Economic Impact of Jones Act on Puerto Rico's Economy

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The Agenda

- This presentation attempts to:
  1. Summarize the basic of coastwise trade laws.
  2. Review of main literature in this field.
  3. Estimate the opportunity cost of cabotage law, including Puerto Rico.
  4. Present conclusions and recommendations.

Defining Cabotage

- Cabotage
  - Derived from the French word "caboter" which means to sail along the coast or by the capes.
- Cabotage trade or coastwise trade
  - Transportation of commodities and persons by vessels between ports within the same country.
- Cabotage rights
  - The privilege to engage in trade and navigation in coastal waters and to the restriction of that right to domestic carriers.

Cabotage as a Trade Barrier

- Trade is view as the engine of development of any nation.
- A nation's balance of trade affects her gross domestic product and the expansion of basic manpower and technological development.
- Trading in today's global economy is mostly carried out on water and ships are the connecting vehicle.
- No form of transport equals the ship in the enormous quantity and volume of goods traded between nations.
- Shipping remains the essential toll in which an export promotion policy can be mounted and sustained.

Cabotage as a Trade Barrier

- If a government places restrictions on cabotage, insisting transport within a county be undertaken by domestic firms, then it will act as a barrier to trade.
- Economically, cabotage regulations that restrict access or reserve maritime trade within a country's territorial jurisdiction to the local capacities constitute a form of protectionism.
- Within a nation, cabotage rules may be politically justifiable for national security or public safety concerns.

OECD Common Shipping Principles

- The OECD Maritime Transport Committee have in place a number of Common Shipping Principles that govern the maritime industry. Originally agreed in 1987, and updated in 2000, the 16th Principles provide for the five basic elements:

1. The maintenance of open trades and free competitive access to international shipping operations, maritime auxiliary services and multimodal transport involving a maritime leg.
2. Co-ordinated response to external pressure, based on full consultations between Member countries.
3. The role and recognition of governmental involvement by Member countries to preserve free competitive access and the provision of choice to the shippers.
4. A common approach to the application of competition policy to the liner shipping sector.
5. Measures relating to safety, the environment and substandard shipping.

WTO: General Agreement on Trade in Services

- Efforts have been undertaken by the World Trade Organization (WTO) to liberalizing the maritime transportation service.
- Uruguay Round (1986-94)
  - The General Agreement on Trade in Services (GATS) was one of the landmark achievements of the 8th round of multilateral agreements.
  - The GATS was inspired by essentially the same objectives as its counterpart in merchandise trade, the General Agreement on Tariffs and Trade (GATT).
- Doha Development Round (2001 - Present)
  - Free trade service sector negotiations in agenda.
  - Allies include countries Canada, Japan, Korea, Switzerland, New Zealand, Norway, Hong Kong, the EC, Singapore, Chile, Australia and Columbia
- However, there is until today no global regimen governing shipping.

Types of Cabotage Law

- National Shipping
  - The rights of navigation and trading within a country's coasts or from port to port within a nation are reserved exclusively for and carried on by its national flagships and nationals.
- Regional Shipping (or Short Sea Shipping)
  - The rights of navigation and trading between ports of a given group of countries are reserved exclusively within the nations members of the specific economic grouping. For example: Mercosur, and the EU (APEC is currently under analysis).

Types of Cabotage Law

- Strict Cabotage Laws
  - Policy designed to encourage the exclusion of foreign-built, foreign owned or foreign-crewed and operated vessels.
- Liberalized Cabotage Laws
  - Policy designed to allow some levels of foreign participation either in the ownership or building of the ships used and nationality of the operators involved, or foreign-registered ships' involvement, in a especific coastal shipping.

Defining Coastwise Laws

- A set of rules governing shipment of freight, household goods and passengers by water between points within a country or its territories.
- Title 46 of the United States Code covers the coastwise laws.
- Public Law 109-304, enacted on October 6, 2006, substantially reorganized and re-codified the U.S. coastwise laws.
- Two commonly mentioned U.S. coastwise laws are:
  - The Passenger Vessel Services Act of 1886
  - The Merchant Marine Act of 1920

What is the Jones Act?

- The term Jones Act may refer to one of several federal laws in the United States:
  - Jones Act (Philippines Autonomy Act)
    - Approved by Congress in August 29, 1916
    - Sponsored by Representative William Atkinson Jones
    - Provided an autonomous government to prepare the Phillipines for independence.
  - Jones Act (Jones-Shafroth Act, Puerto Rico)
    - Signed by President Woodrow Wilson in March 2, 1917.
    - Sponsored by Representative William Atkinson Jones.
    - Provided a civilian government and conferred U.S. citizenship.
  - Jones Act (Merchant Marine Act of 1920)
    - Signed by President Woodrow Wilson in June 5, 1920.
    - Sponsored by Senator Wesley L. Jones.

Jones Act

- The Jones Act, formally known, Merchant Marine Act of 1920, stated that a vessel may not provide any part of the transportation of merchandise by water between points in the U.S. unless the vessel is (46 U.S.C. §55102):
  - owned by U.S. citizens.
  - a U.S.-flag ships.
  - built in the U.S.
  - crewed by U.S. citizens.

Compliance with a:
Registry endorsement &
Coastwise endorsement
(45 U.S.C. Chapter 121)

Two parts of the Jones Act are of particular historical importance

- First, to recognize the importance of a strong merchant marine system for (46 U.S.C. 50101):
  - Assist the national defense in case of war or national emergency.
  - The development of foreign and domestic commerce.

Two parts of the Jones Act are of particular historical importance

- The second important aspect of the Jones Act created benefits for sailors.
  - A seaman injured in the course of employment or, if the seaman dies from the injury, the personal representative of the seaman may elect to bring a civil action at law, with the right of trial by jury, against the employer. Laws of the United States regulating recovery for personal injury to, or death of, a railway employee apply to an action under this section (46 U.S.C. § 30104).

The Passenger Vessel Services Act

- The other U.S. coastwise legislation is the 1886 Passenger Services Act which states that no foreign vessel shall transport passengers between ports or places in the US unless the vessel is (46 U.S.C. § 55103):
  - owned by U.S. citizens.
  - a U.S.-flag ships.
  - built in the U.S.
  - crewed by U.S. citizens.

Compliance with a:
Registry endorsement &
Coastwise endorsement
(45 U.S.C. Chapter 121)

Where Does the Coastwise Laws Apply?

- The coastwise laws applies to the U.S., including the island territories and possessions of the U.S. (46 U.S.C. § 55101).
- The coastwise laws do not apply to:
  - American Samoa
  - The Northern Mariana Islands, except as provided in the *Covenant To Establish a Commonwealth of the Northern Mariana Islands in Political Union With the United States of America*.
  - The Virgin Islands until the President declares by proclamation that the coastwise laws apply to the Virgin Islands.

Where Does the Coastwise Laws Apply?

- Other exemptions permit the transport of cargo between specific U.S. ports by certain vessels that do not comply with Jones Act restrictions.
  - Ships that are constructed outside the U.S., but are registered under the U.S. flag, are permitted to operate between American Samoa, Guam, Midway, Wake, or Kingman Reef and other U.S. ports (46 U.S.C. 12111).
  - A foreign-built, foreign-flagged vessel that is salvaged in U.S. waters and subsequently rebuilt in the United States may operate in the U.S. domestic market, provided that the cost of rebuilding it is at least three times its assessed value at the point of salvage (46 U.S.C. §12107).
  - A foreign-built, foreign-flagged vessel seized during war by U.S. citizens may subsequently be permitted to operate under the U.S. flag in the domestic maritime market (46 U.S.C. 12112).

Where Does the Coastwise Laws Apply?

- Transportation of passengers between Puerto Rico and other ports in the United States (46 U.S.C. §55104):
  - A vessel not qualified to engage in the coastwise trade may transport passengers between a port in Puerto Rico and another port in the United States.
  - However, if a U.S. passenger vessel qualified to engage in the coastwise trade between Puerto Rico and another port of the U.S., the Secretary of the Department of Homeland Security shall notify the owner or operator of the foreign vessel to terminate the service within 270 days after the Secretary's notification.

Other U.S. Coastwise Laws

- Aside from the Jones Act, the U.S. maintains cargo preference laws, which reserve the transport of certain types of U.S. cargo to vessels operating under the U.S. flag.
  - Cargo Preference Act of 1954
    - U.S.-flag vessels must transport at least 50 percent of government-owned cargo and all U.S. military cargo.
  - Food Security Act of 1985
    - Requires that U.S.-flag vessels transport at least 75 percent of agricultural cargoes that are a part of foreign assistance programs administered by USDA and the U.S. Agency for International Development.
  - Alaska Power Administration Asset Sale and Termination Act of 1995
    - Requires that international exports of Alaskan crude oil be transported solely by U.S.-flagged and U.S.-owned vessels, although such vessels may be constructed outside of the United States.

Cabotage Laws at the International Context

- While many nations have a variety of cabotage restrictions, very few require the use of domestically built vessels.
- Most nations maintain cabotage restrictions on inland waterways, rivers, and lakes, for reasons of sovereignty and national security.
- In a survey conducted by the U.S. Maritime Administration of 56 selected countries, it was reported that 40 countries maintain cabotage provisions with respect to their domestic waterways, and seven other countries restrict, but do not prohibit, the operation of foreign vessels in their domestic markets.
  - U.S. Department of Transportation, Maritime Administration, *By the Capes Around the World: A Summary of World Cabotage Practices,* found at http://www.marad.dot.gov/publications/pubs.html.

Registration conditions in OECD countries

OECD Country	REGISTRATION MARITIME POLICY
Australia	Australia vessel must be majority Australian-owned unless designated to be chartered by an Australian operator.
Austria	Austria over 50% ownership by EEA-nationals; principal place of business must be located in Austria.
Belgium	Belgium vessel must be owned by nationals domiciled and resident in Belgium or legal identities having their main establishment in Belgium.
Canada	Canada vessel must be owned by Canadian/Commonwealth citizens/company, principal place of business must be in Canada/Commonwealth country.
Denmark	Denmark at least 2/3 of the vessel must be owned by persons/companies of EU/EEA nationality, principal place of business must be in Denmark.
Finland	Finland more than 60% of Finnish registered vessels must be owned by Finnish nationals, principal place of business must be in Finland.
France	France 50% of the vessel must be owned by EU/EEA nationals or wholly owned by companies headquartered in a EU country, principal place of business France
Germany	Germany vessel must be owned by an EU national or a company having its principal place of business in an EU Member country.
Greece	Greece foreign ownership in Greek flag vessel is limited to 49% for non-Greek natural or legal persons.
Hungary	Hungary foreign ownership is limited up to 50% unless bilateral agreements imply otherwise.
Ireland	Ireland vessels must be fully owned by Irish nationals/corporations or nationals/corporations of a reciprocating state (i.e. UK, Canada, New Zealand and Pakistan).
Italy	Italy at least 50% of the vessel must be owned by Italian or EU nationals (persons or companies), derogations can be granted under certain circumstances.
Japan	Japan vessel must be fully owned by Japanese nationals or companies having their principal place of business in Japan, two-thirds of the representatives must be Japanese.
Korea	Korea majority-owned by Koreans (60% of the voting interest); board of directors and representative director must be Korean nationals.
Luxembourg	Luxembourg over 50% ownership by EU-nationals or companies established in Luxembourg; master must be EU-national.

Source: OECD. *Regulatory Issues in International Maritime Transport*. OECD: Directorate for Science, Technology and Industry, Division of Transport

Registration conditions in OECD countries

OECD Country	REGISTRATION MARITIME POLICY
Mexico	Mexico vessels must be owned by Mexican natural/legal person
Netherlands	Netherlands ship must be owned 2/3rds by EU/EEA-nationals; place of business must be in the Netherlands; management must be in the hands of EU/EEA-nationals
New Zealand	New Zealand ships must be majority-owned by New Zealand citizens/residents
Norway	Norway if registered in the NIS,* ships with more than 40% foreign ownership must be managed by a Norwegian company with its registered office in Norway.
Poland	Poland ship must be owned by Polish citizens or a company incorporated in Poland
Portugal	Portugal only resident in Portugal can register vessels under the Portuguese flag
Spain	Spain EU nationals or companies; corporations must be domiciled in an EU country and have a representative in Spain
Sweden	Sweden 50% of the vessel must be owned by Swedish nationals or if the vessel is essentially under Swedish control and its owner his permanent residence in Sweden
Switzerland	Switzerland majority of the capital and two thirds of the voting rights, administrative bodies and management must be exercised by Swiss nationals
United Kingdom	United Kingdom ship must be owned by EEA-citizens; place of business must be in the UK

Source: OECD. *Regulatory Issues in International Maritime Transport*. OECD: Directorate for Science, Technology and Industry, Division of Transport

Development of International Seaborne Trade, selected years (millions of tons loaded)

Year	Oil	Main bulks	Other dry cargo	Total (all cargoes)
1970	1,442	448	676	2,566
1980	1,871	796	1,037	3,704
1990	1,755	968	1,285	4,008
2000	2,163	1,288	2,533	5,984
2005	2,422	1,701	2,986	7,109
2006	2,698	1,836	3,166	7,700
2007	2,747	1,957	3,330	8,034
2008	2,742	2,059	3,428	8,229
2009	2,642	2,094	3,122	7,858
2010	2,752	2,333	3,323	8,408

Source: UNCTAD. *Review of Maritime Transport*. various issues.

Cargo carried per deadweight ton (dwt) of the total world fleet, selected years

Year	World Fleet (millions of dwt)	Total Cargo (millions of tons loaded)	Tons Carried per dwt
1970	326	2,566	7.9
1980	683	3,704	5.4
1990	658	4,008	6.1
1995	735	4,651	6.3
2000	799	5,984	7.5
2005	896	7,109	7.9
2006	960	7,700	8.0
2007	1,042	8,034	7.7
2008	1,182	8,229	7.3
2009	1,192	7,858	6.6
2010	1,276	8,408	6.6

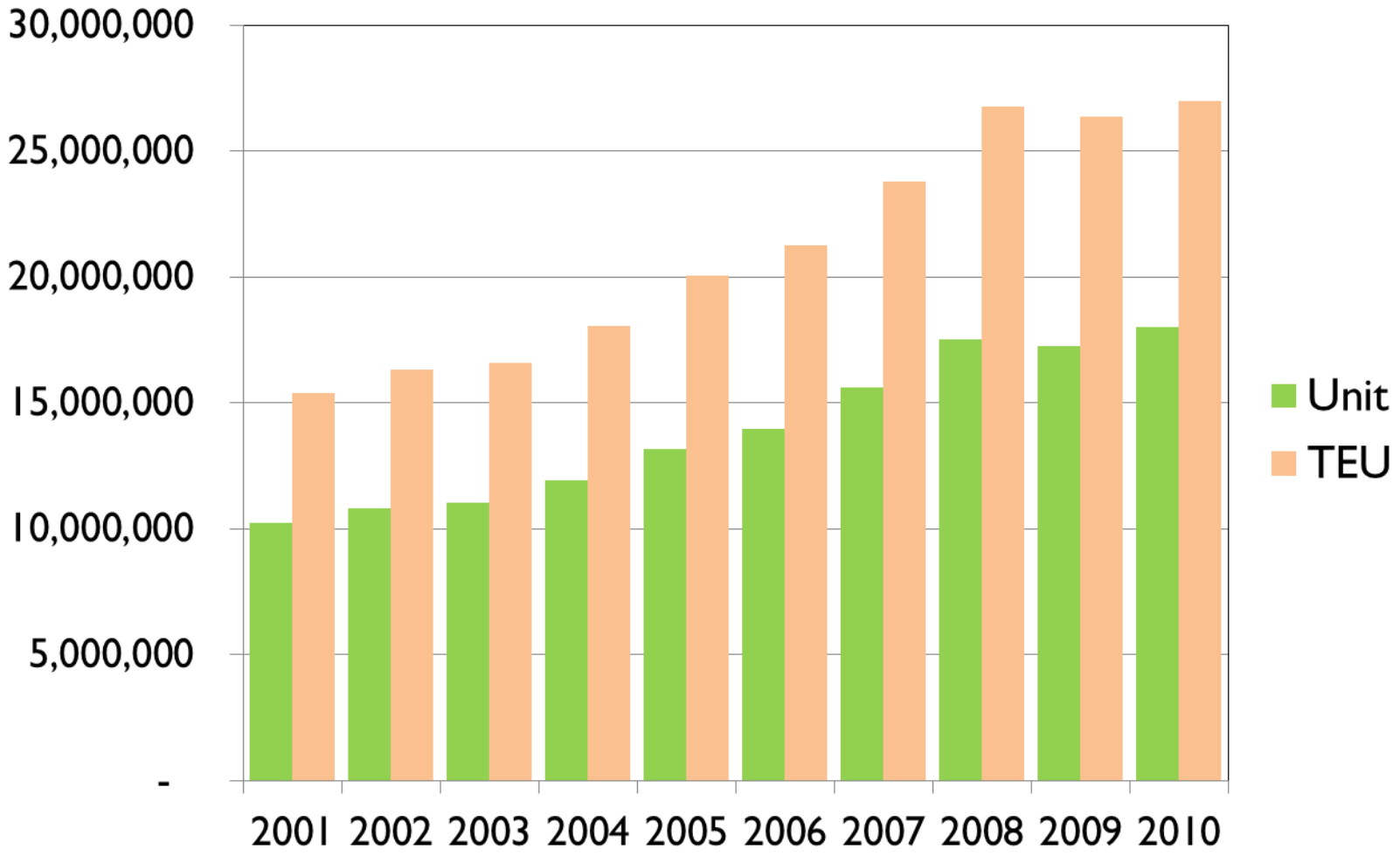
Source: UNCTAD. *Review of Maritime Transport*. various issues.

World Total Container Fleet Ship, Selected Years

Year	Number of vessels	TEU capacity	Average vessel size (TEU)
1987	1,052	1,215,215	1,155
1997	1,954	3,089,682	1,581
2006	3,494	8,120,485	2,324
2007	3,904	9,436,377	2,417
2008	4,276	10,760,173	2,516
2009	4,638	12,142,444	2,618
2010	4,677	12,824,648	2,742
2011	4,868	14,081,957	2,893

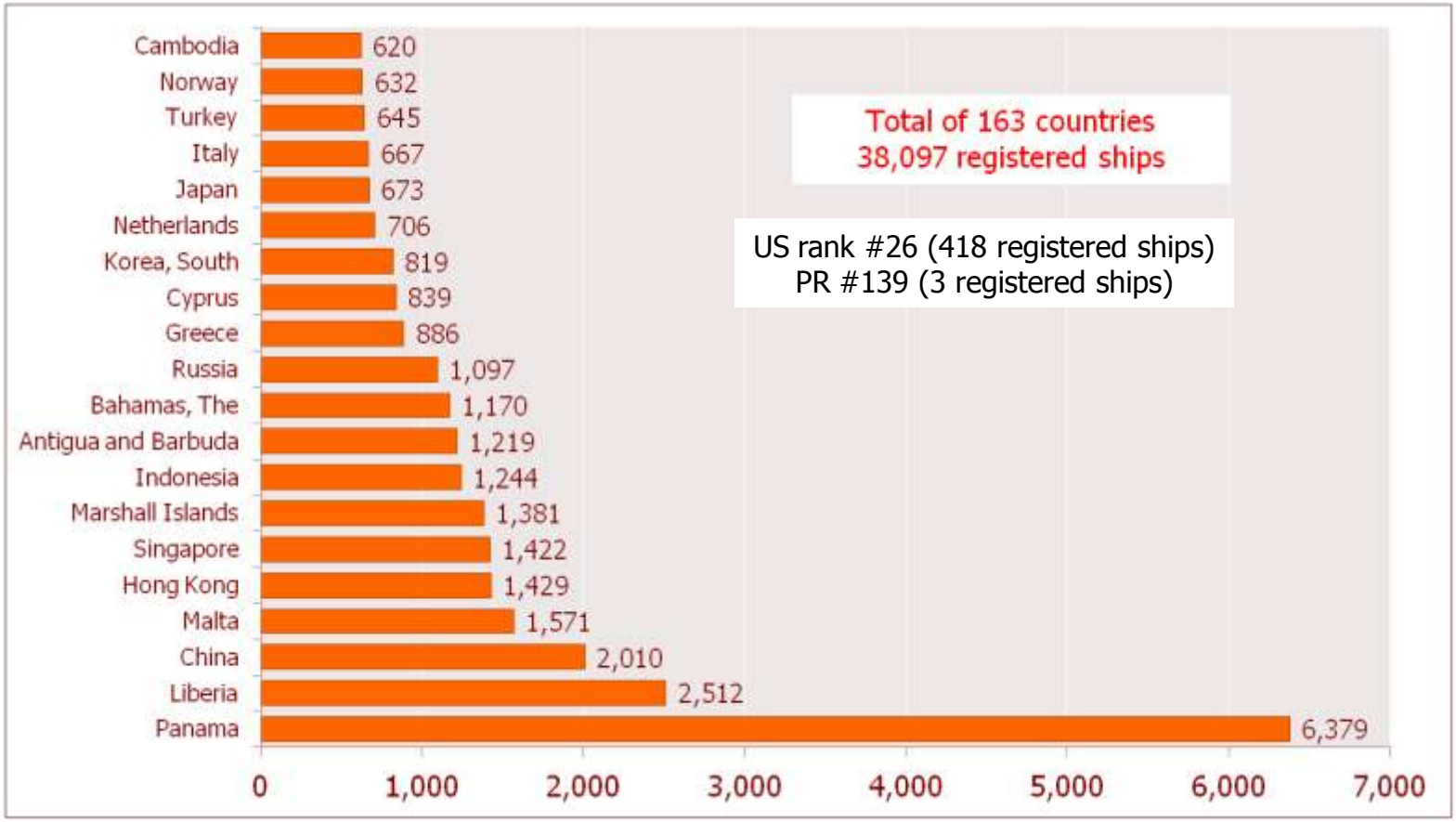
Source: UNCTAD. *Review of Maritime Transport*. various issues.

Change in World Container Fleet, 2001-2010



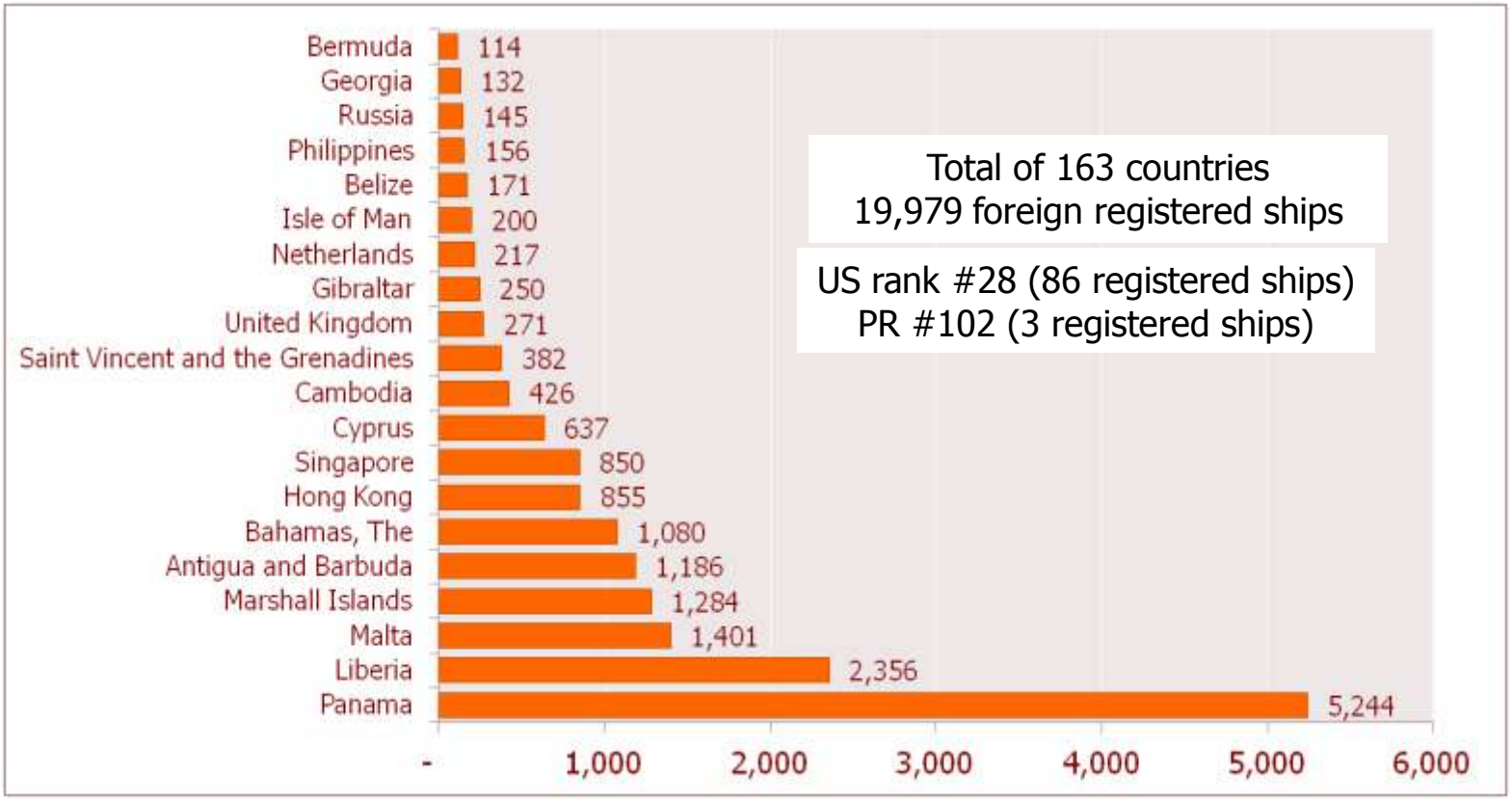
Source: Containerization International, Market Analysis: World Container Census 2010.

Number of Registered Ships: 2010



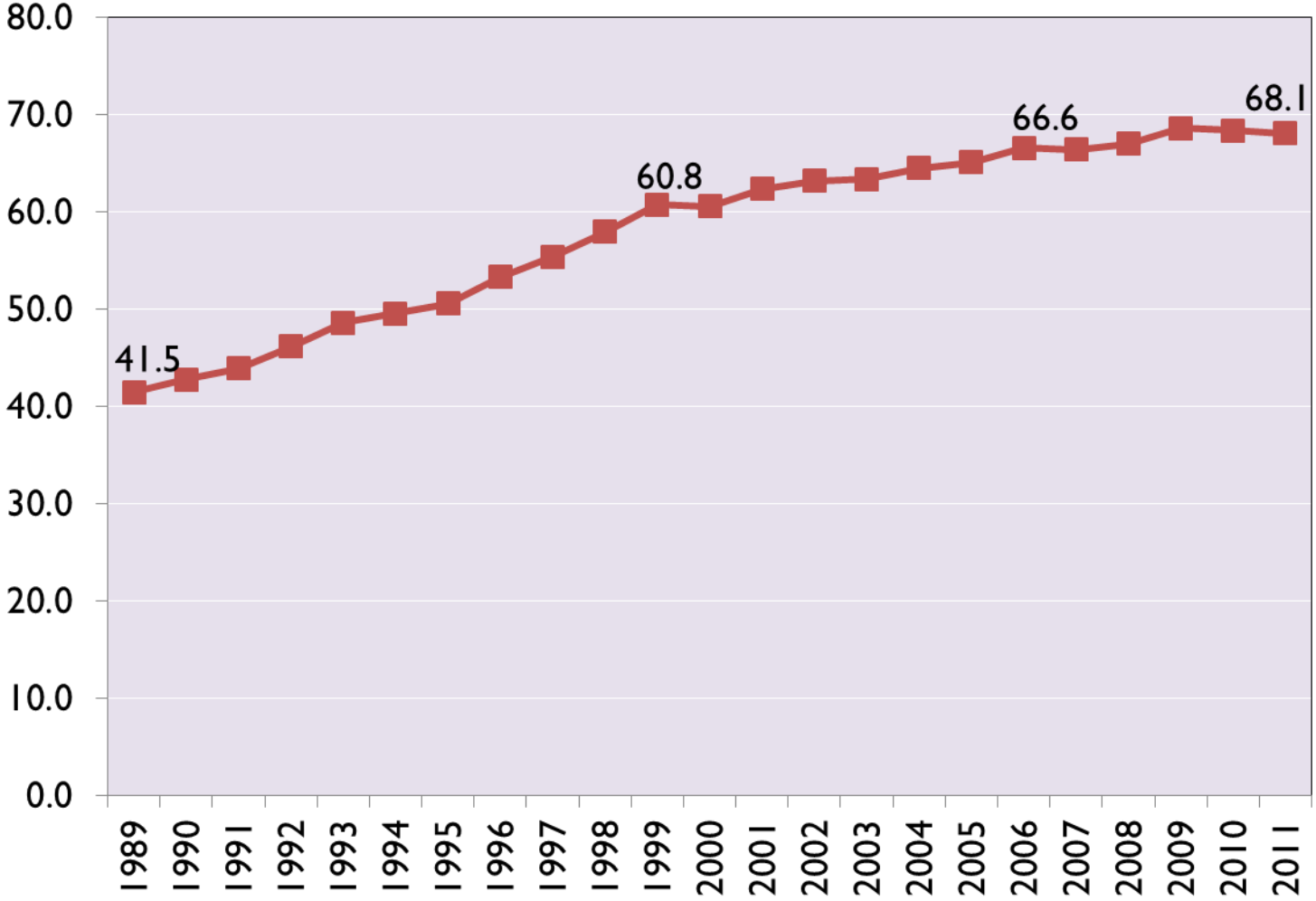
Source: https://www.cia.gov/library/publications/the-world-factbook/

Number of Foreign Owned Registered Ships: 2010



Source: https://www.cia.gov/library/publications/the-world-factbook/

Share of Foreign Flagged Fleet (as percentage of dwt)

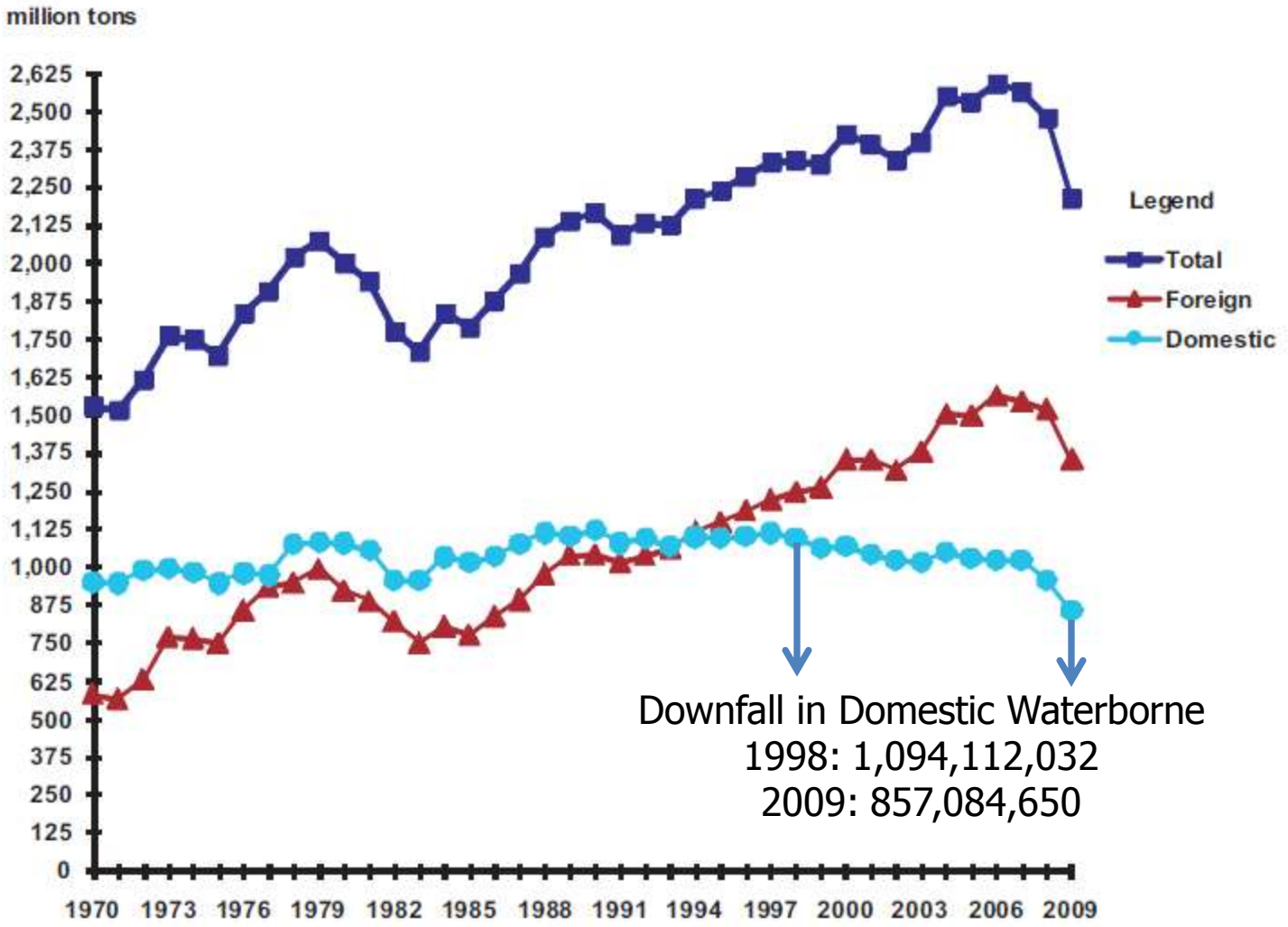


Source: UNCTAD. *Review of Maritime Transport*. various issues.

Number of Registered Ships in Other Country: 2010

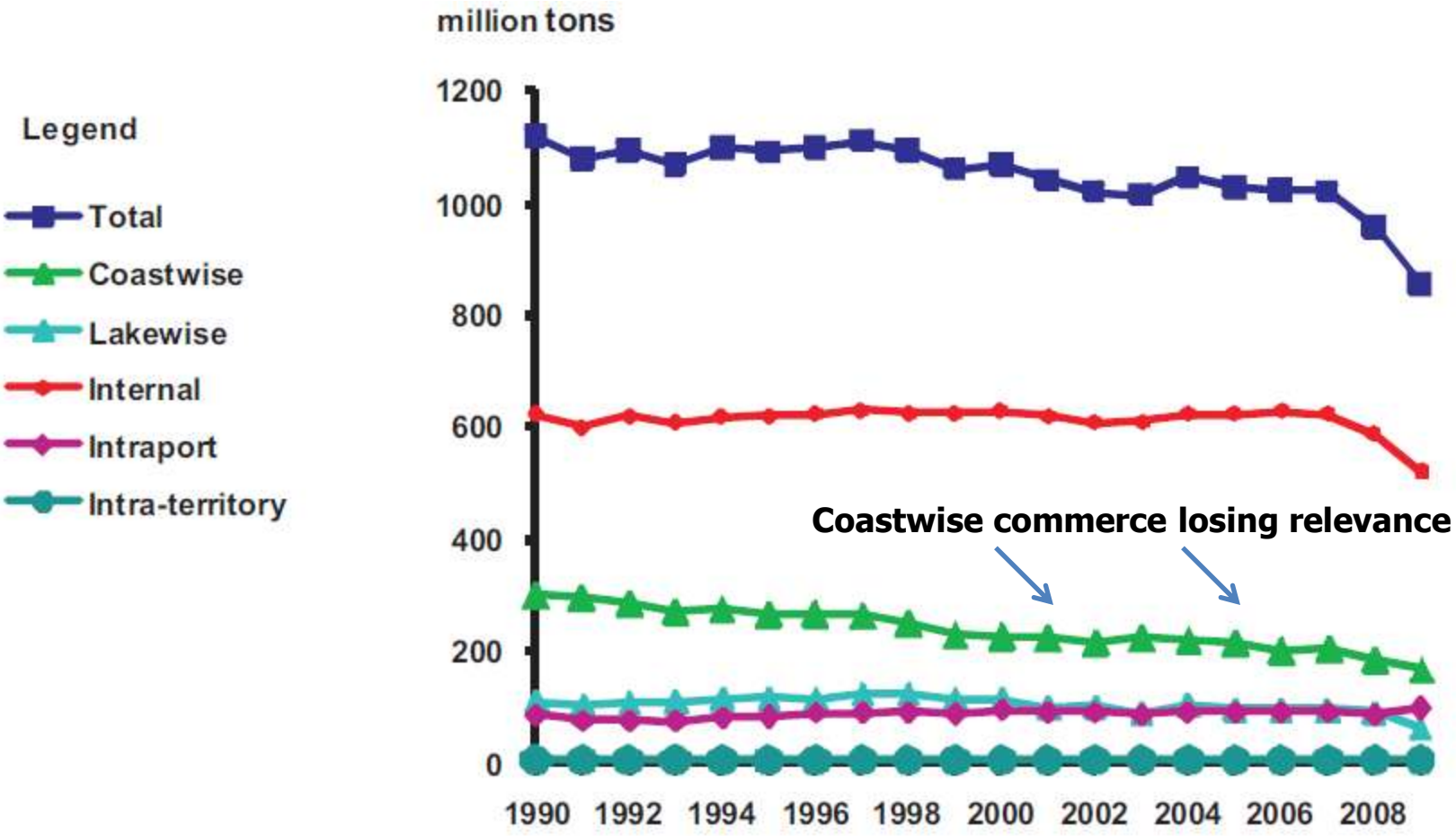
Source: https://www.cia.gov/library/publications/the-world-factbook/

Total Waterborne Commerce in the U.S., 1970-2009 (millions short tons)



Source: U.S. Army Corps of Engineers, *Waterborne Commerce of the United States (Part 5, National Summaries),* Calendar Year 2009.

Domestic Waterborne Commerce in the U.S., 1970-2009 by Type of Traffic (millions short tons)

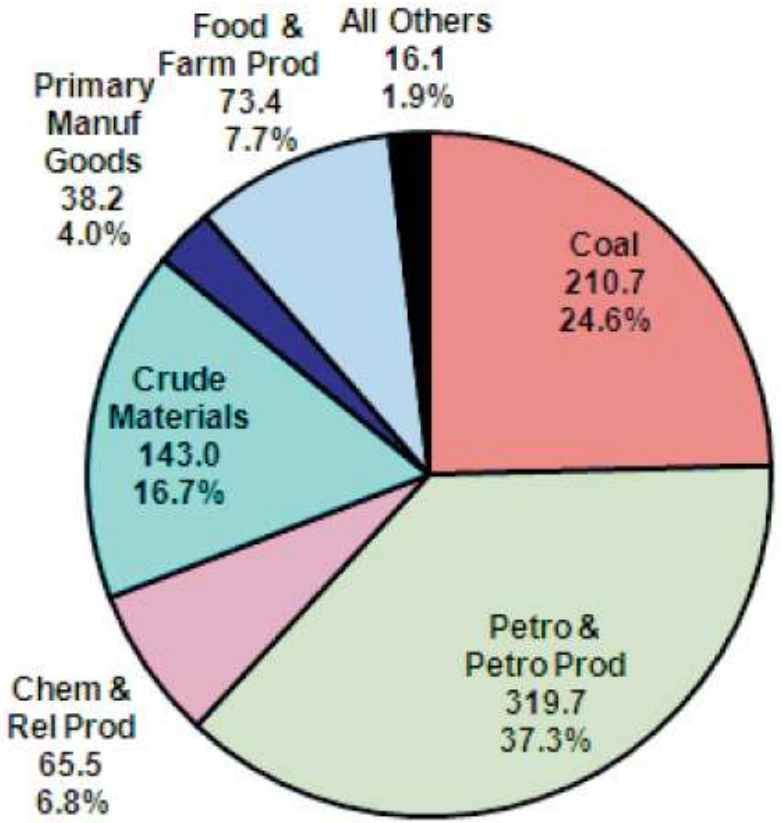


Source: U.S. Army Corps of Engineers, *Waterborne Commerce of the United States (Part 5, National Summaries),* Calendar Year 2009.

Intermediate products dominate domestic waterborne commerce

Coal, petro & related products represents 62%

PRINCIPAL COMMODITY GROUPS CARRIED BY WATER, 2009
(million short tons and percentage of short tons)
Domestic Commerce



Source: U.S. Army Corps of Engineers, *Waterborne Commerce of the United States (Part 5, National Summaries),* Calendar Year 2009.

San Juan port rank # 43 of a total of 150 ports in the U.S.
Ponce port rank #94

Table 5-2: SELECTED U.S. PORTS BY PORT NAME, 2009, RANKED BY TOTAL TONS
(short tons)

Rank	Port Name	Grand Total	Foreign			Domestic
			Total	Inbound	Outbound	
1	South Louisiana, LA, Port of	212,580,811	103,077,456	36,016,778	67,060,678	109,503,355
2	Houston, TX	211,340,972	147,969,451	84,629,722	63,339,729	63,371,521
3	New York, NY and NJ	144,689,593	83,469,086	64,032,262	19,436,824	61,220,507
4	Long Beach, CA	72,500,221	58,572,609	37,283,269	21,289,340	13,927,612
5	Corpus Christi, TX	68,239,968	50,804,314	39,673,722	11,130,592	17,435,654
6	New Orleans, LA	68,126,087	31,057,829	14,143,810	16,914,019	37,068,258
7	Beaumont, TX	67,715,469	43,286,648	36,873,234	6,413,414	24,428,821
8	Huntington - Tristate	59,171,545	-	-	-	59,171,545
9	Los Angeles, CA	58,406,060	51,399,625	31,278,985	20,120,640	7,006,435
10	Texas City, TX	52,632,461	36,475,801	31,701,199	4,774,602	16,156,660
41	Memphis, TN	13,980,433	-	-	-	13,980,433
42	Cincinnati, OH	11,767,981	-	-	-	11,767,981
43	San Juan, PR	11,295,229	4,973,226	4,224,628	748,598	6,322,003
44	Anacortes, WA	10,430,937	2,212,984	916,798	1,296,186	8,217,953
45	New Haven, CT	10,135,297	3,234,487	2,856,482	378,005	6,900,810
94	Ponce, PR	2,213,836	2,210,319	1,823,653	386,666	3,517

Source: U.S. Army Corps of Engineers, *Waterborne Commerce of the United States (Part 5, National Summaries),* Calendar Year 2009.

Economic Impact of Cabotage Laws in US

- United States International Trade Commission (USITC)
  - In 2002 the USITC found that repealing the Jones Act would have an annual positive welfare effect of $656 million on the overall U.S. economy.
  - The daily operating cost differential for a foreign flag tanker relative to a typical tanker in Jones Act trade in 1999 was -52 percent.
    - USITC, *The Economic Effects of Significant U.S. Import Restraints*, 2002.
  - In 1999 the USITC found that the economic cost of the Jones Act was as much as $1.3 billion for 1996.
    - USITC, *The Economic Effects of Significant U.S. Import Restraints, 1999*.

Cost Differentials: U.S. Coastwise vs. Foreign Trade

Table 5-1
Comparison of daily operating expenses for U.S.-flag vs. foreign-flag vessels, 2002

Type of Vessel	Tanker[1]		Containership[2]	
	U.S.-flag	Foreign-flag	U.S.-flag	Foreign-flag
	U.S. dollars			
Crew	9,400	2,100	12,100	2,800
Fuel	6,000	6,000	12,700	12,700
Maintenance and repair costs[3]	2,000	1,000	4,200	2,900
Insurance	900	600	2,200	1,400
Port call, cargo, and vessel expenses[4]	3,790	3,690	96,646	96,546
Total	22,090	13,390	127,846	116,346

Source: USITC. *The Economic Effects of Significant U.S. Import Restraints,*. 2004. Page 96.

Total Cost Differential 2002
Tanker 65%
Containership 10%

Table 5-1
Comparison of daily operating expenses for U.S.-flagged vs. foreign-flagged vessels, U.S. dollars, 2005

Expense category	Type of vessel			
	Tanker[a]		Containership[b]	
	U.S.-flagged	Foreign-flagged	U.S.-flagged	Foreign-flagged
Crew	11,000	2,300	12,705	2,940
Fuel	2,600	1,100	4,410	3,045
Maintenance and repair costs	1,200	700	2,310	1,470
Insurance	11,000	11,000	13,335	13,335
Other[c]	2,100	1,500	1,500	1,400
Total	27,900	16,600	34,260	22,190

Source: USITC. *The Economic Effects of Significant U.S. Import Restraints,*. 2007. Page 98.

Total Cost Differential 2005
Tanker 63%
Containership 54%

Economic Impact of Cabotage Laws in US

- Congressional Budget Office (CBO)
  - CBO estimated that the cost to the economy from cabotage in fiscal year 1983 was about $1.3 billion.
  - CBO reported that the maritime support programs have an annual budget cost of $1 billion.
  - The budgetary or economic cost to improve U.S. maritime capabilities range from $1 billion to $4 billion per year above current costs.
    - The Congressional Budget Office, "U.S. Shipping and Shipbuilding Trends and Policy Choices," August 1994.

Economic Impact of Cabotage Laws in US

- Lawrence J. White, estimated costs to be $2 billion in 1984.
  - White, Lawrence J. *International Trade in Ocean Shipping Services: The United States and the World*. Cambridge, MA: American Enterprise Institute, Ballinger Publication, 1988.
- Hufbauer and Elliott, estimated a net cost of $1.1 billion.
  - Hufbauer, Gary C. and Kimberly A. Elliott, *Measuring the Costs of Protection in the United States*. Washington DC: Institute for International Economics, 1993.

Economic Impact of Cabotage Laws in Alaska

- U.S. Government Accountability Office (GAO)*
  - In 1988 GAO estimate that the building vessels in the United States increases the cost of transportation with Alaska by $163 million per year.
  - This cost estimate represents the excess of annual capital costs in 1987 for the U.S. built ships in the current Alaska-trade fleet over those of similar foreign-built ships.
  - GAO expect this cost to decrease due to new pipeline between California and Texas.
  - Production of Alaska North Slope oil is expected to peak in 1989 and decline thereafter.

*USGAO. *The Jones Act: Impact on Alaska Transportation and U.S. Military Sealift Capability*. Washington D.C: September 1988.

Economic Impact of Cabotage Laws in Hawaii

- Lawrence W. Boyd, estimate that the per capita income lost from repeal of the Jones Act in Hawaii would range from $37.50 per household to $1,124.
  - Center for Labor Education and Research at the University of Hawai'I - West O'ahu available in http://clear.uhwo.hawaii.edu/jonesact.html
- Daniel Brackins (2009), estimate that the operating costs at U.S. vessels under U.S. flag is significantly higher than foreign vessels, the average annual cost for a U.S. flag is $34,260 while for a foreign vessel is $22,190.
  - *The Negative Effects of the Jones Act on the Economy of Hawaii.* Bastiat Institute (Aug. 18, 2009) available at http://www.bastiatinstitute.org/wp-content/uploads/2009/08/Jones-Act-Study1.pdf

Cost Differential

Table 1.
Operating Cost Differences

Expense Category	U.S. Flagged	Foreign Flagged	Difference
Crew	$12,705	$2,940	$9,765
Fuel	$4,410	$3,045	$1,365
Maint. & Repair	$2,310	$1,470	$840
Insurance	$13,335	$13,335	$0
Other	$1,500	$1,400	$100
TOTAL	$34,260	$22,190	$12,070

Source: The Economic Effects, 2007
The Negative Effects of the Jones Act on the Economy of Hawaii
Daniel Brackins

Table 2. Cost of Food Based Hawaii vs. Mainland

Table 2. Cost of Food Based on a Thrifty Plan

	Mainland	Hawaii	Difference
Male 20-50	$174.00	$251.60	30.8%
Female 20-50	$154.90	$231.00	32.9%
Family of Two	$361.80	$530.80	31.8%
Family of Four	$602.80	$905.10	33.4%

Source: Official USDA Food, 2008; Official USDA Alaska, 2008
The Negative Effects of the Jones Act on the Economy of Hawaii
Daniel Brackins

- Because Hawaii imports 90% of goods there is a significant impact as a result of Cabotage Laws in the islands.

Economic Impact of Cabotage Laws in Puerto Rico

- Paquita Pesquera (1965), found a surcharged cost of $48.3 millions in 1964.
  - Pesquera, Paquita (1965), *Algunos Problemas que Confronta la Transportación Marítima entre Puerto Rico y Estados Unidos y sus Implicaciones para la Economía de la Isla*. Tesis de Maestría, Departamento de Economía, Universidad de Puerto Rico, Recinto de Rio Piedras.
- *Management and Economic Consultant, Inc, (1993),* found if Cabotage Laws were repealed, the net saving will be near $100 million of a total of $961 million on freight costs.
  - See John Collins, "The Jones Act: Good or Bad ?": Caribbean Business, Agoust 10, 1995.
- Herrero, José, A. Soriano & J. Valentín-Mari (2003), found an additional cost of $426 million in fiscal year 2000.
  - *El Efecto del Régimen Actual del Comercio Exterior en Relación al Transporte Marítimo sobre la Economía de Puerto Rico*. Ceteris Paribus, Vol. 3. Marzo 2003. Available at http://ceterisparibus.uprm.edu/articulos/vol3/articulo2.htm

Economic Effects of U.S. Cabotaje Law in Puerto Rico (2012)

- Working paper, authors
  - Jeffry Valentin-Mari, Ph,.D.
  - Jose I. Alameda-Lozada, Ph.D.
- Justification
- Methodology
- Limitations
- Results
- Conclusion

Justification of this study

1. WTO/GATS/OECD advocated to free trade in services including maritime transportation as engine of world economic growth. United States is a founding member of these institutions and negotiations.

2. Highly concentrate oligopolistic structure controlling the productive efficiency of trade commerce in Puerto Rico, which is vital for an island economy.

3. Collateral economic effects such as price discrimination and antitrust litigations representing a misallocation of limited economic resources.

Justification of this study

1. The emergence of Panama as the major hub port and airport for Latin-American and the possible participation of Puerto Rico as a Caribbean satellite transshipment hub.

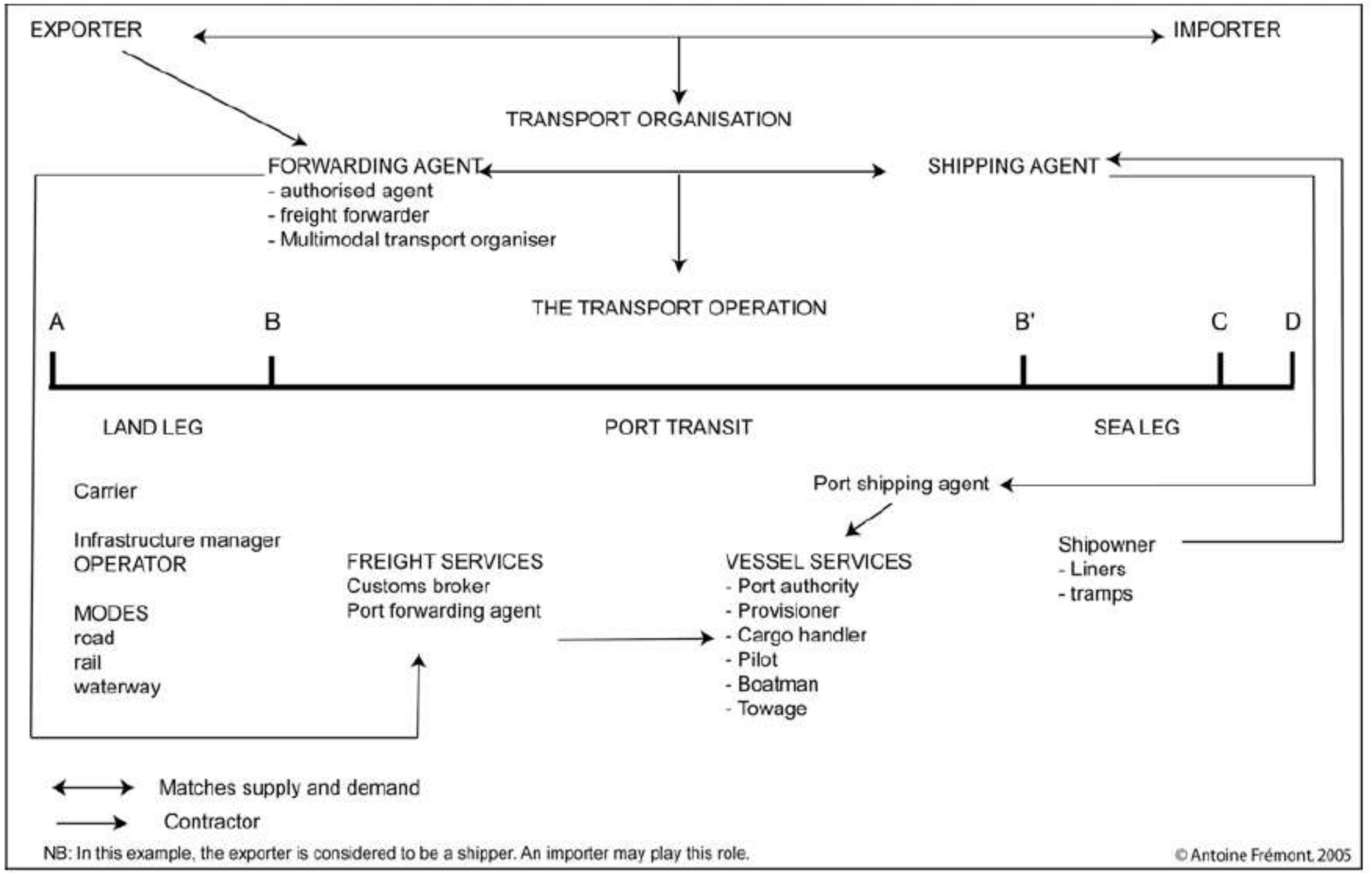
2. The positive experience generated in the cruised line ship industry since Puerto Rico succeeded to be exempted from the coastwise laws in the transportation of passengers.

3. The Great Recession (2007 - ?), Puerto Rico now enter its sixth year in recession and the government urgent need to focus fully on growth-generating policies.

PANAMA: Beyond the Canal

- City of Knowledge
  - Cluster for education, research, and innovation, and was developed to promote and facilitate synergy between universities, scientific research centers, businesses, and international organizations.
  - It is located in what used to be United States Army South headquarters, Fort Clayton.
- Colon Free Zone
  - The largest cargo and transshipment centre in the hemisphere.
  - 2011: 7% PAN GDP, 30,669 employees and 2,223 firms.
- Panama Pacific Special Economic Area
  - Area designated in 2004 for the production of goods and services of high added value and technology in the former USAF base Howard.
- Tocumen Air Cargo Transshipment
  - Plan 2025 propose to establish 20 air cargo terminals in the Tocumen International Airport.
- Panama Canal Railway Company
  - The trans-isthmus railroad handles some 500,000 container operations each year, and its continual expansion will allow it to reach 750,000.

Parties Involved in the sea transportation chain in shipping freight



Source: Fremont, Antoine *Empirical Evidence for Integration and Disintegration of Maritime Shipping, Port and Logistics Activities.* International Transport Forum. Discussion Paper No. 2009-1 January 2009.

M&A between shipping companies

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
1	Maersk Line	Maersk Line	Maersk Sealand	Maersk-SeaLand	Maersk Sealand	Maersk Line	Maersk Line	Maersk Line	Maersk Line	Maersk Line
2	Evergreen	Evergreen	Evergreen Line/Uniglo	P&O Nedlloyd	P&O Nedlloyd	MSC	MSC	MSC	MSC	MSC
3	P&O Nedlloyd	P&O Nedlloyd	P&O Nedlloyd	Evergreen	Evergreen	P&O Nedlloyd	Evergreen	Evergreen	P&O Nedlloyd	CMA-CGM
4	Sea-Land	MSC	Hanjin/DSR-Senator	Hanjin/DSR-Senator	Hanjin/DSR-Senator	Evergreen	P&O Nedlloyd	P&O Nedlloyd	Evergreen	Hapag Lloyd
5	COSCO	Hanjin	MSC	MSC	MSC	Hanjin/DSR-Senator	CMA-CGM	CMA-CGM	CMA-CGM	COSCO
6	Hanjin	Sea-Land	COSCO	NOL/APL	NOL/APL	COSCO	Hanjin/DSR-Senator	NOL/APL	NOL/APL	CSCL
7	MSC	COSCO	NOL/APL	COSCO	COSCO	NOL/APL	COSCO	Hanjin/DSR-Senator	CSCL	Evergreen
8	MOL	NOL/APL	NYK	NYK	CMA-CGM	CMA-CGM	NOL/APL	NYK	COSCO	NOL/APL
9	NYK	NYK	CMA/CGM/ANL	CP Ships	NYK	MOL	NYK	COSCO	Hanjin/DSR-Senator	Hanjin
10	HMM	MOL	CP Ships	CMA-CGM	CP Ships	CP Ships	MOL	CSCL	NYK	NYK
11	Zim	HMM	Zim	MOL	K Line	NYK	CP Ships	OOCL	OOCL	MOL
12	Yangming	Zim	MOL	K Line	OOCL	K Line	K Line	MOL	CSAV	OOCL
13	CMA-CGM	CP Ships	K Line	Zim	MOL	Zim	OOCL	Zim	MOL	K Line
14	OOCL	CMA/CGM	HMM	OOCL	HMM	OOCL	Zim	CP Ships	K Line	Yang Ming
15	NOL	Hapag-Lloyd	OOCL	Hapag-Lloyd	CSCL	CSCL	Hapag Lloyd	K Line	Hapag Lloyd	Zim
16	CP Ships	OOCL	Yangming	Yang Ming	Yang Ming	Hapag Lloyd	Yang Ming	CSAV	Zim	Hamburg Süd
17	K Line	K Line	Hapag-Lloyd	CSCL	Zim	HMM	CSCL	Hapag Lloyd	Hamburg-Süd	HMM
18	APL	Yangming	UASC	HMM	Hapag Lloyd	Yang Ming	Hyundai	Yang Ming	Yang Ming	PIL
19	Hapag-Lloyd	UASC	CSAV	CSAV	CSAV	PIL	CSAV	HMM	CP Ships	CSAV
20	Cho Yang	Safmarine	Cho Yang	Hamburg-Süd	Hamburg-Süd	CSAV	PIL	Hamburg Süd	HMM	Wan Hai
		Uniglory						Delmas		
		Lloyd Triestino								
		DSR Senator								

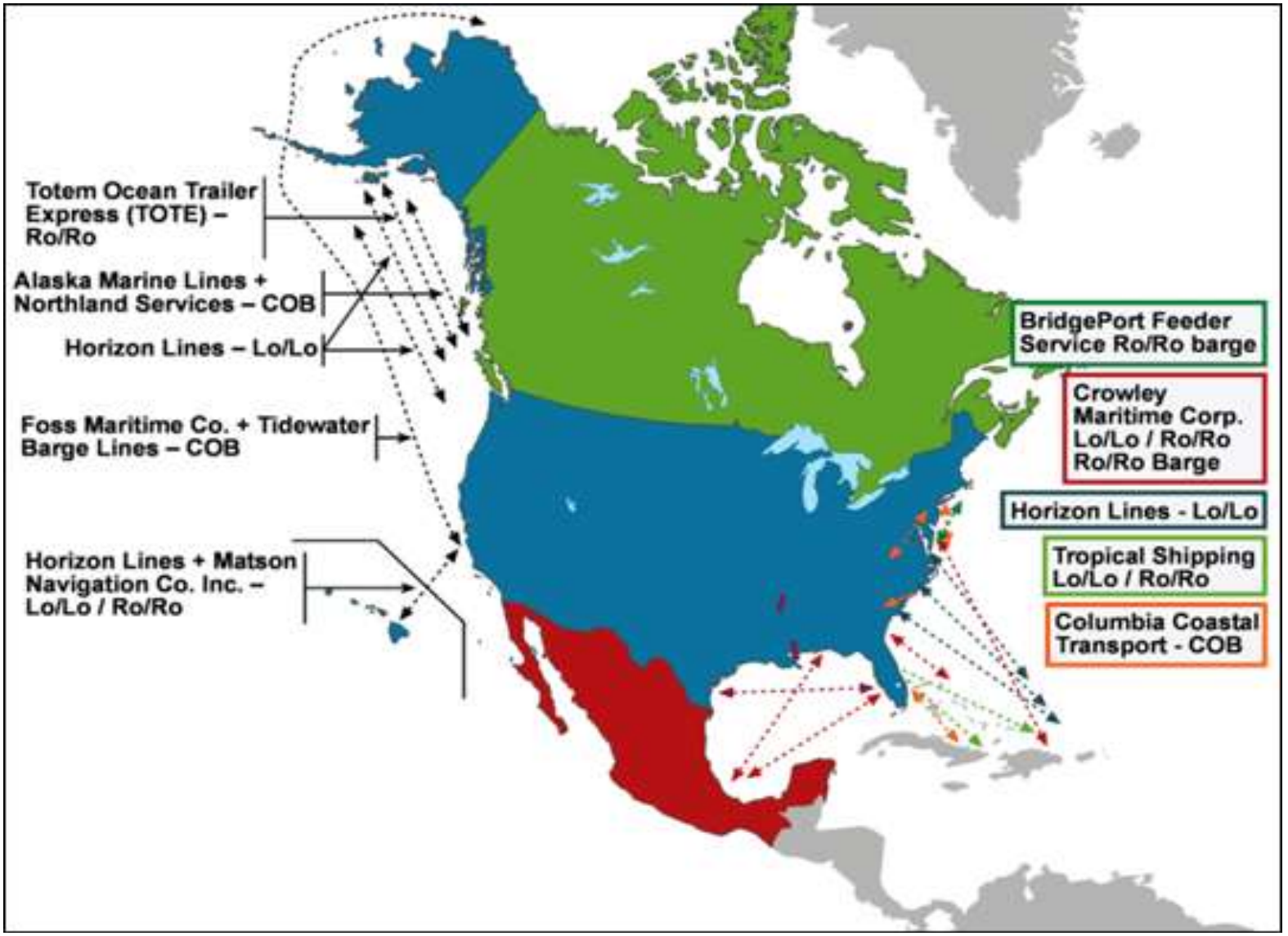
Source: Van de Voorde and Thierry Vanelslander. *Market Power and Vertical and Horizontal Integration in the Maritime Shipping and Port Industry*. International Transport Forum. Discussion Paper No. 2009-2 January 2009.

Table 2.6. The 20 leading service operators of container ships, 1 January 2011
(number of ships and total shipboard capacity deployed (TEUs))

Ranking	Operator	Country/territory	Number of vessels	Average vessel size	TEU	Share of world total, TEU	Cumulated share, TEU	Percentage of growth in TEU over 2010
1	Maersk Line	Denmark	414	4 398	1 820 816	11.2%	11.2%	4.2%
2	MSC	Switzerland	422	4 176	1 762 169	10.8%	22.0%	16.9%
3	CMA CGM Group	France	288	3 715	1 069 847	6.6%	28.6%	13.2%
4	Evergreen Line	China, Taiwan Province of	162	3 666	593 829	3.7%	32.3%	0.2%
5	APL	Singapore	141	4 197	591 736	3.6%	35.9%	12.8%
6	COSCON	China	147	3 848	565 728	3.5%	39.4%	14.1%
7	Hapag-Lloyd Group	Germany	126	4 446	560 197	3.4%	42.8%	19.1%
8	CSCL	China	120	3 841	460 906	2.8%	45.7%	0.8%
9	Hanjin	Republic of Korea	98	4 565	447 332	2.8%	48.4%	11.8%
10	CSAV	Chile	119	3 217	382 786	2.4%	50.8%	95.4%
11	OOCL	China, Hong Kong SAR	85	4 408	374 714	2.3%	53.1%	29.1%
12	MOL	Japan	91	3 989	362 998	2.2%	55.3%	4.2%
13	NYK	Japan	85	4 152	352 915	2.2%	57.5%	-1.9%
14	K Line	Japan	84	4 143	347 989	2.1%	59.6%	7.0%
15	Hamburg Sud	Germany	98	3 423	335 449	2.1%	61.7%	18.2%
16	Yang Ming	China, Taiwan Province of	78	4 137	322 723	2.0%	63.7%	1.7%
17	HMM	Republic of Korea	60	4 753	285 183	1.8%	65.4%	9.7%
18	Zim	Israel	73	3 857	281 532	1.7%	67.2%	30.5%
19	PIL	Singapore	111	2 146	238 241	1.5%	68.6%	36.9%
20	UASC	Kuwait	47	3 800	178 599	1.1%	69.7%	1.1%
Total top 20 carriers			2 849	3 979	11 335 689	69.7%	69.7%	12.4%
Others			6 839	719	4 918 299	30.3%	30.3%	1.1%
World containership fleet			9 688	1 678	16 253 988	100.0%	100.0%	8.7%

Source: UNCTAD. *Review of Maritime Transport 2011*.

Existing US Coastal Shipping Routes



Highly Concentrated Oligopolistic Structure

Market Structure of Maritime Shipping Serivice in Puerto Rico, 2001

Carrier	Type of Vessel Operated	Vessels in PR	Weekly Capacity (FEUs one way)	Weekly Service Frequently	Ports Served	
					CONUS	PR
Crowley	Roll-On/Roll-Off Trailer Barges	8	1,837	4	Pennsauken, NJ; Jacksonville, FL	San Juan
CSX Lines	Containers	4	2,194	4	Elizabeth, NJ; Jacksonville, FL; Houston, TX; New Orleans, LA	San Juan
NPR, Inc	Containers	3	1,725	3	Philadephia, PA Jacksonville, FL	San Juan
Sea-Star Line	Combination Ro/Ro and Container	2	1,130	2	Jacksonville, FL Port Everglades, FL	San Juan
Trailer Bridge	Container & Roll-On/ Roll-Off Barges	6	1,226	3	Jacksonville, FL	San Juan
TOTAL	**N/A**	**23**	**8,112**	**16**	**N/A**	**N/A**

Source: Data obtained from carrier web pages

Sea Star bought *Navieras de Puerto Rico* (the original government-sponsored shipping company) in 2002/2003. In March 5, 1995, *Navieras* was first sold to a private group of investors.

Highly Concentrated Oligopolistic Structure

Market Structure of Maritime Shipping Serivice in Puerto Rico, 2012

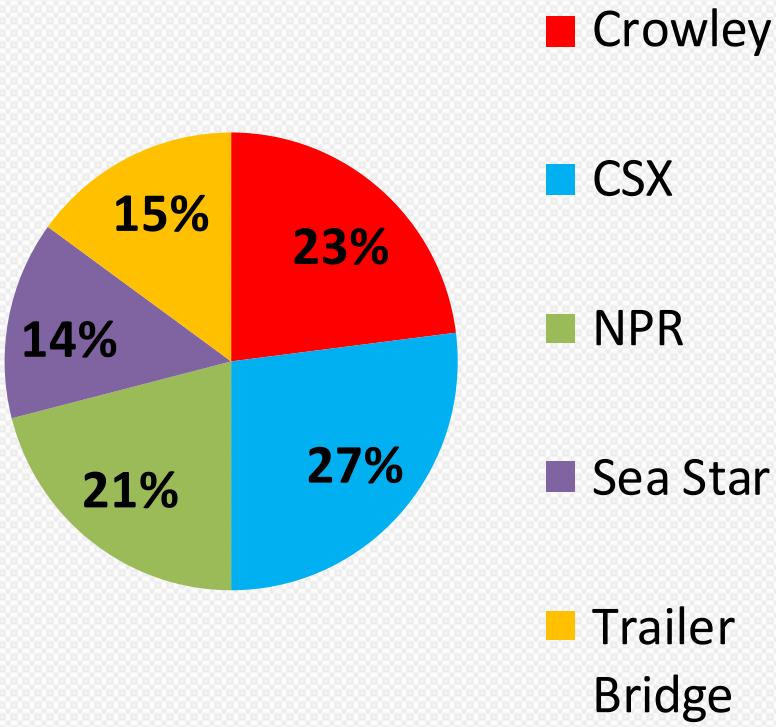
Carrier	Type of Vessel Operated	Vessels		Weekly Capacity (one way)	Weekly Service Frequency	Ports Served	
		Total	PR			CONUS	PR
Crowley	Roll-On/Roll-Off (Ro/Ro)	200 (21 LAC)	8	3,640 FEU	3 weekly sailing service & 1 weekly from Jacksonville, FL	Pennsauken, NJ Jacksonville, FL	San Juan
Sea Star Line	Lift-On/Lift-Off (Lo/Lo) & Ro/Ro	4	3	1,800 FEU	3	Jacksonville, FL Port Everglades, FL	San Juan
Trailer Bridge, Inc.	Ro/Ro	7	5	1,655 containers 54' (2,235 FEU)*	Four vessels provide 2 weekly sailing service & one vessel every 7 days	Jacksonville, FL	San Juan
Horizon Lines, Inc.	Containers	20	4	7,947 TEU (3,974 FEU)*	3 weekly sailing service & 1 every 14 day from Houston with connection in Tampa, FL	Elizabeth, NJ Jacksonville, FL Houston, TX Tampa, FL	San Juan
TOTAL	**N/A**	**231**	**20**	**11,649**	**14**	**N/A**	**N/A**

Source: Data obtained from carrier web pages

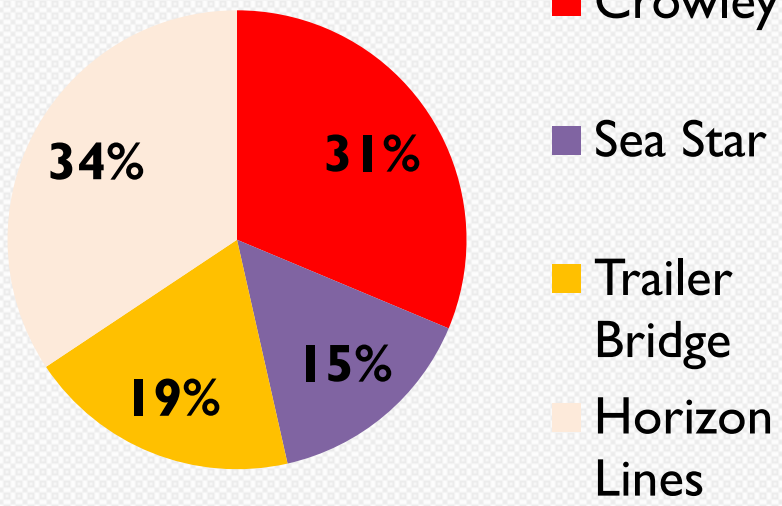
* Convertions in FEU made by authors

A reduction in weekly service frequency and in number of vessels. However, the vessels weekly capacity shows an increase.

Potential Market Shares based on Total FEU weekly capacity 2001



Potential Market Shares based on Total FEU weekly capacity 2012



Highly Concentrated Oligopolistic Structure

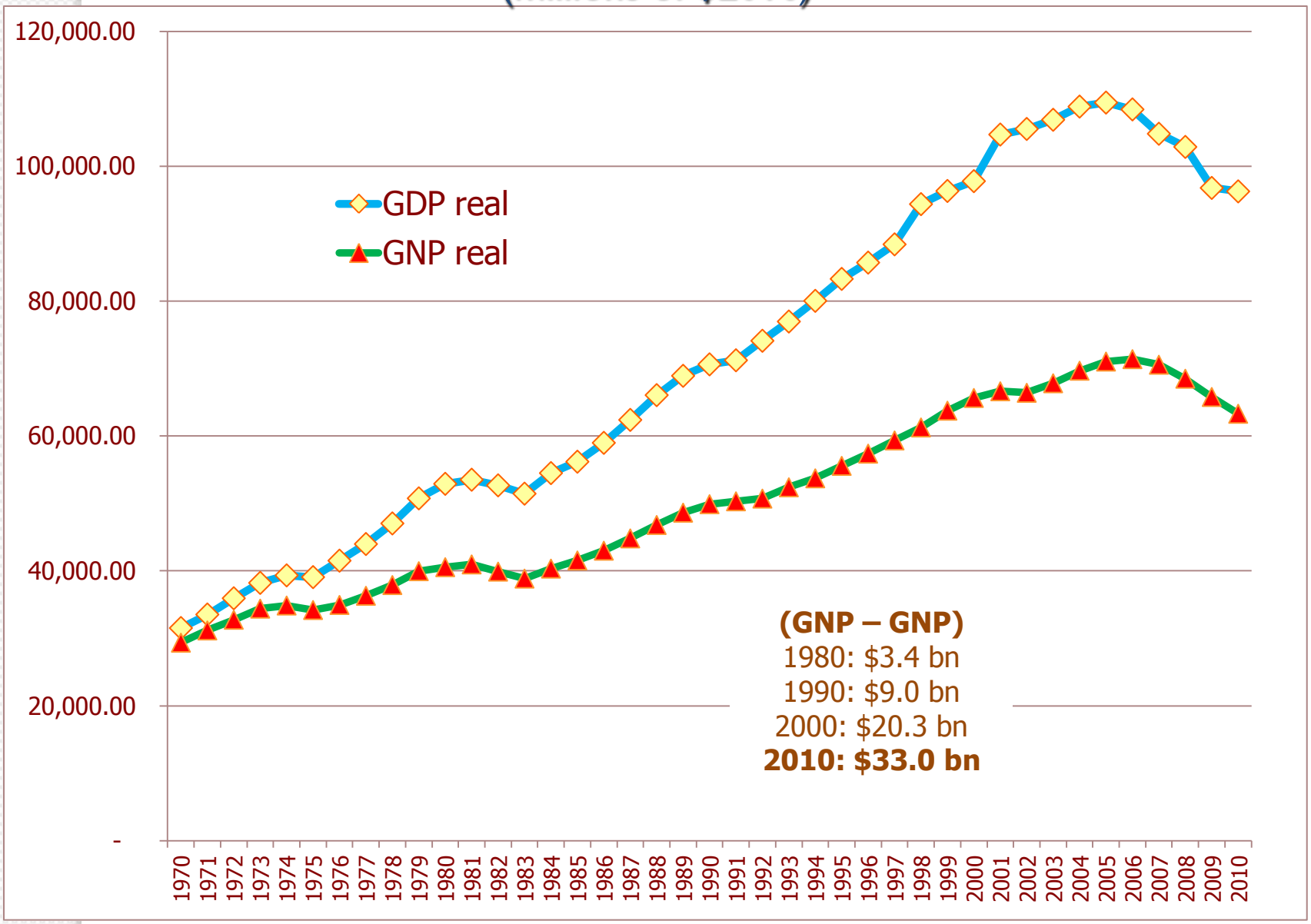
Price Discrimination & Antitrust Litigations

- In 2008, the U.S. DOJ Antitrust Division served search warrants and subpoenas on four shipping carriers for allocating customers, rigging bids, and fixing prices for coastal shipping services between the United States and Puerto Rico.
- Violation of the Sherman Act. 15 U.S.C. §§ 1 and 3.
- Relevant period: May 2002 – April 2008
  - Trailer Bridge enter into the DOJ Antirust Division's Leniency Program (2008).
  - Horizon Line, LLC agrees to pay a criminal fine of $45 million (Feb. 23, 2011). The fine was reduce to $15 million due to bankruptcy (April 2011).
  - Sea Star Line agrees to pay a criminal fine of $14.2 million (Nov. 17, 2011).
  - Five former shipping executives from both Sea Star Line and Horizon Lines have been sentenced to pay a total of nearly $85,000 in criminal fines and to serve more than 11 years in prison, collectively.
  - In January 2009, one of the former shipping executive was sentenced to 48 months in jail, the longest jail term ever imposed for a single antitrust violation.

Price Discrimination & Antitrust Litigations

- Subsequent to the commencement of the DOJ investigation, 58 Class Action Lawsuits were filed by the direct purchasers against the domestic shipping carriers, 34 were relate to ocean shipping services in PR.
- On August 31, 2011, the U.S. District Court for the District of Puerto Rico approved the settlements for a total of $52.25 million — $20 million from Horizon, $18.5 million from Sea Star and $13.75 million from Crowley.
- In February 2011, the shipping carriers entered into a Memorandum of Understanding with the attorneys representing the indirect purchasers and the Commonwealth of Puerto Rico to settle the investigation by the Puerto Rico Office of Monopolistic Affairs and the lawsuit filed by the Commonwealth of Puerto Rico in February 2011, and the class action lawsuit in the indirect purchasers case.
- Under the Memorandum of Understanding, Horizon line, Sea Star Line and Crowley Liner Services each agreed to pay $1.7 million for a full release in those matters.

Puerto Rico Real GNP & GDP: FY 1970 - 2010
(millions of $2010)



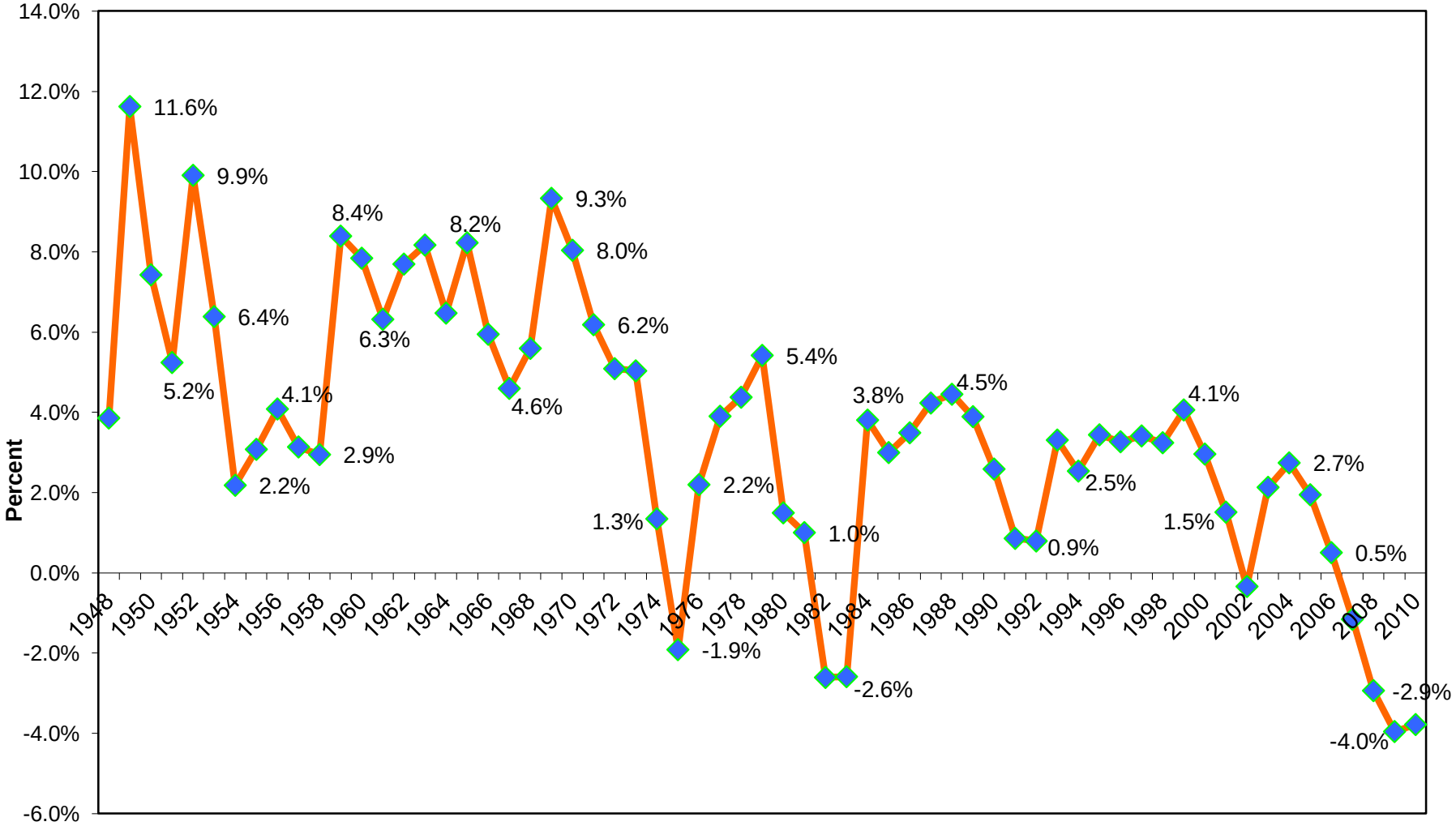
Source: Puerto Rico Planning Board. *Economic Report to the Governor*. various issues. San Juan, PR.

Principales Economías de las Americas: 2009					
País	PNB (M de $)	País	PIB (M de $)	PIB - PNB	(PIB-PNB) / PNB
EUA	14,233,516	EUA	14,119,000	-114,516	-0.8%
Brazil	1,557,007	Brazil	1,573,409	16,402	1.1%
Canada	1,416,347	Canada	1,336,068	-80,279	-5.7%
Mexico	962,076	Mexico	874,810	-87,266	-9.1%
Argentina	304,070	Venezuela, RB	326,133	39,779	13.9%
Venezuela, RB	286,354	Argentina	307,155	3,085	1.0%
Colombia	227,814	Colombia	234,045	6,231	2.7%
Chile	160,655	Chile	163,669	3,014	1.9%
Peru	122,355	Peru	130,325	7,970	6.5%
Puerto Rico	62,759	Puerto Rico	95,708	32,949	52.5%
Cuba	62,196	Cuba	62,705	509	0.8%
Ecuador	54,130	Ecuador	57,249	3,119	5.8%
Rep. Dominicana	45,937	Rep. Dominicana	46,788	851	1.9%
Guatemala	37,189	Guatemala	37,322	133	0.4%
Uruguay	30,154	Uruguay	31,511	1,357	4.5%
Costa Rica	28,664	Costa Rica	29,240	576	2.0%
Panama	22,683	Panama	24,711	2,028	8.9%
Trinidad y Tobago	22,356	Trinidad y Tobago	21,204	-1,152	-5.2%
El Salvador	20,785	El Salvador	21,101	316	1.5%
Bolivia	16,061	Bolivia	17,340	1,279	8.0%
Paraguay	14,279	Honduras	14,318	866	6.4%
Honduras	13,452	Paraguay	14,236	-43	-0.3%
Jamaica	12,402	Jamaica	12,070	-332	-2.7%
Bahamas	7,136	Bahamas	7,234	98	-4.7%
Nicaragua	5,726	Haiti	6,479	NA	NA
Haiti	NA	Nicaragua	6,140	414	7.2%
Fuente: World Bank. 2009. *World Development Indicators*. Washington, D.C.					
Nota: Cifras en dólares corrientes de los Estados Unidos.					
http://www.worldbank.org/					

PNB = GNP
PIB = GDP

The net income generate by resources owned by foreigners in PR is equivalent to 52.5% of the PR's GNP.

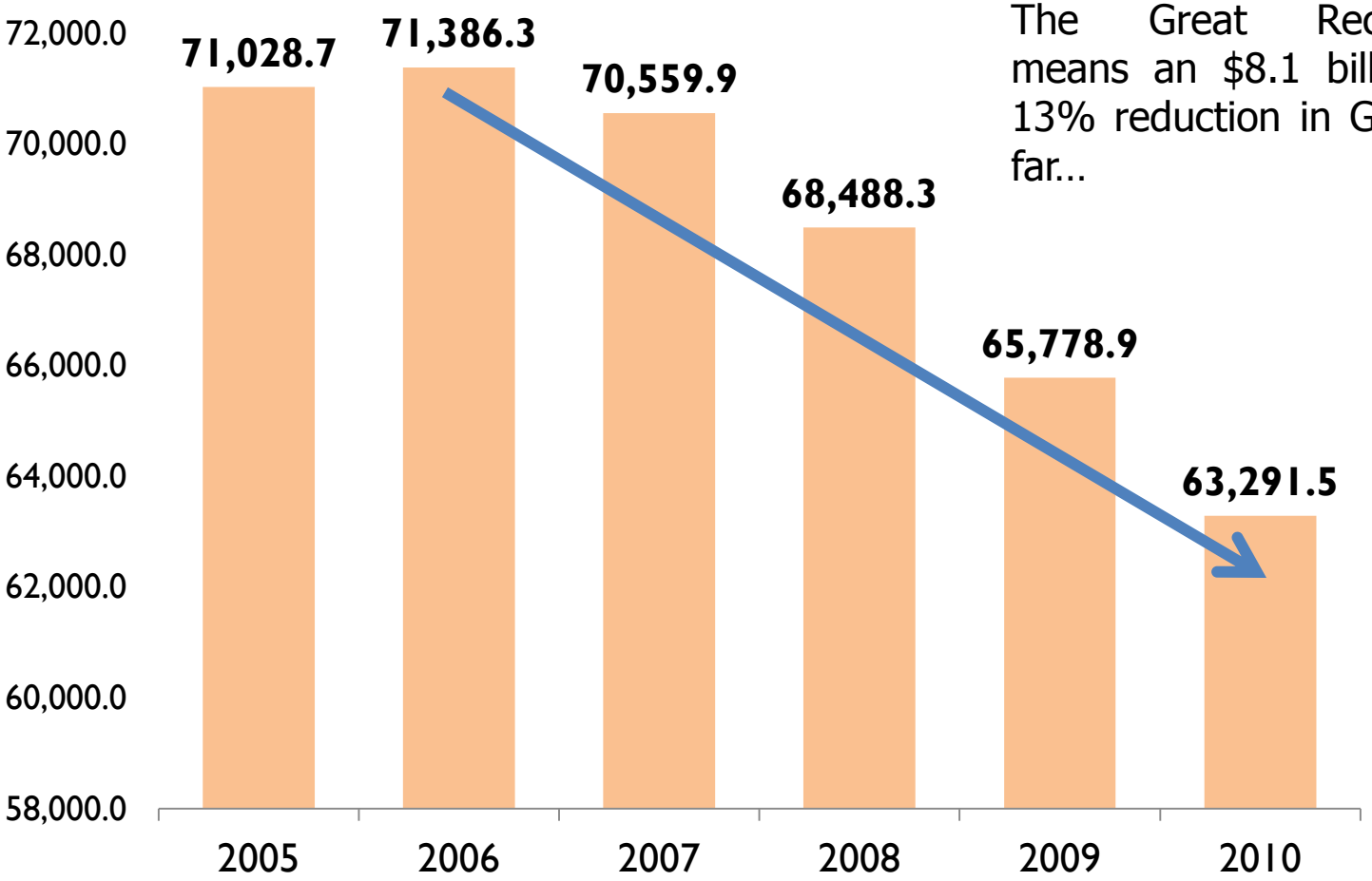
Annual Growth of Real GNP of Puerto Rico
FY 1948-2010



Source: Puerto Rico Planning Board. *Economic Report to the Governor*. various issues. San Juan, PR.

Puerto Rico GNP: FY 2005-2010

(In millions of $2010)



The Great Recession means an $8.1 billion or 13% reduction in GNP, so far…

Source: Puerto Rico Planning Board. *Economic Report to the Governor*. various issues. San Juan, PR.

Methodology

1. Estimation of the reciprocal demand function of Puerto Rico, excluding the transportation costs of the merchandise exported and imported.
2. Estimation of reciprocal demand function of Puerto Rico, including the transportation costs of the merchandise exported and imported.
3. Estimation of the difference between the two reciprocal demand functions, i.e. (2) - (1).
4. Estimation of the opportunity cost of the transportation service in the trade commerce.
5. Estimation of the economic cost of maritime transportation service to Puerto Rico trade commerce under the Jones Act jurisdiction.

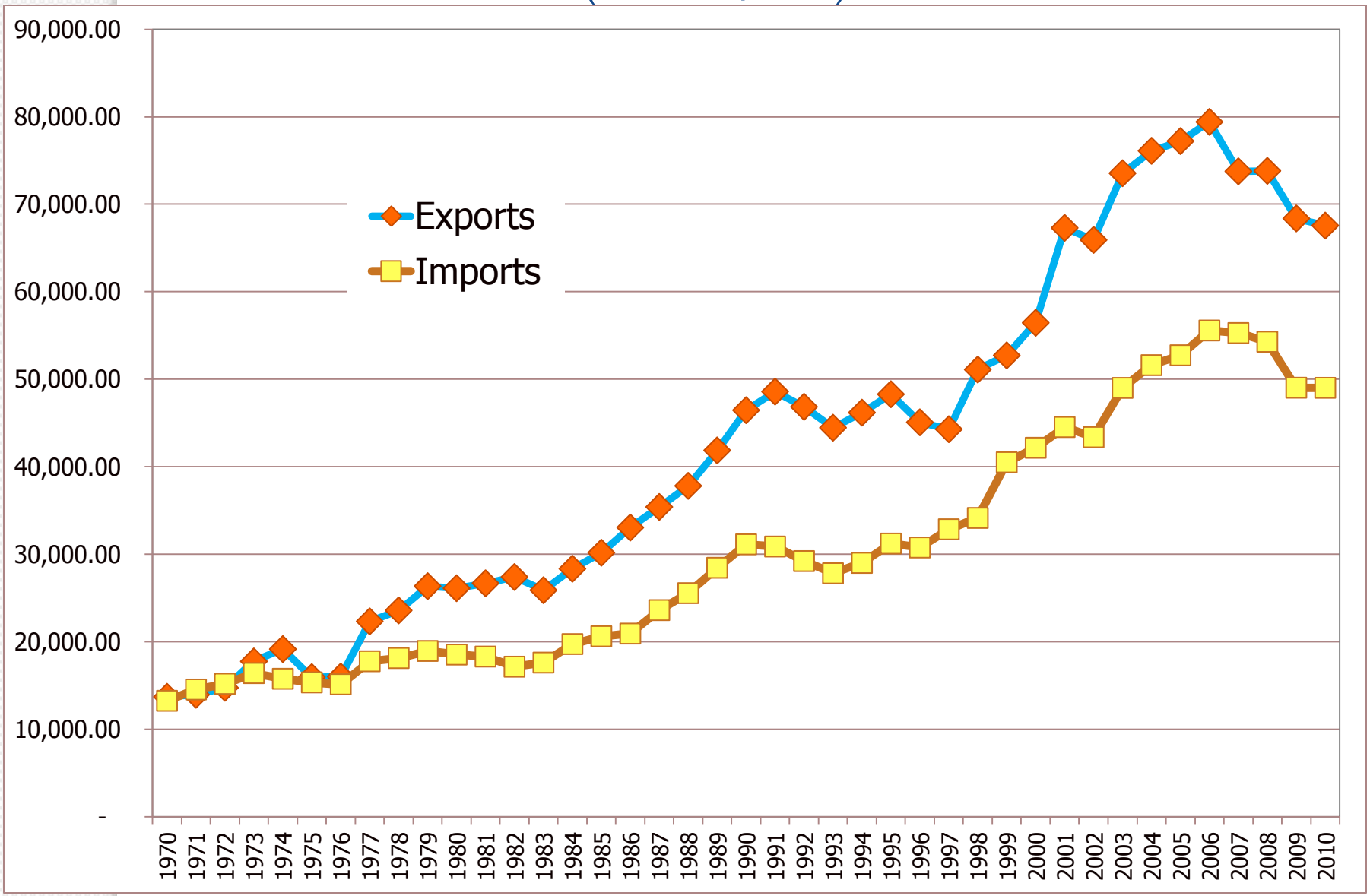
What is the reciprocal demand theory?

- Reciprocal demand
  - The concept that, in international trade, it is not just supply and demand that interact, but demand and demand. That is, a trading equilibrium is a reciprocal equilibrium in which one country's demand for another country's products (and willingness to pay for them with its own) matches with the other country's demands for the products of the first.
- Reciprocal demand curve
  - An offer curve. So called to emphasize that a country exports in order, reciprocally, to get imports in return.

Limitations

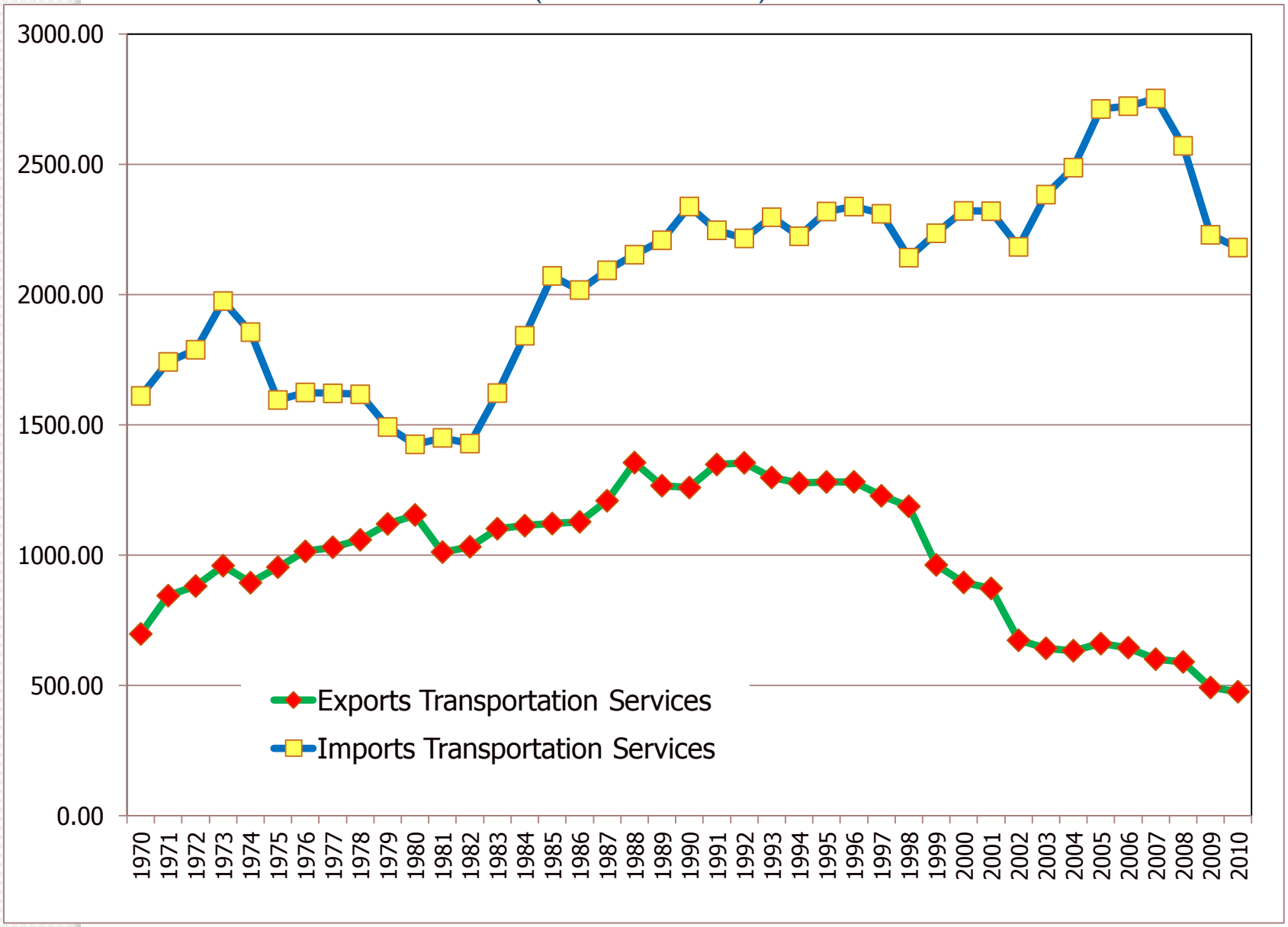
1. Analysis based on aggregate macroeconomic statistics.
2. Entrepot trade: U.S, intermediary of Puerto Rico's exports and imports.
3. No time series or cross sectional analysis of maritime transportation freight tariffs is conducted due to lack of necessary data.

Puerto Rico's Merchandise Trade Commerce: FY 1970 - 2010 (millions $2010)



Source: Puerto Rico Planning Board. *Economic Report to the Governor*. various issues. San Juan, PR.

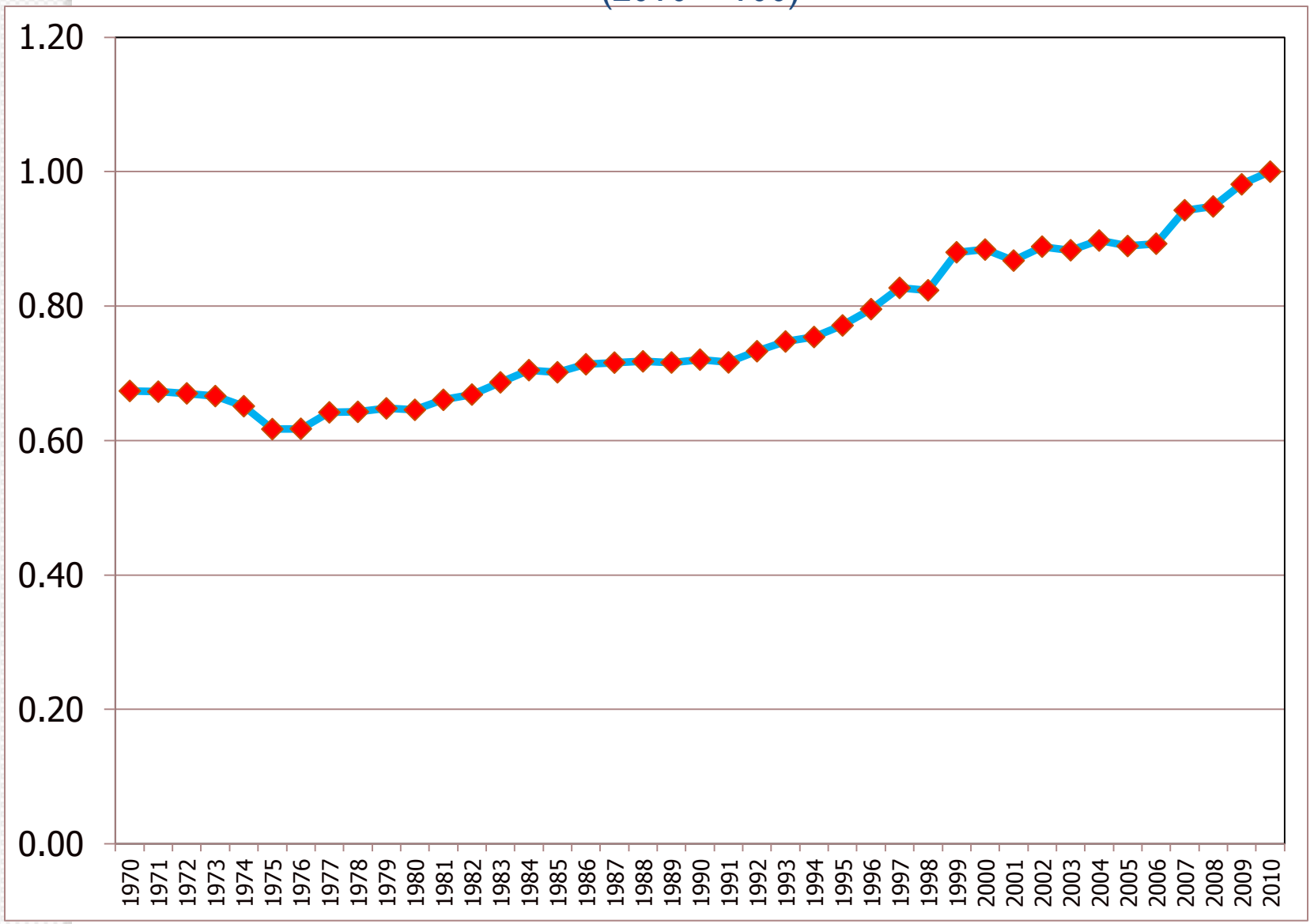
Puerto Rico's Export and Import Transportation Services: FY 1970 - 2010 (millions $2010)



Source: Puerto Rico Planning Board. *Economic Report to the Governor*. various issues. San Juan, PR.

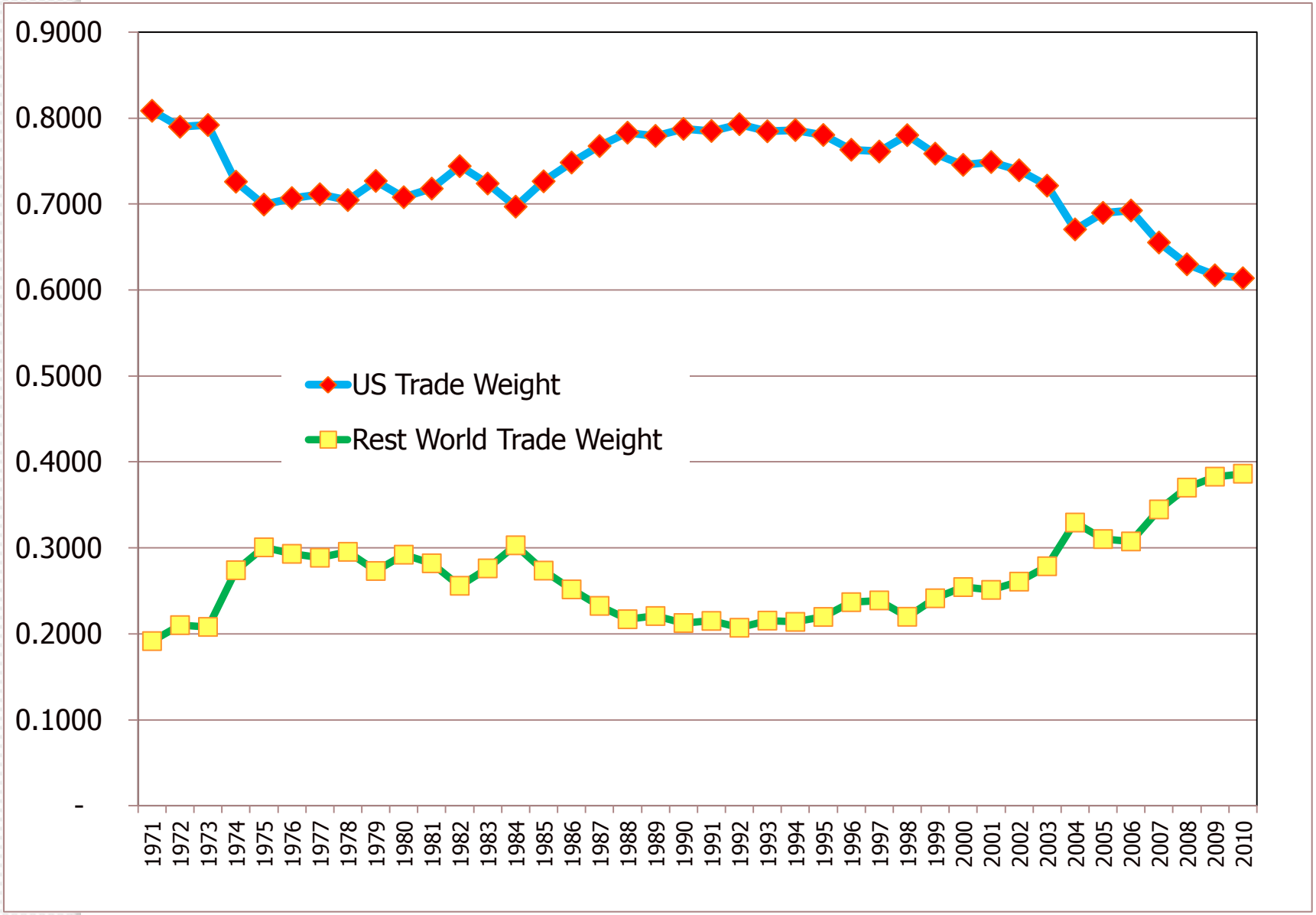
Puerto Rico's Terms of Trade Index: FY 1970 – 2010

(2010 = 100)



Source: Puerto Rico Planning Board. *Economic Report to the Governor*. various issues. San Juan, PR.

Puerto Rico's Trade Commerce Distributional Weight: FY 1970 - 2010



Source: Puerto Rico Planning Board. *Economic Report to the Governor*. various issues. San Juan, PR.

Econometric Model *

- Puerto Rico's reciprocal demand function

$$\frac{M + Tran_M}{P_M} = \beta_1 \left(\frac{X + Tran_X}{P_X}\right) + \beta_2 \left(\frac{P_X}{P_M}\right) + \beta_3 \left(\frac{GDP}{P_{GDP}}\right)$$

M = Imports of merchandise (nominal $)
X= Exports of merchandise (nominal $)
$Tran_M$ = Imports transportation services (nominal $)
$Trans_X$ = Exports transportation services (nominal $)
GDP = Gross Domestic Product (nominal $)
P_M = Implicit Price Deflator for Imports
P_X = Implicit Price Deflator for Exports
P_{GDP} = Implicit Price deflator for GDP

Data Period: 41 FY 1970-2010

Source: *Economic Report to the Governor*, prepared by the PR Planning Board

* Econometric model was develop by Herrero, Soriano and Valentín Mari (2001)

Econometric Model

- PR's reciprocal demand function with the transportation cost service of merchandise exported and imported.

$$\frac{M + Tran_M}{P_M} = \beta_1 \left(\frac{X + Tran_X}{P_X}\right) + \beta_2 \left(\frac{P_X}{P_M}\right) + \beta_3 \left(\frac{GDP}{P_{GDP}}\right)$$

$$\boxed{\frac{Tran_M}{P_M} = \alpha_1 + \alpha_2 \left(\frac{M}{P_M}\right)} \qquad \frac{Tran_X}{P_X} = \alpha_1 + \alpha_2 \left(\frac{X}{P_X}\right)$$

$$\frac{M + \left(\alpha_0 + \alpha_1 \frac{M}{P_M}\right)}{P_M} = \beta_1 \left(\frac{X + \left(\alpha_0 + \alpha_1 \frac{X}{P_X}\right)}{P_X}\right) + \beta_2 \left(\frac{P_X}{P_M}\right) + \beta_3 \left(\frac{PIB}{P_{PIB}}\right) \quad (1)$$

Econometric Model

- PR's reciprocal demand function without the transportation cost service of merchandise exported and imported.

$$\frac{M + Tran_M}{P_M} = \beta_1 \left(\frac{X + Tran_X}{P_X}\right) + \beta_2 \left(\frac{P_X}{P_M}\right) + \beta_3 \left(\frac{GDP}{P_{GDP}}\right)$$

$$\frac{Tran_M}{P_M} = 0 \qquad \frac{Tran_X}{P_X} = 0$$

$$\frac{M}{P_M} = \beta_1 \left(\frac{X}{P_X}\right) + \beta_2 \left(\frac{P_X}{P_M}\right) + \beta_3 \left(\frac{PIB}{P_{PIB}}\right) \qquad (2)$$

Econometric Model

- PR's reciprocal demand function including the transportation cost service.

$$\frac{M + \left(\alpha_0 + \alpha_1 \frac{M}{P_M}\right)}{P_M} = \beta_1 \left(\frac{X + \left(\alpha_0 + \alpha_1 \frac{X}{P_X}\right)}{P_X} \right) + \beta_2 \left(\frac{P_X}{P_M}\right) + \beta_3 \left(\frac{PIB}{P_{PIB}}\right) \quad (2)$$

- PR's reciprocal demand function excluding the transportation cost service.

$$\frac{M}{P_M} = \beta_1 \left(\frac{X}{P_X}\right) + \beta_2 \left(\frac{P_X}{P_M}\right) + \beta_3 \left(\frac{PIB}{P_{PIB}}\right) \quad (1)$$

- Estimation of PR's opportunity cost of the transportation services of the merchandise exported and imported = (2) – (1)

Results

$$\mathrm{LN}\left(\frac{M}{P_M}+\frac{\mathrm{Tran}_M}{P_M}\right)=0.5317398\ \mathrm{LN}\left(\frac{X}{P_X}+\frac{\mathrm{Tran}_X}{P_X}\right)+1.086769\ \mathrm{LN}\left(\frac{P_X}{P_M}\right)$$

Source	SS	df	MS		
Model	4370.26787	2	2185.13393	Num. of obs. = 41	
Residual	.83182488	39	.021328843	F(2, 39) = 99204.05	
Total	4371.09969	41	.021328843	Prob > F = 0.0000	
				R^2 = 0.9998	
				Adj-R^2 = 0.9998	
				Root MSE = .14604	

LN M Transp	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
LN X Transp	.5317398	.0882811	6.02	0.000	.3531744	.7103052
LN TermsTrade	1.086769	.2157615	5.04	0.000	.6503503	1.523188

$$\mathrm{LN}\left(\frac{M}{P_M}\right)=0.5730956\ \mathrm{LN}\left(\frac{X}{P_X}\right)+0.9727448\ \mathrm{LN}\left(\frac{P_X}{P_M}\right)$$

Source	SS	df	MS		
Model	4308.08698	2	2154.04349	Num. of obs. = 41	
Residal	.937255133	39	.024032183	F(2, 39) = 89631.62	
Total	4309.02424	41	105.098152	Prob > F = 0.0000	
				R^2 = 0.9998	
				Adj R^2 = 0.9998	
				Root MSE = .15502	

LN M	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
LN X	.5730956	.0873335	6.56	0.000	.396447	.7497442
LN TermsTrade	.9727448	.212826	4.57	0.000	.5422637	1.403226

Econometric Model

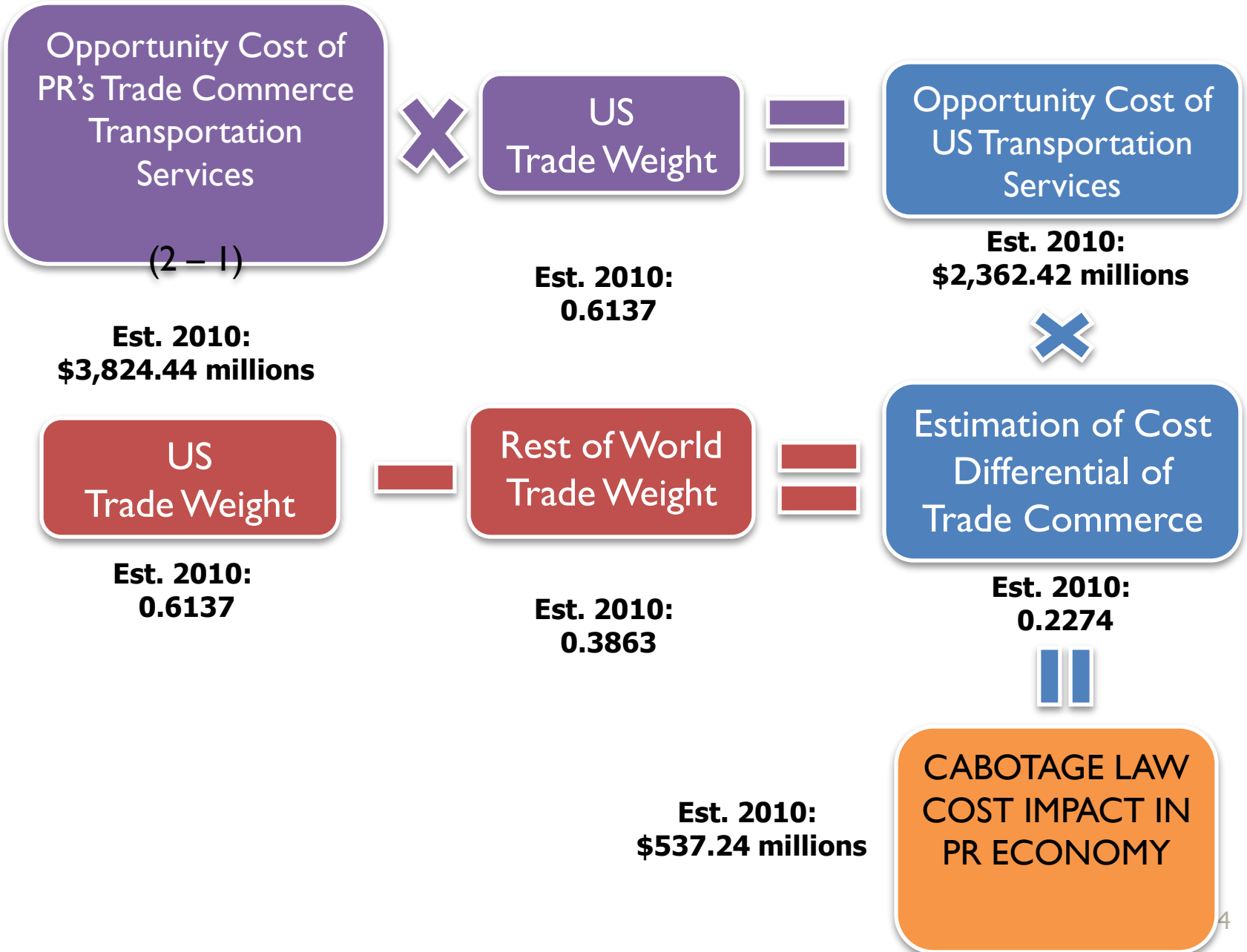
- Relative importance of US in Puerto Rico trade commerce.

$$\text{US trade weight} = \left(\frac{X_{PRtoUS} + M_{PRfromUS}}{X_{PR,Total} + M_{PR,Total}} \right)$$

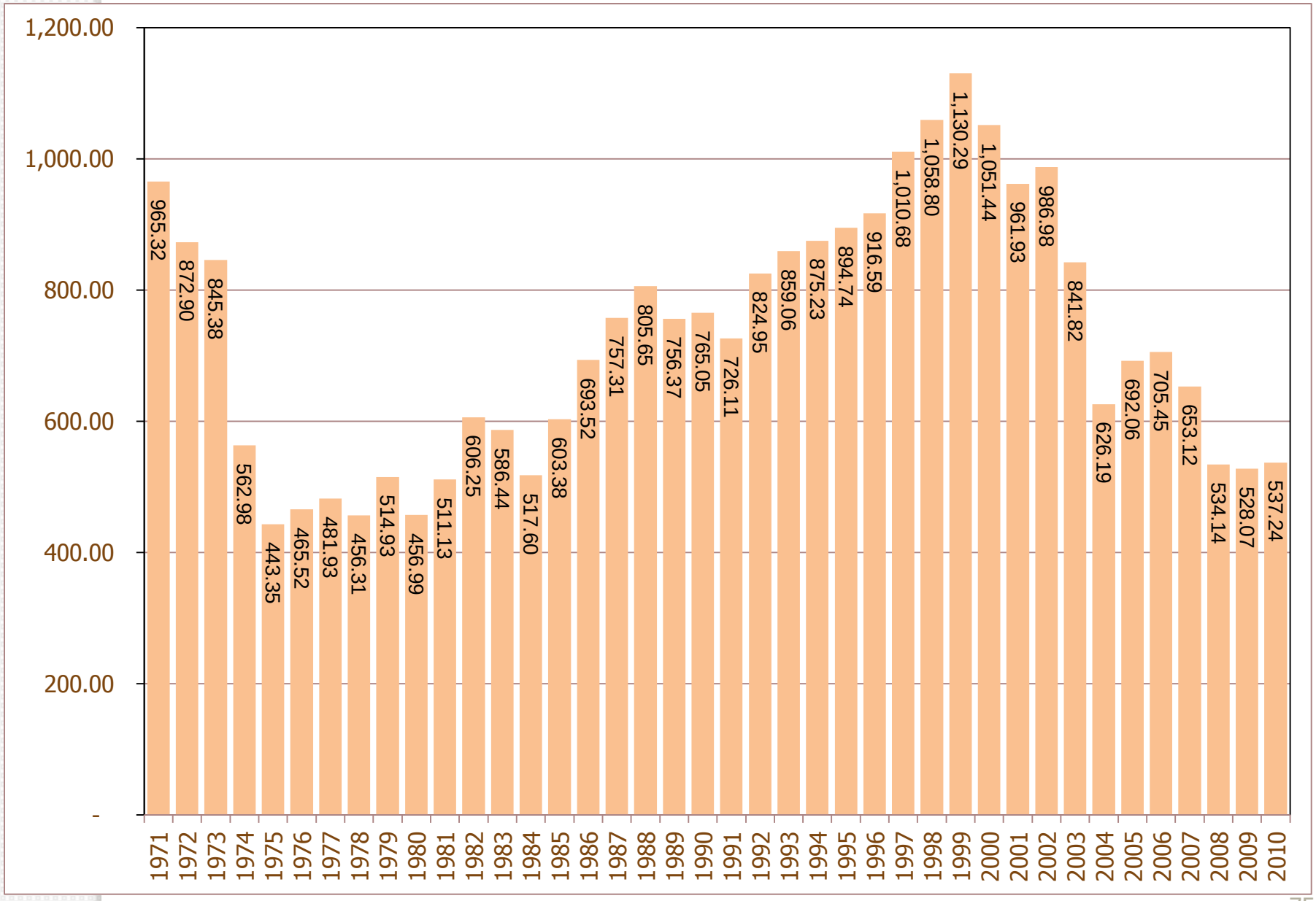
- Relative importance of Rest of the World in Puerto Rico trade commerce.

$$\text{Rest World trade weight} = \left(\frac{X_{PRtoRestWorld} + M_{PRfromRestWorld}}{X_{PR,Total} + M_{PR,Total}} \right)$$

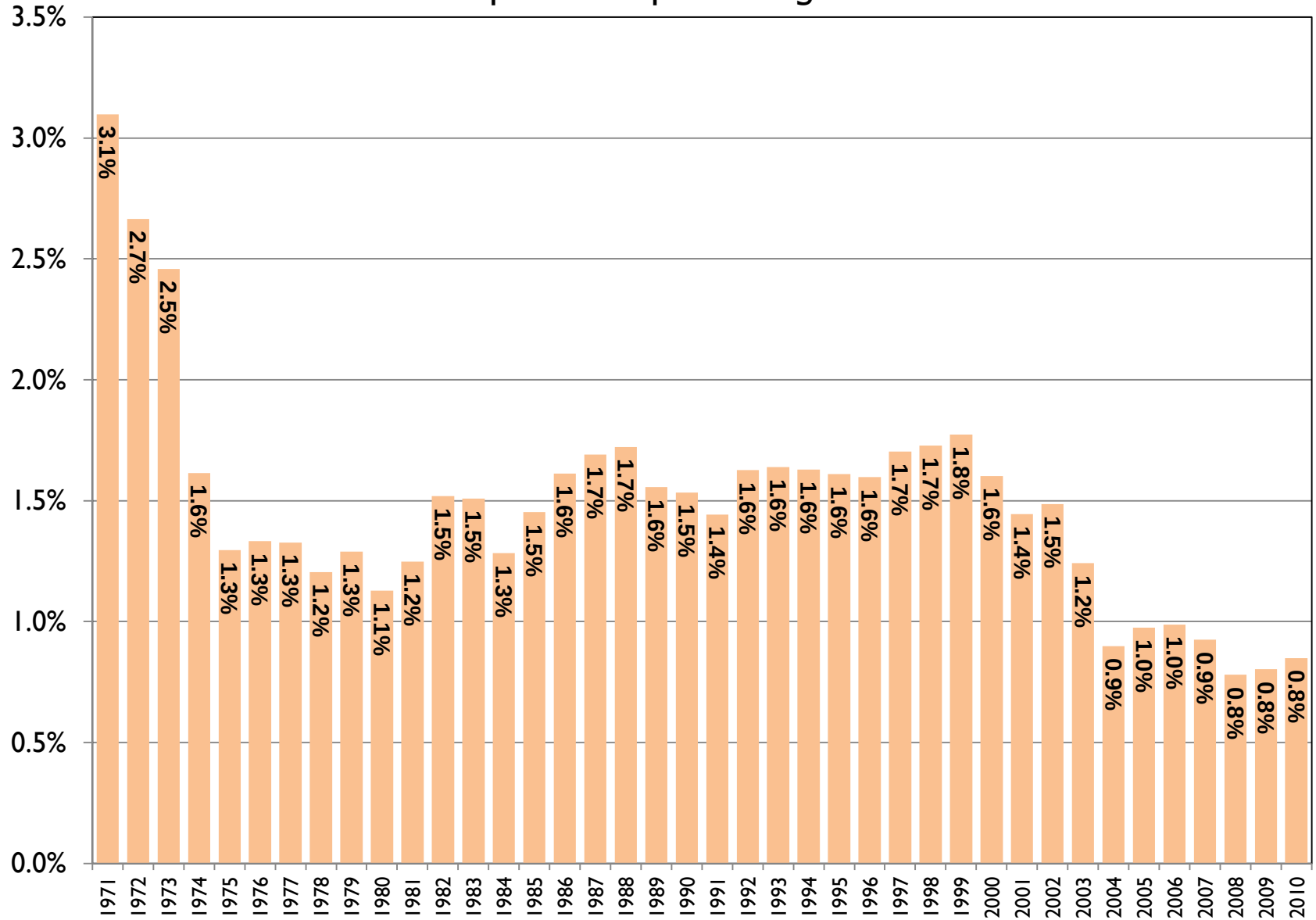
Econometric Model



Estimation of Jones Act Impact on Puerto Rico Economy: FY 1970 - 2010 (millions $2010)



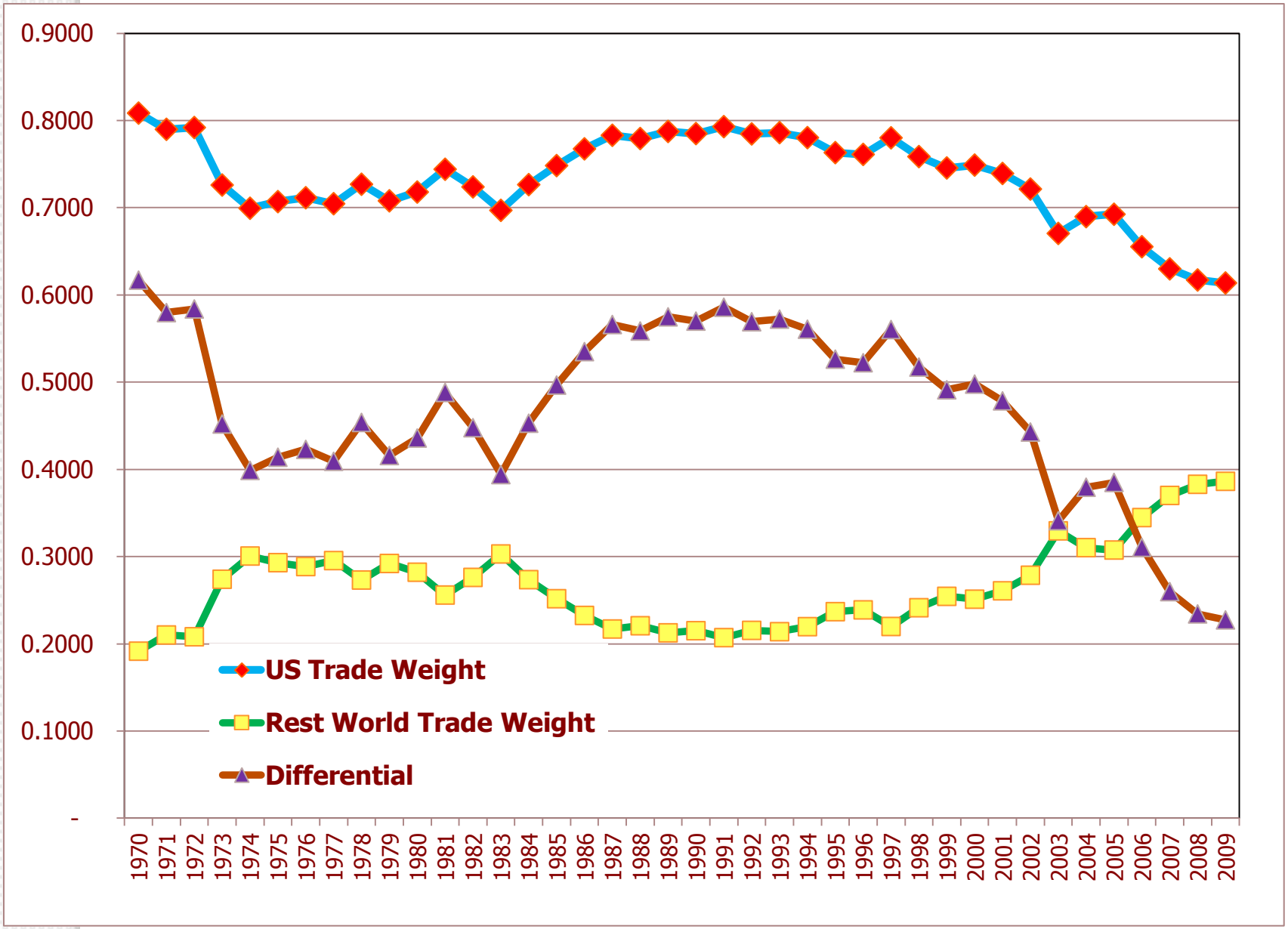
Jones Act Impact as a percentage of PR's GNP



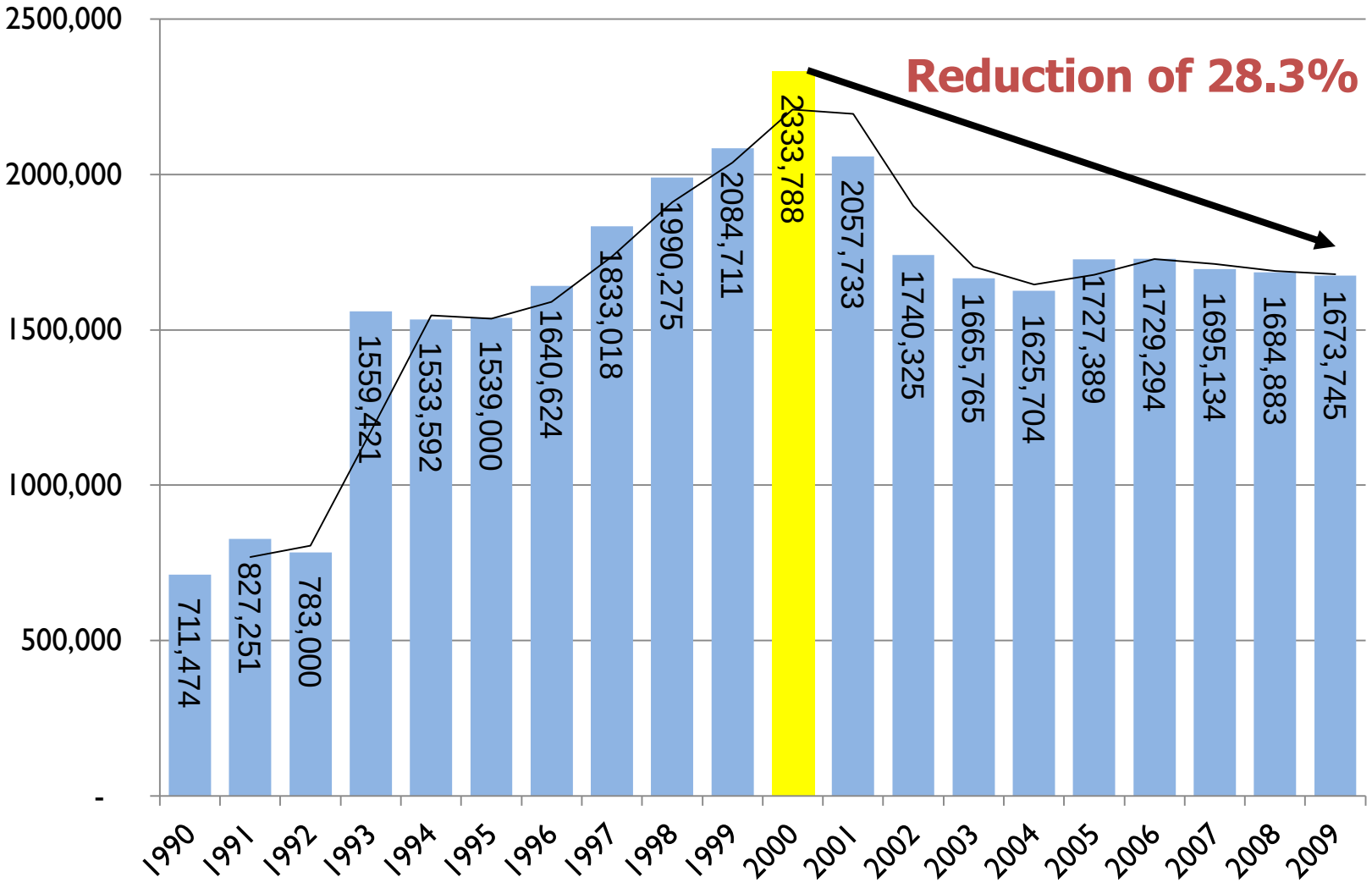
Determinant Factors of Cabotage Economic Impact

1. The Great Recession has lowered the demand for merchandise.
2. The repeal of IRS Section 936 has eroded the PR's manufacturing capacity.
3. Trade commerce share to U.S. has been declining in the past decades.
4. Trade commerce share to the rest of the world has been increasing in the past decades.
5. Structural change in cargo movement, air cargo is increasing its relative importance in Rafael Hernández Airport in Aguadilla, PR.

Puerto Rico's Trade Commerce Distributional Weight: FY 1970 - 2010



San Juan: Traffic of Containers in TEUs



Source: America Association of Ports Authorities at http://www.aapa-ports.org

Conclusions

- Several studies has been made in the past about Jones Act impact on PR's economy. Despite the differences in methodology, all share the same conclusion: A negative effect.

- In the present study, the Jones Act impact was estimated in $537 million for FY 2010. The impact reached a peak of $1.1 billion in FY 2000.

- Since FY 2000, the size of Jones Act impact, expressed as percentage of PR's GNP, has been declining consistently not because cost reductions but other economic reasons.

Conclusions

- International organizations such as the OECD and the WTO are pursuing for negotiations to adopt policies for free trade in services including the shipping trade. The United States is a founding member of this multilateral institutions.

- The actual oligopolistic structure is not within a contestable market. None of the U.S. carriers is among the top 20 carriers company at the world.

- The carrier market in Puerto Rico seems to allow for inefficiency, given the legal institutional framework that protect the U.S. carriers form foreign competition that implies the Coastwise Laws.

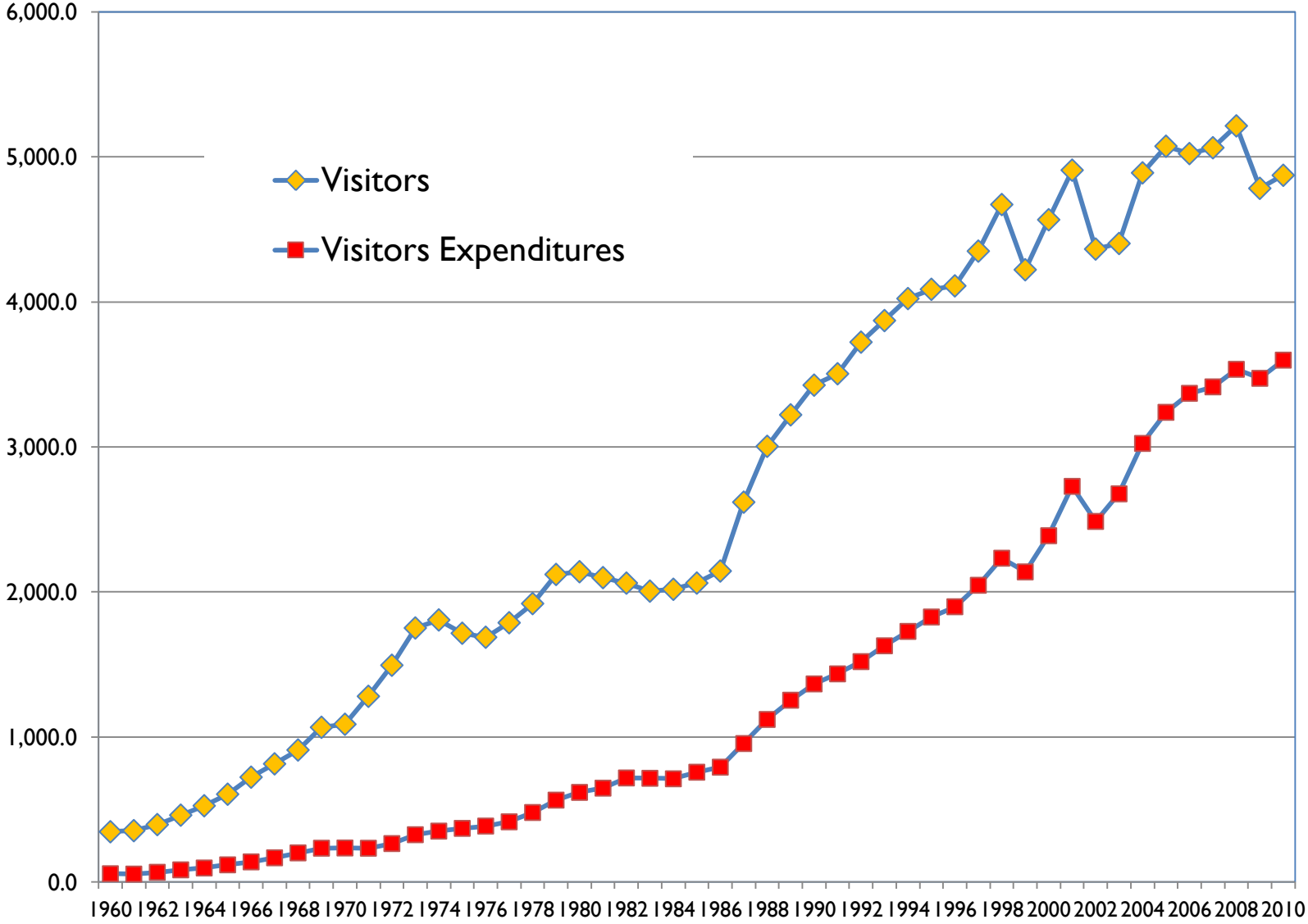
Recommendations

- Since the mid-1980s, the Puerto Rican government, obtained a limited-exception on the Passenger Vessel Services Act since no U.S. cruise ships that were Jones Act-eligible were participating in said market.

- The outcome of that exemption has been a success story by observing the time- trend in the number of visitors and expenditures in Puerto Rico. This experience could be used as a *learning lesson* for the efforts to repeal the Jones Act restrictions in the transportation of merchandise.

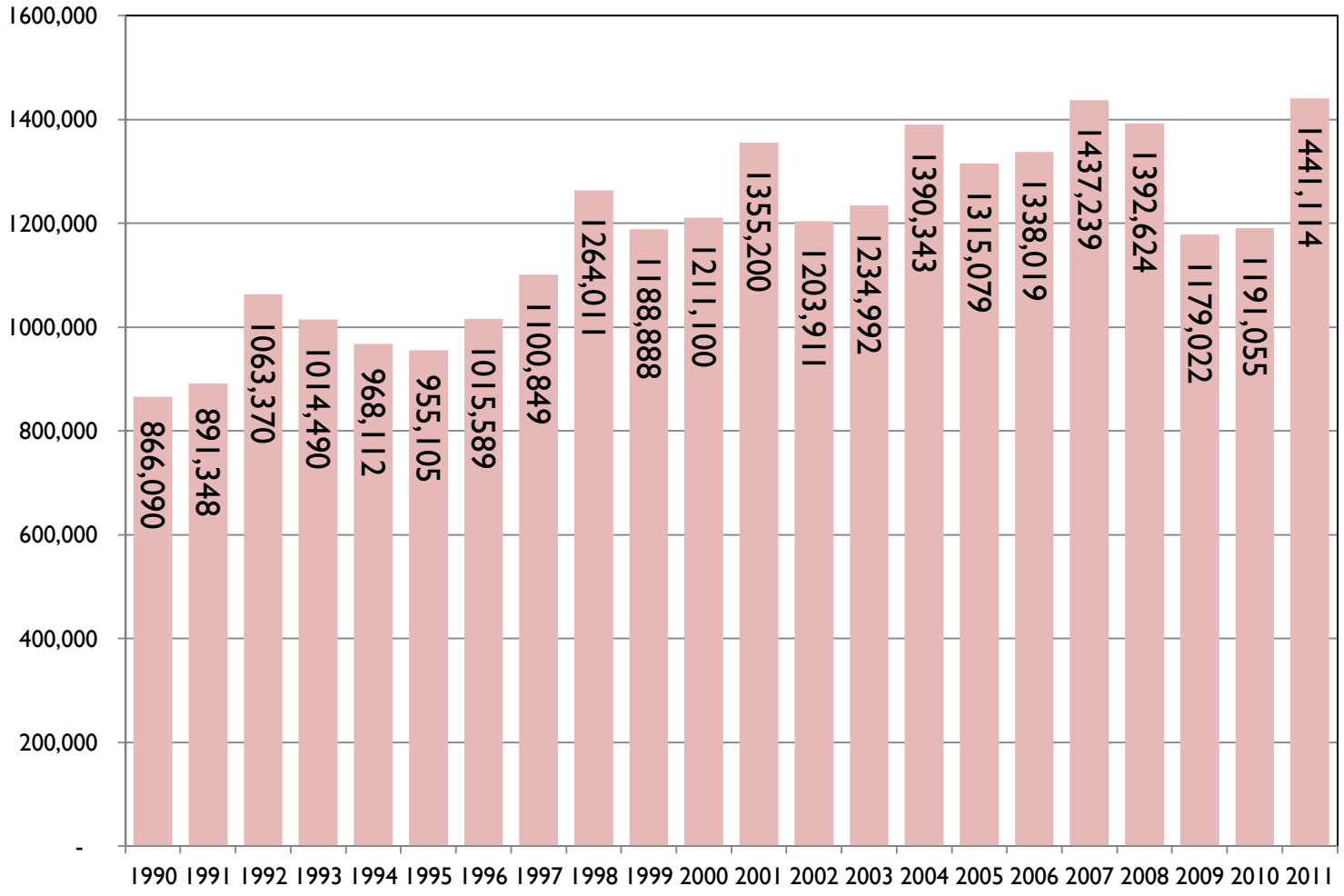
Number and Expenditures of Visitors in Puerto Rico: FY 1960-2010

(Visitors in thousand persons & Expenditures in millions dollars)



Source: Puerto Rico Planning Board. *Economic Report to the Governor.* Various issues.

PR's Success Story Cruise Ship Passengers: FY 1990-2011



Source: Puerto Rico Tourism Company. *Selected Tourism Industry Statistics*. Various issues.

Recommendations

- The development of a value added fishery industry by allowing foreign vessels to unload fishery in Puerto Rico's ports (Mayaguez, Ponce) could be accomplished by the no application of the Nicholson Act *(46 U.S.C. § 55114)* in Puerto Rico.

Who is exempted form the Nicholson Act?

- ***Virgin Islands.—***
  - ***In general.—*** *A **foreign vessel of not more than 50 feet overall in length** may unload its catch of fresh fish (whole or with the heads, viscera, or fins removed, but not frozen, otherwise processed, or further advanced) in a port of the Virgin Islands for immediate consumption in those islands. Fish unloaded under this paragraph may be sold or transferred **only for immediate consumption**. In the absence of satisfactory evidence that a sale or transfer to an agent, representative, or employee of a freezer or cannery is for immediate consumption, the sale or transfer is deemed not to be for immediate consumption. This paragraph does not prohibit the freezing, smoking, or other processing of fresh fish by the ultimate consumer of the fish.*
- ***Northern Mariana Islands.—*** *Subsection (a) does not apply to the Northern Mariana Islands.*
- **American Samoa**, exempted since1954.

Recommendations

- A phase out process of 10 years to repeal Jones Act.
  - Phase One (Enacted in the 1st year):
    - No U.S. built requirement. Shipping companies operating in Puerto Rico will be able to buy vessels in Korea, Japan, Brazil or elsewhere. According to a GAO (1988) these vessels can be purchased at capital investment of about one-third of those under the Jones Act.
  - Phase Two (Enacted in the 5th year):
    - 50% ownership vessel requirement and place of business in Puerto Rico. This will allow the possibility of foreign direct investment in Puerto Rico's shipping market.
    - This is crucial for the potential development of a valued added transshipment port in Ponce were intermediates foreign products could be imported for final elaboration in order to be re-exported to the US market or elsewhere, taking advantage of the "free market" between Puerto Rico and the US or other U.S. free trade agreement .

Recommendations

- A phase out process of 10 years to repeal Jones Act.
  - Phase Three (Enacted in the10th year).
    - 50 % of U.S. flagged ship requirement. To allow 50% of foreign-registered ships' involvement in the coastal shipping between ports of Puerto Rico and U.S.