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Entrepreneurial Planning in a Regulated Environment: the U.S. Federal Maritime Commission and the Maritime Industry

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Abstract Entrepreneurs exploit market opportunities and innovate to achieve or maintain strategic advantage over their competitors. In the absence of government regulation, entrepreneurs are free to focus on improving satisfaction of customer wants, for example, by enhancing current goods, supplying new goods, or supplying established goods at lower cost. In a regulated market, entrepreneurs focus on satisfying regulatory authorities, for example, to earn rate increases, subsidies, or tax benefits. Economists normally conceptualize regulation as restricting entrepreneurial choice over prices charged, including general prohibitions against price discrimination, or as imposing additional costs on business enterprises through mandating actions entrepreneurial planners would not otherwise have chosen, or prohibiting actions which would have been freely chosen. This paper examines the role of a specific regulatory agency, the Federal Maritime Commission, and its regulatory oversight of the maritime shipping sector. Business strategy and public policy implications will be developed, as well as implications for the growth and development of the shipping industry. The history and nature of government intervention in the maritime sector will be reviewed. The presence of a regulatory authority at least partly substitutes a kind of bureaucratic sovereignty over the

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consumer sovereignty of an unregulated market. Regulated firms compete for favors from the regulatory authority, and in a regulated environment strategic advantage is directed away from entrepreneurial planners to political entrepreneurs.

Keywords Regulation · Entrepreneurial planning · Maritime industry · Federal Maritime Commission

Introduction

The actual practice of regulating the maritime industry often fails to follow the modes economists have typically expected to observe. Entrepreneurs innovate to take advantage of market opportunities. Entrepreneurial ability manifests itself in an awareness or sensitivity toward market opportunities overlooked by others. Part of this ability is applied toward better satisfying established consumer wants which are observable to entrepreneurs in advance; but more noteworthy is entrepreneurs' experimental attempts to satisfy incipient or latent wants they are among the first to imagine or anticipate (Harper 1996). In a regulated market, entrepreneurs' focus is shifted toward regulatory imperatives. Regulation offers different opportunities for entrepreneurial innovation, as well as imposing new constraints. This results in entrepreneurs developing strategies for satisfying regulatory authorities in hopes of receiving rate increases, monopoly power, subsidies, tax benefits, exemptions from regulation, or other rewards regulatory authorities can dispense. In the absence of regulation, entrepreneurial awareness is applied exclusively to satisfying consumer wants. In a regulated environment, entrepreneurs must also apply awareness toward opportunities created by regulatory limitations.

Maritime regulation is founded on four independent and partially conflicting bases which thus mimic Hayek's (1945) fragmented knowledge of consumer preferences. Maritime regulation is complex in that there is an overriding statutory imperative in the form of cabotage legislation, a legal requirement that shipping between two U.S. ports must be U.S. flagged, owned, and crewed. In addition, two agencies have been charged with regulation since 1961: the U.S. Federal Maritime Commission, the primary regulatory authority charged with maintaining industry stability and protecting the shipping public, and the U.S. Maritime Administration, charged with promoting the industry and protecting domestic interests. The Maritime Administration regulates coastwise shipping, while the Federal Maritime Commission regulates foreign trades, shipping between U.S. and foreign ports. Additionally, the U.S. maritime labor force is licensed by the U.S. Coast Guard.

The article is organized as follows. The section titled "Regulation and Strategic Behavior" addresses the implications of business regulation in terms of Kirzner's knowledge problems, strategic incentives, and the differing information content of regulated versus unregulated prices. "Maritime Regulation: The U.S. Federal Maritime Commission" profiles the maritime industry and interprets the legislative mandate and responsibilities of the Commission, the American regulatory authority which oversees the maritime industry. Finally, the "Conclusion" provides concluding comments.

Regulation and Strategic Behavior

The success of the maritime industry is always dependent on correctly addressing the market demand for transportation. The traditional economic view of consumer preferences is that they are subjective, decentralized knowledge, but are also inchoate knowledge which is incapable of verbal articulation, revealing itself only through consumer behavior (Hicks 1939, pp. 312–13; 1956, p. 127; Wold 1943; Samuelson 1948, 1950; Houthakker 1950; Yokoyama 1953; Afriat 1967; Diewert 1973). Firm success in achieving its own objectives depends on its contribution to achieving consumer objectives.

Transportation services are such a fundamental component of the production process that there is little scope for substitution of transport for finished goods delivered to the final consumer (Menger 1871, p. 243). Any relative increase in transportation costs leads to substitution of goods requiring less transportation services for goods requiring more. This could be accomplished by any or all of the following:

1. Substitution of services for goods,
2. Substitution of lighter or more compact goods for heavier or bulkier goods, or
3. Substitution of manufacturing activity located closer to the final consumer for manufacturing located farther away.

These behavioral changes will effect substitution away from relatively more expensive transportation services and toward relatively cheaper nontransportation output. This explains why, for example, goods are transported by ship rather than by air, or by inland barge rather than by truck.

Under unregulated competition, the firm faces the market demand provided by consumers' desires to satisfy their wants. Furthermore, because transportation costs are such a small percentage of the cost of production of consumable output delivered to the final user, the price elasticity of demand for transportation is extremely low at the industry level; although, at the firm level, customers will abandon an established carrier for even marginal savings in shipping rates. The greater point is that the total volume carried by the industry is not sensitive to cost pressures, at least for small changes in shipping rates and in the absence of significant rate variation across firms.

Regulation and Kirzner's Two Knowledge Problems

Knowledge Problem A (Kirzner 1990)[1], the overoptimistic belief that entrepreneurial plans will succeed better than they do in fact, is self-correcting through market forces because planning failures always become evident after the fact. The overoptimism of Knowledge Problem A results in entrepreneurs engaging in production planning which realizes a lower return than anticipated, or even a loss.

For example, a firm can offer a cost-minimizing service between two points between which there is no demand for transportation services. The expectation that customers on

[1] Kirzner's (1984a, b) initial explorations of market process drew heavily on Hayek's (1937, 1945, 1978), and Mises's (1936, 1949) critiques of the informational inadequacy of central planning. He later introduced the distinction between Knowledge Problems A and B (Kirzner 1990).

this route exist turns out to be mistaken, so profits cannot be earned. True circumstances can only be known after the fact and can only be discovered through experience.

In contrast, Knowledge Problem B, the unduly pessimistic belief that entrepreneurial plans will not succeed and should not be attempted, is not self-correcting because it results in the decision not to undertake productive activity which would actually have been profitable. Knowledge Problem B can only be addressed through entrepreneurial alertness, and can never be completely eliminated. In addition to explicit over-pessimism, Knowledge Problem B occurs whenever entrepreneurs are unaware of potential opportunities, a ubiquitous condition which does not call for actors to be consciously pessimistic.

Kirzner's Knowledge Problem A causes planned exchanges to be impossible to fulfill. The transportation firm pursues a strategy predicated on their expectation of underlying preferences and consumer demand, but if the view turns out to be incorrect the services will be worthless in the marketplace and significant loss will occur. The existence of Knowledge Problem A offers a potential avenue for government intervention to improve on the market solution, but Kirzner (1990, pp. 169–71) notes that this type of problem is self-correcting, as market participants either adjust their plans in light of hard experience or withdraw from the market. Transportation enterprises typically move to compete in different, more lucrative routes, or sell off their assets. Thus intervention by regulatory authorities directed at overcoming Knowledge Problem A would more likely *prevent* firms from responding appropriately rather than improving their ability to achieve a market solution.

The firm's strategy is largely predicated on expectations of demand for transportation services, and therefore on subjective beliefs held by entrepreneurial planners about underlying preference of the firm's customers. Enterprise strategies always face risk because their effectiveness always depends on calculations about future consumer preferences underlying future demand for the firm's services. Firms informed by accurately anticipated consumer preferences can formulate optimal strategies to achieve firm objectives; e.g., profit and revenue maximization. Firms with mistaken beliefs about consumer preferences construct suboptimal strategies which would be optimal in the nonexistent environment to which their planners commit, but preclude achievement of enterprise objectives in the subsequent reality.

Strategic Incentives from Regulation

Firms develop long-range strategic plans based on their anticipation of future business conditions, including resource costs and consumer preferences. All things equal, long-term entrepreneurial planning offering more flexibility is strictly preferable to planning offering less (Harper 2003). The firm selects various parameters such as capital equipment combinations to maximize profits in the expected business environment. The firm's transportation infrastructure is an example of sunk costs as used by Rothbard (1962, p. 466), Hoppe (1999, p. 235), and Anderson and Ross (2005, pp. 36–39). In the short run, past entrepreneurial planning constrains future possibilities. Given the firm's extensive sunk costs, the firm faces a relevant variable condition if the fees for a particular cargo movement cannot be covered by freight charges. Firms operate to maximize revenue in the short run, understanding that sunk costs are irrelevant.

U.S. regulatory activity also aims at protecting domestic firms from unfair foreign competition, especially from foreign government-controlled or subsidized enterprises, and protecting domestic transportation customers from discriminatory practices, especially price discrimination (Niskanen 1971). Unless the regulatory authority grants firms monopoly power, the enterprise can pursue only a strategy of product differentiation and price discrimination through market segmentation. This behavior results in a market structure of monopolistic competition rather than pure monopoly. Transportation enterprises cannot exclude competitors under unregulated competition; but under regulation, the regulatory authority can exclude or limit access of rival firms on each route.

The policy makers of the regulatory authority may thus be superior to the entrepreneurial management of competing transportation enterprises in discerning customer preferences. For example, survey respondents (transportation customers) might be more forthcoming with information to a government agency, either under threat of the police power, or because shipping customers seek no competitive advantage over a public authority which they might attempt to gain over a firm charging for its services. Entrepreneurial management is generally superior for satisfying consumer wants, but under certain conditions regulatory management may be superior for systematically uncovering consumer preferences. How the regulatory authority behaves is discussed below along with implications for actual economic efficiency. Here, it is only necessary to establish the possibility that under the right conditions regulation may promote efficiency.

Information Content in Regulated vs. Unregulated Prices

Kirzner notes that equilibrium prices signal market participants' plans to each other and thus guide future planning. In contrast, disequilibrium prices signal to alert market participants how revised plans may benefit market participants in the future. In Kirzner's view, disequilibrium prices predominate, thus entrepreneurial opportunities are everywhere. Entrepreneurial consumers and producers who take advantage of these disequilibrium prices move the market toward dynamic equilibria which are generally never realized. By construction, regulated tariffs are disequilibrium prices which are persistent, because the market price cannot be charged under regulation, thus the amount of the service provided, as well as the amount of resources devoted to providing the good or service, are always in a state of either shortage or surplus. Even when regulators attempt to mimic market price-setting, they are at best adjusting regulated prices after-the-fact of market price movements.

Prices summarize relevant information which would otherwise be useless to market participants in satisfying their wants, but the imperfections in market prices also create the profit-and-loss incentives for entrepreneurs to adjust their pricing arrangements (Kirzner 1984a, p. 149). A price may summarize economic information regarding the supply-and-demand conditions in the relevant markets without signaling whether the price represents an equilibrium or a disequilibrium. Entrepreneurs compete in adjusting prices in a "competitive process which *digs out* what is in fact discovered" (Kirzner 1984a, p. 150). The competitive process Hayek (1978, p. 180) describes, where "competition is valuable only because, and so far as, its results are unpredictable and on the whole different from those which

anyone has, or could have, deliberately aimed at," is difficult to accommodate through regulatory planning.

Kirzner's (1984b, p. 160) view is that disequilibrium prices offer pure profit opportunities for alert entrepreneurs who can arbitrage among different prices temporarily prevailing in different markets. This incentive allows entrepreneurs to effect adjustment of the disequilibrium price vector toward equilibrium (Harper 1998). Although, by construction, an equilibrium is never reached, Kirznerian entrepreneurs always act to lessen the extent of the disequilibrium. In contrast, a Schumpeterian entrepreneur moves the market price vector away from equilibrium by introducing new production technologies, marketing and distribution media, and creating new plans which increase the social dispersion of knowledge (Schumpeter 1912). The contributions of both kinds of entrepreneurship are unlikely to be appreciated fully by the regulatory authorities, particularly in the earlier stages of innovation.

Hayek notes the dispersal of knowledge as an economic problem, "a problem of the utilization of knowledge which is not given to anyone in its totality" (Hayek 1945, pp. 77–78). Dispersed knowledge provides one forum for entrepreneurial activity. Entrepreneurs seek out, or at least remain alert to, the dispersed character of this knowledge, hoping to profit through offering information to those who can benefit from, but do not yet possess it. Thus, entrepreneurs act to overcome the dispersal of knowledge. This kind of entrepreneurial activity overcomes disequilibria based on information asymmetries, acting to move the market toward equilibrium and symmetric information. This equilibrium can never be realized and furthermore, in the act of overcoming asymmetric information, entrepreneurs upset the entrepreneurial plans of others, preventing coordination of individual plans, and ensuring a disequilibrium state even as they move the market toward equilibrium. This interpretation of the entrepreneurial function leaves room for both Schumpeter's and Kirzner's views of the entrepreneur. Entrepreneurs profit from removing information imbalances and bring about a movement toward information equilibrium, where everyone enjoys equal and more complete information (Kirzner 1973, pp. 66–67).

Maritime Regulation: The U.S. Federal Maritime Commission[2]

This section discusses the nature of regulation to which the U.S. maritime industry is subject. The scope of potential regulation is far greater and more general than the limited extent regulation is applied in practice to the maritime sector. U.S. regulation is mainly concerned with relatively specific anticompetitive behavior, and with protecting the domestic maritime sector against foreign-subsidized competition.

[2] The authors prepared this section based on a review of correspondence (U.S. Federal Maritime Commission 2005b) received on August 17, 2005 from the Commission's senior staff describing its legislative mandate and responsibilities and the Commission's website (U.S. Federal Maritime Commission 2005a).

Legislative Mandate

The Ocean Shipping Reform Act of 1998, which took effect May 1, 1999, is the latest in a series of legislative mandates governing the role and responsibilities of the Federal Maritime Commission (FMC). The Commission was established as an independent regulatory agency by Reorganization Plan No. 7 which became effective August 12, 1961, separating the Commission from the U.S. Maritime Administration (MARAD). Its predecessor organization, the Federal Maritime Board, was governed by section 19 of the Merchant Marine Act, 1920, and Public Law 89–777. The Board's dual responsibilities originally included the regulation of international ocean commerce and the promotion of the U.S. maritime trades. The 1961 reorganization plan established both regulatory and promotional shipping laws. Because the Commission regulates both domestic and foreign-flagged carriers serving the U.S. shipping public, its regulatory actions must be flag-blind, and it has no role in promoting the domestic industry or maritime trades. The agency charged with promoting the maritime trades and the domestic maritime industry is the U.S. Maritime Administration. The division of regulatory (FMC) and promotional (MARAD) missions minimized potential conflicts of interest. Table 1 summarizes the principal acts of enabling legislation.

Subsequent legislation, the Shipping Act of 1984, the Foreign Shipping Practices Act of 1988, and the Ocean Shipping Reform Act of 1998, shifted the Commission's mandate. In effect, the Commission's current *raison d'être* is to address international trade conditions adverse to domestic carriers that are not experienced by foreign competitors. The Commission is empowered to regulate market conditions through removing unfair competitive advantages foreign-flagged shippers might enjoy on U.S. trade routes.

Table 1 U.S. Maritime regulation enabling legislation

Year, title, and digest of regulatory initiative
1916 U.S. Shipping Board authorized.
1920 Merchant Marine Act (Jones Act)—initial implementation of cabotage policy, requiring ships serving domestic and costal routes be U.S. owned, flagged, and crewed. Section 19 empowered the Board to make rules and regulations to address conditions unfavorable to shipping in our foreign trades.
1933 U.S. Shipping Board Bureau established.
1936 U.S. Shipping Board Bureau renamed the U.S. Maritime Commission.
1950 U.S. Maritime Commission renamed the U.S. Federal Maritime Board. U.S. Maritime Administration established.
1961 Reorganization Plan No. 7—U.S. Federal Maritime Board renamed the U.S. Federal Maritime Commission.
1984 Shipping Act, 1988 Foreign Shipping Practices Act, 1988 Ocean Shipping Reform Act: Commission is to address international trade conditions adverse to domestic carriers that are not experienced by foreign competitors. Empowered to regulate market conditions through removing unfair competitive advantages foreign-flagged shippers might enjoy on U.S. cargo routes. Under the Foreign Shipping Practices Act, the Commission was granted authority to remove nonmarket barriers to ocean trade, take countervailing retaliatory actions, impose penalties when foreign carriers and/or governments impact U.S. flagged carriers through unfair exclusionary practices. The 1988 Act requires the Commission to address adverse conditions affecting U.S. carriers in our foreign trades that do not exist for foreign carriers in the United States.

Table 2 Glossary of specialized legal terms

Legal terms commonly used in describing U.S. federal regulation of the maritime industry
Common carrier—a provider of transportation services to the general public, as opposed to a contract carrier. A common carrier must charge the same tariffs and surcharges to all customers, except those covered by service contracts.
Conference agreement—an agreement among independent firms which compete on particular routes or within a defined geographic region. Participating firms did not enjoy the right of independent action, and were subject to internal fines if they changed a tariff without permission of the conference. The participating firms were often collectively referred to as a shipping conference. All parties subject to a conference agreement were required to charge uniform tariffs and surcharges to all customers, except those covered by service contracts. Conference agreements were required to be filed with the U.S. Federal Maritime Commission 45 days prior to taking effect. Starting in the mid-1990s, conference agreements were largely superseded by more flexible discussion agreements.
Contract carrier—a provider of transportation services to contracting customers, as opposed to a common carrier. Tariffs, surcharges, and other fees are negotiated by the two parties, are not published, and are not reviewed by the Commission.
Discussion agreement—an agreement among independent firms which compete on particular routes or within a defined geographic region. Unlike a conference agreement, participating firms retain the right of independent action. There is no mechanism for internal enforcement of a discussion agreement. Participating firms are always free to lower tariffs without notice, and can raise them subject to only to 30 days advance publication notice. The Commission will grant exemption for cause to the 30 day advance publication requirement. Individual firms are free to charge different tariffs and surcharges, but may not discriminate against any customer. They can still charge different tariffs and surcharges as part of service contracts. Starting in the mid-1990s, discussion agreements have largely superseded conference agreements.
Freight forwarder—a shipping intermediary, middleman, ocean transportation intermediary (OTI), or service broker, including some providers of intermodal transportation services which do not own or operate their own fleet. Because freight forwarders lack fleet assets which can be attached, they are licensed and bonded with the Commission if they serve U.S. ports.
Government controlled carrier—an enterprise operating under control of a foreign government, often receiving operating or shipbuilding subsidies.
Non-vessel operating common carrier (NVOCC)—a firm which charters or otherwise hires cargo space on vessels it does not own on behalf of shipping customers with which it contracts. These firms are middlemen between shipping customers and shipping firms. Like freight forwarders and OTIs, these are bonded and licensed with the Commission. NVOCCs must charge uniform tariffs and surcharges to all customers except those covered by NVOCC Service Arrangements (NSAs).
NVOCC service arrangement (NSA)—a standardized agreement between an NVOCC and one of its customers to provide special rates or services, equivalent to a service contract with a ship operating common carrier. NSAs allow NVOCCs to negotiate special tariffs and surcharges with specific, usually large, customers.
Ocean transportation intermediary (OTI)—a freight forwarder serving ocean routes. Like all freight forwarders, because they lack fleet assets which can be attached, they are licensed and bonded with the Commission if they serve U.S. ports.
Service contract—an agreement between a common carrier and one of its customers to provide special rates or services. Similar to a contract between a contract carrier and its customer(s), except the common carrier also offers service to the general public.
Surcharge—a fee in addition to the basic tariff. Surcharges may be assessed for fuel (bunkers), seasonal high capacity requirements, and terminal access and handling fees.
Tariff—the rate charged for shipping service. Common carrier tariffs must be published 30 days in advance. Common carriers may increase tariffs with less than 30 days notice only with the approval of the U.S. Federal Maritime Commission and only with compelling justification.

Responsibilities

The Commission regulates ocean common carriage and service contracts that affect U.S. foreign maritime trades. A glossary of specialized legal terms used by the U.S.

Maritime Commission is given in Table 2. In addition to protecting the shipping public from discriminatory pricing and maintaining stability within the industry and reliability of service, the Commission also bonds and licenses maritime enterprises which do not have attachable fleet assets, known as ocean transportation intermediaries (OTIs). OTIs may be either non-vessel operating common carriers (NVOCCs), or freight forwarders. The Commission's broad authority to take retaliatory action against unfair practices by foreign-flagged carriers and foreign governments has deterred many adverse impacts on the domestic shipping industry. Often, nonmarket barriers against U.S. flagged ships, such as denial of access to load cargo at foreign ports results in negotiated compromises among the Commission, the U.S. State Department, and the foreign government.[3]

Commission proceedings, the majority of which result from internal investigations based on either a Commission-initiated investigation or information submitted by a private party, are initiated when a person or entity is believed to have violated any provision of the Shipping Act of 1984. Cases are referred to the Office of Administrative Law Judges for discovery, hearings if deemed necessary, and an initial decision which is reviewed by the Commission.

In a Commission-initiated proceeding, if a violation of the Act is substantiated, the offender may be ordered to pay a civil penalty to the United States. In a private party complaint case, the complaining party may seek reparations as a remedy if successful in proving a violation of the Act and proving its damages incurred as a result of that violation. The Commission's Bureau of Enforcement, designated as a party to all proceedings initiated by the Commission, may also seek leave to intervene in a case initiated by a private-party complaint. All orders instituting a proceeding or noticing the filing of a private-party complaint contain language requiring the parties to consider the use of alternative dispute resolution services as directed by the presiding Administrative Law Judge. Parties are encouraged to utilize the informal settlement procedures to resolve matters to avoid formal litigation and mitigate the damage to both parties.

The Commission's Annual Reports provide information pertaining to its actions and penalties assessed for prohibited acts identified in Section 10 of the Shipping Act. In the past, the Commission reviewed all conference agreements for problematic issues during the initial agreement review process. At this time the Commission

[3] Under the Foreign Shipping Practices Act of 1988 and Section 19 of Merchant Marine Act of 1920, the Commission is obligated to protect U.S. shipping trades from unfair foreign practices. One aspect of this responsibility is the need to remove nonmarket barriers from ocean transportation in foreign ports. These laws provide authority for countervailing action to impose penalties on foreign flag carriers who adversely affect U.S. carriers through nonmarket forces. Though this authority is used very little, it acts as a deterrent.

> The Commission has a longstanding and a very effective record of dealing with a host of foreign government practices in various trades. We have addressed restrictions against third-flag carriers in our trade with Ecuador, Venezuela and Colombia; laws preventing U.S. companies from establishing subsidiaries in the PRC; discrimination against non-Korean intermediaries by the Republic of Korea; restrictions on U.S. flag carriage of military cargo to Iceland; and general cargo reservation schemes in Argentina, Brazil, and Peru. (Speech, U.S. Federal Maritime Commission, 1997)

More recently, the Commission has intervened to reverse adverse actions by Brazil, where a labor action prevented U.S. ships from being unloaded; and Japan where discriminatory terminal access fees were impeding U.S. ships from access to that market. In the case of Japan, the U.S. Coast Guard turned back Japanese ships until an agreement to provide equal access to U.S. and Japanese port facilities was finalized.

reviews a discussion agreement to determine whether it is likely, by a reduction on competition, to produce an unreasonable reduction in transportation service or an unreasonable increase in transportation cost (Section 6(g) of the Act, 46 App. U.S.C. 1705). If the Commission has concerns, it can delay the agreement's effective date beyond the normal limit of 45 days after rendering the finding to analyze the potential competitive impacts more fully. However if the Commission finds an agreement substantially anticompetitive under the above criteria it has authority under Section 6 (g) of the Act to seek injunctive relief. Recent Commission concerns include a capacity management program in the Trans-Pacific, collective behavior and pricing practices by the Trans-Atlantic Conference Agreement (TACA 2006), and a pooling arrangement in the outbound Trans-Pacific trade. In all of these cases, the concerns were resolved without a formal hearing or assessment of penalties.

The U.S. Federal Maritime Commission protects the maritime industry from some kinds of foreign competition. Most of the other regulatory requirements on the industry are not particularly restrictive. Thus there is little scope for the regulatory authority to impair industry performance. The extent to which regulation confers monopoly power also seems limited. The Commission's enforcement authority provides a mechanism for protecting shipping customers from abusive pricing, specifically discriminatory pricing and rapid changes in tariffs.

The U.S. Maritime Industry

American maritime enterprises operate under an informal and limited antitrust exemption intended to allow them to compete better with foreign firms, particularly with foreign-government-operated enterprises. American firms competing in a defined geographic region can enter discussion agreements to set uniform tariffs and apportion routes. The antitrust exemption requires regulatory intervention which necessarily entails income transfers (Posner 1971, 1975, 1976; Rothbard 1977; Ikeda 1997).

Although collusion in setting prices is permitted within a conference or discussion agreement, "uncompetitive" prices, that is, prices either too low or too high compared to the purported competitive price, are not permitted under antitrust legislation.[4] Price discrimination is also prohibited, and regulation generally delays rapid price increases, in that higher tariffs do not normally take effect for 30 days.[5]

[4] The U.S. Federal Maritime Commission investigates allegations of price discrimination. Because discussion agreements may result in uniform price-setting, the Antitrust Division of the U.S. Department of Justice could not prosecute participants for their part in a government authorized activity. The Antitrust Division could still prosecute firms for charging anticompetitive prices. The Commission plays no role in regulating prices beyond enforcing the prohibition against price discrimination and enforcing the requirement that tariff increases be published with 30 days advance notice. The prohibition against price discrimination prevents collusive oligopolists from extracting all consumer surplus through acting as a perfectly discriminating monopolist. Some scope for price discrimination remains in that service contracts are exempt from the prohibition. Prior to 1984, the Commission did review and sometimes comment on proposed tariff increases.

[5] Controlled carriers, that is, foreign-government-owned carriers, are subject to a 30 day advance notice requirement for both price increases and decreases. The Federal Maritime Commission reviews controlled carrier rates for reasonableness, unlike with privately-owned firms. APL, formerly American President Lines and now a Singaporean controlled carrier, recently received an exemption to this requirement because it had no service contracts which would have avoided the regulation.

The prohibition against price discrimination applies only to the basic tariff. Surcharges can be increased or decreased without prior publication notice and are routinely levied for fuel (bunkers), terminal handling fees, peak season carriages, and other factors; but these must be uniform throughout a discussion agreement. The quantity of goods shipped is still dependent on national income and output, and thus still market determined; but in this context, quantity is not determined jointly with price, but independently. This quantity will approximate the competitive quantity as long as consumer demand for shipping is inelastic at the industry level.

More recently, starting in the mid-1990s, formal conference agreements have been largely superseded by discussion agreements. A conference agreement was a government-sanctioned collusive oligopoly where adherence to the agreed tariffs could be enforced by fines against conference members (Cournot 1897; Efroymson 1943; Fellner 1949; Andrews 1964; Cohen and Cyert 1965; Friedman 1977); a discussion agreement is a looser arrangement where collusion is permitted, but cannot be enforced by members against each other. Under a conference agreement parties had no right of independent action. Independent action is afforded to parties to a discussion agreement, and internal fines cannot be levied. Since the late 1980s, new kinds of maritime enterprises have emerged: freight forwarders and other ocean transportation intermediaries (OTIs). These firms are brokers of transportation services which charter or book freight transport on ships owned by other maritime firms. Since OTIs have no vessel assets which can be legally attached, the U.S. Maritime Administration has required them to be bonded to ensure performance and recovery of the cargoes by the shipping public.

EU policy, in contrast, has discouraged shipping conferences in European markets. The weaker *de facto* antitrust exemption offered by discussion agreements has clearly improved competitiveness and benefited the shipping public.

Conclusion

Government regulation of the maritime sector in the U.S. was examined. In practice applicable legislative mandates constrain regulatory authorities from engaging in some of the most invasive kinds of regulation, so there seems to be relatively little downside to their actions. Where regulatory conduct would clearly be detrimental, such as delaying adjustment toward market clearing prices, these shortcomings were pointed out. Most regulatory actions seem to have little or no detrimental impact on the industry in the short run.

By imposing constraints on entrepreneurial plans, government regulation prevents entrepreneurs from fully satisfying consumer wants. Behavioral constraints result in suboptimal behavior which can impair the competitive outcome and lower living standards and quality of life. Nevertheless, regulation can overcome potential information constraints, and whenever this is the case, regulation contributes to improving market outcomes, at least theoretically.

Regulation can be conceptualized as an attempt to substitute idealized government preferences for those of the consumer, or at best, substituting the regulatory authority's imperfect understanding of consumer preferences in place of the actual preferences revealed by a competitive market. The actual market

preferences are instances of decentralized knowledge in the sense used by Hayek, Mises, and Kirzner. Although it can be argued that government may have some advantages in uncovering actual preferences, it could also be argued that dispersed market agents, the entrepreneurial planners who risk their own wealth and reputation, are better equipped than government regulators to uncover dispersed market information (Harper 2003).

It is notable that the level of regulatory intrusion facing the U.S. maritime industry has diminished over time. Today, maritime regulation is far less pervasive and constraining than it was for most of the twentieth century. The Federal Maritime Commission stands as an example of a regulatory authority that implicitly encourages a form of firm "self-censorship," in which maritime firms face strong incentives to avoid regulatory attention and scrutiny. This can cause firms to focus on minor incremental adjustments to their business strategies rather than implementing dramatic strategic change. To some extent firms avoid entrepreneurial innovation to shield themselves from the risks and costs of potential regulatory action.

Economists conceptualize government regulation as restricting entrepreneurial choice over prices charged, including general prohibitions against price discrimination, or as imposing additional costs on business enterprises through mandating actions entrepreneurial planners would not otherwise have chosen, or prohibiting actions which would have been freely chosen. The entrepreneurial alertness which manifests itself in improved satisfaction of established consumer wants and experimental attempts to satisfy latent wants is shifted, in a regulated market, toward regulatory imperatives.

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