the area. Lincoln County is already poised with capital access,

medical services, transportation (waterborne commerce potential, highway, air, rail), and telecommunication services to satisfy new business requirements. Given the growth potential, economic development strategies may be warranted to leverage local resources for targeted and focused efforts for its development.

6. Transfer Payments and Investments Income Sector

a. Background

Transfer payments and investments income is considered a spatial and temporal non-earned source of income. The income can be considered as being derived from another area or in another time. Transfer payments are receipts by individuals when no goods or services are produced. Appendix C shows the amount of each transfer payment program in Lincoln County. Another source may be transfers from future generations, i.e. borrowing. Farm program payments are not classified as government transfer payments. They are included in the personal income estimates as part of farm proprietor income.

Investment income is the result of payments made from wages, salaries, and profits from past work. Investments income includes dividends, interest, and rents. Dividends are cash payments to stock holders by corporations organized for profit. Interest is the monetary and imputed interest income of persons from all sources. Rent includes the monetary income of persons from the rental of real property, except the income of persons primarily engaged in the real estate business. Rent also includes the imputed net rental income of owner/occupants of non-farm dwellings and the royalties received by persons from patents, copyrights, and rights to natural resources.

b. Economic Contributions

The growth of non-earned income, particularly from retirement, represents a major and increasing source of purchasing power. Table III.3 shows the difference in consumption patterns by age on a national basis. More research of these consumption patterns for Oregon's coastal areas needs to be done to provide information on the business impact of this growing population. Coastal areas that capture an increasing share of the retirement related income, which accompanies a net in-migration of retirees, can stimulate employment and incomes by increasing local spending. It may be that these year-round residents foster economic and employment stability. Spending from non-earned income sources is assumed to have a 1:1 multiplier effect in order to account for total personal income. This assumption may be conservative, but there is no local consumption data available in order to develop economic models whose results would show a different multiplier effect.

c. Outlook

The trend in investments income mirrors general economic conditions. Investments income was increasing in Lincoln County until the 2008 recession after which it stabilized. There has been a dramatic increase in transfer payments as a percent of total personal income. As transfer

payments have gone up, the percent of total personal income that is "earned" (i.e., employee compensation and proprietor income) has fallen.

Transfer payments and returns from investments have become a major source of income for most coastal areas. Transfer payments and investments income in Lincoln County in 2012 are 50 percent of total personal income in 2012. This compares to about 39 percent for Oregon and 35 percent for the U.S. (Figure II.5).

The growth of non-earned or previous generational income, particularly from retirement, represents a major source of purchasing power in rural areas. The in-migration of retirees to Pacific Northwest coastal areas has helped increase investment income and transfer payments to higher shares in Oregon coastal counties than for the U.S. These higher percentages may be viewed as immigrant "retiree income effect."

C. Retiree Income Effects

Retirement income in coastal counties is related to income earned in earlier years by current residents. It is either income of residents electing to stay during their retirement years or it is income that is transferred to the coastal areas by retiree aged people moving to the Coast. The in-migration of retirees has helped increase coastal counties' total personal income. It is difficult to identify the income amount using traditional data sources. It can be assumed that it is mostly from the non-earned BEA categories for transfer payments and investments, but households comprised of non-retirement aged people also have some income from these sources.

In 2003, transfers and investments ranged from nine percent to 28 percent higher for coastal areas than for the U.S. (Appendix A). These higher percentages may be viewed as an indicator that the retiree income effect is much higher on the Oregon Coast than in the U.S.

A retiree income effect analysis answers the question of what share of an area's total personal income can be attributed to retiree's spending in that area. How to treat previously earned income presents an analytical problem. Some of this income may be part of past employment payments of long term residents and part may be new payments brought into the area by new immigrants. For an analytical process, we have assumed the U.S. average share that is received as transfer and investment income is a basic amount (Table III.3). The transfer and investment income multiplier is assumed to be 1.0 for this analysis. Then the percentage over and above the U.S. average multiplied by the consumption multiplier for that county is an estimate of the retiree effect. The retiree income effect in an index for personal income generated from non-earned income spending. The index does not include the total effects from spending by retirement age residents. The index usefulness is from comparing the relative contribution between coastal counties and other areas.

The multiplier for household consumption is derived from national expenditure patterns. Residents in smaller communities do not spend all of their income in these communities. They are more likely to travel to other, larger areas for much of their personal needs, such as health care, food, and automobile purchases. These out-of-area purchases were modeled by including

only half of the average local senior household expenditures for the personal need items. By adjusting for the personal need items, the retiree income effect was lowered by about five percent.

The retiree income effect increased from about 19 percent in 2003 to 20 percent in 2012 for Lincoln County (Figure III.4). The growth of non-earned income, particularly from retirement programs, represents a major and increasing source of purchasing power in many coastal areas. Coastal areas that capture an increasing share of the retirement related income, which accompanies a net in-migration of retirees, can stimulate employment and incomes by increasing local spending. It may be that these year-round residents foster economic and employment stability.

To properly identify the retiree income effects, a survey of coastal residents' expenditure patterns is needed. National expenditure information may not be applicable to Oregon's coastal economies. How much of the expenditures are made within the local economies and how much is exported (i.e. to the Willamette Valley economies) is information critical to making definitive estimates of the retiree income effect.

Table III.2
Zoning by Acres for Lincoln County

<u>Zoning</u>	<u>Acres</u>	<u>Percent</u>
Forest	572,000	90%
Urban	18,500	3%
Farm	14,000	2%
Rural	12,000	2%
Other	<u>17,500</u>	<u>3%</u>
Total	634,000	100%

Source: Lincoln County Transportation System Plan (CH2M Hill 2008).

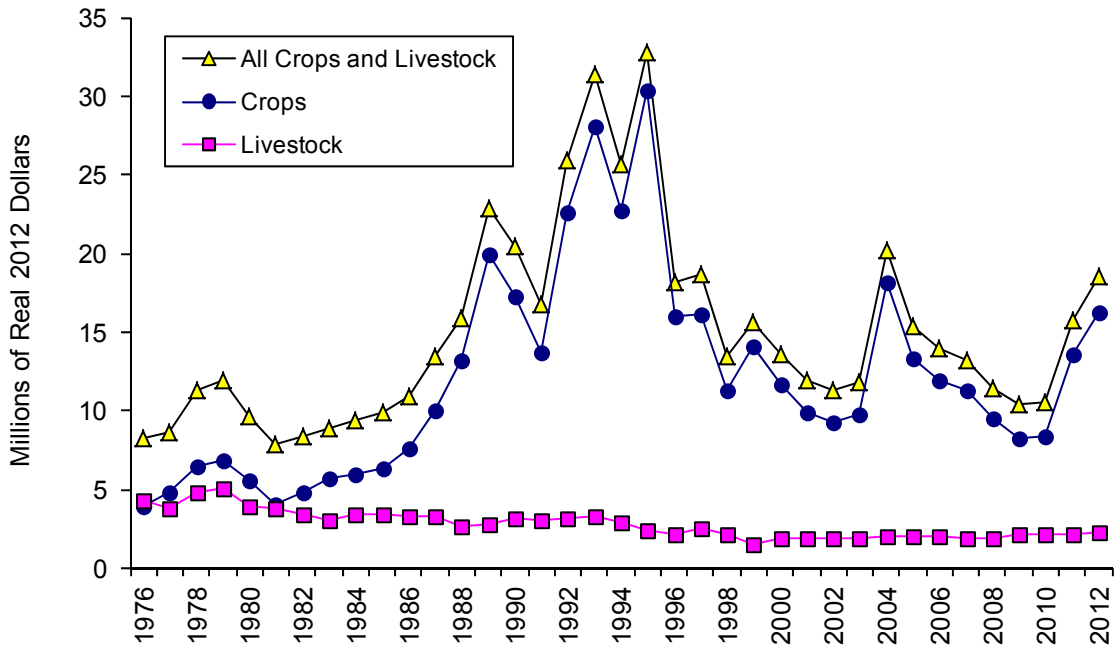
Table III.3
Retiree Effect With and Without Out-of-Area Purchase Adjustment in 2003 and 2012

	2003		2012	
	United States	Lincoln County	United States	Lincoln County
Total personal income	\$9,479,611.0	\$1,495.2	\$13,729,063.0	\$1,678.7
Transfer and investment	\$2,997,984.0	\$680.7	\$4,853,442.0	\$839.7
Percent	31.6%	45.5%	35.4%	50.0%
Difference from U.S. average		<u>13.9%</u>		<u>14.7%</u>
Without Out-of-Area Purchase Adjustment				
Transfer and investment personal income at the U.S. average rate of 30.7%		\$472.85		\$593.45
Direct retiree effect over the U.S. average		\$207.9		\$246.2
Multiplier retiree effect		<u>\$151.8</u>		<u>\$179.8</u>
Retiree effect (multiplier included)		<u>\$359.7</u>		<u>\$426.0</u>
Percent		<u>24.1%</u>		<u>25.4%</u>
With Out-of-Area Purchase Adjustment				
Direct retiree effect		\$166.3		\$197.0
Multiplier retiree effect		<u>\$121.4</u>		<u>\$143.8</u>
Retiree effect (multiplier included)		<u>\$287.7</u>		<u>\$340.8</u>
Percent		<u>19.2%</u>		<u>20.3%</u>

- Notes: 1. Personal income in millions of 2012 dollars, adjusted using the GDP price deflator developed by the U.S. Bureau of Economic Analysis.
2. Household expenditure multiplier is 1.73.
2. Out-of-area purchase adjustment is estimated to be half of average local household for expenditures such as health care, transportation, and entertainment.
3. Transfer and investment income multiplier is assumed to be 1.0.

Source: Study.

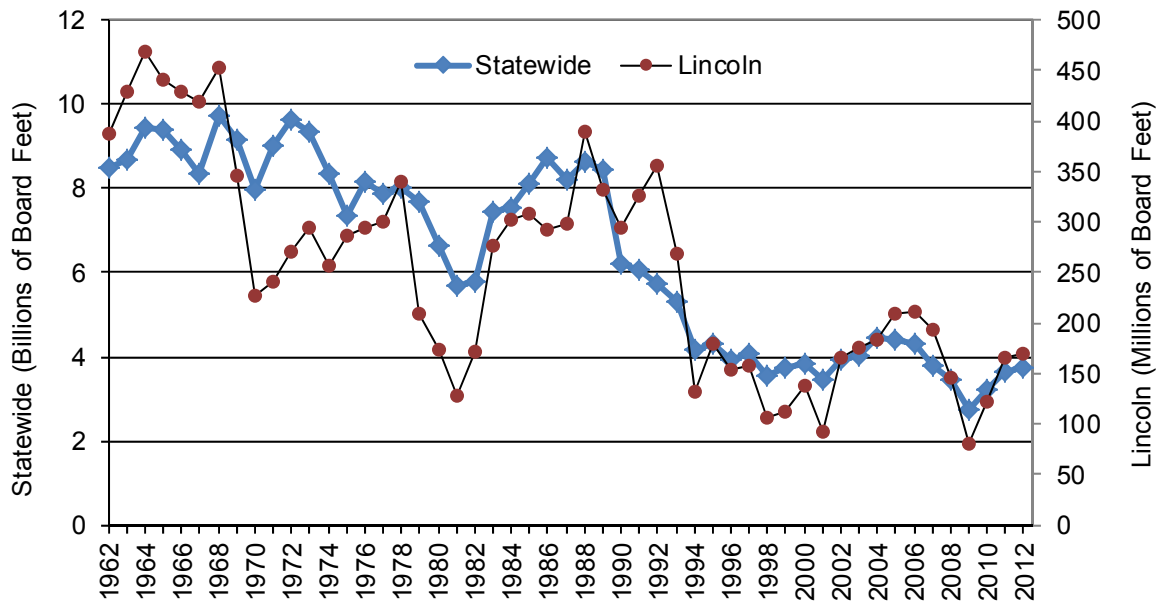
Figure III.1
Lincoln County Gross Farm Sales in 1976 to 2012



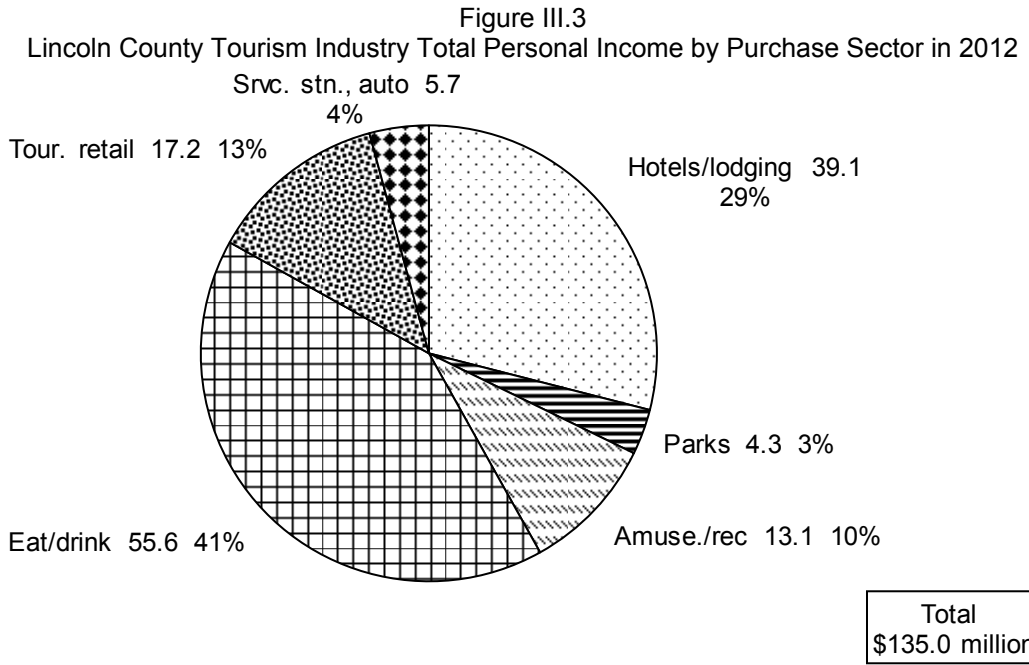
Notes: 1. Values in millions adjusted to 2012 dollars using the GDP implicit price deflator developed by the U.S. Bureau of Economic Analysis.

Source: Oregon State University Extension Service (annual and 2013).

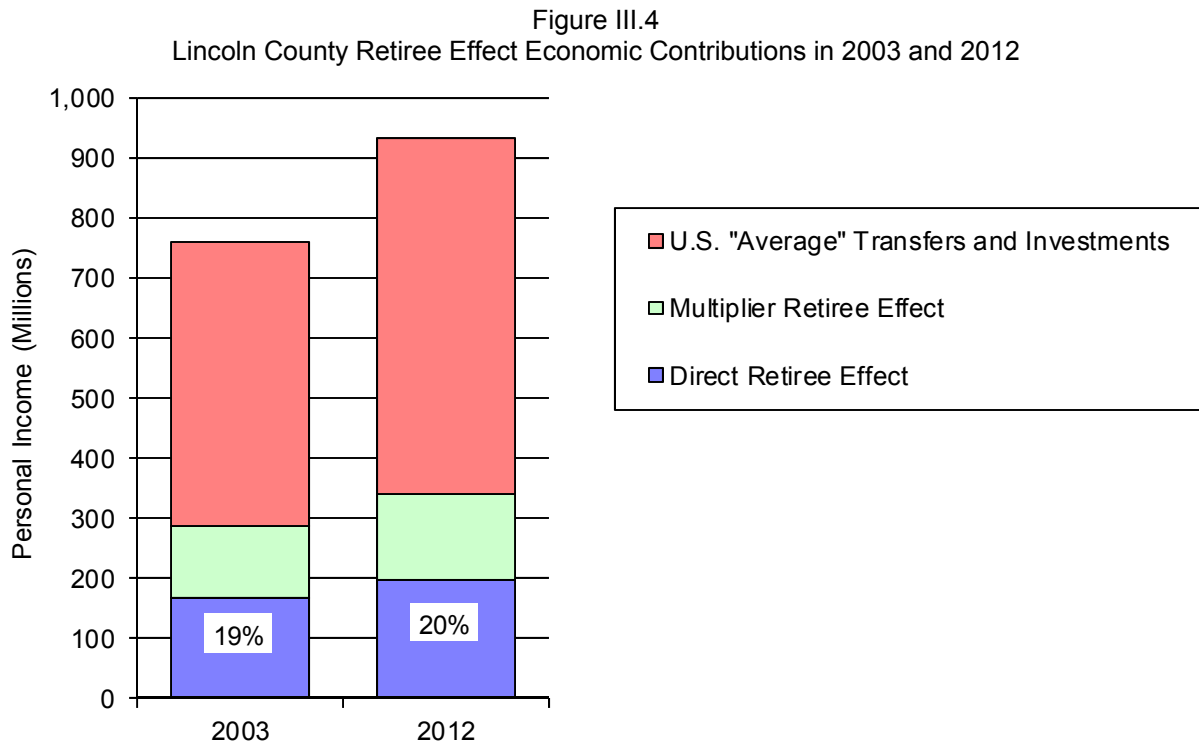
Figure III.2
Oregon Statewide and Lincoln County Timber Harvests in 1962 to 2012



Source: Oregon Department of Forestry (annual reports).



Sources: Based on wage and salary data from 2011 IMPLAN, with State parks updated from White et al. (2012).



- Notes:
1. Personal income in millions of 2012 dollars, adjusted using the GDP price deflator developed by the U.S. Bureau of Economic Analysis.
 2. Retiree effect assumes half of purchases for selected personal need items are made out-of-area.
 3. The shown share of total personal income includes direct and multiplier retirement effect.
 4. Retiree effect is an index and does not represent total economic contribution from spending from retirement age residents.

IV. TRENDS DISCUSSION

A. Sectors Summary

Tracing personal income generated by net earnings in Oregon coastal areas shows that natural resource based industries in such sectors as commercial fishing, agriculture, timber, and tourism are important contributors to coastal communities economies. The economic contributions from these sectors to each county's economy for the year 2003 are shown in Appendix A. Lincoln County's economic contributions in 2003 (adjusted for inflation) and 2012 are shown in Table ES.1 and Figure ES.1.

- *Commercial fishing* (including oyster aquaculture) economic contributions in Lincoln County increased by 37 percent over the analysis period and is 10 percent of the County total personal income in 2012. There are good and bad years in this sector over the analysis period, depending on cyclical abundances of crab and shrimp and how ocean conditions affect salmon returns. Generally, real prices for onshore landed species increased during the analysis period.
- *Agriculture* increased by 50 percent during the analysis period, but still represents less than a half percent of the County's total personal income in 2012. The gains were in crop farm-gate sales which had both production and price increases in the analysis period.
- *Timber* contributes six percent of total personal income in 2012 and experienced a 38 percent increase. Real stumpage prices over the analysis period remained about the same if only the beginning and end years are used for reference.
- *Tourism* is a significant contributor to coastal areas, contributing eight percent to Lincoln County's economy in 2012. Tourism spending is highly influenced by visitor household disposable income and the 2008 recession generally lowered household disposable income proportions. However, the tourism sector increased by 18 percent over the analysis period. There is an extreme skew in this sector's income. Many jobs have wages at low level, but there are some proprietorships and professional jobs at high income levels. Many communities are already saturated during the summer and need to work on flattening the seasonal demand curve. There are high infrastructure costs related to this sector and the challenge is to extract rent from visitors to pay for it.
- *Other identified industries* sector increased by 47 percent during the analysis period. The 2012 new subsector earnings for marine science and education increases offset a decrease in the payroll from an operating pulp and paper mill located in Toledo within the other identified industries sector. There are increases in this sector from small specialized manufacturing. As the large, resource based industries declined, more jobs were contracted to self-employed individuals. More accessible telecommunication infrastructure has assisted in small businesses being able to be established in rural areas.
- The residual calculation for *other not identified industries* decreased over the analysis period.

- *Transfer payments* increased by 33 percent and *investments income* increased by 13 percent over the analysis period. These constitute about 50 percent of Lincoln County's personal income in 2012. Overall, Lincoln County's total personal income grew by 12 percent between 2003 and 2012.

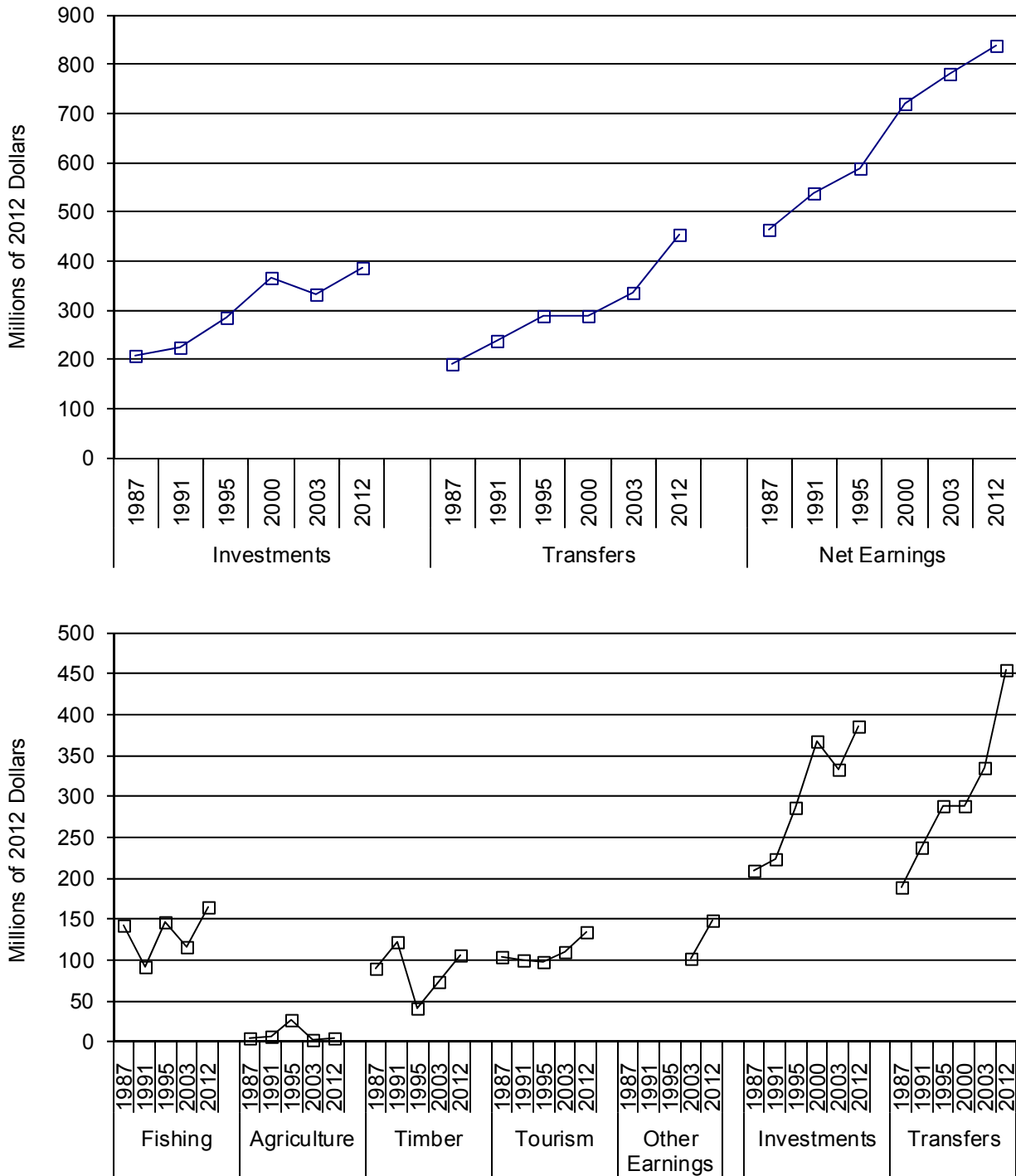
The economic contribution trends are shown for Lincoln County in Figure IV.1. In a 20 year period following the 1980's, personal income generated by the timber and fishing industries declined. Some of these reasons for the decline were decreasing availability of natural resource for harvests, new demands to use natural resources for recreation and habitat preservation, and in the case of fish products, decreasing real prices. However, the economic adjustments to those conditions have been concluded and the economic situation in the early 2000's can be considered the new comparison standard. In reference to the new standard, changing demographics in coastal areas has led to a shift in income and employment opportunities. As the population of coastal counties has continued to age, income from transfer payments has risen, and the percent of total personal income that is earned in the current generation (i.e., employee compensation and proprietor income) has fallen. The relative importance of natural resource based industries as a source of income has declined as other industries have increased.

B. Implications for Economic Development

The economic analysis results provide greater understanding of the economic and social makeup of the region. The analysis results will be useful for public policy deliberations, and especially economic development monitoring, evaluation, and planning.

Compared to many other rural communities, Lincoln County is exceptionally well positioned to meet economic development challenges. Economic development planning has been undertaken by the County ("Economic Development Strategies: Long Range Plan," 2010); Yaquina Bay Economic Foundation ("Establishing Newport, Oregon as a Hub for Ocean Observing Activities in the Pacific Northwest," 2008); and, more recently the City of Newport ("Commercial and Industrial Buildable Lands Inventory and Economic Opportunities Analysis," 2012). Lincoln County's Small Business Development Corporation (SBDC) (affiliated with the Oregon Coast Community College) provides local capacity to help fledgling entrepreneurs. Other Lincoln County cities and ports have updated business and development strategy documents. The Economic Development Alliance of Lincoln County (EDALC) is an engaged and capable economic development coordinating body. EDALC is the local contact for an Oregon Enterprise Zone that encompasses most of Lincoln County's urban areas. There are many business groups in the County spearheading economic development activities, including the chambers of commerce in Lincoln County. This study's documentation and analysis of the changes in the economy and demography in Lincoln County will assist all of these entities in making more targeted and successful economic development activities.

Figure IV.1
 Lincoln County Trends in Personal Income From Net Earnings,
 Industry Sectors, Investments, and Transfers in 1987 to 2012



- Notes: 1. Personal income in millions adjusted to 2012 dollars using the GDP implicit price deflator developed by the U.S. Bureau of Economic Analysis.
 2. Other earnings includes the sectors for "other identified" industries and excludes "other not identified" industries.

Source: U.S. Bureau of Economic Analysis and Study.

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Appendix A

Sources of Total Personal Income for U.S., Oregon, and Coastal Counties in 2003

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Appendix A
Sources of Total Personal Income for U.S., Oregon, and Coastal Counties in 2003

	U.S.		Oregon		Clatsop		Tillamook		Lincoln		Coastal Lane		Coastal Douglas		Coos		Curry		Coastwide	
	Income	%	Income	%	Income	%	Income	%	Income	%	Income	%	Income	%	Income	%	Income	%	Income	%
Total Personal Income	9,151,694.0	100%	102,418.8	100%	928.7	100.0%	622.8	100.0%	1,196.1	100.0%	398.5	100.0%	145.1	100.0%	1,539.1	100.0%	525.7	100.0%	5,355.9	100.0%
Net Earnings	6,340,842.0	69%	67,825.2	66%	563.6	60.7%	348.0	55.9%	644.6	53.9%	214.7	53.9%	76.4	52.6%	810.3	52.6%	218.3	41.5%	2,875.9	53.7%
Commercial fishing; also					89.2	9.6%	6.1	1.0%	54.8	4.6%	1.1	0.3%	2.5	1.7%	28.0	1.8%	12.2	2.3%	194.0	3.6%
Distant water and fish meal					12.0	1.3%	1.2	0.2%	39.7	3.3%	1.5	0.4%	1.9	1.3%	2.1	0.1%	0.7	0.1%	59.1	1.1%
Aquaculture					0.0	0.0%	3.5	0.6%	0.8	0.1%	0.0	0.0%	0.1	0.1%	3.1	0.2%	0.0	0.0%	7.6	0.1%
Agriculture					6.1	0.7%	81.3	13.1%	2.2	0.2%	1.6	0.4%	1.0	0.7%	19.7	1.3%	7.7	1.5%	119.7	2.2%
Timber					106.4	11.5%	74.8	12.0%	60.1	5.0%	13.7	3.4%	12.8	8.8%	148.1	9.6%	40.6	7.7%	456.5	8.5%
Tourism					74.8	8.1%	23.5	3.8%	89.9	7.5%	19.2	4.8%	7.2	5.0%	59.3	3.9%	24.0	4.6%	298.0	5.6%
Other identified industries																				
Paper and paperboard mills					41.3	4.4%	0.0	0.0%	60.3	5.0%	0.0	0.0%	0.0	0.0%	25.3	1.6%	0.0	0.0%	126.9	2.4%
Water transportation and marine cargo					7.4	0.8%	0.0	0.0%	0.7	0.1%	0.0	0.0%	0.0	0.0%	50.9	3.3%	0.6	0.1%	59.6	1.1%
Ship building, steel fabric., other heavy constr.					43.7	4.7%	0.0	0.0%	0.8	0.1%	0.0	0.0%	5.3	3.6%	8.0	0.5%	0.1	0.0%	57.9	1.1%
Other identifiable (govt., research, comm., special ed., military)					6.9	0.7%	0.9	0.2%	17.9	1.5%	1.2	0.3%	2.3	1.6%	1.3	0.1%	30.2	5.8%	60.7	1.1%
Subtotal identified industries					387.7	41.7%	191.4	30.7%	327.4	27.4%	38.4	9.6%	33.1	22.8%	345.8	22.5%	116.1	22.1%	1,439.9	26.9%
Other not identified					176.0	18.9%	156.6	25.1%	317.2	26.5%	176.3	44.2%	43.3	29.8%	464.5	30.2%	102.2	19.4%	1,436.0	26.8%
Investments	1,475,529.0	16%	18,634.0	18%	188.3	20.3%	134.0	21.5%	274.5	23.0%	91.5	23.0%	31.6	21.8%	335.7	21.8%	155.3	29.5%	1,210.9	22.6%
Transfers	1,335,323.0	15%	15,959.6	16%	176.7	19.0%	140.9	22.6%	277.0	23.2%	92.3	23.2%	37.1	25.5%	393.1	25.5%	152.1	28.9%	1,269.2	23.7%
Total Employment	127,795,827		1,563,725		15,396		8,038		16,589						22,299		6,461			
Unemployment Rate	6.0		8.1		7.0		6.6		8.6						8.7		7.2			
Per Capita Personal Income	31,472		28,734		25,801		25,210		26,672		25,057		23,504		24,380		24,228			
Population	290,788,976		3,564,330		35,993		24,705		44,846		15,902		6,174		63,130		21,697		212,447	

- Notes: 1. Personal income in millions of 2003 dollars.
2. Personal income generated by identified sectors includes direct as well as indirect and induced income. The economic sectors dependent upon the identified sectors, such as retail and service businesses, are included in the identified sectors. This means the "multiplier effect" is included.
3. Investment and transfer personal income is only direct income, although research shows that the multiplier effect is approximately one for both of these sectors.
4. Population is from U.S. Bureau of Economic Analysis estimates.
5. Total employment includes covered payroll.
6. For coastal Lane and Douglas counties, the ratio of coastal county to county per capita personal income from census information in 2000 was applied to county per capita personal income from U.S. Bureau of Economic Analysis information in 2003 to determine coastal county per capita personal income in 2003. Coastal county total personal income in 2003 was based on population estimates developed using Census 2000 zip code data adjusted using the PSU rate of growth between 2000 and 2003 for the cities of Florence and Reedsport. The shares of earnings, investments, and transfers from adjacent counties are used as a proxy.

Source: The Research Group. A Demographic and Economic Description of the Oregon Coast: 2006 Update. Prepared for Oregon Coastal Zone Management Association. March 2006.

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Appendix B

Population, Housing, Geographic, Health, and Social Characteristics in 2012

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**Table B.1
Population, Housing, Geographic, Health, and Social Characteristics**

	Clatsop	Tillamook	Lincoln	Coos	Curry	Coast	Oregon
Total Personal Income in 2003 (millions, \$2012)	1,225	792	1,495	1,992	678	6,182	129,432
Investments	255	178	340	460	198	1,431	24,719
Transfers	225	174	340	488	192	1,420	19,625
Net earnings	745	440	814	1,044	288	3,331	85,089
Total Personal Income in 2012 (\$millions)	1,383	907	1,679	2,142	759	6,870	152,722
Investments	277	207	386	428	208	1,505	29,322
Transfers	331	252	454	690	255	1,982	29,792
Net earnings	775	448	839	1,024	296	3,382	93,608
Housing Characteristics in 2010							
Housing units	21,546	18,359	30,610	30,593	12,613	113,721	1,675,562
Occupied	15,742	10,834	20,550	27,133	10,417	84,676	1,518,938
Occupied by renter	28.1%	18.0%	23.8%	30.5%	25.4%	25.7%	34.3%
Vacant	5,804	7,525	10,060	3,460	2,196	29,045	156,624
Vacant for second home	19.9%	33.8%	25.1%	4.0%	9.0%	18.1%	3.3%
Population Characteristics in 2010							
Population	37,039	25,250	46,034	63,043	22,364	193,730	3,831,074
By age							
Under 18	20.5%	19.8%	17.3%	18.9%	15.7%	18.6%	22.6%
Age 18-64	62.8%	59.3%	61.1%	59.7%	56.3%	60.2%	63.5%
65 and over	16.6%	20.9%	21.7%	21.4%	28.0%	21.2%	13.9%
Median age	43.2	47.5	49.6	47.3	53.5	n/a	38.4
By race							
White alone	90.9%	91.5%	87.7%	89.8%	92.0%	90.0%	83.6%
Components of population change							
Total change, 2000-2010	2,230	1,908	141	151	23	4,453	422,796
Net migration	1,960	2,150	1,135	2,376	1,773	9,393	260,495
Natural increase	270	-242	-994	-2,225	-1,750	-4,940	162,301
Population in 2012	37,190	25,305	46,295	62,890	22,295	193,975	3,883,735
Income Characteristics in 2012							
Per capita income	25,257	22,625	25,177	21,992	23,516	23,631	26,702
Families in poverty	12.6%	12.9%	11.0%	11.4%	7.0%	11.2%	10.8%
Households with earnings	74.2%	69.5%	67.5%	65.6%	57.0%	67.1%	76.8%
Households with Social Security	35.0%	39.9%	41.5%	44.0%	49.2%	41.8%	29.8%
Households with retirement income	22.4%	23.2%	21.0%	25.7%	31.2%	24.3%	18.2%
Households with food stamps/SNAP benefits	16.3%	15.5%	18.5%	20.6%	16.5%	18.1%	16.6%
Educational Attainment in 2012							
Persons over 25 with high school education	91.8%	88.5%	89.3%	87.8%	90.8%	89.4%	89.2%
Persons over 25 with bachelors education	22.1%	20.3%	24.0%	17.8%	20.4%	20.7%	29.2%
Household Size in 2010	2.29	2.29	2.20	2.29	2.12	2.25	2.47
Labor Force Characteristics in 2012							
Participation rate	61.1%	56.0%	56.8%	53.2%	48.1%	55.3%	63.6%
Geographic Characteristics							
Area (square miles) in 2010	829	1,103	980	1,596	1,627	6,135	95,988
Density (persons per square mile) in 2010	44.7	22.9	47.0	39.5	13.7	31.6	39.9
Commute Patterns in 2008-2012							
Did not work at home	94.3%	95.2%	95.3%	93.5%	93.9%	94.4%	93.7%
< 10 min.	29.5%	30.0%	26.8%	27.1%	45.5%	29.7%	17.1%
10-29 min.	52.6%	48.9%	53.3%	50.2%	40.9%	50.4%	54.4%
30+ min.	17.9%	21.1%	19.9%	22.7%	13.6%	19.9%	28.4%
Worked at home	5.7%	4.8%	4.7%	6.5%	6.1%	5.6%	6.3%

Table B.1 (cont.)

	Clatsop	Tillamook	Lincoln	Coos	Curry	Coast	Oregon
Land Ownership (1975)							
Federal	0.8%	20.3%	31.0%	23.7%	64.8%	32.0%	51.9%
BLM	0.1%	6.7%	3.8%	16.0%	6.5%	7.7%	25.3%
USFS	0.0%	12.7%	26.4%	5.4%	53.4%	22.0%	24.1%
BIA	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%
Other	1.2%	0.0%	0.0%	0.0%	0.0%	0.2%	1.1%
State	9.8%	44.1%	3.6%	6.2%	1.1%	11.8%	2.5%
County	0.8%	0.7%	3.1%	2.1%	0.2%	1.3%	0.9%
Private	88.1%	35.8%	63.1%	70.3%	38.8%	57.0%	45.2%
Assessed property value per capita in 2012							
Residential	77,895	115,617	92,664	40,858	65,106	72,863	43,952
Commercial/industrial/multi-housing	29,585	14,315	25,195	14,808	22,132	20,898	19,021
Utilities	4,572	6,042	4,211	2,665	1,811	3,742	4,179
Other	26,063	23,115	20,032	14,600	26,061	20,522	16,098
Total	138,114	159,089	142,102	72,932	115,111	118,025	83,250
Net property tax rate	1.266%	1.107%	1.366%	1.262%	0.873%	1.220%	1.575%
Health and Social Characteristics							
Physicians per 1,000 persons (2012)	2.2	1.7	1.7	1.9	1.3	1.8	n/a
Bank deposits per capita (\$) (2012)	12,557	12,473	16,593	12,563	14,305	13,712	17,044
Housing w/ inadequate plumbing (2008-2012)	0.5%	0.6%	0.4%	0.6%	1.0%	0.6%	0.6%

- Notes: 1. Coast is a geographic region comprised of five counties (Clatsop, Tillamook, Lincoln, Coos, and Curry).
2. Total personal income is in millions of 2012 dollars adjusted using the GDP price deflator developed by the U.S. Bureau of Economic Analysis.
3. Net migration equals in-migrants minus out-migrants. Natural increase equals births minus deaths.
4. Assessed value is reduced by amounts of exempt properties.
5. Income characteristics are from ACS based on 2008-2012 aggregations in 2012 dollars.
6. Poverty proportions are from ACS 2008-2012 aggregations. Poverty thresholds based on family status in both Census and ACS data sources, but methods differ and comparison caution is suggested. Example poverty threshold for a two children and two adult family is about 50 percent median income.
7. Sources of income are from ACS 2008-2012 aggregations (SS – social security, SNAP – food stamp).

Sources: Decennial Census 2010, and ACS aggregations for 2008-2012. Components of population change, and 2011-2012 population from Population Research Center, PSU. Assessed property value and property tax rates are from Oregon Department of Revenue, Oregon Property Tax Statistics. Oregon Office of Rural Health for physicians. FDIC for bank deposits. U.S. Bureau of Economic Analysis for total personal income. Land ownership is from:

Federal Lands:

BLM Facts: Oregon and Washington, 1974-75.
Summary of National Forest Acreages as of June 30, 1975 (Information Sheet 5400).
Various publications, U.S. Fish and Wildlife Service.
Additional information supplied by the Bureau of Indian Affairs and National Park Service, Portland.

State Lands:

Biennial Report of the State Forester, 1972-1974. Oregon State Board of Forestry.
Biennial Report 1972-1974. State Land Board, Division of State Lands.
State Park Acreages. Oregon State Parks and Recreation Department (to June 30, 1975).
Various Publications, Oregon Department of Fish and Wildlife, 1975.

County Lands:

Information supplied by counties and by the Association of Oregon Counties, May 1976.

Private Land:

Figures determined by subtraction of the federal, state, and county lands from the county area.

Table B.2
City Population and Housing Characteristics in Recent Years

	Population Characteristics										Housing Characteristics in 2010				
	2010					2012					Housing Units	Occupied Rate	Vacant Rate	Renter Occupied Rate	Vacant Second Home Rate
	Population	Under 18	18-64	65 and over	White Alone Rate	Median Age	Average Household Size	Education 25+ H.S.	Individual Poverty Rate	Median household income					
Oregon	3,831,074	22.6%	63.5%	13.9%	83.6%	38.4	2.47	89.2%	15.5%	50,036	1,675,562	90.7%	9.3%	34.3%	3.3%
Clatsop	37,039	20.5%	62.8%	16.6%	90.9%	43.2	2.29	91.8%	15.8%	44,330	21,546	73.1%	26.9%	28.1%	19.9%
Tillamook	25,250	19.8%	59.3%	20.9%	91.5%	47.5	2.29	88.5%	17.2%	41,869	18,359	59.0%	41.0%	18.0%	33.8%
Lincoln	46,034	17.3%	61.1%	21.7%	87.7%	49.6	2.20	89.3%	16.0%	41,996	30,610	67.1%	32.9%	23.8%	25.1%
Depoe Bay	1,398	9.7%	60.5%	29.8%	92.9%	56.6	1.96	91.8%	15.4%	43,382	1,158	61.7%	38.3%	20.9%	26.3%
Lincoln City	7,930	18.4%	61.3%	20.3%	83.7%	46.2	2.14	88.0%	20.5%	29,686	6,025	60.5%	39.5%	32.5%	29.5%
Newport	9,989	20.0%	61.1%	18.9%	84.1%	43.1	2.22	88.0%	18.7%	47,270	5,540	78.6%	21.4%	39.3%	13.8%
Siletz	1,212	24.5%	61.2%	14.3%	69.7%	42.0	2.67	83.3%	23.0%	37,188	483	92.8%	7.2%	25.1%	0.8%
Toledo	3,465	24.8%	63.4%	11.8%	89.9%	37.6	2.60	86.4%	18.9%	45,230	1,474	90.3%	9.7%	36.4%	1.8%
Waldport	2,033	15.8%	57.9%	26.2%	91.2%	53.0	2.08	89.2%	14.5%	35,889	1,196	81.4%	18.6%	28.2%	10.4%
Yachats	690	4.9%	53.6%	41.4%	95.2%	62.3	1.72	94.5%	8.6%	42,396	807	49.6%	50.4%	18.6%	40.0%
Coos	63,043	18.9%	59.7%	21.4%	89.8%	47.3	2.29	87.8%	17.3%	37,853	30,593	88.7%	11.3%	30.5%	4.0%
Curry	22,364	15.7%	56.3%	28.0%	92.0%	53.5	2.12	90.8%	13.7%	38,401	12,613	82.6%	17.4%	25.4%	9.0%

Notes: 1. Income characteristics are from ACS based on 2008-2012 aggregations in 2012 dollars.

Sources: Decennial Census 2010, and ACS aggregations for 2008-2012.

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Appendix C

Personal Current Transfer Receipts

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Table C.1
Components of Personal Current Transfer Receipts in 2003 and 2012

Description	Lincoln County			Oregon			U.S.		
	2003	2012	2012 Shares	2003	2012	2012 Shares	2003	2012	2012 Shares
Personal current transfer receipts (thousands of dollars)	340,450	454,150	100.0%	19,624,663	29,792,192	100.0%	1,625,381,108	2,358,236,000	100.0%
Current transfer receipts of individuals from governments	332,386	444,669	97.9%	18,985,807	28,995,788	97.3%	1,573,350,379	2,294,240,000	97.3%
Retirement and disability insurance benefits	151,811	201,332	44.3%	8,183,163	11,229,394	37.7%	597,262,806	797,716,000	33.8%
Social Security benefits	143,256	193,016	42.5%	7,382,028	10,423,459	35.0%	561,063,043	762,165,000	32.3%
Excluding Social Security benefits	8,555	8,316	1.8%	801,135	805,935	2.7%	36,199,763	35,551,000	1.5%
Medical benefits	118,779	161,751	35.6%	6,626,944	11,124,122	37.3%	673,576,802	1,007,290,000	42.7%
Medicare benefits	65,110	116,458	25.6%	3,550,629	6,284,592	21.1%	334,963,101	560,762,000	23.8%
Public assistance medical care benefits	52,170	43,228	9.5%	3,014,208	4,735,949	15.9%	331,673,204	430,836,000	18.3%
Military medical insurance benefits	1,498	2,065	0.5%	62,106	103,581	0.3%	6,940,497	15,692,000	0.7%
Income maintenance benefits	25,868	40,724	9.0%	1,645,797	3,238,521	10.9%	161,266,695	267,112,000	11.3%
Supplemental security income (SSI) benefits	4,624	7,617	1.7%	353,156	506,250	1.7%	43,234,672	52,492,000	2.2%
Earned Income Tax Credit (EITC)	5,404	6,426	1.4%	358,730	501,749	1.7%	38,751,310	55,044,000	2.3%
Supplemental Nutrition Assistance Program (SNAP)	9,123	13,846	3.0%	473,630	1,255,098	4.2%	26,780,344	74,861,000	3.2%
Other income maintenance benefits	6,717	12,835	2.8%	460,282	975,424	3.3%	52,500,369	84,715,000	3.6%
Unemployment insurance compensation	20,431	15,961	3.5%	1,579,452	1,523,030	5.1%	64,844,141	85,051,000	3.6%
State unemployment insurance compensation	20,194	15,381	3.4%	1,553,057	1,446,554	4.9%	63,372,281	82,399,000	3.5%
Excluding state unemployment insurance compensation	236	580	0.1%	26,395	76,476	0.3%	1,471,860	2,652,000	0.1%
Veterans benefits	13,005	21,480	4.7%	628,163	1,170,541	3.9%	38,527,384	70,157,000	3.0%
Education and training assistance	1,565	2,676	0.6%	298,690	667,068	2.2%	34,248,581	63,456,000	2.7%
Other transfer receipts of individuals from governments	928	745	0.2%	23,598	43,112	0.1%	3,623,971	3,458,000	0.1%
Current transfer receipts of nonprofit institutions	5,167	5,606	1.2%	409,402	470,924	1.6%	33,343,193	37,779,000	1.6%
Current transfer receipts of individuals from businesses	2,897	3,875	0.9%	229,454	325,480	1.1%	18,687,536	26,217,000	1.1%

Notes: 1. Transfers are in thousands. Adjustment to 2012 dollars made with the GDP price deflator developed by the U.S. Bureau of Economic Analysis.

Source: U.S. Bureau of Economic Analysis.

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