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Cartel Practices and Policies in the World War II Era

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by

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Abstract

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The goal of this thesis is to examine cartels in the World War II era: how and why they operated, why they existed, and any assistance they may or may not have received from their respective governments. This thesis, in particular, will focus on three countries, the United States, Germany, and Britain. Cartels are typically defined through the lens of monopolized business activity that can deal with anything from petroleum and steel to pharmaceuticals, and take actions to restrict output and raise prices to eliminate their competition. The research finds that cartels that operated in Europe during this era were able to take advantage of the disorganization during World War II to expand their business and raise their profits at the expense of the general public.

The thesis includes three case studies, including the United States, Germany, and Britain. These cases will explore policies before, during, and after World War II to compare them across time and place and see how cartel formation and behavior changed, if at all. Focusing on the same main themes, such as social and political outlook and the level of government support for each country will enable analysis comparing cartels and policy response to cartels. The case study approach will lead to answers of the main question of how the disruption caused by World War II affected cartels in Europe and also the economic and historical basis for cartel formation. Cartel evolution during the era under study is related to the reasons that cartels formed in the first place and their original goals. These issues will be discussed, along with their respective countries and the economic repercussions, both positive and negative.

Chapter 1 - Introduction

1.1 Research Question

This chapter will introduce the main questions of this paper, why they are important, and why this thesis is organized as a case study. It will also review prior studies and how they relate to this research.

Cartels have always existed in one way or another. Some are legal, endorsed, and even encouraged by governments to, for example, facilitate an increased number of a nation's exports or stabilize prices or employment. Others are international in scope, created by several countries to benefit all member countries, such as OPEC. These are examples of legal cartels. Illegal cartels also exist, with the purpose of earning monopoly profits for cartel members at the expense of the general public. While today people think of "drugs" when they hear "cartel", in the context of this thesis, "cartels" refers to the attempt to monopolize an otherwise wholly legal businesses. Many cartels that existed in the twentieth century acted either through the government with their support, or circumvented the government totally.

1.2 Why Study the History of Cartels?

Both drug cartels and OPEC, two of the most recognizable cartels, are constantly in the news. OPEC is a political tool that was formed as retaliation against United States actions in Israel, and the drug cartels do business with narcotics. Both have negative connotations, sometimes for good reason. However, what many people do not realize is that while these cartels are quite harmful, they do act similar to the cartels discussed in this paper. The drug cartels, OPEC, and the cartels that will be discussed in this study all act to have control over a market, can be supported by governments, except for the drug cartels, and look to increase their profits through monopoly power. However, with the drug cartels and OPEC, there is much more of a no-nonsense type of outlook. Countries do not want them coming into their respective countries, for the wellbeing of their citizens and also because of the potential national security risks they can bring. While many people immediately think of drug-related cartels first when discussing cartelized activity, they need to also know that other cartels are actually quite important to most countries, such as OPEC. OPEC not only has more power and has control of a necessity, but it is also supported by their member states and the countries that need their oil. Cartels are not intrinsically good or bad, as discussed in this study, it just depends on the country, policies, culture, and economy. Context is very important when examining cartels and whether they have positive or negative effects. The focus in this paper is on cartel activity and cartel policy in Britain, the United States, and Germany in the first half of the twentieth century, during times of war, depression, and governmental change.

The goal of the paper is to examine the cartels in the World War II era and how they operated, why they existed, and any assistance they may or may not have received from their respective governments. This thesis, in particular, will focus on three countries, the United States, Germany, and Britain. The German commentary will also shed light on how the Nazi regime assisted certain cartels, such as I.G. Farben and Krupp. It is interesting that many cartels that operated in Europe during this era specialized in many industries, such as technology and pharmaceuticals and also how they were essentially able to take advantage of the disorganization during World War II to assist themselves in expanding their businesses.

Through this paper, the questions that will be addressed concern cartels and how they were run during the interwar and World War II eras to discover how they were formed and how they were treated by their respective governments, what the national benefits and detractors of these cartels existing were for their respective countries, and whether the political systems mattered as far as the cartels in the United States, Germany, and Britain. The United States, historically, and also during World War II was very anti-cartel. The United States had permitted export cartels, and they were largely exempt from antitrust regulation, other than a few instances, as discussed in the United States case study.

The British government worked to thwart some cartels, while supporting others, such as the steel and iron cartel, in order to boost the economy during World War II as well, however, Germany was much different. Companies such as I.G. Farben were able to get their start during the turmoil that surrounded the interwar period and the Weimar Republic era and were able to become even more profitable and successful when the Nazis rose to power.

1.3 Why a Case Study is Best

This thesis will be presented in a case study format. The next chapter is on the inner workings of cartels, the economic reasons of why they develop, their goals, and also information such as how they are run and how they make their money. It will outline the United States, Germany, and Britain and their policies before, during, and after World War II to compare them and see how they changed, if at all, while also focusing on the same main topics for each, and will come together in the conclusion of the paper. Each individual country's case study will contain information such as the political and social stances concerning cartels during the World War II era and the time period surrounding it, the industries that the cartels in their respective countries mainly focused on, any actions the government may have taken to either support or break up cartels, and the respective country's economic stance on cartels and the process in which they went about breaking them up, if any.

1.4 Prior Research of Cartels

Before delving into the case study, some basic facts about each country should be explained. In Britain, much of the new business efforts were focused around the iron and steel and banking industries and making them stronger so Britain could compete internationally, as shown in Capie and Billings (2004). In Germany, many of the cartels that formed in the post-World War I era and during the Weimar Republic, such as I.G. Farben were working with the Nazis to find ways to expand and make their businesses more profitable, be it through slave labor, or expanding into the countries that the Germans were invading, as shown in Hayes (1987). The Nazis also used domestic cartels to help with the war effort. The United States was steadfastly anti-cartelization, other than a few instances during the twentieth century with the passing of the Capper-Volstead Act and the Webb-Pomerene Act, both assisting certain industries, such as the agricultural industry, and the war effort.

There have been many attempts of prior literature to evaluate the cartels that existed during World War II and how the war was critical to how cartels were run and treated by their respective governments, what the national benefits and detractors of these cartels existing were for their respective countries, and whether the political systems mattered as far as the cartels in the United States, Germany, and Britain. For instance, some governments, such as Britain, supported government-sanctioned cartels, while other countries, like the United States, had antitrust laws to protect them from cartel activity. In order to find the solution of how and why these cartels existed through a case study, why cartels operate and how they come about will be established.

The literature supports the findings above, as well as post-World War II information on the United States and how the United States was handling cartels, by breaking cartels up and making sure they did not have a monopoly power over an entire industry, which is what Mowrey (1984) sought to prove. This inspired other governments to break up their own cartels because of the precedent set by the United States. Additionally, after the war, the United States, as well as other international governments, decided that the companies like I.G. Farben had to be broken up for the good of the people and for the future stability of the new German government. The self-serving point of view of the Americans also has to be mentioned considering they wanted to separate international cartels to help American companies have a greater market share in their respective industries. That could have been an underlying goal of the United States in the trials that followed the Holocaust, which appears in the *Trial of War Criminals Before the Nuremberg Military Tribunals, Volume VII* (1953). These documents also contain the information used in the I.G. Farben case, which support what the courts found disturbing and illegal about their business practices and their verdict on how to break up the companies.

As stated, the prior research on this topic shows a large increase in cartel activity due to the disorganization during World War II, both in America and more so, the European continent, particularly in Germany with the rise of I.G. Farben during the Weimar Republic era and the iron and steel and banking industries in Britain. As a result, many cartels were founded during the interwar time period between World War I and World War II because of that turmoil and were able to expand and become more productive due to the increased disorganization during World War II between the Axis and Allied countries. I.G. Farben is a prime example of this, as discussed above. I.G. Farben was founded during the Weimar Republic era and was able to expand their practice and become more successful and profitable under the Nazi regime through their own internal business practices, as well as with support from the Nazis, such as slave labor and funding, as shown by Sasuly (1947).

1.5 Conclusion

This thesis paper will be extensive in the sense that the cartel industries in the three countries will be analyzed, whether they were government supported or not, and then will be synthesized at the conclusion of the paper in an attempt to show the similarities and differences, as well as to show whether the cartels that existed were successful in an economic and historical sense. In other words, did the cartels succeed in an economic way, were they profitable, did they have monopoly power, were they broken up by the government, etc.? In a political way, were they illegal and working with the government, did they have outside support, did they come about for a "moral" reason, etc.?

In the end, the goal of this thesis is to see how cartels and cartel policies compare and the extent to which they were deemed successful from an internal point-of-view and from an economic, political, and social standpoint. The differences seem glaring from the outside since the United States had very strong anti-cartel policies already in place, the British had government sanctioned cartels, and Germany, because of the unsettlement on the continent and in Germany at the time, had many cartels and even supported a few. It will be interesting to see how all three of these countries differ and also the influence that the United States cartel policy had on foreign governments.

After the resurgence of cartels during the World War II era, many of the countries actually used the United States as a model for breaking up those cartels. According to Borkin (1978), the United States set a precedent in America as far as dissolving cartels that had monopoly power over a particular industry or were acting illegally. They were a model for European countries in that sense, and actually participated themselves in breaking up those cartels.

The case study will show that the World War II era changed the landscape for cartels in Europe. Before that, between the two World Wars, many cartels were able to develop and succeed because the turmoil in Europe, and because of this and because of the way in which the cartels took advantage of their respective countries and the people that they did business with, the cartels were forced to break up in the end.

The remainder of this paper will show a comparison of how the three countries, all affected by the war and the turmoil in Europe in the mid-twentieth century, handled cartel practices. This will allow for the answer the main question, of how World War II both allowed and caused cartels in Europe to change and also how the cartels were able to come about in an economic and historical way. There will also be a section to start on the reason why cartels decide to come about in the first place and what their goals are, economically speaking, as displayed by Siegfried (2012). This section will also discuss the economic repercussions, both positive and negative when it comes to cartels and how they operate within the government, or sometimes in secret, as shown by Evenett and Suslow (2000). With all of this information, a case study between Britain, the United States, and Germany on their differing cartel industries will form.

Chapter 2 - Review of Cartel Theory and Practice

The following chapter will highlight and give an overview of the background of cartels and how many of them come to be. It will also explain why they exist and what they mean to the public, both positively and negatively. Lastly their goals and their historical and economic reasons for why they exist will be laid out and established. A primary reason for their existence is to corner a market and to gain monopoly power over a particular industry. It is also difficult to quantify the amount of cartels because many of them operate under the radar of civilians and governments.

2.1 Why Cartels Start and their Goals

Previous literature has shown that many reasons are central to the development of cartels. In a study to discover just how many cartels there were during this time period, Steen, Toivanen, and Hyytinen (2010) used a Hidden Markov Model, also taking into account that often we do not know whether a cartel exists in an industry or not. They take the model and data from a period of legal cartels. Estimates suggest that once founded, cartels are persistent and by the end of the interwar period, almost all industries they examined were cartelized. Similarly, Zimmerman and Connor (2005) measure factors that contribute to the variation in cartel duration. Consistent with previous cartel duration studies, industry concentration and market share have positive effects on cartel duration.

Contrary to former findings, the analysis shows a positive relationship between economic downturns and cartel duration. They find that several internal cartel characteristics have some statistical significance on cartel duration, such as the number of participating firms, overcharge percentage, cultural diversity, and bid rigging. Increased use of antitrust leniency programs has had an increasingly significant negative impact on cartel duration as well.

Similar to the sources above, Marquez (1994) discovered the various determinants of life expectancy for international cartels. He finds that a cartel's optimal duration is a function of market structure and demand growth. According to the results, increases in either market share or cartel concentration extend life expectancy. Faster demand growth shortens cartel durability. Levenstein and Suslow (2006) worked to discover the average longevity of cartels and whether they can succeed. They conclude that many cartels do survive and that the distribution of duration is bimodal. While the average duration of cartels across a range of studies is about five years, many cartels break up very quickly. Cartels can also affect other non-price variables, including advertising, innovation, investment, barriers to entry, and concentration. Cartels break up occasionally because of cheating or lack of effective monitoring, but the biggest challenges cartels face is the entry to a particular industry, depending on government policy and adjustment of the collusive agreement in response to changing economic conditions. Clearly, cartels have many incentives to go into business, but the government of their respective county also has equal reason to step in and prevent them.

Cartels exist for many different reasons, such as to increase revenue and to corner a market. Going along with those ideas, Andrew Carnegie (1889) wrote an article on his dislike of the United States government's antitrust agreement since it would restrict the development of the railroad industry. He wrote this article to promote combining many companies in to a few large corporations to decrease the amount of competition. He believed his railroad company would vastly improve the country and his ability to help the budding transportation industry, therefore his business would be intruded upon by the new law since he saw this railroad cartel as something that would help the country. Most likely, he was primarily concerned with his own company more so than the government, representing the mindset of many companies. He knew he could essentially cartelize the railroads and saw antitrust laws as a hindrance toward his ultimate goal. He also writes about how it disrupts healthy competition, in his eyes. Obviously, this is not always the case and his personal business goals should be a cause for some skepticism. The purpose of the article was to show the benefits cartels and privatized business can have from the perspective of a businessman who wanted to expand and control the railways.

Additionally, Bouwens and Dankers (2005) found that cartels develop and exist oftentimes because of particular market structures and the desire to hold a monopoly. Contrary to Carnegie and Bouwen and Dankers's point, the reason why many governments took a stand against cartels, as Symeonidis (2002) establishes, is because cartels typically promote collusion, which many governments view as illegal. The author also examines British cartel policy, specifically the 1956 Restrictive Trade Practices Act and other actions during the 1950s to show how collusion typically is conducted and how the government views it in a negative way. Similarly, Suslow (2005) finds that a formal cartel organization sets up a multilateral relationship between firms in a given industry in order to make a profit. In her study, the results show that the more uncertain the environment the cartel operates in, the shorter the duration. Other industry structure characteristics and cartel organization variables included in the empirical model have a much weaker influence on duration, such as competition. Meanwhile, Siegfried (2012) found that market concentration and trade associations facilitate a greater number of cartels.

Cartels have more or less one main goal: find a niche in the market in which they can gain a strong foothold and make a profit. This might be an industry with business opportunities or where they believe they can dominate their competitors and work, oftentimes, under the nose of their government. Levenstein and Suslow (2006) argue that cartels have a significant impact on other industries as well. Along with taking advantage of many people, particularly those who they sell to, they can also have an impact on other cartels. If the government passes legislation to control one cartel, this could hurt the business of other companies that have cartelized as well. This is why many cartels fail in less than five years, since when one gets caught in the middle of their monopolizing scheme, others can be caught as well.

Cartels create a large, formal, and multilateral organization in a specific industry. These relationships are formed through their monopolization practices and cartelize their horizontal and bilateral contract agreements. These contracts are of real interest in order to discover their goals. The agreements aim to be a sort of safety net, not only with regard to the cartel's competitors and the government under which they are working, but also themselves (Suslow 2005). If they can create and sign the right contract, then they can safeguard themselves from one company within the cartel, or from one executive getting all or most of the punishment, usually fines or jail time and the forced break up of the cartel. This way, one person is not held responsible and the blame is spread throughout, oftentimes minimizing the impact. A properly written and signed agreement also leads to increased longevity as well. Cartels are comfortable working in an environment with the proper built in safety nets. Especially with the already significant looming uncertainty, they are able to protect themselves from the severe punishments that can lie ahead. Kwoka and White (2018) explain what precautions companies need to take in order to protect themselves from troubling legal circumstances:

- The fewer are the number of selling firms;
- The more similar are firm sizes;
- The more difficult is entry;
- The more similar are firms' costs;
- The greater is product homogeneity;
- The smaller and more frequent are orders;
- The more available is information about rivals' prices;
- The more stable is demand;
- The smaller and more numerous are buyers; and
- The lower are fixed costs. (Kwoka and White 2018, 198)

Cartels aim to further monetize and monopolize their business in strategic, risky, and very profitable ways. This obviously comes with plenty of risks. That is why their contracts are so important since they have the potential to help the company down the road in the case of an unforeseen circumstance.

2.1.1 Economic Reasons

There are many economic reasons for cartels. They can be formed by the government in order to facilitate some sort of economic goal, such as preparing for war, or can be formed without the knowledge or support of the government and the government not paying particular attention to what the cartel is doing. Whichever situation occurs, some companies may decide to take advantage of it. There could also be a niche in the market the cartel decides to exercise monopoly power and exploit for their benefit. According to Levenstein and Suslow (2006), the potential profits that can be reaped through collusion can be a strong economic motivation for cartels to collude and raise prices. They examine whether these types of situations allow cartels to succeed, how long they can succeed, and why they decide to break up in the end, which happens frequently.

Many cartels do survive, but not for very long because of the many opposing factors at work, such as the government, cheating among their competitors, and opposition of those people they are attempting to take advantage of through monopolization. Other factors include those listed above, from Kwoka and White, such as difficulty of entry and the stability of demand. Marquez (1994) discusses similar findings. A cartel's duration, this paper finds, is a factor of the market they operate in as well as demand growth. Therefore, increases in either of these factors positively affects a cartel's lifespan and causes them to be more successful over time. The cartels that last longer than five years are able to successfully increase prices and profits, especially if they are the only operators in a specific industry.

Zimmerman and Connor (2005) identify and measure why the duration of cartels in a particular industry varies so much. They study more recent cartelized companies, which shows that cartelized activities are obviously still happening, but more importantly, that most governments have still not found a way to deter cartels, if they decide to do so. The five most important factors for a cartel starting and then succeeding are market structure, internal cartel organization, industry-specific conditions, external macro-economic conditions, and antitrust law environment. All of these play an important role in the founding of large cartelized companies.

The most important factors are industry concentration and market share. They both fit together: if a particular potential cartel is not very concentrated, meaning there is not much competition, then there is an increased chance for companies to take advantage of an opportunity where they can drastically increase their profits. Similarly, if there is not a large market share in an industry, then that is appealing for the same reason as above. An economic downturn also positively affects not only the longevity of a cartel, but also the executives' motivation to start a cartel. If there is a downturn in the economy, then they may be able to take advantage of the people they do business with as they become potentially more and more desperate with a downturn in the economy and begin to lose money.

The more firms in a cartel agreement, the larger their market share will be, leading to higher prices and more extreme plans for bid-rigging, or a fraudulent scheme by a corrupt individual or company to make a particular product seem more valuable so it sells at a higher price. Examples of large cartel conglomerates include I.G. Farben and Krupp in Germany. These all add to the appeal and duration of companies as they decide whether or not they want to cartelize themselves. Lastly, not surprisingly, the more antitrust laws that are passed and supported by the government, the more unlikely companies are to cartelize themselves. They sometimes take the large amount of risk into account and decide against cartelizing because of the potential negatives that could come out of it, such as steep fines and jail time for the executives in the companies, if the cartels are deemed illegal.

With regard to the agreements that companies come to in order to cartelize to not only agree how they are going to run the business, but also how to protect themselves from at least a little bit of risk, Siegfried (2012) explains how even the smallest deviation from the agreement can lead to disaster. For example, an elevation in the price of a product will affect sales, and if the cartel changes the amount of funds dedicated to spending, disaster can occur. Not only can disagreements and distrust among the participants occur, but the government may notice something unusual about the activities of the company and decide to step in. Marshall and Marx (2012) call these agreements purposeful collusion where if these contracts are signed and drawn up correctly, then the inter-firm communication will improve as well as the decreased likelihood for internal rivalries. Following the instructions outlined by Kwoka and White above is also an important step. Since the morals of the business owners are already questionable given their willingness to enter a cartel agreement, the respective business owners often do not trust each other.

Among the most important economic reasons for the founding of cartels are market share and monopoly power. Limiting factors include the confidence that the business owners have in the other owners within the cartel, whether the government is aware of their existence or not, and industry concentration. The executives understand the risks involved with these types of businesses, but often, when considering whether to agree to form a cartel, if these factors are in place, they will decide to take the risk.

2.1.2 Historical Reasons

Historical reasons for cartels deciding to go into business are similar to the examples above, but taking a look at a specific example further enhances those reasons. As stated, cartels typically see a hole in the market, lack of government intervention, or both, and decide to take advantage of that opportunity. In Europe, various companies saw an opportunity to form a conglomerate in the German Power-Cable industry, however, a

European Union commission set out to break them up (Normann and Tan 2014). They penalized them through billions of Euros worth of fines and in some cases, banned them from doing business in a particular country. Germany was one of these countries, but others such as Japan were also affected. When they were able to operate fully, before the sanctions, they were making 16% increases on their profits each year, further showing the appeal of cartels to go into business. However, once the fines began to be issued, some of the cartel member companies began to drop out, further showing the effects of government intervention.

Clearly, starting a cartel is a remarkably risky undertaking and for that reason, many decide against it. However, with the right pieces in place, the potential for a large market share, the unwillingness of the government to step in at the time, and the trust of the respective business owners, some choose to do it and test the waters. Oftentimes, however, governments do catch wind of the typically illegal business activity and decide to step in, such as with the German Power-Cable cartel. This can lead to massive fines and jail time, particularly for the executives of the company. Despite this, some business owners are still willing to take the risk.

The United States was clearly anti-cartelization and did all they could through antitrust laws to ensure the safety and security of their industries without anyone having monopoly power. Britain seems to have been essentially a hybrid of Germany and the United States in the sense that they were fairly anti-cartelization, but there were instances of them supporting cartels in the banking and iron and steel industries to support their economy. Germany was quite different from the other two countries, considering how prolific the cartelized activity was, with I.G. Farben as a prime example. The political structure and history of new government regimes allowed for this to happen. Eventually, the United States had a large effect on new German antitrust laws after World War II. All three countries acted in different ways and had different levels of cartelization, making for an interesting case study. A table of some cartels that existed within each country that are explained in this paper is below:

	United States	Britain	Germany
Cartel(s)	Trans-Missouri Freight Association, *1897* Sugar Manufacturing Cartel, *1934-1974*	Iron and Steel Industry, *1939-1948* Banking Industry, *1939-1948*	I.G. Farben, *1925-1951* Krupp, *1811-Present*

Table 1: Cartel Activity

2.2 Policy and Laws

Often national or international governments step in, in order to control or break up cartels. Laws passed by Britain include the Restrictive Trade Practices Act of 1956, which was meant to support competition. The United States passed the Sherman Act in 1890 to promote competition, the Clayton and Federal Trade Commission Act, the Webb-Pomerene Act in 1918 in order to allow certain exporters the opportunity to be free of some antitrust laws, and the Capper-Volstead Act in 1922 to exempt farmers from some antitrust laws. After the war, Germany established the Federal Cartel Office to monitor cartelization in Germany. All of these laws can be seen in the chart below. Gribbin (1976) shows that there were many laws and actions taken by governments to attempt to organize cartels in order to defend the military from being hurt and to ensure a high living standard for their citizens. For instance, the author touches on the United States and the inspiration that they had on other countries to control their cartel industries. He also uses data on what cartels in Europe sold, their business practices, and how they were allowed to conduct business in their respective countries, such as the iron and steel industry in Britain.

Date	United States	Britain	Germany
1890	Sherman Act		
1914	Clayton Act Federal Trade Commission Act		
1918	Webb-Pomerene Act		
1922	Capper-Volstead Act		
1956		Restrictive Trade Practices Act	
1958			Federal Cartel Office established

Table 2: Cartel Laws

Additionally, as Podolny and Morton (1999) find, these laws are instituted since, in the cartelized merchant shipping industry, for example, as well as other industries, the social status of an entrant impacts the behavior of cartels. They find that people of high social status are 40% less likely to be preyed upon by the cartel than those of low social status, making them increasingly successful by preying on lower-class people. Knowing how taking advantage of those who interact with cartels, as well as those who do not is part of the existence of cartels, it is logical that governments institute antitrust laws.

2.3 Social Benefits and Detractors

As far as the effects that the development of cartels has on a respective country, Evenett and Suslow (2000) find that cartels do affect other private practices, namely other businesses that are in competition with them in a significant way and that cartels distort resource allocation as well. They also establish that government policies that prevent cartels can be instituted through the government and other organizations. For instance, Fabbrini and Gilbert (2000) show how the government was able to rebuild Italy's economy after many instances of cartels hurting the economy. Italy used electoral reform to induce new strategies for alliance formation, resulting in party fragmentation, an unprecedented expansion of the number of political parties, and a structure of often contradictory political alliances, thus showing how through the Italian government attempting to change electoral practices rather than the prevalence of cartels, they were hurt even further.

Chapter 3 – United States Case Study

The United States has always been relatively anti-cartel, other than a few specific instances. This differs from Germany and Britain in a significant way. The United States has passed many antitrust acts through Congress to prevent the ability of cartels and monopolies from existing. For instance, in Boston in the late 1700s, the city commissioned a company to build a bridge connecting Boston to Charlestown over the Charles River. They chose the Charles River Bridge Company to build it. However, in the 1830s, the city commissioned another company, Warren Bridge to build another bridge just a little ways down the river. Charles River Bridge went to court claiming that Massachusetts had breached their contract by allowing another bridge to be built near theirs for the same purpose and claimed that they had exclusive rights to the area. Eventually, the court decided against Charles River Bridge, saying that it did not impede on their territory. Instances of this nature, focusing on exclusive rights to certain areas or products as well as other occurrences led to the passing of the Sherman Act. Before the Civil War in America, United States society was fairly agrarian and American industry did not change much at all until after the war. However, once industry and national markets began to expand rapidly and the industrial revolution was triggered, many smaller regional firms faced legitimate competition for the first time. As a result, the larger companies had lower prices and took advantage of economies of scale. Many smaller companies were facing elimination from the market if they did not agree to merge with the larger companies, which then led to the creation of many trust companies in the United States. In order to protect the smaller firms and to keep the trusts from having monopoly power, the government had to step in (Waldman 1986, 23-24). Another case that was an inspiration of sorts for the Sherman Act was the Trans-Missouri Freight Association case, where the Supreme Court ruled that price fixing for any reason was illegal, even if the two prices did not differ much at all (Kwoka and White 2018).

Also in the 1890s, another factor that led to the Sherman Act was the Populist movement. The Populist movement was founded, in part, to combat the perceived abuses of monopolies and trusts. With the crop failures happening in the Midwest and the South, the farmers began to take action to get help from the government. They formed small political groups where they lived and began to take action. After the Civil War, they went from a plantation system to more of a sharecrop style of farming and were being hurt as a result. However, despite the bad crops, falling prices, and lack of support from the government before they took action, other than some minor victories in the locales with strong farming culture, they were able to accomplish very little.

On the topic of the Populist movement, Swenson (2002) challenges the idea that welfare state builders take their cues solely from labor and other progressive interests. He argues instead that social reformers in countries such as the United States and Sweden looked for support from above as well as below, taking into account capitalists' interests and preferences in the political process. Capitalists in both countries appreciated the regulatory impact of reformed social and labor legislation, which later proved to inspire other governments, such as Britain and Germany to do the same. The United States has historically been against cartelization, as shown through their antitrust laws, as well as the way in which they instituted some of their own policies after World War II in Europe.

When the Populist Party was formed in the early 1890s, in order to expand their reach, they included workers from other industries, such as labor and industrial workers.

The main changes they were fighting for were an increase in currency from the Federal Reserve, government ownership of the railroads, and a tariff on their revenue only, among other things. This was all meant to give them more voice within the government to help them down the road when more problems arose as well and was also an inspiration for the Sherman Act (Stigler 1985).

In 1892, the Populist Party was able to nominate a candidate for president, James Weaver. They attached themselves with Democrats as well, and with their new relationships in politics, as well as their presidential candidate, were able to elect some of their members to congress, although they did not win the presidential election. One of their primary goals was to use their unionized power to promote more competition in the industrial and agricultural sectors, meaning they wanted legislature monitoring and disbanding cartels that affected their jobs. This was still a major step in the right direction for their movement. However, most of the elected officials represented the Midwest, not the South. This divide, between the white supremacist members in the South and the elected officials with differing beliefs in the Midwest ended up being the beginning of the end for the Populist movement.

In 1890, The Sherman Act was passed in order to combat any monopolistic agreements that may lead to a non-competitive atmosphere within a particular industry (Stigler 1985). Through the Sherman Act, the Department of Justice was granted the ability to prosecute any company that was viewed as attempting to monopolize. The act also allowed anyone who was harmed, usually in a financial sense, to bring the company to court as well. Each case was, and still is decided on rules of reason and how drastically it affects trade, both domestically and internationally. The Sherman Act came about for a few reasons. First and foremost, there was a large amount of public turmoil with the existence of monopolies in the industrial field, as discussed in the examples above. Most of these grievances were made by unions that were beginning to popularize themselves around the country. Also, in the 1890s, the railroad union was striking, which was essentially what made the government take a step to prevent the executives of the railroads from taking advantage of their workers, as they had in the past. Many politicians felt that these large companies and the ways in which they were run were bottlenecking trade within the United States. These two factors were looming large in the decision to sign the Sherman Act in Congress.

The main purpose of the Act was and is to prevent a monopoly or cartel from raising prices as they see fit in order to protect trade and supply. If they raise prices whenever they want to, then people and competing companies within the United States will be hurt. The whole purpose of the Sherman Act was to allow the markets to dictate where the prices of specific goods should be. This Act was meant to keep markets competitive, so if a company were to gain something resembling a monopoly of their own, through nothing other than the fact they have good business practices, then that is perfectly legal (Stigler 1985). However, if a company willingly takes steps to monopolize, that is when the government steps in. There are two main sections of the Sherman Act, with a third saying United States territories can also be tried. The first outlines what exactly is monopolistic conduct, as stated above. The second shows what type of trade-related results are monopolistic.

Then, in 1914, the United States passed the Clayton and Federal Trade Commission Act. The Clayton Act was passed as an addition to the Sherman Act and was more specific on what other monopolistic tendencies are illegal, such as price discrimination, price fixing, and other unfair business practices. The Federal Trade Commission Act was also passed as an addition to the Sherman Act and was meant to force companies to be honest with their advertising and sales practices to prevent them from being untruthful about the products they were selling (Stigler 1985).

In 1918, the United States also passed the Webb-Pomerene Act with the purpose of allowing certain exporters the opportunity to be free of some antitrust laws. This was based around the war effort as a law that would allow the United States to allow some companies to work with cartels so that they could expand their war production. These companies were allowed to do this until the 1920s (Larson 1970).

The United States also passed the Capper-Volstead Act in 1922 to give the agricultural community antitrust exemptions. It was passed in order to attempt to bring the United States out of the depression they were in at the time, specifically in the agricultural industry. The farmers were feeling an increase in pressure to produce after World War I and needed this Act in order to succeed as well as to provide for the country (Volkin 1985).

When it comes to the United States breaking up cartels, there are two different ways to look at it. One is through the lens of the United States stepping in and breaking up international cartels, which they were only able to do after World War II in Germany in the context of the Nuremberg Trials, which has been highlighted above and is also discussed in the Germany case study. The other perspective is the ways in which they broke up domestic cartels. Hogan (1989) shows how The Marshall Plan was more than an effort to put American aid behind the economic reconstruction of Europe. American officials hoped to refashion Western Europe into a smaller version of the capitalist economy that existed within the United States. Hogan's emphasis on integration is part of a view that sees The Marshall Plan as an extension of American domestic and foreign policy. America was decidedly anti-cartel, so much so that they wanted to influence other countries in Europe to adopt similar ideals.

On the international stage, United States activity centers around how they went about breaking up German cartels such as Krupp and I.G. Farben after World War II through the Nuremburg Trials with the other Allied countries. The laws the United States and other Allies enforced during these trials centered on their already existing antitrust laws, such as the Sherman Act. Kinghorn and Nye (1996) find how strong the United States influence was on other countries in Europe. They believe the United States assisted German industries to have the smallest firms and the lowest concentration levels both in the aggregate and when grouped industrially. French levels of firm size and concentration are comparable to those of the United States, based on census data from the early to mid-twentieth century. Domestically, the United States operated differently. With the Acts they passed above, the United States went about prosecuting cartels differently than they did in Germany.

Examples of the United States breaking up domestic cartels include many instances during the New Deal and after World War II. During the New Deal, the United States passed laws such as the National Industrial Recovery Act in 1933, which worked to strengthen trade networks and maintain prices of goods as to not hurt consumers. They also worked to protect smaller business against the actions of larger businesses and conglomerates. The National Industrial Recovery Act was met with much criticism. For instance, it actually "suspended the operation of Section 1 restrictions against collusive "restraints of trade"" under the Sherman Act, leading to the potential for an increase in cartelization (Alexander 1994, 247). They allowed state and local governments to tax large companies differently to deter them from cartelizing, especially when going over state borders.

After World War II, the United States helped to defend fading anti-competitive industries in order to avoid large and private companies from raising prices, which would effectively cause a monopoly. As Windolf (2002) proves, comparative data on interlocking directorates and capital networks between large corporations in the United States and five countries in Europe, Germany, Great Britain, France, Switzerland, and the Netherlands show that the resources of the economic elite were based on bureaucratic power, property rights, and social capital. In the transitional economies, the type of capitalism that was evolving resembled Western capitalism, but with certain significant differences. Privatization created a relatively high concentration of ownership. There was no clear-cut separation of ownership and control, but rather a balance of power between managers and owners, meaning monopolistic tendencies were more likely within these companies. This shows why the government attempted to step in to disrupt large mergers and made it so huge companies who wanted to buy another large company now had to get permission from the Federal Trade Commission, as to avoid forming a monopoly as well.

When it comes to the United States and how they dealt with cartels in their own country, it is clear that the United States dislike and distrust for cartels was exacerbated during the World War II era. According to Bridgman, Qi, and Schmitz (2009), a prominent cartel in the United States was the sugar manufacturing industry. They study the sugar manufacturing cartel that was created during the New Deal. It was a legal cartel, supported and endorsed by the government that lasted for forty years, from 1934 through 1974. As a legal cartel, the industry accessed domestic and import sales quotas, but it also had to accept government-sponsored cartel provisions. The cartel provisions also changed the location of industry. For example, it kept production in California and the West. Since the United States understood how cartels could sometimes be beneficial, they decided on supporting a select few of them as to protect themselves from cartels that would be illegal under their antitrust laws. Blais (2012) found that cartels have always been important for governments to control through antitrust laws. They overcharge consumers and there is a push for governments to be harder on them, as seen from the United States after World War II. This article demonstrates that the combined level of United States cartel sanctions has been only 9% to 21% as large as it could be to protect potential victims of cartelization. This means that the average level of United States anti-cartel sanctions could be increased dramatically.

The United States has been relatively anti-cartel for its entire lifetime, but there have been moments in which it has had to make necessary changes in order to allow for the growth and wellbeing of certain industries, such as the agricultural industry with the farmers and Populist movement. Clearly, cartels were useful to the United States during World War I, but not after the war. In 1918, they allowed industries that would help with the war effort to do business with cartels in order to improve their standing in the war. In 1922 they had to allow farmers and the agricultural industry to be exempt from antitrust laws in order to help with the hard times they were facing. And before those two laws, in 1890, the Sherman Act proved as a sort of end-all-be-all, bringing what seemed to be an end to any cartel practices going on within the United States. Based on prior research and findings, it is evident that the United States took it upon themselves to wholly embrace their longstanding antitrust laws and attempted to promote them throughout Europe after World War Ii through the Nuremberg Trials. They held steadfast to their principles and wanted to be able to ensure that other countries saw the benefits of doing the same.

Chapter 4 – Britain Case Study

Britain did allow certain industries to cartelize during the time before and after World War II. Even before this point in time, in the late nineteenth century, Germany and other well-developed countries began to catch up or overtake them in the race to industrialize. Britain had no choice but to work to fight against the rising tide with government-supported cartels of their own. The main industries were the iron and steel and banking industries. British support changed the long-term structure of competitive advantage, specifically in the presence of democratic deficits (Hensmans 2011). Increased state support allowed building societies to leave behind other members of society, or in other terms, the people who were not members of banking institutions were left behind by the wayside during the nineteenth and twentieth centuries. As discussed in later sections of this paper, people are once again left behind by banks in the mid-twentieth century. Britain, other than Germany was one of the few countries to allow cartelization, in addition to Australia, France, Nazi Germany, and Japan (Borkin 1940). After World War II, the governments in these nations adopted antitrust laws. The adoption of antitrust laws shows that governments were aware of the struggle over liberal capitalism during the Great Depression and World War II, the postwar Allied occupations of Japan and Germany, the reaction against American big business during the Cold War, and the clash over globalization and the World Trade Organization. The development of big business brought along new opportunities for firms to cartelize.

Both industries on the iron and steel side of the economy were fairly disjointed after World War I, but also had rapidly increasing demand. With the rising demand, companies began to expand rapidly, looking to create their own foothold in the market for long lasting prosperity. Along with the growth of these companies, they began to work together and formed agreements with one another to control prices and distribution in their respective British territories. As a result, the government had to step in to impose price controls on the industry to prevent wide-scale monopolization. This was the first instance of the iron and steel industries attempting to monopolize and cartelize. After World War I, hundreds of small companies existed, all with the common goal of growing as fast as they could to meet the demand. However, at this time, most of the production was controlled by a few firms that could essentially control all of the supply and had the potential to put too much product into the economy, thus hurting the competitors and dropping the prices.

During the interwar period and the peace that came with it in Britain, there was a large rise in demand for iron and steel. After the war, the government subsidized many production materials, including steel and iron, which only facilitated even more supply being brought into the market place. Also at this time, in the early 1920s, because of the rebuilding going on all throughout Europe, Britain was not able to trade as freely as they had before the war, meaning despite the high demand, they could essentially only sell within their country.

Eventually, after the bubble of demand in 1918, 1919, and 1920, the early 1920s brought a steep drop in demand because of all the supply that was brought into the economy. They still had a lot of product for new construction projects such as railways and buildings, both new ones and for ones which were destroyed during the war, but nobody needed it any longer considering how rapid much of these improvements were made after the war. Most of them had already been finished, leading to the excess in supply. As a result, prices climbed, hurting the industry even more.

In the mid-1920s, Britain allowed these companies to dump their excess materials they were still holding onto and had not yet sold into the economy. The government helped by subsidizing prices to add to the draw of companies who did not have a strong need for building materials to still buy them since the prices were so low. While this did briefly remedy the situation, the 1930s brought the Great Depression and prices of foreign imports dropped more than domestic products, making it almost impossible to sell anything within Britain. Barjot (2013) analyzes the most important factors contributing to why the world construction industry, specifically, was dominated by international firms. The paper addresses two major goals, the distribution of building supplies and the shift to services initiated by the European building and public works firms. The conclusions of a macroeconomic approach identify that technological innovation, control of technological progress, better risk management, advantages in terms of organization, commercial know-how and support of banks, more skilled engineers and workers, the decisive role of the colonial experience, and state economic support all played a role. What this means is that because of many changes to the structures of governments on the European continent, industries such as that of steel and iron were booming, but once all the structural changes were put in place and some semblance of normalcy was achieved, the market shrunk for reasons outlined above, especially because of how much supply there was. This indicates why the demand for steel and iron was so high just after the war, but when the 1920s came along, development dropped, and so did demand.

When the steel and iron companies tried to get government support and were able to offload some of their product, they were still hurt because of how much profit they were forfeiting with lower prices. Another reason, as Mowery (1984) shows, was that an important factor in the poor performance of the British economy in the twentieth century was the low level of investment by British firms in research and development, another reason, he states, that Britain fell into the Great Depression. In this article, Mowery compares the development of industrial research in Great Britain and the United States between 1900 and 1950, focusing on the reasons for the much lower levels of industrial research investment in Britain. He concludes that the British difference can be attributed to differences in corporate structure, educational systems, and government policy.

The public sentiment towards the steel and iron cartel was two-fold. Some people and organizations, particularly the construction companies building new structures and the railways, liked the huge influx of iron and steel in the economy, which dropped the prices they had to pay to build. However, these same people and firms then experienced how drastic the prices went up in the 1920s and 1930 for the reasons stated above. This hurt their businesses and lead to them buying international steel and iron products, which in turn hurt the domestic steel and iron industry.

With the lack of assistance from the government, the larger firms still in existence had a few choices of how to proceed. They could accept lower profits and slash the salaries and benefits of top management, but from their point-of-view, the best option was to cartelize themselves in the 1930s in order to protect themselves by controlling prices, contracts, and supply. After they formed the British Iron and Steel Federation, the government eventually and reluctantly recognized them. Despite the government's attempts to not give them any assistance after World War II, other than helping them in offloading supply, once the rearmament practices began in the mid to late 1930s, they recognized the steel and iron industries as a legal cartel in order to use them for their rearmament process in preparation for the impending war. After the war, the Labour Party came to power, which did not change any of the cartelization policies that they allowed during the war. However, in 1951, the Conservatives regained control of Britain and decentralized the industry.

The banking industry cartel was founded for similar reasons in the late 1800s and early 1900s. When Britain began to face competition from industrializing nations, they formed a national banking cartel in order to help finance their domestic production and eventually, their rearmament process. While this cartel is classified as a primarily English cartel, many countries, including the United States, Germany, France, and Italy actually had a hand in it. The most important banking families of the time were all involved. The families included the Lehmans, Rockefellers, Rothschilds, and others. Much of the details have come to light fairly recently, over the past few decades (Toniolo 2005).

For instance, one of the bankers who assisted the families above in controlling much of Britain and developed country's wealth was none other than J.P Morgan. He and the others assisted in funding the English War in South Africa as well as the Franco-Prussian War. He even helped direct the Paris-Peace Conference in 1919. This would indicate that this banking cartel played a large role in the reconstruction of Allied countries between World War I and World War II. They became an integral part of the Bank of International Settlements (BIS), which also oversaw much of the redevelopment after the First World War (Toniolo 2005). The BIS worked with the largest federal banks in the world at the time, including that of Britain, the United States, Italy, Switzerland, Canada, the Netherlands, and France.

At the time, the BIS was not officially considered a cartel, it was well known for helping facilitate many agreements and essentially existed as a bank for all of the central banks. However, many experts did consider it a cartel since the federal banks were able to essentially control the global stock market through the BIS. The BIS was owned by the largest federal banks and existed to buy and sell shares of country's banks with other countries and private investors. However, in 1946, Britain decided to buy into the BIS, allowing them to get assistance in rebuilding and rearming from the BIS, through other countries. Additionally, Capie and Billings (2004) examines a range of evidence relating to British banks in during World War II, when the banking cartel was at its strongest. The conclusion is that the banking cartel can be described as soft, rather than hard, meaning that they had strict output quotas and profit shares among its members, a product of the government's support of the cartel.

In addition to the perceived cartelized activity, although it was not officially considered one, the banking industry itself in Britain was allowed to form a cartel of their own. In World War I, all mergers were to be reviewed by the Treasury department in Britain, and they were always allowed. Because of this, the largest banks in Britain emerged in the early 1920s. They were Barclays, Lloyds, Midland, National Provincial, and Westminster. According to Braggion, Dwarkasing, and Moore (2012), the banks began to change loan rates, making them rise, especially immediately after the end of World War I. Then, in 1919, there was a potential bill in Parliament called the Joint Stock Banks Amalgamation Bill in order to try to control the banks, but it was not passed. Their market share skyrocketed, For example, in 1870, the ten largest banks in Britain controlled about 30% of total deposits, while in 1920, those same banks had a 74% market share.

As a result of the many bank mergers, which produced these massive banks, public sentiment was fearful of the power of the banking industry in Britain, especially during the time of uncertainty surrounding the interwar period and the Great Depression. Because of declining competition, the banks were able to benefit their shareholders and themselves, but hurt the banks' customers because of the rapid decline in competition. The mergers also caused a decline in bank loans and non-price competition, an indicator of cartelized activity. While the economy did expand through the government allowing the banks to merge and hold much of the nation's wealth, it did hurt many of their customers.

In the early 1950s when the Conservatives took over Parliament, many changes occurred with how the government assisted certain industries and how they were allowed to conduct business. The Conservatives had been in power since 1951, the timeframe in which many banks and other industries attempted to and did cartelize. This particular Conservative government moved against cartels, but the Conservative party did not do this consistently. However, in 1956 they passed the Restrictive Trade Practices Act. The goal of this Act was to support competition and forced any company that attempted to or did restrict trading to face consequences and be placed on a public register unless they had permission to do so by the government. Any and all changes to agreements or any new potential agreements had to be brought before the Restrictive Practices Court for them to decide whether they were conducting legal business activities or not. However, the act was only enforceable on goods, meaning the banks and other unified monopolies who did not trade physical goods were not held accountable (Dennison 1959). They essentially only dealt with import and export interfering cartels, which made the banks almost immune to any legislation. In Britain specifically, it is clear they were similar to the United States in the sense that they were not very supportive of cartels, but did understand the potential benefits they could have to their economy, specifically in the banking industry.

Lastly, on a very specific cartel outside of banking and steel and iron, cyanide exemplifies how the development of a new product or a new process, if adopted by the market, generates a number of economic processes including secondary innovations to promote the exploitation of the new discovery (Lougheed 2001). This technological advance also promotes new industrial ventures, which may exist over many decades, thus enhancing economic development. The history of the adoption of the cyanide process for the extraction of gold from its ores exemplifies such developments. One outcome was the formation of an international cyanide cartel. Similarly, in the Rayon industry, Cerretano (2012) offers an account of the European continent's cartelization in the rayon industry during the interwar period. While showing that cartelization went hand-in-hand with rapid growth and a boom in foreign direct investment in the 1920s, he argues that the collapse of the international financial system hindered international cartelization in the 1930s.

Two other sources, Gribbin (1976) and Miller (1962) both exemplify the laws and qualities that allowed cartels to establish themselves in European countries as well as the actions taken against them by their respective countries during World

War II. There is also data on the specific countries that existed as well as what they sold, their business practices, and how they were allowed to conduct business in their respective countries, such as the cartelized banking industry in Britain and how it helped to fuel their economy. Additionally, they highlight European cartel administration and its legislation on the continent and how most governments worked to contain and disband cartels during the period around World War II. It contains examples from both Britain and Germany and their cartels before, during, and after World War II.

Based on their governmental practices, Britain wanted to assist themselves in expanding their economy and allowing their citizens to live with better lifestyles. To do this, Britain introduced and allowed various government-supported cartels, such as the iron and steel and banking industries. These cartels allowed them to expand enough in order to be competitive during World War II.

Chapter 5 – Germany Case Study

Many German cartels were founded during the interwar period when the Weimar Republic was in control of Germany. Because of the transition from the previous government to a new government, many companies saw an opportunity to spring to action and form a cartel to enhance their business practices and increase their profit.

As far as policies that allowed for the rise of cartels in Germany, Normann and Tan (2014) analyze the effects of cartel policies on firm behavior using data from the German Power-Cable cartel, as discussed above. Antitrust authorities affected the cartel under two different legal regimes, penalizing the cartel in some years, and exempting it for ten years from the general cartel prohibition. The differences depended on whether the regimes saw it fit to penalize cartels for their activity. In some years, mostly before World War II, they were penalized, while during the war, they were under much less scrutiny. The threat of penalties was sufficient to reduce profit from collusion. The intended efficiency gains from rationalization, which was the justification for legalizing the cartel, did not materialize.

Additionally, Edwards (1966) highlights most of the countries in Europe and their laws that both prevented and gave way for the cartels. Specifically looking at Germany, it highlights the anti-cartel laws that were passed, as well as decrees preventing monopolies and other cartel-related business operations. However, these attempts at changing the cartel outlook of Germany very clearly did not work and were not enforced, as seen below.

This new manufacturing and production development in Germany through the tariff deals the companies were given by the Zollverein, the German customs union, then allowed these companies to compete on an international scale, particularly with Britain, who was leading the industrialization of Europe. The cartels, combined with the tariff deals, allowed these companies to expand rapidly and successfully. In the early twentieth century, more than 400 cartels existed in Germany in many of its largest industries such as coal, iron, electrical, textile, timber, and many more. The reason why these industries were cartelized is explained by Paesani and Rosselli (2014). They show that commodity markets, inefficient resource allocation, and the cyclical reappearance of excessive surpluses and shortages are all typically managed by national governments, and typically also focus around cartels, thus explaining why cartels became so prevalent in Germany.

I.G. Farben, the main cartel of interest for this study, was the most powerful dye and pharmaceutical cartel in Germany. However, before they were founded, the German cartel system was allowed to develop in the late 19th century to attempt to make up lost ground from the industrial revolution. The Zollverein made tariff deals to enable the mass production of plants for various companies, one of which was Krupp. Because they were behind other rapidly developing countries, they were allowed to develop under the protection of the Zollverein. This allowed the companies to get certain privileges and tax breaks that very few industries outside of manufacturing allowed. As Germany began to become affected by industrialization more and more in the late nineteenth and early twentieth century, Germany eventually became a dominant force in the chemical and pharmaceutical landscape. I.G. Farben was the leader in the chemical industry in Germany. Eventually, they had 90% of the entire market share of international chemical products by the early Weimar era (Sasuly 1947).

Germany had many active cartels over the course of the nineteenth and twentieth centuries. Much of this information comes from the *Survey of International Cartels and Internal Cartels* (1976). Even starting as early as the eighteenth century, the first coal cartels began to be founded. Krupp began to mine coal near Essen, Germany in the mid-1700s. They then were able to use the Zollverein policies to build new plants and mining operations to eventually form a cartel in the coal industry. These then led to iron and railroad cartels since both of those were required in Krupp's business practices. Over time, all three of these industries were able to cartelize, with Krupp having their hand in some aspect of all of them. The steel cartel in particular became the most powerful of the three, catapulting Germany to be the leading producer of steel by the late nineteenth century.

These first instances of cartels in Germany, such as Krupp, allowed for the next breed of companies to come up under these favorable deals, such as I.G. Farben in 1925 (Hayes 1987). They were able to monopolize patents. As more and more companies in the pharmaceutical space began to apply for patents, I.G. Farben was able to control all of them, giving them all of the power in their field, thus forming a monopoly. They were able to research the remaining chemical companies and buy patents they thought they would eventually need to put them out of business and take over the industry by themselves. They did this in multiple industries in which they were present. These included plastics with Rohm and Haas and pharmaceuticals with Merck, Boehringer, and Knoll. All these companies were connected through cartel contracts in order to not only organize the conglomerate, but also to protect them.

When the Weimar Republic began, the country's economy and social practices were fairly relaxed and were quite similar to the concept of free market collaboration, or laissez faire. The other areas of the government, particularly the courts, also shared in this view and supported the idea of a free market. This is why the cartels were able to gain such a strong foothold in the country. Even in the 1890s, the court system held up the policy of the freedom of contracts, essentially granting cartels the right to continue signing any and all agreements that they deemed to help their business strategies. Not only that, but the public also mostly agreed with this stance and supported the idea that as long as the cartels understood that they had to operate with the public in mind and in a way that could help them, they saw no issue in restricting them. As Germany fell into depression during the late nineteenth century, the largest companies, banks, and wealthiest people were able to find ways in which to cartelize their businesses to bring more wealth to themselves and increase the industrial standing of Germany.

During the Weimar Republic era and into the World War II era, the German economy changed substantially with the transfer of power to and from the Weimar Republic. Their competition policies did not do very much to influence the existing cartels and they did not do so much in the sense of restricting any sort of trade or exports. They had nothing close to America's antitrust laws at the time that still exist to this day.

Once these cartels were formed, many of them found further success within Germany because of a new government being formed under Adolf Hitler and the Nazi regime. Since this led to German rearmament and the start of World War II, many cartels were able to take advantage of the current state of Germany, with the support of the government, and worked with the Nazis to gain a stronger foothold in the economy.

Between the mid-nineteenth century and the period surrounding World War II, Germany was neither pro or anti cartels. In fact, both the Weimar government and the Nazis had no qualms with cartels in Germany. They essentially stayed out of the way, especially after any attempt at legislation would not take. As stated, most of these industries were in the manufacturing space, with steel, chemicals, and coal all being cartelized. By this point, the cartels in Germany were very productive and if the German government had made a strong attempt to disband them, which they did not, almost all of their production and manufacturing capabilities would weaken considering how much money was coming out of cartels.

Pertaining to the cases mentioned above, Borkin (1978) highlights the huge chemical corporation, I.G. Farben, and its relations with Hitler and the Third Reich, its takeover of the chemical industries of Europe in the wake of German conquest, its use of slave labor in its own Auschwitz-like concentration camp and its trial at the Nuremberg trials. Hayes (1987) argues that I.G. Farben proved consistently unable to influence national policy outside the narrow sphere of the firm. The most infamous aspects of Nazi policy, the Third Reich's armaments and autarky drives during the 1930s, Germany's advance toward war, the pillaging of Europe, the exploitation of slave and conscript labor, and the persecution of the Jews occurred despite I.G. Farben's advocacy of alternative courses of action. Nonetheless, I.G. Farben grew rich under the Nazi regime and was directly involved in some of its greatest crimes. This proves how whether I.G. Farben supported what the Nazis were doing or not, they were benefitting from being allowed to work under the Nazi regime.

Similarly, Sasuly (1947) showed that I.G. Farben controlled more than 380 other firms throughout Germany and 500 foreign firms and was involved in at least 2,000 cartel agreements, which spearheaded Germany's preparation for World War II. The author was head of Intelligence and Liason for the Finance Division of the Allied Control Council after the war. The trials of Nazi industrialists at Nuremberg were based largely on information his office provided.

The German government endorsed their relationship with I.G. Farben, as both sides were profiting from their agreement. Essentially almost all of the production coming out of Germany was controlled by a handful of organizations that were quickly joining together (Hayes 1987). Germany did not have any policies to regulate monopoly powers or cartels at this time, as further proven through Hitler's famous "export or die" quote. More and more of the cartels began to increase their exports at this point and as a result, the Germans were faced with remarkably steep tariffs from the countries in which they were exporting. Krupp was also utilized by the Nazis in many cases to help with their rearmament and ammunition attempts before and during World War II, as well as I.G. Farben, as shown above. Stokes (1988) produced a study of postwar German chemical firms, which brings new insights into the resurgence of the West German economy after World War II. Germany was able to utilize many of these cartels to bolster their economy. Additionally, when Germany began to invade and take control of other European countries, such as France, they incorporated the local companies into their own conglomerates to allow for more control and more profit. For instance, French oil companies were incorporated with current German companies at the time. The French companies also received benefits from their success under the Nazis as well, making it a good deal for both sides. This instance in particular lasted from 1940 though 1944, when the Germans began to fall in the war. This shows how important the cartels were to Germany during the war. The outside countries had it in their own interest to protect their domestic industries. Germany could not do anything to stop the cartels without disrupting their economy at this point, so other countries had to defend themselves.

Most of the disbanding of German cartels was facilitated by the Allied countries, particularly the United States and Britain after World War II, when Germany was split up between East and West Germany. Most of these break ups happened through trials, such as the Nuremberg Trials. The Allied Powers brought the cartels to court and tried the companies under their laws. The United States had a history of antitrust laws, so obviously most of the companies did not successfully make it through court. Schröter (1993) researched the six leading German cartelized firms during the twentieth century to understand the historical realities of the foreign market. The author concludes that the post-Second World War Americanization of Germany has implied a further connection to America and their influence as far as the interconnectedness of many governments, including the United States, Britain, and Germany.

As stated, I.G. Farben was also able to cartelize during the time surrounding founding of the Weimar Republic. According to United States government reports, made public by the United States Government Printing Office in the early 1950s, a large trial against I.G. Farben shows just how tumultuous these cartels were. Documents on the trial against I.G Farben and the crimes they were charged for also include affidavits of the defendants. Additionally, the documents show the decision of the Military Tribunal and how they decided to break up the cartel. Also during the trial against I.G Farben, the documents show they were charged for many different transgressions such as slave labor. Documents on the trial against Krupp and the crimes they were charged for include why they were deemed a dangerous company and specifically analyzes their use of slave labor as well. Additionally, it shows the decision of the Military Tribunal and how they decided to break up the cartel, by disbanding and jailing those responsible. Schulte (2002) also wrote a book that covers Germany before, during, and after World War II and the business practices during those time periods. It also looks at how women were used and specific companies that operated as cartels, including German Earth and Stone Works and the shady business practices of the SS and how they were similar to cartels. Germany, because of the turmoil in the country and the surrounding area before, during, and after World War II was filled with cartels and was taken advantage of by companies such as I.G. Farben.

Despite this evidence, it is important to remember the United States was also involved with the cartels before and during the war in some ways. Germany was a prime location for many cartels to develop because of the ways the government allowed them to succeed during World War I, the Weimar Republic, and then World War II. According to Martin (2016), prior to World War II, German industry was anti-democratic, which is in many cases pro-cartelization and was somewhat skeptical of Hitler. After the Allies had successfully occupied Germany and removed the Third Reich, the process of reconstructing the devastated nation's economy began under supervision of the United States government. James Stewart Martin, who had assisted the Allied forces in targeting key areas of German industry for aerial bombardment, returned to Germany as the director of the Division for Investigation of Cartels and External Assets in American

Military Government, a position he held until 1947. Martin investigated the industrialization of these cartels and investigated their ties to Wall Street. Many American corporations had done business with German corporations who helped fund the Nazi Party after they came to power. Despite the lack of effort to stop cartels, it is clear that the United States did not do much by way of assistance, either.

Since Germany was powerless after the war and was at the mercy of the Allied countries, almost all of the dilution of the cartels was facilitated by the United States and Britain. If it were not for the end of the war, those cartels such as Krupp and I.G. Farben could have lasted much longer. Based on prior research and findings, it is evident that Germany was unwilling and at the same time, allowed cartels, such as I.G. Farben and Krupp, to exist under the premise that the government was able to utilize them for their needs. This is how Germany primarily differs from the United States and Britain.

Chapter 6 - Comparative Analysis and Discussion

There is no doubt that each of these countries, the United States, Britain, and Germany, treated cartels differently. Each country had different levels of stability and governmental priorities and beliefs that all factored into how they treated cartelized companies. Germany very clearly knew what their cartels were doing, but based on their historical practices, there was no reason to expect them to prevent cartelization at all. They endorsed many of them, specifically Krupp and I.G. Farben and struck deals with them during World War II after they had been around for decades. The United States had the opposite outlook on cartelization. Through many acts and laws, such as the Sherman Act, they worked to disallow cartels to do business within the United States. Britain is a sort of combination of the two. They passed the Restrictive Trade Practices Act in 1956, which is similar to the Sherman Act in the United States, but not quite as strict, but they also eventually endorsed the steel and iron cartel and did nothing to stop the banking cartel, which is more similar to Germany.

6.1 Similarities and Differences of the Three Countries

Prior literature has shown how different the United States, Britain, and Germany all have been with the cartelization of certain industries within their respective countries and also how those industries were treated by their governments. The chart below shows some of the basic characteristics that each country showed during the World War II period and how they differ.

Issue	US	UK	Germany
How cartels form	Secretly	With government blessing and support	Private and open during tumultuous times
Prevalence of cartels	Some, but hidden and illegal	Some	Many
Attitude toward cartels	Anti cartel	Fairly anti-cartel	Both to be used by the government and ignored
Policy	Strong antitrust	Instances of cartel support	Mainly post-war court hearings
Favored cartels	Iron and steel	Banking, iron and steel	I.G. Farben
Reason for support	Rearmament	Support economy, rearmament	Nationalism and profits

Table 3: Country-Specific Cartel Activity and Policy

The similarities and differences of the countries are briefly outlined above, but this will be a deeper dive into them. The first important distinction to make is how strict or relaxed the countries were when it came to allowing or disciplining cartels. The United Sates was and still is remarkably strict. With the passing of the Sherman Act, the Webb-Pomerene Act, and the Capper-Volstead Act, it attempted to thwart any potential cartelized activity within the United States. The Sherman Act, in essence was meant to promote more competition in the economy and to punish any company who was perceived of attempting to monopolize themselves. It was meant to protect the United States and the international economy from intentional efforts to raise prices and change the supply of certain goods. The Webb-Pomerene Act granted amnesty to certain companies to be exempt from antitrust laws, a change from the hard stance of the

Sherman Act. This act was signed to allow certain companies to do business with cartels to increase war production and to give a boost to the economy. The Capper-Volstead Act came about because of the farmers and the rise of the Populist movement, whose main goal was to help out the struggling farmers in the South and Midwest.

Very clearly, the United States was only in support of doing business with cartels in certain, vital situations. For the most part, they did not support cartelization within the country. Despite the stance they took against cartels, Blais (2012) demonstrates that the United States has actually not been as hard on cartels as they are perceived to be and could have actually been stricter. Based on United States antitrust laws, the United States could have actually been 79%-91% harsher on cartels, referring to their fines and jail time for the individuals and companies held responsible.

Germany is quite different from the United States, and much of that is because of the government turnover they experienced between the early-mid 1900s, specifically between World War I and World II. The transition to the Weimar Republic saw the founding of new cartelized activity in Germany, specifically I.G. Farben, and before them, Krupp. Both monopolized themselves through many different actions, including buying up patents of their competitors, and merging with their competitors. Both were able to thrive during the Weimar Republic through these means as well as by being able to grow while under the government. There were very few attempts to control their growth or attempts to stop them from taking over the pharmaceutical and industrial space. Then, when the Nazis came to power before World War II, they were able to continue doing the same thing.

There were some very minor attempts to thwart their growth early on, but eventually, once Adolf Hitler and his government began the rearmament process and began to reorganize the government, and then started the Second World War and their "final solution", those companies became an even more integral part of the government. The Nazis began to use them for their benefit, striking deals with them. Since labor was hard to come by because of the war, companies then began to approach the SS asking to use some of their prisoners in their factories. The Nazis agreed in return for small fees and for assistance with research and medical supplies on the side of I.G. Farben, and assistance with rearmament through Krupp. Much of this information was uncovered through the trials that the United States led after the war was over with the other Allies. It was not until these trials that the scope of I.G. Farben and Krupp and their relationship with the Nazis was discovered and they faced consequences and were forced to break up (Hayes 1987).

The United States and the Allies stepping in was the first time these companies faced a zero-tolerance policy, since they were able to work hand-in-hand with the prior German governments. Germany differs from the United States in the sense that they allowed cartels to develop completely unscathed, however they do show similarities to Britain, since they allowed the banking cartel to develop with essentially no monitoring.

Meanwhile, Britain is essentially an example of how the United States and Germany's stark differences can appear elsewhere. Britain was similar to the United States in the sense that they did not want to give any assistance to the iron and steel industry. They allowed them to cartelize, in a sense, just after World War I, which differs from the United States. The cartel came to the government asking for assistance after they were hurt by the Great Depression and were putting too much supply into the marketplace. As a result, the government helped the British Iron and Steel Federation control prices and assisted them in selling as much material as they could into the economy. This action seems similar to the Capper-Volstead Act and the Webb-Pomerene Act by the United States in the sense that they are helping a struggling industry try to get their footing back.

The banking industry in Britain during the World War II era is quite different from how the United States treated cartels and is more representative of Germany. They allowed the largest banks in Britain to merge with and buy out smaller, less powerful banks in order to control almost 80% of total deposits by the 1920s. The United States, based on their track record with companies such as the Trans-Missouri Freight Association would have gotten involved, while Germany most likely would not have. This is what makes Britain a sort of combination between the United States and Germany. At times they were somewhat harsh and attempted to stop cartels to promote competition, while other times, they were similar to Germany and allowed companies to cartelize without doing anything to stop them. They also passed the Restrictive Trade Practices Act in 1956. This act shows some similarities to the Sherman Act, but it is not nearly as harsh. The Sherman Act was meant to stop all cartelized activity and was meant to promote competition without collusion in all industries, while the Restrictive Trade Practices Act did attempt to stop cartelization, but only with goods, meaning that anything that effected imports and exports was prosecutable, while other cartels, such as the banks were safe. It was very similar to the Sherman Act where it did promote competition, but only for select industries.

On a similar note, containing the broad scope in the differences between two of the countries examined, Dobbin (1994) found that the United States, France, and Britain used different kinds of industrial policies to improve economic growth. This book examines the evolution of public policies governing one of the first modern industries, the railroads. The author challenges conventional thinking in economics, political science, and sociology by arguing that culture plays an important role in the development of policies designed to promote industrial growth. This goes to show the differences many countries can have when approaching antitrust laws and their stance on them.

However, Britain, the United States, and Germany all have one common similarity. They all used cartelization to help themselves with the effort for World War II in one way or another. Germany obviously utilized I.G. Farben and Krupp with their war efforts and rearmament. Britain utilized their iron and steel industry for the same purpose, as did the United States with certain industries, such as agriculture. This is the one similarity that all three countries share with each other.

6.2 Why this is Important

The importance of recognizing and understanding the differences between how the United States, Britain, and Germany treated cartelization in their countries is that it shows how business was allowed and expected to be conducted in their own respective ways. All three countries were successful in their own ways. The United States was able to build their economy and expand it based on laws of competition and antitrust laws. Britain was able to rearm themselves and rebuild their economy after the Great Depression though allowing the banking industry to grow, thus helping their economy.

Germany was a disaster after World War I, and without the cartels helping them rebuild their economy, rearm themselves, and help with the war effort, both before and during, there is no doubt they would have been defeated earlier.

While the United States is by far the most successful and longest lasting economy, in terms of relative stability, all were successful in their own ways. It is a fact that the United States assisted in helping to rebuild Germany after World War II, with the help of Britain and the other Allies. Their two similar, but different approaches to the management of cartelized activity played a major role in the Nuremburg Trials after the war and the rebuilding of the German government and economy. Many of the beliefs of Britain and the United States were transferred onto Germany and has influenced their policy making since the war, including the development of their Federal Cartel Office, which is meant to do the same as their counterparts in the United States and Britain, to ensure the encouragement and enforcement of competition. The success of this office can be seen though the example provided by Normann and Tan (2014), who took a look at firm behavior, using data from the German Power-Cable cartel. Although not directly related to the time restrictions of this study, it sheds light and detail as to why cartels operate in the ways that they do. This cartel was founded in the 1990s to combine the six biggest power-cable companies at the time, however, antitrust authorities actually stepped in and broke them up.

Knowing this history is important to understand how different countries can have differing policies concerning how to develop business and build a fruitful economy, but many times, they come together and the policies of one country can help another country develop new laws and policies meant to help their growth in a stable way. While

Germany did develop their country's economy and rearm very quickly after World War I, they did it through unstable means, through cartels such as I.G. Farben and Krupp. After the war, with the help from the United States, Britain, and the other Allies, they have been able to take some of those policies and adapt them for their government which has helped them become more productive, competitive, and stable. Although, there is a legitimate argument that the Allied powers had personal reasons to get involved with the trials after the war so that they could break up what they deemed to be illegal cartels in order to decrease competition for their own domestic companies. However, even with this argument, the Allied powers still did help Germany build and maintain a successful economy through their own governmental beliefs, with some inspiration from the Allied powers.

6.3 How WWII Changed Cartels

Before and during World War II, cartels were much more prevalent than they are now. While they do still exist, many are government supported and are watched closely. OPEC is the main example of cartels that are still very prevalent and have more power than some governments, but are still able to do business with the entire world. Their member countries work together to determine the quantity and prices of their respective oil reserves. They do operate as a stereotypical cartel, however. They fix the prices of oil barrels in ways in which allows them to not only determine how countries can buy and afford them, but also in a way to make sure they can still benefit. They do engage in price wars, especially with countries such as the United States since they have plentiful amounts of their own oil and are a non-member on account of them never being invited to join and their support of Israel. However, they are still recognized by governments all over the world because oil is not a commodity in the vast majority of countries.

Overall, attitudes towards cartels in the United States, Germany, and Britain all seem fairly similar today because of the ways in which they all have instituted and have continued to enforce antitrust laws. However, they differ in the timing of the creation those laws, with the United States being the earliest, then Britain, and lastly, Germany. How they got to the point of anti-cartel legislation, however, is the difference. The United States had the Sherman Act signed well before even World War I in response to different events such as the Populist movement, Britain instituted cartel policies most forcefully when the Conservatives took control of Parliament in 1951 and instituted the Restrictive Trade Practices Act in 1956, and Germany had to loose the war and go through the Nuremburg Trials before they began monitoring their cartels with a Federal Cartel Office. All of these countries had different experiences with cartels and had differing outlooks on how to use, punish, and facilitate them, but in the end, all have arrived at a relatively similar final outlook on cartel practices.

Chapter 7 – Conclusion

Cartels all operate quite similarly. They have the goal of increasing their revenue and taking control of a market through monopoly power. These goals are clearly shown by Andrew Carnegie (1889) and his thoughts on the government stepping in and disrupting his plans for the railroad industry in the United States. Often, these companies find ways to use particular market structures and governmental policies in their favor in order to conduct their business. Sometimes this is illegal, such as the position that the United States took on particular domestic cases, and other times, it is legal, as seen through the relationship I.G. Farben and Krupp had with the German government. The important aspect of cartelized business practices to keep in mind is their promotion of collusion, price discrimination, and other methods of controlling the supply of a particular good in a market. This is typically where governments with antitrust laws will step in and take action against cartels.

When cartelized companies who hold monopoly power, or anything resembling a monopoly begin to take advantage of trade practices, many governments will step in and break up and prosecute them. The United States has been the most forceful about this. With their laws, such as the Sherman Act, they wanted to end collusion and promote competition. Then, more than half a century later, Britain passed the Restrictive Trade Practices Act of 1956. Both countries saw it fit to insert themselves into the business practices of cartels. For instance, the United States implemented the Sherman Act in part because of the Trans-Missouri Freight Association, who was accused of price fixing. Britain took similar actions, especially when it came to any company that could affect imports and exports. They did not want any one company to have a monopoly over an entire industry. However, that is where their antitrust actions stopped, as seen in the case of the British banking cartel that formed to control almost 80% of the nation's deposits. The British government did nothing to stop it. Both countries also allowed some cartel-type companies to succeed as well, since they allowed iron and steel cartels to develop for the country's benefit while rearming for World War II. This is seen in the case of the iron and steel industry in Britain when the government helped the industry sell their excess products and also used them to rearm for the War. The United States signed the Webb-Pomerene Act in order to allow some industries, such as agriculture, to do business with cartelized companies in order to help them with the war effort as well.

Before and during World War II, Germany was on the opposite end of the spectrum when it came to cartel practices. They chose to endorse and work with many cartels, the two most important being Krupp and I.G. Farben. They did not have any legislation preventing these companies to cartelize, nor did they make any serious attempts to do so. The main reasons for this were, quite simply, because of their lack of policies and desire to step in since the government was being assisted by the cartels and the cartels were being assisted by the government. Meanwhile their outlook on cartel activity did change drastically after World War II when the United States, Britain, and the other Allies stepped in during the Nuremburg Trials. The Nuremberg Trials were meant as war crime prosecution, not for cartels specifically, but the disbanding of cartels did become part of the trials since they were roped in with war crimes in some cases. So, as a result, it took the implementation of foreign antitrust laws and the change in governmental policy for them to eventually establish their own antitrust laws and court.

These countries are undoubtedly different when it comes to their cartel policies before, during and after World War II, but what is interesting is how not only they went about enforcing antitrust laws differently and how they changed their laws depending on what type of cartelization activity was occurring in their country, but also how they all have one similarity between them. They all utilized cartels at one point or another during World War II. The United States used multiple industries such as the agriculture and iron and steel industries, Germany used I.G. Farben and Krupp, most notably, and Britain utilized their iron and steel industry for rearmament as well. This is the lone parallel between all three case studies.

Whether the cartels had success or not is completely dependent on context. In the United States, the lack of cartels and the hard stance taken by the government shows how successful a government and economy can be without the support of cartels and how the government working to rid the economy of anti-competitive companies can work. In Britain, it went both ways. The iron and steel cartel, while they did have tough moments and did little to add to the wellbeing of the country in the 1920s, did help Britain rearm before the war, after the government recognized them as a legitimate cartel and decided that they needed their help. However, the banking cartel was different. They did help boost the economy and earned more money for their investors and the company itself, but they did nothing to help their customers since rates became inflated. They actually hurt them through controlling much of the wealth, and their customers suffered because of it.

The outlook on Germany depends on the timeframe. Before and during World War II, cartels were a major part of their economy and helped rebuild the country and were in charge of much of the production and industrialization that Germany so desperately needed. However, at the end of the war and after the war, it is clear that the cartels did little to help Germany in the long run. Through their relationship with the Nazi government and utilization of Nazi resources, including laborers, they were harshly punished after the war for their crimes and Germany was left with a severely damaged economy with little to no organization. That is not to say the cartels were responsible for the downfall of Germany and their economy after World War II, but they did not help the cause either.

Clearly, judging the success of a cartel, specifically those during World War II, is tough to do, especially considering the core difference in the antitrust laws that each country followed. It also depends on the entity that is assessing its success. If it is the government and the cartel was supported and the cartel was profitable, then it was a success. The opposite is also true. From the cartel's point-of-view, if they made a lot of money and were able to get away with raising prices and having monopoly power, then it is a success. Just like above, the opposite is also true. From the outlook of a citizen, if they are not effected by the monopoly, then the cartel having a monopoly is not their problem, but if they are effected, then it is problematic. However, what is clear is that the country that suffered the worse was Germany, who had by far the most cartelized activity, and the country that made out the best during World War II was the United States, which was the opposite. All the cartels did was conduct business within the scope of what was legal at the time in Germany. Obviously other factors must be taken into consideration, especially considering that the United States did not enter the war until late and that they were not in Europe, sparing them damage to their infrastructure. Either way, however, it is clear that in this case study that the United States and Britain and their stricter laws against cartels did more to help than hurt the countries during World War II, especially when compared to Germany. These countries are different because of their willingness to create and enforce antitrust laws. All of them have different ways in which they approached controlling cartels, indicating that cartels can be taken advantage of for governmental purposes, and can hurt a country, but can also be useful in some cases. Further research may include examining how each of the steps taken to promote competition since World War II by the United States, Germany, and Britain have effected the competition among firms in their respective counties. The case studies of each of the countries in this thesis make it clear that cartels are just like any economic tool.

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