Rum Row and the Plunder Problem

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Abstract

Black markets are often typified by small-scale businesses. This is due to the fact that large-scale operations are more likely to attract the unwanted attention of law enforcement. This, however, was not the case on Rum Row during America's experiment with alcohol prohibition in the 1920s. As the Prohibition era progressed, individual smugglers and small-scale operations all but disappeared as large-scale syndicates emerged. This paper argues that syndication occurred in order to combat wide-scale hijacking. Economic theory would often predict, given the absence of state enforcement and the necessary secrecy of black markets, that the market for smuggling liquor into the US would breakdown in the presence of such predation. In reality, institutional mechanisms emerged among rumrunners to foster social cooperation and a thriving market. Two main mechanisms were employed to minimize the threat of hijackings. First, smugglers vertically integrated in order to better enforce contracts. Second, smugglers set up a system of credit to avoid carrying cash while undertaking activities that were prone to hijacking.

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The most hazardous of all trades, that of a smuggler, though when the adventure succeeds it is likewise the most profitable… — Adam Smith (1776 [1976], 128)

Happily, however, there is in the political, as in the human, body, a vis medicatrix*, which for extraordinary evils produces extraordinary remedies… The smuggler is a radical and judicious reformer. His labours are unhappily confined to the least bulky articles, but as far as this field extends they are always directed to that part of the prohibitive system, which may be broken through with the greatest advantage, because it is maintained at the greatest loss.* — Nassau Senior (1828, 64)

1 Introduction

"As this one was leaving, a very large boat… came up alongside, with a least a dozen men on board. Fortunately, our deck was full of men, as I fancy he was up to monkey tricks. He went off examining us. These fellows will attack a drunk or sleeping ship, but don't like risking their hides. When these big boats come near us we watch them like hawks. I have a blue flare ready on the bridge to attract attention. Also, none of the officers go on deck unarmed at night. There's too much money in this ship for my liking. Several raids have been carried out, actually by one of the partners in a rumrunner. One boat about five miles east of us was raided not long ago. One partner was on board as supercargo, the other doing the shore end. The shore end lad had a raid carried out and cleared off after with, I am told, about $40,000."

The above story comes from the May 29th, 1924 entry of rumrunner[1] Alastair Moray's (1929 [2007], 143) diary. The tales of hijackings[2] were not an uncommon tale[3] to tell amongst rumrunners. As 'Eddie,' a rumrunner, told a journalist (Young 1925a),

[1] Here rum running is a term used to describe the smuggling of foreign produced liquor into the United States during the U.S. experiment with alcohol prohibition from 1920 to 1933. This is separate from the term bootlegger, which designated those who simply sold the liquor within the country. As Young, (1924b)

> "Yes there are 'ijackers, too, crowd of blighters. They 'ave come alongside ships in the dark and got aboard that way before the men could stir. But they'll never board me. I keep watch myself at night. Hanybody who comes near and doesn't know the word gets shot—that's hall. The 'ijackers are mostly yellow-'earted. They lay in wait for small boats and run before they fight. Still—there are some bad ones, the rotters. Hi honly 'opes they try to board me. 'Ave hanother?"

In prohibiting the manufacture, sale, and transportation of alcohol a lucrative market was created.[4] That Americans seized the opportunity to provide thirsty consumers with the liquor they desired[5] should be a surprise to no one. Smuggling, after all, has been

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a journalist for *the New York Times* who spent time with both the Coast Guard and rumrunners on Rum Row, put it, "But we have been warned to avoid that word bootlegger. It is considered a distinction in some circles to be ranked a rum runner; a bootlegger merely sells the stuff." Though the terms are often used inter-changeably most rumrunners preferred to keep them separate because they viewed what they did as distinct from simply selling liquor. Rumrunners tended to view the trade as an extremely lucrative game, as the famous rumrunner Bill McCoy (Waters 2007, 5) put it,

> There was money in the game—lots of it, if you could keep it. Beyond that there was all the kick of gambling and the thrill of sport, and, besides these, there were the open sea and the boom of the wind against full sails, dawn coming out of the ocean, and nights under the rocking stars. These caught and held me most of all.

[2] Young (1924a) describes hijackers "…to be a miscreant who waits in some convenient cove to pounce upon a hard-working bootlegger on his way out to the fleet. This hi-jacker is a dangerous man who spreads consternation among rum-runners. It is doubtful if the combined forces of law and order are so much dreaded as one hi-jacker. These gentry have swift boats, able to overtake any ordinary rum craft. They come up with shooting irons in hand and black masks affixed. They demand money or your life and shoot to kill."

[3] Hijackers became a bigger problem for rumrunners over time. In a May 1924 article Young (1924a) notes, "But it is likely that neither hi-jackers nor rum pirates are numerous." By December of the same year, however, Young (1924b) notes a drastic change, "…stories of schooners boarded and men murdered because they stuck to the trade. One vessel was robbed of food, water, money and liquor; even her compass was taken away and her wheel smashed. Such is competition along Rum Row." Just as much of the rumrunners had to learn how best to smuggle in the liquor, so too did criminals waiting to take advantage, as McCoy (Water 2007, 22) put it, "The game was growing more strenuous. Individual gunmen and mobs as well were learning that rum-runners were the safest and most profitable people to rob."

[4] During Prohibition the highly thriving illicit market, and the crime that accompanied it, were often sited as sources of Prohibitions failure. For more on the effectiveness of Prohibition from both sides during Prohibition see Carver 1931; Cherrington 1929a, 1929b, 1930; Crowther 1930; Dorr 1929; Feldman 1927; Fisher 1927, 1928, 1930; Franklin 1927; Gebhart 1930; Hose 1928; Starling 1923; Tydings 1930; Nystrom 1929; and Warburton 1932.

[5] See Friedman and Friedman (1984) for how prohibitions turn ordinary citizens into criminals. And Boettke (1993) for the similar affect many of the Soviet Unions practices had in creating black markets and making its citizens criminals. The Soviet Union in general had many distorting effects that caused many undesirable consequences (see, for instance, Boettke 1988, 1990a, 1990b, 1990c, 1991, 1992, 1993a, 1993b, 1993c, 1994a, 1994b,1995, 1998, 2001; Boettke and Anderson 1993, 1997; and Lavoie 1985a, 1985b).

an integral part of American History.[6] And the amount of liquor smuggled into the country was tremendous. In 1924 the department of Commerce estimated that liquor valued around $40,000,000 was entering the United States annually (Sinclair 1962, 198).[7] No small sum back in the 1920s.

During America's "Noble Experiment" of alcohol prohibition,[8] hijackings along Rum Row[9] became a major problem for the illicit market of smuggling foreign produced liquor on to U.S. soil. Rum running operated outside the law, making predation not only possible but also very profitable. This type of circumstance within most economic models should cause the market to breakdown. Yet, Rum Row did not fall apart due to predation.[10] This paper investigates the mechanisms rumrunners used in order to get

[6] One of America's founding Fathers, John Hancock, was a known smuggler (for more on this see Pierce 1992). The Smuggling of Liquor has been around for a long time as well, as Warburton (1923, 23) notes, "There has always been some manufacture of alcoholic spirits, especially in the southern Appalachian region, by persons evading the federal tax, as well as some production of cider and fruit wines in homes and rural areas, which also paid no Federal tax" Even before Prohibition illegal production and smuggling of liquor was occurring. For example, "In 1915, which appears to be a typical year, federal officials seized 3,764 illicit stills, and 34,381 gallons of distilled spirits" (U.S. Treasury 1930, 72).

[7] See also Young (1925c).

[8] The 18th amendment to the United States Constitution was ratified on January 16th, 1919 and went into effect the follow year on January 16th, 1920. The amendment made the "…manufacture, sale, or transportation of intoxicating liquors within, the United States and all territory subject to the jurisdiction thereof for beverages purposes is hereby prohibited." The enforcement and interpretation of this amendment was created under the Volstead Act, as drafted by Andrew John Volstead a member the United States House of Representatives from Minnesota. The term Noble Experiment comes from Herbert Hoover who said prohibition was "a great social and economic experiment, noble in nature and far reaching in purpose" (quoted in Mason 1995, 148). For more on prohibition in general see Behr 1996; Coffey 1975; Englemann 1979; Hallowell 1972; Johnson 2002; Lerner 2007; Mason 1995; Okrent 2010; Timberlake 1963; Thornton 1991; Wald 1927; and Warburton 1932.

[9] Rum Row is rumored to be created by rumrunner Bill McCoy, when he set sail from Nassau just off the coast of New York (see Water 2007, Okrent 2010). McCoy was arrested in 1923 but had managed to bring in over 700,000 cases of liquor into the U.S. during his time as a rumrunner on Rum Row ("The Real McCoy" 1935).

[10] The downfall of Rum Row was due to increased enforcement efforts by the U.S. Government. In about 1927 the Coast Guard stepped up efforts to block the illicit trade (see, for example, Young 1925c, 1927; and Okrent 2010). These efforts by the Coast Guard started years before and took considerable sums and effort. As *Time Magazine* (Prohibition 1925) noted in 1925, "The cost of such an effort is variously estimated up to $250,000,000 initial outlay on additional ships, etc., besides heavy annual expenses of a personnel of perhaps 25,000 men at sea (the present Coast Guard force is about 7,000)." The end of Rum Row, however, did not stop the importation of liquor into the United States. Most came in from Detroit (see, for example, Young 1927; Hallowell 1972; Engelmann 1979; Gervais 1980; and Okrent 2010) and

around the problems created by the threat of predation. While this is far from ideal it does show that rumrunners were still able, in spite of the increased threat of predation due to the absence of formal enforcement, to benefit from the gains from trade.

This paper fits into several literatures. First it contributes to the economics of crime literature. The first to apply rational choice theory to crime was Becker (1968). Following him a number of works have analyzed the activities of criminal organizations, the optimal strategies for preventing organized crime, and reasons for its emergence (see, for example, Anderson 1979; Reuter 1983, 1987; Jennings 1984; Arlacchi 1986; Jankowski 1991; Dick 1995; Konrad and Skaperdas 1998; Garoupa 2000; Skaperdas 2001; Chang et al. 2005; and McCarthy 2011). Another strand analyzes the industrial organization of criminal organization and how private rules emerge in the absence of the state. Leeson (2007b, 2009a, 2009b) studied the private regulations of violence and theft developed by 18th century Caribbean pirates. Skarbek (2010, 2011) shows the rules developed to provide law and order by prison gangs. Leeson and Skarbek (2010) show that all criminal organizations govern conflict by some sort of constitutional rules. Finally, Reuter (1985) and Leeson and Rogers (2011) discuss the organizational structure of criminal enterprises.

Second, it applies the work in the industrial organization literature on vertical integration from a transaction cost approach (see, for example, Alchian and Demsetz 1972; Barzel 1982, 2002; Coase 1937, 1972; Grossman and Hart 1986; Hart 1995; Hart and Moore 1988, 1990; Joskow 2005, 2006; Klein, Crawford, and Alchian 1978; and Williamson 1971, 1975, 1979, 1983, 1985, 1996). This paper, in part, analyzes how the

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many syndicates moved the liquor through the actual ports with special political connections (see, for example, Gosch and Hammer 1974; Lacey 1991).

vertical integration helps solve a violent version of Klein, Crawford, and Alchian's (1978) hold up problem. And similarly, Leeson (2007a) shows how African traders get around a similar problem through the use of credit. Rumrunners provided an analogous mechanism of credit in addition to vertically integrating.

The paper is laid out as follows: Section 2 offers a comparative analysis of the supply chain under conditions of an unhampered market[11] with those of the prohibitive market. Section 3 presents the theories behind the two mechanisms used by rumrunners to avoid the problems of internal predation, namely vertical integration and the use of credit to eliminate money within the market. Section 4 presents historical evidence of the use of vertical integration and the use of credit along Rum Row during Prohibition. Section 5 concludes.

2 Legal and Prohibitive Supply Chains

Several problems exist for illicit markets that are not present in legal markets. The major differences tend to be that in illicit markets contracts are not enforceable in the courts of law; the assets of those operating in the market may be seized at anytime; participants risk arrest and imprisonment; and the use of credit is severely limited or does not exist. Even if we dispute the degree to which these are true it is clear that there is a real difference between the licit and illicit markets.

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[11] The "unhampered" market in this case is the Scotch whiskey industry today. There are a host of regulations within the market (see, for example, Shanker 1999) but could still be considered unhampered relative to the trade under prohibition.

For example, we can see real differences between the distribution of Scotch whiskey[12] today and the distribution of Scotch whiskey during Prohibition.[13] It will be useful to illustrate these differences between the legal market of today and the illicit market under Prohibition in order to better understand the situation rumrunners operated under. The Scotch whiskey industry today is, just as it was in the days under the 18th amendment, very lucrative.[14] And, again just as in the 1920s and early 1930s, Scotch whiskey continues to be a prized export for Scotland; in fact, it is the third highest export behind oil and gas (Lodge 2010). Naturally despite the similarity in profitability there are major differences in the structure of the supply chain.

2.1 Scotch Whiskey Today

First, I will describe the process in which Scotch whiskey[15] companies produce, ship, and distribute the whiskey to the final customer. Whiskey is different from other industries in the way in which costs are built up in the supply chain. Time is very important in the production and distribution of Scotch whiskey, and whiskey in general, from the time of

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[12] Whiskey is sometimes spelled whisky, but for consistency I will be using the former spelling. On the difference see Asimov (2008).

[13] Despite the name Rum Row, the majority of liquor smuggled in tended to be Scotch whiskey (see, for example, Okrent 2010), which is why the "Rum Fleet," or the boats that operated in Rum Row, were also referred to as the "Scotch Armada" (Enforcing 1925).

[14] Today Scotch whiskey brings in about 4 billion pounds a year into the Scottish national coffers (Lodge 2010). Many realized the possible high tax revenue alcohol could bring in even back before and during Prohibition. Some argued against Prohibition using the loss of revenue argument (See for example, Warburton 1932, 148-154) and many have made the case today that the 18th amendment was repealed in order to take advantage of tax revenue during the great depression (for example see Boudreaux 2007).

[15] Scotch whiskey is a distilled in Scotland. It can be made from either malt or grain, with the majority of Scotch being a blend of both. Some blends have a Carmel color added to them. Scotch, Irish, and Canadian whiskies are defined as distilled spirits from the distinct location they are produced in, even under US regulations. American whiskey, like Scotch whiskey, is typically produced from grain or malt, and is also often defined by the location it is produced. For the distinctive flavors in whiskies see Lee et al. (2001).

production all the way through the marketing and selling of the product. Whiskey, unlike most products, is not ready for sale when it leaves the factory doors. Most whiskey is matured for at least three years before it is ready for consumption.[16] This creates a delay between the moment of production and the time of sale. As Jakovljevic (2006) notes, "…distillers will have an inventory of maturing spirit worth several dozens of millions of a hard currency. The management bulk spirit stocks, from distillation, through the maturing process, to bottling, represents the biggest single challenge for whisky producers." About 80% of Scotch whiskey production is a combination of different malts of varying age, strength, and origin (Jakovljevic 2006) and as a result most Scotch whiskey is matured away from the distilleries it was first produced.

After the production process, Scotch producers, and/or wholesalers,[17] are faced with the costs of moving the product to the American market and, once there, the costs of pulling it through to consumers, i.e. advertising, promotion, and other marketing strategies (Russell 2003). The supply chain is broken up into two different channels based on the end usage of the whiskey; namely on premises consumption, i.e. bars, restaurants, hotels, etc. or off premises consumption, namely home consumption, i.e. supermarkets, liquor stores, online stores, etc. Which channel the specific whiskey brands choose to

[16] In fact, most countries, which contain whiskey producers, have laws regulating how long whiskey must be matured (Russell 2003). These regulations often go beyond the time required for maturation. American whiskey, known as bourbon, is required to be matured in new charred, white oak barrels. While other countries may require the use of small wooden barrels (Ralph 1995). This will often depend upon the country and type of whiskey.

[17] There are a number of factors that determine whether a firm will contract distribution out or to vertically integrate. See for example, Coase 1937; Williamson 1971, 1975; Klein, Crawford, and Alchian 1978; Barzel 1982, 2002. Vertical Integration as a mechanism for contracting will be discussed further below.

target more heavily will depend upon what type of brand they want to become (Russell 2003).[18]

Planning the channels of distribution will depend upon whether to use internal or external resources of the company. The brand owner may choose to either use their own sales forces or distribution division to conduct the selling of their product or rely on wholesalers. If the brand owner decides to use external resources then he typically will take great care to choose which intermediaries they deal with because doing so not only effects efficiency but is also important for defining the image of the brand (Russell 2003). Wholesalers can include a variety of companies. They range from general services to catering towards more specialized services.

In exporting to foreign markets finding the right local distributors is crucial. Russell (2003) even claims that finding the correct level and quality of distributors is a key to success. The distributor's task is to implement international positioning strategies for the brands that they distribute. In order to effectively do this they must have knowledge the local conditions. In today's whiskey industry, as Russell (2003, 330) put it, "marketers have to think global and act local."

Constant monitoring is another important element in dealing with intermediaries. Businesses are constantly figuring out ways to reduce this cost while not endangering their profits. As a result, businesses are constantly revising their strategies (Russell 2003). Conflicts, naturally, can still occur within the distribution channel. Once a problem occurs, managers' need to quickly and swiftly identify the problem and resolve the conflict in order to not disrupt business and cut into profits. Thus, the whole supply chain

[18] Marketing is an important input into how exactly the supply chain is formed. The channel strategy is informed by marketing strategy, otherwise resources will likely be wasted in the effort to effectively connect the consumer with the product (Russell 2003).

is managed such that managers can control any decision along each step in the distribution chain (Russell 2003).

The process of physically moving the whiskey from Scotland to America has probably changed little, with the exception of technological innovations. But there are major differences beyond simply legitimately moving the goods through customs. Marketing strategies, global positioning, and a tightly structured management chain are all important elements in today's whiskey industry. Companies take an active role in moving their product directly to foreign markets. While this occurred to some degree in the 1920s,[19] it was not occurring in the American market and the level of complexity is certainly higher. The Scotch companies also play a larger role in the selling of the liquor once the whiskey has reached American soil.[20]

The differences, of course, stem from the illicit nature of the market. Individuals cannot turn to the law in disputes and must operate in secret. Secrecy breeds corruption (Ostrom 1997) and thus makes it more difficult to interact with other individuals. It prohibits, or at least severely limits, the ability to advertise and makes resolving disputes much more difficult. Before turning to the structure of the supply chain on Rum Row it will be useful to discuss in greater detail the changes to the market when it goes from legal to illegal.

2.2 From Licit to Illicit in Theory

[19] See Buxton 2010 for a history of the Dewar's Company and the role of international marketing played through the company's history.

[20] And whiskey producers realize the importance of the ability to market their product. As Tommy Dewar (2001), the famed whiskey producer known for his wit, put it, "If a man upon his trade relies he must either bust or advertise."

Theories about the structure of illicit markets often follow the Kefeaver Committee's (U.S. Senate 1951) findings that illicit markets are based on violent monopoly control and corruption.[21] And the claims made by many of the official agencies echo the same sentiments on organized crime.[22] Empirical work by Reuter and Rubinstein (1982), however, points to evidence that illicit markets maybe characterized more by a large number of small enterprises much closer to competition than collusion.[23] This discrepancy is certainly nothing new. Thus, it will be beneficial to quickly summarize some of the economic forces at work in illicit markets in theory before examining Rum Row's distribution process. To do this I will summarize the work of Reuter (1985).[24] His analysis indicates that, despite the common understanding, illicit markets are more likely to be characterized by many small firms not large violent monopolies. Economic forces tend to produce small ephemeral enterprises in illegal markets. The use of violence, despite attempts by certain organizations, is not likely to change this structure. When monopolization of the market does occur it is more than likely a result of government corruption aiding the process (Reuter 1985).

The typical analytical focus in industrial organization focused on costs curves, i.e. the relationship between the number of units produced and the cost of producing those units.[25] Recently new institutional economists, particularly Williamson (1975), have begun to question whether other costs might affect the shape of cost curves. The center

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[21] Some historical black markets certainly do seem to follow such a conclusion. The Kefeaver Committee's results found this to be the case in bookmaking markets in Miami (U.S. Senate 1951). These results, however, are most likely a result of political circumstances (Reuter 1985, x).
[22] For example, as the President's Commission on Law Enforcement and the Administration of Justice stated, "In large cities where organized criminal groups exist, very few of the gambling operators are independent of a large organization" (Presidents Commission 1967, 2).
[23] Their study investigated illegal markets in numbers, loan sharking, and bookmaking in New York during the 1970s. They found little to no evidence that prices were fixed or entry was restricted.
[24] See also Reuter (1983, 1987) and Reuter and Rubinstein (1982).
[25] Scherer (1980) provides surveys the field of industrial organization.

issue that determines the size and scope of the firm, according to Williamson (1975), is the choice between particular transactions within the firm or to contract out into the market. This choice is often dependent on the ease of monitoring performance and the flow of information.

In illicit markets this is very important. Monitoring costs are typically very high and the flow of information is negligible. Human factors can also increase costs, particularly the need to compensate those involved in the distribution of the good, from production all the way to the final consumer.[26] In other words, the dangers from authorities and death often raise the costs significantly and thus affect the shape of the cost curves and the nature and scope of the illicit firms.

In illicit markets, just as in normal legal markets, the characteristics of a firm are determined by an array of factors from technological to institutional and even to human. The interaction of these will determine whether the market is populated with many small firms or few larger firms.

According to Reuter (1985), in going from legal to illegal three main factors come into play that will help shape the organization of illicit markets. First contracts are not enforceable in official state courts.[27] Second authorities, or even thieves,[28] may seize the assets of the illegal operation. The most immediate consequence of an illegal product stems from this factor because the need to control information is crucial. Meaning, each participant must structure his activities, particularly those that involve other participants,

[26] These costs can be considerably high. For example, the mark up on the final sale of heroin in the early 1980s reached about one hundred times (see National Narcotics 1981, 30).
[27] Enterprises may be able to find ways around this problem and still enforce contracts even in the absence of the state. See, for example, Stringham 2003 and Leeson 2007a.
[28] Reuter (1985) does not mention theft as a possible source of seizure but given that agents participating within the market cannot turn to courts for disputes the risk of theft is increased. This was particularly true during Rum Row, as we shall see below. Thus, the risk of asset seizure should include more than simply the authorities.

in a way that keeps the risk of police learning of his participation low.[29] This will influence with whom and how many participants the different enterprises will be willing to transact with. And finally, participants run the risk of arrest and imprisonment, physical harm, and possibly even death.[30]

Thus, these costs may entice firms to limit their activities, keeping their size small. And due to the risks of arrest and imprisonment, physical harm, and death, firms tend to be short lived, making their growth difficult. It is also important to note that markets are not just defined by their final product. In shipping scotch, for example, a number of markets exists. The Scotch producers' selling to wholesalers constitutes one market and then retailers selling to final consumers would constitute another market.[31] Given the black market prices, which offer closer to monopoly prices relative to licit market conditions (in order to compensate for risk), this encourages more individuals to enter the market. Thus, we should expect to see a wide variety of activities performed by each enterprise entering the market.

Reuter's (1985) framework does not necessarily apply to every illicit market. As mentioned above, fewer larger firms performing a wider variety of activities may indeed exist in some illicit markets but many of the economic forces create situations that cut

[29] And this was certainly true in rum running. Making sure those you worked with and interacted with were loyal was very important. And it was important to never keep things in writing so it can't be traced back. As Meyer Lansky put it, "Trust your memory. Keep your business in your hat" (Lacey 1991, 66). Rumrunner Bill McCoy was eventually arrest in 1923 because he wrote instructions down to one of his employees that was later captured with the instructions. As McCoy put it, "I knew that commandment number two of the successful rum-runner should be "Never put anything in writing," and yet I broke it. I created permanent first-class evidence against myself in my own handwriting" (Water 2007, 28).

[30] In rum running, the risks of harm and death tended to be greater. Many of the rumrunners who were caught by authorities faced only minor penalties, especially relative to the money they pulled in. For example, gangster Mayer Lansky only had one major conviction in his life and it was for his rum running activities, As his autobiographer put it, "Meyer's only serious conviction came in his seventh and final appearance—a $100 fine for violation of the Volstead Act in November 1931, two years before prohibition ended" (Lacey 1991, 71).

[31] The typical definition of a market in industrial organization is laid out in Scherer (1980, 59-61).

against the popular perception of illicit market organization. Rum Row actually presents an interesting case when compared to Reuter's (1985) framework. In its early days, from 1920 to about late 1923/early 1924 Rum Row seems to fit Reuter's theory perfectly. By 1924, however, the structure of the market began to change. How and why this happened will be explained below. For now, lets turn to what the supply chain looked like in the early days of Rum Row.

2.3 Supply Chain in the Early Days of Rum Row

Foreign produced liquor of all sorts found its way into the country from all sides of the United States: through the Canadian/U.S. border,[32] the Mexican/U.S. border, along the Gulf Coast, the Pacific Coast, and of course along the Atlantic Coast (Robinson and Robinson 1983; Okrent 2010). The northeast section of the Atlantic Coast was home to Rum Row; from about the Jersey Shore up through Long Island, or basically it was a line

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[32] This was the major point of entry for Foreign produced liquor. As Young (1927) noted, "The Canadian border has been the sector in which activity is greatest." Seventy-five percent of all the liquor imported into the U.S. during Prohibition came from Canada across the Detroit River (Mason 1995, 39). There are several reasons for this. First, the Detroit River was very thin, less than a mile wide at points. As Roy A. Haynes, the National Prohibition director, described the Detroit River, "The Lord probably could have built a river better suited for rum-smuggling, but the Lord probably never did" (quoted in Mason 1995, 39). Second, Canadian law practically invited U.S. citizens to engage in the trade. Canada, like the U.S., was dry but around the time the 18th amendment and Volstead Act went into effect, Canada allowed the production and exportation of spirits in Ontario (Engelmann 1979; Mason 1995). Soon Americans hoped in their boats crossed the river purchased Canadian whiskey in bulk with a stated destination usually of Cuba, only to turn right back around to Detroit, where the whiskey would then be transported anywhere in the country for consumption. And many individuals got involved. Thousands were reportedly arrested for violation of the Volstead Act but this was probably only a very small portion involved in the trade (Mason 1995). It should also be noted that much of the liquor was cut and diluted once it reached American shores by syndicates and gangs such as the notorious Purple Gang (Kavieff 2000, 2001). For more on Prohibition in Detroit see Mayo 1929; Hallowell 1972; Engelmann 1979; Gervais 1980; Hunt 1995, 2000; and Mason 1995.

of boats running about 200 miles from southwest to northeast, about 30 miles[33] offshore from Atlantic City,[34] New Jersey to New London, Connecticut (Prohibition 1925).[35] Boats basically would lay anchored off the coast acting as floating liquor stores (Young 1924a, 1924b; Carse 1959; Water 2007; Okrent 2010).[36] As Okrent (2010, 166-167) described it,

> In daylight an innocent beachgoer might have perceived it differently: the long line of hulking ships and the smaller boats flitting among them looked like a fleet preparing to launch an invasion. The less innocent (which is to say virtually anyone who lived within a day's drive of the coast) knew better. This wasn't an invasion, but a sort of inverse blockade, an unsiege: the boats were there not to deny Americans something they needed but to provide them with something they wanted.

This, however, is only the middle of the supply chain. What is unique from the standpoint of an illicit market about Rum Row is that the supply was open and legal. What made it illicit was the liquors distribution into the United States. Meaning the supply was legally produced in foreign countries then sold to individuals who then smuggled the liquor

[33] Initially international waters where defined as one league, or three miles, off shore. In the mid-twenties the U.S. unilaterally declared a twelve-mile limit, or four leagues, in order to make it more difficult to smuggle liquor into the country (Young 1925c; Okrent 2010). This pushed the Rum ships further off shore sometimes as much as 50 miles (Young 1925c; Carse 1959; Okrent 2010). Of course this also made the territory the Coast Guard needed to cover much larger. As the Tariff Act of 1922 (United States 1922) noted:

> Sec. 581. Boarding Vessels.—Officers of the customs or of the Coast Guard, and agents or other persons authorized by the Secretary of the Treasury, or appointed for that purpose in writing by a collector may at any time go on board of any vessel or vehicle at any place in the United States within four leagues of the coast of the United States, without as well as within their respective districts, to examine the manifest and to inspect, search, and examine the vessel or vehicle, and every part thereof.

For more on the Tariff Act of 1922, see Berglund (1923).

[34] For more on the illegal market for liquor and the political corruption associated see Johnson 2002. The HBO television show "Boardwalk Empire" is based on this work.

[35] Though some sources differ on the exact size and location of what constituted Rum Row. The heaviest areas typically were off the coast of Atlantic City, Delaware Bay, Cape May, and the far ends of Long Island (Young 1924b).

[36] One officer (quoted in Okrent 2010, 163) on a rum schooner described Rum Row as, "It was like going to a supermarket…We had a good reputation and lots of customers. They would carry your mail ashore and bring you anything you wanted."

illegally into the U.S.[37] So, just how did the Americans obtain the foreign produced Scotch whiskey?

The early days of Rum Row were characterized by a sense of openness towards entering the trade. Any man, or woman,[38] daring enough to attempt to make a ton of money very quickly was welcome to try. As rumrunner Bill McCoy (quoted in Okrent 2010, 165) noted, all anyone needed to be a rumrunner was to obtain, "anything with a bottom that could float and a hold that could be filled with booze." According to McCoy, there was a lot of learning by doing as Rum Row evolved (Water 2007).

By 1924, however, the Row had emerged as defined by three distinct phases (Young 1924b). The first is the ordering from Europe, again usually Scotch whiskey from Scotland, and then shipping to the Caribbean.[39] The Caribbean acted as a sort of warehousing, distribution, sorting, and repackaging center.[40]

[37] Many of those who participated in the market broke no laws and cared little for where the liquor went once it was sold to their customers. As Rumrunner McCoy noted about a colleague who sold him much of his liquor, "All Murphy's transactions, however, were entirely within the law. He bought and shipped liquor to Nassau legitimately. He sold it to purchasers equally legally. Where it went thereafter was none of his business" (Water 2007. 28). And as a reporter for *the Times* noted, "The traffic is absolutely legitimate in the sense that there is no law forbidding commercial dealings in liquor or anything else on the high seas" (Brooks 1923). See also, for example, Barbican 1928[2007]; Lythgoe 1962 [2007]; Moray 1929 [2007]; Water 2007; Wigley 1923; and Young 1924a, 1924b.

[38] While most rumrunners tended to be males between the ages of 20 and 50 (Young 1924b) there was a wide range of those attempting the trade. In Detroit reports of whole families, including young children, engaged in smuggling could be found (Engelmann 1979). And women also occasionally entered the trade. They were often given the title of queen of the rumrunners for their efforts (see for example, Stevens 1923 and Lythgoe 1964 [2007]).

[39] Usually Nassau in the Bahamas but many points within the Atlantic where also shipped to such as Bimini, Bermuda, and Cuba (see for example, Young 1924a, 1924b; Barbican 1928 [2007]; Moray 1929 [2007]; Carse 1959; Lythgoe 1964 [2007]; Ling 2007; Water 2007; and Okrent 2010) and even up North near St. Pierre and Halifax (see for example Robinson and Robinson 1983 and Okrent 2010). For more on the economic history of the Bahamas see Storr (2004).

[40] The liquor was often repackaged in order to make it easier for the liquor to be smuggled ashore by the rumrunners (Lythgoe 1964 [2007]). All of these functions also were a great increase to the economies of the islands used, particularly for the African populations who were often paid to do hauling and repackaging required (see Lythgoe 1964 [2007]).

The second stage is the transportation of liquor up from the Caribbean[41] to Rum Row. This was done in what became known as the 'Mother Ships,' which made up the 'Rum Fleet' or 'Scotch Armada' that waited off shore as floating liquor stores.[42] These boats were typically 75-feet schooners.[43] A schooner of this size would usually carry about 5,000 cases (12 bottles) of liquor in her cargo, which at the time would have been worth about a quarter of a million dollars (Prohibition 1925). Some of the bigger ships were freighters that held up to 50,000 cases of liquor each run up to Rum Row (Prohibition 1925). The ships were often registered under the English, or another foreign flag.[44] The schooners would load up with booze and set sail with papers to export to some destination they would never reach.[45] The ships would then sit along Rum Row until their

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[41] Or in some cases down from Canada (Robinson and Robinson 1983 and Okrent 2010).

[42] The rum fleet usually had many boats in any given area. As Young (1924a) described one visit to Rum Row, "Now we turn interested eyes toward the rum fleet. There are but six ships off the point. Usually they vary from twelve to fifteen, depending upon the activity of the cutters and the general trend of trade. We passed three in the night near fire island and there are seventeen anchored off highlands, some thirty vessels in all on the average, carrying cargoes worth $10,000,000." *Time Magazine* reported in 1925 that ninety vessels were found participating in the trade (Prohibition 1925). According to Young (1925c) no less than three hundred and thirty two vessels plied the rum trade in 1924, making some $40,000,000 according to figures gathered by the Department of Commerce.

[43] A Schooner is a type of sailing vessel characterized by the use of fore-and-aft sails on at least two masts with the forward mast either the same height or shorter than the rear mast. See Collins (1985) for more on the history and evolution on the fishing schooner.

[44] Ships registered under foreign flags could not be owned by Americans and so many set up fronts to register their boats under foreign flags. As Brooks (1923) notes, "As everyone knows, a considerable, lucrative, and exciting industry has sprung up, with the Bahamas as its base, for the purpose of smuggling liquor into the United States. This industry is carried on predominantly by British ships, from British ports, flying the British flag, and acting in conjunction with confederates on the American mainland." And as *The Times* (U.S. War 1922) noted in 1922,

> Some of it is carried in "rum runners," which lie twelve or fifteen miles off shore along the Atlantic coast and peddle to adventurous American small craft, most of which successfully evade the prohibition blockade; some, perhaps most of it, goes to British possessions on this side and is then transshipped from Nassau or Bimini or the Bermudas or Canada to the United States, often in American bottoms…and in these and other ways such a volume of illicit import is attained as has reduced the American revenue officials to despair.

Also see for example; Barbican 1928 [2007]; Moray 1929 [2007]; Lythgoe 1964 [2007]; and Water 2007.

[45] As McCoy described it, "From then on, my schooner cleared for Halifax and never got there. On her return I made affidavit that she had sold her cargo at sea and had touched at no port. That satisfied the Nassau customs men and became the usual procedure for all rum-runners" (Water 2007, 12). Halifax was a popular port for listed destination for rumrunners coming from the Caribbean but Halifax itself had a its own share of rumrunners cleared to leave their port.

cargo was completely sold and then turn around and reload. The costs of running these ships were to pay the crew and provide provision for duration of the trip. Employees upon the ship were often paid well,[46] and they were well provision for usually up to a months stay (Prohibition 1925).[47]

The final stage is actually running the liquor from Rum Row onto American soil. 'Shore runners,' or specialists in bringing the liquor to shore in speedboats, would wait in any of the many liquor ports waiting for customers to hire them to make a run out to Rum Row. As Young (1924b) noted, "Hundreds of such men are waiting to be hired in any of the liquor ports. Curiously enough, they do not ordinarily run contraband for their own account. They are specialists and stick to the trade of matching wits against the law." The shore runner usually received ten dollars a case for "the perils of hardship, pursuit and death—$2,000 a night for 200 cases" (Young 1924b). The shore runner's speedboats were characteristically "thirty feet long and 'all engine,' plus enough room aft. for 200 cases of the best Scotland produces" (Young 1924b).[48] The boats needed to be fast in order to out run the Coast Guard[49] and this was an expensive process, the typical

[46] As Bill McCoy (quoted in Water 2007, 27) noted, "I paid my captains $1,000 per month on voyages they made alone, $500 per month with the privilege of putting $500 more "under the stern"—putting $500 worth of their own liquor aboard—if I accompanied them. My mates got $500 normally, $250 if I were aboard, and $250 additional under the stern. The cook received $150 and could carry $150 worth of his own liquor for sale. Seamen got $100 a month and a bonus of $100 at the end of each trip."

[47] Usually the liquor sold very quickly but this often depended on the level of Coast Guard patrolling. Near the end of Rum Row, about 1926/1927, Rum ships started running very low on supplies due to Coast Guard vigilance, even crew men causing tales of kidnappings and forced labor aboard the Rum Ships, while certainly possible there is not much evidence (see Young 1925b).

[48] Earlier Young (1924a) described the typical shore runner's vessel: "His craft is 40 feet long, of 500-case capacity, remodeled especially for the trade. The former cabin has been entirely covered over; a hatch up forward provides ready means for quick loading and unloading. She is a big, heavy motor cruiser capable of fighting almost any sea. A coat of battleship paint has made her a dull gray. She looks formidable and sinister."

[49] When Young (1924b) asked a rumrunner, named Eddie, why the government doesn't just build faster boats,

> Eddie tosses his head and explains that the Government doesn't know how. Besides, the yards that build the rum boats would not accept Government orders. Some of the

speedboat cost about $3,000 dollars (Young 1924b). This, however, was not a problem because the boat could be paid off in just two trips out to Rum Row (Young 1924b). Once the shore runners reach the shore, assuming they have successfully evaded the Coast Guard, a large number of men usually wait on the beach to unload the cargo and speed it away to its final retail destination.[50] As Young (1924b) was described the process by a member of the Coast Guard who actually saw the process occur many times,

> "He tells us a story of how rum is unloaded and immediately we feel warmer. It seems that speed boats are run up on the beach until their keels dig in the sand. Then a half dozen waiting men plunge in their hips and transport the precious cargo ashore. All this at midnight in a freezing sea."

And these are the three states of how the whiskey is transferred from producer to retailer or consumer.

If the buyer is big enough and wishes to engage in a broad scale he will find the offices of an established liquor syndicate and place his order. In many cases the bigger enterprises will have stocks of liquor sitting off already on Rum Row, if not then the syndicate places an order and in two or three weeks the buyer is informed and then the buyer must engage a shore runner to retrieve his liquor (Young 1924b). Most individuals,

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> craftsmen in America have gone into rum-boat building, he says. It would not be ethical for them to build Government boats too.

The Coast Guard realized this and instead captured and used rumrunner boats to aid their attempts to capture other rumrunners (Willoughbly 1964 [2007] and Waters 2007). As Young (1924a), while on a trip to Rum Row with the Coast Guard noted,

> Coast Guard cutters are not equipped with fast motor craft suitable for such enterprises. But the master of the Seminole hit upon the idea of using captured boats to hunt suspected craft. These boats have special virtue of lacking all service marks and sometimes can get close to rum-runners without giving alarm. If the reader ever experiences the temptation to do a stroke of rum-running, let him beware all boats that move.

This, however, did not seem to phase many of the rumrunners, as Young (1924b) heard from Eddie, "In addition, he insists, their crews do not understand how to handle them. What would clerks enlisted in the Coast Guard know about boats? One boat was burned off Sandy Hook when some land-lubber let her motor backfire."

[50] In some, even many, cases it would make a detour to warehouses where it will be cut and diluted first (Gosh 1979; Engelman 1979; Lacey 1991; and Okrent 2010). By cutting and diluting the whiskey one bottle can be turned into three (Engelman 1979) but this comes at the cost of quality and was reflected in the reputation of the seller, even in the secrecy of the black market (Gosh 1979 and Lacey 1991).

however, whether a retailer or a final consumer, lack the necessary capital to purchase in this manner. "Instead, he buys 200 cases and engages a shore runner to bring it in" (Young 1924b). And finding a shore runner was surprisingly easy. As Young (1924b) put it,

> "Let us suppose that a 200-case customer appears in some liquor port and makes his business known. He may represent a club or a restaurant, or he may merely look forward to an expensive Christmas. In any event, he is likely to receive a hint as to where a syndicate agent can be found. Usually these agents are secreted about as carefully as a barber pole on Main Street. He finds an agent, and business begins."

The trade is a very prosperous one when it works.[51] *Time Magazine* (Prohibition 1925) reported that in 1925, "Hiterto prices have run about as follows: A case at Rum Row $25, on the beach, $40; to the retail bootlegger, $50; to the consumer, $70-or $6 a bottle."[52]

These early days of Rum Row made many men, and even some women, millions of dollars practically overnight. As rumrunner, Bill McCoy (Water 2007, 3) put it, "I was a pioneer in the old go-as-you-please, every-man-for-himself rum running racket. I quit when adventure went out of the game and Big Business came in."

Compared with the whiskey industry today we can see a few major differences and even some major similarities. The involvement, at least out in the open, of the whiskey producers is very minimal. They simply sold the product to Americans, or others, who then found ways to get the whiskey into the country. And as for the structure of the market, we do see, as Reuter (1985) would predict, many small ephemeral firms,

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[51] As Young (1924b) put it, "It takes little reckoning to see that is a prosperous trade. Scarcely a hand around us lacks a diamond ring of a thousand facets, the kind that costs a boatload of Scotland's famous product. And these men have the look of success. And it is small wonder that they are called bootleggers: for every trade has its vanities, and that of the bootlegger is his boots, properly enough. It is the special mark of his company to dress in a swagger pair reaching well above his knees."

[52] Though pressure from the Coast Guard often increased the prices from $6 to $7 or $8 a bottle (Prohibition 1925).

rather than the larger, though not monopolistic firms, of the modern whiskey industry.[53] This, however, was not how Rum Row settled. Violence and the potential, and actualization, of predation caused the structure of Rum Row to change. Before dealing with the mechanisms for how rumrunners dealt with this issue I will examine the nature of predation that occurred on Rum Row.

2.4 The Trouble with the 'Go-Through Guys'

Rum running was a very profitable endeavor and as a result stealing from rumrunners was very profitable. Those participating in the market could not turn to the state to deal with issues of predation,[54] so naturally, given the black market profits, predation became a big issue.[55] Hijackers known as the 'go-through guys,' named as such because "they

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[53] The trends in the alcohol industry today have been gearing towards internationalization of brands and the consolidation of several multinational producers. See International Center (2006).

[54] As Young (1924a) put it, "To the casual observer it would seem that the rum ships offered a rich prize to any hardy spirit. All of the ships have considerable sums aboard. They carry average crews and doubtless plenty of weapons, but the hi-jacker who could overpower a crew and escape a rich treasure, indeed. According to reports, that very thing happened not long ago, with a loss of $100,000 to a ship which had been off shore for some time. Whether the report is true never will be known. Rum Row and environs are rich in reports of all shades and descriptions."

[55] The issue of predation was an issue within many black markets during prohibition. Smuggling in Detroit had large issues with hijackings. The purple gang, a group of Jewish gangsters were more known for their hijacking antics than for their black market exchanges (see Kavieff 2000, 2001). Engelmann (1979, 93) notes there were many hijackers, who were basically pirates, preying off of "legitimate" rumrunners all along the Detroit River,

> Even greater dangers were presented by pirates. For if large profits were to be made by "honest" rum running, even greater profits could be made by anyone unscrupulous enough to rob rumrunners. As early as 1921 pirates were reportedly roaming the river like the English sea dogs of the sixteenth century who sailed the Spanish Main in search of plunder. Because of these individuals, pariahs even of the society of rumrunners, crossing the river at night became even more dangerous than might be expected. Rumrunners therefore not only watched for police boats but also for the boats of masked pirates who pulled alongside and transferred a cargo at gunpoint.

Bootlegging in Chicago also produced a variety of predation as the big the syndicates fought each other as well as any little guy who tried to enter the market. As *The New York Times* (Stone 1926) put it, "The little fellows don't count much. They are the bootleggers of bootleggery, the "gyps" of this new industry. Now and then one of the "pirates" is bumped off, but most of the fighting is among the "big five."

were willing to go through, straight through any opposition for cash and kill to get it" (Carse 91), starting to emerge to fill this demand. Armed simply with their desire to steal the money shore runners or the mother ships had on board and big machine guns the 'go-through guys' made easy targets of many participating in the activities of Rum Row (Carse 1959; Okrent 2010).[56]

Reporters interested in the curious activities of Rum Row began to notice the problem of predation rumrunners were started to have to deal with. As Young (1924a) described his first impression of the hijacking problem,

> The Coast Guard, the bootleggers and shore agents of the law agree that hi-jackers ply their trade along the New Jersey and Long Island coasts. But so far as the records go none has been caught. The hi-jacker has a near relation in crime, the rum pirate, who is more numerous and almost as dangerous. His special booty is rum instead of money and several of his species have been captured. But it is likely that neither hi-jackers nor rum pirates are numerous. Even one of either sort would multiply into an army, seen through the magnifying glasses of fear and rumor.

But by about a year later, however, Young (1925c) was changing his tune,

> Then came the hi-jacker. He seized the opportunity to prey upon shore runners. For a time it seemed that the rum ships and patrons would be exterminated by the hi-jackers, who pounced upon them without warning, seizing liquor or money, often leaving death in their wake. Not since the old days in the West has there been such lawlessness as that of Rum Row. Lying outside the jurisdiction of any nation and without in any sense being pirates, the enemies of all nations, the rum ships were floating depositories of treasure—liquid and gold.

The threat of predation was always present but few initially viewed it as a large problem, they thought the trade could go on. It turned out, however, things could not go

[56] The go-through guys could be either members of some shore side gang or simply independent operators. They preferred to steal from the shore runners. As Carse (1959, 91) put it,

> "When attacked by the go-through guys, the contact boats [shore runners] usually held crews of two, or no more than three, men. Their assailants numbered as many as six. The scene was repeatedly the same; the black-hulled boat with the pluming wake that connoted enormous engine speed. Then the inward sweep and the dark, crouched figures in the last of the sunlight. The Thompson gun was shown, the gunner spraddled in the cockpit, his legs braced by a pair of his companions so that his aim would be precise."

on as they were. Rumrunners themselves noticed this problem. As McCoy (Water 2007, 3) once said, "I've been thrilled and chilled. I've been double-crossed and robbed and shot at and jailed" but this was simply part of the game or adventure,[57] the hijackers introduced something else that was not what McCoy wanted, as he (Water 2007, 22) put it, "The game was growing more strenuous. Individual gunmen and mobs as well were learning that rum-runners were the safest and most profitable people to rob." Many of the robberies were even occurring with inside jobs. Fake deals would be offered only to have one party steal from the other.[58]

This was a serious problem for the smuggling market. Rumrunners, however, found ways around it. New methods of business were transacted and the market remained profitable for many as a result. Let us now turn to what I argue are the two main mechanisms used by the rumrunners in order to minimize the threat of predation: namely the enterprises acting along Rum Row vertically integrated to better enforce contracts and avoid the problems of anonymity and through the use of a credit system that allowed them to remove money from the transactions physically out on Rum Row.

3 Mechanisms: Vertical Integration and Credit

[57] McCoy (Water 2007, 20) seemed to view the trade as something exciting but also very serious, as he stated, "From the time my schooner returned to Nassau after her second trip the game grew more strenuous. Trouble doubled and re-doubled. You could say at least one thing for the rum running racket; it never was monotonous. Something was always happening and, usually, it was what you least expected. In time I grew to dread the periods when everything looked rosiest. Experience taught me that I was then something was overdue to blow up right in my face."

[58] One such case was reported by *The Washington Post* (9,000 1924) in 1924, "It is said today that several persons offered to buy the liquor here and then stage a fake robbery at the warehouse. Those offers, and all others of a suspicious nature, were declined. (9,000 1924)

Black markets can often come with an internal threat of predation and, because of the need for secrecy and lack of formal authority, can often not enforce efforts against this predation. In other words, the ability to contract between individuals acting within the market is extremely difficult and the ability to protect ones assets from stronger individuals is very difficult as well.

In some black markets large amounts of capital, often in the form of cash, is necessary to conduct business.[59] Carrying large amounts of money while going off to make the purchases makes participants vulnerable to the predation mentioned above. In other words, pirating from those participating in the trade becomes very profitable with less risk from imprisonment from formal authorities.

These are serious problems that could cause the market to breakdown. Individuals would not be able to benefit from the gains from trade. Fortunately, for the participants of the market, and for the final consumers,[60] mechanisms that economists are familiar with in theory have existed and have been implemented, which help individuals to work around such problems.

In markets, even legitimate ones, where the costs of contracting is prohibitively high, whether through opportunistic behavior or not,[61] firms have used vertical integration as an alternative to contracting. And groups, when facing individuals or other

[59] This was certainly the case on Rum Row. Large amounts of liquor was produced from Rum Row, smaller purchases were done in the more retail markets such as the drinking establishments, i.e. speakeasies and blind pigs, and for home establishments, from establishments like pharmacies, doctors offices, and "soda" shops (see Engelmann 1979; Behr 1996; and Okrent 2010).

[60] This, of course, could be seen as a negative depending on your final end. If the goal is for Prohibition to work then the use of such mechanisms that help participants realize the gains from trade in the market is a negative. This was realized even back during Prohibition. As Young (1924a) noted, "The Coast Guard and hi-jackers have worked together for one common end, but from different motives."

[61] As we will see below, vertical integration can be an alternative to contracts, when contracts are prohibitively costly. A variety of reasons exist for why contracts may be too costly, such as incomplete contracts and opportunistic behavior. Though it should be noted that the type of opportunistic behavior mentioned in most models is not the violent opportunistic behavior that can occur within black markets.

groups, who are stronger and willing to steal, have found the use of credit as a means of creating exchange rather than predation. Below I will discuss how these mechanism help solve the problems predation causes.

3.1 Going to be Opportunistic? Fine We'll Integrate

Vertical integration is defined to occur when a single firm spans two or more stages of production (McFetridge 1994).[62] Firms will vertically integrate in order to economize "on transactions by harmonizing interests and permitting a wider variety of sensitive incentive and control processes to be activated" (Williamson 1975, 104). This type of thinking in economics follows Coase's (1937, 1972) distinction of firms and markets as substitutes for governance mechanisms. Thus, in the absence of the ability to contract within the market for certain production or distribution stages vertical integration acts as an alternative to effectively align incentives and thus allow the production and/or distribution process to run efficiently.

Organizational economic based theories following the transaction costs (see for example Williamson 1971; 1975, 1983, 1985) and property rights based (see for example Grossman and Hart 1986; Hart 1995; and Hart and Moore 1990) economic theories of vertical integration "start with the recognition that firms seeking to consummate transactions must confront a variety of potential transaction costs, contractual, and

[62] In the case of Rum Row, we are concerned with the distribution of the good from producers to the consumers, so the vertical integration that is occurring is not in the production stages but in the distribution stages.

organizational hazards, which related to the attributes of the transactions at issue" (Joskow 2006).

In other words, there are costs associated with writing, monitoring, and enforcing contracts that may create poor *ex ante* investment incentives and *ex post* performance inefficiencies within a firm. Further contracts may be open to opportunistic behavior. One such example could be the bargaining over of the appropriable ex post *quasi rents* (meaning the difference between asset values of the intended use and the next best use if the relationship is terminated) could cause certain parties to not hold to the contract (see Klein, Crawford, and Alchian 1978; Williamson 1979, 1996; Hart and Moore 1988). Thus, contracting the stages of production out to the market may not be feasible or at least is prohibitively costly.

Basically, the problem is that sometimes, when transactions are mediated through market-based contracts, buyers (the firm contracting out) and sellers (those providing the goods or services to the firm) may have conflicting interests. Vertical integration has a potential advantage because, as Joskow (2006) puts it, "the internal organizational allocation mechanisms are likely to better harmonize these conflicting interests and provide for a smoother and less costly adaptation process under these circumstances, facilitating more efficient *ex ante* investment in the relationship *and* more efficient adaptation to changing supply and demand conditions over time."[63] Thus, the decision of whether to vertically integrate or to contract out will depend on the trade offs firms face for the different transaction costs associated with each.[64]

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[63] According to Williamson (1985, 87) the decision to integrate are rarely due to technological reasons.
[64] Other costs may exist as well. Barzel (1982) and North (1978) argue that measurement costs can also be a contributing factor in the decision to vertically integrate. Barzel (1982) argues that when attributes are

This research on vertical integration typically operates on the problems of incomplete contracts, which provide opportunistic opportunities that create bad investment incentives and inefficient performances. While this problem certainly can exist under black markets there is still another problem facing the use of contracts: their enforcement. There is no authority or courts of law that can be turned to and other third party enforcement is difficult because of the necessary secrecy black markets require to avoid detection from authorities. Thus, the opportunistic behavior may be different than attempting to grab quasi rents, such as through the use of violence and theft.

Still, the similarities in the benefits of vertical integration remain. Barzel (2002) argues that vertical integration may be a means of enforcing contracts even without the state. Transactions within a market can take many different forms, from simple caveat emptor transactions[65] to complex contractual long-term relations. Enforcement of these transactions can take two basic forms: (1) either through the use of third party enforcement, usually through the courts of the state but can also come from arbitration and other forms, or through the use of (2) self-enforcement mechanisms, which vertical integration would be an example. The latter is usually turned to when legal enforcement is prohibitively costly or ineffective.

Barzel (1982, 2002) offers four different alternative organizational arrangements to the use of contracts that help to avoid opportunistic behavior within the market. The first is to simply use only caveat emptor transactions. Again, this means to sell goods or services without any actual conditions that guarantee the product or service is as

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objectively measurable then the use of contracts is efficient. The more difficult these attributes are to measure the more viable the use of long-term interactions and vertical integration become.

[65] Literally this translates to "Let the buyer beware." In this context it refers to exchanges that are face to face and from deal to deal with no guarantee of quality or safeguard (Barzel 2002).

advertised. This has several problems. First it can only sometimes prevent against fraud and theft. In many cases the product being sold maybe in bulk and inspecting each product is too costly, thus fraud maybe very easy. This would be the case on Rum Row. Scotch is bought at a minimum of twenty-five cases[66] and so going through each is not possible because often the sales much be done quickly. Boats that take too long to load and be on their way are more likely to be noticed by the Coast Guard and thus face a higher risk of capture. Another problem is that caveat emptor is useless if the other guy is stronger than you. If you can be overpowered then the theft can still occur.

The second alternative form of organization is the use of a third party enforcer. Contracts can be made and then are enforced through a third party. If one reneges on the contract, or acts opportunistically at all, then they are punished by a third party. This aligns incentives and eliminates the flaws in contracting. This, however, is also easier said than done. The major problem is that in black markets there is a premium on secrecy. As we shall see below, those acting within the market want to deal with a few individuals as possible in order to limit the ability of authorities to trace them back to the market. And involving a third party adds another link to the chain.

The third is the use of long-term relationships, where the same two parties have repeated interaction. The promise of future interactions creates an incentive to not behave opportunistically because if one does then the other will terminate the relationship. This use of reputation is very important within black markets and definitely comes into play at least to some degree. Repeated business certainly disciplines individuals and its breakdown is certainly not desirable. The problem here is the ephemeral nature of black market enterprises (Reuter 1985). And as basic game theory informs us repeated play

[66] See Young (1924b).

only holds when the end is not known. Similarly, criminals often have a higher time preference[67] than most individuals and thus are more likely to act on the present gains to be made from stealing right now, even at the cost of future gains. Many who operate in the black market may simply be out for a quick fortune and thus willing to use methods not geared towards the long run. It is true that for many the promise of repeated interactions acts as an incentive to avoid opportunistic behavior but may not be enough to prevent others from doing so.

The forth and final alternative form is the use of vertical integration. This simply puts two or more stages of production or distribution under one hierarchical organization or firm. Vertical integration allows enterprises to have more control over each stage of the process. By making potentially opportunistic individuals employees rather than exchange partners firms can lower the likelihood of disputes regarding exchanges (Barzel 1982). The manager is able to instruct employees to move commodities from one to another and basically, "The upstream employee, who is paid a wage rather than being rewarded for his output, can gain little from deliberately providing low-quality commodities; neither can the downstream employee gain much from spending resources to get high quality specimens. Therefore, they are unlikely to have disputes regarding what they give and receive" (Barzel 2002, 96). By making them an employee there is no contract between the two but rather the employer becomes a sort of third party with the power to enforce relationships and dissolve disputes between the different employees.

This will not automatically work in a black market situation either. Employees face larger risks acting within black markets and must be compensated for this. They will

[67] Meaning they are individuals who are less forward looking than the typical individual. For more on time preference see Mises (1949 [2010]).

require a much higher wage in order to keep them happy, for an unhappy employee is a very large risk for illicit firms. They are more likely to use violent opportunistic behavior to steal from or take advantage of the firm's assets and/or they are more likely to turn to the police. It is for these reasons that in many criminal enterprises the bosses have very little interaction with the majority of employees.[68] On the reverse, however, the higher ups in each enterprise know who their employees are. This may not be the case in dealing with separate enterprises at each stage. Thus, giving another advantage to vertically integrating under such circumstances.

The high cost of dealing with employees is one reason why it is unlikely for many black markets to engage in vertical integration. This is why Reuter (1985) predicts that most black markets will consist of many small competitive firms rather than the typical stereotype of a few large colluding firms. The high costs and the large black market premium are usually enough to keep most enterprises doing one smaller activity rather than branching out and dealing with more potentially opportunistic individuals.

With some enterprises, however, these dealings may not be avoidable. Rum Row for example comes in three distinct phases and must be done in this manner. Stage one is relatively unimportant for the black market side; in fact, many of the firms that interact in this stage are perfectly legitimate, i.e. Scotch companies in Europe and Caribbean distributors. In dealing in stages 2 or 3, however, one is going to have to interact with individuals in the other stage. As was mentioned above, at first the market was structured as Reuter (1985) would predict but as time went on opportunistic behavior, in the form of violent theft, grew more and more. Thus, as I will show in the Section 4.1, rumrunners began to vertically integrate.

[68] See, for example, Gosch and Hammer (1964) and Lacey (1991).

This may not lead to collusion but it could. In a market where there are fewer firms competitive forces may still be at work, especially if there are more substitutes.[69] In the case of Rum Row, as will be shown below, it seems there was minor collusion but the market was still overall pretty competitive.

Still, vertical integration as a substitute for contracting better allowed enterprises to deal with predation. It is a costly method but maybe the more efficient choice. Now I will turn to the other method used by rumrunners to deal with potential predation, both within and without the firm; namely the use of credit instead of money in making transactions out in the Atlantic.

3.2 Alternative to Money: The Identification Card

Markets by themselves are insufficient to prevent the strong from plundering the weak. Even Adam Smith (1776 [1976]) believed this, as he stated, "It is only under the shelter of the civil magistrate that the owner of…property…can sleep a single night in security. He is at all times surrounded by unknown enemies, whom, though he never provoked, he can never appease, and from whose injustice he can be protected only by the powerful

[69] During Prohibition there were substitutes to foreign produced liquor brought in from Rum Row, namely liquor smuggled in from other areas, homemade spirits, wine, and beer, and even medically prescribed liquor and from churches (see, for example, Lerner 2007; Okrent 2010). In 1928, it is estimated that doctors earned forty million dollars by prescribing whiskey (Wagner 2008). The Department of Research and Education of the Federal Council of the Churches of Christ found in 1925 that,

> The withdrawal of wine on permit from bonded warehouses for sacramental purposes amounted in round figures to 2,139,000 gallons in the fiscal year 1922; 2,503,500 gallons in 1923; and 2,944,700 gallons in 1924. There is no way of knowing what the legitimate consumption of fermented sacramental wine is but it is clear that the legitimate demand does not increase 800,000 gallons in two years (Dobyns 1940, 297).

arm of the civil magistrate continually held up to chastise it." And black markets, operating outside the law, would seem to be especially vulnerable to this problem.[70]

And within the standard models the threat of violence theft is enough to cause the market to break down. This, however, does not necessarily need to be the case. While, markets do need rules to function (Buchanan and Brennan 1985 [2000]) these rules can emerge privately and without a state. Greif, Milgrom, and Weingast (1994), for example, show that if the stronger agent is stationary then the weaker agent can simply boycott by moving.[71] This sort of multilateral punishment, however, is not effective in a situation like Rum Row. As mentioned above, shore runners are usually the targets of hijackers; if the shore runner is weaker his choices are either to never enter the market or hope to avoid the hijackers in the first place.

Another option is still possible. Some models have been introduced containing the idea that both parties can transform their resources into useful goods or coercive power (see for example Bush and Meyer 1974; Umbeck 1981; Hirshleifer 1988, 1995, 2001; Skaperdas 1992, 2003; Anderson and McChesney 1994; Anderson and Hill 2004; Skaperdas and Syropoulos 1997; Neary 1997; Grossman 1998; Grossman and Kim 2002; and Bates, Greif, and Singh 2002). This will work in many cases[72] but not in all.

[70] And Rum Row was particularly vulnerable to this, as participants on the mother ships had to stay out in international water without the protection of any law, their boats sitting targets on the water. And if they came to shore they would be arrested. Moray (1929 [2007]) describes a story of a medical emergency where one of his crew voluntarily came to shore to get the sick man some help knowing he would be arrested when he landed.

[71] See also Scott (2009) for the example of how a large group Chinese hid from the state up in the mountainous regions. Boettke (2005, 2010, 2011a, 2011b) and Boettke and Aligica (2009) for more on the economics of self-governance as a research program.

[72] This was definitely true to some extent along Rum Row. Many rumrunners began to invest in greater strength, mostly by acquiring faster boats and many more guns. As McCoy (quoted in Ling 2007, 55) noted,

> I had heard of their raids while in Nassau and before coming north on this run had shipped a couple of Lewis machine guns, several Thompson submachine guns, a half-dozen Winchesters, several sawed-off shot guns and a Colt .45 for each of my crew.

Individuals operating in the market can improve their resources and technology in order to make them stronger. It could even be argued that this is a necessary but not sufficient condition within a black market since the protection of a formal authority is absent.[73] Still, if one person or group has a monopoly on the technology of greatest violence, the other individuals and groups are severely limited in their ability to increase their strength against aggression. In the case of rum running, for example, shore runners may not be able to weigh their boats down with the weapons necessary for protection because they intend to pick up at least 200 cases of liquor and race it back to shore. Their weight is important because they need, even with this liquor, to out run the Coast Guard if necessary. Hijackers knew this and came armed to the teeth, thus making them stronger than the shore runners. In theory does this mean they must be defenseless? Not necessarily because there is still another possibility.

Leeson (2007a) offers another possible explanation for how weaker individuals can trade with stronger individuals, namely thru the use of credit. As Leeson (2007a, 311) put it, “you can’t steal what’s not there, but you can trade with it.” Leeson (2007a, 305) gives the example of late pre-colonial Africa, where “European settlers on the west coast of Africa employed middlemen to collect goods they needed for export from producers in the remote interior of Central Africa… They were tempted to overwhelm these communities with force and steal the goods they desired rather than trading for them.”[74]

> While selling liquor on the Row, all of us went armed, and submachine guns were hidden in the furled sails. I also had given orders to my men never to bunch when strangers were on our deck but to keep scattered so that it would be impossible for pirates to hold us all up at once.

[73] As will be described below, many of the smaller enterprises on Rum Row were indeed pushed out by violence (see, for example, Young 1924b, 1925c).

[74] It is important to note that this is simply a violent version of the hold up problem mentioned by Williamson (1975), Klein, Crawford, and Alchian (1978), and Hart and Moore (1988) discussed in the above section on vertical integration.

The middlemen had a large incentive to plunder the producers within Central Africa, just as the hijackers along Rum Row had an incentive to plunder those attempting to purchase and sell liquor. What was needed in both cases was to alter the payoff structure from such activities. One solution was to not engage in trade. African producers, in other words, would simply produce a subsistence living, leaving the bandits from Europe with little to nothing to plunder, thus giving the middlemen the incentives to simply stay home. Similarly, on Rum Row, individuals could just stay home, or in other words not engage in the trade, i.e. let the market breakdown. This, however, is obviously suboptimal. The gains from trade are not realized and all individuals are clearly worse off.

Luckily there is another way. In the case of the African traders, credit was used in order to lower the payoff from using plunder while still engaging in trade. As Leeson (2007a, 311) put it, "Although middlemen could not steal goods that did not yet exist, credit enabled producers to trade with goods that did not yet exist. By keeping current stocks low but exchanging with middlemen on credit, producers could produce for subsistence, thus deterring plunder but still enable trade, which would allow both sides to reap the benefits from exchange." While in the previous strategy the producers had subsistence living and middlemen stayed home, now producers have subsistence living *plus* the gains from exchange, making both better off.

This produced further benefits to the producers. There was not one single group of middlemen but multiple groups. Thus, the middlemen's goods being produced on credit were in danger of being plundered by other middlemen. This gave the incentive for the middlemen to provide protection for the producers. The result was that the producers went from a target of violence and plunder to a group worth protecting.

The case of dangerous middlemen trading with African producers fits well with the story of how rumrunners actually dealt with predation on Rum Row. There are, however, several differences. Both use credit, but in a slightly different way. What the Africans did was to sell the promise of production. Rumrunners, on the other hand, did not promise to produce but simply removed money from the process on Rum Row. Money changed hands *before* the exchange went down. Customers were then given an identification card,[75] which was redeemable for the cases of liquor from the mother ships. By doing this shore runners did not need to carry large amounts of cash with them while they ran to pick up the cases of liquor. This lowered the incentives of the hijackers to actually engage in predation. The liquor, while considered liquid gold, was bulky and difficult to seize. Attacking rumrunners with the identification cards, as I shall show below, required having certain knowledge that the hijacker was unlikely to know.

Another difference is that the rumrunners are not actively trying to trade with those who aimed to steal from them but instead peacefully exchange with others on the market. It was certainly possible that many of the hijackers, in facing a lower incentive to engage in predation, may be enticed to enter the market legitimately but this needed not to be the case.

While slightly different, this situation still provided a similar incentive structure. It helped provide a better incentive towards cooperation rather than conflict.[76] The use of

[75] What historical happened will be provided on this in Section 4.2.
[76] See Leeson, Coyne, and Boettke (2006) on turning a situation from conflict to cooperation. See also Cowen and Coyne (2005) and Coyne (2006a, 2006b, 2007) on converting conflict to cooperation within developing countries.

credit made engaging in predation less effective and enabled rumrunners to benefit from the gains from trade that would have been denied them if hijackers were able to continue their plunder.

4 Rumming Around Predation

Evidence for how Rum Row operated is difficult, but luckily not impossible, to come by. There may not be as much as we would prefer but evidence has come to light. Mainly through journalism and first hand accounts from interviews, diaries, and autobiographies of those involved we can show actual evidence of vertical integration and the use of credit operating within Rum Row.

James C. Young (1924a, 1924b, 1925a, 1925b, 1925c, and 1927) was a journalist for *The New York Times* who spent a lot of time covering the exploits of rum running throughout prohibition; spending time with both the Coast Guard and the rumrunners. After his second trip to Rum Row Young (1924b) noticed a change in the market, as he put it,

> Rum running has altered almost unbelievably in a year. The holiday aspect is gone. The rules are changed. The amateur is no more. Bargain days along Rum Row have ended. Instead of waiting three miles off shore the nearest whisky ships are thirty miles out and some vessels are even fifty. There is danger in every foot of water.

This change came in response to the emergence of predation brought by the hijackers and general opportunistic behavior found within black markets. As Young (1925c) put it, "Pressure from the hi-jackers required a new method of business, and it was promptly found." This predation could come from anywhere. Either through opportunistic individuals one traded with or through pirates waiting to pounce upon those with money to steal. In order to maintain the market and realize the gains from trade, rumrunners needed to figure out how to deal with this predation. And that is exactly what they did. The changes came in the form of vertically integrated enterprises and the removal of money from market. This section illustrates how these mechanisms actually took place in practice.

4.1 *Big Business Now on Rum Row*

The old carefree days of early Rum Row simply could not deal with the problem of internal predation.[77] While it was true that rumrunners were usually an easy target for hijackers hoping to make a quick buck from the unsuspecting, or more likely the very suspecting and very fearful, rumrunners, there were ways around this. As many of the models pointed out above noted,[78] investments could be, and were, made by rumrunners in order to improve their strength. They purchased guns, faster boats, planned strategically, and as we shall see below, used credit in order to limit the damage that could be done from potential hijackers waiting to pounce (see, for example, Barbican 1928 [2007]; Moray 1929 [2007], Carse 1959; and Water 2007).[79]

[77] While hijackers were certainly a problem, the most dangerous occurred as an inside job. As I will show below, the use of credit helped dissuade some hijackers but if inside help occurred then something else had to be done. As Okrent (2010, 278) noted, "These pirates, known as "go-through guys," needed to have decent intelligence sources—disloyal crewmen were prime informants—but beyond that they required a small boat, a few weapons, and murderous intent."

[78] Again, see, for example, Bush and Meyer 1974; Umbeck 1981; Hirshleifer 1988, 1995, 2001; Skaperdas 1992, 2003; Anderson and McChesney 1994; Anderson and Hill 2004; Skaperdas and Syropoulos 1997; Neary 1997; Grossman 1998; Grossman and Kim 2002; and Bates, Greif, and Singh 2002.

[79] Pressure from the Coast Guard and changes in international laws also contributed to the need for improving their strength in order to successfully operate on Rum Row. As Young (1924a) noted, "The

The problem was that individuals selling the smuggled liquor were finding it very difficult to deal with not only the hijackers waiting in the coves along the coast but also opportunistic individuals they dealt with, i.e. trading partners willing to break contracts and make way with all the cash and/or assets from the deals they made. The incentive was simple: one could make money by engaging in exchange with rumrunners but could make even more by taking cash and assets by force. And with no law to stop them and given the ephemeral nature of the trade many, as described above, took the opportunity.[80]

Thus, rumrunners needed a way to align the incentives of those they engaged with in each of the three stages of Rum Row. Contracts were not only incomplete but also had an incentive built in to forcibly acquire more rents from the other party. In other words, a violent version of Klein, Crawford, and Alchian's (1978) hold up problem existed.

In response to this rumrunners turned to the alternative of contracting out to the market: vertical integration. Thus a market full of fewer larger firms emerged instead of

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Coast Guard has many methods in its book of tactics when dealing with bootleggers. One of the most effective is the seizure of their capital. In practically every case they get his money back by judicial process, but undergo distress of mind and loss of time". The Coast Guard was also very aware of what happened along Rum Row, as Young (1924a) continued, "Many of the Rum-runners would be surprised to learn how much the Coast Guard knows about their activities. The arrival and departure and approximate cargoes of the rum ships are recorded with as much care as the movements of merchant ships, perhaps a great deal more."

Similarly, evading the Coast Guard became more difficult when the three-mile limit was moved out to twelve miles. As Young (1925c) noted, "Finally, the three-mile limit was increased to approximately twelve miles—"an hour's sailing distance"—by the treaty with Great Britain that became effective in 1923. This virtually eliminated amateur rum-running, and there appeared the shore-runner with a fixed rate. Under the Twelve-mile limit rule seldom did a rum schooner come closer than twenty miles to shore, while the main boats of the fleet lay thirty miles out." This required the use of human capital, which was previously not necessary. Many simply did not have the knowledge necessary on how best to out run the Coast Guard. Making it out to the open sea, for example, was apparently a recipe for disaster. "We cruse away from the fisherman and sight a small boat leaving a rum ship. She makes straight for the open sea. That is a poor way to escape, as we soon prove by standing directly in the small boat's wake" (Young 1924a). Young (1924a) continued, "He cannot get back to his king row—the shore—from any point on the compass. If he puts to sea the cutter will run him down. Only when he has high speed and a leading start can he get away."

[80] This is why until the final last offensive by the Coast Guard, the hijackings, many of which were inside jobs, were considered by the rumrunners to be the deadliest menace on Rum Row (see, for example, Young 1925c, Moray 1929 [2007], and Okrent 2010).

the market with many small entrepreneurs who sailed the waters of Rum Row in the previous years. As Young (1924b) put it,

> We hear, for instance, that big business has taken hold of rum running. The rum runners themselves shake their heads and admit this as truth. No longer is it the free and untrammeled trade of old, in which a lucky skipper might win riches from a cruise or two after starving a lifetime on a fishing schooner.

In other words, the little guy was no more; the day of the syndicates had arrived.[81] Of course many of the little guys attempted to stay[82] but were pushed out by the larger syndicates.[83] And these syndicates did bring a different type of business into Rum Row. For example, the type of man entering the business changed. Those who showed up in Nassau were a completely different class and as a result ran their business in a completely different way. As Bill McCoy (quoted in Ling 2007, 42) put it,

> Nassau's invasion was composed of city men, New York City men, for the most part. Big shots of the underworld and their escorts of gunmen and racketeers left their haunts in Manhattan and Brooklyn and moved to the Bahamas. The Nassau gang was largely made up of gangsters who knew gang procedure. They were not toughened and made reckless by what the boom compelled them to endure. They were more than adequately tough already. Big Eddie, Big Harry, Squinty, and Lefty, and the rest of them, poured in with their retinues of gorillas and for some vivid months proceeded to take Nassau apart and remould it close to their hearts desire.

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[81] As Willoughby (1964, 58) put it, "Most sales were arranged by the syndicates, which now controlled just about everything in the illicit trade."

[82] Some chose to leave, such as Bill McCoy (see, for example, Water 2007, 2), as they viewed the game as having changed and the adventure gone.

[83] See, for example, 9,000 1924; Anonymous 1923; Barbican 1928 [2007]; British 1923; Carse 1959; Engelmann 1979; Gosch and Hammer 1974; Johnson 2002; Lacey 1991; Lerner 2007; Ling 2007; Moray 1929 [2007]; Okrent 2010; Secret Code 1925; Stone 1926; Tells 1922; Water 2007; Waters 2007; Wigley 1923; and Young 1924b, 1925a, 1925c.

The syndicates were often former small time criminals who saw prohibition as a chance to make it much bigger.[84] Thus, many did not shy away from the use of violence within their business.[85] As Stone (1926) noted about the Chicago syndicates,[86]

> The gangs that maintain this strange unity against the law even while fighting each other are not gangs in the pre-prohibition sense of the word. They are syndicates selling beer and alcohol at wholesale to bootleggers and cheating saloons. They are made up for the most part of former highwaymen and youngsters who would have been highwaymen if born a decade earlier.

Thus, the syndicates often did use violence to remove unwanted individuals from the market. This does not mean it was done without thinking.

The problem with the little guy was not necessarily a desire for monopolization on Rum Row[87] but the fact that his small craft often got in the way. As Young (1924b) put it,

> Today, it is said, rum running is an organized traffic in which capital controls the source of supply. And capital has no wish for the little man's business, be he buyer or seller. It does not want to be bothered by him. His hundred-ton schooners merely clutter up Rum Row. His chip of a boat coming from shore for ten-case orders is a nuisance. There is a logical certainty that he will be caught, and every man caught may talk too much. So the big rum ships have cut off the chance of fortune for the independent

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[84] See, for example, Gosch and Hammer 1974; Allsop 1968; Lacey 1991; and Rockaway 1993.

[85] As Young (1924b) stated, "Soon the rum schooners will be no more. Only a few are left in the trade. Warfare from shore and sea has driven them out. The rum runners tell strange stories of this warfare, with a far-away look in their eyes…"

[86] The Chicago syndicates were not rumrunners but bootleggers who purchased from rum running syndicates. They purchased European liquor from the New York syndicates (Gosch and Hammer 1974 and Lacey 1991) and Canadian whiskey mainly from Detroit syndicates (Engelmann 1979 and Kavieff 2000, 2001). Still, the operations of the syndicates in terms of business and violence remain similar.

[87] There were many syndicates operating along Rum Row. As Young (1924b) noted, "The rum-running syndicates control from one to a half dozen ships each and have cargoes en route in steady service. As fast as one vessel is unloaded the hatches are knocked off another, and the trade goes on." And as Meyer Lansky (Lacey 1991, 80-81) described the business practice of the syndicates,

> It was Arnold Rothstein's principle of the gray rats being unconfined by structure, free to scavenge for themselves to pursue profit as opportunity and their aptitudes led them. Gang leaders might meet together from time to time for sit-downs at which they would sort out disputes over territory and common threats to their welfare. But the fundamental rule was live and let live—laissez faire, the unstructured, free-market principle on which the country's legitimate business had long been founded.

> skipper and the occasional bootlegger. Twenty-five cases is the smallest order, and even that is filled grudgingly.

It is important to note that despite using violence to some degree, the majority of the syndicates viewed it as problematic.[88] It was a business and should be run as such. As the famous gangster Meyer Lansky (quoted in Lacey 1991, 66-67) put it, "We were in business like the Ford Motor Company. Shooting and killing was an inefficient way of doing business. Ford salesmen didn't shoot Chevrolet salesmen. They tried to outbid them." He (quoted in Lacey 1991, 68) continued, "It's always much better not to shoot if you can help it. It's better to use reason—or if that fails, threats."[89] Similarly, as another famous gangster, Charlie "Lucky" Luciano's biographer (Gosch and Hammer 1974, 34) put it, "The profits were far greater than could ever have been realized by crimes against innocent persons and their property, and the penalties were far less, and the chances of ever paying those penalties almost minute." Thus, violence was not as common as the media and fictionalized stories would lead us to believe.[90]

The syndicates took the business as serious as any legitimate businessmen would. Meyer Lansky, for example, used to poor over economics books to learn more about how to succeed. As Luciano's biographers explained (Gosch and Hammer 1974, 35),

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[88] Most of the time they preferred to do business honestly. As Charlie "Lucky" Luciano (quoted in Gosch and Hammer 1974, 36-37) once humorously put it,

> If you was a manufacturer who could give somebody a case of real Scotch, you never had to worry about sellin' 'em dresses, especially if the head of the store back home got some of it. So we helped the manufacturers unload millions of garments and they paid us through the nose for uncut bottles of Scotch 'right off the boat.' We never cheated 'em on quality, but I can't say the same for some of the clothes they made.

[89] They were still criminal organizations. For example, the uses of threats were often utilized. As Lansky's biographer (Lacey 1991, 68) noted, "But threats only work if people believe that you may implement them, and Meyer Lansky's record provided him with that rather particular credibility."

[90] It was, sadly, still a problem. Violence did increase by quite a bit, from a little less than 12 murders or assaults per hundred thousand in 1920 to 16 murders per hundred thousand in 1933. After Prohibition in 1940 the number had fallen to fewer than 10 per hundred thousand (see Anderson 1997). Owens (2011), however, found no evidence that the murder rate went up after alcohol was made illegal.

> It did not take them long to realize that the demand for liquor was enormous and that they could sell all they could obtain, and more. And so "Lansky's Law" came into being. "It was no joke at first. Meyer was always readin' books about business, economics, things like that. One day, he shows me a library book and he's all excited about it." The book was *Making Profits*, written in 1915 by Professor William Taussig[91] of Harvard University… [Lansky then said] "Will you please for God's sake, listen. You always talk about how you want to learn new things; now, I want to explain thing that's really important. This writer talks about a thing called the law of supply and demand. What he says applies to us right now. If you have a lot of what people want and can't get, then you can supply the demand and shovel in the dough. In other words, that's what we ought to do with whiskey—get plenty of it, good, uncut stuff right off the boat and then sell it at a high price to a bunch of people who don't have the brains enough not to drink it.

Much of their activities centered on long-term thinking. Unlike in the early days where many were only in it to make a quick buck, the syndicates understood the importance of providing a quality product and their reputation as sellers of that product. Again Luciano's biographers (Gosch and Hammer 1974, 36) explained,

> Their future depended on making the right choice. They could strike for quick and big profits by cutting and watering down the Scotch until it was the cheap, barely drinkable rotgut served in the sleaziest speakeasies, a drink which the original Scotch was an infinitesimal part. There would be no trouble selling the stuff and turning a huge profit, for demand for liquor of any kind was unceasing. But if they took this road, they would have to pay a price: they would be tagged as purveyors of cheap booze and their clientele would be those in the lowest strata.[92]
>
> Or they could sell the Scotch as it was uncut. They would still realize huge profits and at the same time they would win as customers the best speakeasies in midtown Manhattan and the most socially prominent private clients. Their reputation as big-timers, as class merchants, would be made; customers would flock to them, and these customers would be

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[91] This probably refers to Frank William Taussig's (1915) second edition of his *Principles of Economics*.

[92] Many of the New York syndicates did started cutting the whiskey with grain alcohol (Gosch and Hammer 1974, 42). The temptation to turn one bottle of whiskey into several was probably too much. Cutting it with grain alcohol, however, was still much closer to the real thing than most individuals who cut the liquor. They did understand that there was an extremely high demand for quality liquor and more money could be made in the long run by providing that liquor. "Much was being purchased in Canada… Even with the dangers and the mechanical troubles, there was never enough uncut whiskey, from Canada or Scotland, to fill the ever-increasing demand" (Gosch and Hammer 1974, 41). For an economic explanation for why quality goes down under prohibitions see Warburton (1932) and Thornton (1991).

> people with plenty of money. The choice was, then, really no choice for men whose eyes were on the top.

Soon the syndicates began to conduct business as efficiently as many legitimate business. As Meyer Lansky (quoted in Lacey 1991, 65) put it, "To cut costs and increase efficiency, we chartered our own ships to bring the Scotch across the Atlantic. I must say in all modesty that we ran things well… By the middle twenties we were running the most efficient international shipping business in the world." The only real differences between the legitimate businesses were the use of bribing authorities in order to conduct business[93] and the need to avoid written records.[94]

The distribution process remained the same, except now because big business also comes with more capital another option was created. As Lacey (1991, 61-62) described,

> There were two routes by which bootleg liquor came by sea to the New York area. Foreign-registered cargo ships would anchor just outside American territorial waters, twelve miles offshore, and high-speed motor-boats would sneak out under cover of darkness to what became known as

[93] Incidences of bribery and collusion with the Coast Guard and Prohibition agents are many. As Luciano (quoted in Gosch and Hammer 1974, 34) put it, "Within a year, we was buyin' influence all over manhattan, from lower Broadway all the way up to Harlem, and even across the Hudson beyond the Palisades in Jersey." He continued (Gosch and Hammer 1974, 35), "When we made that first buy down in Philly, we almost hit the big time at the very beginnin', like we started at the top and kept goin' up from there. Of course, like in any big business, we hadda take care of the guys that could help us, so we greased the police and the politicians. It was all part of the overhead, just like any other business." As one news reported (9,000 1924) noted, "The agents also were seeking information about an American syndicate, which, the Harwell letters asserted, had guaranteed to buy 10,000 cases of high-grade Scotch whiskey a month 25 miles from shore and had deposited United States gold bonds worth 10,000 Pounds as evidence of good faith." The syndicates invested heavily in getting the law on their side, another new report (Tells 1922) notes, "This syndicate has perfected an espionage system that is beyond comprehension. They have spies right in the Federal Building. They know where Federal agents are going before the agents themselves get the orders. There is a leak some place." With single payments to the Coast Guard reaching $8400 (Secret Code 1925). That same report admitted that "United States Dist Atty Buckner today declared fresh proof of collusion between Coast Guard members and the alleged New York rum syndicate, which dominated the Atlantic Coast, has revealed in confessions and private papers taken from some of the 18 men arrested yesterday as participants in the liquor ring." The report even described the complex system of codes between the Coast Guard and rum ships allowing them to smuggle the liquor into the country.

[94] Lansky was particularly apt for his ability to act as an accountant within organized crime. He was even known as the mob's accountant. He followed his mentor Arnold Rothstein and never wrote anything down. As Lacey (1991, 66) phrased it, "True to the example of Arnold Rothstein, his organization lay in the absence of structure. He operated at long distance—the phone call to the person that mattered, the money to the right person. Meyer kept the paperwork in his own head, and if he did require the services of anyone else, he insisted that they do the same."

> Rum Row, loading up and returning to one of the dozens of little harbors and inlets along the coasts of Long Island and the Jersey Shore. But it was also possible, with the right contacts, to bring cargoes of liquor directly into the New York waterfront, then get them unloaded and trucked away as if they were legitimate. This was less dramatic, but it was more business-like, and it was the way that Charlie Luciano preferred.

The operations took place mostly within the syndicates.[95] The syndicates would buy the liquor legitimately from Europe and then ship it over themselves, using their own men to get the liquor to shore. As Luciano (quoted in Gosch and Hammer 1974, 40-41) put it,

> What Arnold did was really very smart. Everybody knows that them guys in Scotland are tight and love money, so Rothstein made legit contracts with them and laid down big deposits so he would be guaranteed delivery. Then he went to Waxey Gordon to arrange for distribution of this liquid gold, with the condition that I should have first call on the buy. Naturally, I bought every drop of it.

By doing so they were able to minimize the threat of predation by internalizing the gains to be made. This was done in two ways, first they provided the employees with strict guidelines for how to perform their jobs and secondly, and most importantly, they paid extremely well. As Lacey (1991, 66) described Lansky's way of doing business,

> Meyer worked out strict rules for the men who drove his liquor consignments: no loud clothes, no fighting or showing off. Picking steady, reliable characters and instilling morale into men whose nature was not to be disciplined, Lansky displayed the management skills that were to be part of his business success throughout his life.

And of course Lansky paid well. As he (quoted in Lacey 1991, 66) put it,

> We paid more than anyone else, and paid in cash. It's remarkable how loyal people will be when you look after them as well as we did. We gave them incentives and rewards for good work. When they came up with useful proposals, we praised them and lined their pockets.

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[95] The syndicates sometimes had numerous "gangs" within. In New York, Gosch and Hammer (1974, 37) note, that the Jewish gangs often operated in association with the Italian gangs. For example, "Lansky and Siegel formed what became known as the "Bugs and Meyer Gang," experts in transportation, with no job too dangerous, no requirement too complex or difficult. They hijacked or rode shotgun as protectors against hijacking, depending upon the exigencies of the moment or the special demands of Charlie Luciania."

The advantage of this was simple. In simply trading with individuals, your trading partner, on Rum Row, had no incentive to care for your gains, only his own. He could get more by simply acting in a violent and opportunistic way. If you didn't come back then someone else would. After all, few lasted very long in the trade. If, on the other hand, you internalize each stage into the firm, then incentives could be aligned. Rules were set to make sure employees performed in an efficient way and they were rewarded for doing so. Paying them high wages put it in their interest to make sure they could continue to do so.

4.2 Whiskey for Just Half of a Two-Spot of Spades

Having cash to buy liquor in bulk was a necessary but dangerous business. Hijackers often did not care to deal with the bulky and heavy cases of whiskey, which were likely to slow them down both in terms of loading and getting away. Instead they found it much easier to make off with the duffle bags or wads of money rumrunners carried with them, either by hitting the shore runners as they approached the mother ships or by hitting the mother ships after enough cash had been built up.[96]

Because the hijackers mostly targeted the cash, the solution may seem a little obvious: remove the cash from the equation. This raises the costs for hijackers and will help limit the amount of predation rumrunners had to deal with. Of course, removing money from the equation is a little easier said then done. The rumrunner's solution,

[96] As Willoughby (1964 [2001], 35-36), a commander in the Coast Guard during Prohibition, noted,

> Piracy had become the worst foe of the rum runners—far more to be dreaded than the almost pitiful fleet of antismuggling craft. On shore, the hijackers were the pirates' counterpart. Some of the pirates were known as the 'go-through-guys" who waited until a ship had sold most of her liquor and amassed a fair amount of cash; then they boarded the ship and took the cash—their prime interest rather than liquor. Often the pirates crippled the ship's motors to prevent pursuit.

however, was quite ingenious. What they did was to create a system of credit similar to the English Tally system[97] that was used successfully in English banking for over seven hundred years.[98] As Young (1924b) explained,

> Rum Row uses that method today in a new variation. It takes a card—often a playing card—and cuts the bit of paste-board into a sort of jigsaw puzzle. One-half of the card remains aboard a rum runner, the other is sold ashore. Each card has its own pattern and commands a certain number of cases, from 25 up to 1,000.

This completely eliminated the need for money while out at sea where individuals are most vulnerable. The playing cards, act as a sort of identification card. Even if the Coast Guard or hijackers successfully seize the card they must know what to do with it. And only those with inside information were able to know what to do with the card.[99] Often the hijackers would leave the rumrunners with their card and the Coast Guard would return it. As Young (1924b) put it, "If a man goes to sea with half of a two-spot of spades in his pocket, representing a hundred cases, and the Coast Guard drives him back, he may turn in his two-spot for full cash value. Should the Coast Guard seize his card he must bear the loss."

The cards even became a sort of currency for those with the proper knowledge about them. They were even used as stakes within card games.[100] The cards are cut in

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[97] For more on the Tally System see Baxter (1989).

[98] As Young (1924b) stated,

> The day of the cash sale on board ended long ago. Fear of seizure by the Coast Guard or the hijackers has driven money from the trade. Rum Row has invented a method not lacking in ingenuity. For a guide and model it took the Bank of England, which in early times identified its patrons by matching notched sticks with them.

[99] Young (1924b) humorously pointed out, "There is a record of some half dozen lost by their owners and turned by others into liquid gold. The uninitiated man can only wonder how the finder would know where to present his ticket. That is one of the matters not disclosed to the casual inquirer."

[100] See Young (1924b, 1925a, and 1925c). Young (1925a) even recounts a poker game between rumrunners that he witnessed,

> Instead of going "shy" for a bet, as the saying is, the skipper draws forth a card of strange appearance from his pocket. It also is a playing card, the half of a jack of spades, cut in weird pattern, somewhat like the cards in a nursery which youngsters spend hours

different patterns in order to make sure they are matched up with the correct other half. As Young (1924b) shows, even other methods of authentication were used to ensure help minimize the incentive for predation,

> There must be a design for every sale. Presumably, the cutting is done abroad, and the necessary halves are shipped here or taken off a rum runner when she arrives. Such is the method of finance approved and adopted by Rum Row. Perhaps the supercargoes aboard ship have further means of identifying these odd-looking cards. They may be numbered with invisible ink. So far as the untrained eye can see they do not differ from ordinary cards. One syndicate uses green entirely, but there seems to be no rule for the other.

Similar to Leeson's (2007a) African traders story, the identification card system provided another example of how credit can be used to minimize the risk of predation. On Rum Row, rumrunners produced a credit system were the product was purchased before hand. The risk was still with those who decided to venture out to Rum Row but now the likelihood of hijackers walking away with the valuable cash or liquor was diminished.

5 Conclusion

Rum running, or the smuggling of foreign liquor into the U.S., during the prohibition of Alcohol from 1920 to 1933, faced, like all black markets, a problem of predation. Rather than causing the break down of the market, certain mechanisms arose to mitigate the issue. In the case of Rum Row, or the rum running that occurred along the Northeast Coast of the Atlantic Ocean, two dominant mechanisms arose. First the structure of the market changed as the illicit enterprises began to vertically integrate each stage along

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matching together. What is this card, we ask the Cap'm, and he says that it is good for a hundred cases aboard the skipper's ship. When presented there it will be matched with the other half, and if the two fit the hundred cases come over the other side.

Rum Row. This helped to better align the incentives of those participating at each stage. Second, rumrunners figured out a clever way of removing money from the market. Customers would purchase the liquor and receive half of a playing card, or dollar bill in some instances, that was cut in half in a jig-saw type pattern, which could then be redeemed for the purchased liquor aboard a rum ship.

There of course was still violence, as no black market is free from that (see, for example, Thornton 1991 and Miron 2004). The very nature of prohibition distorts the market rules and makes realizing the gains from trade difficult.[101] Still, black markets are not all or nothing. What Rum Row helps to illustrate is the versatile nature of human action. Individuals wishing to engage in trade find ways to foster cooperation and thus, realize the gains from exchange, even in spite of the many obstacles presented to them due to a prohibition. It may not be a first best situation but it was better than nothing.

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[101] It could, of course, be argued that that is the point.

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