REVITALIZING THE U.S. MARITIME INDUSTRY THROUGH

CHANGES TO THE JONES ACT

by

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a Capstone Project submitted to the Graduate Faculty of the
California State University – Maritime Academy
in partial fulfillment of the requirements of the degree of

Master of Science

in

Transportation and Engineering Management

with a specialization in

Transportation

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April, 2013
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Executive Summary

Subject: This paper examines the current ailing state of the maritime industry in the United States; with a primary focus on the large tonnage ocean going vessels. Retaining a prominent maritime industry is a key component to the country’s well being. The maritime industry is the heart of commerce for the nation. It is a multibillion dollar industry that is essential to the daily economic stability of the nation, supports millions of jobs, and plays a critical role in national security during a time of need.

Methodology: U.S. policies that govern the maritime industry are discussed including roots of origin, current state of the policies, and the effects they hold over the market. The past and present status of vessels involved in the U.S. maritime industry is profiled and compared to its foreign competitors. Recommendations are made to assist the struggling fleet in regaining its footing in the competitive international shipping market.

Findings: The number of vessels using the United States as the flag of registry has gone from 20% in the 1960’s to less than 1% today. Data was gathered from U.S. and Foreign government sources, current maritime periodicals, and domestic and international shipyards and labor pools. The data provided in this paper shows two primary barriers to entry for the U.S. flagged market as major reasons behind this decline. The requirements that U.S. flagged vessels are built in the U.S. and must be crewed by U.S. citizens make it cost prohibitive for shipping companies to flag their vessels in the United States. These barriers are set in place by antiquated U.S. maritime policies; policies that were created to protect the industry now prevent it from being competitive.
Conclusion: The U.S. maritime industry is in a state of disrepair and in jeopardy of disappearing. The diminutive presence the U.S. maintains in the maritime industry makes it an irrelevant player in the global shipping market. Failing to change the current system will allow the industry to deteriorate further to the point of extinction. This could have severe consequences on the economic stability and national security of the United States.

Recommendations: The recommendation to aid the ailing industry is to amend existing maritime policies that prevent it from being successful. Removing the mandate that ships are built in the U.S. and modifying the crewing requirements will allow the U.S. to be a competitive flag state of registry. Changing these policies will significantly reduce the cost to own and operate a U.S. flagged vessel. This will increase the number of vessels sailing under the U.S. flag and revitalize an industry that is endanger of becoming extinct.
Introduction

The maritime industry in the United States has been on a steady decline since the 1960’s. Antiquated polices that were put in place to protect the maritime industry have left it in its current state of disarray. These policies, known primarily as the Jones Act, have made it prohibitive for the U.S. to be competitive in the global maritime climate of today. Left unchanged, the U.S. faces the chance of its merchant fleet becoming extinct. This paper will provide data and analysis showing how great the discrepancies are between the U.S. and its foreign counterparts. For the United States to regain a relevant merchant fleet these policies must be changed so the nation is able to compete in the global shipping market.

The Jones Act: An Overview

Cabotage laws, which involve trade or transport of goods or people between two points within a country, date back to the earliest days of American history. In 1789, Congress imposed added duties on goods transported by foreign vessels. The Navigation Acts of 1817 barred foreign vessels from domestic commerce. In 1886, Congress extended cabotage laws to passenger vessels, and in 1905 Congress retained U.S. build requirements for domestic shipping. The Merchant Marine Act of 1920 was enacted with the aim of maintaining a merchant marine of the best equipped and most suitable types of vessels owned and crewed by U.S. citizens, sufficient to carry the greater portion of U.S. commerce and serve as a naval or military auxiliary at time of war. (U.S. Department of Transportation Maritime Administration, 2006, p. 1)

Primarily the Merchant Marine Act of 1920 regulates shipping between U.S. ports. Section 27 of the Act, commonly referred to as the Jones Act, is one of the three legal pillars of the modern United States Merchant Marine. A cabotage law, the Jones Act requires that all
merchandise transported between two ports within the jurisdiction of the United States be carried by a U.S.-flag vessel, built in the United States, owned by a U.S. citizen and crewed by American merchant mariners. Just as you cannot fly British Airways from New York to Los Angeles, you cannot use a foreign ship to trade between two ports in the United States. (American Maritime Congress, 2010) This was followed by the Merchant Marine Act of 1936 which added additional maritime agencies, wages and living conditions of American seamen, operational and construction subsidies, and funding for maritime education and training. (Cornell University Law School, 2012) Collectively, these policies make up the large body of regulations governing the U.S. maritime industry, however industry wide they are all grouped together and referred to as the Jones Act.

The following is an excerpt from the Code of Federal Regulations stating the need for the Merchant Marine Act of 1920: It is necessary for the national defense and for the proper growth of its foreign and domestic commerce that the United States shall have a merchant marine of the best equipped and most suitable types of vessels sufficient to carry the greater portion of its commerce and serve as a naval or military auxiliary in time of war or national emergency, ultimately to be owned and operated privately by citizens of the United States; and it is declared to be the policy of the United States to do whatever may be necessary to develop and encourage the maintenance of such a merchant marine, and, insofar as may not be inconsistent with the express provisions of this Act, the Secretary of Transportation shall, in the disposition of vessels and shipping property as hereinafter provided, in the making of rules and regulations, and in the administration of the shipping laws keep always in view this purpose and object as the primary end to be attained. (U.S. Code of Federal Regulations, 2010, p. 52)
There are multiple provisions in the Jones Act designed to protect the U.S. merchant seamen while employed in the maritime industry. Life at sea has been recognized as a profession that endures unique hardships and perils compared to that of a typical job ashore due to the nature of their work. These protections include such items as proper wages, living conditions, legal liability of the vessel owner, medical care, and maintenance and cure should an injury occur. These protection policies encompass a large part of the Jones Act, however this paper will focus on the ship construction and manning requirements which have led to an extreme decline in U.S. flagged vessels.

Current State of U.S. Maritime Industry

The U.S. maritime industry has been in a steady state of decline for decades. Nowhere is this more evident than the large deep draft vessels know as the “blue water” sector. As the world fleet of deep draft vessels doubled over the past 50 years, the U.S. flag fleet shrank to less than 8 percent of its 1960’s totals and more than halved itself again in the last 15 years. The number of registered vessel operators also shrank by more than half from 1,381 in 1995 to just 603 companies in 2010. (Marine News, 2013, p. 8) The graph below depicts the contraction of the blue water fleet and shows the small segment of the world market that is made up from U.S. flagged deep draft vessels.

<table>
<thead>
<tr>
<th>Merchant Fleet Comparison</th>
<th>1960</th>
<th>1995</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>World (over 1,000 GT)</td>
<td>17,317</td>
<td>25,608</td>
<td>34,375</td>
</tr>
<tr>
<td>U.S. Flag (over 1,000 GT)</td>
<td>2,926</td>
<td>509</td>
<td>231</td>
</tr>
<tr>
<td>U.S. PCT of World Fleet</td>
<td>17</td>
<td>2</td>
<td>0.7</td>
</tr>
</tbody>
</table>

(Marine News, 2013, p. 8)
The numbers have been devastating for the largest U.S. flagged vessels, however this is not the case for the smaller tonnage group of vessels referred to as the “brown water” sector of the industry. While the deep draft segment was drastically retracting, the total commercial fleet of vessels in the U.S. actually grew in size and reduced its overall age over the past 15 years.

<table>
<thead>
<tr>
<th>U.S. Flag Merchant Fleet</th>
<th>1960</th>
<th>1995</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Fleet</td>
<td>Not available</td>
<td>39,641</td>
<td>40,512</td>
</tr>
<tr>
<td>Vessels &gt; 10 years Old</td>
<td>Not available</td>
<td>32,684</td>
<td>28,361</td>
</tr>
<tr>
<td>Percent &gt; 10 years or older</td>
<td>Not available</td>
<td>82</td>
<td>70</td>
</tr>
</tbody>
</table>

(Marine News, 2013, p. 8)

The following numbers depict the decline of U.S. flagged vessels as a percentage of the world fleet. There is an understandable contraction after World War II, however that cannot be the cause for the current state that remains today. Should the trend continue it will only be a short time until there is nothing left to measure.

(Lloyd's Register of Shipping, 2010)
The massive decline in size of the U.S. fleet is not the only concern. The remaining U.S. flagged vessels are primarily made up of antiquated ships well past their service life expectancy. Over 50% of the dry cargo and tanker fleet is older than 25 years, and over 70% of the ships are older than 10 years. Many will be headed to scrap yards in the near future without new replacements being built. This makes it even more challenging for U.S. flagged vessels to compete in a competitive market since their equipment is technologically inferior, structurally antiquated, and significantly more expensive to operate. This will continue the decline of U.S. flagged vessels’ further weakening their segment of the international shipping market.

(U.S. Department of Transportation, 2012)
With the deep draft segment of U.S. flagged vessels nearly extinct, it is time for a shift in focus and policy for the U.S. maritime industry. The Jones Act was put in place as a benefit to the U.S. merchant fleet; not a detriment. It was created to help ensure that the United States would have a capable fleet to assist military or humanitarian causes in a time of need. This law was billed as a way to help protect the blue water ships, however today the U.S. is faced with an antiquated fleet that is only a fraction of its former self. The question must now be asked; are the original needs and purposes of the Jones Act still being met? Today is a vastly different world from the times when the Jones Act was written. Examination into polices that are keeping the U.S. flagged fleet relevant in the maritime industry is required.

Barriers to Entry

There are two major barriers that stand in the way of companies flagging their vessels in the United States; one being operating costs and the second barrier is the cost of building a vessel in a U.S. shipyard. Companies who wish to flag their vessels in the U.S. are faced with much steeper price tags for these critical elements. These barriers have become insurmountable for most shipping companies. This has lead to companies building and flagging their ships in other countries and operating with foreign crews. As depicted by the previous graph, the number of large tonnage U.S. flagged vessels has suffered greatly as companies wish to run a much leaner operation and have turned to a foreign flag state to do so.

Operating Costs

Simply stated, U.S. flagged vessels cost more to operate than foreign flagged vessels. The U.S. Department of Transportation Maritime Administration (MARAD) released a report showing the discrepancy between U.S. flagged and foreign flagged operating costs. The total average cost of operating a U.S.-flag vessel in foreign commerce was 2.7 times higher than the
COST INCURRED BY FOREIGN-FLAG EQUIVALENTS. (U.S. Department of Transportation Maritime Administration, 2011) VESSEL OPERATING COSTS ARE BROKEN DOWN INTO 5 BASIC CATEGORIES. THESE CATEGORIES ARE LISTED AS THE FOLLOWING: CREW COSTS, STORES/LUBES, MAINTENANCE AND REPAIR, INSURANCE, AND OVERHEAD COSTS.

BASED ON THE COST DATA PROVIDED TO THE MARITIME ADMINISTRATION BY CARRIERS FOR 2009 AND 2010, THE TOTAL AVERAGE DAILY OPERATING COST OF A U.S.-FLAG VESSEL WAS ROUGHLY $21,774 AND $20,053, RESPECTIVELY. BY COMPARISON, AVERAGE DAILY FOREIGN-FLAG OPERATING COSTS IN 2009 AND 2010, WORLDWIDE, WERE ROUGHLY $7,410 AND $7,454, RESPECTIVELY. (U.S. Department of Transportation Maritime Administration, 2011, pp. 8-10) THIS PUTS U.S.-FLAG CARRIERS ARE AT A DISTINCT DISADVANTAGE IN THEIR ABILITY TO COMPETE IN INTERNATIONAL TRANSPORTATION MARKETS.

THE AVERAGE DAILY OPERATING COSTS LISTED IN THE GRAPH BELOW SHOW HOW GREAT THE DISCREPANCY IS BETWEEN OPERATING A U.S. FLAGGED VESSEL AND A FOREIGN FLAGGED VESSEL. THE GAP IS SO GREAT THAT THERE IS NO FINANCIALLY FEASIBLE WAY FOR A U.S. FLAGGED VESSEL TO COMPETE WITH THE SHIPPING RATES OF ITS FOREIGN FLAGGED COMPETITORS.

(U.S. Department of Transportation Maritime Administration, 2011, p. 8)
One of the primary reasons behind the difference in daily operating costs is the cost to crew the vessel. These numbers are staggeringly different. Companies are not willing to pay five times more to accomplish the same task of moving a ship and its cargo from point A to point B. This difference in pay, which leads to a major loss in profits for the company, has led many companies to flag their vessels foreign, or reflag a U.S. vessel under a foreign registry.

There are ethical issues involved regarding wages, and the numbers do not tell the entire story. The standard of living varies greatly around the world. The numbers need to be judged on a standard of living for the sailor both at home and at sea. While companies strive to make profits, it should not be done at the peril of its workers. On the reverse side of this argument is the U.S. sailor. Companies need to have realistic wages for their employees. It is not fair to demand that someone in an unskilled labor position demand exorbitant wages. There needs to be a world scale developed to better judge what compensation is fair for the work being done.

(U.S. Department of Transportation Maritime Administration, 2011, p. 10)
The following graph shows a cost break down of operating costs structure between U.S. and foreign flagged vessels. The cost of crewing once again sticks out as the greatest difference between the two cost structures. It must also be noted that the graphical breakdown of costs for the U.S. flagged vessels remains nearly five times higher overall than that of its foreign flagged competitors.

(U.S. Department of Transportation Maritime Administration, 2011, p. 9)
Crew size is often brought up as the reasoning why U.S. crews cost more than their foreign counterparts. The graph below dispels this as a contributing factor since on average foreign flagged ships run with larger crews than U.S. flagged vessels. The question now becomes; should wages for sailors come up around the world, or do U.S. sailors expect too high a wage for the tasks performed?

(U.S. Department of Transportation Maritime Administration, 2011, p. 10)

<table>
<thead>
<tr>
<th>Type</th>
<th>Foreign-flag</th>
<th>U.S.-flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>Container</td>
<td>22.4</td>
<td>22.0</td>
</tr>
<tr>
<td>Dry Bulk</td>
<td>22.7</td>
<td>21.3</td>
</tr>
<tr>
<td>Product Tanker</td>
<td>23.5</td>
<td>22.9</td>
</tr>
<tr>
<td>Ro-Ro/ Vehicle Carrier</td>
<td>23.0</td>
<td>21.5</td>
</tr>
<tr>
<td>General Cargo</td>
<td>22.7</td>
<td>20.8</td>
</tr>
</tbody>
</table>

The Cost of U.S. Shipbuilding

U.S. shipyards are unable to compete with foreign yards in the ship building process. This has caused the number of blue water vessels built in the United States to sink to an all time low. The only remaining large tonnage vessels being built in the U.S. are either for the military, or a very small number that are built to be in compliance with Jones Act trade regulations. The system in which U.S. shipyards find themselves operating has caused the cost of production to skyrocket over its foreign competitors. It is estimated to cost 200-300% more to build a vessel domestically in the U.S. than it does overseas.
In 2012 there were only 10 deep draft vessels built in the U.S. Eight of these vessels were for the Navy, while the remaining two were for commercial operators. Below is a list of the vessels name, type of vessel, and gross tonnage. The figures are similar for the preceding years, all showing a steady decline that began more than three decades ago.

<table>
<thead>
<tr>
<th>#</th>
<th>VIN</th>
<th>Name</th>
<th>Builder</th>
<th>Hull #</th>
<th>Owner/Operator</th>
<th>Type of Vessel</th>
<th>GT</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>1102473</td>
<td>Arlington</td>
<td>HII/Ingalls</td>
<td>2656</td>
<td>U.S. Navy</td>
<td>LPD 24</td>
<td>36,028</td>
<td>7-Dec-12</td>
</tr>
<tr>
<td>9</td>
<td>9641792</td>
<td>Spearhead</td>
<td>Austal USA</td>
<td>630</td>
<td>U.S. Navy</td>
<td>JHSV 1</td>
<td>6,588</td>
<td>5-Dec-12</td>
</tr>
<tr>
<td>8</td>
<td>9596127</td>
<td>Cesar Chavez</td>
<td>GD/NASSCO</td>
<td>488</td>
<td>U.S. Navy</td>
<td>T-AKE 14</td>
<td>25,852</td>
<td>24-Oct-12</td>
</tr>
<tr>
<td>7</td>
<td>1165697</td>
<td>Anchorage</td>
<td>HII/Avondale</td>
<td>2655</td>
<td>U.S. Navy</td>
<td>LPD 23</td>
<td>36,028</td>
<td>17-Sep-12</td>
</tr>
<tr>
<td>5</td>
<td>1264085</td>
<td>Pennsylvania</td>
<td>Aker Philadelphia</td>
<td>17</td>
<td>Crowley Marine</td>
<td>Product Carrier</td>
<td>20,242</td>
<td>29-Aug-12</td>
</tr>
<tr>
<td>6</td>
<td>1103023</td>
<td>Fort Worth</td>
<td>Marinette Marine</td>
<td>450</td>
<td>U.S. Navy</td>
<td>LCS 6</td>
<td>5,157</td>
<td>6-Jun-12</td>
</tr>
<tr>
<td>5</td>
<td>1153425</td>
<td>American Phoenix</td>
<td>BAE Alabama</td>
<td>103</td>
<td>Mid-Ocean Tanker</td>
<td>Product Carrier</td>
<td>30,718</td>
<td>5-Jun-12</td>
</tr>
<tr>
<td>4</td>
<td>1103021</td>
<td>Michael Murphy</td>
<td>GD/BuW</td>
<td>506</td>
<td>U.S. Navy</td>
<td>DDG 112</td>
<td>9,013</td>
<td>4-May-12</td>
</tr>
<tr>
<td>3</td>
<td>1164509</td>
<td>Mississippi</td>
<td>GD/EB</td>
<td>261</td>
<td>U.S. Navy</td>
<td>SSN 782</td>
<td>2,099</td>
<td>2-Mar-12</td>
</tr>
<tr>
<td>2</td>
<td>9596125</td>
<td>Medgar Evers</td>
<td>GD/NASSCO</td>
<td>483</td>
<td>U.S. Navy</td>
<td>T-AKE 13</td>
<td>25,852</td>
<td>24-Apr-12</td>
</tr>
<tr>
<td>1</td>
<td>9416680</td>
<td>Howard O. Lorenzen</td>
<td>VT Halter Marine</td>
<td>1979</td>
<td>U.S. Navy</td>
<td>T-AGM 25</td>
<td>17,420</td>
<td>16-Jan-12</td>
</tr>
</tbody>
</table>

(Colton, Delivery of Ships, Boats, and Oceangoing Barges in 2012, 2013)

Statistics show that the U.S. decline in shipbuilding is a localized problem and not an issue seen globally. The world fleet has seen a steady increase in the number of vessels. Without financial incentives for companies to build ships in the U.S., this trend will not improve, causing the number of U.S. flagged vessels to continue to decline.
One of the primary causes in the massive price discrepancy comes from economies of scale. In the United States in the last 20 years, most ships are designed and built as a series of one to four vessels. This means that the ship owner spends money to design the vessel, get it approved by the appropriate governing bodies, and gain appropriate financing to have a shipyard build less than a handful of them. In Japan, for example a shipyard will build a series of over 100 ships designed exactly the same. The shipyard then proceeds to get several ship owners from around the world and sell slots for each of the 100 vessels they plan to build. In ship building, the shipyard expects to decrease the cost of producing each ship by 5 to 10 percent per ship for the first 3 to 5 ships they build. After the fifth ship, this is where the yard starts making their profits. (Elkinton, 2013) This is an economy of scale because the yard can leverage to buy steel, equipment, and machinery at bulk and volume pricing. Imagine how much an automobile would cost if GM had to design and manufacture only 3 cars of a certain model. In the case of the United States shipyard, this is what happens.
The chart below shows the value of vessels on order at shipyards throughout the world as of October 2011. The total value of ships on order in the U.S. makes up a very small fraction of the total amount on order worldwide. Shipyards in Asia dominate the shipbuilding landscape, accounting for more than 85% of the total value of ships on order. South Korea has found its niche by capitalizing on the boom of high tech and high dollar drill ships and the world’s largest container ships which will soon be gracing ports across the globe. South Korea’s market share has been challenged from China as their production numbers ramp up due to the building of new shipyards containing advanced technologies in ship construction.

(Baek, 2011, p. 14)
Wage scales for workers around the globe are a major factor in the cost of shipbuilding; however they are not the ultimate driver of final cost. While the United States has one of the higher wage standards in the world, there are several countries that have a higher minimum wage. One of the countries having a higher minimum and a much larger ship building industry is Japan. The scale of production as well as technological advances allows them to compete in the international shipbuilding industry while offering a higher wage for its workers. South Korea who is not listed on the chart below but is one of the industry leaders in ship construction has a minimum wage of about 6 USD an hour. (Department of Education, 2013) While there is a fair amount of unskilled labor jobs performed at a shipyard, it should be noted that a majority of shipyard workers perform skilled labor and are paid significantly more than minimum wage for their efforts.

Also shown on the graph below is a wage for workers in Beijing, China. There is no set minimum wage for the entire country of China. The wage varies by region, however the number shown below gives a representation showing how much lower China’s wages are than the rest of the world. This raises multiple issues ranging from the inability to fairly compete in the industry to human rights. China’s foothold in ship construction continues to grow though their low wages are not the only reason behind this. China has made massive investments in building new shipyards and embraced the latest ship construction technologies to allow them to effectively compete in global shipbuilding market. Ultimately wages play an important role in shipbuilding but are not the sole determinate of success and productivity in the industry.
The following is a breakdown of building costs and carrying capacity for two container ships; one built in the United States and one that is currently under construction in Korea. Already 10 years old, one of the newest U.S. flagged container ships is the M/V Manukai built for Matson Navigation Company. This vessel is operated in the Jones Act trade route between Hawaii and the U.S. west coast. The Manukai was built at Kvaerner Philadelphia Shipyard Inc. and is the first commercial ship made at the shipyard in 34 years. The vessel was built in 2003 at a cost of 110 million USD which would equate to approximately 140 million USD today. It carries a load of 2600 TEU’s (Twenty foot equivalent unit shipping containers) and is 712 feet in length. (Yamanouchi, 2003) There were a total of 4 vessels of this class built for Matson with no plans for any more in the future. This design is not used by any other company.

In comparison, Maersk, the world’s largest container shipping company, has embarked on a new shipbuilding program that will make up the largest vessels in the world. The new vessels will be 1312 feet in length, hold 18,000 TEU’s, and be built at a cost of 190 million
USD. Maersk has a contract in place to build 10 of these vessels with an option of 20 more in the future. They are currently being built at DSME shipyards in Korea, with the first vessel due to launch in July 2013. These vessels will be state of the art in cargo capacity and stowage while burning less fuel and creating fewer emissions than its predecessors or competition. (Martin, 2011)

In a side by side evaluation of the two vessels there are a number of comparisons that can be made to show the overall differences in costs. The most obvious of the comparisons is the total cost to build each vessel. The Maersk ship cost is 190 million USD, and the Manukai would cost roughly 140 million USD should it be built today. This puts the cost of the Maersk ship at 50 million USD more than the Manukai. The Maersk ship is nearly double the length of the Manukai. If you break it down to price per foot the Maersk ship costs roughly 145,000 USD per foot and the Manukai costs 197,000 USD per foot. More important than length is the carrying capacity of the vessels, which ultimately determine their profitability for the company. The price per TEU of the Maersk ship is 10,600 USD, and the price per TEU of the Manukai is 53,800 USD. The cost for the Matson ship is over 5 times more expensive per TEU than for the Maersk ship. This is one of the most telling figures a company will look at to determine the financial success of the vessel. These results have been a major deterrent in keeping companies from building a ship in the U.S.
Artist’s rendition of the M/V Manukai. Length: 712 feet; Capacity 2600 TEU’s

(Matson Navigation Company, 2002)

Artist’s rendition of the Maersk Triple E class vessel. Length: 1312 feet; Capacity 18,000 TEU’s

(Maersk, 2013)
Economies of scale play a major factor in the production costs of the two ships. The Maersk ship is able to capitalize on the design and build of multiple vessels of the same class. This enables the shipyard to purchase all items in massive quantities which results in a huge savings for both the ship yard and the shipping company. The Matson vessel Manukai was built as one of four ships. It was a major cost to design the ship and neither the yard nor the company was able to build enough vessels to recoup the investment in the design. The shipyard was not able to achieve the factor of production necessary to become proficient in the building the ships. This forces the shipyard in the U.S. to frontload all of its profits, resulting in exorbitantly higher cost of production. (Elkinton, 2013)

Below is an aerial view of the STX Dalian Shipbuilding complex located in the Dalian Province of China. This is the world’s largest shipyard measuring 5,500,000 square meters (approximately 1350 acres). In comparison, the U.S. shipyard in the second photo is at Aker Shipyards in Philadelphia, Pennsylvania. The U.S. shipyard could be neatly tucked into one of the corners of the yard in China, occupying only a small fraction of the Chinese yard. This again shows the production difference between the U.S. and other countries; highlighting the inefficiencies that the U.S. shipyards face by having to work on a much smaller scale.
Aerial view of Dalian Shipbuilding Complex – Dalian Province, China

(Baek, 2011)

Aerial View of Aker Shipyard – Philadelphia, Pennsylvania

(Rice, 2005)
Environmental regulations are not on par around the world. The events that occur in a shipyard in China vary greatly from what is allowed in the United States. This must be looked at as the two are compared against one another. The realities of business on a global level include the fact that the U.S. might not be able to compete in such an environment due to the regulations and standards held in the country. Some cost cutting measures used in other countries will not be applicable in the U.S. This puts the U.S. shipyards at a financial disadvantage. When making direct comparisons, such items must be taken into consideration where the realistic question needs to be asked: Is the U.S. capable of competing globally?

U.S. Government Subsidies

The United States government, specifically MARAD, has created a program to help alleviate the cost discrepancy between operating a U.S. flagged vessel and a foreign flagged vessel while helping to ensure the country will have adequate access to these vessels in a time of need. The Maritime Security Act of 1996 created the Maritime Security Program (MSP). The MSP provides a fixed retainer payment to U.S.-flag vessel owners in exchange for providing the Department of Defense with assured access to their vessels and related transportation services and infrastructure during times of war, national emergency, or when otherwise deemed necessary by the Secretary of Defense. (U.S. Department of Transportation Maritime Administration, 2011, p. 14) These ships are foreign built and reflagged in the U.S. They are not eligible for Jones Act coastal trade and work on international routes.

The retainer payments equal about $8500 per day or about $3.1 million dollars a year per vessel. Even with this additional funding a $4100 difference remains per day in operating cost between U.S. and foreign flagged vessels. The upside for shippers is the access to preference
cargos that must be shipped on U.S. flagged vessels. These cargos demand a higher rates and lead to larger profits for the shipper. The majority of preferred cargo derives from the shipment of military goods. With recent cutbacks in government spending military spending has been significantly reduced. This has concerned shippers since there is no guarantee to the volume of preference cargo a company will receive.

The graph below shows the price difference for shipping companies with the retainer payments made by the government.

![Figure 9: Average Daily Operating Costs by Flag, 2010*](image)

*US-flag costs are weighted by the number of vessels in each operator’s U.S.-flag fleet.

(U.S. Department of Transportation Maritime Administration, 2011, p. 15)

This Maritime Security Program has come with its share of controversy. Proponents of the program believe it has strayed from its original intentions. The program began as a way to subsidize the shipment of United States military cargo around the world but has become
something quite different. It now stands as a $2 billion operation that, ironically, is dominated by a handful of shipping giants, all owned overseas. With government financing up for renewal in Congress for another decade, the program’s foreign flavor has set off a debate about its future and about the volatile issue of foreign ownership in American industry. (Lichtblau, 2012)

Looking at the program as a whole, compounded with the major issues facing the U.S. merchant fleet the question must be asked: Is the government subsidizing the right things to help the industry?

Current Loopholes

Due to the high costs associated with the Jones Act companies have developed numerous loopholes to work around the system. One example of this is the offshore oil and gas industry. There are currently 17 Drillships and 20 Semisubmersible rigs and over 20 specialty vessels working in the U.S. Gulf of Mexico. All of these vessels are foreign flagged even though they continually operate within the U.S. exclusive economic zone. (Rigzone, 2013) These numbers are expected to rise steadily over the next few years as oil production in the Gulf of Mexico increases. These types of vessels did not exist during the original drafting of the Jones Act nor have they been added to the Act over the years. The requirement for manning these vessels with U.S. crews has not completely been ignored. Companies attempt to fill the vessels billets with U.S crews, however they are able to obtain a waiver from the U.S. Coast Guard allowing non citizens to be employed as regular members of the crew as stated in 33 CFR part 141.20. (Code of Federal Regulations, 2013) Cruise ships are another type of vessel that continually call on U.S. ports, carry U.S. passengers, but are flagged and crewed foreign. These ships avoid the Jones Act requirements by making one stop in a foreign country even though the business revolves around U.S. ports and passengers.
The development of the articulated tug barges (ATB’s) is a solution that was created to help ease the costs by drastically reducing regulations the vessels must adhere to and the size of the crew required on board. Due to the nature of the vessels make up, only the tonnage for the tug is accounted for in determining the regulations it must follow and not the barge which it is connected to. Oil tankers and cargo vessels face a number of oil spill regulations especially along the U.S. coast. Surprisingly, many of the regulations governing the coastal sized tankers, which carry between 120,000 barrels of oil, do not apply to ATB’s which can carry up to 400,000 barrels of oil. Crewing on board an ATB ranges from eight to twelve depending upon routing compared to as many as 25 for a typical coastal tanker. (Cowan, 2013, pp. 30-31) Having reduced regulations and manning requirements raise a number of safety concerns which are counterproductive to the maritime climate the Jones Act was intended to create.

Legal teams have also found ways for companies to avoid compliance with Jones Act regulations. The wording “vessel equipment” and “merchandise” are two key terms of art for Jones Act interpretations. If an item is “merchandise,” only a Jones Act qualified vessel may transport an item between coastwise points. If an item is “vessel equipment,” a foreign flagged vessel may be used to transport the item. (Waldron & Grasso, 2013, pp. 16-17) Manipulating wording in the rules to make a loophole shows additional issues surrounding the outdated Act. Energy would be better spent finding a way to modify the Jones Act to help the U.S. merchant fleet rather than expending so much energy to work around it.

Modifying the Jones Act

The Jones Act was put in place over 90 years ago which was a very different climate that the world and the U.S. operate in today. The Jones Act directly impacts U.S. shipping
businesses. Like most businesses, those who do not change with the times find themselves out of business. This is present state that the U.S. maritime industry finds itself. Without change to the current system, U.S. flagged blue water vessels will become extinct.

The U.S. airline industry operates aircraft that are designed and built in foreign countries. They are owned by U.S. companies, and typically made up of U.S. crews. Why should the Jones Act force shipping companies to operate in a completely different fashion? The requirement that a U.S. flagged vessel must be built in a U.S. shipyards needs to be changed for the blue water segment of the industry. As the previous data has shown, U.S. shipyards are incapable of competing with international shipyards. Putting out a product that costs two to three times more than its competitors is unsustainable for any business and the current number of vessels being built and flagged in the U.S. is proof that the system has failed. Allowing vessels to be built at competitive prices overseas then flagged in the U.S. can instantly erase one of the main barriers a company faces in flagging their vessel in the United States. Given the dramatic decrease in U.S. flagged vessels over the past few decades combined with the near non-existent construction of new vessels in the U.S., this could be a major milestone toward rebuilding a U.S. merchant fleet.

There is a major discrepancy in the cost to crew a U.S. flagged vessel compared to a foreign flagged vessel. Keeping U.S. mariners trained and employed is an important piece of the Jones Act legislation, however the exorbitant cost of U.S sailors has become a prime reasoning for the demise of U.S. shipping. The crewing requirements of vessels working in the blue water market needs to be revised. As it currently stands, U.S. flagged vessels must be made up of a crew consisting of 100% U.S. citizens. This has left shipping companies at a major disadvantage when competing in the international shipping market. By modifying the crewing requirements and allowing non-essential foreign personnel to fill the crewing billet it will allow crewing costs
of U.S. flagged vessels to shrink and become more competitive with others in the shipping community.

Vessels built for the U.S. military and military operations should not be subjected to these changes. Keeping the construction and manning of these vessels stays true to the original principles of the Jones Act. By maintaining these shipyards the United States will remain independent in its ability to construct large vessels. The need of today’s military is dramatically different from that of the past. Technological developments have greatly reduced the number of vessels that are needed for operations. Operating a navy the size it was post World War II is no longer necessary. Having the yards in place to service today’s military needs is a much more realistic approach to handling a smaller navy and sealift command than in times past. Continuing the construction and maintenance of military vessels in U.S. yards will still meet the needs of the U.S. Navy and the people it serves.

Making changes to the Jones Act can help revitalize a beleaguered U.S. maritime industry and make it once again relevant on the global scale. Introducing these major cost cutting measures into an industry that is extremely competitive will give the U.S. a chance to have more vessels owners choose it at their flag of registry. Without the removal of these significant barriers to entry, owning and operating a U.S. flagged vessel will not be a viable option, causing a further depletion of the U.S. fleet.

Benefits of Changing the Jones Act

Removing costly measures that deter companies from flagging their vessel in the U.S. can instantly increase the presence of U.S. flagged vessels in the global maritime market. Not only is the number of U.S. flagged vessels small, the majority of the vessels are old and
dilapidated. This brings to question how useful they would actually be if called into use by the government in a true time of need. By introducing an influx of new vessels into the system, the U.S. would now operate a modern fleet that would be capable of meeting the needs of the nation should a crisis arise. More vessels will equate to more merchant mariners who will be qualified to operate them. While the policy changes call for a reduction in some U.S. crewmembers, a modest increase in the total number of U.S. flagged vessels will ultimately lead to more qualified mariners working in the system.

The Department of Transportation’s Maritime Administration expects port container traffic to double by 2020 and triple by 2030. The effects of this increase in trade will inevitably trickle down, creating millions of jobs and billions in tax revenues for states throughout the country. (Racino, 2012) Should the U.S. stay on the same course, none of the new vessels being built to handle this increase in demand will to be flying the U.S. flag. Hundreds of job opportunities will be lost; and the number of trained mariners the country has access to will continue to decline. The window of opportunity to capitalize on this type of growth is small. Missing out will keep the U.S. at an extreme disadvantage in the international shipping market as other countries maintain access to the most modern ships and experienced mariners available.

Increasing fleet size, the United States can eliminate the billion dollar program created to subsidize U.S. flagged vessels engaged in foreign trade. These funds could instead go towards retooling U.S. shipyards in an attempt to make them competitive in ship repair and maintenance servicing the entry of newly flagged U.S. vessels into the market. Investing in new technology for shipyard equipment and training for workers can help attract new business while allowing the yards to be more financially competitive. Over time U.S. yards can find their niche in the market or potentially become competitive again in the shipbuilding process.
International regulations have tightened up significantly forcing shipping companies to adhere to more stringent safety regulations on their vessels, regardless of flag of registry. Ship owners can no longer look to foreign registries as a means of avoiding basic standards for the safety of the vessel and the crew. This is not true of all registries but is the direction the industry continues to progress towards as the world’s safety culture becomes less tolerant of preventable casualties. This will be beneficial for the U.S. in attracting more ship owners to use it as their flag state. As the world security concerns remain uncertain, the stability of the U.S. government can be a benefit to the shipping companies who chose to use it as a flag of registry and have the added protection of being an extended part of U.S soil. Before these discussions can take place, the costly barriers to entry must be removed for companies to consider the U.S. flag as an option.

Consequences of Changing the Jones Act

Modifying the Jones Act is not a risk free endeavor and comes with its own set of threats and issues. Making significant changes to longstanding policies that impact an entire industry requires time and patience. Although the consequences of such a change must be thoroughly planned out, all potential outcomes cannot be completely covered. Regardless of how attractive the U.S. becomes as a flag state registry some ship owners will not choose it due to personal conflict or past experiences with the country.

The elimination of the requirement that U.S. flagged ships are built in U.S. shipyards will receive strong ire from the U.S. shipyard community. If the yards are unable to attract the business of regular maintenance and ship repair they will fall further into obscurity and go out of business. If all public shipyards were to disappear it is unlikely they would ever return. It is difficult to replace the unique skill set involved in many ship yard trades. Shipyards also operate on valuable waterfront property that is highly sought after for different types of development.
Once the land is lost, it would be difficult to recover and rebuild after the area is transformed for different use.

Eliminating the requirement that U.S. vessels sail with only U.S crews for the blue water market could lead to a shortage of qualified mariners. Replacing a percentage of non-essential crews will lower the number of U.S. mariners on each vessel. Increasing the total number of U.S. flagged vessels actively sailing around the world will lead to an overall increase in the number of U.S. mariners working on blue water ships. Without the guarantee that this will occur, there is valid concern about losing qualified seagoing professionals. With the number of U.S. flagged vessels in the brown water market rising, this risk should be mitigated, and ideally avoided all together if the U.S. is able to regain market share in the registry of blue water vessels.

Companies who have been in compliance with the Jones Act and paid the exorbitant prices for ships constructed in the U.S., and sailed with only U.S. crews will be put at an instant disadvantage should these regulations change. They would face competition from companies who were operating with a much lower overhead by using foreign built vessels that are not tied into contracts with pricey U.S. unions. This would allow them to compete at a much lower market price to ship goods and could put the Jones Act companies out of business. The answer to this problem will be complex where a resolution must be reached to find balance in helping those who abided by the laws of the Jones Act. The terms of help for these companies should be substantial but they should not be permanent. Within a reasonable time frame a company should be able to stand on its own and compete with others in the market. Jones Act companies should be given a fair shot to compete, but they should not be indefinitely subsidized by the government.
The purpose of change is to ultimately create a positive effect, however the results can have on unforeseen or uncalculated outcomes. The idea behind changing the Jones Act is to benefit the U.S. maritime industry. The good intention to benefit an industry in decline does have the potential to be the final nail in its coffin. Shipping is a very competitive industry. There are measures the U.S. can take to help make it more competitive in the market. It is possible the country is no longer meant to compete in the global shipping industry. That being the case, the U.S. must accept its role in the industry and find a way to continue to meet its needs before the industry disappears.

Conclusion

The U.S. maritime industry is a small percentage of what it once was. Antiquated maritime policies are the main contributing factor to this decline. The industry is large and multifaceted, containing issues that are extremely complex. Changing the policies that prevent the U.S. from being competitive give it the best chance for survival. Change does not come without risk, however the threat to staying the same course seems far greater than those associated with change. Repealing the U.S. build and modifying the Manning requirements can help the industry rebound from its insignificant position making it an appealing flag state of registry. Without this change the U.S. stands at great risk of sinking further into obscurity until it no longer exists in the maritime industry.
References


