



Theory for Explaining Alaska's Economy



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ECONOMIC BASE MODELS: A SIMPLISTIC BUT USEFUL WAY TO THINK ABOUT OUR ECONOMY

Alaska's economy may be divided into basic and support industries.

Basic and support industries are driven by different factors and grow or decline for different reasons.

Basic industries bring money into Alaska.

Oil, mining, seafood and air cargo are basic industries because they sell resources, goods and services to markets outside Alaska. Tourism is a basic industry because tourists spend money in Alaska. The federal government is a basic industry because the federal government spends money in Alaska. Alaskans' investment and retirement incomes are like basic industries because they bring money into Alaska.

Basic industries are driven by factors such as:

resource abundance
world market conditions
competition from other regions
and federal and state resource
management policies.
federal spending

Support industries depend on spending of Alaska businesses and residents.

Retail trade, services, and local government are support industries.

Support industries are driven by basic sector income, and also by the extent to which Alaskans spend money in Alaska rather than Outside.

Economists say the basic income is "multiplied" as it is re-spent within the Alaska economy, generating support income.

As the Alaska economy grows, the share of money which is spent in Alaska grows, causing the support sector to grow.

Some economic base model math . . .

- Total income = Basic income + Support income
- Support income = Basic income x the Multiplier
- Leakage = Share of income spent outside the region
- Multiplier = $1 / \text{Leakage}$ (*this is not intuitive, but it can be shown mathematically*)
- Total income = Basic income / Leakage
- The smaller the region and population, the greater the leakage and the lower the multiplier

How big is the multiplier?
Some very rough “rules of thumb”

- For small Alaska villages, almost all income “leaks” out and the multiplier is very small ($\sim 1.2 - 1.4$)
- For Alaska as a state, leakage is smaller and the multiplier is larger ($\sim 2 - 3$)

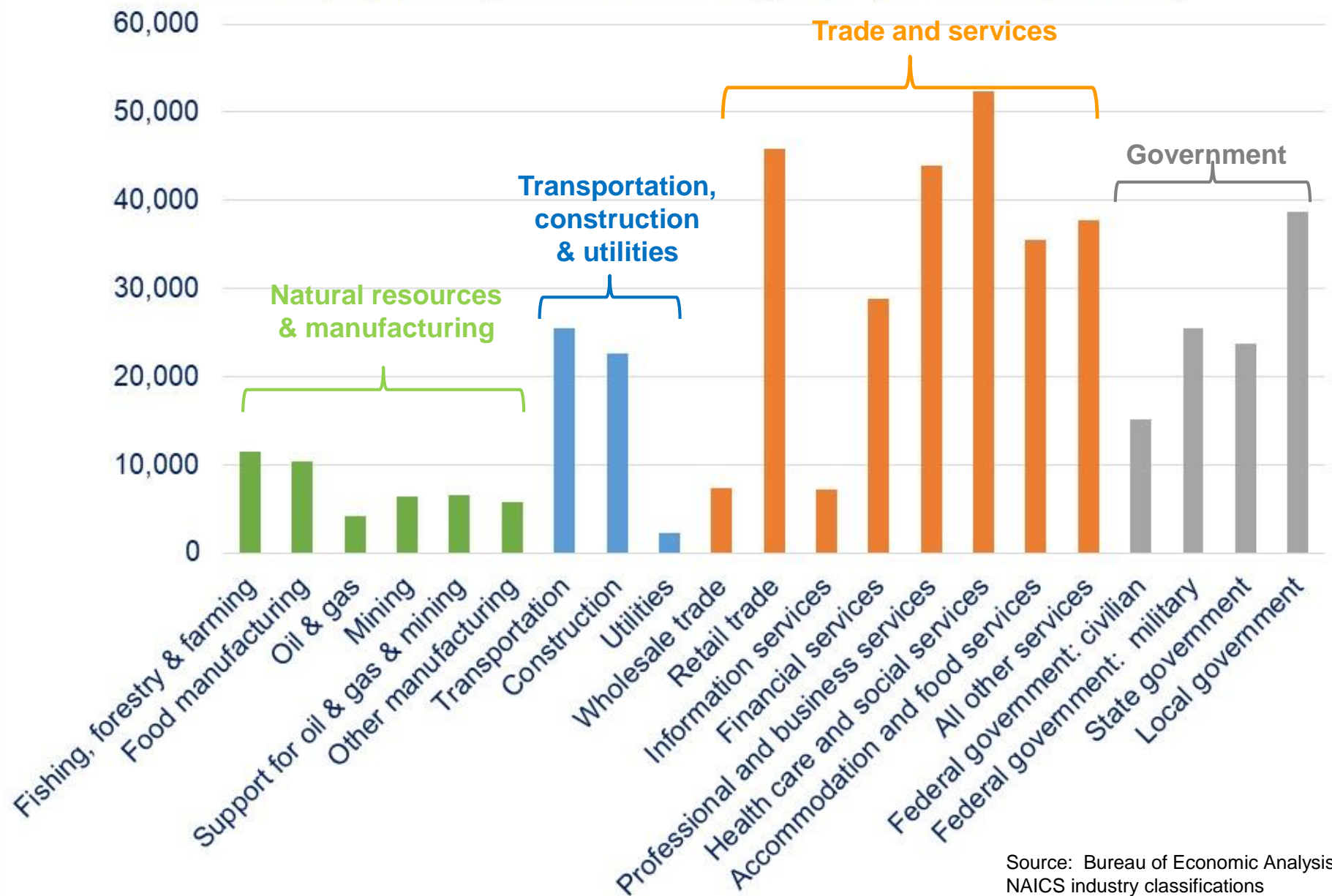
The fundamental insight of economic base models

There are two ways the Alaska economy can grow:

- By growing basic industries which bring money into Alaska
- By growing support industries
 - by reducing “leakage” and growing the “multiplier” so that a greater share of money which comes into Alaska is spent in Alaska

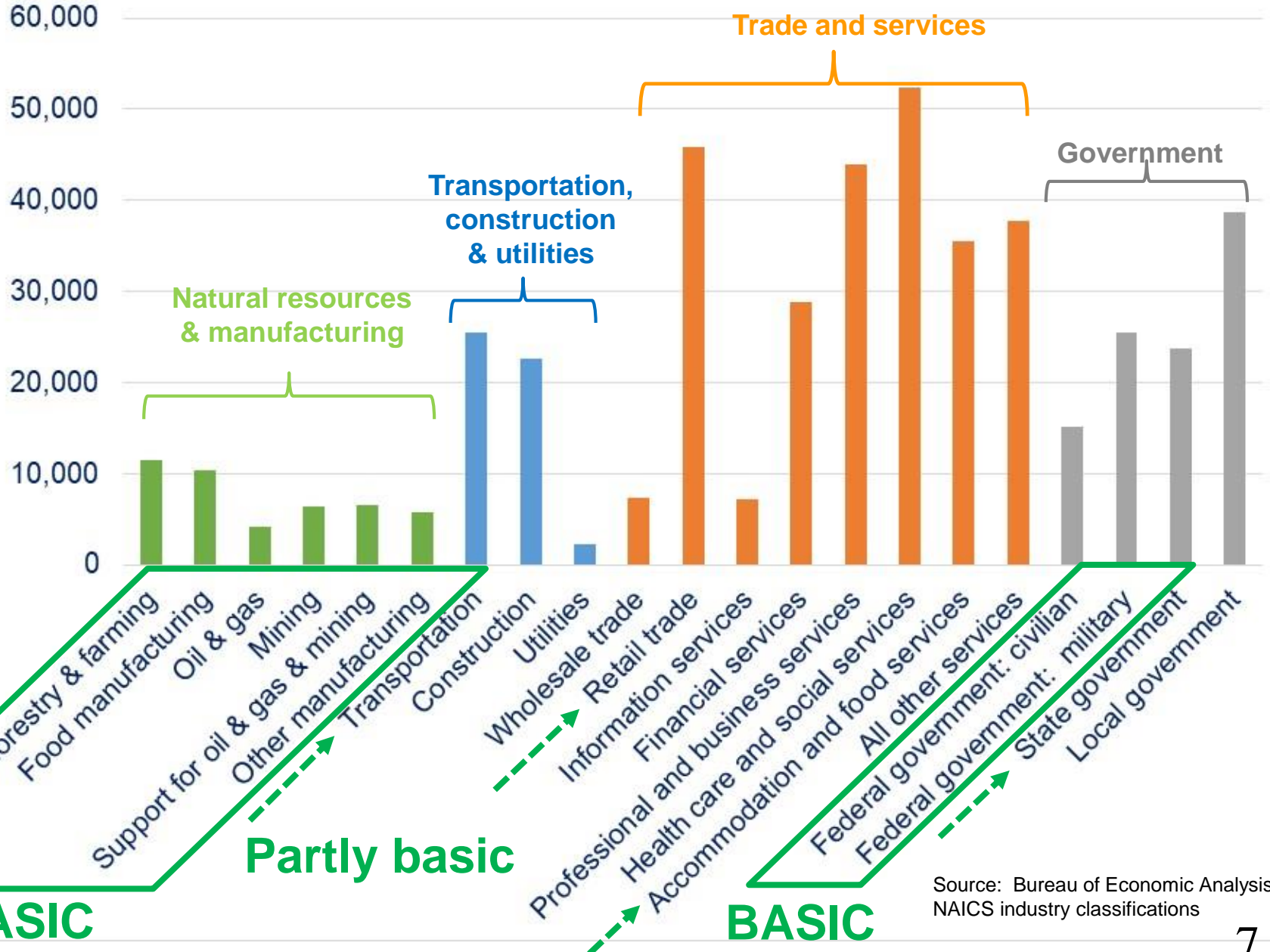
Which Alaska industries are “basic”?

Alaska Employment by Sector & Industry, 2017 (full-time & part-time)



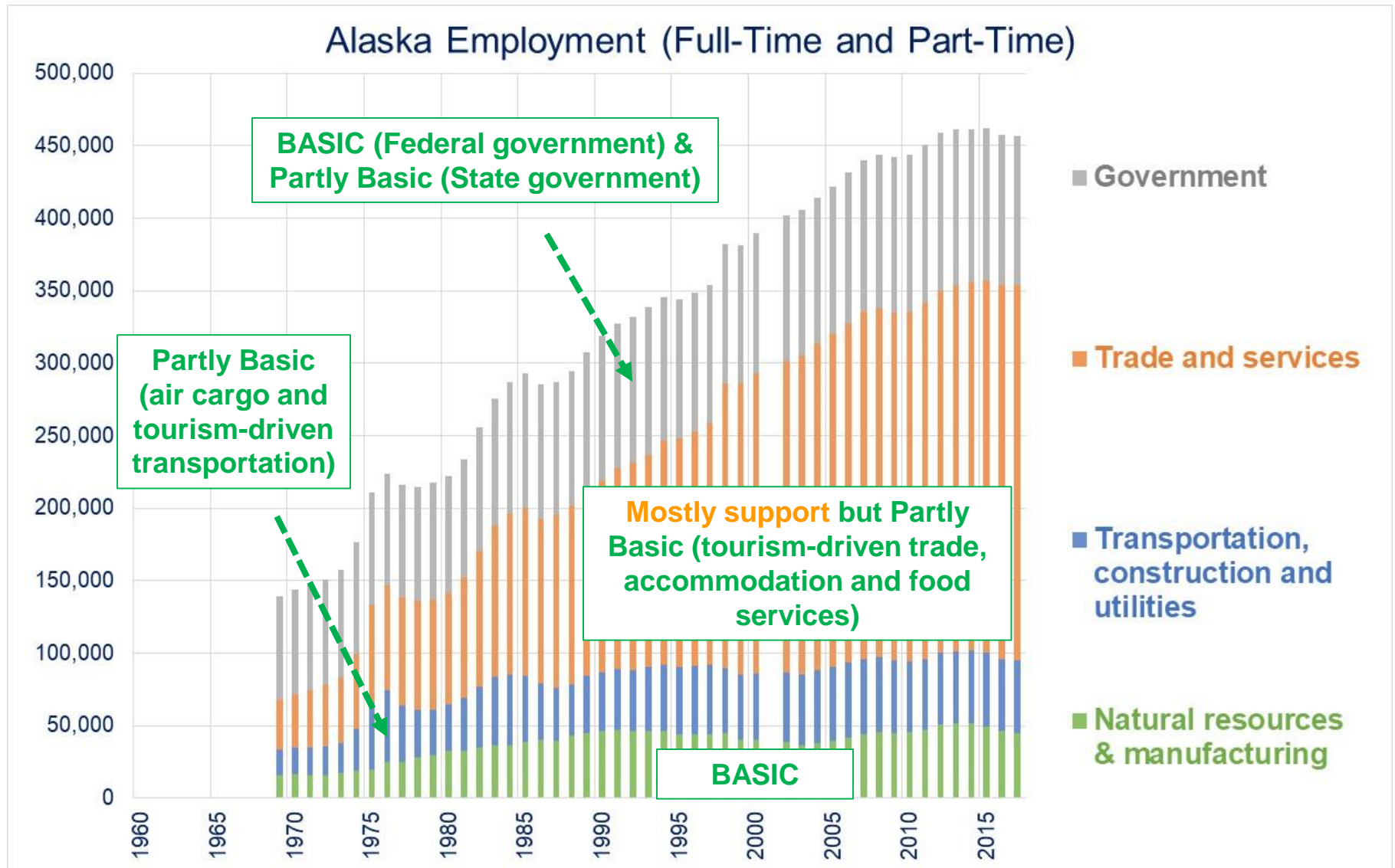
Source: Bureau of Economic Analysis,
NAICS industry classifications

Alaska Employment by Sector & Industry, 2017 (full-time & part-time)



Source: Bureau of Economic Analysis, NAICS industry classifications

Alaska economic growth over the past 50 years was driven both by growth in basic industries and by growth in the multiplier.

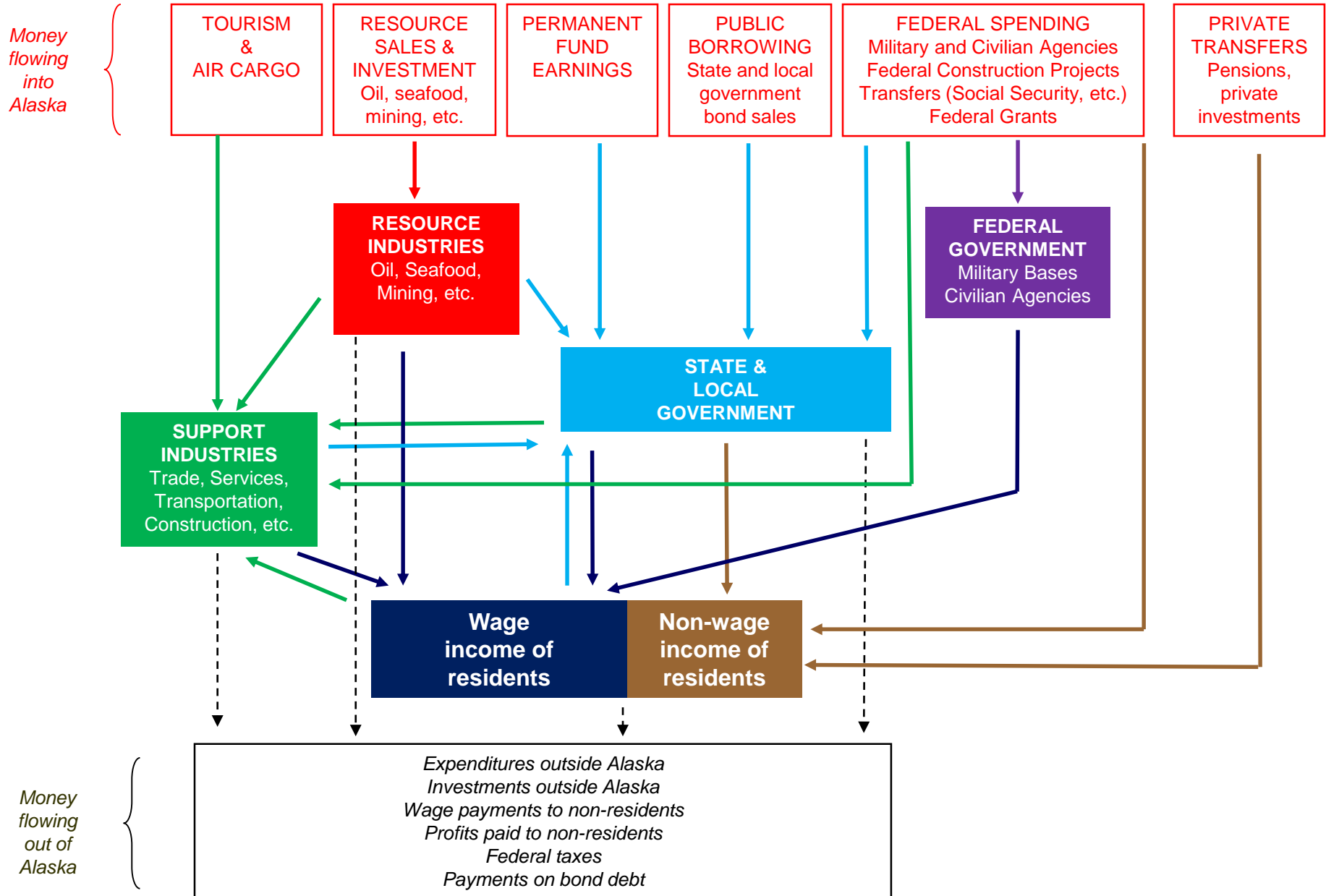


The economic base model described in the previous slides is a very simplistic way of describing what drives Alaska's economy.

The graph in the following slide shows a more complex (but still simplified) way of thinking about what drives Alaska's economy.

- Each line in the graph represents a particular kind of payment.
- Money flows into the Alaska economy in many different ways, represented by the red boxes in the top rows.
- That money drives four broad industry groups:
 - Resource industries
 - Federal military and civilian government
 - State and local government
 - Support industries
- Payments from those industries all contribute to the wage income of Alaska residents
- There are feedback loops of payments between different industries, as well as from residents to support industries and to state and local government
- Money flows out of the economy in many different ways as industries and residents spend and invest outside of Alaska.
- *Over time, each of the lines in this graph has changed in various important ways. To get a real sense of how and why the Alaska economy has changed, you need to think about all the lines and how and why they have changed!*

How Money Flows Into, Through and Out of Alaska's Economy



A different way to think about what drives Alaska's economy

What is the potential for each of twelve different kinds of economic activities?

Private or public sector?	Producing what?	For what markets?	
		Outside markets	Alaska markets
Private sector	Natural resources		
	Goods		
	Services		
Public sector	Natural resources		
	Goods		
	Services		

Private sector vs. Public sector

- **Private sector activities**

- Must be profitable to survive
 - Not necessarily every year, but on average over time
- Must be competitive . . .
 - Can't have significantly higher costs than their competitors unless they can command a significant price premium over their competitors.
- Or must be subsidized

- **Government activities**

- Don't have to be profitable
- Can have higher costs than potential competitors
- But can only survive if:
 - There is enough money to fund them
 - There is political will to fund them

Greenhouses in the Netherlands . . .



It would be technically feasible to have greenhouses on the North Slope heated and lit by natural gas!



Private industry wouldn't do it without a massive subsidy.
Government could do it if it had enough money and political support.

Economic potential for Alaska private sector production of **natural resources** . . .

Type or production	Economic potential
Natural resources for Outside markets	HIGH. Alaska has abundant natural resources which are in limited supply worldwide, driving up prices to levels at which production in Alaska is profitable (even though not as profitable in some other resource-producing areas with lower costs).
Natural resources for Alaska markets	LOW. The Alaska market doesn't need many natural resources because Alaska's population is low and we don't have many manufacturing industries which use natural resources as inputs. One exception is energy for the Alaska markets, such as the natural gas used for heating and electricity generation in southcentral Alaska.

Economic potential for Alaska private sector production of **manufactured goods**. . .

Type or production	Economic potential
Manufactured goods for Outside markets	LOW. Except for a few goods made from our own natural resources, such as canned salmon, there is very little that we can produce in Alaska that can't be produced and transported to end markets more cheaply somewhere else.
Manufactured goods for Alaska markets	LOW. Except for a few goods made from our own natural resources, there is very little that we can produce in Alaska that can't be produced somewhere else and transported to Alaska more cheaply than we can produce it here.

Economic potential for Alaska private sector production of **services** . . .

Type or production	Economic potential
Services for Outside markets	<p>LOW. For the same reason that its difficult for Outside producers to be competitive selling services to Alaska, historically it's been difficult for Alaska-based companies to be competitive selling services to markets outside Alaska. Exceptions are a few industries in which Alaska companies have specialized expertise, such as cold-weather engineering.</p> <p>But the internet may make it possible for far Alaskans to compete in providing many more kinds of services—<i>IF</i> people who can provide those services want to live in Alaska.</p>
Services for Alaska markets	<p>HIGH. Alaskans consume a wide variety of services such as health care, education, accounting, movie theatres. It's a lot easier and cheaper to produce these services here in Alaska than to try to get them from somewhere else. Even if a restaurant in Alaska has to pay its workers more than a restaurant in the Lower 48, it can still compete because restaurants in the Lower 48 aren't much use to people in Alaska who want to go out to dinner.</p>

Economic potential for Alaska public sector production . . .

Type or production	Economic potential
Natural resources for Outside markets	LOW. In general, government in Alaska has preferred to leave natural resource production (oil, fish, minerals) etc. to the private sector.
Natural resources for Alaska markets	
Manufactured goods for Outside markets	LOW. In general, government in Alaska has preferred to leave production of goods to the private sector.
Manufactured goods for Alaska markets	
Services for Outside markets	MODERATE. Some of the services of government in Alaska—in particular national defense but also management of the national parks and other federal government assets—can be thought of as services which are provided primarily to residents of the Lower 48 (although Alaskans also benefit).
Services for Alaska markets	HIGH. Providing services to Alaskans—such as police protection, fire protection, road plowing, education, etc., is one of the main functions of government in Alaska..

The economic activities in which Alaska can most easily compete, and which make up for most of Alaska's economy, include:

- Private industries producing natural resources in limited global supply
 - Oil, Seafood, Mining, Tourism
- Private industries taking advantage of Alaska's location
 - International air cargo
- Private industries producing for the Alaska market
 - Retail trade, Services
- Private industries paid for in full or in part by the federal and state governments
 - Construction (federal and state funded projects)
 - Health care (federal health care grants)
- Federal government military & civilian services for Americans and Alaskans
- State and local government services for Alaskans

Alaska is a state, not a country!
This has major implications for Alaska's economy!

- Federal spending, subsidies and taxes
- Federal ownership/control of Alaska lands and fisheries
- Federal economic and environmental regulations
- Free trade with US market and relatively free trade with world markets
 - Bigger markets for Alaska
 - More competition for Alaska
- Free migration to and from other states
 - Access to high-skilled labor
 - Significant non-resident employment
 - High migration in and out as economic conditions change
- Free investment flows in and out
 - Significant investment from other states and countries
 - Significant flow of profits to other states and countries
 - Significant non-Alaska control of the economy

Economic implications of free trade with the US market and relatively free trade with world markets . . .

- We can't "protect" our industries against competition from other states
 - Can't ban imports of milk from Washington state
 - Can't mandate local purchases of services
 - Can't charge Outside commercial fishermen significantly more for fishing permits, or ban them from owning permits
 - Transportation costs are our only "protection" from competition

Economic implications of free migration to and from other states . . .

- Free migration to and from other states
 - Access to high-skilled labor
 - Significant non-resident employment
 - High migration in and out as economic conditions change
 - Unemployment rates can't get too far out of line with other states
 - If unemployment rates got too much higher than other states, people would leave and look for employment elsewhere
 - If unemployment rates got too much lower than other states, people would come here to look for employment
 - Wages and salaries can't get too far out of line with other states
 - If they got significantly higher, people would come here to take jobs and bring wages and salaries down
 - If they got significantly lower, people would leave and employers would have to raise wages and salaries
 - Your Permanent Fund dividend may not raise your income as much as you think . . .
 - Your employer may be able to pay workers less than he would have to pay if they didn't get dividends

Economic implications of free investment flows in and out of Alaska . . .

- Significant investment from other states and countries
- Significant flow of profits to other states and countries
- Significant non-Alaska control of the economy
- Outsiders won't invest in Alaska unless they can earn returns competitive with what they could earn elsewhere
- Alaskans won't invest in Alaska unless they can earn returns competitive with what they could earn elsewhere

Enclave economies . . .

- An enclave economy is economic activity which is located within a geographic region but which is not integrated with the economy of the region.
 - In a pure enclave economy, all of the workers in the enclave economy come from outside the region and are not really "residents" of the region: they consider their real home to be somewhere else.
- Alaska has some local economies which it is useful to view as “enclave economies.”
 - Remote military bases (such as the former Adak Island Naval Station)
 - Remote fish processing plants which ship in all of their workers from Outside and ship all production Outside
 - North Slope oil fields (which are enclave economies from the perspective of the North Slope Borough).
- While enclave economies may be located physically within a region, it is debatable whether they should be considered part of the economy of the region, since they may interact with the rest of the regional economy only to a very limited extent.

Remote regions . . .

- Economists sometimes describe places like Alaska as a remote regions.
 - Remote regions are sparsely populated, far from population centers, with high costs. Other remote regions include northern Canada, the Russian North, the interior of Australia, and isolated islands in the South Pacific Ocean.
- Because of high costs, remote regions tend to be at a competitive disadvantage within their national economies and the world economy in producing most kinds of goods and services.
 - Remote regions may have a competitive advantage only in producing those natural resources not found in other parts of the national economy or the world economy.
- Because of their dependence on natural resource production, remote regions are often subject to “boom-and-bust” cycles as new resources are discovered or old resources are depleted, and as natural resource prices fluctuate.
- Alaska has become less “remote” as the economy has has grown and diversified.

Value adding in remote regions . . .

- Industries which manufacture products using natural resources are sometimes called “value added” industries, because they “add value” to what the economy produces.
 - Oil refining
 - Lumber manufacturing
- In remote regions, resources are often shipped out of the region in a raw form with little or no value adding, because the costs of processing the natural resources are lower elsewhere so that manufacturing tends to be more profitable outside the remote regions.
- Residents of remote regions (and their politicians) typically express the desire for more “value added” activities and industries, to derive more benefits and employments from their resources.
- This goal can be difficult to achieve . . .

Not everyone necessarily benefits from value adding.

- A problem with “value-adding” in a high-cost economy is that it is also “cost-adding.”
- While you add value to what gets exported from Alaska, you can also end-up reducing the price paid to the raw material producers.

How might value adding affect how much a forest owner gets paid for her trees?

	Without value-adding	With value-adding
Price of boards in Japan	\$100	\$100
Cost of sawing the boards in Japan	\$20	
Cost of shipping boards to Japan		\$20
Cost of shipping logs to Japan	\$30	
Cost of sawing the boards in Alaska		\$40
Price paid for logs in Alaska (= price minus all costs)	\$50	\$40