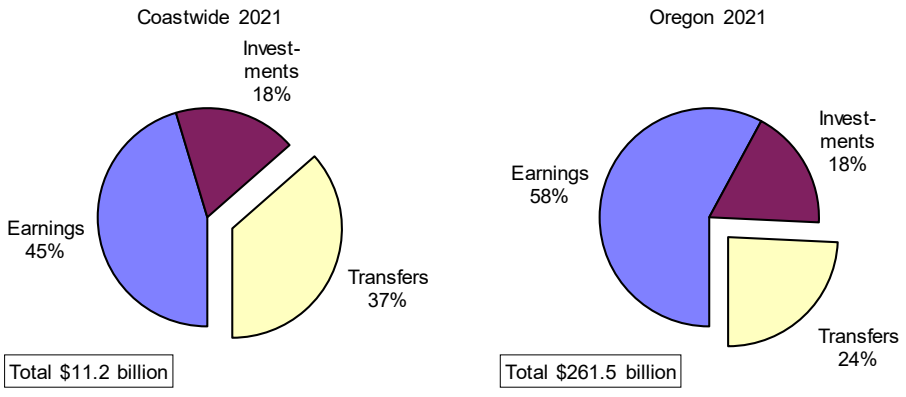
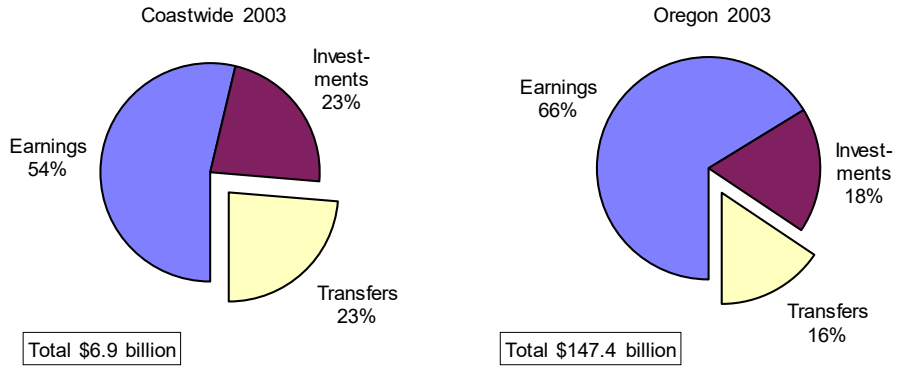
OREGON COAST YEAR 2021 SOURCES OF INCOME STUDY
Technical Supplement Report

Share of Personal Income Sources in 2003 and 2021





Note: Personal income in billions adjusted to 2021 dollars.

Oregon Coast Visitors Association

(This page intentionally left blank.)

OREGON COAST YEAR 2021 SOURCES OF INCOME STUDY
Technical Supplement Report

prepared by
The Research Group, LLC

prepared for
Oregon Coast Visitors Association

January 2024

Suggested Citation

Oregon Coast Visitors Association. Oregon Coast Year 2021
Sources of Income Study, Technical Supplement Report.
Prepared by The Research Group, LLC. January 2024.

PREFACE

This study was sponsored by the Oregon Coast Visitors Association (OCVA). Marcus Hinz, OCVA Executive Director, provided insight and understanding of the issues facing coastal communities. The OCVA is the official Regional Destination Management Organization for the entire Oregon Coast as designated by the Oregon Tourism Commission (dba Travel Oregon). OCVA inspires travel and strengthens collaboration to create and steward a sustainable coastal economy.

The study consultant was The Research Group, LLC Corvallis, Oregon. Shannon Davis was the principal author who was assisted by Hans Radtke. Kari Olsen at The Research Group provided research support.

This report was reviewed in draft form to provide candid and critical comments. This feedback helped make the findings of this report as sound as possible and ensures the report meets standards for objectivity, evidence, and responsiveness to the study charges. Although reviewers provided many useful comments and suggestions, they were not asked to endorse study findings and recommendations. The authors take sole responsibility for describing project results.

The authors' interpretations and conclusions should prove valuable for this study's purpose. However, no absolute assurances can be given that the described results will be realized. Government legislation and policies, market circumstances, and other situations will affect the basis of assumptions in unpredictable ways and will lead to unanticipated changes. The information should not be used for investment or operational decision making. The authors and OCVA do not assume any liability for the information and shall not be responsible for any direct, indirect, special, incidental, or consequential damages in connection with the use of the information.

Authorization is granted for the study report's contents to be quoted either orally or in written form without prior consent of the authors. This is subject to it being reproduced accurately and not used in a misleading context. Customary reference to authorship, however, is requested.

ACKNOWLEDGEMENTS

Funding was provided by OCVA, Travel Oregon, and Lane County. Study collaborators that were contacted for data and/or participation follow.

Northwest Fisheries Science Center (Allen Chen, Economist)
Oregon Employment Department (Erik Knoder, retired; Shaun Barrick, Workforce Analyst; and, Jes Mendez, GIS Research Analyst)
Coastal Oregon Marine Experiment Station (Gil Sylvia, retired Executive Director)
Travel Oregon (Javier Parada Torres, Research Coordinator)
Oregon Department of Agriculture (Alex Manderson, Food Safety Specialist)
Oregon Department of Fish and Wildlife (Tommy Swearingen, retired Marine Reserve Program)
Oregon Department of Forestry (Brandon R. Kaetzel, Principal Economist)
Oregon Health and Science University, Oregon Office of Rural Health (Emerson Ong, Data/GIS Analyst)
Hatfield Marine Science Center (Bob Cowen, Director and Mark Farley, Strategic Initiatives and Communications Manager)
Lincoln County Economic Development Alliance (Paul Schuytema, Executive Director)
Lane County (Jenna Cusimano, Community & Economic Development Management Analyst)
OSU Extension Service (Jamie Doyle, Agent Coos Bay; Angie Doerr, Agent Newport)
Oregon Sea Grant (Karina Nielsen, Director)
Oregon Department of Education, Office of Research, Assessment, Data, Accountability, and Reporting (Jonathan Wiens, Director of Reporting, Accountability, and Data)

The many businesses contacted to learn about their business activity are thanked anonymously for their time and input.

TABLE OF CONTENTS

TABLE OF CONTENTS (CONT.)

List of Tables

TABLE OF CONTENTS (CONT.)

Page

Appendices

GLOSSARY

List of Acronyms

BEA	U.S. Bureau of Economic Analysis
bf	board feet using Scribner measurement which can be in billions (bbf), millions (mmbf) and thousands (mbf)
BLS	U.S. Bureau of Labor Statistics
BPA	Bonneville Power Administration
ENOW	NOAA's National Ocean Watch
EV	electric vehicles
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.
NAICS	North American Industry Classification System
NOAA	National Oceanic and Atmospheric Administration
OCVA	Oregon Coast Visitors Association
OCZMA	Oregon Coastal Zone Management Association
TGM	Oregon Transportation and Growth Management Program

Definitions

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.
Prices	Prices are dollars received by a seller divided by the volume of the sale. The price term can be described differently depending on the production and distribution channel where the transaction occurs. For example in commercial

	fishing, the transaction between harvester and first purchaser is referred to as *ex-vessel.* A reported price often uses a volume measurement for pounds in the round. This means the fish weight is adjusted to be as caught even though it might be sold partially altered such as gutted. The price for agriculture or aquaculture at first purchase is *farm-gate.* Again, it is important to understand the volume characteristic. Further down the distribution channel are price names such as *ex-processor, wholesale,* and *retail.* Often prices are compared over time and it is necessary to adjust to a real dollar value to compensate for inflation. This study uses the index called gross domestic implicit price deflater or GDP price deflater developed by U.S. Bureau of Economic Analysis. Other indexes are available.
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.
Labor force participation	Consists of all residents 16 and over who are either employed or jobless and looking for work divided by the civilian (excluding members of the armed forces) noninstitutional population age 16 and over. The employment-population ratio measures civilian employment as a percent of the total noninstitutional population.
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.

Port Group

The following table lists the major ports, acronyms, Census Bureau geographic areas (cities, counties, and zip code areas), and river/streams that are mapped to port groups. Area economic data is used for showing commercial fisheries (distant water fisheries are included) representation in local economies in 2019. Demographic and well-being data is used to show an area's commercial (distant water fisheries are excluded) and recreational fisheries engagement in 2018. (The time disparity is due to data availability.) Both measures have their unique purpose in showing the importance of fisheries in an area and how different Oregon Coast areas contrast. Discussions of fisheries importance include showing historical trends and variability for the measures.

Port Group	Area Economic Data	Cities and Source of Demographic/Well-being Data	Major Rivers and Streams
Astoria (AST)	Clatsop County	Astoria, Hammond/Warrenton, Gearhart, Seaside, and Cannon Beach. Clatsop County used for Census Bureau data.	Columbia, Klaskanine, Lewis and Clark, Youngs, and Necanicum rivers; Big Creek, Gnat Creek, and Bear Creek
Tillamook (TIL)	Tillamook County	Tillamook, Garibaldi, Netarts, and Pacific City. Tillamook County used for Census Bureau data.	Tillamook, Kilchis, Miami, Nehalem, Nestucca, Trask, and Wilson rivers
Newport (NPT)	Lincoln County	Newport and Depoe Bay. Lincoln County plus zip code 97439 used for Census Bureau data.	Yaquina, Siletz, Alsea, and Salmon rivers; Big Elk Creek, Drift Creek
Coos Bay (CSB)	Coos County	Coos Bay, Florence, Winchester Bay, and Charleston. Coos County plus zip code 97467 used for Census Bureau data.	Siuslaw, Umpqua, Smith, Coos, Slough
Port Orford (PRD)		Port Orford. Zip codes 97465, 97476, and 97450 used for Census Bureau data.	Elk and Sixes rivers
Brookings (BRK)	Curry County	Brookings and Gold Beach. Curry County less Port Orford zip codes used for Census Bureau data.	Chetco and Rogue rivers

I. INTRODUCTION

This report contains method descriptions and data portrayals for a study sponsored by the Oregon Coast Visitors Association. The study investigated economic drivers of the Oregon Coast economy. The study also reviewed the Coast's social setting and made interpretations of economic development challenges. This report serves as technical supplement to summary descriptions contained in the study's briefing report. This report has more detailed data attributes and literature is cited where applicable to support the briefing report's findings and interpretations. There is increased social and economic data granularity in this report. When the briefing report contains coastwide summaries of analysis results or social and economic indicators, this report will have the county level data.

This report provides updated information for similar studies originally sponsored by the Oregon Coastal Zone Management Association (OCZMA). The last one was completed in 2006 using data year 2003 (TRG 2006). This new report updates and summarizes the changes that have occurred in the last two decades.

Coastal leaders and communities benefit by having a single, overarching study to document area-wide and local trends. Study results help in having a cost-effective approach for developing plans and policies to address the trends. In the absence of a single study, individual jurisdictions would be forced to prepare their own background and assessments. Locally prepared assessments would not be consistent with neighboring jurisdictions, making region-wide comparisons among jurisdictions difficult or impractical.

This report has descriptions for the three components of personal income that accrue to households and individuals on the Oregon Coast. The components are net earnings, investment income, and transfer payments. For the net earnings component, modeling is used to show the importance of the Coast's unique set of industries.[1] The modeling is economic base analysis that categorize all businesses (including employers and proprietorships) into basic (commercial fishing, timber, etc.) and non-basic (trade, services, etc.).[2] It is assumed that all other non-basic industries economic contributions are the result of the net earnings basic industries, investments, and transfers components.

1. The net earnings component of total personal income includes more than just wages and salaries. It also includes proprietor 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 are generally higher at the Coast because there are more business units per employee than in the State.
2. Economic base model theory assumes a regional economy is divided into two sectors: basic (such as commercial fishing and timber) and all others (such as trade and services). The basic sector (also known as the export sector) depends on sales that occur outside the regional economy. The non-basic industries depend on selling within the local economy. Actually there are crossover businesses; some sales will be exported out-of-area and other sales will be local. However, the bifurcation serves to explain the tenants of how economies work. The struggle for this modeling approach is the calculation of the basic sectors total economic contributions within the regional economy. The regional economy's total activity is supposedly known from widely reported by government sources (like the U.S. Bureau of Economic Analysis) and the aggregation of the basic sectors economic contributions cannot exceed that checksum.

II. APPROACH

A. Data Sources

Two types of statistics are used in the report to describe the existing situation of the population and economy. *Social* statistics measure the characteristics and the well-being of individuals. Health and welfare data is included as a social accounting statistic. Included demographic statistics refer to population differences, such as age, gender, race, mobility, household size, etc. *Economic* statistics are used, not as a measure of individuals, but of the business activity in which they participate. The amount of business sales, the number of jobs, and the wages businesses generate are all used as measures. The adopted measurement for the economic contribution modeling is income. It could just as well have been other measurements such as business output, but the income metric was selected because it is comprehensible for policy making. The scale for the model's calculations are for the coastwide economy, but individual county industry categories are itemized.

The demographic and well-being information is largely based on Year 2020 decennial census information. Intercensal data from the U.S. Bureau of Census American Community Survey (ACS) are more recent estimates for some measures.[1] The Oregon Office of Rural Health provided coastal county health profiles. The Oregon Department of Education, Office of Research, Assessment, Data, Accountability, and Reporting provided school enrollment data.

The economic information is business activity from many sources. Personal income data is from the U.S. Bureau of Economic Analysis (BEA), employment data from the U.S. Bureau of Labor Statistics (BLS), and employment/payroll data provided by the Oregon Employment Department. The latter source is the State's data for the BLS Quarterly Census of Employment and Wages program (commonly referred to as the ES-202 Program).[2] For consistency across all areas and from all data sources, net earnings income is adjusted to be by place-of-work.

The economic base model provides estimates for the six identifiable industry categories' direct, indirect, and induced income at the county level. The first four industry categories estimates are from statewide economic studies that use economic input-output model response coefficients from IMPLAN.[3,1,2] There is incongruity in result years, result measurements, and downstream

1. Depending on the population size for the geographic area being reported, the ACS data can be representative of either one-year or a range of five-years. The ACS geographic area population size break is 65,000. There are no counties or cities that are equal or greater than this break during the reporting period. Therefore, while this report may tag data for a particular year, the data will be representative of a five-year panel. Caution is suggested in using ACS five-year range data in trend analysis. There will be overlapping data range years. ACS data is drawn from a sample of residents, so the smaller the area being described will result in higher variance than for larger populated areas.
2. The other identified and identifiable industry categories have large business representation along the Oregon Coast. However, when itemizing the subcategories by county, confidentiality rules (showing jobs and payroll when the numbers represent fewer than three businesses) accompanying the ES-202 data comes into play. It was necessary to interview the businesses to procure their declarations of job numbers or to use published information about the business. No interviewed business refused to reveal job numbers. Industry average wages were used to estimate payroll costs for the businesses.
3. The four statewide studies are (see bibliography section for full citations): TRG (December 2023), Oregon State University College of Agricultural Sciences (August 2021), Oregon Forest Resources Institute (2019), and

effect extents that all need adjustments to make the results consistent. The adjustments are described in Chapter IV.

The other two industry categories employ economic base modeling methods that use a crosswalk of industry classifications populated with employment/payroll data provided by the Oregon Employment Department. Economy response coefficients are from the U.S. Bureau of Economic Analysis (BEA) Regional Input-Output Modeling System known as RIMS II. Appendix A has tables showing the NAICS crosswalk to this study's industry categories and model parameterization numbers.

Year 2021 is the most recent year at study start in which total personal income information is available at the county level from the U.S. BEA. This year coincides with the coronavirus pandemic duration that has general economy and social relief program influences (Arnaut-Hull 2022). Some indicators have data years prior and subsequent to the analysis target year. Their applicable years are distinguished on tables. Tables showing detailed statistics for coastal counties is contained in Appendix B.

County boundaries were adopted for data presentation and discussion for the following five coastal counties: Clatsop, Tillamook, Lincoln, Coos, and Curry. Where possible, data for coastal Lane and Douglas counties was used. The portions of Lane and Douglas counties adopted for study inclusion can be geographically described as being those portions west of the Coast Range summit.[3] In the case of Lane County, this includes the unincorporated communities of Swisshome, Deadwood, and Mapleton, and all areas west of these communities. For Douglas County, this includes the unincorporated community of Scottsburg and all areas west of it. For some data, it was necessary to use the growth rates and ratios found in Lincoln and Coos counties for coastal Lane and coastal Douglas counties, respectively. When historical growth patterns were reviewed, the cities of Florence and Reedsport were used for coastal Lane and Douglas counties, respectively.

Many of the social and economic statistics are expressed as averages or proportions for the Coast. Examples are unemployment rate and housing vacancy rate. In these cases, a weighted mean rather than arithmetic mean of coastal county rates is used for the calculation. The frequency used for the weighting is chosen to most closely be associated with the measurement. In the example of unemployment rate, the average across counties used total employment. In the example of vacancy rate, total housing units (occupied and unoccupied) was used. Whenever possible, absolute numbers were sought to calculate coast-wide averages and proportions. This way, the information would be self-weighted rather than estimated through a weighting technique.

Dean Runyan Associates (2022). It was sometimes necessary to itemize statewide studies' results for common primary business activity, convert economic activity metrics, and adjust to 2021 dollar year.

1. The Impact Analysis for Planning (IMPLAN) is an input-output model. The model is a product of IMPLAN Group LLC, 16740 Birkdale Commons Parkway, Suite 212, Huntersville, NC 28078.
2. These four basic industry categories production chain is through primary processing such as commercial fishing processing and timber dimension cut and plywood mills. Secondary manufacturing in these four categories is included in the other identified categories.
3. These geographic areas were approximated by zip codes 97439, 97493, 97453, 97480, and 97430 for coastal Lane County and 97467, 97441, and 97473 for coastal Douglas County.

B. Model Specification and Uncertainty

This report's section discusses the economic base model method and specification. The economic base model uses a mix of statewide studies results and new industry specific economic contribution calculations.

It is necessary to have a catch-all residual industry category so that all industry categories sum to the personal income net earnings component and sum to an area's total personal income (including investment income and transfer payments). The BEA estimates for total personal income at the county level are used for checksums.

Algebraic expression for the model at the coastwide level follows:

$$TP = NE + NEU + IT \qquad \text{Eq. 1}$$

where: TP is total personal income from BEA for five counties and from the ACS for coastal Lane and Douglas counties. The ACS estimates are adjusted for the definition differences with BEA.
NE is economic contribution from the many identified industry categories.
NEU is economic contribution from net earnings (including multiplier) for the residual not identified industry category.
IT is economic contribution from investment income and transfer payments from BEA.

$$NE = \sum_i ID_i \qquad \text{Eq. 2}$$

where: ID is income (including multiplier) for the many identified industry categories.
i = identified industries

$$IT = (1 - OA_C) * HCM_C * \sum_j R_j \qquad \text{Eq. 3}$$

where: OA is a Coast out-of-area purchasing coefficient.
HCM is a household consumption multiplier from RIMS II for Coast.
R is receipts
j = investments or transfers receipts

The OA variable can also be interpreted to include receipt savings for some households rather than purchasing. On the other hand, it can also include disbursements of drawdowns on past savings. It will take a special population survey of Oregon Coast residents to determine an appropriate factor.

Need to solve for the catch-all category NEU:

$$NEU = TP - NE - IT \qquad \text{Eq. 4}$$

subject to $0<IT<(TP-NE)$

NEU being positive is a model constraint. If IT is too large then NEU will be negative. The OA coefficient can make IT too large. The suggested 10% out-of-area purchasing coefficient used as a model place holder factor makes NEU positive for each county.

The retiree effect can be defined as potential purchasing power being generated in the counties over an adopted reference amount. The reference amount in the 2006 OCZMA study was the nation's proportion of investments and transfers receipts.

Calculating the retiree effect has the following algebraic expression:

RE = (C% * TP) - (US% * TP) Eq. 5

where: RE is retiree effect
US% is the nation's proportion of total personal income investments and transfers.
C% is the counties' proportion of total personal income investments and transfers.
TP is the Coast's personal income.

To find a retiree effect's economic contribution closer to a true value will need study resources to undertake a retiree consumption and lifestyle survey. The BLS does maintain a consumer expenditure survey program, but it is national level sampling. Results are shown for four U.S. regions, but cannot be assumed to apply to the Oregon Coast situation. The survey has additional discussion in Chapter IV.B.6.

The economic base model performs well using the above described relationships and assumptions. That means itemizations and sums seem reasonable and positive. What is not known is accuracy. The itemizations (such as the agglomerated industry category for other identified) do not have test standards to compare.

Sometimes developing deterministic models calibrated for current conditions can be tested against retrospective cases for validation. Another method is to develop an ensemble of models and compare results. For example, the original OCZMA studies did not rely on other authors' statewide study results and instead calculated economic contributions from industry inputs and outputs. Study resources prevented carrying that method into the current study. A second example would be to use different analytic techniques and data such as regression analysis to build a model. Using these methods as a second and third approach would create an ensemble. The ensemble would be used to estimate uncertainty associated with the separate approaches. Ensemble uncertainty estimations can help the model practitioner find model specifications that need attention. Despite lack of testing, the real benefits of the economic base model is as much generating quantitative outcomes as the insight gained in selecting appropriate statewide studies, using a clustering strategy for industries, and adopting factors and relationships so that differences with checksums are plausible.

If more work is to be done on model testing, it would be to determine the sensitivity of key variables used in the model. The OA factor sensitivity exploration would be an interesting investigation, i.e. what happens to results if the OA factor is changed by 10, 20, etc. percent? For some statistical explorations, the testing effects would be trivial as the model is linear.

A more thorough statistical testing for uncertainty could involve Monte Carlo simulation. The purpose of Monte Carlo simulation is to obtain a distribution of the model outputs given distributions of the inputs (e.g., forcing functions, model parameters, boundary conditions). It would give hints on error propagation from the statewide studies, measurement error from the NAICS data, and other potential biases. The testing would be useful for expressing results in confidence intervals rather than point estimates. This would give the reader more assurance for what might be true levels of economic contributions. From a model specification perspective, the testing can help detect and mitigate erroneous relationships and invalid assumptions.

It is suggested the model specification not be used in a future framework without close monitoring of relationship and input data shifts. New statewide studies might not have the same detail to allow consistency adjusting. Markets and production techniques change which may change industry clustering rules. A model practitioner needs to be wary of data integrity and bias to avoid carrying those errors into a future specification of the model.

III. SOCIAL INDICATORS

A. Demographic Descriptions

1. Population Characteristics

Since 1970, the population of Oregon has been growing much faster than the population of the United States (Table TS.1a). There has been overall growth in coastal counties, but at a slower pace than Oregon. The exceptions are Lincoln and Curry counties which have grown almost as fast as Oregon's population in the last two decades. The population of coastal Douglas and Coos counties have been growing much slower than the Coast and the State.

Generally, coastal counties have an overall out-migration of young adults who leave the region to find education and employment opportunities. With these migration patterns alone, coastal areas would experience significant shifts in their demographic structure. However, this trend is exacerbated by in-migration patterns. The national population is "aging" with large population cohorts moving into middle and older age groups. The people in these retirement age cohorts are moving to the Oregon Coast.[1] The trend is the same for Oregon, but more so for the coastal counties. A snapshot in Year 2021 of the Coast's age cohorts is shown in Table TS.2. Among the coastal counties, Lincoln and Curry counties have the highest proportion of retirement age people.

The net migration growth to Oregon is coming from both from job seekers and retirees looking for a more affordable and laid-back lifestyle. California is the top state for migration origin. The reasons for moving to Oregon from California were affordability, job opportunities, and quality of life (OED May 2023 and United Van Lines January 2021).

1. Retirement age specific net migration between 2000 and 2020 was calculated using the 65 and older age cohorts.

The coastal portions of Lane and Douglas counties have interesting population trends. Using the populations of Florence and Reedsport cities, respectively, to approximate the coastal portions of Lane and Douglas counties reveals a disparate growth pattern (Table TS.1a). The Florence population increased 82 percent between 1990 and 2020. Reedsport decreased 10 percent during the same period. In-migration of retirement age people fueled Florence's population growth. The median age in 2020 in Florence was 60, which is 20 years older than the rest of Oregon. A similar large influx of population in Reedsport has not replaced the out-migration of working age families.[1]

The Coast and Oregon's components of population change are shown in Table TS.3. Net migration (individuals moving out minus those moving into an area) has oscillated between positive and negative in the shown intercensal periods. The growth in population due to natural increases (births minus deaths) has declined steadily since 1950, reaching a negative value between 1990 and 2000.

2. Geographic Density

The State and coastal counties have similar population densities at 43.8 and 32.9 persons per square mile, respectively (Table B.1). Since Oregon's land area includes vast unpopulated areas east of the Cascades, the coastal counties' density would indicate that density is very low. By comparison, the population density of the Portland Metropolitan Statistical Area (includes land area and population in Clark County, Washington) is 375.3 in 2022 (citypopulation.de).

3. Housing Stock

The housing stock for the Oregon Coast is generally older than for the State. This is so despite the growth of second homes and condominiums. The proportion of housing that is older than 50 years is 36 percent on the Coast and 33 percent for the State in 2021 (Table TS.4).

Housing costs are generally lower at the Coast. Monthly housing costs for renters are lower than the State in 2021 (median $953 vs. $1,250). Housing costs to owners are also lower (with mortgage $1,520 versus $1,840 and without mortgage $481 versus $587) in 2021.

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. Coastal counties' housing stock includes a much higher proportion of second homes than the State (Table TS.5). Tillamook County has the highest percentage of second homes of all the coastal counties.

The median value of owner occupied homes on the Coast in 2021 (Table TS.4) is less ($286,588) than the State ($362,200). But, the residential assessed value per capita is much higher ($88,782

1. All large lumber mills and the International Paper Co.'s paperboard mill in western Douglas County shut down operations. There are still other strong local employers, principally in ship building and repair, steel fabrication, and communications. Such employer diversification may bode well for the area's future economic development.

versus $56,461). This demonstrates the presence of higher-valued second homes on the Coast than in the rest of the State.

4. Employment

Oregon's coastal areas have undergone significant economic and demographic transitions in the last two decades. Traditional resource-based industries like commercial fishing and wood products have declined in relative importance. Trade and service jobs associated with businesses serving tourism and retirees have increased. Because of the influence of the dairy industry in Tillamook County, agriculture has remained fairly constant. The major change, however, has been the increase in "other identified" and "other identifiable industries" categories. The industries include other large employers that are readily known, like the Hatfield Marine Science Center in Lincoln County. Later chapters discuss these categories in depth.

The flip side of employment is unemployment. In the past, coastal counties were much more vulnerable to recessions than the State and U.S., such as the downturn in the early 1980's (Table TS.2). Coastal counties experienced worse unemployment. Unemployment rates had spikes during the Great Recession (2008-2009) and pandemic (2020-2022) years. In the last decade, coastal counties have closer unemployment rates to those in the rest of the State and U.S.

5. Income

Investments income has narrowed in importance while transfer payments have broadened. There is a higher proportion of transfer payments on the Coast than in Oregon or the nation (Table TS.6). This is partially a function of the increase in retirees collecting transfer payments in these areas. While total personal income has increased, the share of total personal income that is earned (i.e., employee compensation and proprietor income) has decreased (Table TS.7). This means a lot of spending on the Oregon Coast is not tied to salaries and wages from local businesses or industries.

Per capita income is one of the most accurate indicators of economic well-being. It is the total of income from all sources - wages, interest earnings, dividends, business profits, and transfer payments like welfare, unemployment compensation, and retirement - divided by the total population. The per capita net earnings in the coastal counties are below per capita net earnings at the State or national level. The gap has been increasing in recent years (Table TS.8).

Average wage and salaries is less along the Coast than in Oregon.[1] Measured in real 2021 dollars, the average Coast worker earned about $45,670; the average Oregon worker earned $63,989 (Table TS.4).

1. Real wages are the average wages for unemployment insurance covered workers adjusted for inflation. The data for this calculation are drawn from employment and payroll data collected by the Oregon Employment Department. The average wage is the sum of all wages for all covered workers divided by the average number of workers each year. Wages are adjusted for inflation using the GNP implicit price deflator provided by the U.S. Bureau of Economic Analysis. The self-employed work force is not included in the payroll data.

A significant factor in the comparison of wages has been the rapid growth of jobs in the relatively low wage service sector occupations. A greater fraction of the population is earning wages now than in previous years. In other words, today there are more workers per capita than twenty years ago. This increase in workers per capita has helped offset the decline in real wages per worker.

Annual covered employment and wage trends are shown in Table TS.9. The Great Recession and pandemic years downturns are prominent features on the table. Both employment and wages are on the upswing since 2020.

Income inequality statistics can be misleading when averages are used as indicators. A few households in very high income brackets can mask the effects of many households in lower income brackets. The income brackets by county are shown in Table TS.10. All coastal counties have far fewer households in the highest income brackets than the State. Coos and Curry counties have the highest proportion of households in the lowest income bracket.

Another indicator which shows coastal counties are skewed towards lower household incomes than the State is the proportion of people living below poverty level. The proportion in coastal counties is 8.8 percent, compared to the State's 7.5 percent in 2021 (Table B.1). A comprehensive accounting of Oregon's poverty data, causes, and assistance programs can be found in Oregon Housing and Community Services (2004).

Lagging wages contribute to the housing problem along much of the Coast. Many potential workers are unable to secure affordable housing as rising demand for coastal property has priced homes and rentals out of their reach. This lack of workforce housing in turn makes it more difficult for employers to attract and retain workers in occupations such as trade and service workers. This is especially true for businesses oriented towards the tourism industry.

6. School Enrollment

County level school enrollment absolute and per capita over a 12-year period is shown in Table TS.11. The absolute enrollment when summed for the Oregon Coast has remained steady in the last 12 years despite a growing population. This is a concern to school districts trying to improve education opportunities as State support is partially based on enrollment. The county with the highest per capita enrollment in the fall 2021 is Coos County and the lowest is coastal Lane County. The greatest 12-year change is in Curry County at negative 20.9 percent. The negative change would reflect the population transformation away from family age families and increasing numbers of retirement age households.

7. Firm Structure

Sole proprietorships are run by one individual. The other business structures (partnerships, limited liability companies, cooperatives, and corporations) can have employees. Many of the jobs in commercial fishing, agriculture, and tourism are sole proprietorships. The percent of employment in proprietorships is higher on the Coast than in the State and has stayed about the same over the last 30 years (Table TS.12).

8. Labor Force Participation

The Coast's labor force participation is showing a growth rate which exceeds the rate of growth for the area's population (see Table TS.13). This differential in growth rates, which also took place at the State and national level, can be attributed in large measure to the entry of proportionately more women into the labor force.[1] In addition, the aging of the population, the entry of the baby boomers, early retirement for men, and overall population growth also played their parts.

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 economic downturns and inflation. Other women worked to support their families or to pursue individual economic goals. Social factors such as the rising divorce rate and the surge of single, educated women also bring many females into the labor force.

9. Well-being and Prosperity Measures

The Oregon Coast is distinguished by its health and well-being characteristics. Table TS.4 and Table TS.14 show statistics for educational attainment, access to health services, the poverty rate, the proportion of substandard housing and the crime rate for the Oregon Coast as compared to the State. All statistics show the Coast is quite different than the State.

a) Health and Well-Being Characteristics

The average education level in coastal counties have fewer people with college or graduate degrees and more people with high school levels of education than the rest of the State.

The Oregon Coast doctor count is proportionally much lower than the State. Hospitals and health clinics along the Oregon Coast provide trauma and basic health services while specialized medical services are located in the major population centers of the State.

The crime rate for coastal counties is less than the State. The trend over the last two decades shows decreasing overall reported crimes for both the Coast and the State.

b) Wealth Characteristics

Other indicators of prosperity for coastal residents compared to the rest of the State are shown in Table TS.4. Bank deposits per capita are less on the Coast than for the State. The effective buying income (equivalent to the federal government's disposable personal income and a bulk measure of retail market potential) is less for the Coast than the State.

1. In 1970, women made up 38 percent of the civilian labor force in the United States. By 1990, their proportion of the work force increased to 46 percent. Women made up 47 percent of the total civilian labor force and had a participation rate of about 59 percent in 2021. Men are showing a slight decline in participation rates and are 68 percent in 2021.

Not surprisingly, retail sales per capita on the Coast is also less. A contributing factor is the sales leakages that occurs when coastal residents travel to large urban centers along the I-5 Corridor where price and product selection is better than on the Coast. The counties with big box businesses and serving as trade centers (such as Clatsop County) have higher rates for this indicator.

IV. ECONOMIC DESCRIPTION

A. Methodology

The study's economic analysis purpose is to provide better understanding of the distinct industry drivers in Oregon Coast economies. The drivers are subsumed in the personal income component net earnings. Instead of using traditional industry classifications that can cloud what is happening in the Oregon Coast situation, an economic base analysis is used.[1] The adopted economic base is four specific industry categories (commercial fishing, agriculture, timber, and travel tourism) and two agglomerated industry categories ("other identified" and "other identifiable" industries). There is another category called "other not identified" that is calculated as a residual to account for all personal income net earnings.

The "other identified" category includes four subsectors: paper and paperboard mills; water transportation and marine cargo; ship building, fabrication, heavy manufacturing, heavy construction; and mining. The "other identifiable" category includes higher education, research, and special training; public health; tribal services; and, other. The "other not identified" has other businesses found on the Oregon Coast which cannot be identified due to data confidentiality and/or data specification issues. Income returned from commuting to outside-of-area located jobs would also be included in the "other not identified" category.

The economic base model generates estimates for each industry category's direct, indirect, and induced income at the coastwide level. The modeling relies on statewide economic impact studies for the first four above mentioned industry categories. (See Chapter II.A. for references to the four studies.) The other two industry categories employ economic base modeling methods that use a crosswalk of industry classifications populated with employment/payroll data provided by the Oregon Employment Department.

The other two components of total personal income are investment income and transfer payments. They are sometimes colloquially referred to as "non-earned income." The term does not appreciate their origin can be from asset holdings derived from past earned income. The two additional categories are included from a consumption perspective, therefore are categorized as basic industries.

1. Industry employment data keys off wages and salary positions that are subject to unemployment insurance coverage. The Oregon Coast has comparatively many sole proprietorships that are uncovered, hence left out of the traditional employment information. Further, the classification system itself will not always reflect business activity within observed industries.

It is assumed that all other goods and services industries economic contributions are the result of the basic industries business activity and purchasing afforded by investment income and transfer payments.

Each of the industry categories, with the exception of non-earned income categories, involves the exchange of locally produced goods or services for sales outside of the local economies. Investment income and transfer payments 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.

For Lane and Douglas counties, which include coastal cities as well as inland areas, 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.

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.

Sometimes personal income gain or employment in one area may be personal income loss to a different area. For example, the expenditures by the Bonneville Power Administration for hatchery funding may be a transfer from electricity paying consumers in Portland and Seattle to anglers and businesses in coastal communities. These allocation and equity issues are not addressed in this study.

B. Economic Modeling Results

This chapter discusses in detail the application of the economic base modeling. A separate economic analysis is completed for "retiree effect." It is done to show the importance of non-earned income in the coastal economy attributed to the large proportion of retirement age population. The average U.S. investment income and transfer payments proportion of personal income was used as a base for this calculation.

1. Commercial Fishing

a) Summary

The Oregon commercial fishing industry is made up of businesses and industries which harvest and process. Fresh fish are distributed throughout the West, while frozen and processed fish are distributed throughout the U.S. and exported to the rest of the world.

The commercial fishery has been an important part of coastal areas' economies. Oregon fishermen harvested and landed in Oregon 317.8 million pounds of fish in 2021, worth a total of $205.4 million ex-vessel value (Tables TS.15 and TS.16). The Astoria port group (Clatsop County) had the highest landings in weight in 2021 165.9 million pounds. (The Columbia River salmon net fishery landings are included in the Astoria port group landings.) The Newport port group (Lincoln County) had the highest landings in value in 2021 $74.6 million (Table TS.17).

There has been a shift in the last 20 years away from salmon and toward higher volume and lower price fisheries. Groundfish and Pacific whiting have had steady landing values in recent years following recovery from earlier years overfishing. Sardines was a major fishery in terms of pounds landed during the last 20 year period, but the fishery has been suspended in the last few years due to a low point in its cyclic abundance. Market squid is an emerging fishery the last few years, but it also has high cyclic abundances.

Aquaculture (principally oyster farming) is usually not included in commercial fishery statistics. The products, however, reach the consumer through the traditional seafood processor channels. Therefore, this economic analysis has included them with commercial fishing. The Oregon Department of Agriculture provided bushels and gallons of production by growing area. Aquaculture farm-gate value is from The Research Group, LLC and Hans Radtke (June 2022).

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 also harvested in "joint venture" with foreign processor boats off the Alaskan as well as the Oregon coast. Many 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 Bristol Bay. The total revenue returned to the coastal communities in Oregon by these distant water fisheries for 2021 is estimated to be about $99 million income (TRG December 2023).

Value added occurs to seafood products at each step of harvesting and processing. The value-added amounts differ according to each step of harvesting and processing for the various seafood product forms. 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 eight and nine large processors (purchasing more than $5 million ex-vessel value) on the Oregon Coast in 2020 and 2021, respectively, and many small to medium firms provide a variety of processing services.

b) Economic Contribution From Commercial Fisheries

The statewide study TRG (December 2023) was relied upon to provide commercial fishing economic contribution estimates. The study reported economic contributions to local economies as well as the State's economy. For this report, the former is used for showing economic contributions.

Economic contribution is from harvesting, primary processing, aquaculture, and distant water fisheries. In 2021, the commercial fishing industry generated a total of $495 million in terms of total income for the Oregon Coast communities (Table TS.18). The industry in Clatsop County generated a total of $170 million income. The Newport commercial fishing industry and supporting businesses generated a total of $183 million income in Lincoln County. The other major fishing port, Coos Bay, generated about $82 million income in Coos County.

2. Agriculture

a) Summary

Few areas can rival the diversity of crops and livestock, which can be grown in Oregon's 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 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 commercial fishing, timber, and travel tourism industries.

Today the agricultural industry remains strong in Tillamook County. This includes growth of the sausage and meat processing industry in Tillamook County. A past development was the expansion of the Tillamook Creamery to eastern Oregon. This expansion out of the coastal region is due to increased markets also as a move to have operations closer to the feed supply.

Many vegetables, berries, and nursery crops grow very well in the mild climate of the coastal region. Cranberries produced on the Oregon Coast in Coos County are a deep red color and are used as an additive in the processing of many cranberry products. Over the

last several years, special forest products, such as mushrooms, greens, and Christmas ornamentals have received added attention.

The major crops and livestock product farm receipts in 2017 are shown in Table TS.19. The five coastal counties in Oregon (Clatsop, Tillamook, Lincoln, Coos, and Curry) produced $198.6 million in sales. Tillamook County had the largest sales $117.1 million, followed by Coos County ($49.9 million), and Curry County ($17.4 million). Lincoln and Clatsop counties had agricultural sales $3.6 million and $10.7 million, respectively. The data is from USDA 2017 census of agriculture and includes sales of timber from small woodlots.

b) Economic Contribution From Agriculture

The statewide study Oregon State University College of Agricultural Sciences (August 2021) was relied upon to provide agriculture economic contribution estimates. The economic footprint estimates were used. (It was assumed the statewide study's Table 14 was for Year 2021.) It was necessary to extirpate the contribution estimates arising from commercial fishing and visitor tourism. They would have been duplicate with other base industry categories economic contribution estimates. The statewide study's measurement for jobs was converted to income using BEA average per job data. The statewide estimates were proportioned to Coast counties using farmgate receipts. A state-to-local economy economic effect ratio was used to account for the scale of the local economy level. Agriculture production and primary processing in 2021 generated $197 million income in Oregon coastal communities. Tillamook County, which includes the Tillamook Creamery and several meat product producers, receives a total of $113 million income from the agriculture sector. This is about twice as much as Coos County, where the growing of cranberries is the major agricultural crop (Table TS.18).

3. Commercial Timber

a) Summary

Some of the nation's finest timber grows 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. Oregon has led the nation for many years in producing softwood lumber and plywood typically used for homebuilding (OFRI January 2023).

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.

There has been changes to the technological requirements for labor in logging and wood processing. The changes have diminished 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.

Oregon harvests have declined from the 9 bbf level in the late 1980's to the 4 bbf level in recent years (Table TS.20). The decline in long-term harvest levels resulted as producers harvested 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. 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."[1] Harvests may bump up as industrial lands harvested in the 1960's and 1970's mature to the point they can support another round of harvest.

As final product and stumpage prices increased, transportation costs have become a smaller part of final manufacturing costs. Mills are willing to expand their timbershed boundaries. This trend has caused a reduction in processing capability on the coast. Most timber is now shipped to the major processing centers of Roseburg, Eugene, or the Portland metropolitan area (Ward et al. 2000).

1. 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.

Timber industry economic contributions on the Oregon Coast are mostly from logging and forestry support on private ownership lands. Private ownership has shifted to investment firms and real estate trusts (including Hancock operating under several corporate names and a restructured Weyerhaeuser company) that use more intensive cutting rotations. Investment firms and real estate trust interest in timberland ownership includes lowered tax liability due to abolition of Oregon's harvest severance taxes for large holdings, application of how corporate profit are federally taxed, and hedging against fluctuating national stock market (OPB et al. June 11, 2020).

The five coastal counties (Clatsop, Tillamook, Lincoln, Coos, and Curry) harvests in 2021 was 0.7 bbf (Table TS.21 and TS.22). Most of the harvests were from private and tribal lands. Tillamook County had the highest harvests at 0.19 bbf and Curry County had the least at 0.07 bbf. Clatsop County has the highest proportion of private timberlands along the Coast at 88.1% (Table TS.23). The average of the Coast timberland held in private ownership is 57.0%.

b) Economic Contributions From Commercial Timber

The statewide study OFRI (2019) was relied upon to provide timber economic contribution estimates. Paper mills and some secondary processing (14 percent for Columbia and 16 percent for Tillamook) were extirpated to avoid duplication in their accounting in other industry categories. The estimates were distributed to Coast counties using timber industry jobs by county. The estimates were converted to income using BEA wage averages. Finally, the dollar year 2016 was adjusted to be 2021 dollar year. The timber grown, harvested, and processed in the coastal counties generated an estimated $457 million income (Table TS.18). The largest amount is generated in Coos and Clatsop counties ($148 million and $106 million, respectively).

4. Travel Tourism

a) Summary

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. Sometimes these activities are categorized as heritage tourism, eco-tourism, and adventure tourism.[1] From a business perspective, tourism is an economic opportunity. For this study, tourism is defined as overnight visits as shown in Dean Runyan Associates (2022). Day travel estimates are not included because of data limitations according to the study authors. The travel tourism spending

1. For parts of the Oregon Coast in recent years, this also includes visits to casinos.

by coastal counties is shown for 2021 in Table TS.24. The highest spending occurred in Lincoln County ($605 million) and Clatsop County ($493 million).

b) Economic Contributions From Travel Tourism

The statewide study Dean Runyan Associates (2022) was relied upon to provide travel tourism economic contribution estimates. Statewide total earnings including the multiplier effects was apportioned to Coast counties using visitor spending. Further, a state-to-local economy economic effect ratio was used to account for the scale of the local economy. The total estimated income generated by these tourist-oriented industries is $284 million in Clatsop, $101 million in Tillamook, $262 million in Lincoln, $121 million in Coos, and $49 million in Curry County (Table TS.18). The estimates for the coastal part of Lane and Douglas counties are $87 million and $25 million, respectively.

5. Other Identified and Identifiable Industries

The other identified industries category has four subcategories: paper and paperboard mills; water transportation and marine cargo handling; ship building, steel fabrication, heavy manufacturing, and construction; and, mining. Not all businesses fall neatly into the other identified category. For example, some ship and boat repair is expected as a result of local commercial fishing operations. Such activities are therefore already included in the multiplier estimates of the commercial fishing industry. However, for some ports, such as Newport, Reedsport, and Coos Bay, a larger than usual amount of employment is generated by boat and ship building. This resulting income is therefore included as a basic industry.

Water and marine cargo handling is another basic industry that is important, especially for Coos and Clatsop counties. Paper and paperboard mills are very important to some coastal areas. This subcategory was not included in the timber industry category because the availability of timber does not seem to be the crucial ingredient in the placement of such paper mills. Availability of water and waste discharge are the important factors. The mining subcategory includes many quarry operations along the coast. There is an ore processing facility in Coos County. In sum, the other identified industries category generated $569 million income in coastal counties (Table TS.18).

The other identifiable category includes higher education, research, public health, tribal services, etc. Education from K-12 years and local government is not considered a basic industry, but college and specialized training centers are basic. Facilities such as the Oregon State University Astoria Seafood Laboratory; Hatfield Marine Science Center (including agencies such as NOAA MOC-P, USFWS, CEOAS, USFWS, etc.) in Newport; University of Oregon Institute of Marine Biology in Charleston; Job Corps Centers in Astoria and Yachats; and, the South Slough National Estuarine Research Reserve are included as a basic industry. Large public health businesses are considered basic because they can attract outside revenue for patient treatment. Tribal services not including casinos are largely federally funded so can be considered basic. For the same federally funded reason, military facilities such as the U.S. Coast Guard would be in this other identifiable category. Summing over all the institutions and businesses, the other identifiable category generated $1.3 billion income in Oregon coastal counties (Table TS.18).

The not identified industry category is a residual calculation to account for all of the income in the personal income net earnings component. This category would be inclusive of other small industries and services on the Coast that export goods and services and therefore generate income for coastal residents. It would include foundries, plastic injection mold manufacturers, machine builders, hardware and software computer developers, writers, or manufacturers of small handicrafts. Such small industries are important when summed together. However, they are too dispersed to be identified in this study. Commuting to out-of-area places of work would be another not identified category contributor. For example, workers residing in Clatsop County and working at the paper mill in Columbia County. Another example category contributor in Curry County would be commuting to the high security California State prison in northern California. Calculating the other not identified category generated $1.2 billion income in Oregon's coastal counties (Table TS.18).

6. Investment Income and Transfer Payments

Non-earned income can be considered as being derived from another area or in another time. Some of such income is a result of wages, salaries, and profits from past work. Investment income may come from other geographic areas in the form of pure geographic transfers. Another source may be inter-temporal transfers from future generations, i.e. borrowing.

The growth of non-earned income, particularly from retirement, represents a major and increasing source of purchasing power. Table TS.25 shows the difference in consumer expenditure patterns by age on a national basis. More research of these 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 age related local spending can stimulate employment and incomes.

a) Types of Investment Income

Investment 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. Private pensions such as 401k plan disbursements are another example of investments income.

b) Types of Transfer Income

These payments include Social Security, medical payments, and specific retirement programs for railroad workers, federal civilians, military personnel, and State and local government employees. Medical payments include Medicare, Medicaid and other vendor payments. Table TS.26 has itemization of the receipts for these personal income components.

There are transfer payment programs that are paid to support people through times of economic misfortune. The unemployment insurance payments are funded through payroll taxes. Public assistance is generally paid by federal, state, or local appropriations. The miscellaneous programs include other government payments to individuals such as federal education and training assistance payments. Farm program payments are not classified as government transfer payments. They are included in the personal income estimates as part of farm proprietor income.

There has been a dramatic increase in transfer payments as a percent of total personal income. This is at least partially a function of the increase in retirees in these areas. As transfer payments have gone up, the percent of total personal income that is "earned" (i.e., employee compensation and proprietor income) has fallen (Table TS.27).

Investment income and transfer payments range between 39 and 58 percent of the total personal income in the coastal counties of Oregon. This compares to about 34 percent for Oregon and 31 percent for the U.S. (Table TS.6).

C. Retirement Related Income Effects

Retirement income in coastal counties is related to income earned earlier by 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 of transfer payments and investments, but households comprised of non-retirement aged people also have some income from these sources.

The higher proportions of investment income and transfer payments may be viewed as an indicator that the retiree effect is much higher on the Oregon Coast than in the U.S. A retiree effect on coastal economies is calculated for this study to answer 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 base amount (Table TS.28). Then the percentage over and above the U.S. average is an estimate of the retiree effect. It is called potential purchasing because not enough is known about how much of receipts are saved and the spending patterns on the Oregon Coast. The definition for the local retiree effect ranges from eight percent for Clatsop County to 24 percent for Curry County.

Residents in smaller communities do not spend all of their income in these communities. They are likely to travel to other, larger areas for some purchases. An assumed out-of-area purchase factor was used in the economic base modeling whose results are shown in Table TS.18. A 10 percent placeholder assumption was used. This means 90 percent of spending for personal need

items, health care, transportation, entertainment, etc. are assumed to take place within local economies by retirees.

The in-migration of retirees has helped increase the source of income in coastal counties. The in-migration and the growth of income 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.

To properly identify the retiree 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 saved and/or spent in out-of-area economies is information critical to making definitive estimates of the retiree effect.

Research of the consumption patterns in local coastal areas as well as demand for local services by age and income groups is needed to provide information on business and local government fiscal impacts for this growing population cohort. For economic development policy in coastal communities, the comparison should be made between the benefits of attracting this cohort with the overall cost in public services, changes to land use demands, and other impacts.

V. PLANNING AND POLICY IMPLICATIONS

Coastal communities in Oregon and elsewhere are undergoing significant social and economic transition as traditional industries decline, new industries emerge, and population ages and expands with the flow of immigrants. Decreases in the overall supply of timber and short-term declines in demand for wood products has led to downturns in the wood products industries. Likewise, the importance of commercial fishing has been reduced due to increasing management emphasis on conservation and sustainability. There has been centralization and higher use of technology in processing. Industries benefiting from tourism and increased retirement age population have been expanding, leading to economic diversification in coastal communities. Many coastal communities have taken advantage of these trends by focusing on developing their tourism and other service industries as traditional natural resource based industries decline.

The following is a discussion of some social and economic trends that may affect coastal communities' growth. The discussion cites several important studies. Care was taken to ensure the information is within the context of authors' conclusions. The discussion is included to provide a larger view of social and economic forces that affect coastal communities.

A. <u>Social Trends</u>

The changing population base (global, U.S., and statewide) will influence Oregon's coastal communities. It will affect such areas as the composition and quality of the work force, social and health care needs, education, and housing.

In 2021, 52.9 million people 65 years of age and over were counted in the United States (Table TS.1b). This represents a 37.0 percent increase since 2010, when 38.6 million older people were counted. The change in Oregon mirrored the national trend. Oregon went from 518,786 (13.5 percent total) to 809,354 in 2021 (19.0 percent total) or 56.0 percent increase. The Oregon Coast 65 plus age population changed 49.5 percent during this period. There is no reason to expect these coastal demographic trends that have accompanied the State and national trends will not continue.

The labor force will be shaped primarily by three factors: the aging of the baby boomers, the shortage of entry-level workers due to the low birth rates, and the influx of women into the work force. Due to the scarcity of educated entry-level workers, employers will face increased costs of upgrading prospective hires through training and development, and producing compensation and career development packages to attract the best talent. Basic educational competency and literacy will become increasingly important. For children, this may mean much greater emphasis on early childhood education. Among early entrants into the job market and for the existing work force, it will mean lifelong training and retraining.

The demand for lower paying jobs may mean it will be necessary to allow more foreign labor supply. Local economic development programs may want to attract those workers and assist employers with their hiring responsibilities. There will also be the need for housing provision. The Alaska approach for requiring worker living accommodations at rural fish processing facilities can be looked at as a guidance example.

A greater proportion of women in the work force will mean that programs geared toward assisting their needs will be required. Child care, flexible work rules, pensions that accommodate absences for pregnancy leave, job sharing, and special training will be considered. Adult day care will become necessary since fewer women will be home to care for aging parents.

B. Natural Resources Use Trends

Natural resource extractions have provided fairly steady employment in periods of strong U.S. economic growth. However, declines in natural resources available for harvests and declines in prices can reduce the total employment of these sectors. Global supply/demand changes have great influence on the real prices offered for natural resource commodities. Shifting demographic factors are increasing the demand for trade and service jobs that support the tourist and retiree spending industries.

It's tempting to take short-term occurrences and predict long-term trends. However, both the long-term increase in supply due to increase in technology and productivity, and the slow increase in effective demand points to no expectation of real price increases for natural resource commodities.

C. Attracting Retirees

As the population ages, the bountiful coastal natural resources and temperate climate attract tourists as well as retiree settlement. Attracting retirees may be a policy that fits into some coastal communities' economic objectives. It is important to understand that the aged are not a homogenous group, and should not be treated as such. An often overlooked group is residents who grow older in their long-term home communities. Their characteristics and needs are different from in-migrating elderly and they require a different set of services and policies.

One study (Shields et al. 2002) of older movers finds that those who move for amenity or retirement reasons tend to be younger, wealthier, and more highly educated. These same studies also show that there are significant differences in income characteristics and spending habits between household types and these differences can be used to assess differences in economic and fiscal impacts. This age group also will invest in housing construction and upgrades, which impacts the construction sectors fiscal impacts similar to other age groups fueling community growth. The retiree age group does not have the same demand profile for public services like schools and health facilities; they will impact water, sewer, roads, and other infrastructure.

Income for retirees may include items different from the general population. Many retirees will own their own home and receive pensions, annuities, and other benefits that are not included in the usual definition of household income (Aizcorbe et al. 2003). Households of retirees are usually smaller than the average. Comparing household income will thereby distort the income as well as the expenditure descriptions.

Research of the consumption patterns in local coastal areas as well as demand for local services by age and income groups is needed to provide information on the business and local fiscal impact of this growing population. For economic development policy in coastal communities, the comparison needs to be made between the benefits of attracting this age cohort with the overall cost in public services, changes to land use demands, and other impacts.

D. Lessons Learned From Economic Dependence on Natural Resources

The economic growth of the American West was highly dependent on the availability of cheap or free natural resources. For most of the 19th century the emphasis on public land management was simply to move land from federal to private ownership. During this formative period, many Americans viewed federal lands as a vast resource to be settled and exploited. Driving economic interests were fur trading, homesteading, agriculture, mining, fishing, and forest use (Lynch and Larrabee 1992). Epperly et al. (April 2020) traces Oregon Coast's development spurred by natural resource availability.

The West's once-important natural resource industries declined dramatically in terms of jobs and incomes (Power and Barrett 2001). These industries historically supported European settlement. They are still widely believed to be the economic lifeblood of the region's rural areas and small cities. Their decline still provokes deep anxiety. The fear is the region will become more depressed and more residents will be forced to leave. Despite these fears, the changing industrial

structure has not triggered an overall decline in jobs, income, or residents in the region. On the contrary, as industrial transformation proceeded, in-migration, employment, and aggregate real income have increased.

Coastal and watershed habitat improvement projects can stimulate economic development via construction jobs and increased recreation opportunities. Thinning and forest fire protection measures on forest lands is needed to promote forest health. Such operations on public lands can also be an employment creator. Required protections for management of private timber lands will continue to make an important contribution to the region's economy.

Cogan Owens Cogan (2005a and 2005b) addressed how Oregon can replace jobs lost to the downturns in natural resource extraction activities. In particular, the study addressed how Oregon can leverage its assets and opportunities to commercialize research, transfer technology, and create "traded-sector" jobs in sustainable industries.[1]

Rural communities might be interested taking advantage of new opportunities in renewable energy generation (such as ocean wave and wind installations). When sited correctly and acceptable to the public and other land/water users, these new energy sources can provide new income sources. Surrounding communities can benefit from having new residents employed at equipment maintenance and facility operations jobs. In some cases, facilities can increase the property tax base. Incentivized initial development needs to be carefully weighed against long term impacts (such as interrupted pristine vistas and cost recovery electricity rate increases).

E. Challenges to Economic Development in Coastal Communities

The challenges facing economic development in coastal communities include dealing with its unique social and economic characteristics and geographical setting. The following challenges list are generalized and not all items are applicable to all coastal areas. Further, there are local, State and federal sponsored organizations with programs (both strategic planning and initiatives) that are addressing threats and opportunities for economic development.

- Problems of distance and accessibility to producer's markets.
- Narrower bases of economic activity, making it vulnerable to cyclical swings.
- Lower levels of available labor, skill sets, and education/training facilities albeit there are many organizational efforts to provide workforce training and education programs.
- Gaps in communication and transportation networks.
- Lower population densities that deny "critical mass" levels for certain businesses, public services, and organizations.
- Public services water supply and wastewater treatment infrastructure is at or reaching capacity for many Coast's providers.[2]

1. Traded-sector jobs are those resulting from the export of products or services. Traded-sector jobs increase wealth locally by importing it from outside the exporting state or region.
2. Capacity problems are due to equipment obsolescence, meeting new water quality supply and wastewater discharge standards, growing residential and industrial demand, failing/undersized distribution/collection lines, and water supply storage issues.

- Smaller tax bases, making the provision of public infrastructure and services more difficult to finance.
- Less access to and local control over private investment capital. Although, Oregon has active economic development districts that offer entrepreneurial support and small business financing.
- Unexplored need and impact assessment for the growing retirement age population.
- Movement towards technology for natural resource use, i.e. substitution of capital for labor will require a more educated workforce.
- Weather directed summer season tourism can overwhelm transportation systems and public services during the short summer season, putting emphasis on strategies using demand pricing and attraction promotions to favor shoulder seasons and winter events.
- Consolidation and centralization in commercial fishing, agriculture, and timber industries.
- Existing power rates are comparatively low and Bonneville Power Administration (BPA) pricing plan through 2025 is flat (BPA 2023). However, there may be local utility and BPA budget pressures due to purchase arrangements with renewable energy generating providers that will lead to higher rates.
- Low provision of EV charging stations and gaps in access to high speed broadband.
- Lack of affordable housing for lower wage level job workers.
- Climate change related sea level rise and flooding, planning and mitigation for shoreline erosion, and tsunami preparedness.
- Dependence on a small circle of leaders who are often volunteers serving a variety of roles.
- Dealing with higher quality of life (lower crime rates, cleaner environment, scenic views, and less congestion) requires sophisticated planning and management to preserve.

Oregon coastal communities in closer proximity to large metropolitan areas are faring better economically than the more remote communities. Natural resource extractive industries are still important in these areas, but the commodity value is no longer an automatic comparative advantage for economic development. These areas have other advantages for economic growth: high quality of life being in a rural setting, sufficient medical, shopping, and other services, and comparably low land values. They also have transportation systems that allow a convenient driving distance to higher levels of education, medical services, airports, etc.

Policies to increase economic activity should seek to smooth out the business activity seasonal roller coaster. Infrastructure requirements designed for peak load are expensive, but not providing services at the peak level discourages private investments.

In economic terms, an area may have a "comparative advantage" over another area for reasons of proximity to production inputs (land and natural resources), capital incentives, ready markets, labor availability, intermodal transportation systems, and communication networks. Sometimes not recognizing what are the comparative advantages in changing market conditions will lead development efforts astray. Strategies can be costly for communities when unrequited. Economic development promotion efforts especially those addressing trying to change comparative advantages are tricky and need to be well studied for feasibility.

Local economic policy should treat the community's site-specific characteristics, both public services and the quality of the natural and social environments, as important determinants of both citizen well-being and local economic vitality. In turn, visitors will be attracted from metropolitan areas for ecological and cultural based tourism. This will make public goods an important part of the local economic base, and attract desired economic growth. Economic growth can occur from distinctive places with a high quality of life:

- A resource base is still important, but no longer an automatic comparative advantage.
- Traditionally, more capital and more labor is what made economies grow. Technology is replacing those requirements.
- An extraordinary quality of life can attract and retain talented people.
- Knowledge businesses can occur anywhere, but adequate telecommunication infrastructure is required to take full advantage of these opportunities.
- Talented and skilled people are key to supporting a knowledge economy. Opportunities for educational enrichment are needed from kindergarten through life.

Large expanses of timberlands, water vistas, low density development, and footloose business opportunities (not tied to nearness of manufacturing input and market centers) will draw visitors and permanent residents. Knowledge based industries dependent on reliable and robust broadband services will be attracted to the quality of life amenities available to owners and workers in these coastal areas (Ozimek 2021). The biggest challenge will be to maintain these amenities as the region experiences growth.

There are ways that community-based initiatives that encourage development of sustainable communities can effectively deal with the above descried challenges. Oregon Coast community specific practices were determined and reported in an Oregon Transportation and Growth Management Program (TGM) sponsored by the Oregon Department of Transportation and the Department of Land Conservation and Development. The TGM produced significant information about growth management objectives and practices.

The TGM program helps governments across Oregon with skills and resources to plan long-term, sustainable growth in their transportation systems in line with other planning for changing demographics and land uses. TGM encourages governments to take advantage of assets they have, such as existing urban infrastructure, and walkable downtowns and main streets. The TGM program provides funds and services to Oregon cities, counties, tribes, and transit districts.

Another State initiated program to promote economic development was for Business Oregon to conduct market analysis for five emerging industries in 2022. Several of the completed analyses are applicable to Oregon Coast. For example, the "Oregon Ocean Resources and the Blue Economy Market Analysis" completed by Eastern Research Group, Inc. looks at trends, provides an opportunities assessment, and makes prescriptive recommendations to overcome weaknesses and challenges for coastal and ocean connected business development. The analysis adopted blue economy definition using NOAA's National Ocean Watch (ENOW) data set. The ENOW dataset contains economic data at the state and county level describing six sectors dependent on the ocean: living resources, marine construction, marine transportation, offshore mineral resources, ship and boat building, and tourism and recreation. NOAA has used NAICS codes to

define a set of industries that fall within each ocean economy sector. (The publication acknowledges the data set is incomplete when applied to Oregon Coast situation.) The publication describes possible funding sources for carrying out the prescribed economic development projects.

VI. BIBLIOGRAPHY

Aizcorbe, Ana M., Arthur B. Kennickell, and Kevin B. Moore, Division of Research and Statistics. "Recent Changes in U.S. Family Finances: Evidence from the 1998 and 2001 Survey of Consumer Finances." *Federal Reserve Bulletin.* January 2003.

Arnaut-Hull, Zoe. "The Impacts of the COVID-19 Pandemic on Tourism Along the Oregon Coast." Thesis Clark Honors College, University of Oregon. 2022.

Bonneville Power Administration (BPA). Rate Proceeding Administrator's Final Record of Decision BP-24-A-02. July 2023.

Cogan Owens Cogan. Key Market and Technology Trends in Natural Resources and Sustainable Development. Prepared for Oregon Economic and Community Development Department. http://www.econ.state.or.us/NatResTrends.pdf. June 30, 2005(a).

Cogan Owens Cogan. Strategic Assessment and Action Plan for Natural Resources and Sustainable Development. Prepared for Oregon Economic and Community Development Department. http://www.econ.state.or.us/NatResAction.pdf. June 30, 2005(b).

Davis, Shannon W. and Hans Radtke. A Demographic and Economic Description of the Oregon Coast. Prepared for the Oregon Coastal Zone Management Association. March 1994.

Dean Runyan Associates. The Economic Impact of Travel in Oregon, 2021p (Preliminary). Travel Oregon. May 2022.

Department of Administrative Services, Office of Economic Analysis. Oregon's Demographic Trends. July 2019.

Eastern Research Group, Inc. Oregon Ocean Resources and the Blue Economy Market Analysis. Prepared for Business Oregon. March 2023.

Epperly, Haley, Tommy Swearingen, and Shannon Davis. Socioeconomic Profile of the Oregon Coast: A Comparative Analysis. Oregon Department of Fish and Wildlife Marine Reserve Program. April 2020.

The Ford Family Foundation and OSU Extension Service. Oregon by the Numbers. August 2023.

Lynch, D.L. and S. Larrabee. Private Lands Within National Forests: Origins, Problems, and Opportunities. p 198-216 in Steen (1992). 1992.

Manderson, Alex, Oregon Department of Agriculture. Oregon shellfish production. Personal communication. May 26, 2023.

Oregon Department of Forestry. Annual Timber Harvest Reports. Via Internet http://www.odf.state.or.us/DIVISIONS/resource_policy/resource_planning/Annual_Reports/default.asp?id=401010205. 2005.

Oregon Department of Forestry. Oregon's Timber Harvests: 1849-2004. 2005.

Oregon Employment Department (OED). Migration Patterns in the Past Five Years. May 2023.

Oregon Forest Resources Institute (OFRI). Oregon Forest Facts. 2023-2024 Edition. January 2023.

Oregon Forest Resources Institute (OFRI). The 2019 Forest Report. Prepared by Oregon State University and University of Idaho. 2019.

Oregon Housing and Community Services. Report on Poverty 2004. 2004.

Oregon Public Broadcasting (OPB), Oregonian, and ProPublica. "Big money bought Oregon's forests. Small timber communities are paying the price" in Oregonian newspaper. June 11, 2020.

Oregon State University, College of Agricultural Sciences. Oregon Agriculture, Food and Fiber: An Economic Analysis. August 2021.

Ozimek, Adam. "The Future of Remote Work." Upwork Economist Report. 2021.

Power, Thomas Michael, and Richard N. Barrett. Post-Cowboy Economics: Pay and Prosperity in the New American West. Island Press. 2001.

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

The Research Group, LLC (TRG). Oregon Commercial and Recreational Fishing Industry Economic Activity Coastwide and in Proximity to Marine Reserve Sites for Years 2020 and 2021. Draft. Prepared for Oregon Department of Fish and Wildlife, Marine Reserve Program and Marine Resource Program. December 2023.

The Research Group, LLC and Hans Radtke. Oregon Seafood Supply Sources, Interim Technical Report from the Potential Economic Impact from Increasing Local Harvest Seafood Consumption on the Oregon Coast. Prepared for the Oregon Coast Visitors Association. June 2022.

Shields, Martin, Judith I. Stallmann, and Steven C. Deller. "Does Retiree Household Income Matter? Comparing the Economic and Fiscal Impacts of Low and High Income Retirees in Rural Wisconsin." *Community Economics*. Center for Community Economic Development; Community, Natural Resource, and Economic Development Programs;

and University of Wisconsin-Extension, Cooperative Extension Service. Newsletter No. 306. April 2002.

United Van Lines. 44th Annual National Migration Study for 2020. January 2021.

University of Montana, Bureau of Business and Economic Research. "Harvest and Industry." Via Internet http://www.bber.umt.edu/fir/HarvestOR.aspx. Downloaded January 2024.

Ward, Franklin R., Gary J. Lettman, and Bruce A. Hiserote. Oregon's Forest Products Industry: 1998. U.S. Forest Service, Pacific Northwest Research Station, and Oregon Department of Forestry. February 2000.

Wolf, Edward C. A Tidewater Place: Portrait of the Willapa Ecosystem. The Willapa Alliance. 1993.

Table TS.1a
Population 1970 to 2020 for U.S., Oregon, and Coastal Counties

	1970	1980	1990	2000	2010	2020
Clatsop	28,473	32,489	33,301	35,630	37,039	41,072
Tillamook	18,034	21,164	21,570	24,262	25,250	27,390
Lincoln	25,755	35,264	38,889	44,479	46,034	50,395
Coastal Lane	2,246	4,411	5,162	7,340	8,466	9,396
Coastal Douglas	4,039	4,984	4,796	4,370	4,154	4,310
Coos	56,515	64,047	60,273	62,779	63,043	64,929
Curry	13,006	16,992	19,327	21,137	22,364	23,446
Coast	148,068	179,351	183,318	199,997	206,350	220,938
Oregon	2,091,533	2,633,105	2,842,321	3,421,399	3,831,074	4,237,256
U.S.	203,211,926	226,545,805	248,709,873	281,421,906	308,745,538	331,449,281

Notes: 1. Cities of Florence and Reedsport represent coastal Lane and coastal Douglas counties, respectively.
Source: Census Bureau, decennial data and American Community Survey (ACS) 5-Year Estimates; and Portland State University Population Research Center.

Table TS.1b
Coastal Counties, State, and U.S. Age of Population in 2021

Age Group	U.S.	Oregon	Coast	Clatsop	Tillamook	Lincoln	Coos	Curry
0-17 years	74,234,075	861,027	35,887	7,819	4,947	8,034	11,792	3,295
18-29 years	53,193,417	659,554	23,258	5,343	3,048	5,261	7,560	2,046
30-49 years	85,530,684	1,155,956	44,922	9,853	6,109	10,404	14,243	4,313
50-64 years	63,878,684	780,729	43,934	8,166	5,776	11,236	13,338	5,418
65 years and over	52,888,621	809,354	60,774	10,247	7,748	15,968	18,221	8,590
Percent								
0-17 years	23%	20%	17%	19%	18%	16%	18%	14%
18-29 years	16%	15%	11%	13%	11%	10%	12%	9%
30-49 years	26%	27%	22%	24%	22%	20%	22%	18%
50-64 years	19%	18%	21%	20%	21%	22%	20%	23%
65 years and over	16%	19%	29%	25%	28%	31%	28%	36%

Source: Census Bureau, American Community Survey (ACS) 5-Year Estimates; and Portland State University Population Research Center.

Table TS.2
Unemployment Rate in 1970 to 2022

Year	Coastal Counties	Oregon	U.S.	Year	Coastal Counties	Oregon	U.S.
1970	8.0	7.1	4.9	2000	6.0	5.2	4.0
1971	8.8	7.6	5.9	2001	6.7	6.4	4.7
1972	7.8	6.8	5.6	2002	7.4	7.6	5.8
1973	6.9	6.2	4.9	2003	8.4	8.0	6.0
1974	8.8	7.5	5.6	2004	8.0	7.4	5.5
1975	12.8	10.6	8.5	2005	6.8	6.2	5.1
1976	10.5	9.5	7.7	2006	6.1	5.4	4.6
1977	8.2	7.4	7.1	2007	5.7	5.2	4.6
1978	6.5	6.1	6.1	2008	6.5	6.2	5.8
1979	8.3	6.8	5.8	2009	10.7	10.8	9.3
1980	11.2	8.3	7.1	2010	11.5	10.7	9.6
1981	13.0	9.9	7.6	2011	10.7	9.6	8.9
1982	13.7	11.5	9.7	2012	10.1	8.8	8.1
1983	13.2	10.8	9.6	2013	9.0	7.8	7.4
1984	12.1	9.4	7.5	2014	7.8	6.7	6.2
1985	11.1	8.8	7.2	2015	6.5	5.5	5.3
1986	9.4	8.5	7.0	2016	5.5	4.7	4.9
1987	7.3	6.2	6.2	2017	4.8	4.1	4.4
1988	7.2	5.8	5.5	2018	4.7	4.0	3.9
1989	7.5	5.7	5.3	2019	4.3	3.7	3.7
1990	7.0	5.5	5.6	2020	9.3	7.6	8.1
1991	7.1	6.0	6.8	2021	6.2	5.2	5.3
1992	8.8	7.5	7.5	2022	4.9	4.2	3.6
1993	8.9	7.3	6.9				
1994	7.0	5.5	6.1				
1995	6.5	4.9	5.6				
1996	7.8	5.6	5.4				
1997	8.4	5.6	4.9				
1998	8.0	5.7	4.5				
1999	7.4	5.5	4.2				

Notes: 1. Coastal counties are inclusive of Clatsop, Tillamook, Lincoln, Coos, and Curry.
2. There was a change in measuring unemployment rate starting in 1990. A time series model was used rather than a handbook method.

Source: Data years up to 1994 are from the Oregon Employment Department, and 1995 to present are from the U.S. Department of Labor, Bureau of Labor Statistics (BLS).

Table TS.3
Coast and Oregon Population Change by Components During Years 1940 to 2020

	Years	Population	Total Change	Net Migration	Natural Increase
Coast	1940	88,276			
	1950	119,003	30,727	19,915	10,812
	1960	139,908	20,905	-700	21,605
	1970	141,783	1,875	-9,193	11,068
	1980	169,956	28,173	20,916	7,257
	1990	173,360	3,404	-1,913	5,317
	2000	188,287	14,927	16,929	-2,002
	2010	193,730	5,443	10,383	-4,940
	2020	207,232	13,502	26,869	-13,367
Oregon	1940	1,090,000			
	1950	1,521,341	431,341	293,478	137,863
	1960	1,768,687	247,346	18,501	228,845
	1970	2,091,385	322,698	160,346	162,352
	1980	2,633,156	541,771	396,157	145,614
	1990	2,842,321	209,165	35,766	173,399
	2000	3,421,399	579,078	421,452	157,626
	2010	3,831,074	409,675	247,374	162,301
	2020	4,237,256	406,182	309,335	96,847

Notes: 1. Net migration equals in-migrants minus out-migrants.
2. Natural increase equals births minus deaths.
3. Coast does not include coastal Lane and coastal Douglas counties.

Source: Census Bureau, decennial data and American Community Survey (ACS) 5-Year Estimates; and Portland State University Population Research Center.

Table TS.4
Coastal Counties and Oregon Prosperity Measures in 2021

	Coast	State
Property Value		
Assessed value per capita		
Residential	$88,782	$56,461
Commercial/industrial/multi-housing	$21,864	$23,384
Utilities	$5,175	$5,796
Other	$31,379	$23,915
Total	$147,201	$109,555
Net property tax rate	1.301%	1.700%
Wealth		
Bank deposits per capita	$22,848	$26,782
Effective buying income per household (2023)	$73,974	$88,455
Retail sales per household (2017 data adjusted to 2021 dollars)	$37,321	$43,332
Average wage per worker	$45,670	$63,989
Housing Stock		
Median monthly housing costs to owners		
With mortgage	$1,520	$1,840
Without mortgage	$481	$587
Median monthly housing costs to renters	$953	$1,250
Median value of owner occupied homes	$286,588	$362,200
Percent of housing units built before 1970	36.3%	33.0%
Vacancy rate	23.9%	7.8%

Notes: 1. Average wage per worker is for covered employment in 2021.
2. Coastal counties are inclusive of Clatsop, Tillamook, Lincoln, Coos, and Curry counties, except bank deposits per capita and vacancy rate also include coastal Lane and coastal Douglas counties.

Source: Oregon Department of Revenue, Portland State University Population Research Center, FDIC, WSU, BLS, and Census Bureau, American Community Survey (ACS) 5-Year Panel Estimates.

Table TS.5
Second Homes as a Percent of Total Housing Units for Oregon and Coastal Counties in 2021

Oregon	3.2%
Clatsop	22.2%
Tillamook	35.5%
Lincoln	24.2%
Coastal Lane	12.0%
Coastal Douglas	3.1%
Coos	4.5%
Curry	9.9%

Source: Census Bureau, American Community Survey (ACS) 5-Year Panel Estimates.

Table TS.6
Sources of Total Personal Income by Component in 2021

	Clatsop		Tillamook		Lincoln		Coastal Lane		Coastal Douglas	
Components	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Total	2,184.6	100.0%	1,433.0	100.0%	2,669.4	100.0%	1,042.2	100.0%	319.3	100.0%
Investments	340.8	15.6%	271.1	18.9%	493.3	18.5%	227.8	21.9%	38.1	11.9%
Transfers	705.1	32.3%	506.8	35.4%	957.6	35.9%	572.1	54.9%	139.0	43.5%
Net Earnings	1,138.7	52.1%	655.1	45.7%	1,218.5	45.6%	242.3	23.2%	142.3	44.6%

	Coos		Curry		Coast		Oregon		U.S.	
Components	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Total	3,624.3	100.0%	1,256.2	100.0%	12,529.0	100.0%	261,546.5	100.0%	21,288,709.0	100.0%
Investments	632.9	17.5%	285.5	22.7%	2,289.5	18.3%	46,810.4	17.9%	3,921,286.0	18.4%
Transfers	1,390.9	38.4%	516.7	41.1%	4,788.2	38.2%	63,427.1	24.3%	4,617,314.0	21.7%
Net Earnings	1,600.4	44.2%	454.0	36.1%	5,451.3	43.5%	151,309.0	57.9%	12,750,109.0	59.9%

Note: Personal income in millions of nominal dollars.
Source: Study and U.S. Bureau of Economic Analysis.

Table TS.7
Total and Shares in Sources of Total Personal Income for Coastal Counties in 1969 to 2021

Year	Total Personal Income	Earnings	Investments	Transfers
1969	2.7	73%	16%	10%
1970	2.8	71%	17%	11%
1971	2.9	70%	18%	12%
1972	3.1	70%	18%	12%
1973	3.3	69%	18%	13%
1974	3.4	67%	19%	14%
1975	3.5	65%	19%	16%
1976	3.8	66%	19%	15%
1977	4.0	67%	19%	15%
1978	4.3	67%	19%	14%
1979	4.5	66%	20%	14%
1980	4.5	63%	22%	15%
1981	4.4	58%	25%	17%
1982	4.2	55%	27%	18%
1983	4.3	55%	27%	18%
1984	4.4	54%	28%	18%
1985	4.5	54%	28%	18%
1986	4.7	55%	27%	17%
1987	4.7	56%	27%	17%
1988	4.9	56%	26%	17%
1989	5.1	55%	28%	17%
1990	5.2	55%	27%	18%
1991	5.3	55%	26%	19%
1992	5.5	55%	25%	20%
1993	5.7	54%	26%	20%
1994	5.8	54%	25%	20%
1995	6.1	52%	27%	21%
1996	6.3	52%	27%	21%
1997	6.5	53%	27%	21%
1998	6.7	53%	26%	21%
1999	6.7	54%	23%	22%
2000	6.8	54%	24%	22%
2001	7.0	55%	22%	23%
2002	7.1	55%	21%	24%
2003	7.3	56%	21%	23%
2004	7.4	56%	21%	23%
2005	7.5	56%	20%	24%
2006	7.7	55%	21%	24%
2007	7.8	53%	23%	24%
2008	7.9	51%	22%	26%
2009	7.7	50%	21%	29%
2010	7.9	50%	20%	30%
2011	8.0	50%	20%	30%
2012	8.0	50%	20%	29%
2013	8.0	49%	21%	30%
2014	8.3	49%	21%	31%
2015	8.7	48%	21%	31%
2016	9.0	49%	21%	31%
2017	9.3	49%	21%	30%
2018	9.6	49%	21%	30%
2019	10.0	49%	21%	31%
2020	10.8	45%	19%	35%
2021	11.2	45%	18%	37%

Notes: 1. Total personal income in billions adjusted to Year 2021 dollars using the GDP implicit price deflator developed by the U.S. Bureau of Economic Analysis.
2. Coast is inclusive of Clatsop, Tillamook, Lincoln, Coos, and Curry counties.
Source: U.S. Bureau of Economic Analysis.

Table TS.8
Coastal Counties Income Maintenance in 1969 to 2021

Year	Per Capita Income Gap	
	U.S.-Oregon	Oregon-Coast
1969	769	2,602
1970	730	2,355
1971	559	2,725
1972	346	2,399
1973	342	2,512
1974	-231	2,651
1975	-375	2,398
1976	-816	2,023
1977	-697	1,858
1978	-785	1,859
1979	-700	1,792
1980	-149	2,315
1981	936	2,574
1982	1,783	2,342
1983	1,566	2,289
1984	2,106	2,764
1985	2,541	2,312
1986	2,670	2,048
1987	2,937	2,562
1988	3,002	3,298
1989	2,802	3,469
1990	2,740	4,033
1991	2,466	3,856
1992	2,738	3,888
1993	2,219	4,292
1994	1,873	4,786
1995	1,578	5,090
1996	1,311	5,423
1997	1,638	5,723
1998	2,495	5,844
1999	3,265	6,048
2000	3,497	6,980
2001	4,133	5,442
2002	4,466	4,532
2003	4,513	4,081
2004	4,490	4,670
2005	4,817	4,957
2006	4,423	5,912
2007	5,088	5,517
2008	5,037	5,548
2009	5,033	4,221
2010	5,709	3,750
2011	6,201	4,418
2012	6,076	5,222
2013	5,772	4,860
2014	5,316	4,911
2015	4,425	5,711
2016	3,942	6,126
2017	3,796	6,572
2018	3,341	6,994
2019	3,568	6,821
2020	2,765	7,089
2021	2,784	8,239

Notes: 1. Per capita income is average annual per capita personal income. This includes household income from all sources (net earnings, investments, and transfers) divided by population.
2. Dollars adjusted to 2021 using the GDP implicit price deflator developed by the U.S. Bureau of Economic Analysis.
3. Coastal counties are inclusive of Clatsop, Tillamook, Lincoln, Coos, and Curry.

Source: U.S. Bureau of Economic Analysis data; data adapted for report by Study authors.

Table TS.9
Coastal Counties Annual Covered Employment and Wages in 2003 to 2022

Year	Employment	Wages (millions)
2003	68,783	2,575
2004	70,111	2,642
2005	73,347	2,732
2006	74,142	2,771
2007	74,703	2,799
2008	73,952	2,801
2009	70,260	2,661
2010	69,603	2,655
2011	69,333	2,660
2012	69,439	2,669
2013	70,404	2,714
2014	71,024	2,772
2015	72,833	2,912
2016	74,418	3,018
2017	75,429	3,095
2018	76,643	3,184
2019	77,770	3,274
2020	71,745	3,210
2021	74,266	3,392
2022	75,826	3,615

Notes: 1. Covered wages are adjusted to 2021 dollars using the GDP price deflator developed by the U.S. Bureau of Economic Analysis. Year 2022 is nominal.
2. Coastal counties are inclusive of Clatsop, Tillamook, Lincoln, Coos, and Curry.
Source: U.S. Bureau of Labor Statistics.

Table TS.10
Household Income Distribution by County in 2021

	Median		Income				Income Distribution			
Area Name	Household Income	Households	Less than $15,000	$15,000 to $74,999	$75,000 or more	$100,000 or more	Less than $15,000	$15,000 to $74,999	$75,000 or more	$100,000 or more
Clatsop	$61,846	16,649	1,335	8,439	6,875	4,561	8.0%	50.7%	41.3%	27.4%
Tillamook	$55,730	11,381	1,103	6,429	3,849	2,285	9.7%	56.5%	33.8%	20.1%
Lincoln	$54,961	22,093	2,458	12,147	7,488	4,673	11.1%	55.0%	33.9%	21.2%
Coos	$52,548	27,627	3,604	14,771	9,252	6,163	13.0%	53.5%	33.5%	22.3%
Curry	$57,553	10,788	1,016	5,917	3,855	2,670	9.4%	54.8%	35.7%	24.7%
Coast	$55,917	88,538	9,516	47,703	31,319	20,352	10.7%	53.9%	35.4%	23.0%
Oregon	$70,084	1,658,091	145,513	736,143	776,435	552,924	8.8%	44.4%	46.8%	33.3%

Source: U.S. Census Bureau.

Table TS.11
Oregon Coast Public School Enrollment in 2009 and 2021

	2009		2021		Per Capita
	School	Enrollment	School	Enrollment	12-Year
County	Enrollment	Per Capita	Enrollment	Per Capita	Percent Change
Clatsop	4,954	0.134	4,835	0.116	-13.7%
Tillamook	3,278	0.130	3,274	0.118	-9.4%
Lincoln	5,179	0.113	5,206	0.102	-9.1%
Coastal Lane	1,345	0.082	1,196	0.069	-16.2%
Coastal Douglas	650	0.110	593	0.095	-13.5%
Coos	8,520	0.135	9,550	0.147	8.8%
Curry	2,457	0.110	2,060	0.087	-20.9%
Coastwide	26,383	0.122	26,714	0.115	-6.1%
Oregon	561,696	0.147	553,012	0.130	-11.9%

Note: School enrollment does not include private schools or home teaching. Grades are kindergarten through 12. Counts are during Fall of school year. Coastal Lane enrollment approximated using Siuslaw School District and coastal Douglas enrollment approximated using Reedsport School District. Population for coastal Lane and Douglas counties are for included zip code boundaries, with 2009 approximated by 2010.

Source: Enrollment: Oregon Department of Education, Office of Research, Assessment, Data, Accountability, and Reporting; population: U.S. Bureau of Economic Analysis and Census Bureau, American Community Survey (ACS) 5-Year Panel Estimates and 2010 Decennial data.

Table TS.12
Coast and Oregon Firm Type Distribution in Select Years

	Distribution of Employment by Firm Type					2021
	1977	1985	1994	2003	2021	Employment
Coast	100.0%	100.0%	100.0%	100.0%	100.0%	107,827
Wage and salary jobs	77.9%	73.7%	74.4%	73.2%	73.6%	79,387
Proprietors	22.1%	26.3%	25.6%	26.8%	26.4%	28,440
Nonfarm	19.7%	23.5%	23.5%	24.9%	24.9%	26,806
Farm	2.4%	2.8%	2.1%	1.9%	1.5%	1,634
Oregon	100.0%	100.0%	100.0%	100.0%	100.0%	2,559,698
Wage and salary jobs	82.2%	79.8%	80.5%	79.5%	76.2%	1,949,998
Proprietors	17.8%	20.2%	19.5%	20.5%	23.8%	609,700
Nonfarm	15.3%	17.4%	17.4%	18.6%	22.5%	575,026
Farm	2.5%	2.8%	2.1%	1.9%	1.4%	34,674

Notes: 1. Employment includes full-time and part-time jobs.
2. Coast is inclusive of Clatsop, Tillamook, Lincoln, Coos, and Curry counties.

Source: U.S. Bureau of Economic Analysis.

Table TS.13
Coast, Oregon, and U.S. Labor Force Participation and Share by Gender in 1980, 1990, 2000, and 2021

	1980		1990		2000		2021	
	Male	Female	Male	Female	Male	Female	Male	Female
Labor Force Participation								
Coast	66.9%	42.3%	64.5%	49.0%	62.7%	52.6%	54.7%	48.5%
Oregon	74.6%	50.2%	74.4%	56.7%	73.3%	59.2%	66.7%	58.4%
U.S.	77.4%	51.5%	75.5%	57.6%	72.2%	58.3%	67.7%	58.7%
Share of Labor Force								
Coast	59.9%	40.1%	55.0%	45.0%	52.5%	47.5%	51.8%	48.2%
Oregon	58.4%	41.6%	55.1%	44.9%	54.1%	45.9%	52.8%	47.2%
U.S.	57.6%	42.4%	54.3%	45.7%	53.2%	46.8%	52.7%	47.3%

Notes: 1. Labor force participation includes civilian non-institutional population 16 years and over, and share of labor force includes civilian labor force 16 years and over.
2. Coast is inclusive of Clatsop, Tillamook, Lincoln, Coos, and Curry counties.

Source: U.S. Census Bureau, decennial and American Community Survey (ACS) 5-Year Panel Estimates.

Table TS.14
Coastal Counties and Oregon Social Characteristics and Decadal Changes

Educational Attainment

Percent of Persons Over 25 Graduating From High School

	2021	2000
Coast	91.4%	83.4%
Oregon	91.5%	85.1%

Crime Rate

Index Crime Per 10,000 Persons

	2021	2003
Coast	245.8181	455.523
Oregon	304	526

Health

Primary Care Physicians Per 1,000 Persons in 2022 and Physicians Per 1,000 Persons in 2003

	2022	2003
Coast	0.7	1.5
Oregon	0.8	2.7

Inadequate Housing

Percent of Housing With Inadequate Plumbing

	2021	2000
Coast	0.4%	0.8%
Oregon	0.5%	0.5%

Notes: 1. Data for coastal counties are inclusive of Clatsop, Tillamook, Lincoln, Coos, and Curry counties.
2. The index crime statistic was created by the FBI to provide a general measure of crime rates across jurisdictions and over time. Index crimes include the person crimes of murder and non-negligent manslaughter, forcible rape, robbery, and aggravated assault and the property crimes of burglary, larceny-theft, motor-vehicle theft, and arson.

Source: Census Bureau, American Community Survey (ACS) 5-Year Panel Estimates; The Ford Family Foundation and OSU Extension Service (August 2023); and Oregon Office of Rural Health.

Table TS.15
Oregon Onshore Landed Volume by Major Fishery in 1981 to 2021

Year	Salmon	D. Crab	P. Shrimp	A. Tuna	Groundfish	P. Whiting	P. Sardine	P. Halibut	M. Squid	Other	Total
1981	7,009	6,981	25,904	7,693	81,835	360	--	150	0	17,614	147,546
1982	8,572	7,020	18,429	1,855	90,084	3	--	234	113	2,468	128,779
1983	2,669	5,332	6,532	3,397	77,369	143	--	579	297	3,654	99,972
1984	3,595	4,999	4,844	1,594	61,309	746	--	1,055	947	4,755	83,844
1985	6,570	7,358	14,840	1,518	61,920	1,950	--	813	1,752	2,525	99,245
1986	13,792	4,658	33,884	2,461	54,883	927	--	1,314	26	1,573	113,517
1987	15,094	5,991	44,589	2,288	67,176	403	--	916	0	1,925	138,383
1988	17,789	9,417	41,846	3,967	70,495	543	--	582	0	3,486	148,126
1989	11,724	11,676	49,129	1,080	81,047	196	--	916	96	9,544	165,408
1990	5,412	9,510	31,883	2,079	73,305	5,058	--	622	--	11,033	138,903
1991	5,344	4,924	21,711	1,259	80,847	29,109	--	544	0	6,136	149,875
1992	2,364	11,908	48,033	3,896	75,215	107,939	9	712	13	6,731	256,820
1993	1,848	10,456	26,923	4,754	81,303	78,970	1	663	131	5,246	210,294
1994	1,285	10,638	16,386	4,698	64,265	143,563	0	540	233	3,993	245,602
1995	2,862	11,954	12,106	5,034	55,066	147,355	--	543	246	3,408	238,574
1996	2,842	19,302	15,727	8,948	57,002	155,590	0	310	229	2,501	262,452
1997	2,245	7,777	19,560	9,168	52,703	162,782	0	377	271	5,996	260,877
1998	1,978	7,410	6,096	10,603	41,806	157,895	2	237	19	4,356	230,402
1999	1,560	12,347	20,451	4,553	44,119	160,965	1,710	350	2	3,337	249,394
2000	3,142	11,180	25,462	8,757	39,311	151,461	21,005	331	13	2,761	263,423
2001	5,266	9,690	28,482	8,959	31,645	117,673	28,176	253	4	3,523	233,671
2002	6,119	12,444	41,584	4,362	21,102	71,220	50,069	529	4	2,680	210,112
2003	6,722	23,930	20,546	9,165	25,934	80,648	55,683	342	27	2,635	225,632
2004	5,936	27,273	12,207	10,754	25,590	130,238	79,610	345	43	2,220	294,217
2005	4,688	17,730	15,784	8,087	27,231	135,503	99,450	357	32	3,577	312,439
2006	1,814	33,316	12,195	8,536	27,395	135,186	78,634	251	60	3,156	300,543
2007	1,384	17,026	20,125	10,468	30,881	94,360	92,911	244	1	3,596	270,997
2008	1,923	13,888	25,520	8,864	37,922	61,466	50,593	243	0	4,345	204,765
2009	2,312	21,854	22,153	10,072	41,400	62,988	47,357	234	0	2,442	210,811
2010	2,774	15,868	31,463	10,700	36,855	69,530	45,971	186	17	3,253	216,618
2011	2,422	17,260	48,314	9,682	28,936	151,464	24,302	217	0	3,222	285,821
2012	1,927	8,666	49,144	9,886	28,475	107,652	93,957	197	0	6,811	306,716
2013	3,513	26,073	47,629	10,205	31,111	167,499	57,956	205	0	5,198	349,390
2014	6,414	11,915	51,960	8,777	28,375	168,226	17,171	206	1	7,318	300,362
2015	3,159	2,287	53,516	7,577	32,976	94,907	4,699	263	--	4,502	203,885
2016	1,844	15,716	35,528	7,250	35,716	113,035	9	248	2,778	14,793	226,918
2017	1,196	19,016	23,057	4,745	48,374	201,499	3	269	0	4,196	302,355
2018	980	23,137	35,873	5,812	51,167	185,554	20	231	7,046	3,399	313,219
2019	1,003	19,035	26,852	6,571	48,430	222,202	28	252	5,248	4,817	334,438
2020	1,552	19,890	43,133	4,419	41,070	219,617	1	255	10,297	4,369	344,604
2021	1,790	24,301	46,670	3,220	45,360	184,089	26	255	7,838	4,241	317,790
Avg16-20	1,315	19,359	32,889	5,759	44,951	188,381	12	251	5,074	6,315	304,307

Notes:
1. Landings are reported in thousands of round pounds. Landing data is preliminary for 2021.
2. Salmon includes landings of steelhead, which have come exclusively from the tribal fisheries since 1975.
3. D. crab includes only Dungeness crab; p. shrimp includes only pink shrimp; and a. tuna includes only albacore tuna.
4. Pacific whiting (also known as hake) did not emerge as a major fishery species until after 1990. Groundfish in 2021 includes (thousands of round pounds) flatfish (10,895), sablefish (5,236), thornyheads (530), rockfish other than thornyheads (26,712), cods other than sablefish (795), and other (1,192).
5. Biological studies have found the northern population of the Pacific sardine has a three decade or so abundance cycle, and did not emerge as a major fishery species until 2000 in the latest cycle.
6. "Other" in 2021 includes landings (thousands of round pounds) of jack mackerel (1,921), hagfish (786), basket cockle (310), and other species (1,224). Shellfish volume excludes aquaculture production.

Source: PacFIN annual vessel summary, March 2008, April 2009, March 2010, July 2011, April 2013, March 2014, April 2015, November 2016, March 2017, June 2018, July 2019, and March 2023 extractions.

Table TS.16
Oregon Onshore Landed Value by Major Fishery in 1981 to 2021

	Price	Salmon		D. Crab		Pink Shrimp		Albacore Tuna		Groundfish		P. Whiting		P. Sardine		P. Halibut		Market Squid		Other		Total	
Year	Index	Real	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real	Nominal
1981	38.9	28,412	11,047	17,255	6,709	33,523	13,034	17,121	6,657	37,281	14,496	65	25	--	--	412	160	0	0	13,412	5,215	147,481	57,344
1982	41.3	29,928	12,356	18,246	7,533	22,451	9,269	2,980	1,230	48,597	20,064	0	0	--	--	645	266	22	9	2,359	974	125,228	51,702
1983	42.9	7,087	3,040	18,438	7,910	10,858	4,658	4,391	1,884	42,773	18,349	55	24	--	--	1,470	631	186	80	3,372	1,446	88,631	38,023
1984	44.4	11,515	5,118	17,427	7,746	4,843	2,153	1,997	888	33,705	14,981	132	59	--	--	1,828	813	450	200	4,666	2,074	76,563	34,031
1985	45.9	19,750	9,056	23,233	10,654	11,419	5,236	1,787	819	36,913	16,927	378	173	--	--	1,741	798	695	319	3,499	1,605	99,415	45,587
1986	46.8	32,451	15,181	14,080	6,587	38,756	18,131	2,832	1,325	37,094	17,353	128	60	--	--	4,017	1,879	6	3	2,890	1,352	132,254	61,871
1987	47.9	56,316	26,994	17,423	8,351	63,157	30,273	3,504	1,680	50,807	24,353	71	34	--	--	2,970	1,423	0	0	3,311	1,587	197,558	94,696
1988	49.6	78,627	39,020	22,730	11,280	34,557	17,150	6,707	3,328	48,427	24,033	83	41	--	--	1,767	877	0	0	3,795	1,883	196,694	97,612
1989	51.6	27,590	14,228	26,301	13,564	34,720	17,905	1,719	887	48,905	25,221	28	15	--	--	2,523	1,301	15	8	7,869	4,058	149,670	77,187
1990	53.5	17,890	9,573	27,199	14,554	29,208	15,629	3,296	1,764	43,258	23,147	410	220	--	--	2,082	1,114	--	--	10,669	5,709	134,013	71,710
1991	55.3	10,537	5,828	13,491	7,462	21,833	12,076	1,771	979	52,096	28,814	2,477	1,370	--	--	1,847	1,022	0	0	8,193	4,531	112,245	62,083
1992	56.6	6,517	3,687	23,664	13,388	30,380	17,187	7,015	3,969	47,276	26,745	8,977	5,078	--	--	1,463	828	3	2	5,698	3,223	130,994	74,106
1993	57.9	4,188	2,425	20,544	11,898	15,387	8,912	6,704	3,883	47,723	27,638	3,953	2,289	--	--	1,489	862	54	31	5,043	2,921	105,084	60,859
1994	59.1	2,467	1,459	24,451	14,462	16,275	9,626	6,340	3,750	48,639	28,769	7,266	4,298	--	--	1,716	1,015	60	36	3,798	2,247	111,012	65,662
1995	60.4	5,918	3,574	33,191	20,044	14,240	8,599	6,706	4,050	51,289	30,974	11,592	7,000	--	--	1,558	941	69	41	3,715	2,243	128,277	77,467
1996	61.5	5,347	3,288	42,572	26,180	15,223	9,362	12,082	7,430	49,232	30,275	6,743	4,147	--	--	1,144	704	60	37	1,954	1,202	134,357	82,623
1997	62.6	4,431	2,772	23,395	14,636	12,645	7,910	11,735	7,342	44,736	27,987	10,906	6,823	--	--	1,112	695	79	49	2,170	1,358	111,209	69,573
1998	63.2	4,095	2,590	19,793	12,519	5,042	3,189	10,341	6,540	30,816	19,491	5,939	3,756	1	1	511	323	6	4	2,516	1,591	79,060	50,005
1999	64.1	3,184	2,042	36,029	23,107	14,923	9,571	5,899	3,784	34,601	22,192	9,227	5,917	134	86	1,079	692	0	0	1,637	1,050	106,714	68,441
2000	65.6	6,142	4,029	36,141	23,709	15,537	10,192	11,415	7,489	37,152	24,373	9,270	6,081	1,751	1,149	1,064	698	3	2	3,063	2,010	121,540	79,732
2001	67.1	8,712	5,847	28,752	19,296	11,265	7,560	11,263	7,559	30,404	20,405	6,157	4,132	2,412	1,619	718	482	1	1	3,300	2,215	102,984	69,116
2002	68.1	10,178	6,933	30,476	20,761	16,665	11,353	4,333	2,952	20,860	14,210	4,726	3,219	4,139	2,819	1,488	1,013	1	1	2,772	1,888	95,636	65,149
2003	69.5	12,764	8,869	53,417	37,117	7,270	5,051	8,878	6,169	25,434	17,673	5,242	3,642	4,233	2,941	1,238	860	10	7	1,664	1,156	120,150	83,487
2004	71.3	18,216	12,995	60,210	42,954	6,645	4,740	12,818	9,145	22,907	16,342	6,505	4,641	6,826	4,870	1,226	875	9	7	1,628	1,161	136,990	97,730
2005	73.6	14,188	10,438	36,153	26,597	9,381	6,901	11,983	8,816	25,113	18,475	9,660	7,107	8,426	6,199	1,217	896	10	7	2,080	1,530	118,211	86,965
2006	75.9	6,512	4,940	70,932	53,807	5,925	4,494	10,635	8,067	26,277	19,933	10,512	7,974	4,934	3,743	1,010	766	21	16	1,569	1,191	138,328	104,931
2007	77.9	5,983	4,662	49,034	38,202	12,020	9,365	12,152	9,468	26,309	20,497	8,344	6,501	5,841	4,551	1,090	849	0	0	1,763	1,373	122,537	95,468
2008	79.4	5,341	4,240	36,741	29,164	17,561	13,939	13,418	10,651	33,944	26,943	8,604	6,830	7,137	5,665	1,140	905	--	--	2,535	2,012	126,422	100,349
2009	79.9	4,436	3,544	53,072	42,404	8,528	6,813	12,740	10,179	35,213	28,135	4,656	3,720	6,622	5,291	839	670	--	--	2,033	1,624	128,137	102,380
2010	80.9	9,520	7,698	40,497	32,746	13,582	10,982	15,363	12,422	31,695	25,629	6,695	5,414	6,495	5,252	916	740	--	--	2,610	2,111	127,373	102,996
2011	82.5	8,163	6,737	54,145	44,690	29,814	24,607	22,736	18,766	34,456	28,439	20,012	16,518	3,867	3,192	1,382	1,141	0	0	2,902	2,395	177,477	146,485
2012	84.1	8,235	6,925	34,623	29,114	29,357	24,685	17,930	15,077	28,345	23,834	17,375	14,611	10,676	8,977	1,147	965	--	--	2,596	2,183	150,284	126,370
2013	85.6	14,511	12,418	83,212	71,209	28,224	24,153	18,789	16,079	26,085	22,322	23,844	20,405	7,361	6,299	1,148	982	--	--	4,124	3,529	207,299	177,396
2014	87.2	23,087	20,124	55,054	47,988	33,643	29,326	12,646	11,023	25,021	21,810	20,964	18,274	4,040	3,522	1,318	1,149	0	0	3,339	2,911	179,113	156,127
2015	88.0	13,481	11,864	13,535	11,912	45,920	40,413	10,467	9,212	32,711	28,788	8,120	7,146	923	813	1,611	1,418	--	--	3,078	2,709	129,846	114,274
2016	88.9	9,347	8,308	62,706	55,735	28,232	25,093	14,066	12,502	35,989	31,988	9,781	8,694	0	0	1,567	1,392	1,261	1,121	4,165	3,702	167,114	148,536
2017	90.6	6,133	5,556	64,822	58,728	14,005	12,688	11,924	10,803	39,375	35,673	18,085	16,385	0	0	1,559	1,413	--	--	3,253	2,947	159,157	144,193
2018	92.8	5,995	5,562	79,767	74,012	29,001	26,909	10,479	9,723	34,101	31,640	17,713	16,435	3	3	1,326	1,230	3,312	3,073	3,602	3,342	185,298	171,929
2019	94.4	4,426	4,179	71,935	67,930	21,116	19,940	11,496	10,856	29,839	28,178	23,000	21,719	4	4	1,323	1,249	3,056	2,886	3,581	3,381	169,774	160,322
2020	95.7	5,320	5,092	76,066	72,798	23,594	22,580	7,370	7,053	19,286	18,457	15,901	15,218	--	--	1,239	1,186	6,269	6,000	3,460	3,311	158,505	151,694
2021	100.0	6,526	6,526	120,008	120,008	23,360	23,360	6,608	6,608	22,540	22,540	17,479	17,479	2	2	1,579	1,579	4,545	4,545	2,754	2,754	205,400	205,400
Avg16-20		6,244		71,059		23,190		11,067		31,718		16,896		2		1,403		2,780		3,612		167,970	

Notes
1. Nominal value is the revenue received by fishermen/harvesters in the landing year. Real value is in thousands of 2021 dollars adjusted using the GDP implicit price deflator developed by U.S. Bureau of Economic Analysis.
2. Groundfish in 2021 includes landings (real ex-vessel value in thousands) of sablefish ($6,579), flatfish ($7,015), thornyheads ($180), rockfish other than thornyheads ($6,967), cods other than sablefish ($1,417), and other ($383). 'Other' in 2021 includes (real ex-vessel value in thousands) hagfish ($791), bay clams ($772 including basket, butter, gaper), red sea urchin ($725), white sturgeon ($184), razor clam ($111), ghost shrimp ($77), and other species ($94). Shellfish value excludes private lands harvest.
3. Notes and sources from volume table concerning species composition also apply to this table.

Table TS.17
Commercial Fishing Landings by County by Major Fishery in 2021

County	Salmon	Dungeness Crab	Pink Shrimp	Tuna	Groundfish	Pacific Whiting	Other	Total	Aquaculture Oysters
	Volume in Round Pounds (thousands)								Gallons (thousands)
Clatsop	1,530.1	5,016.4	12,982.5	250.1	25,894.8	118,856.6	1,337.1	165,867.7	
Tillamook	18.9	1,760.2	0.0	408.1	66.4	0.0	728.5	2,982.1	
Lincoln	172.1	8,806.9	17,607.5	1,451.3	15,168.7	65,231.3	6,141.3	114,579.0	
Coastal Lane	1.1	0.7	0.0	3.7	0.1	0.0	4.7	10.2	
Coastal Douglas	3.1	920.4	272.5	74.9	344.1	0.0	2,726.9	4,341.8	
Coos	40.4	5,465.7	8,299.0	987.5	2,016.9	0.4	1,128.0	17,937.9	
Curry	24.8	2,331.0	7,509.0	46.9	1,868.9	0.3	292.7	12,073.6	
Coastwide	1,790.3	24,301.4	46,670.5	3,222.5	45,359.9	184,088.6	12,359.1	317,792.3	168.4
	Ex-vessel Revenue (thousands)								Sales (thousands)
Clatsop	$4,328.4	$24,904.8	$6,202.3	$537.3	$10,279.5	$10,881.9	$356.1	$57,490.4	
Tillamook	$161.8	$9,586.1	$0.0	$742.2	$166.5	$0.0	$768.4	$11,424.9	
Lincoln	$1,387.4	$42,933.1	$8,762.0	$3,174.1	$7,890.3	$6,596.6	$3,874.1	$74,617.6	
Coastal Lane	$6.9	$5.0	$0.0	$7.4	$0.2	$0.0	$9.4	$28.9	
Coastal Douglas	$33.5	$5,332.0	$148.0	$195.4	$708.7	$0.0	$1,850.4	$8,268.1	
Coos	$361.8	$25,951.2	$4,313.7	$1,860.7	$1,352.2	$0.0	$1,024.3	$34,864.0	
Curry	$245.8	$11,298.7	$3,934.1	$98.9	$2,142.3	$0.0	$996.7	$18,716.4	
Coastwide	$6,525.6	$120,010.7	$23,360.2	$6,616.0	$22,539.7	$17,478.5	$8,879.5	$205,410.2	$21,602.4

Note: Clatsop County includes Astoria port group, Tillamook County includes Tillamook port group, Lincoln County includes Newport port group, coastal Lane County includes Florence port code, coastal Douglas County includes Winchester Bay port code, Coos County includes Coos Bay port group other than Florence and Winchester Bay, and Curry County includes Brookings port group.

Source: PacFIN annual vessel summary, November 2023 extraction; Manderson (2023); and TRG and Hans Radtke (June 2022).

Table TS.18
Sources of Total Personal Income for Identified Sectors in 2021

	Clatsop		Tillamook		Lincoln		Coastal Lane		Coastal Douglas		Coos		Curry		Coastwide	
	Income	%	Income	%	Income	%	Income	%	Income	%	Income	%	Income	%	Income	%
Total Personal Income	2,184.6	100.0%	1,433.0	100.0%	2,669.4	100.0%	1,042.2	100.0%	319.3	100.0%	3,624.3	100.0%	1,256.2	100.0%	12,529.0	100.0%
1. Net Earnings	1,070.7	49.0%	604.5	42.2%	1,124.1	42.1%	190.2	18.3%	130.7	40.9%	1,468.7	40.5%	401.9	32.0%	4,990.8	39.8%
1.1. Identified industries	915.7	41.9%	469.6	32.8%	906.3	34.0%	157.9	15.1%	98.5	30.8%	1,006.2	27.8%	250.4	19.9%	3,804.5	30.4%
1.1.1. Commercial fishing	170.3	7.8%	24.4	1.7%	182.8	6.8%	0.1	0.0%	14.0	4.4%	81.9	2.3%	21.1	1.7%	494.5	3.9%
1.1.1.1. Onshore	144.2	6.6%	18.2	1.3%	123.0	4.6%	0.1	0.0%	13.8	4.3%	62.7	1.7%	20.4	1.6%	382.4	3.1%
1.1.1.2. Distant water and fish meal	26.1	1.2%	3.2	0.2%	58.8	2.2%	--	--	--	--	4.3	0.1%	0.6	0.1%	93.1	0.7%
1.1.1.3. Aquaculture	--	--	3.0	0.2%	1.0	0.0%	--	--	0.1	0.0%	14.9	0.4%	--	--	19.1	0.2%
1.1.2. Agriculture	11.9	0.5%	112.9	7.9%	7.1	0.3%	--	--	--	--	53.8	1.5%	11.6	0.9%	197.3	1.6%
1.1.3. Timber	31.1	1.4%	36.6	2.6%	29.9	1.1%	4.8	0.5%	14.0	4.4%	136.8	3.8%	28.4	2.3%	281.6	2.2%
1.1.4. Travel tourism	284.5	13.0%	101.4	7.1%	261.5	9.8%	86.8	8.3%	24.8	7.8%	120.7	3.3%	49.4	3.9%	929.2	7.4%
1.1.5. Other identified industries	207.6	9.5%	45.4	3.2%	135.8	5.1%	13.3	1.3%	10.9	3.4%	124.1	3.4%	31.7	2.5%	568.9	4.5%
1.1.5.1. Paper and paperboard mills	115.4	5.3%	--	--	75.3	2.8%	--	--	--	--	--	--	--	--	190.7	1.5%
1.1.5.2. Water transp. and marine cargo	5.6	0.3%	1.4	0.1%	--	--	0.5	0.0%	0.2	0.1%	16.6	0.5%	0.8	0.1%	25.1	0.2%
1.1.5.3. Ship building, fabric., heavy manuf. and constr.	85.9	3.9%	44.0	3.1%	57.6	2.2%	12.9	1.2%	10.7	3.3%	104.2	2.9%	28.7	2.3%	343.9	2.7%
1.1.5.3.1. Ship and boat building	0.2	0.0%	0.1	0.0%	1.5	0.1%	--	--	6.6	2.1%	17.5	0.5%	0.0	0.0%	25.8	0.2%
1.1.5.3.2. Fabrication, heavy manuf.	7.9	0.4%	2.6	0.2%	--	--	--	--	--	--	9.1	0.3%	0.6	0.0%	20.2	0.2%
1.1.5.3.3. Heavy constr.	77.8	3.6%	41.3	2.9%	56.1	2.1%	12.9	1.2%	4.1	1.3%	77.7	2.1%	28.1	2.2%	297.9	2.4%
1.1.5.4. Mining	0.8	0.0%	--	--	2.9	0.1%	--	--	--	--	3.2	0.1%	2.2	0.2%	9.2	0.1%
1.1.6. Other identifiable	210.2	9.6%	148.8	10.4%	289.2	10.8%	52.9	5.1%	34.9	10.9%	488.9	13.5%	108.2	8.6%	1,333.1	10.6%
1.1.6.1. Higher ed., research, and training	9.8	0.5%	4.2	0.3%	36.2	1.4%	--	--	--	--	16.8	0.5%	0.9	0.1%	67.9	0.5%
1.1.6.2. Public health	8.1	0.4%	4.5	0.3%	7.7	0.3%	--	--	17.6	5.5%	146.8	4.0%	36.4	2.9%	221.1	1.8%
1.1.6.3. Tribal	--	--	--	--	24.0	0.9%	3.0	0.3%	--	--	22.9	0.6%	--	--	49.8	0.4%
1.1.6.4. Other	192.3	8.8%	140.2	9.8%	221.3	8.3%	49.9	4.8%	17.2	5.4%	302.4	8.3%	70.9	5.6%	994.2	7.9%
1.2. Other not identified	155.0	7.1%	134.9	9.4%	217.8	8.2%	32.3	3.1%	32.3	10.1%	462.5	12.8%	151.4	12.1%	1,186.3	9.5%
2. Investments	362.9	16.6%	288.7	20.1%	525.4	19.7%	242.7	23.3%	40.6	12.7%	674.1	18.6%	304.1	24.2%	2,438.4	19.5%
3. Transfers	751.0	34.4%	539.8	37.7%	1,019.9	38.2%	609.4	58.5%	148.0	46.4%	1,481.4	40.9%	550.3	43.8%	5,099.7	40.7%
Total Employment	25,093		14,172		25,757		5,438		2,249		31,898		10,590		115,197	
Unemployment Rate	5.9		5.5		6.7		7.2		3.4		6.3		6.6		6.2	
Per Capita Personal Income	52,250		51,643		52,482		60,167		51,058		55,759		53,044		53,847	
Population	41,810		27,748		50,862		17,322		6,254		64,999		23,683		232,678	

Table TS.18 (cont.)

		Columbia	
		Income	%
Total Personal Income		2,843.3	100.0%
1. Net Earnings		1,652.8	58.1%
1.1. Identified industries		432.4	15.2%
1.1.1. Commercial fishing		--	--
1.1.1.1. Onshore	/7	--	--
1.1.1.2. Distant water and fish meal	/7	--	--
1.1.1.3. Aquaculture		--	--
1.1.2. Agriculture		51.0	1.8%
1.1.3. Timber		25.4	0.9%
1.1.4. Travel		22.6	0.8%
1.1.5. Other identified industries		125.2	4.4%
1.1.5.1. Paper and paperboard mills		21.4	0.8%
1.1.5.2. Water transp. and marine cargo		15.3	0.5%
1.1.5.3. Ship building, fabric., heavy manuf. and constr.		78.9	2.8%
1.1.5.3.1. Ship and boat building		--	--
1.1.5.3.2. Fabrication, heavy manuf.		18.8	0.7%
1.1.5.3.3. Heavy constr.		60.0	2.1%
1.1.5.4. Mining		9.7	0.3%
1.1.6. Other identifiable		208.2	7.3%
1.1.6.1. Higher ed., research, and training		2.0	0.1%
1.1.6.2. Public health		--	--
1.1.6.3. Tribal		--	--
1.1.6.4. Other		206.2	7.3%
1.2. Other not identified		1,220.5	42.9%
2. Investments		338.7	11.9%
3. Transfers		851.8	30.0%
Total Employment		18,115	
Unemployment Rate		5.7	
Per Capita Personal Income		53,573	
Population		53,074	

Notes:
1. Personal income in millions of nominal dollars. Dashes can represent positive values, but are not sufficiently significant to show.
2. Net earnings, investments, and transfers include the "multiplier effect."
3. Investment and transfer economic contributions in coastal counties includes an out-of-area purchase factor.
4. Population is from BEA estimates, except coastal Lane and Douglas counties are compiled by zip code from ACS.
5. Total employment (includes self-employment) is from BEA and unemployment rate is from BLS, except coastal Lane and Douglas counties are compiled by zip code from ACS.
6. For coastal Lane and Douglas counties, the ratio of coastal county to whole county per capita personal income from ACS was applied to whole county per capita personal income from BEA to determine coastal county total personal income. Transfers and investments are the share of coastal county household income from ACS, divided by share of whole county, times share of BEA total personal income for whole county. The coastal county personal income net earnings component was expanded by ratio of BEA county level net earnings by place of residence to place of work. Net earnings are the residual.
7. Commercial fishing onshore is the Florence and Winchester Bay portions of Coos Bay port group. Timber uses ACS S2403 "Agriculture, forestry, fishing and hunting" for coastal Lane and Douglas zip codes share of five whole coastal counties, with timber portion estimated by this table's share of timber, agriculture, and onshore fishing, times this table's timber income for five whole coastal counties. Commercial fishing for Astoria port group includes Clatsop and Columbia counties. Timber excludes secondary processing.

Source: Study, U.S. Bureau of Economic Analysis (BEA); Bureau of Labor Statistics (BLS); Census Bureau American Community Survey (ACS) 5-Year Estimates.

Table TS.19
Major Crops and Livestock Product Farm Receipts in 2017

Commodity Group	Clatsop	Tillamook	Lincoln	Coos	Curry	Coastwide	Columbia
Crops	1,443	2,219	(D)	9,111	9,602	22,374	(D)
Berries, fruit, and tree nuts	308	72	370	6,537	7,160	14,446	392
Field crops	407	982	0	1,924	43	3,357	182
Corn	0	232	0	(D)	0	232	(D)
Other incl. hay	407	519	(D)	1,924	43	2,893	(D)
Grain	0	232	(D)	(D)	0	232	182
Sorghum	0	0	0	(D)	0	0	0
Wheat	0	0	(D)	(D)	0	0	(D)
Horticulture	598	664	377	439	2,272	4,351	(D)
Vegetables	125	731	49	147	124	1,174	270
Animals	9,220	114,853	(D)	40,791	7,838	172,702	(D)
Dairy	4,870	106,132	0	20,308	0	131,311	0
Livestock	2,525	8,425	1,988	20,054	6,981	39,974	3,250
Cattle incl. calves	2,412	8,296	1,693	19,464	4,244	36,109	2,968
Sheep/goats	89	129	244	570	2,737	3,769	173
Hogs	24	(D)	51	21	(D)	96	108
Poultry incl. eggs	49	(D)	95	26	(D)	170	126
Specialty	(D)	2	(D)	(D)	(D)	2	(D)
Total	10,662	117,072	3,563	49,903	17,440	198,640	42,545

Notes: 1. Sales are in thousands of 2021 dollars adjusted using the GDP price deflator developed by the U.S. Bureau of Economic Analysis.
2. Excludes aquaculture.
3. (D) denotes not available due to confidentiality.

Source: USDA 2017 census of agriculture data.

Table TS.20
Oregon Timber Harvests in 1962 to 2021

Year	Harvest	Year	Harvest	Year	Harvest
1962	8,500.1	1982	5,757.9	2002	3,922.4
1963	8,675.4	1983	7,464.0	2003	4,001.8
1964	9,418.0	1984	7,549.8	2004	4,451.2
1965	9,393.6	1985	8,127.3	2005	4,411.4
1966	8,921.4	1986	8,742.6	2006	4,327.7
1967	8,357.2	1987	8,215.3	2007	3,798.6
1968	9,742.8	1988	8,615.1	2008	3,441.4
1969	9,150.4	1989	8,419.9	2009	2,748.5
1970	7,981.0	1990	6,218.6	2010	3,226.6
1971	9,027.7	1991	6,080.3	2011	3,649.1
1972	9,629.6	1992	5,742.4	2012	3,748.8
1973	9,364.6	1993	5,294.0	2013	4,199.2
1974	8,361.4	1994	4,167.2	2014	4,125.6
1975	7,370.7	1995	4,304.2	2015	3,788.1
1976	8,147.5	1996	3,922.3	2016	3,888.3
1977	7,876.4	1997	4,081.4	2017	3,851.0
1978	7,996.7	1998	3,531.9	2018	3,926.9
1979	7,694.3	1999	3,759.3	2019	3,628.3
1980	6,639.4	2000	3,853.5	2020	3,377.5
1981	5,695.2	2001	3,439.8	2021	3,902.4

Note: Harvest is in millions of board feet.
Source: Oregon Department of Forestry (2005) for years up to 2001, and University of Montana (2024) for years after 2001.

Table TS.21
Oregon Coastal County Timber Harvests in 1962 to 2021

Year	Clatsop	Tillamook	Lincoln	Coos	Curry	Coast
1962	236.4	232.3	387.9	523.0	491.2	1,870.8
1963	238.2	233.5	429.3	613.2	490.3	2,004.7
1964	291.3	239.5	468.5	742.3	395.3	2,136.9
1965	321.3	235.8	440.6	667.7	352.9	2,018.2
1966	262.1	212.4	429.6	631.7	357.1	1,892.9
1967	244.0	253.2	418.6	481.5	378.7	1,776.0
1968	380.7	263.8	453.1	380.5	401.5	1,879.6
1969	277.4	249.6	346.2	373.3	405.6	1,652.1
1970	303.2	213.0	226.6	549.6	277.3	1,569.7
1971	380.8	266.2	240.0	648.4	273.4	1,808.8
1972	297.9	252.6	271.5	643.4	281.0	1,746.3
1973	230.9	340.8	294.3	686.8	253.6	1,806.4
1974	157.4	262.4	256.2	517.9	206.6	1,400.5
1975	217.4	183.1	286.5	498.3	155.3	1,340.5
1976	279.1	262.8	294.9	501.1	157.0	1,494.7
1977	191.5	261.4	300.0	513.3	208.1	1,474.3
1978	210.1	219.0	340.5	571.8	235.7	1,577.2
1979	257.9	251.7	208.7	436.5	156.0	1,310.7
1980	199.4	232.8	173.2	297.0	169.3	1,071.8
1981	200.0	191.4	128.2	315.8	81.4	916.9
1982	179.6	134.5	171.5	344.8	82.4	912.7
1983	227.8	204.3	276.6	356.5	102.3	1,167.4
1984	212.3	206.9	301.6	420.0	95.0	1,235.9
1985	204.5	200.2	308.5	450.0	125.5	1,288.7
1986	172.9	188.6	292.8	491.2	163.1	1,308.6
1987	172.6	162.9	298.6	489.8	144.8	1,268.7
1988	228.1	207.1	388.6	514.9	168.8	1,507.5
1989	234.3	169.7	332.5	486.4	167.3	1,390.2
1990	132.7	139.2	294.7	409.4	122.5	1,098.5
1991	211.9	175.0	325.0	340.5	118.2	1,170.6
1992	211.0	133.0	356.5	348.1	108.3	1,156.9
1993	216.1	106.4	268.8	342.5	96.5	1,030.3
1994	211.6	136.6	132.6	242.1	69.7	792.6
1995	238.4	115.4	179.2	332.1	72.7	937.8
1996	186.3	107.1	154.0	341.5	68.6	857.5
1997	243.0	108.9	157.7	370.3	79.3	959.3
1998	186.5	93.3	106.4	241.4	50.2	677.7
1999	217.3	126.7	113.2	266.8	78.8	802.8
2000	246.0	121.0	139.0	328.7	85.5	920.2
2001	234.7	135.3	91.8	244.0	52.4	758.3
2002	307.0	146.4	164.7	334.3	72.6	1,025.0
2003	336.1	170.4	176.1	326.3	78.4	1,087.3
2004	314.6	167.1	183.6	356.7	84.7	1,106.7
2005	345.3	210.1	209.4	356.6	99.4	1,220.7
2006	343.3	210.3	212.1	363.8	91.8	1,221.3
2007	338.2	161.5	192.9	303.4	94.7	1,090.7
2008	417.3	182.3	145.2	281.8	76.6	1,103.2
2009	284.8	142.0	81.5	195.7	55.0	759.0
2010	282.9	192.4	121.4	233.6	64.7	894.9
2011	285.9	179.2	166.0	274.6	87.1	992.8
2012	277.3	162.8	169.4	275.1	92.0	976.5
2013	284.8	201.8	173.1	309.9	112.7	1,082.4
2014	272.1	176.5	207.7	281.4	116.8	1,054.4
2015	245.3	185.5	177.0	266.6	70.4	944.8
2016	274.9	210.3	178.4	261.6	95.0	1,020.2
2017	291.4	191.7	184.7	221.0	118.5	1,007.3
2018	231.4	154.0	179.8	254.0	112.4	931.6
2019	215.8	200.6	157.9	176.1	88.4	838.8
2020	234.9	157.7	153.2	236.5	64.5	846.8
2021	188.8	189.5	95.8	191.7	66.3	732.2

Notes: 1. Harvest is in millions of board feet.
2. Coast is inclusive of Clatsop, Tillamook, Lincoln, Coos, and Curry counties.

Source: Oregon Department of Forestry (2005) for years up to 2001, and University of Montana (2024) for years after 2001.

Table TS.22
Timber Harvest by County in 2021

Ownership	Clatsop	Tillamook	Lincoln	Coos	Curry	Coastwide	Columbia
Private & Tribal	120,999	105,565	75,448	167,976	61,133	531,121	137,830
State	66,506	77,733	6,959	10,889	1,480	163,567	2,999
Forest Service	0	4,443	10,322	2,886	2,490	20,141	0
BLM & Other Public	1,330	1,736	3,121	9,966	1,200	17,353	1,198
Total	188,835	189,477	95,849	191,717	66,303	732,181	142,027

Note: Amounts are in thousands of board feet (MBF) Scribner.
Source: University of Montana, Bureau of Business and Economic Research.

Table TS.23
Study Areas Estimated Timberland Ownership

	Ownership by Category		
County	Federal	Other Public	Forest Industry/ Other Private
Clatsop	0.8%	10.6%	88.1%
Tillamook	20.3%	44.8%	35.8%
Lincoln	31.0%	6.7%	63.1%
Coos	23.7%	8.3%	70.3%
Curry	64.8%	1.3%	38.8%
Coast	32.0%	13.1%	57.0%
Oregon	51.9%	3.4%	45.2%

Source: Davis and Radtke (1994).

Table TS.24
Travel Tourism Direct Spending by County in 2021

	Spending	Economic Contributions
Columbia	$39.2	
Clatsop	$492.5	
Tillamook	$202.7	
Lincoln	$605.1	
West Lane	$200.8	
West Douglas	$46.8	
Coos	$228.3	
Curry	$157.4	
Oregon	$10,893.0	$6,490.0

Note: 1. Dollars are in millions.
2. Economic contributions are expressed as income at the statewide level.
Source: Dean Runyan Associates (May 2022).

Table TS.25
Average Annual National Consumer Expenditures by Age Cohort in 2022

	All	By Age of Reference Person				
	Consumer Units	Under 25 Years	25-64 Years	65 Years and Older	55-64 Years	75 Years and Older
Income before taxes	$94,003	$48,233	$110,862	$60,359	$105,498	$49,392
Average annual expenditures	$72,967	$46,359	$80,980	$57,818	$78,079	$53,481
Food at home	8%	7%	8%	8%	8%	8%
Food away from home	6%	6%	6%	5%	6%	4%
Housing	33%	36%	33%	35%	31%	36%
Transportation	17%	21%	17%	14%	17%	12%
Health care	8%	3%	7%	13%	9%	14%
Entertainment	5%	4%	5%	5%	5%	4%
Miscellaneous	8%	11%	8%	6%	8%	5%
Cash contributions	4%	n/a	3%	8%	4%	n/a
Personal insurance and pensions	12%	9%	14%	6%	13%	4%
Total	100%	100%	100%	100%	100%	100%

Notes: 1. Miscellaneous includes apparel, personal care, reading, education, tobacco, and other expenditures.
2. The Consumer Expenditure Survey data includes the expenditures and income of consumers by age of reference person for national geographical basis.
3. Percents shown as "n/a" are suppressed due to the Relative Standard Error (RSE) being equal to or greater than 25 percent. Some components of miscellaneous row are also suppressed, and are excluded.

Source: Consumer Expenditure Surveys, U.S. Bureau of Labor Statistics, September, 2023.

Table TS.26
Personal Income Investment and Transfer Receipts Detail in 2021

Description	Coast	Oregon
Total personal income	100.0%	100.0%
Investments	18.1%	18.6%
Personal current transfer receipts	36.0%	23.9%
Current transfer receipts of individuals from governments	35.2%	23.2%
Retirement and disability insurance benefits	10.9%	6.3%
Social Security benefits	10.7%	6.1%
Excluding Social Security benefits	0.2%	0.2%
Medical benefits	13.1%	8.7%
Medicare benefits	7.5%	4.1%
Public assistance medical care benefits	5.5%	4.6%
Military medical insurance benefits	0.0%	0.0%
Income maintenance benefits	3.0%	2.1%
Supplemental Security Income (SSI) benefits	0.4%	0.2%
Earned Income Tax Credit (EITC)	0.3%	0.2%
Supplemental Nutrition Assistance Program (SNAP)	1.4%	0.9%
Other income maintenance benefits	0.9%	0.7%
Unemployment insurance compensation	2.1%	1.7%
State unemployment insurance compensation	2.1%	1.7%
Excluding state unemployment insurance compensation	0.0%	0.0%
Veterans' benefits	2.1%	0.9%
Education and training assistance	0.2%	0.2%
Other transfer receipts of individuals from governments	3.9%	3.1%
Current transfer receipts of nonprofit institutions	0.5%	0.5%
Current transfer receipts of individuals from businesses	0.3%	0.3%

Notes: 1. Coastal counties are inclusive of Clatsop, Tillamook, Lincoln, Coos, and Curry.
2. Federal tax code has changed in recent years making earned income tax credit only one of several sources for refundable tax credits. Other refundable tax credit includes child tax credit, EV purchase rebate, and education expenses. This has significantly increased the number of tax payers that have negative income tax liability, i.e. who receive federal payments following filing a tax return.

Source: U.S. Bureau of Economic Analysis.

Table TS.27
Study Areas Net Earnings as a Percent of Total Personal Income in 1969 to 2021

Year	Columbia	Clatsop	Tillamook	Lincoln	Coos	Curry
1969	79%	71%	71%	69%	77%	70%
1970	76%	70%	68%	67%	76%	67%
1971	75%	68%	69%	65%	74%	68%
1972	77%	69%	69%	65%	75%	68%
1973	77%	68%	68%	64%	74%	67%
1974	76%	67%	65%	63%	71%	63%
1975	74%	66%	62%	61%	68%	59%
1976	74%	66%	64%	63%	70%	61%
1977	74%	67%	64%	63%	71%	60%
1978	73%	67%	63%	63%	71%	60%
1979	74%	67%	62%	63%	70%	58%
1980	71%	65%	59%	60%	66%	55%
1981	69%	61%	54%	56%	61%	49%
1982	65%	58%	50%	52%	59%	45%
1983	65%	58%	50%	52%	59%	45%
1984	65%	58%	48%	51%	59%	44%
1985	65%	60%	49%	51%	58%	43%
1986	66%	61%	49%	52%	59%	44%
1987	67%	61%	50%	53%	60%	46%
1988	68%	62%	50%	53%	60%	46%
1989	68%	62%	49%	51%	57%	44%
1990	69%	62%	51%	52%	58%	46%
1991	69%	62%	52%	53%	57%	45%
1992	69%	62%	53%	53%	56%	44%
1993	69%	61%	52%	53%	56%	43%
1994	70%	61%	54%	53%	55%	43%
1995	69%	59%	51%	51%	53%	41%
1996	69%	59%	53%	51%	53%	40%
1997	71%	60%	53%	51%	54%	40%
1998	71%	61%	54%	53%	53%	40%
1999	72%	61%	56%	55%	54%	43%
2000	71%	61%	56%	55%	53%	44%
2001	71%	63%	55%	54%	53%	43%
2002	71%	63%	57%	54%	53%	44%
2003	70%	63%	57%	56%	55%	46%
2004	71%	63%	57%	56%	56%	46%
2005	71%	62%	56%	56%	56%	46%
2006	70%	61%	55%	56%	55%	46%
2007	69%	61%	53%	53%	53%	44%
2008	66%	59%	50%	51%	51%	43%
2009	63%	57%	48%	50%	49%	42%
2010	61%	56%	49%	50%	49%	43%
2011	62%	56%	50%	51%	49%	43%
2012	62%	56%	49%	51%	49%	43%
2013	61%	54%	49%	50%	49%	42%
2014	61%	53%	49%	49%	48%	40%
2015	60%	54%	48%	49%	47%	40%
2016	61%	54%	48%	49%	48%	40%
2017	61%	55%	47%	49%	48%	40%
2018	61%	55%	48%	49%	48%	40%
2019	62%	55%	48%	48%	48%	39%
2020	58%	51%	46%	45%	45%	37%
2021	58%	52%	46%	46%	44%	36%

Source: U.S. Bureau of Economic Analysis, Regional Economic Information System.

Table TS.28
Coastal Counties Retiree Effect Potential Purchasing in 2021

	U.S.	Oregon Coast	Clatsop County	Tillamook County	Lincoln County	Coos County	Curry County
Total personal income	$21,288,709.0	$11,167.4	$2,184.6	$1,433.0	$2,669.4	$3,624.3	$1,256.2
Investment and transfer	$8,538,600.0	$6,100.7	$1,045.9	$777.9	$1,450.9	$2,023.9	$802.2
Percent	40.1%	54.6%	47.9%	54.3%	54.4%	55.8%	63.9%
Investment and transfer personal income at the U.S. average proportion		$4,479.1	$876.2	$574.7	$1,070.6	$1,453.6	$503.9
Retiree effect over the U.S. average		$1,621.6	$169.7	$203.1	$380.2	$570.2	$298.3
Percent		14.5%	7.8%	14.2%	14.2%	15.7%	23.7%

Notes: 1. Millions of 2021 dollars.
2. Coastwide is exclusive of coastal Lane and Douglas counties.
3. Retiree effect is an index and does not represent total economic contribution from spending by retirement age residents.

Source: Study.

APPENDIX A

DATA SOURCES AND ECONOMIC IMPACT EXPANSION FACTORS

Table A.1
Crosswalk of Industry Categories to NAICS Classifications and Data Sources

Sectors	From
Net Earnings	
Commercial fishing	
Onshore	Pub 1; coastal Lane (Florence) and Douglas (Winchester Bay) use portions of Coos Bay port group landing revenue
Distant water and fish meal	Pub 1; coastal Lane and Douglas use Alaska crew and license registrations
Aquaculture	Pub 2, Pub 3 project model, and Pub 4
Agriculture	Pub 5, less portions of fishing/dairy from travel sector. Distribution to counties: Pub 6, shares of production revenue (net income + expenses). Convert job measurement to income using BEA county-level per job average wage.
Timber	Pub 7, less paper mills and secondary processing (14% for Columbia and 16% for Tillamook). Distribution to counties: Pub 7 jobs by county, times county BEA average wage; coastal Lane and Douglas use ACS employment by industry, zip code share of five whole coastal counties x above
Travel tourism	Pub 8. Distribution to counties: Pub 8 portion of spending by county, including West Lane and West Douglas for coastal Lane and Douglas
Other identified industries	
Paper and paperboard mills	ES202 private NAICS 322 (paper manufacturing)
Water transportation and marine cargo	ES202 private NAICS 483 (water transportation), NAICS 4883 (support activities for water transportation), and portion of NAICS 488210; and non-tribal government ownership ports (various NAICS) excluding ports in NAICS 71 or 72
Notes: Water transp. and marine cargo includes a portion of NAICS 488210 in Columbia County, and excludes a portion of NAICS 4883 that is double counted with fishing.	
Ship building, fabric., heavy manuf. and constr.	sum
Ship and boat building	ES202 private NAICS 3366 (ship and boat building)
Fabrication and heavy manuf.	ES202 private NAICS 4235 (metal and mineral (except petroleum) merchant wholesalers) and NAICS 333 (machinery manufacturing)
Heavy constr.	ES202 private NAICS 23 (construction)
Mining	ES202 private NAICS 21 (mining, quarrying, oil and gas extraction) and NAICS 327910 (portion of other nonmetallic mineral prod. manuf.)
Other identifiable	ES202 private NAICS 49 (transportation and warehousing), 51 (information), and 54 (professional, scientific, technical services); and NAICS 484 (truck transportation) other than 18% assumed log trucks in the timber sector; all government ownership other than: NAICS 71 and 72 (leisure and hospitality), ports, NAICS 1131 (timber tract operations), and 2% of NAICS 6113 (colleges, universities, and professional schools)
Higher ed., research, and training	ES202 non-tribal government ownership NAICS 611 (education) other than 6111 (elementary/high schools); and NOAA within NAICS 541990; and excluding 2% of NAICS 6113 (colleges, universities, and professional schools) that is already counted in timber sector
Public health	ES202 non-tribal government ownership NAICS 621 (ambulatory health care), 622 (hospitals), and 623 (nursing and residential facilities)
Tribal	ES202 tribal government ownership other than NAICS 71 and 72 (leisure and hospitality) already counted in travel sector
Other	residual

Notes: ES202 NAICS 71 and 72 (leisure and hospitality) include parks, museums, casinos, and other tourism. Ports use a variety of NAICS codes. It is assumed the portion of government tourism payroll from non-tourism visitors is small. Higher education, research, and training is non-tribal government and includes OSU Hatfield Marine Science Center, NOAA in Lincoln County, Oregon Institute of Marine Biology in Coos County, etc. and colleges. NAICS 1131 (timber tract operations) and 2% of NAICS 6113 (colleges, universities, and professional schools) are in the timber sector. ES202 NAICS 51 includes private research and communication. NAICS 54 includes AE, legal, and special education services. NAICS 49 includes transportation services (not marine). NAICS 484 less 18% includes truck transportation other than log trucks.

Assumed non-basic industries	ES202 private NAICS:	
	22 (utilities)	55 (management of companies and enterprises)
	42 (wholesale trade) other than NAICS 4235	56 (administrative and support and waste management and remediation services)
	44-45 (retail trade)	71 (arts, entertainment, and recreation)
	52 (finance and insurance)	72 (accommodation and food services)
	53 (real estate and rental and leasing)	81 (other services (except public administration))

Table A.2
Base and Expansion Factors for Estimating Industry Economic Impacts

Sectors	Clatsop	Tillamook	Lincoln	Coastal Lane	Coastal Douglas	Coos	Curry	Columbia	Oregon	U.S.
Net Earnings										
Commercial fishing										
Onshore	Pub 1	Pub 1	Pub 1	Pub 1	Pub 1	Pub 1	Pub 1			
Distant water and fish meal	Pub 1	Pub 1	Pub 1			Pub 1	Pub 1			
Aquaculture	Pub 4 "Other species, other gear":	0.92	0.78		repeat Coos	0.89				
Agriculture	Pub 5 (less fishing/dairy travel sector)									
	0.2% of Oregon	2.4% of Oregon	0.2% of Oregon			1.0% of Oregon	0.3% of Oregon	0.8% of Oregon		
Pub 4 state-to-local factor:	0.97	0.84	0.73			0.89	0.53	0.97		
Timber	Pub 7 county jobs x county BEA avg wage (less paper mills and secondary processing):									
BEA avg wage, 2016	44,049	43,371	42,138			45,227	37,389	39,793		
Travel tourism Pub 8:	4.5% of Oregon spending	1.9% of Oregon spending	5.6% of Oregon spending	1.8% of Oregon spending	0.4% of Oregon spending	2.1% of Oregon spending	1.4% of Oregon spending	0.4% of Oregon spending		
Pub 4 state-to-local factor:	0.97	0.84	0.73	0.73	0.89	0.89	0.53	0.97		
Other identified industries	ES202 payroll x RIMS II multiplier:									
Paper and paperboard mills	1.91		2.25					1.69		
Water transp. and marine cargo	1.73	1.50	1.57	1.50	1.60	1.95	1.71	2.14		
Ship building, fabric., heavy manuf. and constr.										
Ship and boat building	1.33	1.43	1.33	1.33	1.33	1.33	1.43			
Fabrication	1.43	1.43		1.43	1.43	1.43	1.43			
Heavy manuf.	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.38		
Heavy constr.	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.35		
Mining	1.59		1.59			1.59	1.59	1.42		
Other identifiable	ES202 payroll x RIMS II multiplier:									
Higher ed., research, training	1.28	1.28	1.28			1.28	1.28	1.20		
Public health	1.32	1.28	1.28		1.35	1.35	1.34			
Tribal			1.60	1.60		1.60				
Other	1.37	1.37	1.37	1.37	1.37	1.37	1.37	1.43		
Other not identified	residual	residual	residual	residual	residual	residual	residual	residual		
Investments and transfers income										
Household consumption multiplier	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.12	1.32	1.57
Out-of-area purchase factor	90%	90%	90%	90%	90%	90%	90%	90%		

Notes:
1. BEA RIMS II (Type II) multipliers are National I-O Data Year 2012, and Regional Data Year 2021. Regions are Coast (five whole coastal counties), Columbia County, Oregon, and Lower 48 Plus DC. Weighted averages of several multipliers are used for some sectors.
2. Employment and Wage (ES-202) data are derived from reports filed by all employers subject to unemployment compensation laws. Data was received from the Oregon Employment Department on April 21, 2023.
3. The state-to-local factor accounts for the trade leakage between spending that occurs somewhere in the state's economy or within the local economy. The factor is derived from Pub 4 data.
4. Aquaculture IO-PAC factors are for the shown fishery at the local economic level.

Publications:

commercial fishing	Pub 1	TRG (December 2023)
aquaculture	Pub 2	Manderson, Alex, Oregon Department of Agriculture (May 26, 2023).
	Pub 3	The Research Group, LLC and Hans Radtke (June 2022).
	Pub 4	Chen, Allen, Northwest Fisheries Science Center (June 6, 2023).
agriculture	Pub 5	Oregon State University, College of Agricultural Sciences (August 2021).
	Pub 6	USDA, National Agricultural Statistics Service (May 2023).
timber	Pub 7	OFRI (2019).
travel tourism	Pub 8	Dean Runyan Associates (May 2022).

APPENDIX B

POPULATION, HOUSING, GEOGRAPHIC, HEALTH, AND SOCIAL CHARACTERISTICS BY STATE, COAST, AND COASTAL COUNTY

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

	Clatsop	Tillamook	Lincoln	Coastal Lane	Coastal Douglas	Coos	Curry	Coast	Oregon
Total Personal Income in 2021 ($millions)	2,185	1,433	2,669	1,042	319	3,624	1,256	12,529	261,547
Investments	341	271	493	228	38	633	286	2,289	46,810
Transfers	705	507	958	572	139	1,391	517	4,788	63,427
Net earnings	1,139	655	1,219	242	142	1,600	454	5,451	151,309
Housing Characteristics in 2021									
Housing units	22,882	18,846	31,862	9,939	3,123	31,283	12,981	130,916	1,798,864
Occupied	16,649	11,381	22,093	8,443	2,709	27,627	10,788	99,690	1,658,091
Occupied by renter	28.3%	18.0%	21.5%	24.6%	28.7%	27.6%	19.9%	23.9%	34.0%
Vacant	6,233	7,465	9,769	1,496	414	3,656	2,193	31,226	140,773
Vacant for second home	22.2%	35.5%	24.2%	12.0%	3.1%	4.5%	9.9%	17.9%	3.2%
Vacant - current residence elsewhere	1.0%	5.0%	2.5%	0.6%	0.8%	0.6%	0.9%	1.8%	0.4%
Population Characteristics in 2021									
Population	40,720	27,129	49,866	17,322	6,254	64,619	23,234	229,144	4,207,177
By age									
Under 18	18.6%	18.9%	16.9%	12.6%	19.3%	18.4%	14.3%	17.4%	20.8%
Age 18-64	58.9%	55.3%	53.7%	47.1%	51.2%	55.6%	51.6%	54.6%	61.6%
65 and over	22.5%	25.8%	29.4%	40.2%	29.5%	25.9%	34.0%	28.1%	17.7%
Median age	44.5	47.7	51.6	n/a	n/a	48.4	56.2	n/a	39.6
By race									
White alone	88.3%	90.0%	85.9%	91.5%	93.0%	87.7%	89.5%	88.3%	80.7%
Components of population change				Florence	Reedsport				
Total change, 2020-2021	356	238	508	204	1	225	216	1,543	29,364
Net migration	464	392	934	n/a	n/a	784	624	3,198	30,767
Natural increase	-108	-154	-426	n/a	n/a	-559	-408	-1,655	-1,403
Total change, 2010-2020	2,416	1,280	2,271	930	156	272	641	6,880	436,981
Net migration	2,184	2,190	5,583	n/a	n/a	5,798	4,492	20,247	340,134
Natural increase	232	-910	-3,312	n/a	n/a	-5,526	-3,851	-13,367	96,847
Income Characteristics in 2021									
Per capita income	34,387	31,501	32,776	34,838	26,849	31,824	34,302	32,792	37,816
Families in poverty	4.5%	9.2%	8.4%	9.3%	7.4%	11.7%	7.9%	8.8%	7.5%
Households with earnings	71.1%	64.3%	64.0%	50.7%	59.4%	61.8%	56.2%	62.5%	76.2%
Households with Social Security	40.7%	47.6%	49.2%	62.1%	52.8%	48.3%	56.9%	49.4%	32.9%
Households with retirement income	27.8%	32.6%	32.3%	40.7%	37.0%	31.2%	33.1%	32.2%	23.1%
Households with food stamps/SNAP benefits	15.7%	16.8%	18.0%	17.1%	17.9%	23.1%	15.5%	18.5%	16.0%
Educational Attainment in 2021									
Persons over 25 with high school education	92.1%	90.7%	92.7%	91.9%	90.4%	90.0%	91.9%	91.4%	91.5%
Persons over 25 with bachelors education	25.8%	22.4%	28.6%	25.9%	11.9%	20.0%	24.1%	23.8%	35.0%
Household Size in 2021	2.40	2.33	2.23	2.11	2.28	2.30	2.13	2.27	2.48
Labor Force Characteristics in 2021									
Participation rate	57.4%	50.5%	50.6%	38.1%	44.7%	51.3%	45.5%	50.3%	62.5%
Geographic Characteristics									
Area (square miles) in 2020	828	1,102	981	515	321	1,596	1,628	6,972	95,996
Density (persons per square mile) in 2021	49.2	24.6	50.8	33.7	19.5	40.5	14.3	32.9	43.8
Commute Patterns in 2021									
Did not work at home	91.8%	91.5%	89.5%	89.7%	87.0%	92.8%	83.5%	90.5%	87.5%
< 10 min.	26.3%	32.6%	27.9%	36.6%	42.7%	28.7%	38.5%	30.1%	15.9%
10-29 min.	52.1%	45.4%	52.5%	44.9%	32.5%	50.5%	41.0%	49.1%	52.7%
30+ min.	21.6%	22.0%	19.6%	18.5%	24.8%	20.7%	20.5%	20.8%	31.4%
Worked at home	8.2%	8.5%	10.5%	10.3%	13.0%	7.2%	16.5%	9.5%	12.5%
Land Ownership (1975)									
Federal	0.8%	20.3%	31.0%	n/a	n/a	23.7%	64.8%	32.0%	51.9%
BLM	0.1%	6.7%	3.8%	n/a	n/a	16.0%	6.5%	7.7%	25.3%
USFS	0.0%	12.7%	26.4%	n/a	n/a	5.4%	53.4%	22.0%	24.1%

Table B.1 (cont.)

	Clatsop	Tillamook	Lincoln	Coastal Lane	Coastal Douglas	Coos	Curry	Coast	Oregon
BIA	0.0%	0.0%	0.0%	n/a	n/a	0.0%	0.0%	0.0%	1.2%
Other	1.2%	0.0%	0.0%	n/a	n/a	0.0%	0.0%	0.2%	1.1%
State	9.8%	44.1%	3.6%	n/a	n/a	6.2%	1.1%	11.8%	2.5%
County	0.8%	0.7%	3.1%	n/a	n/a	2.1%	0.2%	1.3%	0.9%
Private	88.1%	35.8%	63.1%	n/a	n/a	70.3%	38.8%	57.0%	45.2%
Assessed property value per capita in 2021									
Residential	96,660	135,855	112,063	n/a	n/a	53,921	67,003	88,782	56,461
Commercial/industrial/multi-housing	26,784	16,184	25,833	n/a	n/a	17,312	24,021	21,864	23,384
Utilities	6,704	7,054	6,312	n/a	n/a	3,611	2,214	5,175	5,796
Other	37,648	43,436	27,550	n/a	n/a	18,171	51,266	31,379	23,915
Total	167,796	202,529	171,759	n/a	n/a	93,014	144,504	147,201	109,555
Net property tax rate	1.391%	1.132%	1.512%	n/a	n/a	1.308%	0.867%	1.301%	1.700%
Health and Social Characteristics in 2021									
Prim. physicians per 1,000 persons (2022)	0.8	0.6	0.7	0.8	0.9	0.9	0.5	0.7	0.8
Mortality rate per 100,000 persons (2023)	1,029.3	1,195.1	1,293.0	1,877.9	1,900.0	1,512.3	1,769.4	1,405.5	909.9
Preventable hospitalizations per 1,000 persons	8.2	7.1	8.6	7.3	15.0	12.1	8.4	9.4	5.7
Uninsurance	4.8%	6.1%	6.1%	n/a	n/a	4.4%	4.4%	5.1%	4.6%
Bank deposits per capita ($)	22,968	22,383	24,084	30,129	19,439	19,705	24,761	22,848	26,782
Housing w/ inadequate plumbing	0.2%	0.3%	0.5%	0.7%	0.0%	0.5%	0.5%	0.4%	0.5%
Public land (2020)	26%	52%	32%	n/a	n/a	30%	55%	40%	56%
Rural population	39%	61%	38%	n/a	n/a	38%	52%	43%	20%
Foster care rate per 1,000 persons	8.4	5.5	11.1	n/a	n/a	11.0	6.7	9.3	6.4
Index crime per 1,000 persons	30.2	18.8	24.6	n/a	n/a	26.9	15.0	24.6	30.4
Voter participation (2022 general election)	66.0%	70.3%	67.5%	n/a	n/a	65.2%	67.3%	66.8%	66.9%

Notes:
1. Coast is a geographic region comprised of five whole counties (Clatsop, Tillamook, Lincoln, Coos, and Curry), and coastal portions of Lane and Douglas.
2. Total personal income is in millions of 2021 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 2017-2021 panel in 2021 dollars.
6. Poverty proportions are from ACS 2017-2021 panel. 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 2017-2021 panel (SS – social security, SNAP – food stamp).

Sources: Decennial Census 2020, and ACS panels for 2017-2021. Components of population change, and 2010-2021 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, mortality, uninsurance. FDIC for bank deposits. U.S. Bureau of Economic Analysis for total personal income. Land area by zip code for coastal Lane and Douglas is from https://www.unitedstateszipcodes.org, accessed Oct. 2023. Public land (2020), rural population, foster care, crime, and voter participation from Oregon by the Numbers, by The Ford Family Foundation and OSU Extension Service, August 2023.

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.