

When IMPLAN Can't Cut It Modeling the WOPR

Dan Green, EAS

The Issues:

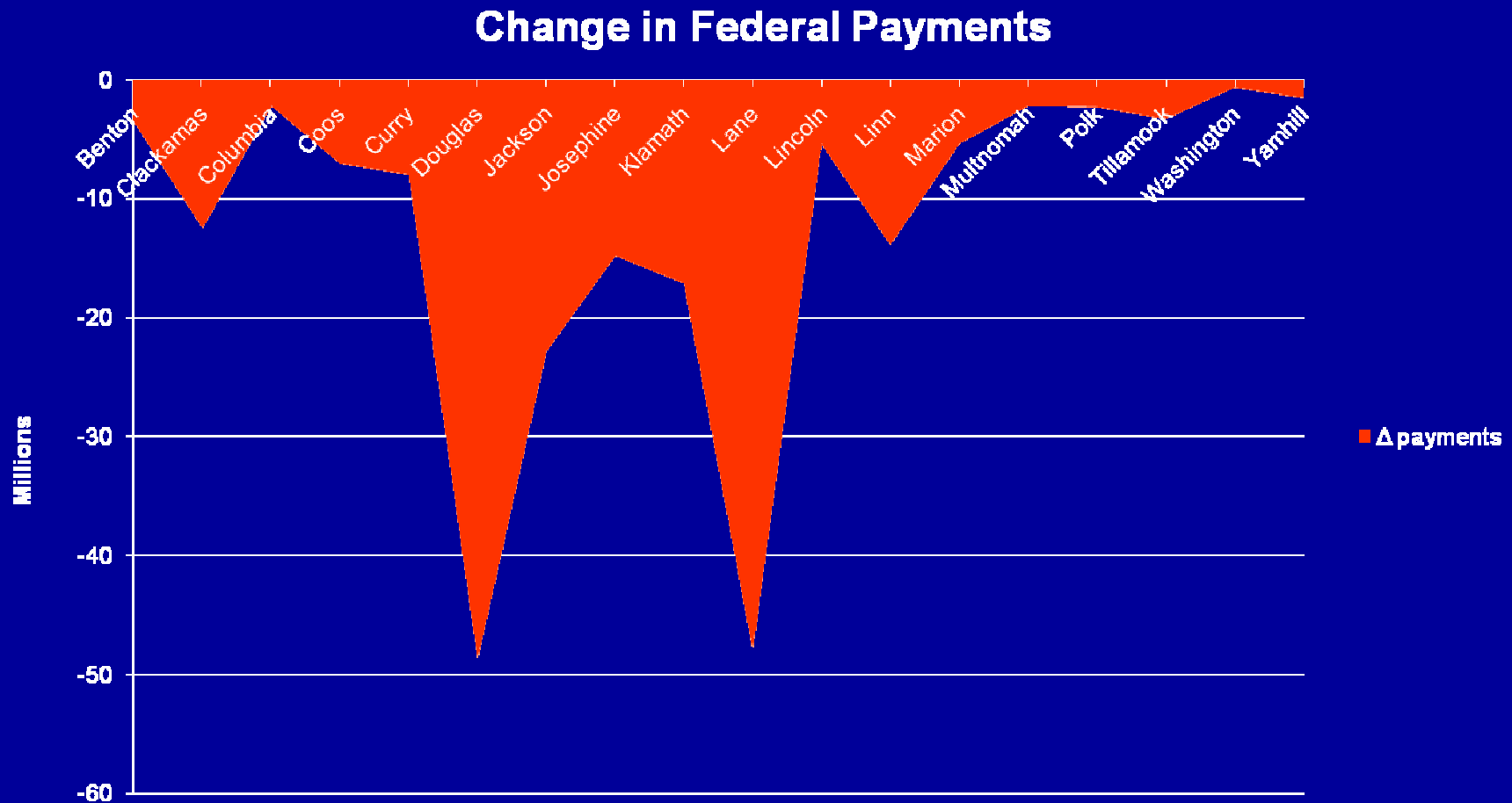
The Known

- Major Changes in Federal Forest Funds
- Major Changes in Timber Harvest
 - O & C lands
 - State forests

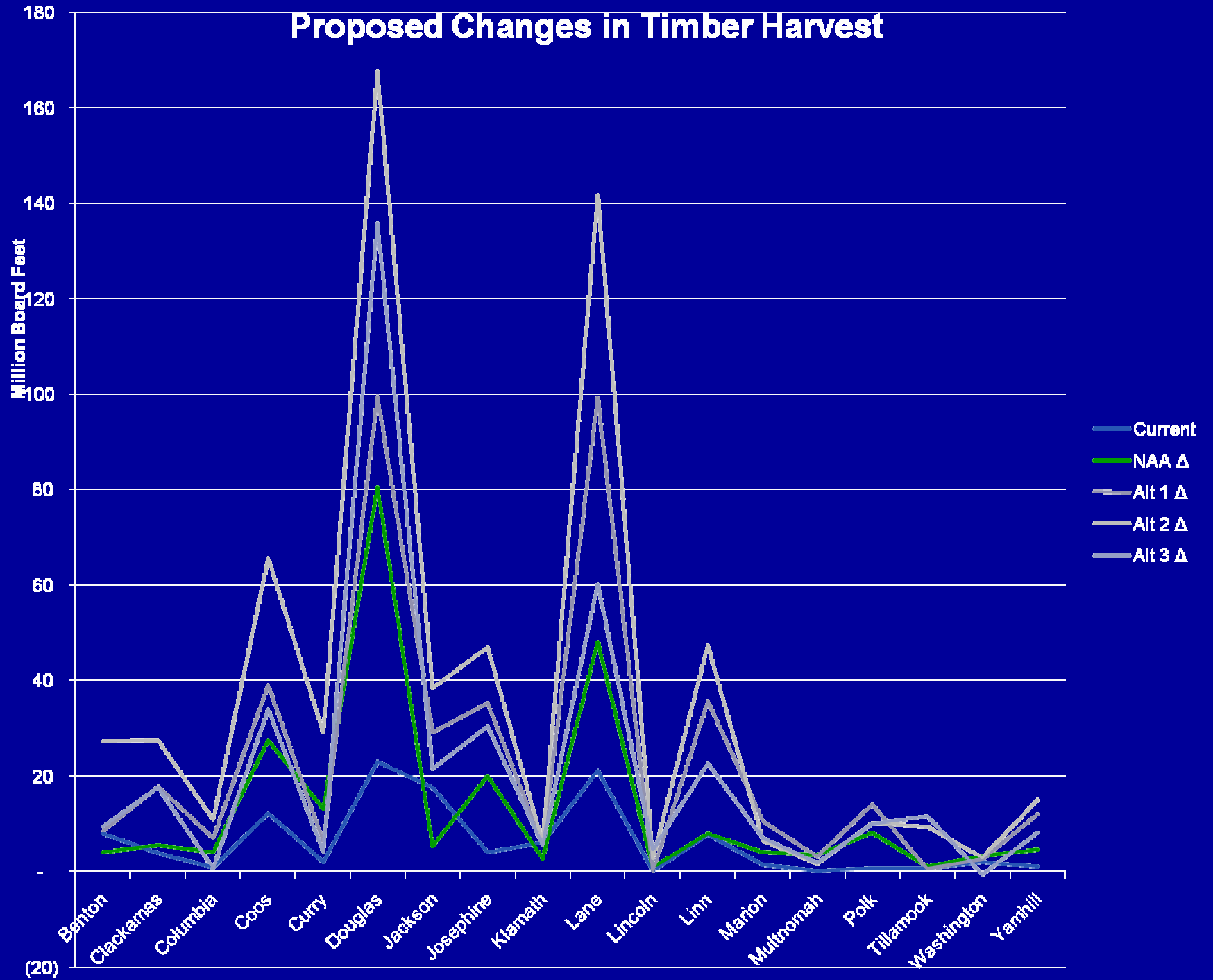
The Unknown

- Local Government Impacts
- Logging and Mills Impacts
- Other Sectors of the Economy

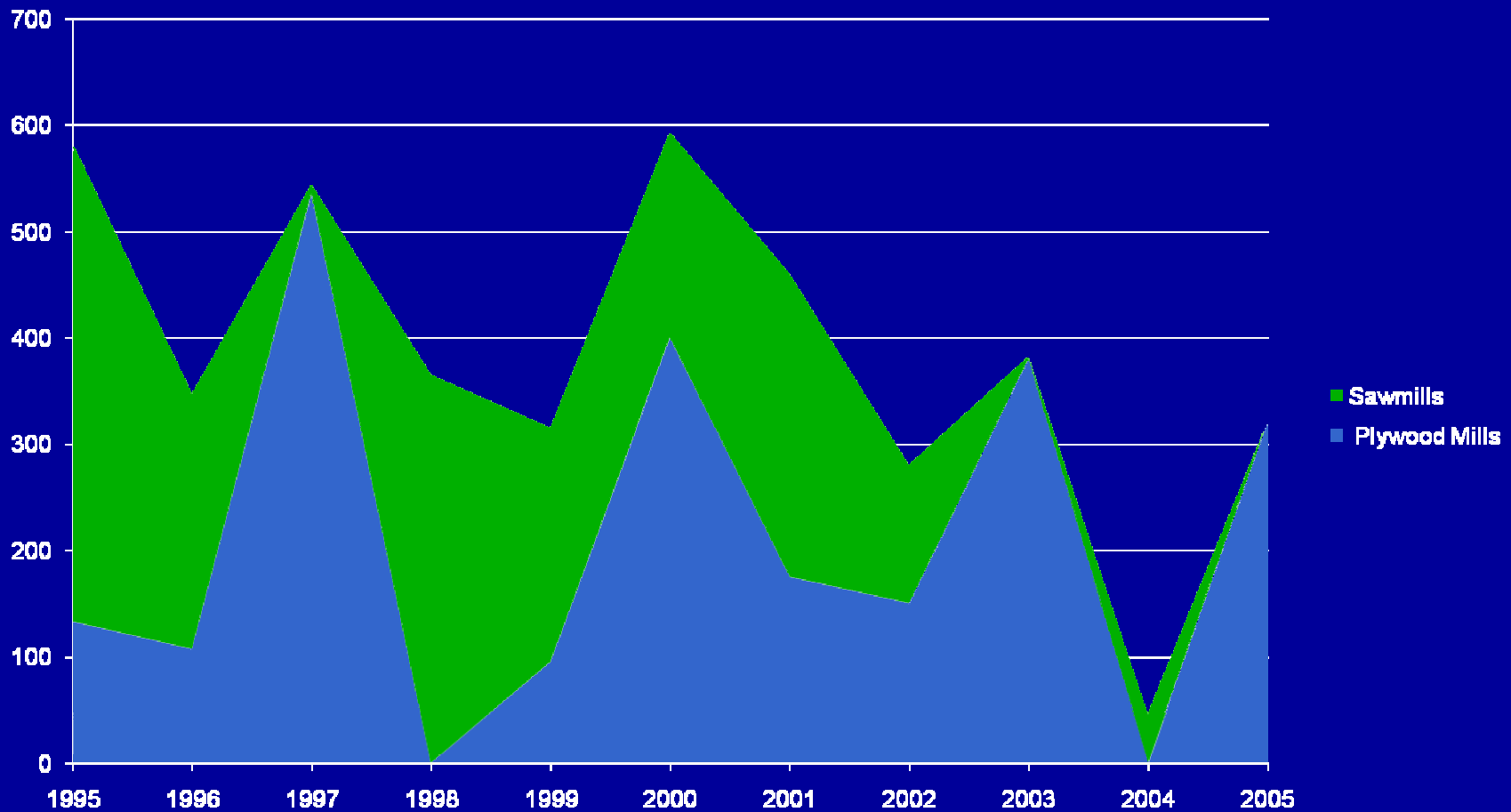
Change in Federal Payments (\$Millions) Secure Schools and Community Stability Act



Proposed Changes in Timber Harvest



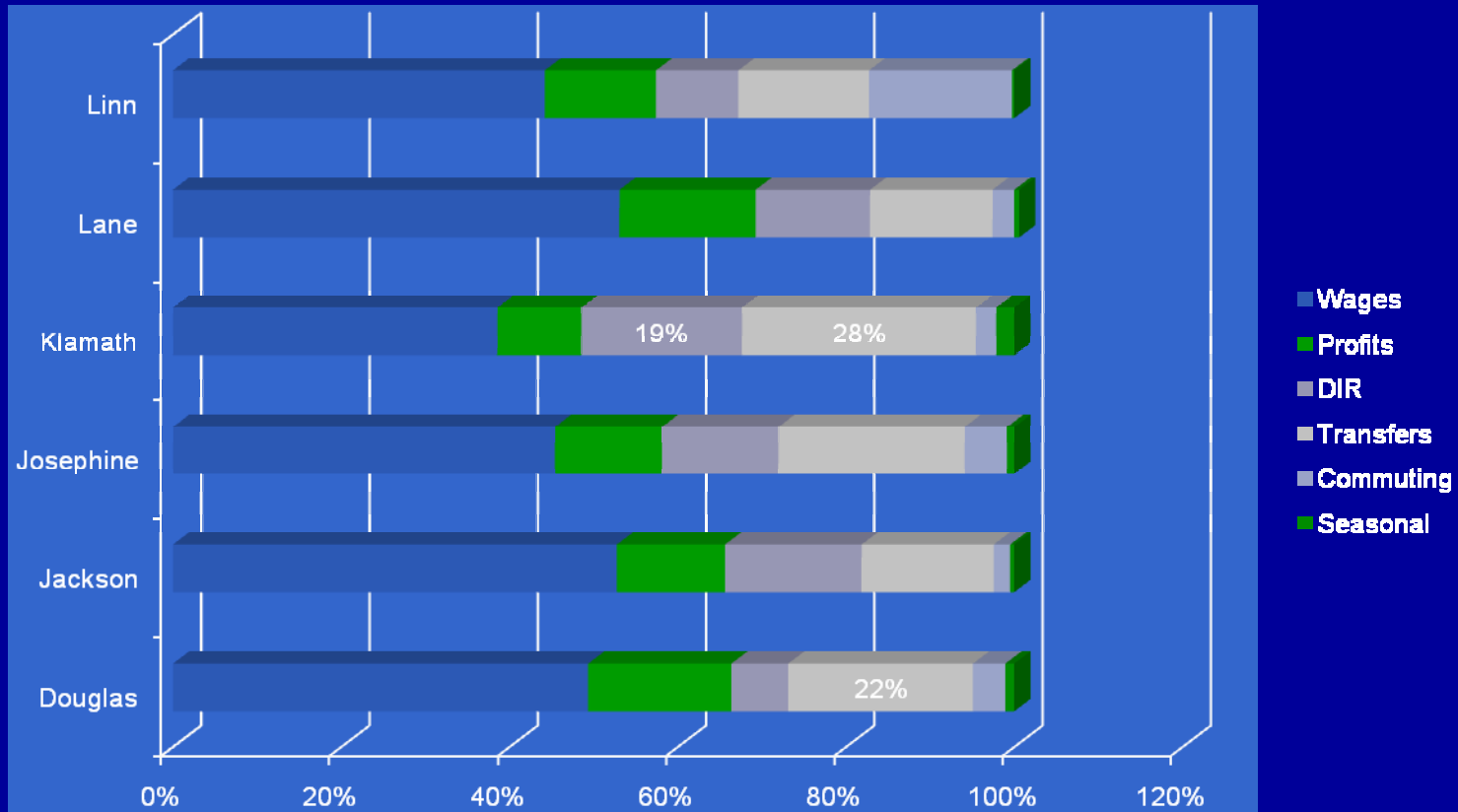
Oregon Primary Wood Products Mill Closures and Loss of Production Capacity



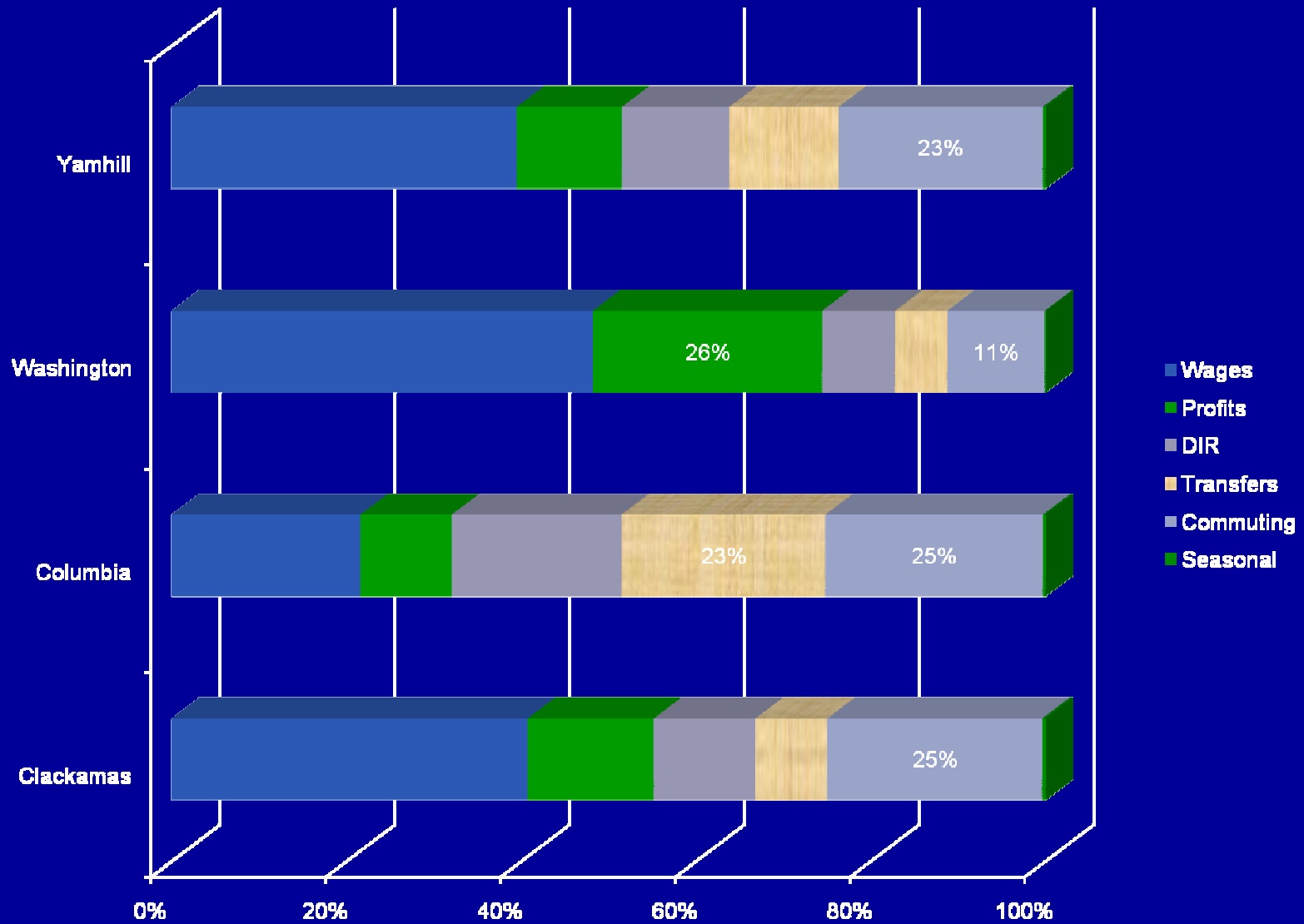
Western Oregon

- 20 counties – Different Kinds of Economies
- Two larger economic areas
 - Portland Economic Area – 20 counties
 - Eugene-Springfield Economic Area
- Community-level impacts
 - Communities of Concern

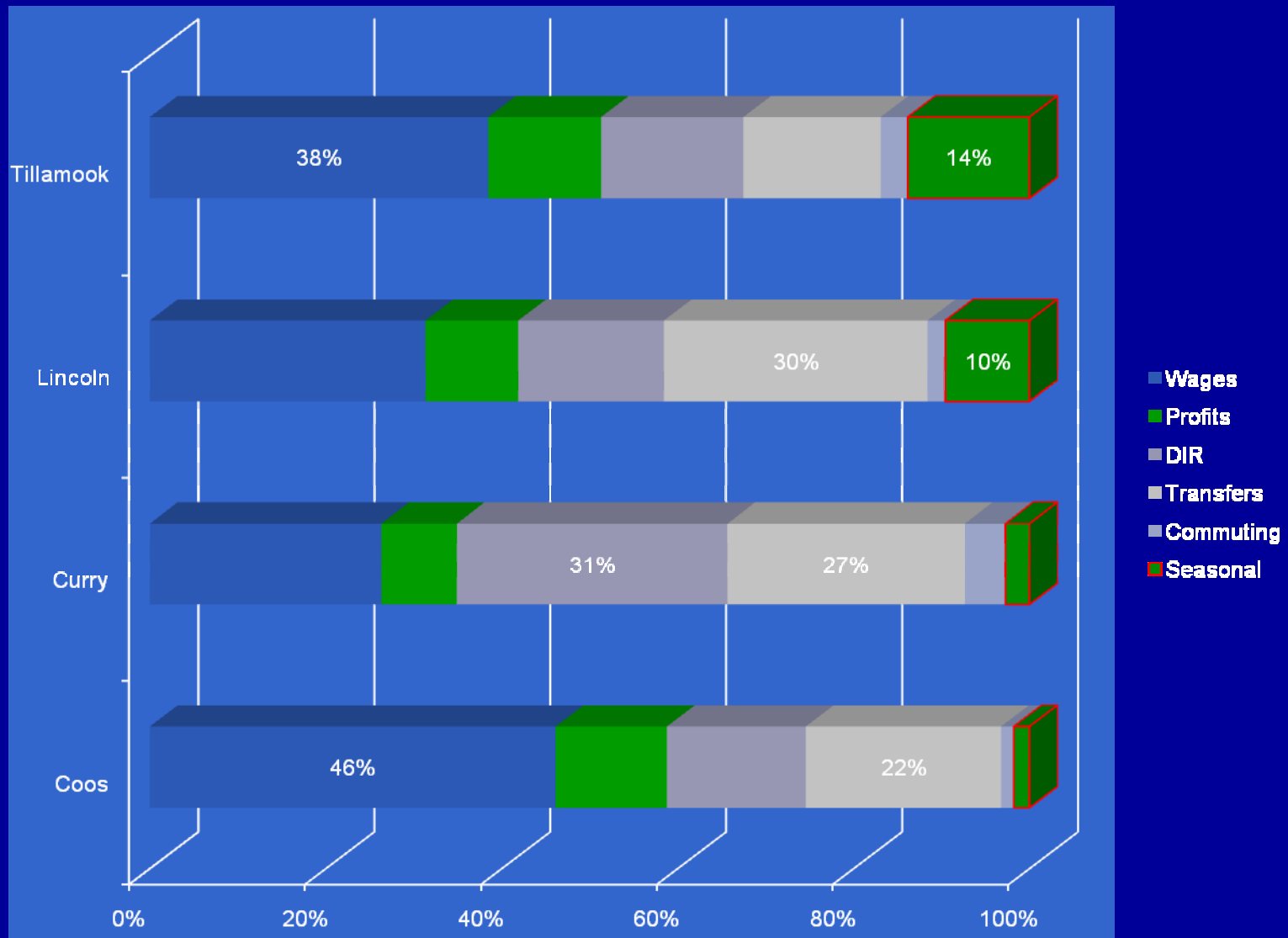
Wood Products Counties



Portland Metro Counties



Coastal Counties



Approach: Hybrid Input-Output Models Linked to Econometric Models

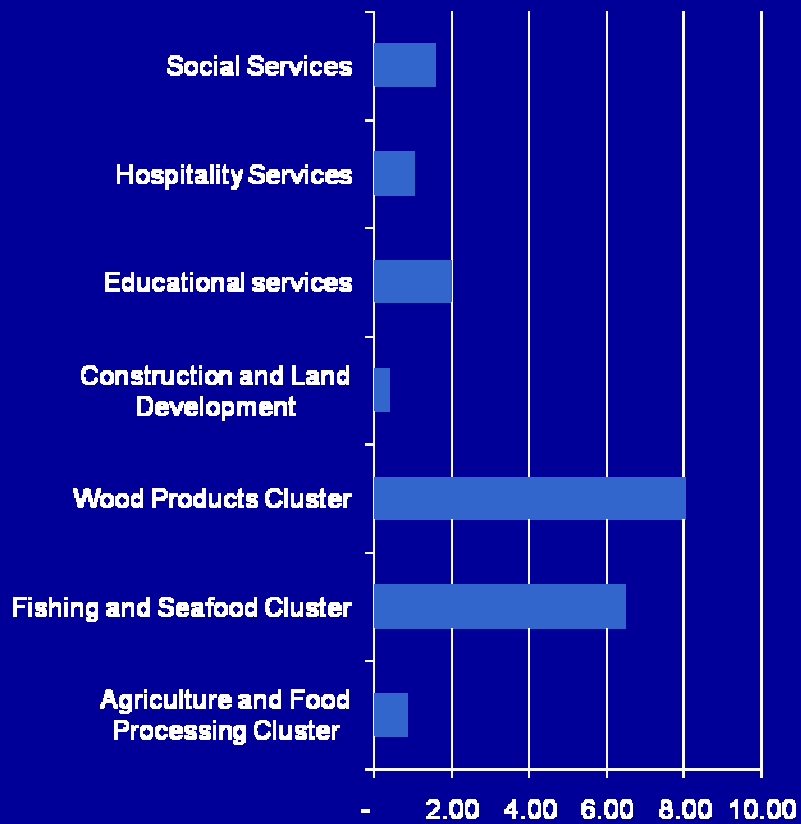
- Twenty County Models
- Two Regional Models
- Attributes:
 - Hybrid Models-
 - Survey data combined with scaled down national data
 - Modified Key Sectors – survey data on forest industry
 - Modified Economic Base - survey
 - Adjusted background sectors to ES 202 data- some bump
 - Forty-one days of field work

Model Attributes

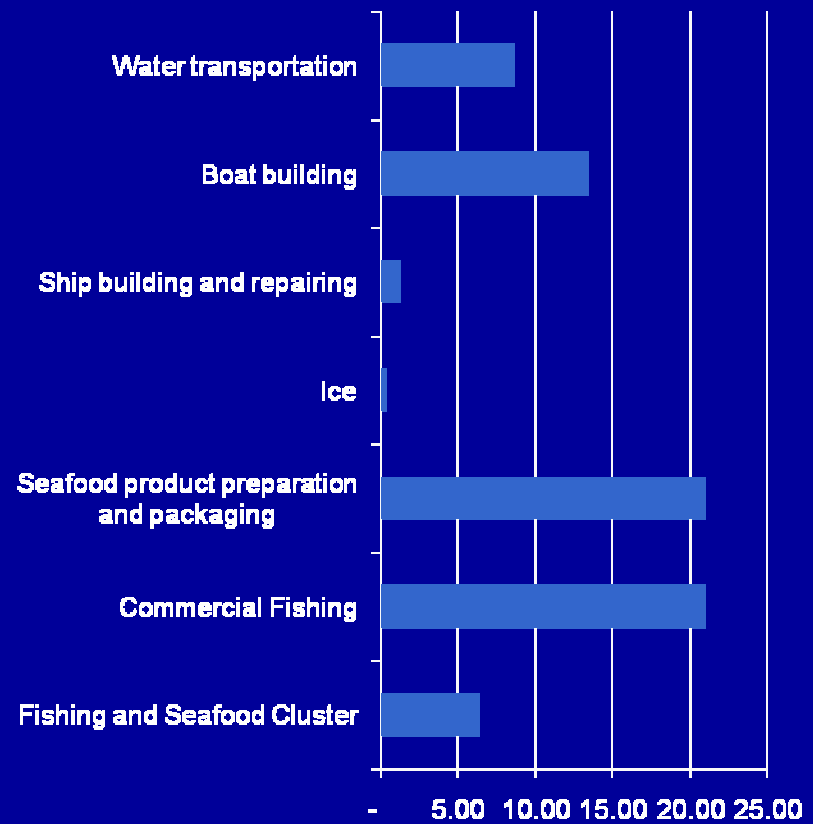
- Transparency- Run in Excel
- Ease of Adjustment of basic data/coefficients
 - Adjust technology
 - Adjust wage rates, outputs, commuting, profits retained, propensity to consume locally, etc.
- Model linkage up, down, across trade hierarchy
- Model add-ins transfer to new model template
- Presentation work transfers to new models
- Report writing links to other office products

Coos County Clusters

Coos Clusters



Fishing Cluster



Examples of Adjustments

- Logging Sector
 - Added New IO sector for Log Trucking –portion of logging assigned to log trucking
 - Changes in Stumpage
 - Part leaves the area
 - Part goes to payments
 - Part finances timber operations
 - Part goes to log trucking
 - Part goes to logging
- Local Government Sector
 - Adjusting labor force and payroll to primary data
 - Fiscal Impact Analysis

- Adjusted Sawmill and Plywood Mills sector
 - Directing Log Flows to Mills– Exports and Imports
 - Mill Outputs, Payroll, Employment, Profits Retained and Commuting – Ehringer Study
 - Adjusting Response Latta –Adams Western Oregon Model
- Residuals Sectors
 - Re-directing flows of residuals –imports/exports
 - Adjusting Response to supply changes- linear
- Cluster Analysis

Bad Sectors

- Agriculture
 - Farm Labor
 - Proprietor's Income
 - Industrial Output
- Logging
 - Jypo loggers
 - Migrant work force
 - Output doesn't correspond to log flow data
- Fishing
 - Seasonality
 - Move from port to port
 - Catch records don't correspond with output

Other Bad Sectors

- Outfitting and Guides
- Hunting and Forest Collecting
- Agricultural and forestry support
- Mining
- Construction
- Sawmills
- Plywood Mills
- Miscellaneous Wood Products
- Real Estate
- Hotels and other accommodations
- Local Government
- Non-profits sectors

Industry Output Issues:

- Survey Output does not correspond well with estimated output on key natural resource sectors
- Estimated using either
 - Employment/output ratios
 - Earnings/output ratios

Income Issues

- Seasonal Home spending on Oregon Coast
- Wage rate data generally very accurate
- Other types of income
 - Illegal Drug production
 - On-line sales

Structural Issues

- Survey data indicates that rural economies are open and have little vertical integration
- The Portland metro area has a more closed economy as does Eugene-Springfield
- Most manufacturing industries export all their output
- Local consumption patterns not recognized by scaling down national patterns (RPC's)