



Picture of Taipei, Taiwan, courtesy of Tong Chen

BACHELOR OF COMMERCE BEST BUSINESS RESEARCH PAPERS

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PETER B. GUSTAVSON
School of Business

The world looks different from here.





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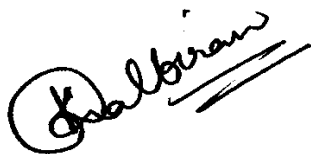
Note from the Editor

The Peter B. Gustavson School of Business is 'international at heart' and we believe that international experience is necessary for developing a global skillset and a culturally competent mindset. The goal of our Bachelor of Commerce (BCom) program is to impart students with the essential skills and knowledge that they need to become a business leader in the global economy. Therefore, it comes as no surprise that close to 200 BCom students decided to go on international exchange in the year 2017-18. During the semester abroad, many students register in COM 470 – The International Business Research Course – which allows them to not only engage with the business practices in their host country, it also enhances their research and writing skills. To showcase the efforts of our students, we present **Best Business Research Papers, Volume 11**.

This year, the students analyzed the challenges and opportunities presented by various elements of the external environment of business in their host countries. In this 11th edition, we present the **top eight of our most interesting research papers**. The topics researched by students cover a wide range of areas, ranging from renewable energy, climate change and energy security to slavery in the private sector, and international strategies of FIFA. Irrespective of the topics studied, these most interesting papers provide an insight into the international experiences of our students, wherein they focus on understanding the international business environment. We hope that these outstanding papers inspire other students to engage in international business research.

We would also like to congratulate Taylor Backhouse and Zack Poirier on receiving the **Jamie Cassel's Undergraduate Research Awards (JCURA)** this year. Taylor researched the impact of the German divide from 1948-1989 on business practices in East and West Germany. Zack analyzed the effects of Poland's energy security needs on Gaz-System, the Polish state-owned natural gas infrastructure and transmission firm.

The University of Victoria's Gustavson School of Business is proud to present these research papers from our 2017-2018 COM 470 students. We would like to thank the people who make this international exchange opportunity a success; it would not be possible without the hard work of these dedicated individuals. Thank you to the International Programs team of Dr. A.R. Elangovan, Director; Brian Leacock, Associate Director; Jane Collins, Manager, International Exchange; Allen Sun, IP Development Officer - China Specialist; Sherri Love, IP Development Officer; Elsa Yan, Exchange Student Advisor; Christina Hernandez, International Student Advisor; Giordi Giacomelli, IP Assistant; as well as Audrey Audebert, BCom Advising Officer and Shannon Perdigao, Academic Projects Officer. On behalf of everyone involved, we hope you enjoy Volume 11 of the BCOM Best Business Research Papers.



Komal Kalra and the Editorial Team

COM 470 International Business Research Instructor
Editor, *Best Business Research Papers, Volume 11*



International Business Research Experience

My international experience in Germany was phenomenal. Having the opportunity to discover Germany's culture, learn the language, and explore many of its European neighbours provided me with a unique aptitude for culture and travel. One of the highlights of my exchange semester was being able to bring the skills and concepts learned at Gustavson Business School to a real-life context while completing research on the modern day economic consequences of post-war Germany. Doing this research allowed me to delve deep into the German business environment and the day-to-day culture of my exchange city. In the end, this project reviewed to me how politics, history, and having a nation torn apart, can have long lasting effects on the economic state of a unified and thriving nation. Overall, I believe this project made my exchange a more well-rounded and immersive experience.

Taylor Backhouse

Prior to my exchange abroad, I had never left North America. Being at the center of the thriving industrial machine that is southwestern Germany was an extremely enriching experience, and it has been invaluable in my personal and professional development. It has allowed me to learn more about international politics, business, and people in general than I thought possible. I'm lucky to have been able to produce a research paper on such an interesting and culturally unique phenomenon, with the co-operation of the University of Mannheim and Fuchs Petrolub. It altered my preconceived notions of what successful business models could be, and I hope that it has genuinely intrigued you as intensely as it did me.

Amy Chen

My international experience in Hong Kong was incredibly transformative and eye-opening; I got the opportunity to immerse myself in a culture unlike anything I have ever been exposed to before, and this time within the context of my business degree. My research paper provided me with an academic lens through which to view the lives of those exploited within Hong Kong's labor force and the underlying forces that further stimulate this problem on a global scale. This subsequently framed the rest of my travels around South East Asia, and I am forever grateful to have had the opportunity to complement my education in such a way and delve into such a complex issue.

Shivani Chitroda

While on exchange at the University of St. Gallen, Switzerland, I was given the opportunity to study under some of the foremost academics in Europe. Among those was a major inspiration for my research—Nicolas Evans, FIFA Group Leader. While this experience was invaluable, it is important that I do not understate the influence of cultural learning in addition to my academic experiences. Many of my European travels were football focused, seeing football matches from Barcelona to Manchester with many in-between. These experiences, in tandem with my passion for football, drove me to write a paper that represented my time in Europe.

Marshall Henson



My research experience while on exchange was an excellent complement to the BCom program and my overall experience studying abroad in Poland. In terms of helping my development in other areas of my degree, preparing a paper on Polish energy infrastructure was a perfect extension of learning in my European Union Economics course that I took on exchange, and was an interesting application of market concepts I learned about in my co-op in Canadian energy infrastructure. Regarding my overall exchange experience, preparing a research paper helped me develop relationships with Polish professors and was a great way to integrate into the academic community at my host university.

Zack Poirier

Although many found it challenging to find motivation in their research while on international exchange, I found it to be a worthy addition that encouraged my intellectual engagement in the overall experience. Researching renewable energy, an ever emerging and significant sector of business, heightened my understanding of Germany's significant leadership in the renewable energy economy; in particular, the process brought light to the existence of clearly untapped business opportunities and benefits that exist for Canada when placed in relation to Germany's progress. The research integrated well with my experience- broadening my understanding of complex business decisions cross-culturally, and building on what the Gustavson School of Business lays solid foundations for in core year. I highly recommend fully engaging in this opportunity, as it will encourage a well-rounded international exchange experience, and present exceptional opportunities for learning and network expansion.

Emma Scully

One of the reasons I chose to attend the Gustavson School of Business is the amazing exchange program and the various international opportunities the school provides. During my time in France I had the opportunity to experience the culture and improve upon my French. I observed how important quality wine is in the French culture and how often it is consumed. While writing my research paper I had the chance to research how climate change is affecting the production of quality wine, impacting the French economy and the production worldwide. Writing the research paper was a great way to immerse myself in the French culture while on exchange.

Richelle Stewart

I was given the opportunity to study in France for my semester abroad, and after finding out I would be in the Champagne region you can only imagine my excitement. Thus, when given the freedom to choose my research topic it seemed fitting to choose the champagne production industry. After visiting the first couple champagne houses, exploring the underground caves, and learning the history I was confident in my decision to research the industry further. I highly recommend visiting the champagne caves and learning the history that remains evident in French culture today. Overall, this research paper complemented my time on exchange and I hope to visit again one day.

Eryn White



From Physically Divided to Economically Divided: The Modern Effects of the German Divide from 1945 -1989 on Current German Economics and its Implications for Doing Business in Germany

Taylor Backhouse

I would like to dedicate this paper to L.G. for helping me with my research and for putting up with all my late nights of writing.

ABSTRACT

Since the war, Germany has struggled to get back on its feet politically, socially, and above all economically. During the division of the nation from 1949-1989, the economic differences between the Federal Republic of Germany (West Germany) and the German Democratic Republic (East Germany) were undeniable. Considering the fact that West Germany operated a free market economy in a western political system, and the East operated a centrally planned economy in a communist political system, there were many economic hurdles come the reunification of Germany in 1989. However, immediately after reunification there was an obvious gap in the economic state of the eastern and western sections of the nation. Thirty years later, despite Germany's economic reputation as a world leader in exports and manufacturing, the gap between the East and West can still be seen in many aspects of German economics. The purpose of this case study is to examine the initial cause of the economic divide as well as to examine the reasons and the severity of the gap as of 2017 and its implications for doing business in Germany.

INTRODUCTION

From War to Wall

In April 1945, the Second World War was coming to an end and a period of recovery in Europe was beginning. With the Russian forces in Berlin and the British, French, and Americans approaching from the west, the Third Reich and all aspects of the German economic, political and social systems lay in ruin. The USSR's quick takeover of Berlin rendered Hitler's successor Grand Admiral Karl Dönitz's plan to capitulate to the British and Americans impossible (Heather, et al., 2017). Growing concerns with angering Stalin led Germany to surrender to all of the allied victors simultaneously.

Following the unconditional surrender of Germany, all governmental authority was now in the hands of the Allies. Differing political ideologies between the communist East and the capitalist West made border negotiations long and laborious and, after one month, Germany was divided into four zones: American in the south, British in the northwest, French in the southeast and Soviet in the East (see Figure 1) (Heather, et al., 2017).

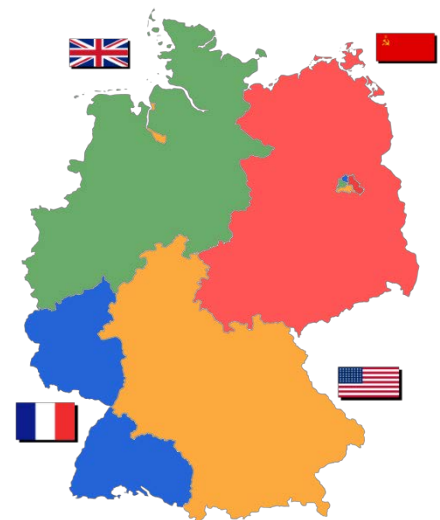


Figure 1. The division of Germany into the American, French, British, and Soviet zones in 1945 (Historiana, 2017)

In 1949, the three western allied sections merged into one revealing two large divided German states: The Federal Republic of Germany (FRG; West Germany) and the German Democratic Republic (GDR; East Germany) (Figure 2) (Heather, et al., 2017). As time went on, the political uncertainty in both the FRG and GDR would cause a social and economic instability. In the east, as the government of the GRD transitioned from a capitalist economy to a communist economy, the business environment became volatile and Germany's largest banks, ministries, and businesses, who were once the pride of Berlin and eastern Germany, began to look westward for survival.

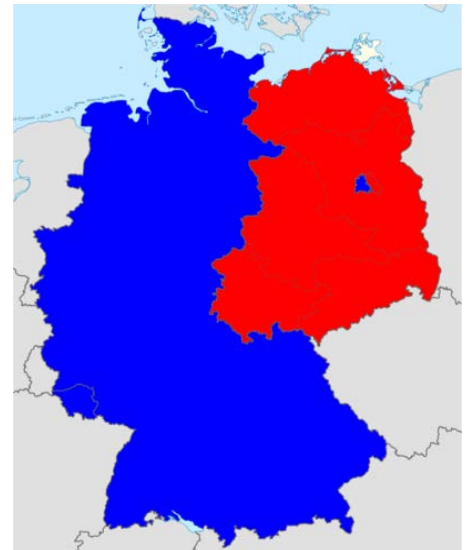


Figure 2. The division of Germany into the FRG (West Germany) and the GDR (East Germany) 1949 (Historiana, 2017)

Banks, Ministries, and Businesses Move West

As the political environment in the GDR began to evolve, Germany's largest and most influential businesses and banks that had their headquarters, in Berlin and Eastern Germany were now looking westward for an opportunity to save their businesses from bankruptcy (Bontje, Musterd, & Pelzer, 2011). In the months to follow, all of the former eastern Germany's large brand name manufacturers, retailers, and banks including Siemens, Daimler (Mercedes Benz), and Deutsche Bank, closed their doors and relocated in the FRG (Bontje, Musterd, & Pelzer, 2011).

The effect of this migration on both states was significant. In the FRG, the immigration brought about a period of "explosive growth and rebirth" for western cities (Heather, et al., 2017). However, for the east the story was quite different. Losing their major industries meant the GDR lost employers, corporate tax payers, and exports. This migration contributed to a further economic downturn in the GDR and was the first step of the establishment of economic disparity between the FRG and the GDR (Heather, et al., 2017).

German Economics (1945-1989)

The devastation from the allied bombing campaigns during the Second World War were colossal. It is estimated that over twenty five percent of Germany's housing was destroyed; in cities, the destruction was greater than fifty percent (Leick, Schreiber, & Stoldt, 2017). Furthermore, most of Germany's economic infrastructure and transportation systems had been completely destroyed in 1945. This period of complete destruction became known as Germany's "zero hour" and it represented a period when Germany had to be rebuilt itself from the ground up (Heather, et al., 2017). This, combined with the stagnant economy between 1945 and 1949 caused a domino effect in the nation. The value of the Nazi currency plummeted, millions of Germans were displaced, there was no industry, natural resources had been depleted, and a shortage of food caused widespread malnutrition and disease in the German state (Marketline, 2014). Though this post-war lull had an equal effect on the economy of both the FRG and GDR, overtime they would drift apart economically creating fundamental differences in the economic condition and policies between them.

The German Democratic Republic—East Germany

Prior to the war, eastern Germany was part of a booming capitalist economy (Marketline, 2014). In fact, eastern Germany's GDP per capita was higher than the western and national German average (Marketline, 2014). Their main exports included steel, chemicals, and minerals. However, after the formation of the GDR in October 1949, the German Economic Council formed communist government led by the Soviet Social Democratic Party (SDP) which ruled until its disassembling in 1990 (Gale Cengage Learning, 2014). Their goal was to implement a central planned economy and therefore abolished any sense of capitalism and private property (MacDougall, 2016).

The centrally planned economy is founded on the principle that the economy does not work in the best interest of the people and that instead, a governing authority must to make decisions to meet social and national economic objectives. Unlike a market economy—where citizens and businesses make production decisions and where the interactions between customers and businesses determine the economy—in a centrally planned economy the government or state controls what is produced as well as how resources are allocated. There are also no private businesses in the centrally planned economy as everything is state owned and controlled.

For the GDR, the introduction of the centrally planned economy by the communist government rendered all resources, manufacturing, processing, exporting, and price setting state-controlled. Despite the GDR’s membership in the Council for Mutual Economic Assistance (Comecon)—a program which included all other Soviet satellite states occupied during the post war period, and was created to coordinate the economics of the eastern European countries that comprised the communist bloc—the GDR faced difficulties creating a viable economy as they lacked many of the valuable resources that existed in the FRG (Encyclopædia Britannica, 2017). In addition, the GDR was less than fifty percent the size of the FRG and had one third the population. Furthermore, the war reparations that were imposed the GDR only further dampened the East’s post-war economic recovery since it required far more productivity than it could produce in order to pay back the Soviet Union (Deutsche Welle, 2017). Unfortunately, the repercussions of these actions on the GDR’s economy were immediate; eastern production levels fell, and businesses closed their doors, resulting in an economic decline that would continue late into the 1960s.

In 1955 the Soviet government implemented a five-year plan, with the goal of economically aligning the GDR with the USSR and helping the GDR make up for war losses. The priority was to increase gross domestic product (GDP) from 23 billion GDR Marks in 1950 to 44 billion GDR Marks by 1955 (Statistische Ämter des Bundes und der Länder, 1950). To accomplish this, the government set industry specific growth targets primarily on traditional industries including textiles, machine building, and mining. A full list of the targets can be seen in Table 1. The plan was focused heavily upon industrial output, natural resource extraction, and energy production. However, the industrial sector of the GDR still had not been rebuilt to pre-war levels. This, combined with a limited amount of technological know-how, resulted in the state’s inability to meet the targets and the failure of Five-Year Plan.

Table 1. Government growth targets included in the first Five Year Plan from 1950 to 1955

Industry	Growth Target for 1950-1955 (%)
Cellulose and Paper	49%
Chemicals	82%
Electronics	96%
Engineering and Optics	139%
Food	87%
Light Industry	76%
Machine Manufacturing	121%
Metallurgy	137%
Mining	94%
Non-metallic Minerals	80%
Power Industry	77%
Textiles	101%
Wood Processing	18%

(Statistische Ämter des Bundes und der Länder, 1950)

Throughout the 1960s, 70s, and 80s the GDR continued to see many major economic issues (Deutsche Welle, 2017). Poor working conditions and a lack of available employment created a mass emigration of the labour force to the FRG (Heather, et al., 2017). This resulted in a labour shortage and a further inability to meet the government's production targets. With the financial status of the GDR worsening, the government was forced to act. In 1963, the New Economic System (NOS) was introduced (Marketline, 2014). The primary goal of the NOS was to aid in economic growth by decentralizing economic planning, which is a far cry from the centrally planned economy that had existed (Marketline, 2014).

In 1968, another reform occurred when the government planned to move away from the traditional forms of industry (mining and textile production) and to focus on innovating and producing new technologies. However, both reforms resulted in failure and had little effect on the country's economic problems. In addition, their inability to export goods to the West led to a deficiency of hard currency, which the GDR needed to pay its debts (Marketline, 2014). The Soviets also ceased to provide the GDR with oil at a reduced price, which it formally would export for profit (Heather, et al., 2017). Furthermore, most of their exports went to other Soviet countries, where the margin on goods was significantly less than their western counterparts. This further contributed to the amounting debt. In 1990, political and economic tensions caused political turmoil resulting in the collapse of the GDR and its reunification with West Germany.

The Federal Republic of Germany—West Germany

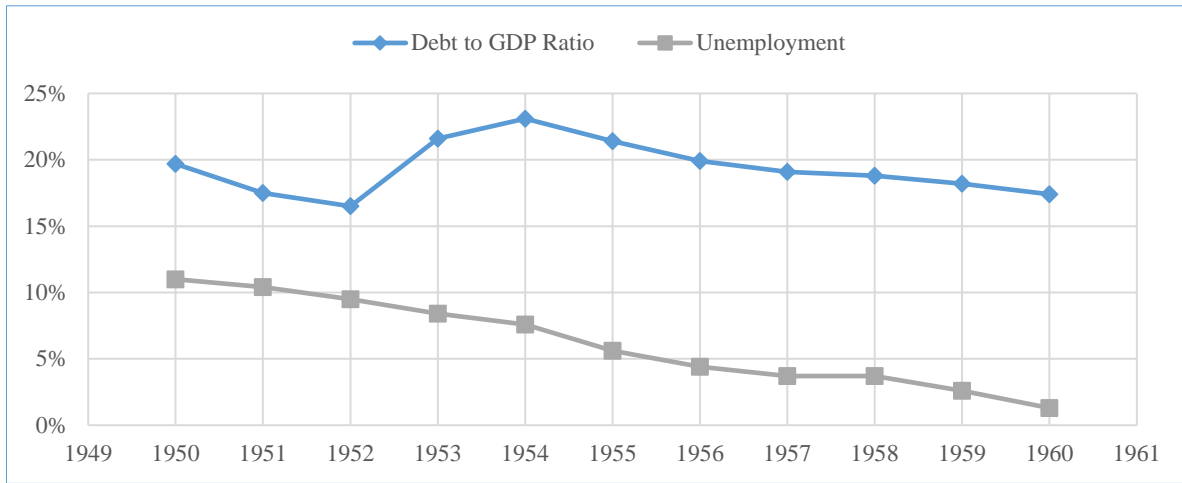
Germany, immediately after the end of the Second World War, was undoubtedly a suffering nation, and the West was certainly not exempt from these conditions. West Germany's industrial capacity was at an all-time low due to the intensive bombings and the killing off of the majority of the labour force (Leick, Schreiber, & Stoldt, 2017). In addition, harsh war reparations, imposed by the Western Allies, created a declining economy. For example, between 1944 and 1946 the FRG's economic output decreased at a rate of 37.6% per annum, while at the same time, the population grew by 20%. This effectively meant that their per capita output fell by almost 50% (Marketline, 2014). Though it was not uncommon to see economic decline following the war, when you compare the 50% decline in GDP per capita in the FRG to Britain's mere 7%, one can understand exactly how desperate the situation was (Marketline, 2014). However, in 1947, in effort to help the economy of the FRG, the Marshall Plan was introduced.

The Marshall Plan, created by General George Marshall, was established to help the western European nations recover from the destruction of the war. Marshall knew that Germany, despite its history, would be essential to re-establish the European economy (Heather, et al., 2017). The Plan provided hundreds of millions of dollars to the FRG in order to rehabilitate the damaged cities and industrial sectors (Heather, et al., 2017). Ultimately, the Marshall Plan gave the FRG the economic push it needed to establish its industrial presence in post war Europe.

After the introduction of a new currency, an influx of foreign labour, and a push towards competition and consumerism, West Germany's "Wirtschaftswunder" –or economic miracle—occurred (Marketline, 2014). This miracle was in part created by the large labour force of unemployed workers. In addition, West Germany benefited heavily off of its joint economy with the British, French, and American zones from which its currency reformation and the Marshall Plan were born. In the years to follow, this economic miracle would continue. Between 1950 and 1960 West Germany saw an average GDP growth rate of 7.96% —double the rate for Britain, France, and the United States (Heather, et al., 2017). As seen in Figure 3, the FRG's debt to GDP ratio decreased and its unemployment fell below two percent. To put this into perspective, the debt to GDP ratio of the UK during the same time was 107%, the unemployment rate was 1.5% and their average GDP growth rate for the decade was 2.85% (Eichengreen & Ritschl, 2008). Part of the reason for this was the healthy trade surplus. Another contributor for the FRG's success was the reputation that it had built for itself in the world of manufacturing. At this time, and even today, a label stating "Made in Germany" was synonymous with quality and superior engineering (Heather, et al., 2017). This

excellence in engineering combined with their capacity surplus allowed them to become one of the world’s leading exporters.

Figure 3. Changes in debt to GDP ratio and unemployment in the FRG from 1950-1960 (%)



(Eichengreen & Ritschl, 2008)

For the FRG, the automotive industry became particularly important. German car companies such as Mercedes Benz, Porsche, BMW, and Volkswagen, who had moved their headquarters to the West, were now a key component of the FRG’s success (Hajdu, 2013). Their desirability and reputation allowed them to charge a premium for their products which brought hundreds of millions of Deutsche Marks into the state (Hajdu, 2013). The success of the automotive industry in West Germany contributed to the continuous GDP growth and allowed them to become an ‘Economic superpower’ and the world’s third largest economy up until 1990 and Reunification (Marketline, 2014).

Reunification—From Two States to One

As the FRG’s economy continued to grow, in the late eighties the economic crisis continued to deepen in the GDR. During the summer of 1989, thousands of people had fled the GDR for the FRG through the newly sovereign states of Hungary and Czech Slovakia (New World Encyclopedia, 2015). At the same time, the GDR’s communist government was growing increasingly powerless. Then, on the evening of November 9, 1989, a member of the Communist Party mistakenly released news in which the government stated that it would allow East Germans to go to the FRG at any time without a visa (Heather, et al., 2017). Crowds immediately gathered at the edge of the Berlin Wall and demanded that the guards let them pass into the West. That night, tens of thousands of East Germans made the journey over the Wall.

The opening of the Berlin Wall was a fatal blow for the GDR and would ultimately lead to its demise. When the election took place in March 1990 the Communist Party, now renamed the Party of Democratic Socialism, was defeated by a party that promised a “speedy reunification of Germany” and thus a new Eastern government was formed (Heather, et al., 2017). Threatened by a continuous stream of refugees leaving East Germany, the new government was forced to expedite the negotiations. In July, a monetary union was created which meant that now East German’s had the same currency as their western counterparts (Heather, et al., 2017). The unification treaty was signed and came into effect in early October 1990 and resulted in the merger of the German Democratic Republic and the Federal Republic to form the unified Republic of Germany. As the East joined the West, the western systems of banking, education, social security and welfare, justice and regulation all directly replaced those from the East (Heather, et al., 2017). However, little was done to help the economic state of the former GDR or to

help create economic equality between the two states. This resulted in the development of an economic gap between the East and West that has only continued to get worse as time has passed.

Research question

Just over 25 years later, Germany is the centre of European economics once again. Although there were periods of economic downturn during the “Dot Com Bubble” and the 2007 financial crisis, it has remained one of Europe’s largest economies. One would expect, based on Germany’s current economic success, that any economic gap created by the reunification period had been fully bridged. However, upon closer inspection, you can see that there is still great inequity between the economic state of western and eastern Germany. Though it may seem, from an outsider’s view, that this be extremely unlikely, upon closer inspection, the economic gap between the East and West is visible in infrastructure, household income, GDP, unemployment rates, and housing prices. After looking into this phenomenon further, it is clear that the divided period of Germany, and the steps taken by the government during the reunification process, are continuing to have a lasting effect on Germany economic equality. Thus, we must consider what caused this gap; why this gap still exists and to what extent it affects the economic state of the nation; and what implications it has on modern day business activities within Germany.

DISCUSSION

The Origins of the Economic Gap—Reunification

Economically, reunification posed several difficulties and consequences for Germany—many of which would have a long-lasting effect on the country. As we have seen, the FRG and the GDR operated polar opposite economic policies. The GDR’s centrally planned economy, state-controlled enterprises, and set prices held it back from economic growth. In contrast, the FRG’s free market model, which followed a free price system, allowed it to recover quickly from its post-war destruction. Although, one can argue both in favour of and against each of the economic principles when considering divided Germany, the fact is that one state prospered while the other one lay on the verge of collapse.

As seen in Table 2, the FRG was far outperforming the GDR up until the reunification (Marketline, 2014). For example, the FRG’s gross national product was almost 600 percent higher than that of its Eastern counterpart. This divide made reunification a grandiose and problematic undertaking economically speaking (Marketline, 2014). The core problem was the state of the eastern German economy, which was much worse than anyone had thought. With the East’s obsolete technology, crumbling infrastructure, and a lack of capitalist experience, West Germany’s government faced numerous decisions. These included: raising money for infrastructure; how to privatise eastern firms; how to handle the exchange rate; and how they planned to allocate the funds in the East—whether it be on investment or consumption (Hunt, 2006).

Table 2. Key economic indicators compared between the German Democratic Republic and the Federal Republic of Germany in 1990.

Indicator	German Democratic Republic	Federal Republic of Germany
Gross National Product (\$ bill)	159.50	945.7
GNP per capita (\$)	9,679	15,300
Budget Revenues (\$ bill)	123.5	539
Budget Expenditures (\$ bill)	123.2	563

(Marketline, 2014)

The infrastructure in eastern Germany was also something that had to be dealt with. There were complaints about energy shortages and many factories and production facilities that required complete demolition and reconstruction (Hunt, 2006). In addition, the transportation network, including the Nazi-era Autobahns, almost needed to be completely rebuilt. To tackle this the West German government began to invest heavily in eastern Germany (Heather, et al., 2017). These funds were primarily allocated to infrastructure and investment. Though it is difficult to track and estimate the exact amount of money that western Germany poured into the East, records suggest that, during the first three years following reunification, it surpassed DM 350 billion (Hunt, 2006). Following this period, it is estimated that an additional DM 150 billion flowed eastward (Hunt, 2006). From 1991-2003, 4-5 percent of the West’s yearly GDP was spent on the East (Heather, et al., 2017). Yet few of these investments provided increased economic benefit to the East.

To tackle the problem with the currency exchange, the Finance ministers of the former FRG and GDR approved a legislation that promised a common currency between the reunified states (Marketline, 2014). On July 1, 1990, citizens of the previous GDR could exchange their DDR Mark for the new western Deutsche Mark (DM). The conditions for the exchange depended on the age of the person and the amount of money they had. On average, the rate was 1.8:1 (DDR Mark to DM) (Marketline, 2014). Loans and other liabilities were transferred at a rate of 2:1, while salaries and pensions were exchanged at 1:1 (DDR Mark to DM). It is important to note however that these rates only applied to citizens of the former GDR. Foreigners and companies outside of the GDR were able to exchange at a rate of 3:1 (Marketline, 2014).

Unfortunately, implementing the unified currency negatively affected the wealth of the former GDR citizens. The so called “great exchange” did not bring about what many East Germans had hoped. Instead, many saw their spending power decrease dramatically. This created an immediate economic divide. To demonstrate the effect of the exchange rate of the well-being of the former citizens of the GDR we will look at the average salaries of citizens from both the GDR and the FRG. According to the Statistics Office of the GDR 1989, the average gross salary for a citizen of the GDR was 2194 DDR Mark. In comparison, Federal Republic of Germany’s data show that the average gross monthly salary was DM 3,358.00 (Marketline, 2014). According to these numbers, at an exchange rate of 1:1, GDR citizens were already DM 1144.00 worse off than the West Germans per month (Marketline, 2014). In addition to this, there were significant increases in the price of goods in the GDR after the DM was adopted. Consider the pre-unification price of potatoes for example (Table 3). At a 1:1 exchange rate, the price for 5 kilograms of potatoes in the FRG was almost 480 percent higher than the GDR pre-reunification. If you couple this with the fact that most Eastern Germans’ salaries were converted at a rate of 1:1 post-reunification, the effect of the exchange rate can easily be seen—the price of many essential goods rose astronomically, sometimes hundreds of percent, making easterners immediately worse off.

Table 3. Product pre-unification prices

Product	Cost in GDR	Cost in FRG
Potatoes (5Kg)	0.85	4.94
Rye Bread (1 Loaf)	0.52	3.17
Beef (1Kg)	9.80	17.20
Tram Ticket	0.20	2.07
Electricity (1kWh)	0.08	0.42
Rent (per Month)	75.00	411.00
Coffee Beans (1Kg)	70.00	17.86
Washing Machine	2,300.00	981.00
Fridge	1,425.00	559.00

The currency conversion also affected production costs. Before reunification, production costs in the GDR were already at a European high. After the introduction of the DM, wages rose far above the productivity level and production costs skyrocketed. As a result, many Eastern firms once again fled to the West as the labour was cheaper and production costs were lower (OCED, 1989).

Another challenge was privatizing former state-owned firms in the GDR. Early in the unification process, the FRG government decided that privatizing the GDR economy was a priority (Ghaussy & Schäfer, 1993). To do so, the western government took over the Treuhandanstalt (Trust Agency; TA) which was previously established by the GDR to take over the East German firms and turn them over to the Soviet state (Ghaussy & Schäfer, 1993). The new, western managed TA had the task of privatizing the eastern firms. Their goal was to match firms in the same industry with western industry experts (Dyck, 1997). The TA decided which companies would continue to operate and which would cease to exist. Considering that some eastern communities were dependent on the companies that operated within them, the TA also decided which communities would prosper and which would not. In total, 75 percent of the firms were taken over by western firms and family business operators, 6 percent were purchased by foreign buyers, and only 20 percent remained in the hands of eastern business owners (Dyck, 1997). The effect of this was the establishment of a network of western own subsidiaries in eastern Germany, many of which would be closed or bankrupt in the years to follow. By the time of the Treuhandanstalt's dismemberment in 1994, it had privatized around 14,000 businesses and 44,000 plants which accounted for 45 percent of the East German workforce (Carlin, 1994). In the end, the TA privatization had resulted in DM 193 billion in net losses (Brada, 1996).

Foreign investors that were aware of the Treuhandanstalt's work were also extremely wary about investing in eastern Germany. Less than 5 percent of all investments in the East were foreign and out of that, most were from West Germany (Ghaussy & Schäfer, 1993). Because of the fact that western Germany had control over a majority of the reunification process, most of the remaining companies in eastern Germany were mere subsidiaries of western companies. Many of these firms were purchased on a "stand-by" basis, meaning that they were purchased and prepared for production, but never actually put to use. In addition to this, most of the East's financial assets were purchased and controlled by the main German banks of the West.

As a result, the economy of eastern Germany suffered immensely during the reunification process. Within a year, unemployment in the East rose above 3 million and industrial output fell well below half of the previous output (Marketline, 2014). In fact, in 1991, the entire production of eastern Germany accounted for less than 8 percent of the entire nation (Marketline, 2014). Even though this was the case, western Germany experienced two years of booming growth with rates of over 5 percent. Meanwhile, eastern GDP fell 15.6 percent in 1990 and 22.7 percent in 1991 (Marketline, 2014).

Though some may dispute that there were any long-lasting effect of the German divide and the reunification, the truth is, even today the economic divide still exists. If key metrics are compared between eastern and western Germany including household income, GDP, unemployment rates and housing prices it is obvious that there is an unbalance of economic prosperity. Of course, it is easy to say, from an outsider's view, that Germany's economy is thriving, but only from within the German border can it be seen that the ongoing economic inequity between the East and the West has created long-term negative side effects. However, the outlook for the East isn't all that bleak, since the economic disparity creates many opportunities for both growing and established businesses.

The Divide Today

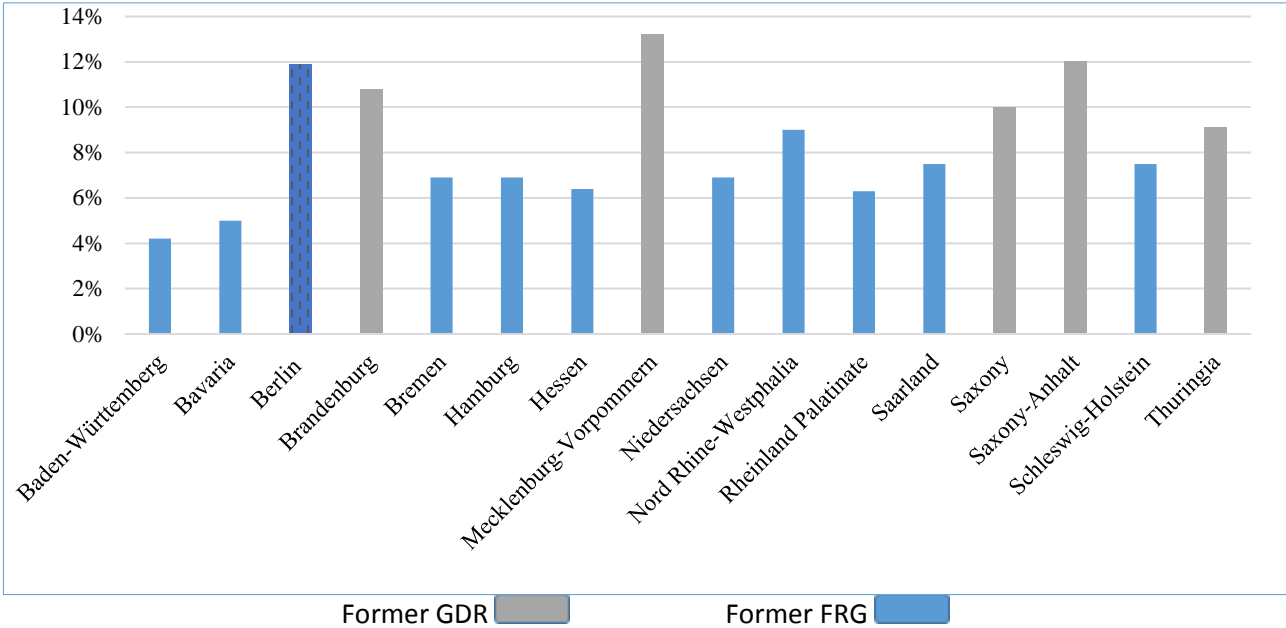
As of 2017, the German economic gap is still prevalent. The Economist's article "Still not Over the Wall," and Rick Noack's article "The Berlin Wall fell 25 years ago, but Germany is still divided," outline the reality of Germany's underlying economic problems (Berlin & Jena, 2014; Noack, 2014). Today, the West's dominance over eastern Germany is visible in many demographics. Whether it be unemployment rates, monthly income, or social services the West seems to continuously outperform the East. According to Oliver Johnmann, the gap today can largely be

attributed to western Germany’s head start both during the denazification process and the prevalence given to it during the reunification process (Johnmann, 2017). In addition, other factors such as the emigration of bright East German minds to the West, the adoption of the Deutsche Mark, and the privatization process played a large role in East Germany’s economic position (Johnmann, 2017). The following will compare the East and West on key present-day indicators.

Unemployment

To explain the modern gap, we will first look at unemployment. There is a lot of debate about unemployment in Germany as many people consider it to be proof of the success or unsuccessfulness of reunification. However, statistics show that an undeniable variance exists between the East and West. From Figure 4, we can see that the highest rates of unemployment, excluding Berlin, exist in the new states that once were territories of the GDR (Statistisches Bundesamt, 2016). Moreover, according to the Statistische Landesämter the former FRG state, Nord Rhine Westphalia, which currently has the highest unemployment rate in the West, still has a rate that is 9 percent lower than any of its former GDR counterparts (Statistisches Bundesamt, 2016). The fact that all states are former GDR members, demonstrates that the problem is not related to any specific state or geographic area, rather that this problem is related to the long-term effects of political turmoil and reunification decisions in the GDR.

Figure 4. Unemployment rate in Germany by state as of 2016 (%). Berlin has been separated due to the fact that it was both a state of the GDR and FRG.



(Statistisches Bundesamt, 2016)

This issue is in part due to the wave of mass migration of labourers, who were seeking higher pay and more promising job prospects that occurred during and after reunification. This had a deep effect on the economy of the region since there were no skilled labourers to work in the few remaining and operative production facilities (Marketline, 2014). Today, there is still a growing concern with potential investors when it comes to investing in new and continuing business ventures in the East and consequently, eastern Germany has failed to evolve economically.

Upon closer inspection, it would appear that the unemployment in eastern Germany has created a vicious cycle that prevents it from repairing the unemployment issue. For example, the lack of available work is driving, rather

pushing, people westward to the enterprise centres of the West. As a result, eastern cities are perceived as having less employment potential for the workers and less return potential for investors. This returns the attention to the West of Germany where the funds and labour are eventually allocated. This phenomenon has created an everlasting threat to cities and states of eastern Germany as their populations, productivity, and wealth are continuing to decline.

Income and Wealth

To continue, a second metric that should be looked at is household income. In 1980, there were obvious differences in the average salaries between former West and East Germany and this is still evident today. Mean income inequality is an ongoing issue particularly for the states that made up the GDR. As seen in Table 4, people in this region are earning less, saving less and therefore are having less disposable income (Statistisches Bundesamt, 2016). If we look at gross and net household income for example, there is a difference of 25% and 23% respectively (Statistisches Bundesamt, 2016). The same pattern can be noted for gross annual salary and disposable income per month. Although these differences are large, the East has taken steps to tackle them which include lowering the cost of goods and housing.

The inequities in wealth between the old GDR and FRG are very transparent. According to Kate Connolly (2015), out of the 500 richest Germans, a mere 21 are in the East, and of those, 14 are in what used to be West Berlin and of the 20 most financially successful cities, only one is in the East. To continue, Madeline Chambers from 'Business Insider' (2015) suggests that western states are considerably richer and households in the East own less than half of the wealth accumulated by those in the West.

Table 4. Comparison of key economic matrices between former East Germany and former West Germany as of 2016

	Former FRG	Former GDR	Difference in Percent of former GDR
Gross Household income per month (€)	4,090	3,080	-24.7%
Net Household income per month (€)	3,144	2,425	-22.9%
Gross Annual Salary (€)	30,881	24,580	-20.4%
Monthly Disposable Income (€)	3,213	2,465	-23.3%

(Statistisches Bundesamt, 2016)

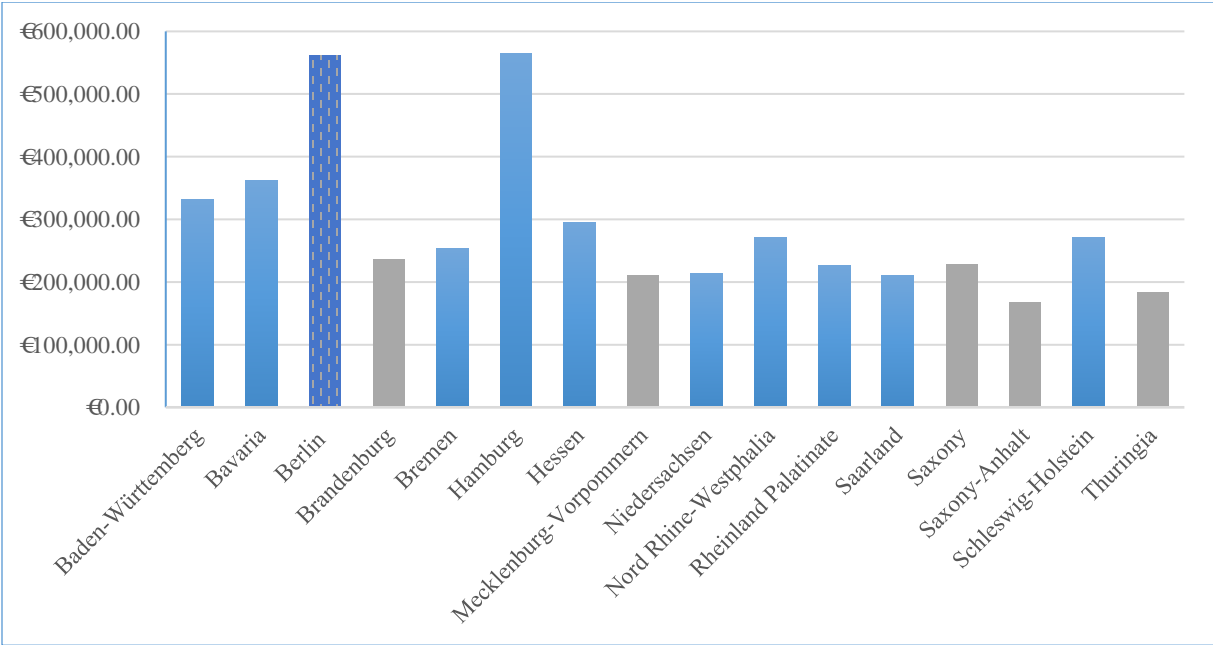
To put it into perspective, let's consider the average wealth of a person in the west and east. The average wealth of a westerner is approximately €154,000 per person (Chambers, 2015). However, if an easterner were to have net assets of €110,000 they would be considered to be in the top 10% of richest eastern adults (Chambers, 2015). The factors that continue to add to these inequities include: the fact that wages in the former GDR are almost €2,800 per month lower than those of their eastern counterparts; pensions were transferred from DDR Mark to DM at a rate on 1:1 whereas savings accounts were transferred at a rate of 2:1, meaning that savings accounts were decimated; and that property in the East is almost worth half as much of that of the West (Chambers, 2015; Connolly, 2015).

Housing Prices

It is fair to say that, for most people, the largest purchase that they will make in their lives, is their homes. Although the price of most goods in the former GDR have adapted to the lower incomes of those in the East, a great difference can be seen between the cost of housing between the East and West. As seen in Figure 5, the average price of homes in the East is much lower than those in the West (Immowelt, 2017). There are many external factors that

are influencing the housing prices including available employment, crime rate, and the quality of the education system (Marketline, 2014). However, when we compare these metrics between eastern and western Germany, some of the eastern states rank in the top five when it comes to their education system and the absence of crime (Marketline, 2014). This implies that neither educational issues nor crime rate problems are to blame for the low housing prices and rather that they are a product of the local, worse-off eastern economy.

Figure 5. Differences in Housing Prices in Each German State in 2016.



(Immowelt , 2017)

Consumption

After the fall of the Berlin Wall, western consumer goods such as Milka chocolate bars, Walkman, and Levi jeans became extremely popular and sought upon goods by easterners (Connoly, 2015). Immediately after reunification western goods such as these flooded the shelves of retailers in the East. However, even today, few products from eastern Germany have infiltrated the western retail scene (Connoly, 2015).

Productivity

As far as productivity is concerned, the East is only 73% as productive as the West. Western cities such as Munich and Stuttgart remain world leaders in automotive manufacturing with companies such as Mercedes Benz, Porsche, and BMW (Marketline, 2014; Connoly, 2015; Heather, et al., 2017). Frankfurt remains home to the headquarters of the country’s largest banks and is considered to be the financial capital of Germany (Marketline, 2014). In Bonn, the old capital of the FRG, resides the headquarters of the country’s postal service, telecommunication, and rail services (Heather, et al., 2017). In addition, out of the top thirty companies making up the German Stock Exchange (DAX) all of them are headquartered in the West (Sharp Trader, 2017). This is in part due to the politically controlled economy of the GDR and the fact that the East is home to industries that are synonymous with a less developed economy. Productivity is an important indicator of economic growth since increased productivity allows businesses to produce greater output for the same amount of economic input (DCED, 2017). This in turn, creates higher revenues, and more gross domestic product (DCED, 2017). The fact that all major industry migrated to the West just prior to the divide, remains, to a large extent, the reason why western Germany continues to exhibit economic growth and why the former GDR continues to fall behind economically.

The Gap's Implications on Doing Business in Eastern Germany

It is obvious that the economic gap between the former GDR and FRG still exists. This divide has created hardships for both the economy of eastern Germany and the people who reside there. While at the same time, the gap provides numerous opportunities for new and current business models to thrive in. To examine both the opportunities of doing business in eastern Germany, the political, economic, and technological environments will be examined.

The Political Environment

Though in the beginning, the transfer of the West's political institutions to the East was detrimental to their economic position, since then, they have been heavily invested in bettering the economic conditions of the former GDR. They provide ample funding and tax breaks to new and existing businesses in effort to attract them to the former GDR. In 2015 alone, over 3.1 billion euros were invested in these companies (MacDougall, 2016). In addition, the government introduced a 5.5% tax on western states that is transferred to promote the economic growth of the East. These conditions provide the perfect foundation for both new and established businesses.

The Economic Environment

Since reunification, eastern Germany and its previously Soviet occupied eastern European counterparts have been considered the "emerging markets of the first world" and according to the Germany Trade and Investing Association (2016), eastern Germany is "one of the world's most attractive investment locations (Caprio, Folkerts-Landau, & Lane, 1994). But nowhere has the former GDR economy grown faster than in its industry. A massive reindustrialization program, has made the East one of the most advanced and equipped yet untapped industrial areas in Europe. This is one of the benefits of the present divide. The inequities between the former GDR and FRG provide businesses with the opportunity to enter an untapped market and get in on the ground floor of the economic boom of the region. Thus far, eastern Germany's economy has been radically overhauled and is ready for industry to infiltrate its facilities and cities. Some businesses like Porsche and BMW have already taken advantage of this (with production facilities in the eastern city Leipzig) yet many are unaware of the benefits that the eastern economy can offer (BMW, 2017; Porsche, 2017). These include, but are not limited to: lower production costs, lower cost of materials, lower shipping costs, lower taxes, and cheaper labour. East Germany has also caught the attention of foreign direct investment (FDI) because of its tax breaks, unemployment rate, and low start-up and production costs (Günther & Gebhart, 2005).

The Technological Environment

Though the technological environment of eastern Germany has been considered to be lagging because of its communist past and little available capital, there are several features that actually provide opportunities for business who decide to operate in the East. First, their extensive railway and freight lines, make it possible to reach over 300 million consumers across eastern Europe in under 24 hours. This in itself provides a huge opportunity for production-based companies. In addition, scientific research institutes are driving the rapid development of a number of new industry sectors that are waiting for investment and business know-how to make them thrive. Eastern Germany has also become a leader in the renewable energy, biotechnology and healthcare sectors (MacDougall, 2016). In fact, the East's Research and Development GDP share is significantly higher than the European Union, and almost equivalent to the US', at 2.5%. These reasons are in part what make the former GDR one of the most attractive markets in the world for investment.

The technological environment of eastern Germany also has attracted a thriving entrepreneurial community. Start-up activity is playing an essential role in the East's economic development. New ventures bring innovation, jobs, and most of all investment to the former communist state and Germany recognizes the benefits of this. The

presence of internationally renowned universities, research centres, and business accelerators makes eastern Germany very attractive for new investment and new enterprises. In addition, the East has an extensive start-up investment program through which it provides financial aid and industry know-how (Cassala, 2016).

All in all, the evidence provided by the analysis of the political, economic, and technological environment of eastern Germany suggests that there are numerous business opportunities in the former GDR. For new businesses and tech start-ups, the East provides some of the lowest rent and corporate tax rates, heavy government funding, and a network of technological research centres (Cassala, 2016). For large corporations, eastern Germany offers low production costs, low goods acquisition costs, and well-connected transportation network that allows them to transport to all of eastern Europe and western Asia. In addition, there is also the opportunity for businesses to act with a social cause. Since the East has been suffering economically for the past 30 years, businesses that invest within this region have the opportunity to offer jobs, bring new industry, raise the living standards, and ultimately help the East bridge the gap between their western counterpart.

CONCLUSION

Overall, the political differences between Soviet-controlled East Germany and Western-controlled West Germany created numerous economic challenges during the division from 1945-1989. Upon reunification, many believed that the economic disparity between the two states would be bridged and that Germany would become one economic entity. However, this was not the case and the economic divide of Germany is still prevalent today, and it is not getting any better. The differences between the former GDR and FRG exist in almost all facets of the German economy, and though Germany as a whole is the economic superpower of the European Union, the East is still struggling to get back on its feet. For businesses, this presents an untapped opportunity. Low production, labour, and material costs combined with ample government funding, a social purpose, and many leading research and business facilities, create a perfect opportunity for a new or existing business to thrive. Therefore, it is imperative that when businesses or investors are considering Germany, that they look and heavily consider the former German Democratic Republic.

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Fuchs Petrolub: The Strengths and Vulnerabilities of the German Mittelstand in the Modern World

Amy Chen

INTRODUCTION

This report explores the German phenomenon of the “Mittelstand”, argued by some to almost be a philosophy and way of life in and of itself; a method of running a business, remaining conservative, and being long-term oriented. This is a foreign ideology and there is no direct translation to English, however it is understood that Mittelstand firms are considered small to medium sized enterprises (SMEs) while also being characterized by specific values, work ethic, and management practices. The modern German economy has a reputation for being incredibly strong, and many consider Mittelstand firms to contribute to this strong economy. These firms are known to be foundational and critical in the modern German economy, employ most of the workforce, and its prominence in Germany is unique to the country. These companies are incredibly competitive in their respective niche markets, and command a strong reputation for high quality as well as innovative despite generally having low public visibility. Using Fuchs Petrolub SE as a prime example, the world’s largest independent lubrications producer, one can further examine how a company uses Mittelstand characteristics to its advantage on the global stage, but also how it may cause some complications and problems that managers face in Germany, as well as how they are consequently being handled.

THE GERMAN MITTELSTAND PHENOMENON

The Mittelstand

Mittelstand firms are also considered small to medium sized enterprises (SMEs), but are additionally characterized by a set of values, beliefs, and tend to follow a similar competitive and management strategy. These companies exist all over the world, but are particularly prevalent in the German speaking countries, making it a distinct phenomenon, and are understood to act as a driving force for the economy of the country (Simon, 2009, p.251). The term itself is in German, and there is no direct translation into the English language. There is no strict definition as to which companies are in the Mittelstand category, as it varies depending on the organization or entity in question doing the evaluation to set the criteria. To some, there are not meant to be strict guidelines, and it is considered to be merely a theory or philosophical idea and intentions behind the operations of a business. According to the German government, the definition exists as companies that employ no more than 500 people and must have an annual turnover below 50 million Euros (Federal Ministry of Economics and Technology, 2012). The firms exist in the different sectors and areas of business, however, the majority of them retain similar characteristics that make them fairly easy to identify. Companies that have similar operational strategies exist all over the world, however approximately two thirds originate from German-speaking countries (Simon, 2009, p.30).

Characteristics of the Mittelstand

Historically, Mittelstand companies have known to be world leaders and innovators in their respective niche categories, with a reputation for producing highly specialized and professional products. The strategy to emphasize vertical integration and specialization in products is much prevalent than compared to other companies, as can be shown in Figure 1, where there is an emphasis on depth rather than breadth. Rather than excel in having a diverse and broad variety of products to choose from, they opt for the high quality, high performance, reliable products. Additionally, “many hidden champions report that they define the standards in their sector” (Simon, 2009, p.51).

Low visibility is a very common characteristic of companies in this category. Although they are world leaders and produce every day products, their names are not often known outside of its particular niche market (Simon, 2009, p.15). These companies tend to operate almost in secrecy, with some of these companies actively avoiding publicity (Simon, 2009, p.14). Mittelstand firms have been coined “hidden champions” by Hermann Simon, due to their lack of active presence in society, coupled with how its existence is vital to the health of the German economy (Simon, 2009, p.15). The prevalence of these companies and their hand in every day products that consumers are not even aware of is what makes them so unique and interesting, as they maintain strong market share while only those operating in the procurement departments of particular companies will be aware of their strong presence. For instance, “half of all cell phones worldwide” and “80% of all chip cards produced” contain an adhesive from a German company called Delo (Simon, 2009, p.24). Jungbunzlauer is a company that provides the citric acid “for every Coca-Cola produced and sold”, and Nivarox has a “global market share of 90%” over a specific mechanical regulation system in wristwatches in the world (Simon, 2009, p.23). Gerriets is in the business of producing large curtains for theatres around the world, and has a market share of 100% (Simon, 2009, p.7). Those who actively seek the information will be aware of the industry leaders, but otherwise, they will remain hidden and unnoticed as they operate so effectively that their inclusion is no longer questioned. The products from these Mittelstand firms simply become a point of parity amongst the products of its competitors.

In terms of Human Resource and Management strategy, the majority are owned by families of the individual who started the company, and are passed down through the generations, although increasingly this has no longer been the case. The companies are often established generations in the past, and primarily operate as well as employ in small towns across Germany (Federal Ministry of Economics and Technology, 2012). This results in leadership continuity, reliability, and establishes trust. The companies tend to be the only major employer in the region where it finds itself, and therefore the relationship between the employer and employee tend to be long term, and mutually beneficial (Simon, 2009, p.133). Through research, many have also found that the amount of sick employees and turnover tend to be lower compared to regular business in Germany (Simon, 2009, p.263).

Research and development are primarily done in house, in order to protect trade secrets and allow them to transform processes to become more efficient and unique (Simon, 2009, p.244). This is also done to reduce costs, and avoid outsourcing to protect its local identity. However, this is not to say that nothing is outsourced. It is common for anything non-essential that does not affect its primary product and quality are to be outsourced, like that of accounting and finances (Simon, 2009, p.254).

A strong relationship to customers is essential for a Mittelstand firm as well. Most companies state that most of their business come from a small percentage of their companies therefore customer loyalty is highly key to the success of the Mittelstand as well (Simon, 2009, p.135). The flexibility involved with adjusting products and services to a consumer’s needs is a unique service that is easier to execute in the circumstances of the German Mittelstand, due to its long term and dedicated relationship with not only consumers, but suppliers, and other stakeholders.

In terms of funding methods, these companies avoid methods that are risk-prone, and generally often avoid it if possible, as Mittelstand companies prefer to avoid relying on external resources. As a result, more than half of its own investment is funded through its own equity, and almost a third from bank loans (Federal Ministry of Economics and Technology, 2012).

What makes them special?

Despite the fact that they are essentially just SMEs, they comprise of most of the businesses and employers in the nation. An understanding of this topic as a whole will allow one to better understand what fuels the German economy, how it has continually been the world’s top exporter, and the strongest economy in Europe (Simon, 2009, p. 17). The philosophy and deeply rooted traditions and values that encapsulate what a Mittelstand firm is.

Additionally, as a force that continually innovates and creates new technologies and efficiencies, they are helpful for the German economy and also entrepreneurial and reputation for high quality goods.

CURRENT ECONOMIC STATE OF GERMANY

The German economy is the environment in which the Mittelstand firms operate, effect, and thrive in, and therefore it is critical to fundamentally understand this context. The health of this economy and the health of the Mittelstand firms work closely together and move in tandem, and understanding that the German economy is now going through a peak while having a shortage in skilled workers will change the way a company will manage its operations and its people.

Germany is currently performing very well with steadily increasing GDP (Nienaber, 2017). The strongest industries in Germany include industry and construction, as well as production in cars, machinery, electrical equipment, and chemicals (Federal Ministry of Economics and Technology, 2012). As an indication that Germany is a strong producer and exporter, many of the Mittelstand firms operate in this category and boost the economy in this fashion. The unemployment rate is currently fairly low and steadily decreasing, however there is a growing concern with the lack of available skilled workers filling positions across the country and has resulted in a spike in job vacancies in the country (OECD Economic Outlook, 2017). Germany is very productive, and this has resulted in a year after year export surplus, allowing the European Union to thrive and reap the benefits of the economic boom currently in the country (Simon, 2009, p. 17). This, however, has caused some concern due to its sustainability going forwards, and its overall effects on the other countries in the European Union.

SOCIETAL TRENDS IN GERMANY

Coinciding with an understanding of the German economy, having a strong grasp of the social issues, past and present, are critical in being able to properly adapt in the environment with societal norms in the country and operating cohesively with the local teams. These certainly must be considered when doing business in Germany by any employee or manager of the firm in order to remain sensitive.

Conservatism and “German Angst” is a major concern that is very much prevalent in modern German society (Eley, 2017). Due to historical events like the hyperinflation in the 1920’s after the First World War, as well as the lasting effects from the Third Reich led by Hitler, many Germans to this day are wary of debt and the use of banks. Inflation rates tend to be very low, and many much rather opt for keeping cash in their homes, and putting money in low risk investments (Eley, 2017).

Although Germany’s economy is booming, the country is threatened by the aging population with the baby boomers, many of which work in the Mittelstand firms. In addition to this, Germany has one of the lowest birth rates in the world, and is steadily declining, which is resulting in an increase of the dependency ratio without any interference (OECD Economic Outlook, 2017). Existing efforts to increase this by providing monetary incentives have proved to be unsuccessful thus far. With more and more of the population reaching retirement age, there is not enough people entering the workforce to counteract these numbers. The lack of skilled workers and empty vocational training positions are also a cause for concern, as there are many opportunities that are not being taken advantage of.

Although German reunification occurred in 1990, there is still a major divide between former East and West Germany, in terms of society as well as infrastructure. The economies and communities in the East tend to be less wealthy and most conservative, and therefore most of the Mittelstand firms as well as other major employers reside in the West.

COMPARISON OF CANADA AND GERMANY

Cultural and Historical Differences

Canada and Germany are both highly developed nations in the world today, however the cultural differences remain. As Canada is a relatively new country while Germany is not, and Canada is known for being a country full of diversity, where much of its population are immigrants or settlers from abroad within the last few generations. Germany has more of a homogenous society in contrast, with much of its population having historical roots in small towns across the country where they still may reside or have family. Additionally, through the use of Hofstede's Dimensions of Cultural Differences in Figure 2, it can be seen that the way business and interactions are done is quite different between the two countries particularly due to the difference in individualism and short as well as long term orientation. It can be clearly seen that German people greatly prioritize long term effects over those of short term, therefore preferring stability and consistency. Canadians appear to prefer individualism more than the Germans, which suggest that, when provided with a decision that may benefit themselves alone or shared amongst peers, it would be more likely that Canadians may opt for the result that would benefit and advance themselves more. As the concept of the Mittelstand phenomenon is central to the idea of the betterment of the community, consistency, and stability, it coincides with why it is so prevalent in Germany rather than a country like Canada.

Canadian SMEs compared with German SMEs

Canadian SMEs often also focus on innovation, comprise most of the businesses that exist in Canada, and employ more than half of the nation's work force similar to Germany (OECD, 2017). A primary difference in the operations between the two is that in Canada, the companies generally do not export, and productivity is fairly low (OECD, 2017). This is a major difference, as Germany, with the support of the Mittelstand firms, is the world's strongest exporter. Both contribute highly to their respective country's GDP, and perform a significant part in how the growth of GDP (OECD, 2017). German SMEs maintain a longer term perspective than Canadian firms, and the tradition of maintaining leadership of the company within the family is still fairly significant which is not a factor in management for SMEs in Canada. Mittelstand firms are extremely long term oriented whereas most other firms are not, and may prefer slower yet consistent growth, over sudden periods of growth. The hiring and capital-raising philosophy has allowed the German economy to thrive during periods of economic downturn, while the Canadian economy has not been as resilient.

MITTELSTAND IMPACT ON THE ECONOMY

The proportion of German firms in the Mittelstand category is over 99%, and therefore it may be understood that it is the most significant player in the economy, not only in its outputs, but inputs as well (Federal Ministry of Economics and Technology, 2012). They consume many resources, and employ much of the workforce in the country. Approximately 60% of all the jobs in the nation, 37% of overall turnover (2 trillion EUR), and 52% of the total GDP are affected by these firms collectively (Federal Ministry of Economics and Technology, 2012). Additionally, approximately 82% of apprentices are given opportunities at these companies in order to further develop their skills (Federal Ministry of Economics and Technology, 2012).

IMPORTANCE OF THE MITTELSTAND

Why is it something managers face while doing business in Germany?

There are very few large multinational giants located in Germany. Most of the workforce and GDP are driven by the Mittelstand firms, and without them operating successfully and adapting properly to the ever changing environment in the world, there may be risk for potential halts in growth for the economic power that is Germany

today. It is essential for management to fully grasp the Mittelstand concept, as the ideology behind it is embedded in most aspects of business. Considering all the trends that have been identified already in German society, the economy, as well as understanding the impact of Germany in Europe as well as in the world on a larger scale, these types of businesses may decline in health, and therefore diminish the current strength the German economy has.

Whether if the manager is from abroad, from the EU, or from Germany, it is essential to grasp the Mittelstand phenomenon due to how prevalent and characteristic they are. Operating outside of the mentality and philosophy in which they are run will possibly create friction and internal conflict between employees, and cause existing customers to feel uneasy. As so much of the workforce is employed by the Mittelstand, and how many businesses and families rely on them, the problems that arise with managing a company of this sort must be addressed quickly and effectively.

GOVERNMENT POLICIES AND SUPPORT

Within Germany

The Federal Ministry of Economics and Technology (BMWi) is also a government agency that tracks data and releases information based on its research on the creation, impact, and progress of Mittelstand firms in the country (Federal Ministry of Economics and Technology, 2012). It has helped establish the Central SME Innovation Programme, where firms can apply for generous grants, favouring those firms that focus on ambitious research and development projects, and explore partnerships internationally (Federal Ministry of Economics and Technology, 2012). The BMWi has also developed various financing programmes, start-up funds, methods to access resources more quickly and easily by developing new modern websites, and helping improve access to the German workforce for employment by encouraging entrepreneurship and employment campaigns, and establishing competitions in schools and around the country to increase awareness (Federal Ministry of Economics and Technology, 2012). With the establishment of this bureaucratic body dedicated to assist the SMEs in the country, it helps decrease the red tape as well, speeding up and streamlining processes to finance, look for new talent to hire, and find resources to expand globally. Germany has a bank dedicated to serving the Mittelstand firms, named the KfW Development Bank, which has assisted in loaning 1.3 trillion EUR to many businesses after the Second World War (Federal Ministry of Economics and Technology, 2012).

Many organizations study, research, and provide resources to Mittelstand firms. Most of them are government funded and are organized at universities around the country, named the Institute for Mittelstand Research (ifm).

In the European Union

Although the European Commission (EC) defines SMEs differently than Germany defines its own, stating that only those companies with 249 or less employees belonging the category (European Commission, 2017). There are many EU business support programs that assist in additional financial resources, offering subsidies, and exceptions in EU-wide compliances if needed upon approval (European Commission, 2017). There are many resources available for those Mittelstand firms that are looking for additional funding if required at favourable rates, establishing strong relationships, encourage innovation and entrepreneurship, as well as create a healthy business environment (European Commission, 2017).

ADVANTAGES AND CHALLENGES OF THE MITTELSTAND

Being able to interpret the advantages and challenges will first require a general look at the general state of Mittelstand firms in the industry, and this can be explored through the use of a SWOT analysis at Figure 3, where one can see that there many different factors at play.

Mittelstand Advantages

A loyal workforce results in lower costs overall, as the need for training and employee turnover is much lower. The relationship between the consumer and the employer become very close, and almost dependent on the other.

The abundance of the Mittelstand and their reputation have given Germany a reputation for high quality products, which again assist in encouraging further growth and sales for firms in Germany.

The strong relationship with consumers will allow the company to thrive well into the future, particularly as it has been found that “just over 10% of hidden champions generate more than half their total revenues from the five largest customers” (Simon, 2009, p. 135). Being able to secure businesses allows a company to remain active and generate consistent revenues.

Long term stability in an unpredictable economic environment is a significant factor as well. During the 2008 economic crisis, it was understood that despite many other businesses and economies around the world performing quite poorly, Mittelstand firms and the German economy stayed relatively stable and strong. In fact, “There was a 1.6% employee increase during the economic downturn.” (Buchanan, 2014). This resilience is an incredible advantage for the firm and its employees.

Using Porter’s Five Forces to look carefully at Figure 4, one can identify how a Mittelstand firm may operate in the market and the different forces that affect it. Competitive advantages of Mittelstand firms in general can be further identified in Figure 5.

PRIMARY CHALLENGES

There are many issues to consider for top level management, managers, and every day employees. As this concept of operating a business may be considered by some to be old fashioned, there are a number of external and internal challenges that must be taken into account in order to operate effectively going forwards.

External Challenges

With the world changing quickly, it is critical to quickly identify trends, and adapt in order to stay contemporary and remain competitive on a global scale. Mega trends such as digitalization, globalization, and the growing interest towards green energy have been concerns across the world, affecting many aspects of businesses and daily life for many. The social challenges of the aging population and lack of skilled workers are significant challenges that Mittelstand firms must deal with. The fundamental nature of Mittelstand firms also indicate that they operate in niche markets, which means that there is also possibly an oversaturation in a particular market in which they operate. As it is so highly specialized, the market may be extremely small, and there may not be much room to grow beyond existing partners. Some analysts suggest that a few German SMEs are reaching its limits. Emerging markets may additionally become a concern, as quality of products and services increasingly improves in those regions.

The mega trends have caused the norms and standards of many businesses to change, which may be difficult for certain companies to handle, particular those that do not handle change easily and are rooted in tradition. The speed at which decisions are made, and how drastic the result of the decision will be, can be difficult, but the small sizes of the Mittelstand firms may also speed up the processes for decisions that must be made. With advances in technologies, competitors have slowly been able to keep up with the high quality products of certain Mittelstand firms through imitation, however the relationships that the Mittelstand firms have established with existing firms assists in affirming its position in the market.

As it is the environment in which Mittelstand firms operate, that they cannot be directly influenced or controlled by the firms, and therefore the companies must adapt accordingly to the concerns that they individually find most threatening to their company in order to stay relevant in the long term.

Internal Challenges

While the continued leadership from a particular family is popular characteristic of a Mittelstand firm, it is a trend that is slowly decreasing over time due to possibly either the lack of an heir that is willing to take the position, or the lack of one that is sufficient to perform the job. This is a concern for employees within as it may result in distrust or uncertainty, which causes a change in the amount of confidence one has in a company. Particularly in Mittelstand firms, this trait is very important to have in a company. The family ownership may also result in individuals that perform less effectively than previous, or superior, and if there are many family members, conflict within in regards to direction of the company or major decisions may result in internal conflicts. The personal investment and interest in the company is much higher than in possibly other organizations not managed in a similar way to the Mittelstand, causing a highly biased opinion of many parties.

The lack of sufficient formal infrastructure and resources may also be an issue, as the organizations are typically very small, and working with the government may cause many difficulties with continued bureaucracy despite the dedicated government organization.

The reputation of a Mittelstand firm is greatly dependant on the quality of its products, and therefore the expectations for its products are incredibly high. Another challenge is to constantly meet these expectations, as if a new product or change in production results in lower quality products, the reputation of the company may be damaged.

IMPLICATIONS OF THE CHALLENGES TO MITTELSTAND FIRMS

What needs to be considered going forward

In order to thrive in the long term, Mittelstand firms must carefully consider their next positions and major decisions that may have not been considered when the company was conceived. Mega trends must be addressed eventually as it acts as a point of parity. If the company does not meet the new standards that consumers begin to expect, then it will be unlikely for the firm to succeed later on as the industry moves forwards. Managers who find themselves in a position to make decisions will have to find the correct balance between the Mittelstand values, and modernization.

In regards to the internal issues, the implications of this over time may result in an extremely weak company, as the team that works cohesively and productively together is one that will perform best in the intense Mittelstand environment.

Problems if things do not change

Without the change and adjustments to account for the internal and external challenges, one may expect that the company may eventually fail as it will not have been actively working against the elements that render the company useless and negate all the competitive advantages that it once had.

FUCHS PETROLUB

The Company

Fuchs Petrolub SE is a public company from Germany, and is the global leading independent manufacturer of lubricants (Fuchs Petrolub, 2017). The firm has always focused on those products, and continues to perform research and development to ensure that the product is extremely effective. The variety of different specialized products has resulted in over 10,000 different types of lubrications that the company can offer, however it is a business-to-business model where generally the products are not sold directly to individual consumers but rather in bulk to large organizations (Fuchs Petrolub, 2017). It makes tailor-made blends of lubricants and greases for specialized equipment around the world. The company sells a full line, provides a global presence, and the flexibility as an independent organization allows many businesses to prefer working with Fuchs (Fuchs Petrolub, 2017).

History and Company Philosophy

With its origins in 1931 started by Rudolf Fuchs, the company has been focusing on producing excellent quality products through focus and investment in its people and product in order for the superior product to be created (Fuchs Petrolub, 2017). Fuchs is now traded on the stock exchange and has become a public company, however the company is still owned by the Fuchs family, with Stefan Fuchs being the CEO (Fuchs Petrolub, 2017).

Fuchs refers to three things which are considered to be at the heart of its business model, which is “Lubricants. Technology. People” (Fuchs Petrolub, 2017). There are additionally “five values of our mission statement – trust, creating value, respect, reliability and integrity” (Fuchs Petrolub, 2017). These values and interests at the core of the business will establish itself in all aspects of business, including human resources policy, product quality, and will be reflected in its relationship with consumers and other stakeholders.

Organizational structure

The organizational structure at FUCHS groups the businesses into the three geographic regions of Europe, Asia-Pacific, Africa and North and South America and reflects the control and reporting system (Fuchs Petrolub, 2017). The company is very diverse and spread across the world, with 3800 employees from over 36 countries (Fuchs Petrolub, 2017).

With a significant focus on technological advancement and efficiency, Fuchs says that approximately 10% of the staff work in research and development, and there are over 600 ongoing projects in order to continually meet the changing needs of their clients. The dedication and interest in working towards meeting all the requirements of its customers is unique to Mittelstand firm style that Fuchs follows. In the structure through Figure 6, it can be established that there is a major focus on sales and technical staff (Fuchs Petrolub, 2017). With figure 7, one can tell that Fuchs Petrolub prefers the company to have management split up not only into regions, but also into functional categories (Fuchs Petrolub, 2017). Figure 8 suggests that there is discussion of upper management with local management, and there is a separate supervisory board which may provide independent and possibly less biased decisions made by the executive board (Fuchs Petrolub, 2017).

Fuchs’ successes and challenges for managers

Fuchs has established itself as a world leader in the market of lubricants, and has consistently delivered high quality products to ensure that machinery and equipment perform at an excellent level for consumers around the world (Fuchs Petrolub, 2017). As new technologies develop, Fuchs may also take this in advantage, for example new electric vehicles can act as a new product in which to provide lubrication products for (Fuchs Petrolub, 2017).

The company employs many people in the Mannheim region in which it has its headquarters, but also around the world in order to facilitate and further establish sales connections. Taking advantage of new emerging markets, Fuchs has been able to establish new offices in Singapore in order to geographically position itself better (Fuchs Petrolub, 2017). With the growing middle class in the emerging markets, the possible increase in automated goods which therein result in the purchase of lubricant goods on a large scale. Fuchs has been able to succeed due to its constant innovation and drive to become more effective and efficient, its modifications and proprietary methods to produce its products, and internal research and development teams which keep its competitive advantages away from competitors. The company succeeds by being able to maintain a strong and motivated workforce, maintain a strong global presence, and continue to provide highly specialized and high quality lubricant products.

Challenges that Fuchs are currently facing include having to adjust to possible new regulations through legislation and government, working towards becoming more sustainable, meeting customer requirements, work with retrieving and working with new raw materials to further develop products, and political issues that cause uncertainty in the environment such as Brexit (Fuchs Petrolub, 2017). As some of these issues are out of the control of Fuchs, the company must be aware of any developments and react accordingly. Additionally, market research from Fuchs has suggested that the markets in which it currently operates are mature, North America and Western Europe, and so it must begin looking into other opportunities like Asia and the Middle East if Fuchs wishes to grow (Fuchs Petrolub, 2017).

Implications of the issues

Managers must clearly identify complications and benefits of Fuchs and parallel them with those that come with the standard Mittelstand firm to see possibly where Fuchs may have shortfalls, and to make the correct adjustments if necessary. Awareness must be drastically increased particularly in the modern age where trends change very rapidly.

To further expand its not only depth in product categories, but into breadth, Fuchs has been acquiring companies such as Deutsche Pento-sin Werke and Lubritene in 2014, which allow them to gather more resources and assets from those companies to perform better with their products regarding lubricants for mining and in food industry machinery (Fuchs Petrolub, 2017). This may have been a decision to possibly diversify slightly more in order to protect the company. The company has in the past decade put many investments into modernizing their existing production facilities in order to perform at a more efficient level, which is another reaction and method of staying competitive.

Insight from Dr. Timo Reister, Member of the Executive Board

In an interview via email with Dr. Timo Reister in Figure 9, who acts as a member of the Executive Board at Fuchs Petrolub, he comments on the importance of long term strategy and investment in its employees. Dr. Reister reveals that “every person matters” in terms of employees, and this feature is an element that not only allowed Fuchs to exist in its current state as a world leader, but allow it to survive possible challenges and threats in the internal and external business environment in which it operates. Additionally, Dr. Timo Reister expresses how Fuchs carefully manages its people in terms of human resources, during the hiring process it must be clearly conveyed early on the values of the company, and it is understood that an investment in the employee will be for the long term rather than the short term. Therefore, employees lean more towards the Theory Y of motivation, where the employees are all encouraged to work together to collectively solve a greater problem as a team. Mittelstand firms are known to be unique to German speaking countries, there are many advantages to continue to do so.

REALITY OF WORKING IN A MITTELSTAND FIRM

Companies in Sennheiser, Faber-Castell, and Miele are also firms that many consider to be in the Mittelstand category. These companies excel in the same manner as described with Fuchs, continued ownership by a particular family, extremely close relationships with its customers, a focus on a niche market, and a strong interest in producing an excellent, world-renowned product for its quality. PWM is a company currently run by Max Krawinkel, a descendant of the original founder, and the firm focuses strictly on electronic price signs for gas stations but no other business, which is a prime example of a firm that will not expand beyond its current niche market despite how easily it may possibly do so, just to maintain its targeted strategy (Buchanan, 2014). A managing director of a synthetic rubber surfacing Mittelstand firm has reiterated the preference of security and stability and long term orientation, stating that “if we could decide between 5 percent growth and 100 percent security, we would choose security” (Buchanan, 2014). The overall implications of this furthers the idea that both management and employees are interest in the long term and best interest of the whole company, and this must be taken into account by managers of Mittelstand firms going forwards while also overcoming challenges.

CONCLUSION

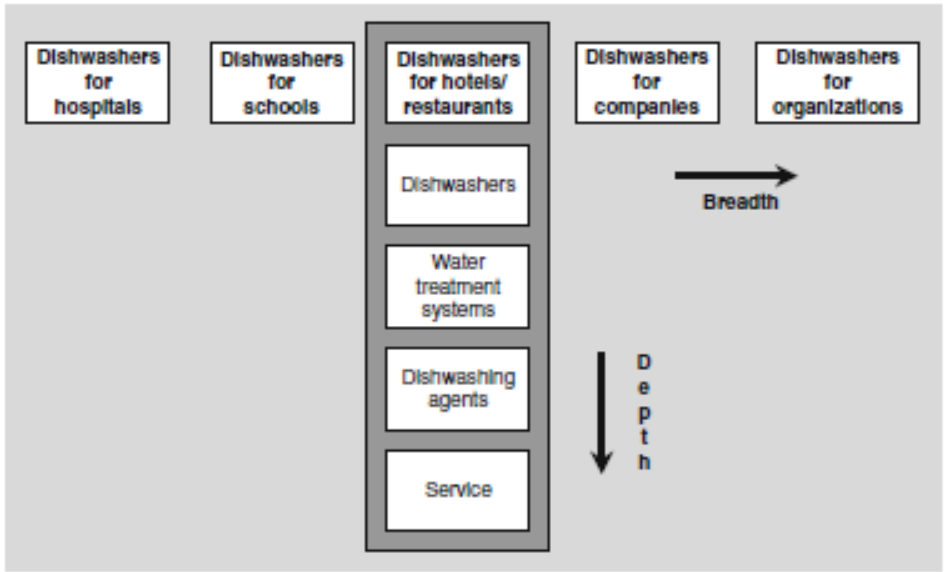
The Mittelstand firms have an immense impact on the German economy and people, and it is understood that although they have been very successful to date and an essential contributor to Germany’s economic strength today, it is very important to address its challenges as well, and consider its possible implications. Through the use of Fuchs Petrolub as an example, one may observe how a manager may view the concerns. The analysis of this phenomenon and its effects are many due to the ever changing environment, and therefore the Mittelstand firms must carefully make decisions in accordance with its existing values and proactively use the strengths that the firm has in order to stay relevant in the future, given all the challenges that have been identified.

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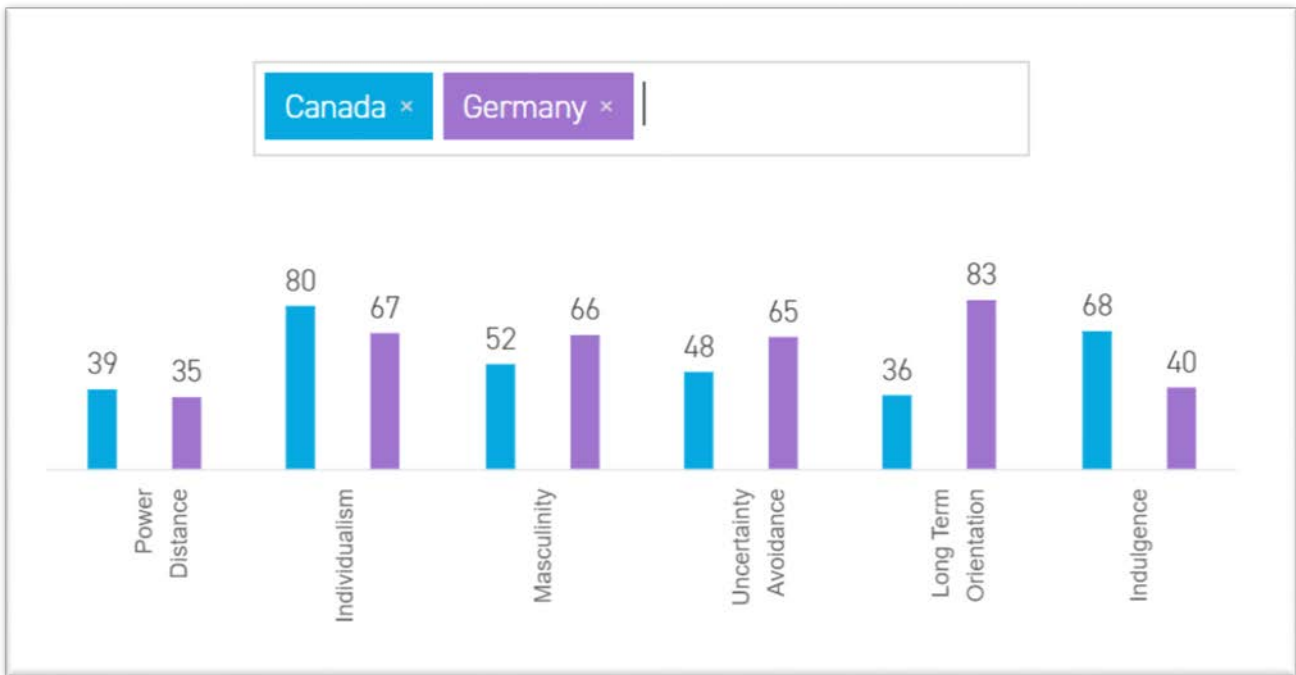
APPENDIX

Figure 1. A company emphasizing depth rather than breadth



(Hidden Champions of the 21st Century, p.201, 2009)

Figure 2. Hofstede Dimension Comparison between Canada and Germany



(Hofstede Insights 2017)

Figure 3. SWOT Analysis of a General Mittelstand Firm in Germany

	Opportunities	Threats
Strengths	Niche markets High quality products	Economic instability in the environment
Weaknesses	Fast development Quicker profits	Ability to compete on price with other companies

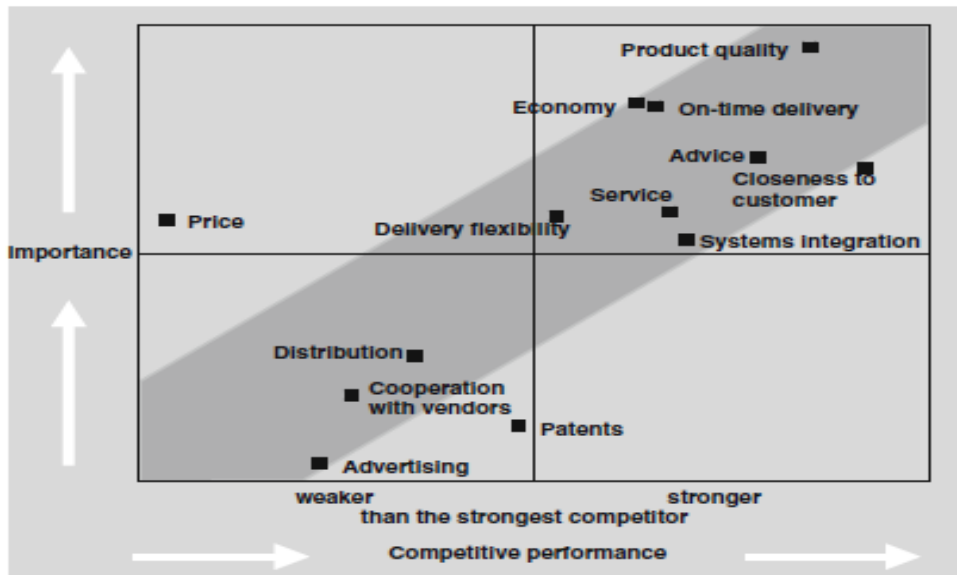
(Amy Chen 2017)

Figure 4. Porter’s Five Forces for Mittelstand Firms.

Industry Rivalry	Extremely high due to competition to excel in performance and innovation
Threat of Entry	Not much of a threat, niche product is very specialized and requires lots of research and development and time to cultivate
Bargaining Power of Suppliers	Not very strong, as the Mittelstand firms often take raw materials and further develop them using proprietary techniques rather than purchase materials pre-developed therefore there is a large selection
Bargaining Power of Buyers	Strong, however the dependance goes both ways due to the long term nature of the business
Threat of Substitutes	Not much of a threat, niche product is very specialized

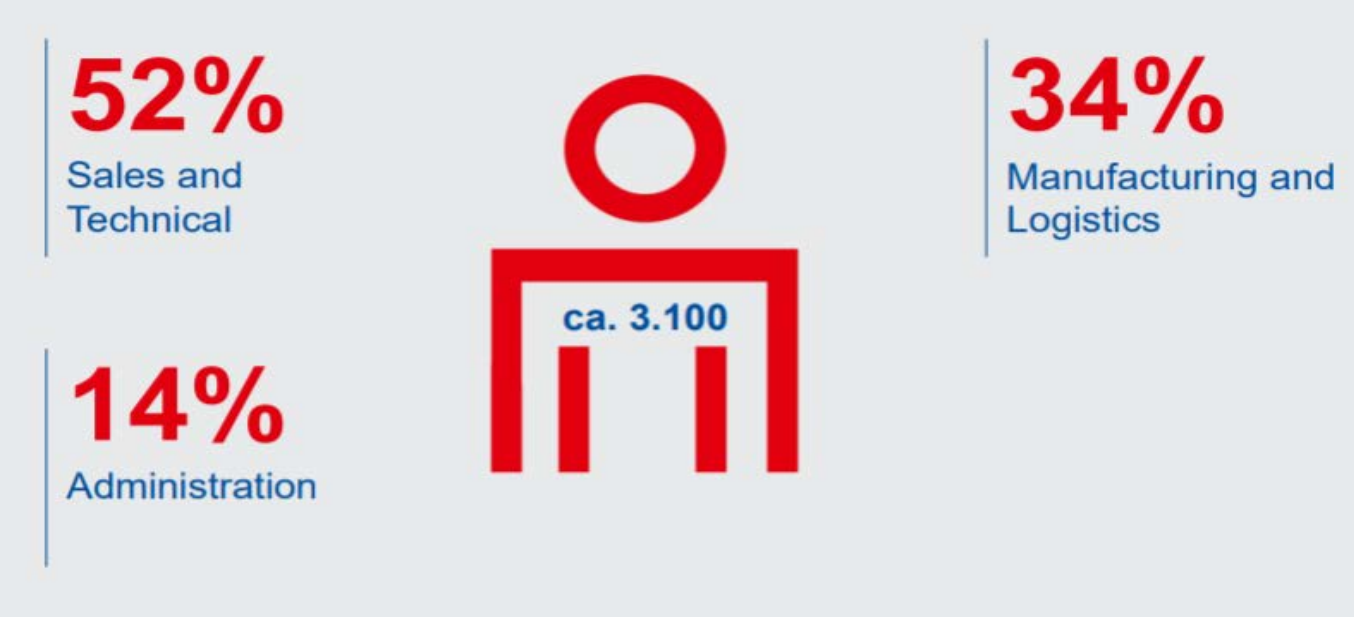
(Amy Chen 2017)

Figure 5. Matrix of competitive advantages for hidden champions



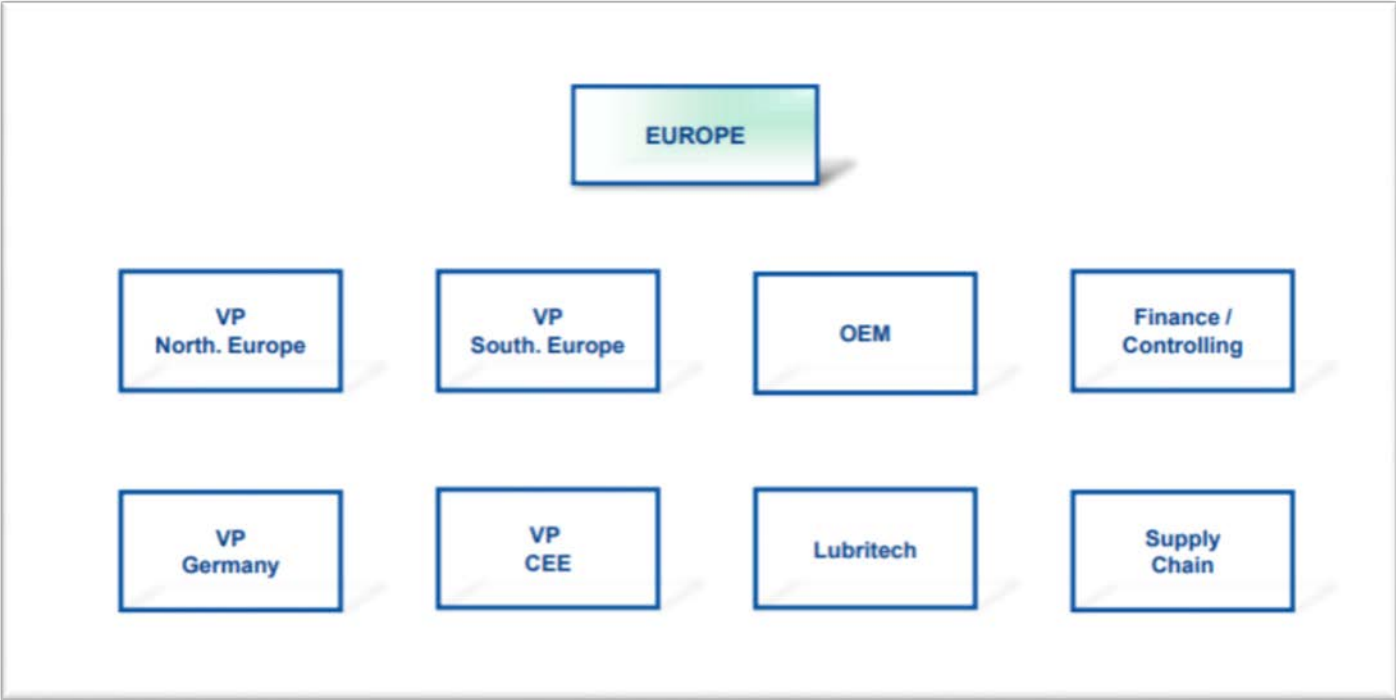
(Hidden Champions of the 21st Century, p.201, 2009)

Figure 6. Fuchs Petrolub Management Structure and Organization



(Fuchs Petrolub 2017)

Figure 7. Fuchs Petrolub Management Structure and Organization



(Fuchs Petrolub 2017)

Figure 8. Fuchs Petrolub Management Structure and Organization

Organization of opportunity and risk management in the FUCHS Group



(Fuchs Petrolub 2017)

Figure 9. Email interview with Dr.Timo Reister, Executive Board of Fuchs Petrolub

Question	Response
1. In what way is the Human Resources policy special in maintaining and managing personnel in Fuchs, compared to firms not structured in the same way?	Selection of employees based on same value understanding as company Profit shares for all employees from the top level to the lowest level Employees: every person matters, support with difficult family situations Hierarchy free direct communication and open feedback culture
2. What in the business environment allows Mittelstand-like firms to thrive more so in Germany than other countries?	Long term thinking, multi-generational family commitment, loyalty, low personal consumption rates of family members (most of the money is reinvested in the businesses which leads to high equity ratios and room for investments).
3. How does decision to specialize in a particular area (ex. lubrications) affect Fuchs' operations and performance in the market, relative to companies that are more horizontally diversified in terms of their product lines?	Deeper understanding of customers, products and technology. Focused market penetration plans.
4. Has Fuchs taken any initiatives to handle the overall skilled worker shortage and the aging workforce, which appears to be an issue across industries in Germany as well as in the world?	Yes: internal education programs, collaborations with universities and schools around the world, push for automation.

(Amy Chen 2017)

Modern Slavery Within Hong Kong's Private Sector

Shivani Chitroda

ABSTRACT

Very little attention has been paid to the involvement of modern slavery within the private sector. This paper analyzes the persistence of forced labor in the modern day, the various forms this activity can take, and focuses on the prevalence of illegal labor within supply chains. Hong Kong is headquarters for many major corporations, many of which take advantage of the low-cost labor in neighboring countries, therefore outsourcing production to various nations in the Asia-Pacific. Given the sparse amount of information provided by the Hong Kong government regarding forced labor, an analysis has been conducted using global studies, relating back to Hong Kong's private sector practices. The Mekong Club, a Hong Kong based businesses organization, is highlighted as one of few organizations to undertake a business-to-business approach in combating these illegal practices. They educate businesses in the private sector as to how they can take action in combating compulsory labor, provide tools and resources to aid supply chain restructuring, and provide an open platform for businesses to share information and discuss routes of action amongst each other. Recommended actionable items for individual companies are explored and the potential implications of this activism are then further considered and addressed with regard to a long-term outlook.

Keywords: modern slavery, Hong Kong, private sector, supply chain management

Every four seconds, another individual is forced into some form of slavery; this amounts to approximately 9.2 million new slaves entering the labor market a year (Ara, 2017). Modern slavery, also referred to as contemporary slavery, is an umbrella term used to describe not only forced labor, but child marriages, sex trafficking, and domestic servitude; both terms will be used interchangeably within the remainder of this paper. It is estimated that there are 45.8 million modern slaves as of 2017 – surprisingly, this incredibly large number is actually the highest it has been throughout all of history (Global Slavery Index, 2016). Out of this estimate, it can be concluded that close to two-thirds of the globally enslaved population reside in the Asia-Pacific region. This statistic reflects the bleak reality that countries in Asia are the main suppliers of low-skilled labor for domestic housework and the bottom-tier of supply chains. While most of the individuals trapped in modern slavery live in or come from countries like India, China, and Pakistan, these countries are extremely populated, are still developing, and have dispersed pockets of poverty which serve as a basis for explaining these conditions.

Despite this phenomenon being linked to less advanced countries, even highly developed economies, such as Hong Kong, have sectors that operate outside of direct government control and cannot have regional policies applied (David et al., 2012). Hong Kong is estimated to have upwards of 30,000 people involved with forced labor; while this is significantly less than countries like India, that have upwards of one million modern slaves, Hong Kong is comparatively wealthier, more well developed, and better positioned to take action in combating modern slavery (Global Slavery Index, 2016). In comparison to global standards, and that of other developed countries, the government of Hong Kong provides little to no information regarding human trafficking, forced labor, and other slavery-like practices occurring within the city, alluding to the almost taboo nature of the topic. It must be noted that the estimate of 30,000 or more slaves in Hong Kong only accounts for individuals actually residing in the city, and does not consider the indirect victims as a result of manufacturing operations that are outsourced. A little-known fact in Hong Kong is that seven out of ten modern slavery victims are directly related to the private sector, usually being integrated into the lowest point of supply chains (Mekong Club, 2017). These people harvest the food we eat, make the commodities that everyday consumers produce, and are exploited on a daily basis; the profits

generated by this industry are upwards of \$150 billion USD, and the only people that see these profits are the slaveholders themselves.

Slave labor contributes very little to national production and gross domestic product (GDP) of a nation, and has the tendency to depress a country's economy (Datta & Bales, 2013). With the private sector being the main gateway through which 70% of forced labor is channeled through, these businesses are in the best position to be actively involved with the prevention of compulsory labor and lead the fight against these global issues. Many large corporations and businesses are based out of or have headquarters in Hong Kong, making the city a great platform to begin the conversation for ending modern slavery. A Hong Kong based business association, the Mekong Club, is one of the first in Asia to become an activist regarding issues surrounding modern slavery. They are a not-for-profit that is aiding this modern day struggle by supporting and educating businesses within Hong Kong's private sector, and its surrounding nations, regarding the prevalence of slave-like practices within various business areas in which they operate (Ara, 2017). The Mekong Club facilitates this process through creating an open environment to discuss the topic, offering presentations, and introducing various tools to assist companies in identifying and addressing modern slavery within their own business spheres.

The following sections will provide an in depth definition of modern slavery practices, the role of the employment agencies, how the private sector plays a turnkey role, outline how the Mekong Club utilizes a business-to-business approach in combating these illegal practices, and provide insight as to how businesses in the private sector can take action in combating compulsory labor.

MODERN SLAVERY

The Issue

Since its abolition from developed countries in the nineteenth and twentieth centuries, the general public has perceived slavery and forced labor practices to be a thing of the past, if not mostly eradicated. This is far from the truth, with the 45.8 million global slavery figure iterated earlier being clear proof that the act of trafficking humans has simply become well hidden in today's digitized society. There are three main categories of contemporary slavery and compulsory labor that can be identified in our modern society: chattel slavery, debt bondage slavery, and contract slavery (Gold, Trautrim, & Trodd, 2015). Chattel slavery occurs when people are born, captured, or sold into permanent forced labor; this is the type of slavery that existed in the United States prior to the Civil War. When referring to slavery, chattel slavery is stereotypically what first comes to mind for most, with the idea of human beings being sold, bought, or inherited as a piece of property (Sutter, 2012). Slavery based on ownership is illegal almost everywhere, and is very rarely found within today's realm of modern slavery. Debt bondage slavery is where people pledge themselves against loans, the most common form being when parents offer their children as substitutes to work and pay off their own outstanding debt. This trade-off is involuntary, with the parents being given no other option, as they often have many other children to take care of. The interest rates on these types of debt are purposefully high so that the child's labor does not actually end up diminishing the loans principle amount, leaving these children enslaved for their entire lifetime (Gold et al., 2015). Similarly, contract slavery arises when fake employment contracts lure and trap workers into the trafficking and enslavement sphere. This act is quite common within the Asia-Pacific region, as many women wind up trapped in domestic servitude contracts, unable to leave due to high contract fees amongst various other factors. Within Southeast Asia, chattel slavery is much less common, with these nations being primarily dominated by forms of forced labor less privy to the public eye, such as debt bondage slavery and contract slavery. It must be noted that the inclusivity of these terms also span to include sex trafficking, child labor, and child marriages; sex trafficking, forced marriages, and child labor will not be broadly discussed for the remainder of this paper unless they explicitly relate to economic activity, specifically within the private sector. The indirect fostering of forced labor is also a huge issue in Hong Kong based companies; while these businesses implement ethical business practices within the city, their supply chains span multiple under-developed countries, often unknowingly exploiting the cheap, low-skilled labor available there.

Similar to physical products, the supply of slave labor can be identified to be made up of three different stages: recruitment, trafficking, and deployment (Crane, 2012). Recruitment is where people are coerced into entering the labor market, trafficking is when humans are forcibly transferred to and prepared for the workplace, and deployment is the final stage in which people are actually put to work. These stages may be further separated within themselves into many layers of buying and selling, and even include agencies and brokers (Crane, 2012). The primary form of direct human enslavement within Hong Kong itself is present as a sub-set of contract slavery; placement agencies exploit people seeking brighter futures and trap them in agreements consisting of excessive working hours and domestic abuse. Domestic servitude in Hong Kong will be further discussed, as there is a relationship between the placement agencies that manage these people, and the supply of low-skill labor within supply chains.

Limitations of Studies

Forced labor statistics can be unreliable to varying degrees due to the essence of the subject matter at hand being a very hard thing to detect, let alone quantify (Bales, 2002); modern slavery is largely hidden crime, resulting in any pertinent data being quite scarce and not readily available to study. Previous studies done on the subject reside largely outside of the management sphere, focusing mainly on the victims of the criminal activity, rather than the organizations perpetuating the crime. Quantitative data regarding any form of human trafficking and forced labor can vary drastically depending on how far the definition is 'stretched'; the incredibly high number of modern slaves referenced today compared to twenty years ago can be partially attributed to the increase in the inclusivity of the definition of modern slavery. In 2000, in order to be actually considered trafficking, human trafficking had to meet three criteria: an act (such as the movement of humans), means (the coercive nature), and purpose (exploitation) (Kessler, 2015). Over time this definition of human trafficking has spanned to include forced labor, meaning that the individual does not necessarily have to change locations or be forcibly moved to be included. This change drastically increased modern slavery statistics, as people trapped in domestic servitude within their own countries were now considered when estimating figures. It can often be unclear due to the dates of various studies, which exact definition of 'modern slavery' is being used in their analysis. The Global Slavery Index (GSI) is reportedly the most accurate data source; the annual studies provide estimates for total numbers of slaves worldwide, as well as estimates for how many slaves reside in each country. It must be noted that the GSI relies on a fairly expansive definition of the subject matter, and sources information from both primary and secondary data points that could have been collected under different definitions of 'modern slavery' (Kessler, 2015).

HUMAN TRAFFICKING AGENCIES

Hong Kong has a very large inflow of migrant workers, the majority being women from Southeast Asia that work as domestic helpers or caregivers for dual-income families. One in five Hong Kong households employs a domestic worker; these helpers are usually sourced through 'recruitment agencies' based out of nearby nations, namely the Philippines and Indonesia (Allmark & Wahyudi, 2016). These recruitment agencies entice workers, typically younger women, with the promise of slightly higher salaries, the perception of superior laws and regulations to protect their rights, and the picture of independence in a 'utopian' city. Women seeking to leave these neighboring countries are hopeful in creating a new life for themselves, and tend to be uneducated about their rights as workers or labor migration laws. The agencies take advantage of this and charge incredibly high fees for their placement services, putting these women in a massive amount of debt. This creates an unavoidable loop where all income they earn goes directly towards paying off the interest accrued on their debt, leaving these people stranded in poor working conditions and unable to return home to their families (Ara, 2017). These women work extremely hard upon arriving in Hong Kong and receiving their work placement, but despite this are given zero assurance of obtaining citizenship in the future. Typically, these contracts have an average length of two years and provide no facilitation for settling permanently in Hong Kong, forcing the continuous renewal of these contracts to pay off lingering agency fees, ultimately leaving these women to spend the rest of their lives as provisional workers with very little rights (Allmark & Wahyudi, 2016).

Many of these domestic workers come from neighboring nations that do very little to protect the wellbeing and rights of their citizens working abroad. Indonesia, for example, is a country that actively works to promote labor migration as a temporary solution to national unemployment and poverty. The Indonesian government receives about \$7.4 billion USD worth of remittances from these migrant workers abroad, and does very little to speak on the behalf of their people working under such poor conditions (Allmark & Wahyudi, 2016). These women become marginalized and demeaned by their employers, are forced to work upwards of sixteen hours a day, sleep in closets or very tight spaces, and their only meals tend to be the leftovers of the children they mind; one woman even reported that the wife of her employer continually disregarding her actual name and only referred to her as 'the creature' (Zarempka, 2000). While protectionist agencies do exist to fight for the rights of these workers, the sad reality is that the corruption in the labor cycle heavily outweighs the activism efforts taking place. There have been increased reports from around the world of physical, mental, and sexual abuse at the hands of officials in office in foreign embassies, these women being the main targets (Zarempka, 2000); exploitation and corruption are present even within the firms and government agencies whose primary role is to assist men and women trapped in situations that violate their core human rights.

SUPPLY CHAIN EXPLOITATION

The connection between businesses and forced labor is not always direct and completely apparent; for example, it's quite unlikely that your favorite local restaurant is running a sweatshop in the back. The link between the two is less direct, and comes about in the form of supply chains. These businesses need various raw materials, component parts, and labor to operate, and the most cost effective sources tend to be located within countries where business accountability and policy regulation is much weaker (David et al., 2012). International supply chains are driven by the essence of cost advantages, and as a result leverage the profitable exploitation of cheap human resources; those individuals at the bottom of the so-called 'food chain' are the first to be taken advantage of in these types of situations, as they are desperate for work to support themselves and their loved ones. These migrant workers leave their homes in search of opportunity, and instead are charged ridiculous fees and have their passports taken away (David et al., 2012) – this activity poses the question as to how these contractors are continuously able to get away with this blatantly illegal behavior, yet still obtain the repeat business of reputable corporations.

Slavery is most likely to persist in illegitimate industries, such as domestic work and unauthorized labor (construction or mining), as these industries already operate beyond the regulation of policy makers and other governing bodies (Crane, 2012). Given the population of slaves worldwide, approximately 78% are engaged in forced labor (Gold et al., 2015). Of this, the majority of forced labor occurs within domestic households and supply chains, with human trafficking tainting numerous raw materials, commodities, and goods that are processed upstream into the households of consumers worldwide. Slave-made commodities are uniformly mixed up with other commodities at different tiers of the supply chain, effectively concealing the illegal activities from companies operating in direct consumer markets (Gold et al., 2015). When judging this from a macro perspective, it is evident that supply chains are highly interconnected and internationally outsourced, and the risk of slave labor being present somewhere along the supply chain is possible amongst almost all industries. Whether looking at electronics, high-tech, automotive and steel, agriculture, seafood, mining, or garments and textiles, global consumers constantly face both a moral and political impact with related purchasing decisions (Datta & Bales, 2013). Identifying the division between free and forced labor within supply chains becomes all that much more difficult when scaling up to the global level, as this can appear in various forms and requires in-depth understanding of local contexts, the products being made, and where the commodities are sourced from (Gold et al., 2015).

To illustrate this further, a six-month investigation done in 2013 that uncovered the horrific slave trade occurring off the coast of Thailand is highlighted. Large numbers of men were being held against their free will and were forced to partake in prawn farming; they endured 20-hour work days, frequent abuse, and if they refused,

execution-style killings (Hodal & Lawrence, 2014). These prawns were mixed in with ethically farmed seafood, and were sold in leading supermarkets around the world such as Walmart, Costco, Tesco, and Carrefour. The differently sourced prawns are not easily distinguishable as they make their way further upstream the supply chain, and onto our dinner tables; while the resulting product is essentially the same, the consumption of the unethically sourced prawns has massive moral implications for global consumers.

THE MEKONG CLUB

Their Role

The Mekong Club is one of the first non-profit organizations to use a business-to-business approach to combat slavery in Asia; they have positively disrupted traditional stigmas surrounding the topic, and have provided relevant training to over 1000 businesses to date (Ara, 2017). They offer presentations and introduce a variety of tools to help create a freer dialogue regarding modern slavery; the issue itself is so taboo that often businesses, especially in Hong Kong, are reluctant to address the issue, as that would mean admitting that there is a problem within their business in the first place. Matthew Friedman, chief executive officer (CEO) of the Mekong Club, strongly advocates for the involvement of the private sector in leading the fight against contemporary slavery; businesses are poised in the perfect position to lead this change, as they have direct control and interaction with their supply chain networks, where a bulk of these illegal activities occur. The non-profit organization streamlines its efforts in raising awareness regarding modern slavery within four main industry they have pinpointed it to be a major issue; banking, manufacturing, retail, and hospitality. Efforts are directed at these four industries due to not only the prevalence of illegal human labor tainting the goods and services produced, but the likelihood that these corporations are the most willing and able to become advocates for change themselves. The Mekong Club acts as a facilitator during this learning process, providing helpful means to initiate the learning process, such as resource guides explaining slavery and clarifying many commonly used definitions, and an online platform to help brands assess the risk of forced labor within specific factors. Depending on the inputs provided, this platform helps to prioritize audits, investigations, and other prudent measures wherever modern slavery is deemed most likely to exist (Mekong Club, 2017). They also offer relationship management training for key departments in the financial industry to help managers and providers understand how to identify key signs of modern slavery, and how to deal with suspicious clients and transactions within their pipelines.

Their Remediation Toolkit is a comprehensive guide aiming to assist companies to address any contemporary labor issues in a strategic and organized manner. It is made up for four sections (preparation, communication, investigation, and remedy), and is complemented by a legal guide for seven Asian countries that have been flagged as being high-risk within the modern slavery sphere (Mekong Club, 2017). Another unique feature they offer is the Commodities/Countries Risk map; this map is an interactive dashboard that gathers data from official sources to generate business-specific country and commodity reports (Mekong Club, 2017). Businesses are able to see instantly if their direct business activities or their key commodities pose a risk of involving forced labor as well as how high that likelihood is. This serves as a great starting point for businesses new to modern slavery activism, as they are presented this information in comprehensive yet easy-to-understand way, allowing them to better allocate resources where deemed most necessary. A best practice repository is also provided to all businesses that use the Mekong Club's services; this allows companies to learn of the existing efforts aiming to combat modern slavery in different countries and the external resources available at their disposal.

The Mekong Club has adopted a vision to abolish modern slavery in Asia, and offers unique services and addresses issues that the government of Hong Kong has not deemed to be a legitimate priority. A few of the high profile corporations engaging with the Mekong Club's services include Adidas, the Bank of America: Merrill Lynch, Clarks, Commonwealth Bank, HSBC, KPMG, and The Walt Disney Company.

Private Sector Activism

Annual profits from slave-led processes are estimated to exceed \$150 billion USD, most of which is channeled through the global banking system; the banking and financial services industry is at a major disadvantage as this is technically money laundering, and they stand to have a lot to gain by taking an active role in battling the issue (Mekong Club, 2016). It is no longer sufficient that companies and financial institutions simply rely on local law enforcement to deal with these problems within the countries they source their raw materials and supplies from, as they are often ineffective and weak in the still-developing countries where these supply chains are set up (David et al., 2012). The private sector's centric role within contemporary slavery provides a strong foundation in identifying suspicious activities, understanding criminal patterns, and developing systems to track this sort of activity. Companies that are involved in any sort of manufacturing or production activities are quite susceptible to unknowingly facilitating unregulated forced labor, as supply chains and manufacturing channels tend to be extensively involved within underdeveloped countries. Additionally, any product sold that is found to have links tied to child labor or modern slavery puts businesses at risk of serious reputational damage, among various other severe liabilities (Mekong Club, 2017). Within supply chains, it is expected that CEOs and upper management have different levels of visibility over separate tiers of the supply chain; within this, it is implied through ethical business practices that companies have a transparent view over at least their first-tier suppliers, business partners, and contractors (David et al., 2012). The Mekong Club's areas of focus in mitigating these risks involve coaching their members in understanding supply chain breadth and boundaries, reaching out to and educating suppliers, and as a last resort, being trained on handling potential reputational risks that may arise (Mekong Club, 2017). The hospitality industry suffers major vulnerabilities due to modern slavery largely due to the vast size of the industry; focal issues include forced prostitution, forced labor within supply chains, and training staff to appropriately detect the problem at various levels of the business (Mekong Club, 2016). According to the 2017 Trafficking in Persons Report, only 66,000 people out of the estimated 45.8 million engaged in human trafficking globally, were rescued; this equates to less than 0.2% of victims being identified and assisted. Through utilizing the power of each individual businesses' control of their purchasing decisions, businesses have the unique capacity to shut out suppliers who rely on exploitative labor to turnover a profit (David et al., 2012). This form of activism would provide a foundation for change, but would need to be complemented by a much more in-depth examination as to why this problem is so reoccurring throughout history and in the present day.

The lack of attention to modern slavery perpetuates a phenomenon called the "denial of slavery in management studies", where the roles of companies and managers are essentially ignored (Crane, 2012). This poses a challenge, as the bulk of resources are currently put towards focusing on victims of modern slavery, instead of rerouting attention to the organizations that are able to act as pivotal players in tackling the issue (Crane, 2012). If these four branches of the private sector were to become more involved in the fight against contemporary labor, they could adopt a top-down approach and play a pivotal role in significantly reducing the amount of people that fall victim to modern slavery.

The first step is to improve centralized supply chain monitoring; while this process is quite useful for a variety of business processes, it still struggles with human trafficking identification and the division between free and unfree labor (Gold et al., 2015). Businesses, with the help of the Mekong Club, must develop appropriate indicators, and improve current ones, to enhance their supply chain transparency and allow for total supply chain mapping. If slavery were detected in a supply chain, the most straightforward and typical response of corporations would be to abruptly withdraw their sourcing activities from the entire region or nation (Gold et al., 2015). The Mekong Club is working with those operating in the private sector to educate them of less radical, and more effective methods of change; while removing their operations entirely does eradicate the corporation from future liability and limit any public relations scandals, it is typically not the best course of action. Even if slave labor tends to pull down the local and regional wage level, slaves do not fuel local consumption because they lack any sort of purchasing power (Datta and Bales, 2013). Generally speaking, a total withdrawal of operations would substantially worsen the socio-economic situation in the region and would not necessarily solve the specific problem of slave labor persisting in

the community or at the individual level because competitors will likely still continue operations in the area due to perceived cost advantages or ethical issues not being an area of concern (Gold et al., 2015). At the end of the day, this does very little in taking steps to alleviate the poor conditions for people trapped within illegal labor rings; other corporations will likely continue their operations, or slaveholders will simply pivot either the industry they are operating in or alter the goods they produce.

In order for change to come about, a collective activist method must be implemented. The first step in achieving collective activism is to foster action at the individual company level; the hope here is that this will also encourage industry competitors to become more well-educated regarding contemporary labor and result in a domino-like effect. Despite organizational fields consisting of different types of organizations, namely public and private, changes within these firms will come about through the interaction, information sharing, and debating amongst one another (Crane, 2012). When companies commit to preventing, detecting, and remediating forced labor, this must be accompanied by actual action (David et al., 2012); this action will involve changing business processes and involve various cost implications. To give a ball-park amount, Anti-Slavery International recommends that businesses invest approximately 0.7% of pre-tax profits into their commitment towards eradicating slavery and improving human rights (David et al., 2012). While this may seem like a small investment, it will add up to a massive return in battling the issue over a longer time horizon. Addressing concerns at a managerial level regarding slave labor implies the need to fully understand the core issue of slavery; the forms it appears in, its financial and socio-cultural rationale, and its stakes in society. Businesses that are serious in wanting to eradicate forced labor from their supply chains must allocate resources in considering the implications of local contexts in the countries where they operate, and take appropriate subsequent action.

CONCLUSION

The global population has tripled since World War II, and the industrialization and rise of many first-world countries has been matched by the loss of community, society safety nets, and basic human rights within less developed nations (Datta & Bales, 2013). Socioeconomic context plays a huge role in influencing the supply of modern slaves; contemporary slavery persists today largely due to the millions of people still living in extreme poverty (Crane, 2012). Modern slavery flourishes in these impoverished conditions, being one of the worst forms of human exploitation that has gotten very little attention amongst the professionals within the private sector. According to the United Nations, human trafficking is the fastest growing form of organized crime, despite being so universally condemned. Hong Kong stands out as one of the more notably wealthier cities taking very little action in combating modern slavery-like practices. Many countries with comparable economic standings, such as the Netherlands, United Kingdom, Sweden, and Australia are amongst the nations with governments taking the most action in combating modern slavery (Global Slavery Index, 2016). The city of Hong Kong is a great starting point for addressing the many issues with human trafficking and forced labor; it is the headquarters for many major corporations in Asia, and with the help of the Mekong Club, will act as a hub for tackling the issue. A lot of retail brands, financial institutions, and various other corporations are very interested in the problem itself but tend to be too reluctant to speak out or actively seek help, as it may appear as 'admitting' to a severe issue within their core operations. Through activist approaches, the taboo nature of the topic is slowly being disintegrated, and many high-profile corporations are beginning to adopt public stances surrounding the issue. Supply chain management was previously thought to be too intricate and as having too many tiers to properly manage beyond immediate partners, contractors, and suppliers; with the new tools and discussion platforms available to businesses of every size, the future of the private sector and their complicitness with modern slavery practices is predicted to look very different. The Mekong Club acts as a facilitator in battling contemporary slavery, and helps to bridge the knowledge gaps and provide resources, encouraging corporations to take the right steps in solving a centuries old problem.

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APPENDIX

Table 1: Measures of Vulnerability to Modern Slavery by Country

Country	Civil & Political Protections	Social, Health, & Economic Rights	Personal Security	Refugees & Conflict	Mean
North Korea	71.20	48.27	62.88	1.00	45.84
India	37.07	36.68	43.88	87.78	51.35
Pakistan	58.40	41.98	52.70	96.79	62.47
China	55.12	26.90	42.84	52.78	44.66
Hong Kong	42.28	17.55	21.44	35.65	29.23
Canada	17.59	23.64	15.48	36.11	23.21

(Global Slavery Index, 2016)

Note: This table outlines the comparisons between various countries mentioned in this paper, and their respective category scores referencing vulnerability to modern slavery. 0 is the 'best' score a country can have in a category and 100 is the 'worst', relating to the absence of protection for rights, physical safety and security.

Table 2: Estimated Proportion of Population in Modern Slavery by Country

Country	Estimated % of Population in Modern Slavery	Estimated Number in Modern Slavery	Population
North Korea	4.373%	1,100,000	25,155,500
India	1.400%	18,354,700	1,311,051,000
Pakistan	1.130%	2,134,900	188,925,000
China	0.247%	3,388,400	1,317,738,000
Hong Kong	0.404%	33,000	7,287,000
Canada	0.018%	6,500	35,871,000

(Global Slavery Index, 2016)

Note: This table outlines the comparisons between various countries mentioned in this paper, and the respective number of people estimated to be involved with modern slavery in each nation.

International Analysis of FIFA

Marshall Henson

ABSTRACT

Fédération Internationale de Football Association (FIFA) has comprehensive global influence, as it recognizes 211 member associations. This paper seeks to outline how FIFA manages cultural, administrative, geographical, and economic distances while operating internationally. Leveraging two FIFA confederations, CONCACAF and UEFA, the paper will outline international operating differences between North America and Europe, respectively. Further, the competitive markets represented by these confederations will be compared. FIFA and its confederations prove to be an atypical study, as the goals of the organizations are non-financial. The focal goals of these confederations are continuous growth and improvement of the game of football. However, the motivations vary between confederations depending on the regions' relative growth stage and objectives. Throughout the research, both bodies were influenced by trends, historical factors, and other governing bodies. Primarily, CONCACAF faced influence from the major sporting leagues established in North America, while the EU had a significant effect on UEFA. Despite the communicated lack of financial interest, the confederations and FIFA are reliant on the fiscal success of their international tournaments. To increase these revenues, the bodies must focus on the expansion of footballing attention and fandom, which will lead to increased sponsorship and TV revenue. The research for this paper was conducted through the analysis of documents, records, articles, and an interview conducted with an employee of FIFA. Ultimately, the paper finds that FIFA, UEFA, and CONCACAF all face materially different complications due to external relevance, internal complications, and strategic orientation.

INTRODUCTION

This paper will analyze the structure of the Fédération Internationale de Football Association (FIFA), particularly in relation to how the association manages its international presence. The focus will be a comparison between two FIFA Confederations: the Confederation of North, Central American and Caribbean Association Football (CONCACAF) and the Union of European Football Associations (UEFA). Both confederations have significant autonomy over their respective regions; however, their decisions are monitored and align with the FIFA standards. Ghemawat's CAGE Distance Framework will be the primary analytical tool used to decipher and categorize the differences between the two confederations, followed by an evaluation of the internal and external competitive markets. Throughout the paper, a focus will be placed on both practical, theoretical, and managerial implications. Ultimately, this paper will use FIFA as a catalyst to analyze the differences between North American and European markets.

FIFA STRUCTURE

FIFA

FIFA is the governing body of world football. The association is governed by Swiss law and its headquarters are based in Zurich (FIFA, 2016). FIFA's stated operating objectives focus on social responsibility, building an integrated community around football, and growth of the association (FIFA, 2016). The goals lack financial motivations, aside from its motivation to match revenues to expenses on a yearly basis. This modest fiscal aspiration legitimizes FIFA's non-financial goals. However, growing the game of football and FIFA-run competitions is not without financial benefits to the operators of the association. TV Rights, particularly for the World Cup, dominate FIFA's revenue stream (Figure 4), creating a strong interconnectedness between the global growth of football and increased

revenues for FIFA. Ultimately, profits are inconsequential to FIFA, but increasing revenue is beneficial to its employees and the development of the game.

The association is head by a president—currently Gianni Infantino—who oversees the FIFA Council. Together, they form the strategic and oversight body (Figure 1). Recently, FIFA has implemented a law limiting the maximum presidency to last 12 years, formed from three terms (Figure 2). Each term the 211 congress members elect or re-elect a president. Congress is formed by equal representation from the 211 members of FIFA (Figure 2). It also serves as the supreme and legislative body (Figure 1). Below these members of FIFA is an advisory body, which is formed from nine standing committees. These four groups and persons form the decision-making bodies of FIFA. Together, they create the direction of the organization and its member associations.

Each of FIFA's 211 member associations belongs to a confederation, which is summarized in Figure 3 (FIFA, 2016). The association recognizes six confederations of football, which belong to the six inhabitable continents (FIFA, 2016). The confederations govern football within their geographical regions, except in exceptional circumstances, such as Australia's national team competing within the Asian region for higher quality of competition (FIFA, 2016). This paper will focus primarily on the confederations for Northern and Central America (CONCACAF) and Europe (UEFA).

CONCACAF

CONCACAF is the regulating body of football within the North and Central American regions, along with the Caribbean (CONCACAF, 2015). The body exists to improve, regulate, and control the game of football (CONCACAF, 2015). As well, the body must resolve footballing matters within the region and ensure FIFA compliance. Most importantly, the confederation must organize international footballing events—its source of revenue. CONCACAF has 35 member associations (Figure 3) with vastly differing populations, from Anguilla to the United States. These associations are split into three groups, representing the Caribbean, Central America, and North America. The confederation contains two financially relevant leagues—the MLS and Liga MX. Countries within the region, beyond Mexico, the US, and Canada, do not have the population or economic significance to produce internationally important leagues. Primarily, the confederation organizes two events: The Gold Cup and the CONCACAF Champions League, for international and club football, respectively (CONCACAF, 2015). Sponsorship and broadcasting rights for these events generate much of the confederation's revenue. Thus, growing the game and attractiveness of the tournaments is paramount to increasing revenues. Despite containing one of the largest sports markets in the world—the United States—football fandom and interest lags behind other confederations. Football is in a growth stage in North America, which molds the operating strategies of the confederation, particularly for its tournaments.

UEFA

UEFA is the FIFA confederation that governs football within Europe. Like CONCACAF, the European body operates to preserve the integrity of the game while orchestrating international tournaments (UEFA, 2014). UEFA consists of 55 member associations (Figure 3). Converse to its North American counterparts, Europe has many competitive and financially robust leagues. In fact, five of the top ten sports leagues sorted by revenue are European football leagues (Figure 5). Due to its history and recent technological developments, football in Europe experiences natural growth. Further, as the dominantly popular sport in Europe, football dictates the sporting world. This allows UEFA to control the European sports market and focus on the betterment of the game and increasing parity, rather than uninterrupted growth. Finally, UEFA benefits from being the most financially significant confederation, which grants the body a larger budget and increased flexibility ("Sports Statistics," n.d.).

CULTURAL ENVIRONMENT

Cultural distances shape how FIFA, CONCACAF, and UEFA function. Simultaneously, football curates an underlying culture, which supersedes certain barriers of international cultural disparity. This section will analyze language barriers and footballing culture, considering their effects on different markets.

Language Barriers

Language barriers are typically prevalent in international business. With 211 member associations, the members of FIFA account for every possible official language. However, the top levels of FIFA operate under 4 official languages. Nicolas Evans, a Group Leader Football Quality Programme at FIFA, speaks about the language barrier: “As problems come, this is probably the smallest possible issue you can imagine at the top level” (Nicolas Evans, verbal communication). His reasoning stems from modern language globalization. He says that at the top levels of FIFA, each member will have a representative proficient in one of the four official languages (Nicolas Evans, verbal communication).

However, Evans indicates that language barriers may be more common at lower levels of the association and confederations: “It may, however, amplify when it comes to grassroots projects or education at lower levels where English may not be spoken as much” (Nicolas Evans, verbal communication). Further, he speaks about how this problem would be more prolific within UEFA, where the zone contains more than 28 official languages, opposed to in CONCACAF, which is mostly trilingual (Nicolas Evans, verbal communication). Ultimately, the issue of language within FIFA administration is immaterial, as having four official languages is broad enough to remain inclusive but narrow enough to avoid misinterpretation.

The greatest challenge of language is within the game itself—football. FIFA permits hundreds of international matches between member associations yearly. In these matches, the two teams will often speak different languages, which is not directly a FIFA-problem. However, the referee must be able to communicate to both teams. This can be particularly difficult in larger tournaments. This language complication was the reason for the introduction of the football-famous yellow and red cards (Porzucki, 2014). However, the referee must be able to control the game beyond a binary system, for which communication is vital. Thus, FIFA assists its referees in learning English and expects them to communicate with it when necessary (Porzucki, 2014). However, there have been cases of noncompliance, such as in the 2014 World Cup, where a referee was attempting to communicate with Greek players in Japanese (Porzucki, 2014). This deterrence from what is expected from employees of FIFA raises Human Resource and training concerns. The referees are an integral part of football, and they should be expected to operate under the conditions compulsory for their employment.

Given the diversity of language throughout the world, maintaining four official languages allows FIFA to promote inclusivity. It is not only positive for the image of the association, but it helps reduce miscommunication or diluted understanding amongst its international presence. However, communication within the activity itself may need better enforcement or amplified training programs.

Footballing Culture

While increasing football’s presence globally, each confederation aims to promote awareness and fandom of the sport. This growth increases viewership and thus TV revenue for FIFA and its confederations. In Europe, football is the dominantly viewed sport, whereas North America lags. This is largely due to the relative strength of the footballing culture. Like most cultures, its predominance stems from history and the current emphasis within the communities.

The Football Association, England's football governing body, was founded in 1863 ("The History," n.d.). Organized football, as it is known today, cultivated from this point forward ("The History," n.d.). Most of Europe was not far behind England. Football grew immensely; it became a place for not only for fandom but agendas—political, racism, homophobia, for example (Bakowski, 2016). Multiculturalism attracted people to football, as these political platforms concerned a diverse selection of individuals. Particularly, the meaning of international matches grew beyond football as political rivalries were established. The status of football has only grown throughout Europe since the late-1800's, as technological advancements have continued to increase accessibility.

Conversely, organized American football started in the 1920's (Klein, 2014)—much later than the Europeans. Footballing federations were created before this, but without an official league, it would have been difficult to erect and maintain a footballing fan culture. In 1921, the American Soccer League (ASL) was founded (Klein, 2014). It presented real promise given the recent and continuing influx of immigrants from soccer-crazed countries (Klein, 2014). Due to the financial clout backing the teams, the league began to attract European players to America. The ASL was sufficiently competing with the NFL within the American sports market (Klein, 2014). However, this growth stumbled with the Johnson-Reed Act in 1924, which limited immigration into the United States (Klein, 2014). Further, the ASL began to misbehave internationally, such as forcing teams to boycott tournaments. As a result, FIFA declared the league an "outlaw league," which led to its eventual collapse in 1933 (Klein, 2014). The growth of football in America stagnated after this, while the four other major sports saturated the market.

Modern football attractiveness can be evaluated through a comparison of two leagues founded within a year of each other in the early 1990's—MLS and the English Premier League (EPL). The MLS was founded in an effort to establish a stable and financially self-sustaining football league. Conversely, the creation of the EPL was a financial *growth* move. The top flight of English football had been part of the English Football League (EFL) since its creation, which tied them financially (MacInnes, 2017). The top flight and its respective owners believed the league could benefit from separating its revenues from less popular English leagues (MacInnes, 2017). Importantly, technological advancements in television and radio meant the market for English was global—including North America. This is the MLS's greatest issue. The fans the league hoped to attract were and will continue to be fans of a well-developed English league, and the growth of the EPL after the separation only preserved this problem. Americans, *de facto*, may feel a greater emotional connection to the English-speaking, high-quality, and tradition-rich league, than when an MLS team is introduced in their backyard. The EPL's financial dominance showcases this, as a ranking of professional sports revenues has the EPL ranking third and the MLS outside of the top ten (Figure 5). Further, the growth of professional football continues to be greater in Europe, where US-based investors seek ownership (Conn, 2015). While TV deals and increased revenue have perpetuated the success of football in Europe, they may have had adverse effects on the growth of football in North America.

Without a league that competes with European associations, North American football fandom has and will continue to produce stagnated results. This affects national team growth, as well, as seen by the United States missing the 2018 World Cup. Massive countries missing the World Cup is not only bad for parity within the game but is financially significant to FIFA and its broadcasting deals.

The presence of the EU may also have a positive influence on the growth of football within UEFA's jurisdiction. The European Commission's 2007 White Paper showcased its positive views on sport within Europe for reasons such as social integration, health, and cultural adaptivity. The White Paper recognizes football's predominance and attempts to promote socially beneficial tendencies within the culture. This administrative commitment to footballing culture ratifies the importance of the sport within Europe.

ADMINISTRATIVE ENVIRONMENT

Administrative factors are complex when operating internationally, as legal and regulatory differences vary between countries. The EU attempts to align legal frameworks to ease international business within Europe.

However, the regulations also create operating limitations compared to the North American free market. This section will cover the challenges faced by both confederations regarding human rights, political interactions, and the presence of the Court of Arbitration for Sport (CAS) for FIFA.

Human Rights

Human rights implications are crucial for any institution when operating internationally, given the discrepancies between countries. This can be particularly difficult within sports, as the leagues and clubs control their athletes. In the United States, a traditional method of operating a sports league constitutes the basis of the rules for the four major leagues. The traditional US-based model restricts the eligibility of athletes until a specified age, at which time they are enrolled into a draft which allocates players to specific teams. These players are then controlled by the same team for 5-8 years depending on the league, regardless of contract length. In the US, this draft system is allowed due to the 1922 Supreme Court decision to allow sporting monopolies within the United States (Rosentraub, 2004). Due to the monopolies of these four major sports, players within the league have no choice but to accept their workplace for the minimum timeline.

European football abstains from this drafting model. Additionally, the European Union (EU) would likely halt any attempt by UEFA to implement drafts. The foundation of such a block would be backed by the Bosman ruling by the Court of Justice of the European Union (CJEU). This court decision stated that clubs have no control over players once contracts have ended. This move empowered athletes, rewarding them with increased control over their careers. Further, any attempt by an individual league to implement such restrictions would simply make the league less attractive to athletes, as there are many leagues for athletes to consider in Europe.

CONCACAF and UEFA player control policies have been shaped by primary and secondary law. North American precedent gives clubs forced and lengthy control over their athletes. Conversely, European clubs have inherently limited control over their athletes beyond signed contracts.

Political Interaction

Operating internationally, FIFA had to choose a home for their association. Along with 44 other international sporting associations, FIFA headquarters are in Switzerland ("Sports bodies," 2015). These bodies collectively contribute just over one-billion Swiss Francs to the economy, annually ("Sports bodies," 2015). In return, Switzerland offers many attractive governance policies and qualities: political stability, neutrality, and attractive tax and legal policies ("Sports bodies," 2015).

Political stability and neutrality within Switzerland allow FIFA to avoid negative associations. Similar to the country-of-origin effect, where consumer perceptions can be molded by the country where a product is produced ("Country of," 2013), FIFA could face similar issues if they operated in a country known for specific radical relations, corruption, or other politically-driven concerns. Like FIFA, UEFA experiences similar political clarity operating out of Switzerland. Conversely, CONCACAF operates out of Florida, within the United States, and has consistently battled allegations of favouritism for the United States and Mexico over smaller countries within the region (Yip, 2015). Although these are allegations and have yet to be proven, the reputation of the confederation still faces harm regardless of the authenticity. The lack of political interference is important to all bodies governing world football, and allegations that indicate otherwise harm their respective legitimacy.

Perhaps a more self-serving benefit provided by being in Switzerland is FIFA's association status. In Switzerland, associations are not required to register with the state or publish financials ("Sports bodies," 2015). Further, they are provided tax breaks and are usually exempt from anti-corruption laws ("Sports bodies," 2015). Foremost, the tax breaks provide FIFA financial flexibility and benefit. Second, the other three benefits provide FIFA the opportunity to operate privately, increasing business flexibility. However, FIFA choose to disclose their financials

annually, as the statutes have openly stated the intention of perpetually matching expenses and revenues. Ultimately, the benefits provided by Switzerland may not all be actualized, but the freedom they provide is what attracts FIFA, UEFA, and other organizations.

Switzerland's attractiveness to sports organizations started around the first World War due to its location and beauty, but political associations, financial benefits, and organizational freedom have continued to make the country attractive.

Presence of the CAS

The Court of Arbitration for Sport (CAS) is an arbitration body created by the International Olympic Committee (IOC) (Blackshaw, 2003, p. 62). CAS is dedicated to resolving disputes relating to sport, offering opinions, and mediation (Blackshaw, 2003, p. 62-64).

In accordance with FIFA's statutes, all confederations "must agree to recognize the jurisdiction and authority of CAS and give priority to arbitration as a means of dispute resolution" (FIFA, 2016, p. 21). Essentially, FIFA requires all its member associations to externalize their dispute resolutions to CAS. This limits the confederations' disciplinary power, along with that of the leagues and associations operating beneath.

Within UEFA, CAS is generally accepted due to its predominance in the European sports model. However, the US sports industry is dominated by the four major sporting leagues which do not accept CAS principles and have internal arbitration and controls—the MLB, NBA, NFL, and NHL. These leagues have formed powerful cartels of their industry following the aforementioned 1922 US Supreme Court decision, which ruled there was no infringement on anti-trust laws (Rosentraub, 2004, p. 104). This decision ensured the closed-system model of US-sports, where the specific leagues could control the number of teams, the entrance of athletes, and create other nuances that made the product marketable. Most importantly, the decision created a continually profitable opportunity for private ownership. Thus, the precedent was in place when major-professional football eventually moved to North America. When the Major League Soccer (MLS) was created, it emulated the closed-system model of its geographical neighbours, as opposed to its sporting partners overseas. However, it is still bound by CAS. This dynamic has been called into question on numerous occasions, with a formal complaint emerging in 2017.

In August 2017, two professional football clubs operating in the lower divisions of American football brought a case to CAS against The United States Soccer Federation (USSF), CONCACAF, and FIFA (Grossobel, 2017). The clubs claim that MLS's closed system does not comply with Article 9(1) of FIFA Statutes, which state that participation in a footballing league under FIFA statutes shall depend solely on footballing merit (Grossobel, 2017). In Europe, this issue is dealt with by a promotion-relegation system. In most cases, European leagues such as the English Premier League will have multiple teams relegated from top leagues to allow for the same number to be promoted for the following season. This creates open competition over the long term. Conversely, MLS entrance is only permitted through relocation of a current team or expansion. The case presents a new dynamic, where the franchise-model for sports has been called into serious question. Any decision, in this case, will come with scrutiny and ultimately could see the US courts attempt to intervene.

This case highlights how FIFA's statutes interact with international markets, particularly in the United States, where leagues operate under a private-ownership and closed-circle model—vastly different from the European model.

GEOGRAPHICAL ENVIRONMENT

The geographical environment for an association that spans all six inhabitable continents can particularly difficult. FIFA must consider physical remoteness, geographical uniqueness, and climates when conducting daily operations.

Despite operating out of Switzerland, the association must consider global implications of all decisions, schedules, and rule alterations.

The concern of operating out of Europe is that FIFA decisions tend to be Eurocentric. For example, the 2007-decision to ban high-altitude international football matches was scorned by many in South America members (Long, 2007). The issue with this decision was the disregard for the landscape of many South American countries. Peru's capital is 3,600 meters above sea level, which meant the new regulation dismissed the capital from hosting international matches (Long, 2007). Despite the health concerns associated with physical activity at high altitudes, critics suggest the decision sets a startling precedent for banning other imperfect geographical situations, such as climate.

FIFA and its confederations must also consider geography when scheduling international matches. Many footballers who play at a national team level, particularly from outside of Europe, play their club football outside of their home-nation. Thus, not only must organizers consider the location of the countries engaging in competition, but the percentage of players who travel from a third country. FIFA has introduced international breaks—a period where club football is paused to accommodate international matches—which are followed by UEFA schedules. This certainly eases the scheduling, but with many players traveling from Europe to South America, travel time can still be a concern.

Ultimately, geographical distances and differences between countries can cause the issue to the FIFA-body which is centered in Switzerland. Schedule organizers, rule-makers, and other FIFA directors must consider a wide array of geographical implications as decisions usually have international effects.

ECONOMIC ENVIRONMENT

Football has a world presence, both socially and economically. This section will analyze the size and growth of the football industry, along with the human capital which preserves this financial success. In both topics, the North American and Europe markets will be considered and compared.

Footballing Economic Presence

In 2009, the footballing financial market was worth 19.5 billion euros—43 percent of the global sports market (Collignon, 2011). The next closest economy is US football, only accounting for 13 percent of the market (Collignon, 2011). Further, football has the second highest growth rate, which is only behind rugby (Collignon, 2011). However, the size of footballing economies varies between countries and regions.

In the US, the highest revenue for an MLS team in 2016 was 63 million USD (Soccer – Statistics," n.d.). Conversely, the highest revenue within the EPL was 753.74 million USD (Soccer – Statistics," n.d.). All 30 of the highest 2015 revenue-generating football teams in the world are from teams within Europe, with 17 clubs being located within the United Kingdom (Deloitte, 2016). The 30th highest revenue in Europe is over 180 million USD, nearly tripling that of the highest US team (Deloitte, 2016). This economic incongruity perpetuates confederation individualism, with clubs from separate confederations never competing in meaningful matches due to inequality. With the growth of football in other confederations, the bodies may be able to open new revenue streams through global club competitions.

Human Capital

Along with success of European football leagues, the region also produces many of the players who dominate these leagues. For example, the German Bundesliga sees over 50 percent of its participants come from the country itself ("Premier League," 2017). However, general participation and interest in football are higher in many other countries, particularly in parts of Africa and South America (Figure 8). This suggests that Europe's proximity and

robust training programs perpetuate the dominance of the leagues by patriots. Human capital refers to the quality and quantity of available talent for professional football clubs.

Due to the number of footballing teams throughout Europe and their development systems, a team will almost certainly discover every youth football player with potential. This player will immediately receive training, thus increasing his ability and the likelihood that he becomes a professional footballer. The route to European football leagues is much less direct for individuals from other regions, particularly without extensive training as a child. In addition to the natural tendency to promote nationals, UEFA has implemented the Home-Grown Player rule. This rule forces teams participating in the Champions League to have a minimum number of players who played within the local association at youth levels. Certain associations, like the FA, have also implemented similar rules for domestic matches. This movement by the confederation attempts to preserve the growth of human capital within the region, given that it holds the most valuable leagues. Restricting foreign player totals forces European clubs to continue to develop patriots, which increases the marketability of European football players and UEFA tournaments. This protectionism of the labour market will make it increasingly difficult for other confederations to grow without significant changes to regional club football.

Conversely, CONCACAF is a growing football confederation which lacks the developmental infrastructure of its European counterparts. Not only do human capital levels suffer due to the shortage of quality football programs, there is also increased competition for young athletes. The four major sporting leagues within the United States are much more attractive to young athletes for the same reasons football is attractive within Europe. These leagues are financially significant with robust recruitment systems and close in proximity. Until football leagues in CONCACAF rival the opportunities provided by the four major leagues, it will remain difficult for the region to nurture exceptional footballing athletes.

The current market for football players perpetuates the parity of world football, where European players dominate the most successful leagues in UEFA. The financial clout of European leagues grants them greater budgets for development, which then allows them to continue advancing local players and leads to human capital discrepancies continuing between the continents. UEFA's recent rule changes have only incentivized teams to continue this, as it concurrently benefits the confederation. Finally, the competition for young athletes in the Americas disincentivizes minors to pursue football.

COMPETITIVE ENVIRONMENT

FIFA is consciously seeking growth of world football, as audience reach and diverse demographics have a positive correlation with broadcasting revenue. FIFA must focus on two aspects to expand its audience—external and internal competition. Further, respective confederations must successfully govern their intracontinental tournaments.

External Competition

The principal hindrance to the growth of world football is the comparative relevance of the sport. Unfortunately, this is largely beyond the scope of FIFA (Nicolas Evans, verbal conversation). However, the confederations must consider the external competition when setting financial expectations, forecasts, and during schedule making. The real stakeholders in terms of footballing relevance are the leagues within the confederations. This section will analyze the complications the leagues face in their competitive environment with external sports and how that affects the confederations.

Football is the most popularized sport in Europe, allowing UEFA to focus on internal topics, opposed to relative. In Germany, for example, football has a 53.1% share of the sports market, with the next closest being handball with a relatively insignificant 7.1% share (Figure 6). The Bundesliga, Germany's top tier of football, essentially lacks

competition. Football market dominance is a common trend in Europe and allows leagues to operate at their own discretion. Thus, UEFA can focus predominantly on the internal parity and the confederation-run tournament.

Conversely, football is much less popular within CONCACAF. Although the sport is popular in Mexico, the United States and Canada lack similar enthusiasm. This is an issue for CONCACAF because the latter two dominate both by population and financial clout. Attracting greater US interest would increase sponsorship, broadcasting, and other revenue streams. Footballing growth in the US is stagnated by the presence of the four major American sporting leagues – the MLB, NBA, NFL, and NHL. The MLS draws a smaller television audience in the playoffs than the other four leagues draw during an average regular season game (Figure 7). This is problematic, given the other leagues play numerous times per week and still maintain significantly higher TV scores. This creates the first problem that is rarely experienced within Europe—scheduling conflicts. Whereas football dictates the market in Europe, four other leagues dictate the scheduling landscape in the US and Canada. Not only must the league consider this, but the confederation as well. When scheduling international matches and tournaments, it is crucial that CONCACAF avoids conflict with major US-sports. Even the 2014 World Cup match between the US and Ghana drew fewer viewers than an average NFL game (Figure 7), so avoiding conflict with the NFL is vital. Further, amalgamating elements from the four major sports and football is important. For example, the MLS institutes a playoff-system, converse to European standards, to assimilate the game to US viewer expectations.

The external competition to football ranges widely. Within Europe, football is the dictating force, whereas America has four other sports leagues with greater clout. These dynamics shape how confederations must adjust their objectives, expectations, and operations.

Internal Competition

Commercial value in sport, not unlike other television, stems from unpredictability. Spectators crave mystery and variability. If results in professional sports leagues become repetitive or seem predetermined, the nostalgia associated with the sport diminishes. Preserving parity is a focal reason for the use of salary caps in American sports—a limit on spending ability. It is believed that these restrictions promote equality within the leagues, given that cost and quality of players are associated.

In the MLS, there are spending limits like those in other US-based sports leagues. The effectiveness of the rules is up for discussion, as designated player spots create spending disparity within the league. Essentially, the salary cap does not apply to these players (“MLS Designated Players,” 2017). However, since the MLS is still in a growth stage, limiting spending on high-end players may be counterproductive. Further, the entirety of a salary cap may be disruptive to the growth of the league by limiting player-appeal. In recent years, Liga MX, the Mexican league which is not financially restricted, has been acquiring many MLS players (McCarthy, 2016). This creates an issue of competitive parity within CONCACAF. The important distinction is that salary rules in the MLS and Liga MX are not connected or decided by CONCACAF.

Conversely, UEFA, as of 2011, has implemented rules to limit spending congruently within the confederation. Financial Fair Play (FFP) limits teams from spending more than they have earned in revenues (Long, 2012). However, the stated reason for the rules varies from the US salary caps: “To prevent clubs from getting into financial predicaments that threaten the sustainability of European football” (Long, 2012). Cynically, this statement seems more like an administrative mirage to avoid potential EU competition law issues than truthful. If UEFA openly admitted that FFP intended to limit spending, irresponsible or not, within football, the rules would certainly be called against the CJEU.

Like with Human Rights, the presence of the EU shapes how UEFA must operate. However, with FFP, UEFA have managed to cloud competition restrictions with images of serving individual clubs and preserving integrity. CONCACAF, however, allows for widely differing financing structures due to the history of the leagues, financial

environments, and the US-sports model. Internal parity is particularly important for both confederations when considering the tournaments they facilitate.

Confederation Tournaments

UEFA and CONCACAF both operate yearly “Champions League” tournaments which integrate the best teams from each league within the confederation. The Champions League may be focally known in Europe but exists throughout other confederations as well. As TV rights and sponsorship are focally important to the finances of FIFA and its confederations (Figure 4), marketing an attractive Champions League is the epicenter of their financial successes.

There are many reasons why the Champions League is more successful in Europe than North America. As discussed earlier, European football benefits from being the most watched sport in Europe, having transnational fans, and ultimately from a rich history. Further, UEFA has a variety of competent leagues which produce competition for Champions League places. However, both tournaments suffer from significantly predictable end results. Routinely, the same 3-4 teams appear in the final four spots in both competitions. The growth of the CONCACAF Champions League will arise from breaking this trend and catering to the viewer’s desire for parity and unpredictability. Finally, the tournament requires serious competition from its biggest market—the United States—to develop interest.

CONCLUSION

This paper focused on the cultural, administrative, geographical, and economic distances faced by FIFA and its North American and European confederations. In addition, CONCACAF and UEFA’s competitive environments are highlighted. First, the analysis of cultural differences eliminated the concern for organizational language barriers but emphasized the importance of English-language refereeing. Additionally, UEFA’s footballing dominance was attributed to historical continuity and growth. Second, the administrative distances evaluated the different expectations for international human rights, the role of Switzerland for FIFA, and explained CAS’s international duties and authority. Third, the geographical distances emphasized the importance of avoiding a Eurocentric bias. Fourth, the economic distances explained how European systems have perpetuated the success of European football and its nationals while being potentially detrimental to the growth of other confederations. The paper concludes with an analysis of the competitive markets: evaluating how different growth strategies lead to CONCACAF’s external market focus and UEFA’s internal market focus. Ultimately, UEFA’s expansive market and CONCACAF’s required growth are the focal distances between the two associations.

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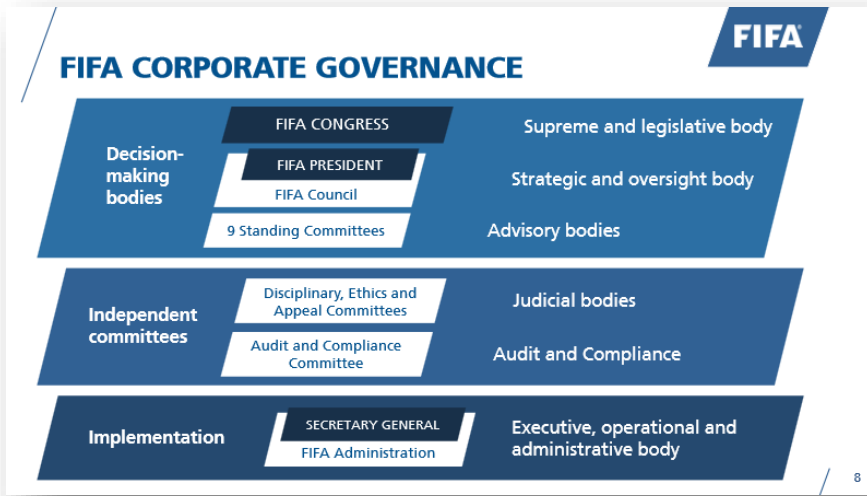
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APPENDIX

Figure 1: FIFA Corporate Governance Structure



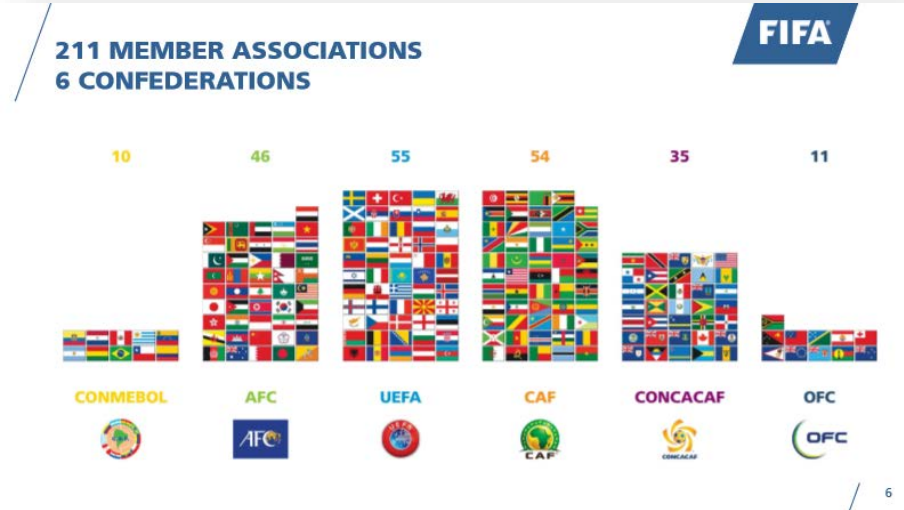
(FIFA Presentation, 2016)

Figure 2: FIFA Election Structure



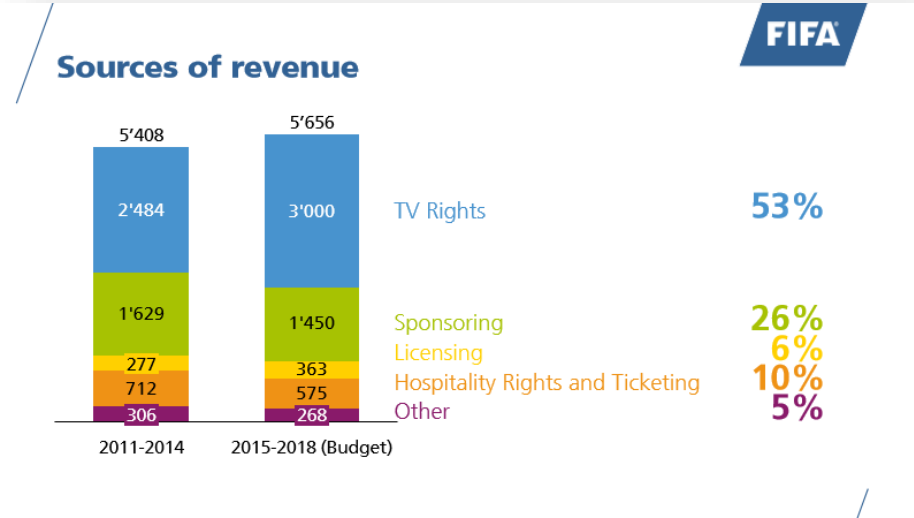
(FIFA Presentation, 2016)

Figure 3: FIFA Member Association Structure



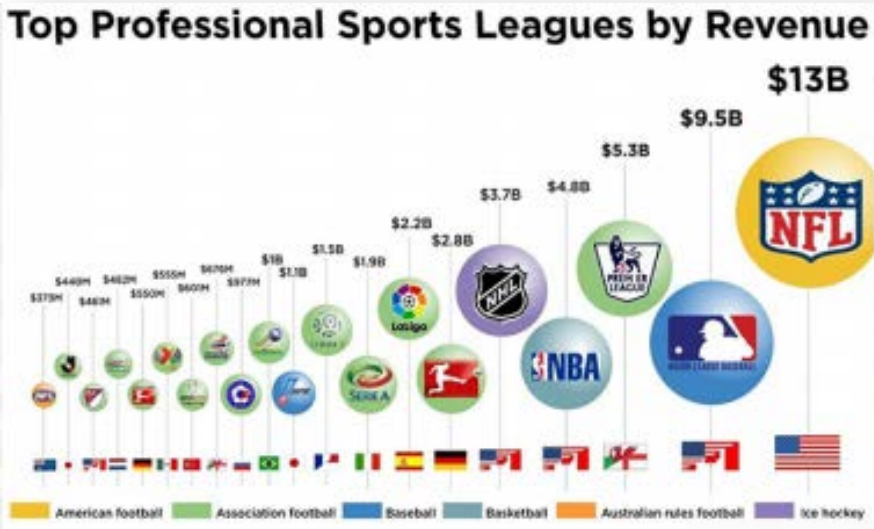
(FIFA Presentation, 2016)

Figure 4: FIFA Sources of Revenue



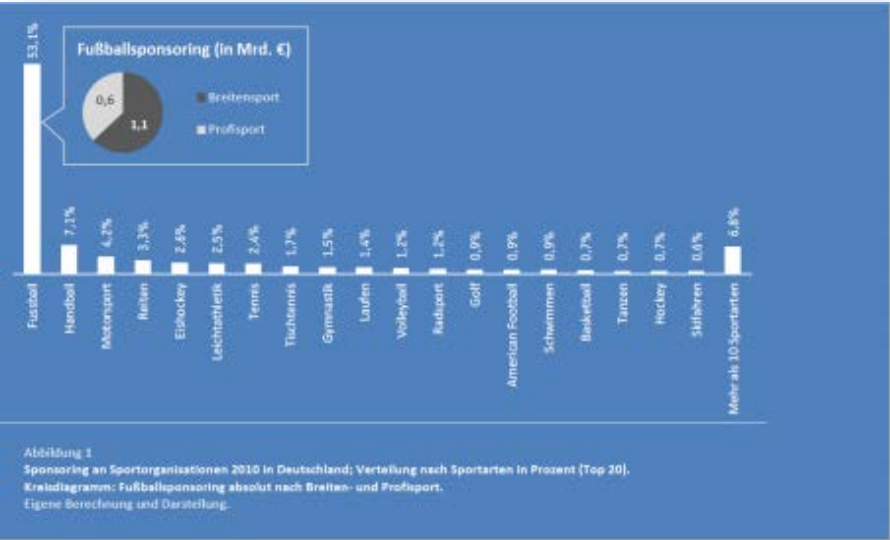
(FIFA Presentation, 2016)

Figure 5: Top Sports Leagues by Revenue



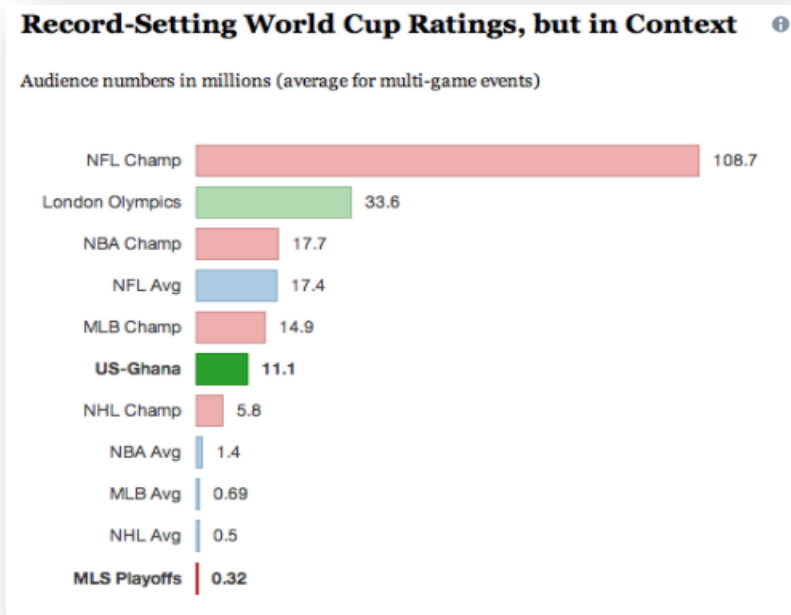
(Value Walk, 2016)

Figure 6: German Sports GDP Contribution



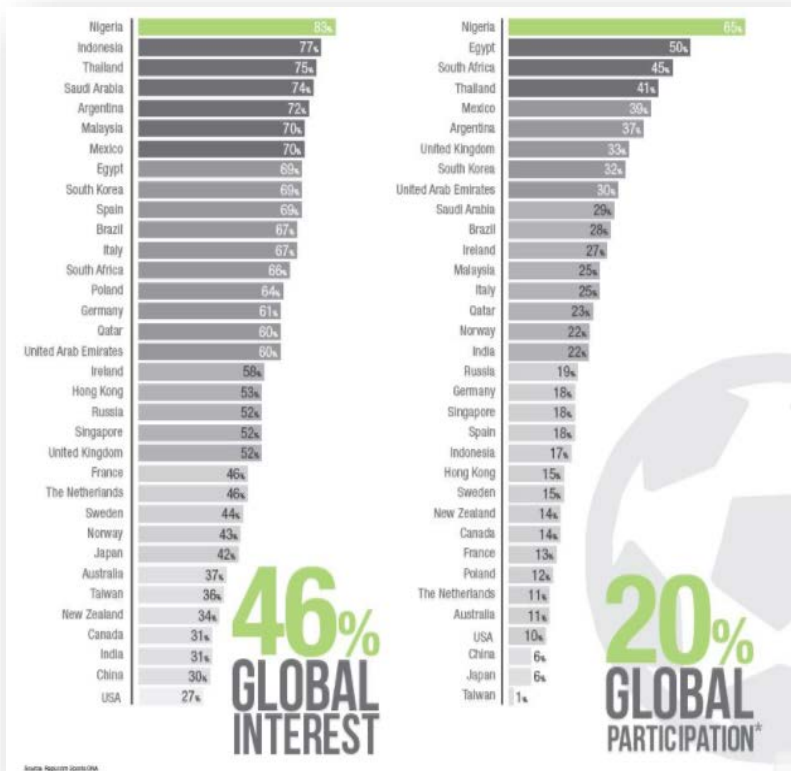
(BMWi, 2015)

Figure 7: Sports TV Ratings



(Chappell, 2014)

Figure 8: Global Interest in Football



(Nielsen Sports, n.d.)

Nicolas Evans, Verbal Conversation:

Interview with Nicolas Evans, FIFA.

Marshall:

How often does FIFA communicate with CONCACAF and UEFA, respectively? Or do the companies simply rely on set rules that have been set out by FIFA for the confederations to follow? Ultimately, the question refers to the autonomy of the confederations.

Nicolas Evans:

There is no numeric answer to this question. Contact is constant and driven by content i.e. on a need-to-be basis. FIFA will always be invited to a Congress of CONCACAF and UEFA but the vast majority of the topics are dealt with directly between FIFA and its members and the Confederations and their members. There are some dedicated projects between FIFA and CONCACAF and FIFA and UEFA which would require further communication but there is no set rule whereby there would be an institutionalised "Monday morning update call" between the federations.

FIFA has a Director for each of the Confederations' members and each confederation will have a liaison for FIFA so much will also depend on these two individuals.

Marshall:

In what situations would FIFA intervene in an attempt to maintain the success of major financial football leagues (i.e. English Premier League) or to increase the development of leagues in new(er) markets (i.e. MLS or Chinese Super League)? Or is this completely outside the purview of the association?

Nicolas Evans:

In essence, never. All the above-mentioned examples are privately-run leagues outside the grasp of FIFA and its member associations (the FA, US Soccer and the Chinese FA). From a purely formal aspect there would therefore never be any attempted intervention. From a procedural point of view, FIFA would also never unilaterally intervene in any league for the purpose of financial success. Only if a Member Association were to ask for help, could FIFA consider providing expertise to support the league be commercially viable (as part of the income generation programme in the development projects for example).

Marshall:

Do language barriers create a larger issue with communicating to European members or members from Central and North America?

Nicolas Evans:

The superlative "larger" is probably correct as CONCACAF is mostly trilingual and Europe has more than 28 languages but in this day and age, each member will have a representative more than capable of speaking one of the four official FIFA languages. As problems come, this is probably the smallest possible issue you can imagine at the top level. It may however amplify when it comes to grassroots projects or education at lower levels where English may not be spoken as much.

Marshall:

How does FIFA interact with the EU? As FIFA is located outside of the EU but clearly operations effect member states.

Nicolas Evans:

FIFA has a Public Affairs Division that interacts with all political stakeholders that are of relevance. This includes Swiss Authorities, EU authorities but also any governmental and public bodies where FIFA holds stakes such as tournament hosts and/or special projects. FIFA does not tend to have a proactive lobbying strategy in the EU for example but have a permanent liaison to the key authorities in Brussels.

Severing Ties: Gaz-System and Energy Security in Poland

Zack Poirier

ABSTRACT

The purpose of this paper is to answer the research question: what are the effects of Poland's energy security needs on Gaz-System, the Polish state-owned natural gas infrastructure and transmission firm? The paper uses European Union primary data on energy use and trade, as well as academic research, corporate reports, and recent news developments to investigate the topic and provide the foundation for analysis. After providing background information on Gaz-System and establishing definitions, the paper explores Poland's energy mix and the role of natural gas within it, before going on to assess the current state of energy security and the competitive forces that shape the European natural gas industry. It then analyzes Poland's international relations with key states and organizations, and details the perceived Russian threat surrounding energy security that results from past use of Russia's gas supplies as geopolitical leverage during several gas disputes with Ukraine. Finally, the paper examines several recent Gaz-System projects and their effect on Poland's energy security, as well as Gaz-System's plans for future strategic asset development and construction pursuing the goal of increased buyer power in the natural gas market.

INTRODUCTION

Since Poland's departure from communism and participation in the 2004 enlargement of the European Union (EU), the nation has been regarded as one of post-communist Europe's most successful transition economies. Polish energy consumption, mostly of fossil fuels, has been growing with the economy. Using data from 1970 to 2014, there is a strong statistical correlation between economic and energy consumption growth, and many scholars argue that a secure supply of fossil fuels has been critical to Poland's successful transition to a market economy (Cerdiera Bento, 2017). Due to Poland's abundant domestic coal deposits, Poland has managed to maintain a relatively high level of energy independence, or the percentage of energy that comes from domestic sources, as Poland was 46% less dependent on energy imports when compared to the EU average in 2015 (Eurostat, 2016a). However, the pursuit of compliance with EU emissions regulations has put downward pressure on the use of coal, and the vast majority of alternative fossil fuels like natural gas come from abroad. Traditionally, there has been a "heavy dependence on piped natural gas from Russia and very limited technical capacity to obtain imported gas from other geographical directions" (Adamus & Florkowski, 2016, p.174). This pattern poses a threat to Poland's energy security, as Russia could potentially cut off the vast majority of Poland's natural gas supply in the case of international conflict. Fear of this happening has been exacerbated by Russia's ongoing entanglement in armed conflict in Ukraine, as well as tough retaliatory sanctions on Russia imposed by Western powers like the United States (USA) and EU (Adamus & Florkowski, 2016).

All of Poland's major natural gas infrastructure assets are owned by Gaz-System S.A., a Polish state-owned firm. The company has been granted the rights to operate all natural gas transmission in Poland through 2030 by the Energy Regulatory Office (Gaz-System, 2016). The company was formed in 2004 when PGNiG, the monopolistic Polish oil and gas firm in which the State Treasury still has a controlling share, spun off their infrastructure assets through direct transfer to the State Treasury (Gaz-System, 2016). Gaz-System effectively acts on behalf of the state to pursue their vision of ensuring "energy security and being a major integrator of the transmission system in Europe" (Gaz-System, 2016).

This paper will examine Poland's energy mix, state of energy security, international relations, perceived threats from Russia, as well as current and proposed responses to these threats, with the goal of answering the research question: what are the effects of Poland's energy security needs on Gaz-System, the Polish state-owned natural gas infrastructure and transmission firm?

DEFINITIONS AND TIME-FRAME

According to Dr. Magdalena Zajączkowska at the Cracow University of Economics, *energy security* has a multifaceted definition and is "contextual and dynamic in nature" (2016). For the purposes of this paper, a definition combining Polish law and Polish context is most appropriate; according to Polish Energy Law, energy security is "a state of the economy which makes it possible to cover the current and potential demand for recipients' fuel and energy needs in a technically and economically viable way, while maintaining environmental protection requirements" (1997). Dr. Zajączkowska continues to outline the four categories of threats to energy security: physical (supply chain failure, technical breakage), economic (ability to deliver energy in an economically viable manner), environmental (meeting the state and world's environmental protection needs), and geopolitical, or "threats arising from the global international situation and the loss of influence of some countries over the transport and distribution infrastructure of energy" (2016). While the first three threats are important, a variety of factors including the fixed and long term nature of Gaz-System's assets, the essential nature of natural gas supply (for heat in the winter and a reliable electricity grid), and current state of international relations heighten geopolitical threats to Polish energy security to a state of criticality. This necessitates focusing on geopolitical threats in particular. Therefore, this paper will use the following definition of energy security: a state of the economy in which it is possible to cover the state's future and potential energy needs in a technically and economically viable way, with minimal threats from loss of influence over energy supply and distribution (Energy Law, 1997) (Zajączkowska, 2016).

Regarding an appropriate time-frame for data analysis, this paper will focus on 2004 until 2015 or 2016, when the most recent annual data is available. It would be inappropriate to use data from 2017, the year this paper was written, due to the highly seasonal nature of energy demand and consumption. As for the exclusion of historical data before 2004, this is appropriate because of the seismic shift in Polish energy needs, demand, and goals upon their accession to the EU as part of the A8 enlargement in 2004. Being part of the EU has sparked tremendous growth in the Polish economy, increased energy demand, symbolized allegiance to Western Europe rather than Russia, and also came with certain accountabilities to EU energy policy (Adamus & Florkowski, 2016).

While the European Commission has set long term energy mix goals such as emissions reduction by 2030, the extent of how compliant the Polish government will be with these regulations is up for debate (Bauerova & Martewicz, 2016). The far more legally binding milestone that Poland has coming down the pipeline stems from the "conclusion of the negotiated intergovernmental agreement with the Russian Federation on 29 October 2010," when "the relevant protocols were signed in Warsaw" to fix Russian gas supply to Poland until 2022 (Szurlej, 2013, p. 937). For the sake of political and market stability, the supply contract will likely be renegotiated far before the current contract's end. The pivotal nature of these negotiations make them the most important overarching influence on decisions made by Gaz-System in the current decade. The fixed nature of natural gas infrastructure and contracts ensures that these negotiations will define Poland's energy policy in the 2020s and beyond. Since foresight beyond these negotiations is nearly impossible, this paper will only investigate Gaz-System's possible strategic avenues from the present until 2022.

ENERGY MIX IN POLAND

When Poland joined the EU in 2004, its energy-intensiveness, measured by a ratio of energy consumption to Gross Domestic Product (GDP), was 118% higher than the EU average. In 2015, Poland's energy-intensiveness was 89% higher than the EU average, and still nearly quadruple that of the mostly tertiary economy of Ireland (Eurostat, 2016b). While less energy-intensive tertiary industries like the information sector have been developing in Poland, the country still has a very energy-intensive economy, so access to fuels is critical for economic sustainability.

Regarding the fuel mix that powers this energy demand, approximately half of Poland's inland energy consumption came from lignite, coal, and other solid fuel sources in 2015, including heat generated from single-household furnaces. Additionally, 25% of energy consumption came from oil and other petroleum products and 15% came from natural gas. Finally, less than 10% of Poland's energy came from renewable sources (Eurostat, 2016c).

NATURAL GAS IN POLAND

Natural gas plays an especially important role in Poland's energy mix because of its importance for heat during Poland's relatively harsh winters. A 2016 study found that "a significant number of single family houses use natural gas as fuel in the heating system" in Poland, and that between 60% and 70% of energy consumption in these households goes towards heat (Krawczyk, p. 216). Therefore, a natural gas supply disruption would not only have detrimental effects on the national energy grid, but would disproportionately affect single family houses, which are usually found outside of large urban centres. If even a small percentage of suburban and rural homes were without power during a cold Polish winter, there would undoubtedly be a large temporary displacement of persons and strain on Polish social services.

Another reason natural gas is especially important in Poland is its involvement in any plausible effort to meet European Commission (EC) goals for carbon dioxide and smog reduction. Regarding carbon dioxide emissions, Poland reached an agreement with the EC that the country would reduce emissions by 40% by 2030, or to the equivalent of 1990 levels. Achieving "the EC goals requires closing all lignite-burning power plants and 90% of coal-burning power plants and replacing them with gas-burning power plants by 2030," which would cause Poland's demand for natural gas to more than double by their 2030 deadline (Adamus & Florkowski, 2016, p. 169). It is very important to note that Poland meeting these goals, or even making an effort to pursue them, is a relatively unlikely possibility under the Polish Law and Justice Party (PiS) that is currently in power, who's idea of environmental energy reform is "building more efficient coal power plants" (Bauerova & Martewicz, 2016). However, the possibility of Poland needing to dramatically ramp up natural gas supply in the coming decade due to changing domestic political tides or increased influence of the EC is important because it will act as significant leverage in favour of foreign natural gas suppliers during upcoming negotiations.

Poland is situated between Russian gas deposits and the huge energy markets of Western Europe, especially Germany. As a result, the main arteries for gas coming into Poland carry Russian-produced gas flowing east to west as part of a contract with Gazprom, the Russian state-owned gas giant (A.E., 2014).

Figure 1: Existing and Planned Polish Natural Gas Transmission Capacity



(PGNiG, 2017a, p. 27)

The blanket agreement between Gaz-System and Gazprom commonly referred to as the Yamal Contract actually covers more than the natural gas entering Poland via the Yamal-Europe Pipeline via Belarus at Kondratki (19% of total imports in 2016), but also covers imports entering Poland in Drozdovitse (32%), Vysokaye (23%), and Teterovka (<1%), as illustrated in Figure 1 (PGNiG, 2017a, p.27). However, gas entering Poland via these points all come from the same source, and constitute 75% of imported natural gas.

However, the rest of Poland’s imported natural gas comes from the west; 18% of total imports in 2016 came from Germany, mostly via the reversal of the Yamal-Europe Pipeline that allows North Sea gas to flow from Poland’s western neighbours, which will be discussed in more detail in the final section of this paper. Additionally, 7% of imports came in the form of Liquefied Natural Gas (LNG) into Poland’s Baltic Sea LNG Terminal, for regasification and distribution (PGNiG, 2017a, p.27).

ENERGY SECURITY IN POLAND

Poland actually has very low energy dependence, as they only import 29% of their energy sources, compared to the EU average of 54% (Eurostat, 2016a). This is mostly due to the enormous importance of coal in Poland, as discussed earlier in this paper, because Poland has significant domestic deposits of coal. However, as a country that spent the better part of the 20th century officially occupied by foreign powers or having their domestic affairs effectively

controlled from the outside, Poland's desire for energy security is nothing new. It is highly likely that Poland's energy security concerns have been a contributing factor for the overdevelopment (Adamus & Florkowski, 2016, p. 168).

However, their dependence on imports for natural gas is much higher, at 72% compared to the EU average of 69% (Eurostat, 2016, Energy Dependence). While this seems to indicate that Poland is no more dependent on gas imports than the average EU member-state, the critical factor is the source of these imports. The vast majority of Poland's natural gas imports come from Russia via pipeline, traditionally providing at least 60% of Poland's total natural gas supply (A.E., 2014). This is simply due to geography and current infrastructure, as discussed in the previous section.

COMPETITIVE ENVIRONMENT

The good news is that the price of natural gas in Poland is relatively low compared to the rest of the EU. In 2016, natural gas was 37% cheaper in Poland than the EU average (Eurostat, 2017, Gas prices by type of user). While at first glance, one may assume this is because Poland produces some gas domestically, it is actually because they get cheap Russian natural gas. Piped natural gas gets more expensive as it gets further from its destination, as pipeline operators charge tolls and governments almost always get a share of the revenues. Therefore, Eastern European countries get cheaper Russian gas than Western European countries, who end up relying more on expensive LNG imports that become competitive a certain distance from Russian production (European Commission, 2014, p. 53). The only countries in the EU that get natural gas cheaper than Poland are Romania, Bulgaria, Hungary, and Estonia, who also rely on Russia for the vast majority of their supplies and are in relatively close proximity to the exporter (Eurostat, 2017). The price of gas that Poland imports is also linked to the price of crude oil, rather than a fixed price contract, which has allowed the nation to take advantage of the global decrease in energy prices since 2014 (PGNiG, 2017a, p. 126).

Even west of Poland, Russian natural gas has an advantage over industry disruptors like those in the United States due to geography and low cost of extraction. A 2016 study by the Oxford Institute for Energy Studies found that the cost for Gazprom to get natural gas to the German border was about 3.5 American dollars per million British thermal units (\$/mmbtu) at the time of publication. In contrast, the marginal cost of liquefaction of natural gas in the US, shipping to Europe, and regasification alone are at least \$4/mmbtu, which was added to the approximately \$2.5/mmbtu cost of extracting the gas at the time (Henderson, 2016, p. 4).

In 1979, Michael Porter published a landmark paper on industry competition that has become the basis of modern industry analysis, where he argued that an industry is attractive if there are weak competitive forces (threat of new entrants, threat of substitutes, bargaining power of suppliers, bargaining power of customers, and industry rivalry). The Russian state has a majority share in Gazprom and owns gas reserves, so the company essentially has no threat from their major supplier. They face low industry rivalry and threat of new entrants in the European market due to the long term nature of gas transmission contracts and the enormous fixed cost of infrastructure construction, as well as the competitive advantage of low production costs and geographical proximity. The threat of coal as a substitute is low due to pressure to reduce emissions in the EU, and the threat of renewable energy seems low for the time being due to high switching costs, though that could change.

Finally, the power of customers like Polish state-owned firms are relatively low, as they are relatively dispersed and have negotiated contracts on a country-by-country basis, face high switching costs, and have very few supplier options. However, the goal of increasing their power has been shaping Polish energy policy and Gaz-System's overall strategy. Aside from dramatically deescalating geopolitical tension with Russia, which is unlikely given the international relations explored in the next section of this paper, increasing Poland's power as a customer is the key to energy security in the nation, as it would free them from the captivity of dependence on Russian natural gas for critical energy needs.

INTERNATIONAL RELATIONS

Since Gaz-System is controlled by the Polish government, international relations play a critical role in their strategy as a firm. A privately owned company only has to be concerned with creating short term and long term financial value for a relatively small group of shareholders. Gaz-System must create shareholder value by being competitive in the international marketplace, but they are accountable to the entire Polish population and have the social responsibility to provide a quality service at low cost to the public (Gaz-System, 2017).

Polish-EU Relations

Shortly after Poland's accession to the EU, the PiS gained control of the Presidency (head of state) and Prime Minister's office (head of government), forming a minority government. They immediately established a tough-on-EU tone when they fought hard for more voting power, delaying treaty negotiations and irritating many EU member-states (BBC, 2017). While Lech Kaczyński of the PiS remained President until his death in 2010, Donald Tusk's liberal, globalist, pro-EU Civic Platform won the Parliament and then the Presidency in 2010 (BBC, 2017). They remained in power, strengthening relations with the EU until 2015, when the PiS regained control of the Parliament and Presidency, a seismic shift in Polish relations with the EU (McMillan, 2017). While Tusk is still influential as the President of the European Council, the PiS has doubled-down on their nationalist, populist, and Eurosceptic stance and is currently on the cusp of passing judicial reform which is at odds with the liberal democratic values of the EU. The parliament seeks to "dismiss and replace judges of the Supreme Court and replace judges of lower courts," and make changes to the National Council of the Judiciary, who are "responsible for maintaining the independence of the judiciary" (McMillan, 2017, p. 2).

The Polish national government has also clashed with EU governing bodies on environmental issues, magnifying their judicial reform dispute. As previously mentioned, the PiS has reaffirmed their preference for coal in the coming decades, while the EU has mandated a reduction of coal's use to meet emissions targets (Adamus & Florkowski, 2016, p. 169). The Polish government has also refused to stop logging a forest near their border with Belarus despite mandate from the EU, citing a need to cut down trees infected with an invasive species of beetle. It is thought that if Poland were to "lose the case before the European Court of Justice, it could face fines of more than \$4.7 million, plus possible penalties of around \$350,000 each day" (Nelson, 2017). This act of non-compliance has aroused fears that Poland may deviate from EU policy regarding energy security as well.

Polish-Russian Relations

Perhaps the most critical point of agreement between the ruling PiS and the EU is a mutual distrust of Russia. Collective anxiety in Poland surrounding Russia is so strong that the government invited North Atlantic Treaty Organization (NATO) troops to "enhance security following Russia's annexation of Crimea," and the PiS has been complaining of patterns like increased Russian military presence in the Baltic Sea since their election in 2015 (BBC, 2017). No stranger to Russian imperialism, the Polish government is generally uneasy about the prospect of Russian expansionism, even considering that Poland's borders are relatively far from Crimea. Key senior government figures, along with a sizable minority of citizens, seems to believe that Russia continues to violently meddle in Polish politics. Jarosław Kaczyński, head of the PiS party, former Prime Minister, and de facto leader of Poland accuses the Russian government of orchestrating the death of his twin brother Lech Kaczyński, who was President of Poland at the time and died in a plane crash landing at the Smolensk airport in Russia. A 2016 poll found that 27% of Poles believe the theory (The Economist, 2016). This political tension between Poland and Russia, when combined with Russia's history of using gas supply as a geopolitical tool, discussed in more detail later in this paper, means that Polish energy dependence on Russia is a troubling matter for the Polish government and Gaz-System.

Polish-US Relations

Poland's relationship with the United States has generally been quite warm since the fall of communism, and the emergence of socially conservative regimes in both states has acted as a catalyst for geopolitical cooperation. Both Trump and top PiS party members have sparred with the globalist, relatively centrist governments of Western Europe, and have made populist, nationalist promises to the citizens who put them in power. Polish 21st century military strategy has been characterized by strengthening ties with the US, as Poland was one of the few countries in Europe to send troops to US-led conflicts in both Afghanistan and Iraq, entering the latter of the conflicts around the time of Polish EU accession, showing that Poland valued US military support more than the opinions of states in western continental Europe (The White House, 2016). Even Obama's White House didn't forget this, as they sent Poland significant military aid through NATO. The White House reported that the "10-year, \$35 billion defense modernization program is an important investment in the country's defense capabilities and will increase the Polish military's interoperability with NATO allies—allowing us to jointly enhance NATO's collective defense, deterrence, and resiliency" (2016).

The two countries also have common energy interests, as the countries share anxiety surrounding Russian energy dominance in Europe and the US is looking to develop their natural gas industry to both boost growth and increase geopolitical influence. In 2017, Poland's Baltic LNG import facility received its first spot purchase of gas from an American company, with the support of the White House, who said that the "opening of the Swinoujscie liquefied natural gas terminal is a necessary and welcome step in Poland's efforts to improve its energy security" (2016). A confidential long-term supply deal has been reached, which will be discussed in more detail later in this paper (PGNiG, 2017b). More recently, the Trump administration has doubled-down on Polish energy independence interests, even when it doesn't directly impact US natural gas shipments or Polish consumption, regarding the Polish-led attempt to delay or block the Russia-to-Germany Nord Stream 2 pipeline which will also be discussed in greater detail later in this paper. In August, the "US Senate voted for unprecedented sanctions against energy companies which have an ownership share of more than 33%" of the Nord Stream 2 project, which may not prevent the pipeline's completion but will delay the construction as financiers shuffle contracts around (Shagina, 2017).

HISTORY OF RUSSIAN NATURAL GAS DISPUTES

Russia-Ukraine Gas Wars from 2006 to 2009

Successive disputes over Ukrainian gas supply and tolls for gas shipped on to Europe occurred between 2006 and 2009, which began shortly after Kyiv took a pro-EU political turn, as Viktor Yushchenko was elected after nullifying a supposedly fraudulent first run-off election with a series of protests referred to as "the Orange Revolution" (Stulberg, 2015, p. 117). On one hand, Kyiv "was poised to take a hardline in light of the new government's pro-Western orientation and Gazprom's reliance on transit across Ukraine to meet growing European demand" (Stulberg, 2017, p. 73). On the other hand, Moscow was "embittered by the results of the Orange Revolution, and inclined politically to punish the new pro-Western government for its nationalist rhetoric" and possibly inspiring nationalist revolutions elsewhere (Stulberg, 2015, p. 117). However, despite the "undeniable political risks that drove the parties over the brink," the "stakes were primarily commercial," beginning with a 28% price hike from Gazprom on exports to Ukraine (Stulberg, 2017, p. 73). Whether commercial or political in nature, the 2006 conflict culminated in an unprecedented four day cessation of gas shipments into Ukraine, who responded by hoarding gas destined for the EU in underground storage facilities before reaching a temporary price cut agreement with Russia. Needless to say, EU nations that were affected by a four day supply shortage of natural gas supplies were concerned about future disruptions (Baltensperger et al, 2017, p. 467).

Those concerned were correct, as successive contractual disputes between 2007 and 2009 culminated in a "protracted two-week supply disruption that imposed significant costs on all parties. Seventeen European countries were affected by the stoppage of Russian gas deliveries, with Bulgaria and Slovakia suffering complete cut-offs" (Stulberg, 2015, p. 118). This time Ukraine paid dearly, as they were forced to accept price hikes to higher rates

than their peers and pay fines to partially cover Gazprom's losses. The fiasco ultimately cost pro-EU Yushchenko his Presidency (Stulberg, 2015, p. 118). While the principal disputes during the successive gas disputes in the first decade of the 21st century were contractual in nature, the tumultuous political context that surrounded the conflicts, and Gazprom's willingness to endure significant pain in to take a tough stance in negotiations increased the perceived risk of Poland being dragged into a similar pricing dispute connected to geopolitical tension.

Crimea Crisis and Natural Gas Price Disputes

The most recent conflict between Russia and Ukraine that involved cessation of natural gas supplies was the 2014 Crimea Crisis that followed the Ukrainian revolution. The conflict burns on today in the form of armed separatist movements in eastern Ukraine, but the associated gas price dispute showed more restraint on both sides than in 2006 and 2009. However, while there was no protracted cut-off, supply disruptions and numerous threats between 2013 and 2015 "galvanized support for an EU Energy Union to harmonize, integrate, and diversify the internal market" (Stulberg, 2017, p. 71). This gas price dispute was less serious than previous ones in many respects, but was alarmingly even more connected to geopolitical conflict, as Russian-backed separatists were waging war in eastern Ukraine during the dispute.

Unsurprisingly, the newly forged connection between Russian expansionism and natural supply contracts worried adversaries of Russia across the globe, and even "prompted U.S. congressional legislation aimed at expediting U.S. liquefied natural gas exports to demonstrate immediate resolve and limit long-term damage to European energy security" (Stulberg, 2017, p. 71).

An additional source of concern for Poland was the significantly weakened hand of Ukraine during this last price dispute due to the Nord Stream pipeline, which bypasses Ukraine and Poland by shipping natural gas straight to Germany's OPAL pipeline network. While Germany shared Poland's concerns of Russia using supply as leverage, they also saw Ukraine as an unreliable intermediary who's mismanagement contributed to previous cut-offs, and the EU subsequently allowed the underwater pipeline to go online 2011 (Stulberg, 2015, p. 119). This development also weakened Poland's bargaining position, as they were no longer a required intermediary between Russia and Germany, and at the same time the Polish government was acutely aware that a significant portion of their gas supply flowed through Ukraine (as mentioned earlier in this paper) and was susceptible to future supply cuts.

POLISH RESPONSE

Given how important Poland's natural gas supply is, the nation's state of energy dependence on Russia, their state of international relations, and previous conflicts between Russia and Ukraine involving gas supply disruptions, Gaz-System's corporate strategy has focused on increasing Poland's energy independence through their competitive position in the natural gas market. To increase their power as a customer, Gaz-System has increased the number of firms in the Polish natural gas market by enabling gas from Norway, Qatar, the United States, and potentially other countries to enter Poland through fixed infrastructure (Polskie LNG S.A., 2017). These infrastructure projects have also decreased switching costs for Poland, as they represent large fixed costs that are now sunk, which means that they cannot be recovered and only the variable costs of importing natural gas via these assets should be taken into account when weighing supply options upon expiration of Poland's contract with Gazprom. Poland has several additional projects planned that will lead to contract negotiations at the same time as Poland's Yamal contract renegotiation (PGNiG, 2017b). The Polish government has also attempted to increase buyer power through keeping the concentration of buyers high, blocking attempts to fragment the EU market by bypassing Poland with a direct Russia-to-Germany pipeline under the Baltic Sea, and forming a regional alliance by developing flexible two-way pipeline routes with neighbouring countries (Porter, 1979; Munteanu & Sarno, 2016; Bouzarovski & Konieczny, 2010).

Reversal of Yamal-Europe Pipeline

As previously mentioned when discussing Gaz-System assets, the Yamal-Europe pipeline that runs laterally across Poland can now transport 5.7 bcm per year from the west, which would meet about a third of Poland's annual demand, though it pales in comparison to the 30 bcm per year that Russia can send west along Yamal-Europe. In 2015, Poland actually received 26% of its natural gas supply from the west through the Yamal-Europe Pipeline, though this figure decreased in 2016 (PGNiG, 2017a, p. 27). This was the first key asset development project in Gaz-System's supply diversification strategy and significantly increased Poland's bargaining power as they approach the 2022 contract renegotiations with Gazprom. The reversal of the pipeline not only creates a potential alternative for long term contracts, shipping Norwegian gas east to Poland, but also provides an emergency resource for Poland if their eastern gas supply were to be interrupted or reduced with little notice.

Construction of Świnoujście LNG Terminal

As previously mentioned, Polskie LNG, a wholly owned subsidiary of Gaz-System, has constructed an operational LNG terminal on the Baltic coast in Świnoujście where LNG can be imported by ship from anywhere in the world and regasified to pipeline grade, dry natural gas (Polskie LNG S.A., 2017). The terminal was constructed with the aim of increasing Polish imports from the West and Middle East to decrease natural gas dependence on Russia, a stance favoured by the EU and potential trading partners like Norway, the US, and Qatar. In fact, the terminal is provocatively named after Lech Kaczyński, the late former Polish President whose brother, and de facto leader of Poland, insists he was effectively killed by Russian operatives (Polskie LNG S.A., 2017).

As mentioned earlier in the paper, the capacity is currently 5 bcm per year and could be extended to 7.5 bcm without increasing the physical footprint, theoretically covering almost half of Poland's natural gas needs (PGNiG, 2017a, p. 27). However, this is highly unlikely, as imported LNG is very expensive due to shipping and regasification costs, even without accounting for the fixed cost of the terminal's expansion. The terminal's first contract was signed, dedicating 3 bcm per year of import capacity to Qatargas LNG shipments, leaving a sizable minority of existing capacity for other Gulf Arab States, North Sea producers like Norway, or the US (Barteczko, 2017).

When the terminal was first opened in 2014, Polish officials left the door open for negotiations with American firms, but said that LNG from US shale deposits would be too expensive for the foreseeable future (Janusz, 2014). However, since mid-2014 it has started to look more and more like the world is in for a prolonged period of depressed energy prices, especially for natural gas. As a result of these price changes and American governmental support, the first American LNG spot shipment arrived in 2017 ahead of Donald Trump's landmark early visit to Poland. This symbolic transaction was followed by the signing of a 5-year contract (2018-2022) for an undisclosed and flexible amount of natural gas, which will expire right when Russian supply contract is up for renegotiation (PGNiG, 2017b). The secretive and vague nature of this contract, timing of the first spot shipment ahead of a diplomatic visit, and timing of contract expiration signal that the deal was more about energy security than free market supply and demand for natural gas.

Proposed Baltic Pipe

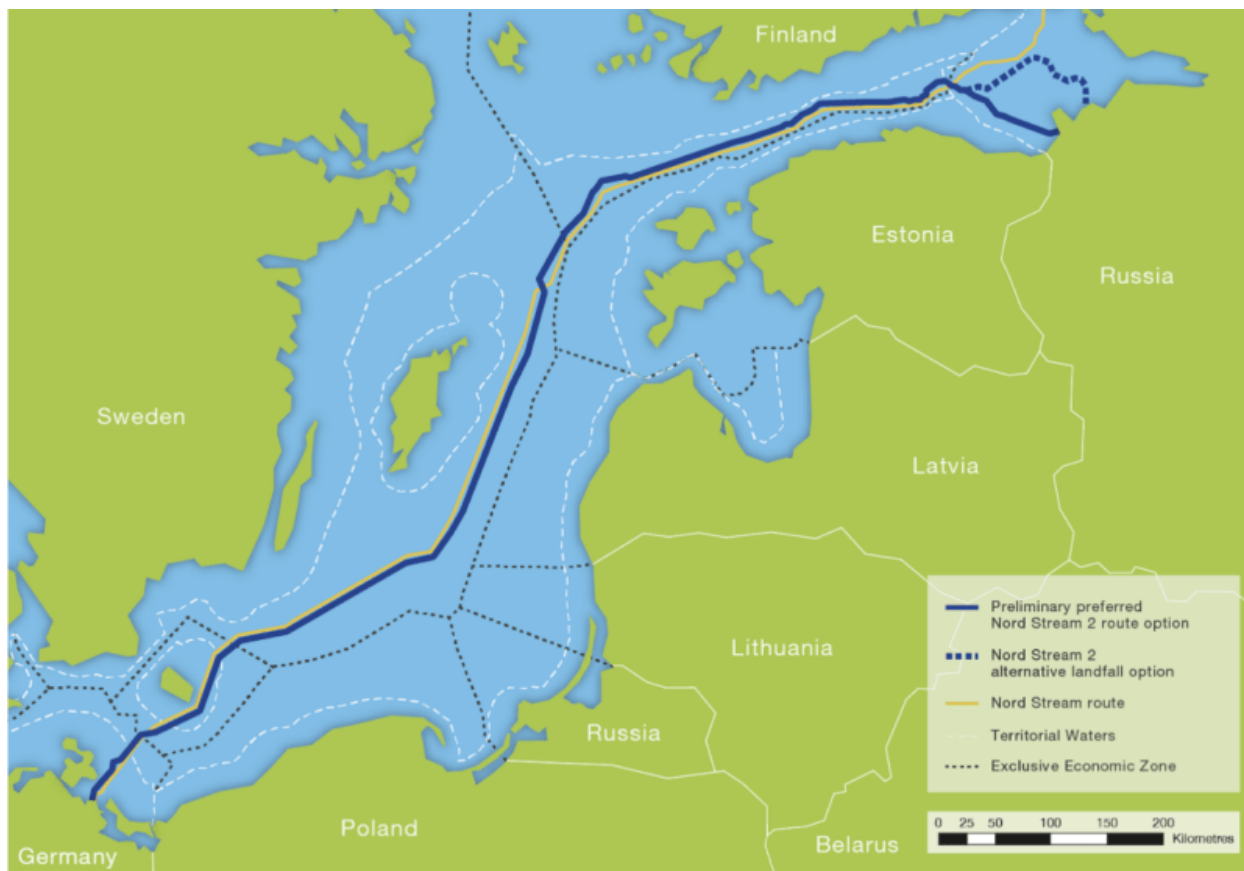
The proposed Baltic Pipe is another major potential source of natural gas imports to Poland, transporting Norwegian gas via Denmark and connecting to Gaz-System's domestic pipeline network near the Baltic LNG terminal in Poland's northwest. Unsurprisingly, Poland aims to have this project approved and completed to come online in 2022, right when the Yamal contract expires (PGNiG, 2017b). In the world of energy infrastructure, construction is far from certain, but even the possibility of this pipeline adding a formidable 10 bcm per year of import capacity significantly increases Poland's power as a customer, as it would enable the country to theoretically walk away from 2022 negotiations with Russia with the ability to cover the entirety of domestic natural gas demand

in conjunction with the new LNG terminal and pipeline gas flow from Germany, albeit at a high financial cost (PGNiG, 2017a, p. 27).

Blocking or Delay of Nord Stream 2 Pipeline Expansion

Contrary to Polish interests, Ukraine leveraging its intermediary role in Russia-Germany natural gas supply in disputes that ultimately resulted in German supply shortages has aligned Germany's interests with Russia, in the sense that neither country wants Ukraine disrupting supply. Therefore, the Nord Stream Pipeline was constructed after the 2009 gas disputes, bypassing Ukraine and Poland by connecting Russia with Germany with a pipeline along the Baltic floor. The Polish government, who "would lose its transit fees and importance in the pipelines network, sees the project as a German-Russian alliance" (Munteanu & Sarno, 2016, p. 81). More recently, an expansion of the route called Nord Stream 2 has been proposed and is making its way through the regulatory process, despite the best efforts of opponents, pitting transit countries like Poland and Ukraine, as well as the US, against the majority of the European Commission (Munteanu & Sarno, 2016, p. 67).

Figure 2: Proposed Nord Stream Route



(Gazpromesport.ru, as cited in Shagina, 2017)

Another major concern is that the proposed project "threatens the pricing power of Poland's new LNG terminal in Świnoujście" by increasing the flow of cheap Russian natural gas into Europe via the Baltic Sea (Rapoza, 2016). Poland has even warmed up to the idea of increasing the westerly-flow capacity of the Yamal-Europe Pipeline, proposing this Yamal 2 option as an alternative to Nord Stream 2, so that Poland can at least maintain its intermediary status (PGNiG, 2017a, p. 27).

As mentioned earlier in this paper, the US has exerted influence in favour of their access point of Poland's LNG terminal by levying sanctions on financiers of the project, causing delays for legal maneuvering, but has stopped short of passing legislation harsh enough to deter partners from actually going through with the project. The Polish government also temporarily blocked the European Commission project proposal (Shagina, 2017). Gaz-System hopes that the risk of increased US sanctions or Polish action within EU governing bodies will help in 2022 Yamal renegotiations with Gazprom, but the projects gradual progression will likely be a big blow to Poland.

Construction of Two-Way Pipeline Routes

Finally, but by no means unimportantly, the Polish state-owned energy firms have also committed funds to build two-way pipelines to Lithuania, Ukraine, Slovakia, and Czech Republic to strengthen their power as customers in the natural gas market, essentially creating a flexible network of countries traditionally dependent on Russian natural gas that can potentially share easterly-flowing gas (PGNiG, 2017a, p.27). The outgoing and incoming capacities on these pipelines are shown back in Figure 1. If Gaz-System is able to continue their increase of imports from the west while reducing imports from Russia, or dramatically increase their imports by maximizing the capacity of all westerly import infrastructure and ceasing all gas imports from Russia, Poland would once again increase their competitive position as a transit state, offering an alternative supply source to other EU countries and EU-associated Ukraine (PGNiG, 2017a, p. 27). At the very least, the two-way nature of these planned pipelines protects Polish natural gas supplies to a certain degree by potentially enabling neighbouring countries to supply Poland with an emergency supply, meaning that significantly disrupting Poland's gas supply would require Russia declaring an all-out gas war with multiple Central European and Baltic nations.

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Germany's Transition to Renewable Energy: Lessons for Canada

Emma Scully

ABSTRACT

Germany is a leader as a renewable energy economy. 50Hertz operates one of Germany's largest electric grids, delivers both solar and wind power as renewable electricity, and uses an intricate system of forecasting to predict when the wind will blow and the sun will shine. Germans are provided subsidies from the government as encouragement to sell to this power grid.

The German renewable energy movement, called *Energiewend*, is politically and economically charged. Controversy began after the nuclear disaster in Japan sparked the closure of nuclear plants in Germany. Although progressive in the renewable energy space, there is much controversy as to how Germany will maintain electricity output if use of nuclear and coal sources are eliminated. Angela Merkel's promise to meet 2020 emission targets is failing, as power production in total has increased over the years due to increase in renewable power production and maintaining production of lignite coal. Pricing models require work, as high electricity rates paid by the consumer will interfere with affordability.

In Canada, Hydro One delivers some forms of renewable energy; however, a large amount of electricity still comes from nuclear power. With nuclear plants nearing the end of their useful lives, Ontario faces a challenging future in terms of renewable energy, and should look to Germany for solutions and learn from their failures. Canada's limited progress in the renewable electricity market can be attributed to a variety of aspects: political, social, geographical and cultural. Hydro One must emphasize the real business benefits of transitioning to completely renewable power; however, there is currently the inability to reliably store renewable energy, which limits both Canada and Germany's progress in the renewable sector.

INTRODUCTION

While most countries have been free riders in the push for renewable energy, Germany has advanced as one of the world's first renewable energy economies. Although Canada has great appreciation for the environment, Germany is progressive in terms of current and future renewable energy production initiatives. As the foundations of the Canadian economy are based on natural resources, this presents a fundamental conflict.

The energy sector faces great risk as a generally intensive area of business. While most countries have been slow to follow suit with experimenting in renewable energy initiatives, Germany's energy producers and providers have advanced. Two like companies are examined to emphasize the importance of competitive advantage: 50Hertz and Hydro One. 50Hertz is a regulated monopoly that operates one of Germany's largest electric grids. This grid delivers Germany's renewable power to 49 percent of the Northeast quadrant from the Baltic Coast to the Czech boarder ("About us - 50Hertz Transmission GmbH"). Hydro One is an electricity transmission and distribution company serving Ontario, and delivers hydroelectric, natural gas, wind, solar and nuclear renewable energy through traditional methods, unlike Germany's progressive grid ("About us"). The following research and critical analysis looks to explore what prompted the movement to renewable energy in Germany, and how these German energy companies, such as 50Hertz, have been able to facilitate this energy revolution to a greater degree than the energy equivalents, like Hydro One, in Canada.

SECTION 1: The History of Germany's Aggressive Renewable Energy Movement

The German "Energiewende" movement in support of renewable energy is a revolution that scientists say all nations must develop if the state of the world's climate is to be saved (Kunzig, 2017). This movement is supported by a vast 92 per cent of the German population (Kunzig, 2017). Renewable energy is now supplying nearly one-third of Germany's electricity, has created 370,000 jobs, decreased carbon emissions by 23 per cent from 1990, and is contributing to over 80 per cent of the Germany's GDP (Kunzig, 2017). German energy companies have the responsibility of catering to the needs of the public, which now is the vast public support for renewable energy.

The move towards how renewables in Germany came to be so substantial is important to address, as it was the push to eliminate nuclear energy that drove the movement initially, due to safety issues that culminated in action in 2000. At this time, there was no desire to replace nuclear power with more coal, as there was certainly enough awareness of environmental issues; therefore, the movement then began towards alternative energy sources. After Japan's nuclear disaster of 2011, Angela Merkel, the chancellor of Germany, ordered that eight of 17 nuclear plants be shut down immediately, with the remainder to be shut down by 2022 (Staudenmaier, 2017). There is disagreement in Germany about the timing of this nuclear phase-out, as the coal and auto industry are heavily protected by unions with much power (Reuter & Wecker, 2017). Loss of coal means loss of jobs, and as such, Germany's aggressive renewable energy movement is highly integrated with the German political climate.

Renewables took off very quickly after 2000 due to the German government introducing a subsidy for those that sold their energy to the grid, which was guaranteed for 20 years, and was essentially passed onto German customers (Staudenmaier, 2017). To make the subsidy more attractive, a whopping 23 billion Euros was paid by consumers on their energy bills as renewable surcharges in 2016 (Ball, 2017). As displayed in Appendix 1, Figure 1, since 2006, energy rates in Germany have increased by about 50 per cent, which corresponds roughly with the increase in renewable surcharges, as also shown by the blue section displayed in Figure 1.

Certainly, it was a great success initially that so many German individuals took advantage of this opportunity to sell power to the grid; however, one mistake may have been that it took an extended period of time (not until 2010) for the government to reduce the subsidies, even after solar panels became very cheap to install. Since these subsidies are guaranteed for 20 years, and are passed onto customers, it has proven to be an extremely costly transition, and possibly unnecessarily so:

'While the big four power companies own most conventional generation (hard coal, lignite, nuclear, and natural gas), they own only about 5 percent of renewable resources. Private citizens, including farmers own 46 percent of renewable generation in Germany, followed by project developers, industry, and banks.' (Bayer, 2015, p. 5)

50Hertz, a transmission system operator in Germany, is involved in connecting all of these providers to the grid (Ball, 2017). 50Hertz spends a large amount of money on engineering, installing, and updating their renewable electricity assets in order to maintain leadership in the growing global renewable electricity sector (Ball, 2017). It has been lucrative for the individuals who took advantage of the opportunity to tap into the grid, but it has been at the expense of the consumer at the other end, since the subsidies are earned by the producer are paid for by the consumer. Additionally, it is a challenge for 50Hertz to control the energy surges on the grid on days when renewables are producing more electricity than the norm, and the renewable producers are paid for their energy even if it goes to waste, which ends up being yet another added cost to the consumer (Ball, 2017).

Traditional coal plants cannot alter their production as readily in sync with the rise and fall of renewables. This is one of the reasons that consumers across Germany pay different rates for electricity, and that the grid operators, like 50Hertz, have a large role to play in managing that cost, even though it is a cost for passing electricity through the grid (Ball, 2017). This is a crucial lesson learned for other countries looking to adapt a similar grid method: as

technology improves and renewables take over, it will be possible to lessen this effect. 50Hertz' pricing models still need to take this cost into account. At some point, high electricity rates paid by the consumer will start to interfere with economic development and affordability. In addition, the German government guarantees the grid operators a minimum return on their investment, which is passed onto the customers; therefore, all of the improvements necessary for this transition are borne by the customer (Ball, 2017). There must be a limit as to how much can be funded by consumers, and it may all be coming to a head in Germany now.

Learning that so many private individuals are profiting from linking into the grid begs the question of how are the traditional electricity producers are being affected. E.ON and RWE are Germany's largest traditional utilities, and they appear to be struggling to come to terms with the transition. RWE, even as late as 2012, was skeptical that solar power could be effective in Germany (Amelang, 2017). As a result, RWE is very late to adapt to the renewable shift.

There is some controversy over the extent to which Germany's electricity output can be maintained if coal and nuclear are both phased out. Since solar and wind energy cannot be produced consistently throughout the year, and there is no reliable way to store this type of energy as of yet, there are times during the year when traditional sources of energy remain essential. As displayed in Appendix 2, Figure 2, in January 2017, very little of the required power consumption was produced by solar, wind, and water; however, this could be changing. If successful, Elon Musk's promise to build a large battery to store various types of renewable energy in Australia to power the entire country could be a promising invention for the future of the renewable energy industry (Guardian Staff, 2017)

SECTION 2: 50Hertz and the Current & Future of Renewable Energy in Germany

Electricity, once produced by producers, whether by renewable sources or conventional means, is fed into a transmission grid (comparable to the likes of a highway) for transporting to distribution operators who then provide it to customers. 50Hertz is responsible for building, operating, monitoring and maintaining a portion of the high-voltage transmission grid in Germany (i.e. managing that highway), and is federally regulated (Ball, 2017). Germany has four transmission operators, and each is responsible for a certain designated area - 50Hertz' area is in the northeast quadrant and serves 18 million people (Ball, 2017). The other three transmission operators are Amprion, Transnet BW (EnBW) and TenneT. The way 50Hertz earns revenue is to charge a grid usage fee, which is government controlled, and is included in the power price paid by the ultimate consumer (Ball, 2017).

The transmission grid operation is extremely complicated, as it involves the use of sophisticated forecasting methods (essentially based on erratic weather patterns) to ensure that power is stable for all of Germany, regardless of its source, and that excess power generated is exported, if possible (Ball, 2017). 50Hertz is a leader in the renewable energy field, and in 2016, was able to integrate 40 per cent of the installed wind power capacity created in all of Germany into their grid ("Wind Power"). 50Hertz has a subsidiary called 50Hertz Offshore. The subsidiary's purpose is to link wind farms that have been built in the Baltic Sea into the 50Hertz grid ("Collecting wind in the Baltic Sea - how electricity makes its way to land"). 50Hertz has been extremely successful, partly because of its very sophisticated forecasting methods which compensate for the variability in renewable energy produced, as well as its forward-thinking approach to connecting with renewable energy sources.

Germany is a net exporter of electricity, meaning that they produce more than can be consumed domestically - this in itself means that there is no incentive economically to eliminate coal production, as it can be exported and sold outside of the country (Kunzig, 2017). There are two forms of coal- lignite and hard coal- lignite is much more pollutant to burn than hard coal (Schwägerl, 2015). To add to the predicament, one of the major factors slowing down the elimination of coal is the number of jobs that will be lost as a result (Kunzig, 2017).

Unfortunately, it is predicted that Germany's emissions goals are not going to be met for 2020, as greenhouse gas emissions have been on the rise since 2009, as displayed in Appendix 3, Figure 3. This is partly because traditional

plants cannot easily vary their production in response to the variability of renewable energy sources, and often, there is so much power available that the price becomes negative for commercial customers (Martin, 2016). Figure 4 in Appendix 3 shows that power production in total has increased over the years, and that coal and lignite have not reduced by a significant amount. Nuclear energy has reduced because of the closing down of plants. Carbon dioxide emissions will not decrease if Germany continues to create both renewable and coal energy, and continues to ship the excess to other nations. Part of the explanation for this continuation of production is that coal energy is so deeply engrained in the German economy. It is cheap, employs many people, and is easily sold abroad to the secondary wholesale renewables market, which is why total electricity production is increasing by the total amount of renewable energy produced (Appunn, Bieler & Wettengel, 2017). Hard coal mines are slated to close by 2018; however, there is no plan to close lignite (brown coal) facilities, which are the 'dirtier' of the two. Not meeting Germany's 2020 targets is major downfall, which has led to much conflict among the political parties (Hockenos, 2017).

All of this uncertainty and disagreement has caused problems for Angela Merkel's new government. Merkel was faced with the task of forming a mixed party, which makes it difficult to come to agreement due to the coal plant dispute and the strong unionization and economics surrounding it. Merkel, although touted as being a world leader in this area, has been unable to form a coalition, and as a result, talks have collapsed (Oltermann, 2017). Part of the issue she is facing is the disagreement over how and when to phase out Germany's coal plants, which is a major contributor to Germany's predicted failure of meeting 2020 emission targets (Wehrmann, 2017). The phasing out of coal is a complicated issue that is limiting Germany's progress and causing major political upheaval. The use of hard coal, the dirtier of the two forms of coal, has decreased substantially, but the use of lignite has remained constant, which is still a major contributor to carbon emissions (Kunzig, 2017). The public has not taken legislative action well, as most recently, when an emissions levy on outdated coal plants was enforced by the German government, demonstrators protested their outrage outside of the ministry (Kunzig, 2017). Germany is struggling to find the appropriate way to phase out their coal use completely. As Germany is not a very resource-rich country, the country relies on lignite substantially, further contributing to the highly difficult phase-out process (Kunzig, 2017).

The pricing and financing of electricity in the future is a point of much debate, and regulators, such as Merkel, are struggling to design an appropriate system to distribute electricity costs to German customers appropriately. Currently, the Renewable Energy Act (EEG) surcharge is paid by customers with their power bills, and finances the feed-in tariffs, also known as the government set subsidy; however, as the levy continues to rise, this puts a burden on customers' power bills (Amelang & Wettengel, 2017). Auctions are now being introduced, which means that power producers will place bids to compete for renewable energy projects (Martin, 2016). This is a useful new method, as it forces the market to determine the price, rather than the government, meaning that carbon produced power will be sold to other European countries so it is profitable to maintain (Martin, 2016). Despite these efforts, many argue that this method of payment will not be enough to lower costs for consumers (Wettengel, 2017). Some argue that pricing carbon emissions more heavily would be a more efficient way to finance and encourage Germany's renewable energy movement (Wettengel, 2017). Regardless of the appropriate solution, major investments, both financial and time, will be required to successfully penetrate this new phase in renewable energy, and many believe that Germany's current systems are not prepared for the challenge.

It is likely difficult for voters to understand how it is possible for these huge costs to be borne by consumers, and yet, greenhouse emissions are still increasing, and coal plants are still producing 40 per cent of the Germany's electricity (Wehrmann, 2017). Although the jury is still out as to the success of Germany's efforts to be leaders in this area, there is no doubt that there are already lessons to be learned by other countries that are watching and waiting to be the second movers.

There are downsides to every source of energy, renewable or not. Wind turbines are extremely noisy, are unsightly, and need to be replaced far more frequently than traditional plant equipment. In addition, they are responsible for

killing many birds and upsetting ecological environments. Solar panels also need to be replaced frequently and disposed of. Even hydroelectric power, which is very common in Canada, often requires the flooding of valuable farmland and an enormous capital investment, which is an added cost contributing to the electricity rates.

SECTION 3: Hydro One and Canada's Efforts in Renewable Energy

Hydroelectric power is renewable and used extensively in parts of Canada, as is not the case in Germany (Muisse, n.d.). The difference in geography of Canada versus Germany must be considered as to why this is the case. Ontario provides a representative example of Canada's renewable energy efforts as a whole. Ontario (and BC) has ready access to sources of water for this purpose, whereas Germany does not. Germany does have rivers, but the geographical area is much more densely populated, and thus, it is not possible to flood valleys, which is required for hydroelectric power.

In 2015, Ontario's electricity generation was 30 per cent renewable at 24 hydroelectric and 6 wind with no coal production ("Ontario's energy mix at the end of 2015"). Compared to Germany's statistics, this appears to be quite positive. What could be viewed as alarming is Ontario's reliance on nuclear power.

A possible explanation for nuclear reliance is that Ontario has run out of places for dam creation to facilitate hydroelectric power generation. Most recently, the Site C Dam creation required billions of dollars of funding, and now professionals cannot decide whether to continue with creation or back out completely (Kurjata, 2017). This has spurred much controversy across the country, as the farmland environment surrounding the dam was flooded, and now is effectively ruined for farming purposes. As Ontario is nearing the end of its useful life of nuclear production, Canada is struggling to determine the most appropriate way to eliminate nuclear waste (Beauregard-Tellier, 2005). This is most concerning, and nuclear waste be an enormous expense to dispose of; however, since Canada does not have a coalition government, it may be easier to come to an agreement than Angela Merkel's governmental situation in Germany.

Based on data available, we are able to come to some conclusions based on comparisons between Germany and Canada at the years 2000 and 2015, and 2016. In order to understand Canada's different approaches, we set a foundation by comparing where both countries stood a short time ago in 2000. As displayed in Figures 5 and 6 in Appendix 3, we can see the distribution of gross power production in Ontario and Germany at the year 2000. Germany's estimated gross power production mix values, as displayed in Appendix 3, Figure 6, are estimated based on the chart of gross power production values in Germany from 1990-2016 in Figure 4. Since values are not listed on this chart for the year 2000, approximate estimates have been made based on the data listed for the year 2000, and based on values at year 2016 and their corresponding bar sizes. Using the gross power production chart, Germany's estimates of distribution of power production in 2000 can be made, and are presented in Appendix 3, Figure 6 of about Nuclear 29%, Lignite 25%, Hard Coal 25%, Gas 8%, Renewables 8%, and Other including mineral oil 5%. Ontario's distribution of values are presented in Figure 5 based on Statistics Canada data for 2000.

If we compare these figures to Appendix 4, Ontario's 2015 data on energy sources in gross power production in Figure 8, and Germany's 2016 equivalent data in Figure 7, we find clear evidence of different approaches between Ontario and Germany in terms of renewable energy production distribution strategy. It is clear from these estimations that Ontario eliminated coal and shifted to nuclear over the years, whereas Germany is phasing out its nuclear production and increased its renewable production, but is unable to eliminate coal at the moment. Ontario, since 2000, has only added 4 per cent to renewables, and replaced coal or oil with nuclear, and a margin of gas. Ontario's methods are cleaner, but not renewable, and came with a huge increase in rates, causing outraged customers in a far worse situation than Germany.

There is an understandable explanation as to why the feed-in-tariffs were not successful, which are the subsidies that the individuals were guaranteed for 20 years. It appears that Ontario has made most of the same errors as

Germany, and to an even greater degree. Customer rates have doubled in the last ten years due to all of the guaranteed subsidies in Ontario (Morrow & Cardoso, 2017). In Germany, subsidies have increased by 50 per cent (Ball, 2017). Ontario has only 6 per cent wind to account for the large rate increases (Morrow & Cardoso, 2017). Similar to Germany, power is overproduced in Ontario (Staff, 2013). The main difference here is that a large portion of this power, in the form of wind turbines, is not even connected to the grid- only about 1,500 of 5,800 megawatts; however, this production is still costing consumers expense (Staff, 2013). 50Hertz and their expertise in this area is something that Ontario has missed out on, and provides a learning opportunity for HydroOne, Ontario's electricity transmission and distribution utility.

In terms of consumption and lifestyle, Canadians use more energy per capita than many other nations. In fact, Canadians use more than twice the energy per capita than used in Germany (Wilson, n.d.). We can attribute lifestyle differences to this variance. In terms of home-life, Germans rarely use air conditioning or fans, most do not have dryers, and most prefer to have their homes dimly lit as a rule, and are extremely diligent about turning lights off (Grantham, 2014). German homes are also smaller on average than those in North America- most live in apartments rather than full homes, which allows for sharing of heat with their neighbors (Grantham, 2014).

Analysis of climates and average temperatures (Grantham, 2014) reveals that Toronto is only slightly cooler, and has brighter and more sunlight than Berlin, which emphasizes a similar climate- this means that greater energy use in Canada can be attributed to simply lifestyle differences, rather than temperature variances. Additionally, Germany's much higher price of electricity encourages conscious energy consumption, as it is extremely expensive to over-use energy (Grantham, 2014). High energy prices have also contributed to Germany's earlier adoption of energy-saving appliances, as it makes that much more economic sense to invest to decrease energy bills (Grantham, 2014). Unfortunately, many "normal" aspects of North American life require excessive amounts of energy outlay. As a result, Canadians require substantial lifestyle changes in order to reduce our energy expenditure per capita.

SECTION 4: Takeaways for Canada: Germany's Transition from Coal to Renewables

Every country begins the journey to renewable energy production at different stages, as presented numerically by the comparison of Ontario's and Germany's energy sources in gross power production in 2000, and 2015 and 2016. Germany shifted out of coal production when nuclear plants were forced to be shut down, while total energy generation capacity continues to grow. There has been a shift from coal to nuclear, as hard coal is being phased out, and lignite remains produced and sold. Conversely, Ontario has been focused on phasing out coal and shifting to nuclear, with different consequences to do with end-of-useful-life for these nuclear plants. Regardless of the differences in progress, Canadian energy companies have much to learn from Germany's failures and accomplishments, given Germany's substantiated presence in the renewable energy sector.

Germany has only partially transitioned to renewable energy, and it appears that the most difficult phase is yet to come. The biggest technical stumbling block towards a full transition is the inability to reliably store renewable energy, which by definition is variable. In particular, wind, solar, and other renewables are the way of the future; however, each country has vastly different dynamics in terms of geographic, economic, political, lifestyle factors. Transitioning to renewables will be a different process for each country and will take time. It is not possible to phase out traditional energy sources overnight, particularly when they are so strongly entrenched in the form of unions and economic contribution.

Often overlooked is the difference in energy consumption habits between Canadians and Germans. Although we have similar living conditions in terms of weather and technological advancement, Canadians consume twice as much electricity per capita than that of Germany (Wilson, n.d.). Part of the reason for Canada's over-consumption may be the fact that energy efficient and eco-friendly products are marketed so well. As a result, purchasing these products ironically fuels the over-use of electricity. Although eco-friendly products are also well-received in Germany, it is German culture to be more minimalist and energy conscious than Canadians. As such, Canadians

must become less consumerist with their energy consumption habits in order to be on-par with Germany's consumption per capita. Unfortunately, this is a heavily engrained adjustment that, arguably, is nearly impossible in North America's consumerist society.

It is important to emphasize the intangible business knowledge and value that 50Hertz can provide for Hydro One. 50Hertz exhibits particular expertise as a pioneer in the renewable energy sector of business, as it has developed very sophisticated predictive techniques to control the flow of energy, such that it is stable on the grid. It is this proactivity in connecting various sources of renewable power, and the development of this intricate grid, that allows for 50Hertz to hold great competitive advantage. Hydro One can learn much from 50Hertz's advancements. The company would be wise to adapt similar predictive techniques and technologies, as to better utilize wind and solar energy. Although Canada sells a margin of its energy to the USA, in terms of overproduction in Ontario, 50Hertz's method of selling to the secondary energy market could be adapted by Hydro One to utilize the 4,300 megawatts of energy unconnected to the grid.

Regardless of any advancement on the grid, the inability to store renewable energy is a giant limitation in the renewable energy sector. Storage of renewable energy, particularly solar and wind, is currently not possible for the long-term, and is a massive road block for the world to major advancements in clean energy. Germany's carbon emissions are a fraction of China and the USA, so Germany becoming completely carbon neutral will not change the world (Rogers & Evans, 2011). It will, however, prove to other nations that it is possible to achieve, and set the stage for a green future. Until storage of certain renewable energy is possible, traditional sources will continue to play a role in filling in the gaps. It may be wise to move to gas energy as an interim measure, as it is less toxic than coal; however, this too is problematic, as one cannot easily slow down and speed up energy production at nuclear, gas, or coal plants.

There is an important lesson to be learned from Germany's attempt to decrease carbon emissions by solely adding wind and solar power. As Germany added wind and solar power to the grid, their carbon emissions did not decrease- coal production was still maintained. Germany is now trying to slow down the production of wind turbines, as the nation is dealing with too much power and carbon emissions (Hockenos, 2017). As of May 2016, the nation's emissions were actually on the rise (Wettengel, 2016). The feed-in-tariffs have encouraged the increase in wind and solar power (Hockenos, 2017). Financially, this may explain why the shift to renewables has been such a huge expense for Germany, and perhaps may not have been for other countries as second movers. This alone is a major lesson for Hydro One's adaptation.

The pricing model of renewable energy is all important. In Germany, the subsidies provided to individuals up until 2010 had a 20-year life, and were awarded at the expense of the end user, even after the cost of solar panels had dropped dramatically. At some point, rates paid by consumers will be a drag on the economy, even though environmentalism is a high priority for both Germany and Canada. Our need for electricity is bound to increase, especially as a likely shift to electric cars hangs in the balance (Moulson, 2017). As such, economic models should be created in advance that are able to somewhat accurately predict the effect that individuals as energy producers will have on traditional utilities.

Canadian power companies, such as Hydro One, must realize and emphasize the real business benefits of transitioning to completely renewable power, and translate this to their consumers. Hydro One must commit to renewable energy as much as possible, as the case for investing in cleaner power for stakeholders is growing stronger. Since energy prices fluctuate most erratically, in order to protect business margins, it may prove wise to invest in renewable energy solutions that are cheaper and more reliable. IKEA recently announced its goal to become 100 per cent renewable by 2020, in hopes of becoming more energy independent and tightly controlling its profit margins ("IKEA- Energy & Resources"). Keeping up with the transition to renewables is also crucial for Hydro One's bottom line to avoid extra expenses: if left too late, penalties could be faced due to government

regulation increase. If Hydro One wishes to remain competitive in a business sense, they must continue to advance in creating cleaner energy.

In terms of second-order value, a greater investment in renewables will create demand in other sectors; for example, better renewable services could encourage innovation in products like Hyperloop, a proposed high-speed transit service relying mostly on solar power (“Hyperloop One”). Additionally, increased efforts in solar and battery power systems could make urban power more effective and durable in power outages and natural disasters (“What The Fire Of London Can Teach Us About Resilient Cities”). Any increase in resilience could offer massive savings for economies around the globe. It makes good business sense for Hydro One to take advice from 50Hertz’s progress and failures, as investing in these renewable alternatives will likely lead to increased returns, but also make the company a good corporate citizen in investing in a better future for all.

CONCLUSION

Energy technology would not have advanced as quickly as it has in terms of wind turbines and solar energy had Germany not taken this approach as a world leader. If technology advances to the point that wind and solar become viable options to provide vast amounts of power, then there will certainly be options for nuclear plants with limited lives in Ontario, and we will have German initiative to thank for it.

There seem to have been oversight in terms of the beneficiaries of the transition in Germany, which regulators in Ontario can also learn from. There is, perhaps, so much emphasis on greenhouse gases that it is perceived as if once those are taken care of, the job is done; however, every source of energy will damage the environment in some way. Hydroelectric power is very expensive to finance, and the controversy over the Site C dam in British Columbia and the billions of dollars that it will cost and have to be paid for by customers at some point exemplifies this point: shifting more power to hydroelectric is not something that can be achieved easily.

Canada also must conserve our use of electricity, whatever the source, and this will take a huge cultural shift that will be difficult for a consumerist society. Canadian energy companies, such as Hydro One, can utilize the business case for sustainability in encouraging Canadians to make this shift, and pave the way for a greener future. Time will tell whether Germany has made the right choices, and whether technology can catch up in time to allow for the complete phase-out of coal and nuclear at the same time - in which case, the world will follow.

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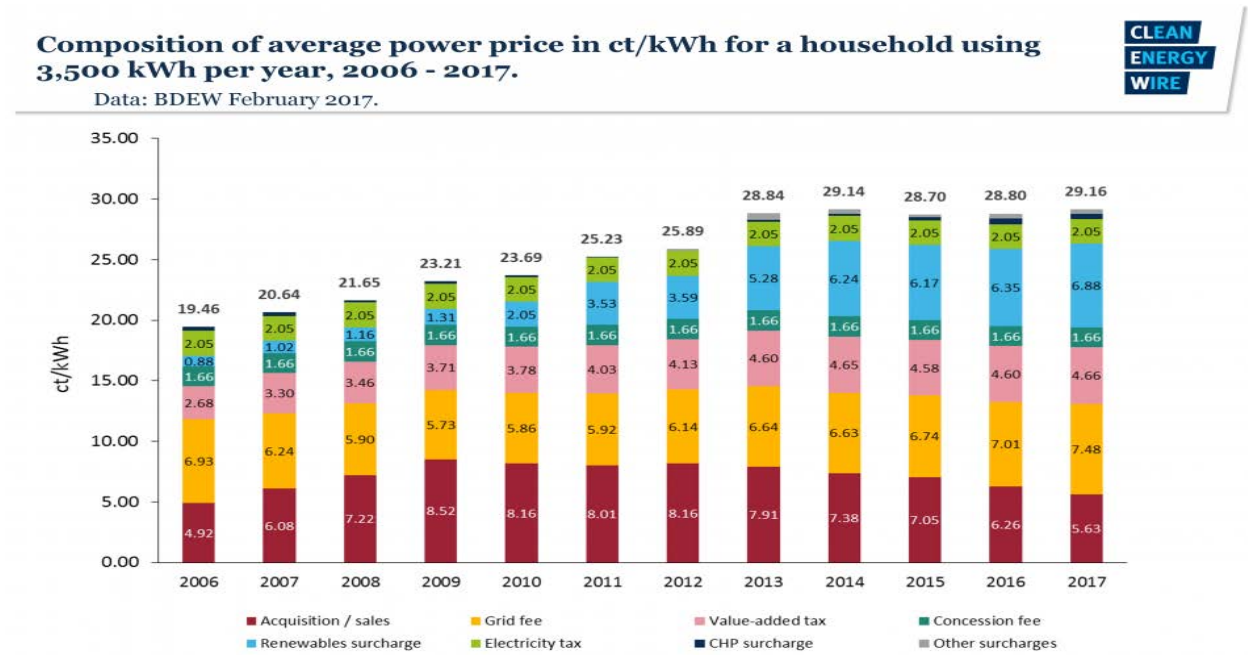
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APPENDICES

APPENDIX 1

Figure 1: Average power price per ct/kWh for a household using 3,500 kWh per year, 2006-2017

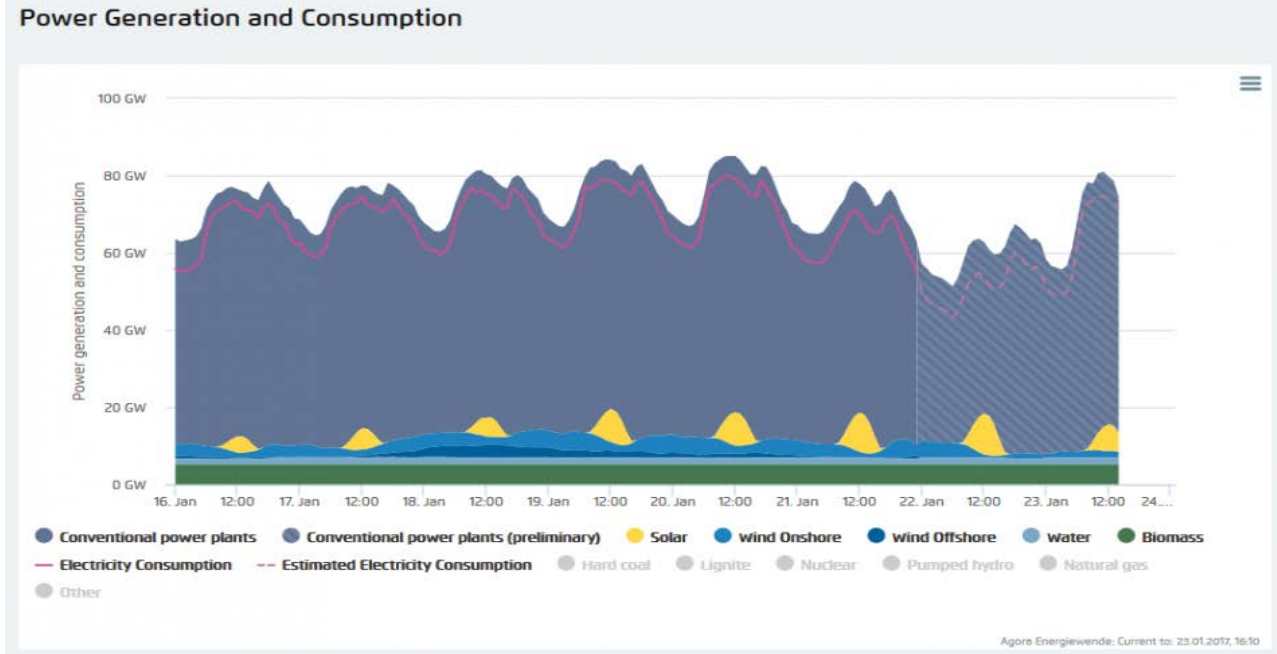


(Thalman & Wehrmann, 2017)

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APPENDIX 2

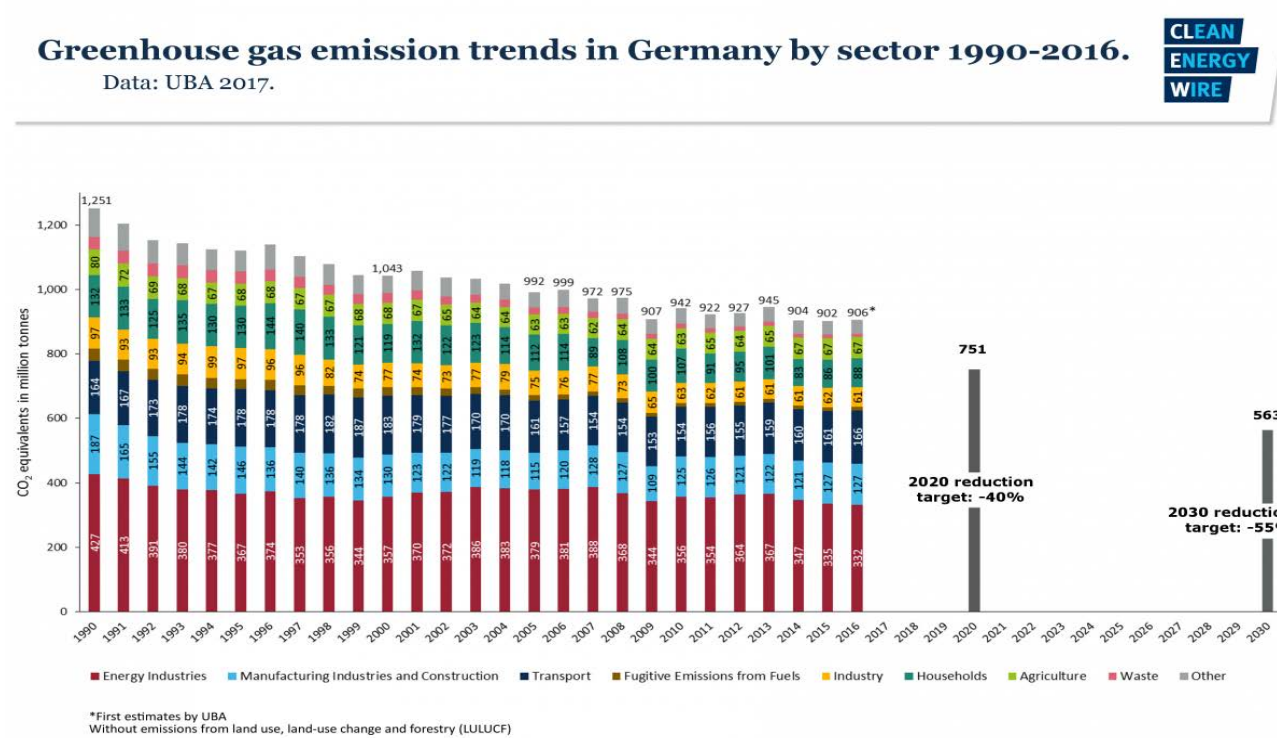
Figure 2: Power Generation and Consumption in Germany, January 2017



(Amelang, 2017)

APPENDIX 3

Figure 3: Greenhouse gas emissions trends in Germany by sector 1990-2016

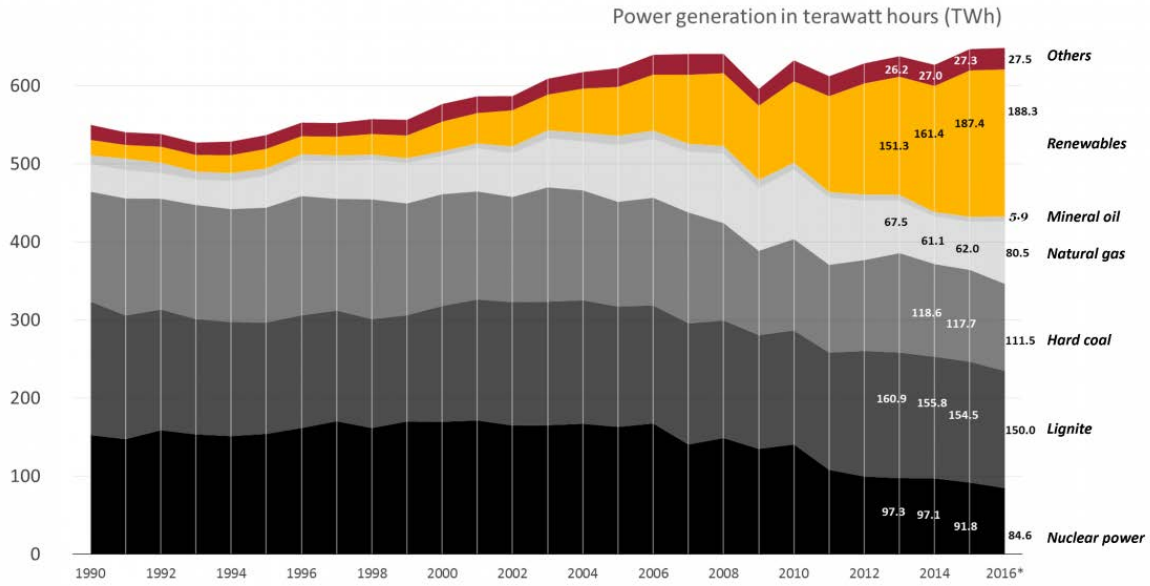


(Wettengel, 2016)

Figure 4: Gross power production in Germany 1990-2016

Gross power production in Germany 1990 - 2016, by source.

Data: AG Energiebilanzen 2017.

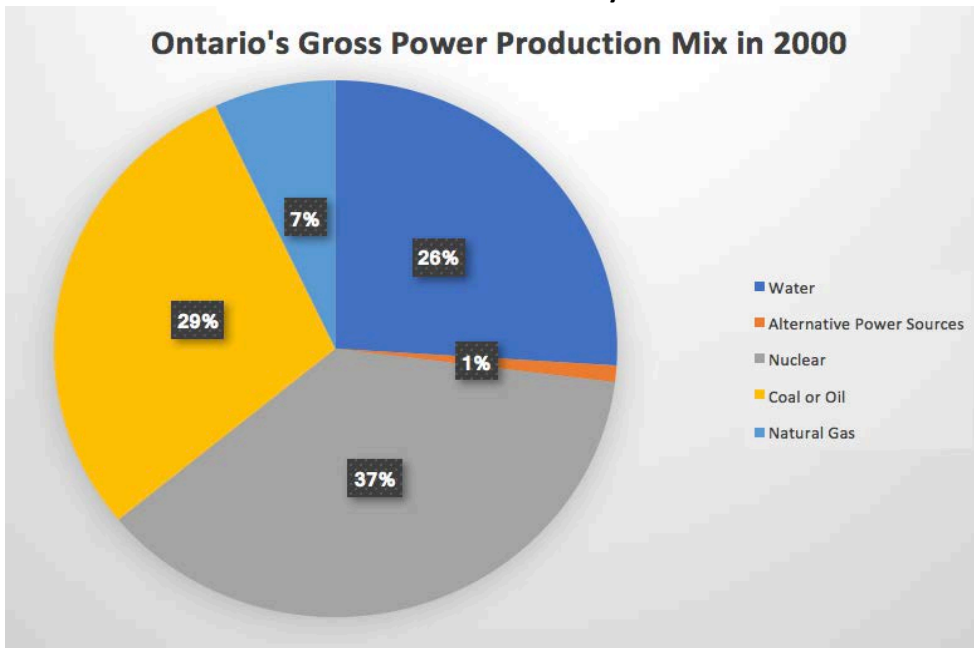


*2016: preliminary data



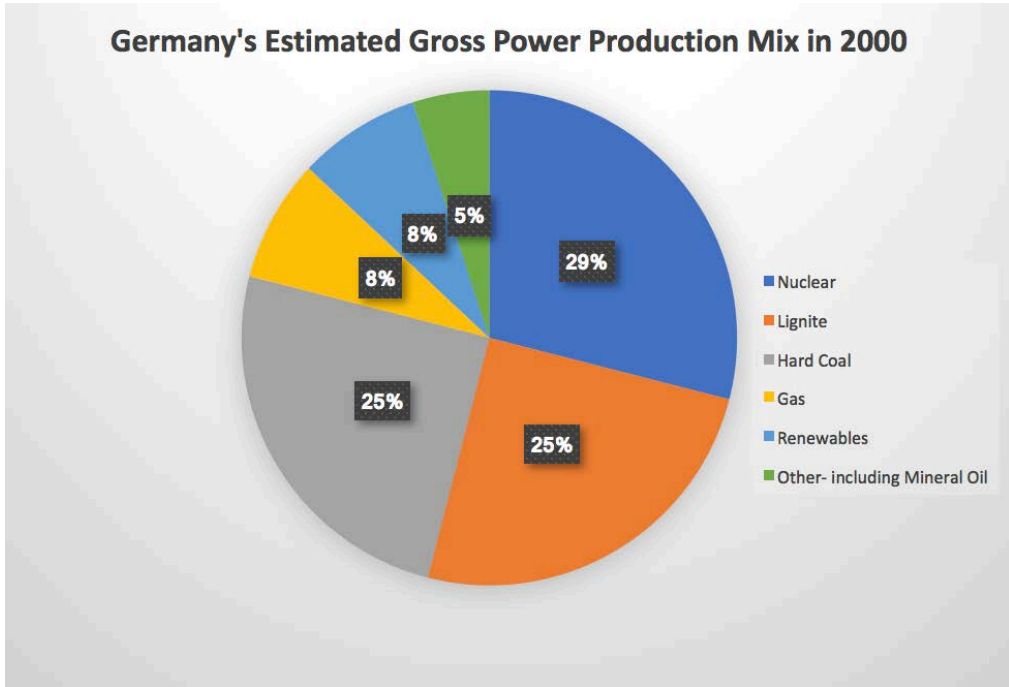
(Appunn, Bieler & Wettengel, 2017)

Figure 5: Ontario's Gross Power Production Mix at 2000 year end



("Ontario's System-Wide Electricity Supply Mix: 2000 Data")

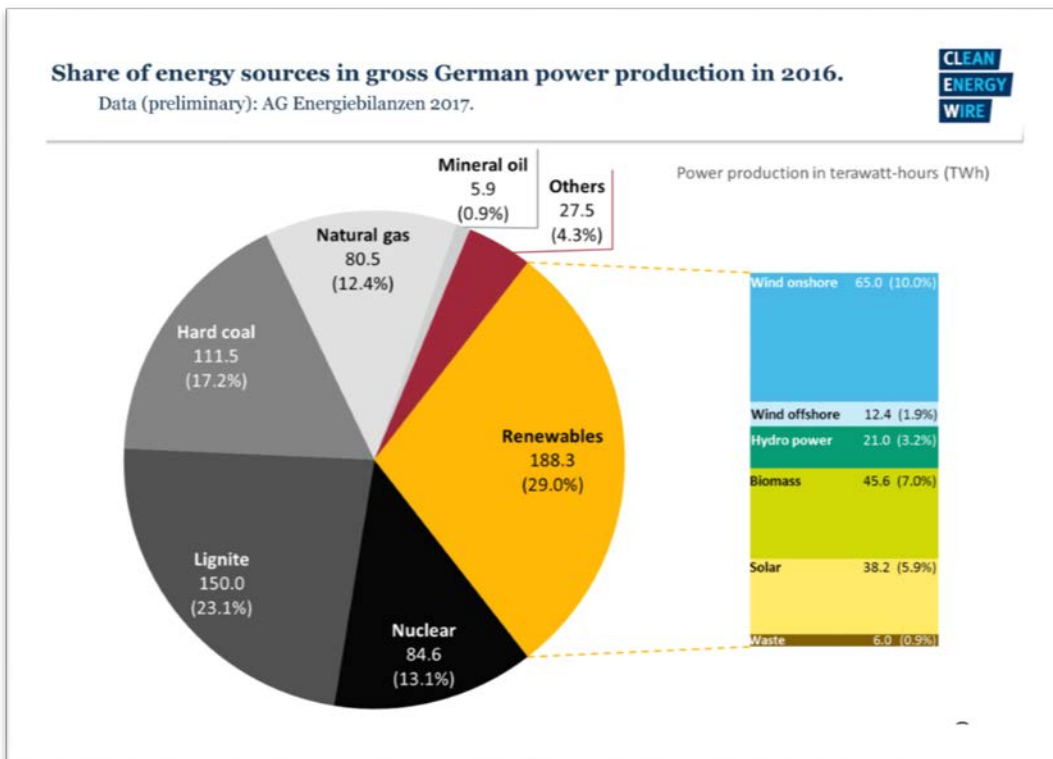
Figure 6: Germany's Estimated Gross Power Production Mix in 2000



(Appunn, Bieler & Wettengel, 2017)

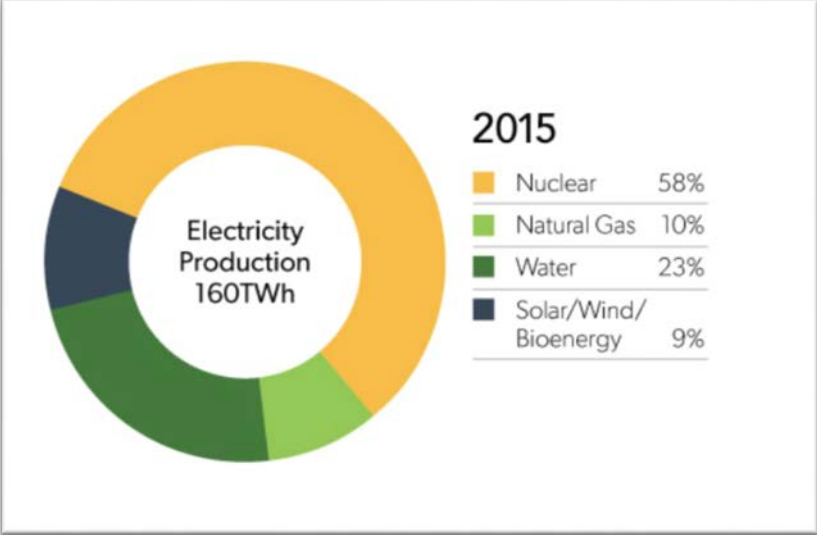
APPENDIX 4

Figure 7: Germany's energy sources in gross power production in 2016



(Appunn, Bieler & Wettengel, 2017)

Figure 8: Ontario's energy sources in gross power production in 2015



("Ontario's energy mix at the end of 2015")

Effect of Climate Change on Bordeaux Wineries

Richelle Stewart

ABSTRACT

Climate change is a worldwide phenomenon impacting many industries in various ways.

This paper focuses on how climate change hinders the ability of Bordeaux wineries to grow quality old-world grapes they have traditionally succeeded in growing. The paper presents the Appellation d'Origine Contrôlée (AOC), the standard it holds Bordeaux wineries to in regards to labeling vintages, and the struggles it creates for Bordeaux wine growers. Additionally, the positive and negative result of climate change on the wine industry worldwide and how it could affect specific country exportation is discussed.

Keywords: *climate change*, effects, affects, Bordeaux, wine

INTRODUCTION

Over the past few decades, climate change has become an adverse issue around the world. Climate change is affected by global warming, causing unusual weather events that effect the environment and its surroundings. In many countries, governments have implemented laws, policies, taxes, and incentives to help keep the planet green and reduce climate change. Climate change is a phenomenon that highly effects the business environment and the way companies conduct their business. The effect of climate change is different across the globe therefore; different regions have to adapt according to their business needs. The implications of climate change on Bordeaux wineries and how it compares to other wine regions worldwide will be searched and discussed.

Effect of Climate Change on the Business Environment

Over the past few decades, many organizations have negatively contributed to climate change and global warming. It has become clear that not all business practices are sustainable, proving the need for change. Although large corporations have a significant impact on climate change, small organizations have also done their fair share on depleting environmental resources. Recently, there has been a shift in all sizes of organizations attempting to be sustainable. Specifically, large corporations have been working to operate in a sustainable way by introducing corporate social responsibility policies into their operations. These businesses are trying to operate sustainably in a variety of ways including, renewable energy, recycling, waste reduction, and composting. In many ways changing policies and practices to react to climate change can affect business operations and the business model as a whole.

Adaptation to climate change can impact a company's corporate culture, everyday operations, and even the organizational structure of the organization. Many corporations are taking it upon themselves to react to climate change and make their efforts publicly visible. Organizations that are reacting to climate change, can begin to achieve green workspaces by turning off lights when they leave rooms, implementing programs to reuse wasted energy, or recycling their waste (Okereke, Wittneben, & Bowen, 2012). Many programs implemented by companies can be costly and take time to implement; however, the overall impact of their company's footprint on society can be drastically diminished. It is becoming important for investors to find green, eco-friendly companies to invest in although it may be costly to implement carbon reductions programs within an organization, they could see financial benefits by gaining shareholders and customers.

Many companies who incorporate sustainable practices into their everyday operations or have sustainable products, advertise themselves as being green. Products that claim to be sustainable often catch consumer's eyes, and tend to be a 'better choice' over brands that do not appear environmentally friendly. However, many companies claim to have sustainable products that actually do not prove to be sustainable; the advertisement of these products as being sustainable is called 'green washing'. Green washing is when a company misleads the consumer to believe its product is produced sustainably with environment and ethics in mind. Many consumers fall for the seven sins of green washing making it challenging for companies that are pure players, opportunists, and cautious advertisers to stand out, as they should. Within the wine industry, sustainable actions can come from growing techniques, harvesting methods, viticulture practices, packaging choice and transportation of the product. Being sustainable in the wine industry is becoming more and more relevant as climate change is beginning to impact wineries.

Although many businesses are buying into the ecofriendly business initiatives, it is not enough to tackle the continuous rising temperatures of climate change. A large effort from all businesses must be made for a drastic change and reversal of temperature increases. In some cases, "climate change adaptation is shifting the commercial and political landscape so that some industries, firms, and coalitions may be weakly incentivized to address the causes of climate change," (Okereke, et al., 2012, p. 23) thus, not all corporations are contributing to the battle against climate change. This concept applies to the wine industry as some wine regions are suffering because of climate change; other areas are 'winning' since they are able to grow old world quality grapes they traditionally may have never been able to before. This greatly affects the way in which companies conduct business within their region, country, and industry, along with how heavily they integrate climate change initiatives into their corporate culture and business model.

A recent trend has arisen of corporate leaders rising to the task of implementing climate change initiatives in their companies to tackle the problem (Okereke, et al., 2012). These leaders are long term oriented; looking at the future of their companies, they view potential loss climate change could cause and how they can work to combat it. That being said, company leaders of all industries must soon realize that:

There is equally a great (or perhaps greater) cost in not taking action, committing the right amount of financial resources towards innovation, research and development, clean technology, capacity building, and achieving value reorientation looks ultimately a wise decision (Okereke, et al., 2012, p. 26).

Sooner or later, all executives and leaders in small and large companies will realize doing business sustainably and adapting practices to fight against climate change is beneficial for society as a whole.

EFFECTS OF CLIMATE CHANGE ON BORDEAUX WINERIES

Over the past 50 years, temperatures in Bordeaux have continued to rise, while precipitation levels have become inconsistent from year to year. The unpredictable weather has put a lot of pressure on vineyard owners, creating uncertainty of how their crops are going to turn out and how profitable their harvests will be. Climate change effects wine growers in multiple ways such as the supply of water available for their crops, the time of harvest and the quality of terroir. Terroir is "a French term that ascribes a wine's uniqueness to the soil, landscape, climate, and viticulture practices of the place where it's produced," (McQuaid, 2011, para. 12) held at a very high importance to wine growers worldwide. The quality of terroir is highly linked to the perceived excellence of wineries blends, which will be altered if current grape varieties are unable to grow in the changing terroir. Winery owners may have to deviate from their traditional wine growing techniques if the effects of climate change continue to increase.

Appellation d'Origine Contrôlée

The Appellation d'Origine Contrôlée (AOC) is a French certification “which governs the production of French wine and spirits that seek geographical indication” (Barnea, 2017, p. 607). The AOC has qualifications a wine must meet in regards to geographical location the grapes were grown, type of grapes used to make the blend, the quality of terroir the vineyard has, and the techniques used by the vineyard to grow and harvest the grapes. In order to achieve the AOC certification, wineries must attain to all the standards. The geographical location and the terroir the grapes were grown in are closely linked. Since the geographical regions are divided due to the differences in terroir, wineries aiming to gain the same geographical identification have similar terroir in their region. The similar terroir across one regional certification, such as Bordeaux, creates and displays quality and consistency for consumers.

The AOC certification is bound by law therefore, it is illegal to name a blend after a region if all the AOC criteria are not met. A few instances that can be illegal are viticulture practices, terroir, and the region the grapes are grown in (Barnea, 2017). Some viticulture practices that effect the AOC regulations are “grape varietal, ripeness and alcoholic strength, yields, vine spacing and pruning, and wine making techniques” (Barnea, 2017, pp. 607-608). It is important to note that due to climate change, these three regulations of the AOC are becoming more and more difficult for wineries to achieve. They are affecting the quality and consistency of blends, along with uncertainty for producers, whether their crops are going to survive to their fullest potential and be profitable.

If climate change continues to persist and temperatures continue to rise, it will threaten the ability for wineries to produce and label their wines under the AOC certification. For wineries that strive to continue meeting AOC regulations, they could potentially have dwindling product supply, making their vintages limited. Additionally, the lack of supply would force producers to sell their product at an increased rate if the demand is high due to limited quantity. The supply and demand will only be favourable for producers if the quality and taste of their vintages meet consumer expectations, increasing demand. If temperatures continue to rise, wineries will be taking a risk continuing growing traditional grapes, as the quantity and quality of harvests could be diminished from viticultural techniques or region of growth not changing under AOC regulations.

Raz Barnea (2017) proposes three changes to the AOC regulations that could positively affect wineries due to the growing changes of climate change. The first proposition would enable wineries to use new viticultural methods, the second proposition is to allow wineries the ability to grow non-traditional crops and use them in their AOC approved blends, and the third is to allow wineries to source grapes from outside the appellation region (Barnea, 2017). The AOC seems hesitant to change, due to long lasting traditions and the importance of terroir, affecting all three propositions in different ways. Although change to the AOC regulations will take time for deliberation, it is clear change must be made to aid wineries and their leaders' future success.

Using the three alternatives a decision matrix will be used to determine which option would be the most favourable for owners of Bordeaux wineries (Figure 1). The four main decision criteria are quality, traditional taste, ease of implementation, and degree of personal winery contribution. Traditional taste was ranked as the most important criteria because winery owners will suffer if the tastes of their wines change drastically and consumers find the blends unidentifiable. The next heavily weighted criteria was ease of implementation, as some alternatives could take longer to implement and a larger financial investment for winery. Quality was the next criteria, as consumers expect the same quality of vintage from year to year, being able to predict the quality of wine due to a wineries reputation. The quality would be altered by all three alternatives; however, growing crops in different regions with more favourable growing conditions would have the most impact. Lastly, the degree of personal winery contribution was considered. This criterion was considered because each winery likes to have control over their blends. If they are outsourcing and receiving grapes from wineries in different areas, they have less control over the outcome than if they were growing and harvesting the grapes themselves. The outcome of the decision matrix

using the four criteria with varying weights is winery owners would prefer the ability to use modern viticultural methods, to improve the impact of climate change on their harvests.

If the AOC were to implement one of the three alternatives proposed by Raz Barnea (2017) it would be the easiest to control and for wineries to implement. Although, Barnea (2017) does note the new viticultural techniques will only aid in battling climate change as long as they work. The pressure of finding techniques that improve viticulture and are favourable for crops would be up to managers and leaders working within each individual winery. This would increase competition between wineries to find the best techniques. Wineries could incur additional costs of experimentation to find the best-suited techniques for each type of grape, and type of terroir the vines are going planted in. The experimentation process would be forever adapting, due to the rapidly changing and unpredictability of climate change.

Château La Tour Carnet

Château La Tour Carnet is a wine estate in the Bordeaux region of France owned by Bernard Magrez, spanning 126 hectares large, and produces blends labeled under the Haut-Medoc appellation of the AOC (Jeff, 2017, para. 1). Château La Tour Carnet is a leading winery in the Bordeaux region, using innovative techniques to grow and bottle their wines, along with conducting research experiments related to climate change. Château La Tour Carnet has four main core competencies that aid in the successfulness of the winery: innovation, strategic orientation, problem solving and quality, in both the wines produced and the experience they provided for visiting guests, which will be explained further.

Château La Tour Carnet has spectacular terroir for growing grapes, “the rich mineral content found in the gravel, limestone and clay soil is good for the production of wine” (Bredahl, n.d., The Vineyard and Winery, para. 2). Due to climate change the terroir of Château La Tour Carnet is being altered, making it difficult to grow the grapes they have been growing for generations. The vineyard currently grows “50% Merlot, 45% Cabernet Sauvignon, 3% Cabernet Franc and 2% Petit Verdot,” (Jeff, 2017, Château La Tour Carnet Vineyards, Terroir, Grapes, Winemaking, para. 1) the varieties that produce blends eligible for AOC certification. Magrez initiated an experiment on the property of Château La Tour Carnet, planting “52 varieties of vine on one of the vineyard’s slopes,” (Southam, 2016a, para. 6) to test how the different varieties grow in the terroir, what kind of blends can be made, and how they taste different. Hazel Southam (2016a, para. 6) stated the first crops planted were expected to be ready in the harvesting season of 2016, marking the commencement of climate change research at Château La Tour Carnet. Currently there is no further research indicating whether the crops were successfully harvested in the 2016 season.

If temperatures continue to rise and unpredictable weather resumes, Bordeaux wineries, including Château La Tour Carnet will be faced with worsening quality of traditional crops, and may be forced to begin growing new varieties of grapes, utilizing them in their current blends. The new variety of grapes would cause problems for winery owners, as their blends would no longer be AOC approved, not complying with AOC regulations of the region. Under current AOC regulations these blends would not be certified because the taste and quality of the wine would be changed, thus altering consumer perception of Bordeaux wines. For wineries such as Château La Tour Carnet, producing wines not eligible for AOC approval is problematic, as the AOC certification allows wineries to charge a premium rate for their blends, ultimately affecting each company’s bottom line.

Cécile Daquin, Magrez’s daughter oversees operations of Château La Tour Carnet, along with a few other château’s owned by Magrez’s as the general manager (Southam, 2016b, p. 50). Daquin has a strategic orientation to improve the company’s bottom line by opening all of Magrez’s château’s and vineyards, including Château La Tour Carnet for the public to visit year round. She believes the future of Bordeaux depends on the willingness of vineyards to adapt their traditions, opening their doors, and allowing consumers to experience Bordeaux (Southam, 2016b, p. 50). Château La Tour Carnet rents rooms to the public, similar to a bed and breakfast allowing them the opportunity

to experience Bordeaux in a unique way. The bed and breakfast provides consumers with a quality experience of Bordeaux vineyards, aiding in the already high reputation of quality Bordeaux wines. Daquin has carried this idea across many of Magrez's Château's as previously mentioned and it has proven to be very successful, with great response from consumers. If all Château's in the Bordeaux area would consider adapting their practices to allow bed and breakfasts, it could be a great profit generating strategy to allow a buffer for years climate change drastically affects crops, the quality of wine, the quantity harvested and quantity of wine available for sale. Château La Tour Carnet and Magrez's innovation keep lending Bordeaux additional methods to tackle the threat of climate change, and aid wineries in continuing profitability and surviving in the industry.

France is the country that exports the largest quantity of wine in the world exporting \$9.1 billion per year, a part of the beverage exportation, one of France's top ten exports ("Wine," n.d., para. 2; Workman, 2017). The exportation of wine from France is growing at a rapid rate, with high demand from importing countries such as the United States of America, United Kingdom, and Canada. Climate change could cause France to slow down exportation with lowering supplies of quality wines, while the price exporting products sell for could vary. If the quality of the wine is lower, wineries could expect exporting wine at a lower cost; however, if there is not a large quantity of wine and demand is high, the selling price of wine would be higher. Over the past three years, in France, the price of basic red wine has dropped 31.7%, demonstrating the struggle of the French wine industry adapting to the demands of climate change and economic variables (European Commission, 2017b, p. 2). The European Union predicts the quantity of wine produced in 2017-2018 harvesting season will be lower than over the past three years (European Commission, 2017a, p. 2). With a lower quantity of wine produced and basic red wines being sold at a lower cost, along with the pressures climate change adds to the quality of vintage grapes, it is clear France will have troubles continuing the growth of wine exportation.

New technologies introduced into the winemaking industry can be hard to implement due to legal restrictions and high financial investment. As previously discussed, some winery owners such as Magrez of Château La Tour Carnet will incur costs to invest in new technologies approved by the AOC for long-term benefits. Wineries should take into consideration the waste they are creating and be socially responsible in the ways they reduce and eliminate this waste. The adoption and adaptation of technologies that Magrez has been able to implement in his vineyards is incredible and help pave the way for other vineyards. Some technologies that could help wine growers battle climate change are contraptions that help reuse water waste, collect rainwater, and technologies that produce clean energy such as solar panels, wind turbines, and geothermal heat (Mustacich, 2017). If wineries help reduce their environmental footprint they are inadvertently helping themselves and the battle against climate change in the wine industry. Technologies similar to the ones explained above that help lessen a wineries negative environmental impact are all technologies that would not affect AOC approval. They would help reduce costs of energy and water thus also helping decrease the wineries long-term expenses, while also decreasing the cost to the environment. That being said, it is important to note that the initial cost of implementing clean energy is very high; however, the long-term benefit of being green, and lowering expenses in the future is beneficial. Leaders of wineries in the Bordeaux region should begin following Magrez' path of finding new technologies and utilizing them to ensure they are still able to create a quality product, with a great taste, impacting the environment as little as possible, while also following restrictions of the AOC.

In France, laws enforced by the government concerning appellations and labeling of wine, make it illegal for wineries to change varieties of grapes used in blends, restrict viticulture practices, and identify the region an appellation spans. As previously mentioned, the labeling of Bordeaux wines is very strict due to AOC regulations. Although climate change is making it difficult for wineries to product blends that have a consistent taste and are of the greatest quality, it is important for winery leaders to continue producing wines eligible for the AOC certification. As previously mentioned, it is illegal for a Bordeaux winery to label a wine as Bordeaux if it does not pass all the requirements of the AOC. Although, this does not mean wineries are legally not allowed to grow grapes not traditionally from the region or specified under AOC regulations, it means wineries are not legally allowed to label blends with non-traditional grapes as regional wines, for example a Bordeaux wine. The legality in

labeling and marketing a blend is important to consider for marketing manager in a Bordeaux winery, as it is crucial they are making correct marketing and advertising decisions that are not going to ruin their reputation with the AOC. For example, in the case of Château La Tour Carnet, they produce wines that do not meet AOC standards due to type of grapes used in the blends, thus they must ensure the labeling, marketing, and advertising are unique to the one blend, not jeopardizing the labeling of their AOC approved wines by grouping them into the same category as Bordeaux wines. Therefore, the legal aspect of wine production is a large constraint for leaders in the wine industry. The laws and AOC regulations seem to have no intention of changing soon, thus, leaders are going to have to make a decision of whether or not the status of a wine being AOC approved is strong enough to refrain from commencing blending grapes that historically are not produced in the appellation region.

Climate change can affect the environment in many ways. In regards to wineries, the major environmental related aspects are the weather patterns, soil quality, and events such as flooding, hurricanes, earthquakes, and droughts. As the environmental aspects of climate change on Bordeaux wineries are discussed further throughout the whole paper, this section will focus on the way environmental change affects marketing for leaders in Bordeaux wineries. The leading individuals in Bordeaux wineries have to prepare for the unexpected each season. Recently, leaders are being faced with weather varying each season, making for an unpredictable quality and taste of blends. The main problem this causes for leaders is the ability for a winery to market a product under the same blend name and label consistently from year to year, with similar taste. If a consumer enjoys a product of a specific winery from one year, they may expect the blend from the next year to be similar, if not identical, in taste and quality. The consistency expectations of consumers may be difficult to meet due to the changing environmental situation. Therefore, leaders must find ways to adapt to the changing environmental situation, and gain a stronger understanding of what can be done to help them reduce the risk of inconsistent blends from year to year.

Climate Change and the Pricing of Bordeaux Wines

Determining the price of a wine is complex and many factors must be considered such as vineyard status, grapes used to make the blend, the age of the wine, weather, and expert opinion (Ashenfelter, 2008; Cardebat, Figuet, & Paroissien, 2014). A wine is difficult to price when it is young, as many individuals do not enjoy the taste of young wines and prefer to drink older wines. Orley Ashenfelter (2008) explains wine loses its astringency as it ages, improving the taste. Regardless of the taste improving over time it is explained that “there is a market for both younger and older wines” (Ashenfelter, 2008, p. 174) due to consumer preference and budget.

The status of a vineyard such as Château La Tour Carnet aids in the pricing of their blends tremendously. One cannot believe that Château La Tour Carnet can sell a bottle of wine for 1,000 euros off the taste and quality alone (Southam, 2016a, para. 10). This is a great example of how brand reputation can be built so highly that consistent quality of a wine produced from an individual winery, can influence the price of their blends so drastically. In Château La Tour Carnet's case it took generations of producing quality wine to reach the level of status they have today. Many other wineries in the Bordeaux region benefit from the same type of status Château La Tour Carnet has built for themselves, due to hard work and consistent representation of quality over the years. Therefore, to aid in pricing wine at the highest price possible, winery leaders must be conscious of the image their brand is reflecting and how their consumers are interpreting it.

The next aspect that effects the pricing of a wine is the age of the wine and how long it has been stored by the winery or other holders. Ashenfelter (2008) describes the old wines as being priced high because their holders need a payoff for the investment of storing the bottles for so long. In this case, the astringency will be lower in the bottles held therefore, having a better taste, thus being more enjoyable for the consumer. In the example of Château La Tour Carnet's wine that sold for 1,000 euros, the price of the wine would have included the wine's age, holding costs, quality and taste, and as mentioned before, the status of the winery.

Weather is another aspect that can affect the pricing of wines. The first two factors are not climate change related; however, were important to note as all aspects come together to create the pricing of a vintage. Weather is the most unpredictable element related to the pricing of a wine since if a season is hot, dry, cool or wet it will affect how the crop grows, how much of the crop survives, and the quality of the crop harvested. In the wine industry especially “global warming creates both winners and losers” (Ashenfelter, 2008, p. 179). In the case of Bordeaux it is likely wineries would be winners or losers together in the same season. Experts are able to predict approximately how good a wine will taste and how high the quality of harvest will be in a growing season. Ashenfelter (2008) notes that approximately 80% of a wine's pricing is determined by the weather experienced within the growing season, while approximately 20% is based off the age of the wine. Climate change therefore, has a large impact on the profits of wineries all over the world, especially in Bordeaux under the severe weather conditions that make it challenging to growing quality Merlot grapes. A cost benefit analysis (Figure 2) has been performed to determine if wineries in the Bordeaux regions should continue growing grapes that are becoming not suited for the region due to climate change.

The last factor that can have an effect on the pricing of wine is expert opinion. A problem with relying on expert opinion in determining the price of a wine is that experts can be biased and not consider factors that could affect the quality of wine such as climate change (Cardebat, et al., 2014). Advertising the opinion of experts and the ranking of the blend can impact the price of the vintage and willingness of consumers to try the wine (Cardebat, et al., 2014, p. 284). Another problem with the price of wine being dependent on expert opinion is the variation in experts' tastes and preferences (Cardebat, et al., 2014). If multiple experts dislike a wine and one expert loves it, the score of the one expert will increase the wine's average score, making it more appealing to consumers and vice versa. For Bordeaux wineries it is important that climate change does not continue to affect their crops negatively otherwise wineries will find it difficult pricing their wine high, due to the weather and possibly experts' opinion on the quality of the wine. High prices could cause consumers to change purchasing habits and allow for threat of new entrants into the old world wine industry.

EFFECT OF CLIMATE CHANGE ON WINERIES WORLD WIDE

Previously discussed is the way climate changes helps some regions benefit, while other regions suffer. As an example, the Okanagan Valley, one of Canada's most developed wine regions will be used. To gain a greater understanding Dwight Sick, the winemaker from Stag's Hollow winery was interviewed. Stag's Hollow is a winery located in the Okanagan Valley, Canada that has a unique terroir presented in Figure 3. Sick describes the Okanagan as being a “complex growing area with a vast amount of unique mini micro climates inside a single region” (personal communication, November 26, 2017). Sick continues to explain that even at Stag's Hollow vineyard the temperature in one area of the vineyard is normally 6 degrees Celsius higher or lower than the other area of the vineyard at any time of the year (personal communication, November 26, 2017). The unique terroir and change in temperature, forces and allows different grapes to be grown in the two areas, due to the different growing conditions. Climate change has again forced and allowed wineries in the Okanagan to plant new varieties of grapes they were previously unable to grow. Some of these grapes include Sauvignon Blanc, Pinot Noir, Cabernet Sauvignon, and Merlot (personal communication, November 26, 2017). The ability to plant untraditional grapes has been positive for the Okanagan valley, while other impacts of climate change have been negative such as “dramatic extremes to the weather,” (personal communication, November 26, 2017) similarly to other regions worldwide.

Similarly to the Okanagan Valley, other regions in Canada are expected to overall benefit from climate change. Climate change is expected to allow the wine region in southern Québec to expand the varieties of grapes grown including Chardonnay and Pinot Noir (Hamilton, 2017, para. 4). The ability to grow old-world grapes will open new markets for the Québec wine industry, and could help boost Canadian wine sales. It is expected the wine-growing region in North America will grow, expanding the industry (Saltzman, 2016, How Canada may benefit,

para. 4). With areas suitable for vineyards, with quality terroir, Canada could have a chance to flourish in the wine industry.

It is clear that new world regions are some of the areas adapting to support many grapes currently grown in the Bordeaux region. John McQuaid (2017) believes Europe is the region that will be impacted most significantly due to climate change. This will allow regions around the world to begin producing blends that compete in markets they have never had the ability to be successful in before. Within the wine industry climate change affects winery consumers, owners, employees, and shareholders. Consumers purchasing habits may change, while owners and employees will have to change marketing and growing techniques.

Climate change is causing “production as a whole [to move] north (or south in the southern hemisphere) as opportunities open up in once-inhospitable areas” (McQuaid, 2011, para. 4). Again, the shift in climate is helping create winners and losers in the wine industry, giving new regions opportunities that were never present in the past. Assuming the terroir in these regions support old world grapes, it is safe to assume new regions and countries will have the ability enter the wine exportation industry as strong competitors in the next 5 years. This will allow wineries in these regions to plant new varieties of grapes, allow the vines to mature, and produce quality vintages.

Within the wine industry climate change creates both price risk and product risk (Engel, Enkvist, & Henderson, n.d.). The cost of agriculture activities is going to increase due to the decrease in clean water supplies and increased labour costs. This will create rising costs for production, water, and cost towards the environment and financial costs.

Furthermore, climate change will affect product risk when regions are unable to grow large quantities of grapes, and quality grapes specific to the appellation region, to produce their blends. Their blends will become unpopular to consumers, and the regions will have difficulty exporting their wines. Additionally, many wineries will “be forced to change their products, move, or go under” (McQuaid, 2011, para 4). There are many risks in the wine industry that cannot be mitigated due to climate change. Managers can reduce the risk now by introducing processes that will decrease the impact of climate change upon the winery once climate change begins to impact the region significantly, to prepare for the long term.

CONCLUSION

Companies and individuals must begin to introduce sustainable actions into their daily lives. To become more sustainable companies must introduce corporate social responsibility policies that relate directly to their business model. It should be a goal for all companies to become pure players, being at the forefront of sustainable actions, making decisions in socially responsible ways. Wineries in Bordeaux need to continue doing their part to tackle climate change, along with creating methods to combat problems climate change poses for the region. Managers must stay optimistic and adapt viticulture techniques as significantly as they can while still meeting AOC standards. Leaders in the wine industry must take initiative and conduct experiments just as Magrez, in order to find new ways to keep the wine industry alive in the old world. Industry leaders in wineries all over the world are being forced to have a global mindset due to climate change and the way it changes the environment.

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APPENDICES

Figure 1: Decision matrix on how to improve the effect of climate change on Bordeaux

Decision Criteria	Weight	Ability to Use New Viticultural Methods	Ability to Grow Untraditional Grapes for AOC Blends	Ability to Source Grapes From Outside of AOC region for AOC Blends
Quality	25%	3	3	4
Traditional Taste	35%	3	3	5
Ease of Implementation	30%	5	1	3
Degree of Personal Winery Contribution	10%	5	5	1
Total	100%	3.8 ★	2.6	3.75

Figure 2: Cost benefit analysis of continuing growing the merlot grape in Bordeaux

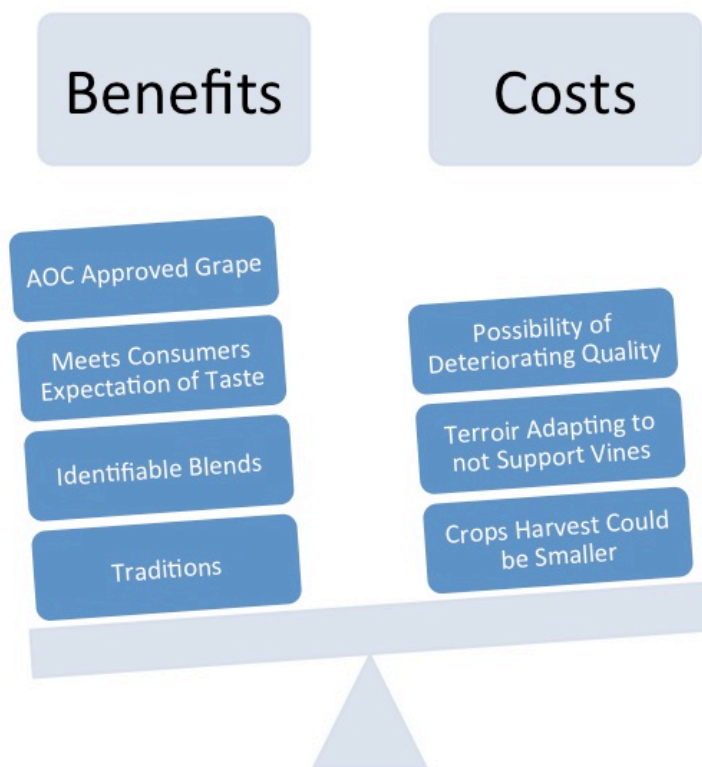


Figure 3: Stag's Hollow Winery



(Google Maps, n.d.)

Champagne Industry in France: Competitor Marketing and Branding Strategies

Eryn White

ABSTRACT

The unique production process of champagne in a northern Appellation D'Origine Contrôlée (AOC) in France, a region called Champagne, generates millions of bottles each year to be distributed worldwide. The history of the champagne in this region originates before the 17th century and as a result, the name 'champagne' comes exclusively from this region; producers of sparkling wine outside Champagne, France cannot legally label their wine as champagne. The numerous champagne houses and the Comité Interprofessionnel du Vin de Champagne (CIVC) are committed to ensuring this high quality product originates here. This paper specifically focuses on the differences between two champagne houses, G.H.Mumm and Veuve Clicquot, outlining their history, location, and unique characteristics; additionally focusing on the similarities and differences in marketing and branding strategies of each house. Veuve Clicquot is a high-quality champagne that maintains the presence of Madame Clicquot, one of the company's founding members, through many branding strategies such as the Business Woman Awards and distinguishing signs of the house. G.H.Mumm on the other hand prefers to target a potentially new market, focusing their website to first time purchasers of champagne providing them with tips for success and news stories. The two champagne houses are unique in history and sales strategies however apply similar traditional means for production and brand awareness. Altogether the 250km of underground caves, acreage of vineyards, and many champagne houses provides a unique and thriving industry in France.

INTRODUCTION

Champagne is more than just a luxurious sparkling wine one opens for celebrating special occasions, the name 'champagne' originates in a unique and northern Appellation D'Origine Contrôlée (AOC), or region, in France called Champagne. France is internationally known for its rich culture, expertise of baguette and pastry baking, and of course its many regions of vineyards and wine production. Many wine connoisseurs and sommeliers will recognize the popular Bordeaux or Burgundy regions however an often-overlooked yet arguably one of the most famous and successful: Champagne. In this exquisite region, there are two major cities: Reims and Epernay, three main divisions, and hundreds of acres of vineyards which altogether maintains a production capability distinct from any other place in the world. The Champagne region of France, has a reputation for high quality and remains the single international producer of champagne; as other producers of sparkling wine around the world cannot legally label and sell their wine as Champagne.

The growth and development of Champagne started in before the 17th century and continues to independently supply an extremely popular international industry with high quality champagne, often accompanying fine dining and elegant events all over the world. Within the region there are 340 Maisons de Champagne, some internationally renowned while others remain local producers to the region (CIVC, 2016). The purpose of this research paper is to explore the impact of the Champagne industry in France, specifically focusing on the successful marketing and branding strategies between two main competitor producers in the Champagne region: G.H.Mumm and Veuve Clicquot.

CONTEXT

History

Champagne originated as a region far before it was the popular sparkling wine everyone knows today with the history of the region dating to before the 1600s. Champagne, specifically the large cities of the region have seen destruction and reconstruction many times over the decades (Sonkin, 2016, part one, para 3). The crossroad for the industry following the Hundred Years' War and Thirty Years' War came when Champagne became known as the center for European trade in the middle ages; the introduction of the Fairs of Champagne, consisting mainly of cloth trade between Italy and France, played an important role for the developing economy (Harlansson, 2004). With the rising economy in Champagne came other industry development, thus the vineyards grew and wine production became an exciting opportunity for northwestern France.

The successful trading industry now established in the region and the cool climate of the region together had a positive effect on wine making for Champagne. The cool climate helps to determine the length of the harvest for picking grapes, resulting in a diversified acidity for the grapes. Therefore, the creation of a unique and short growing season helps to differentiate the harvesting process from other wine regions in France.

One significant contributor to the creation of the sparkling wine, 'champagne', was Dom Pérignon (Sonkin, 2016, part one, para 6). Many experts say wine was already an established industry in the Champagne region before Dom Pérignon settled there, however his insight into the fermentation process is why his name remains distinctively connected to history of champagne (Long, 2009, para 3). Dom Pérignon's main contributions were developing the art of blending, inventing of the mushroom shaped cork (Sonkin, 2016, part one, para 7), and developing a clarification technique to press black grapes yet produce white wine (Long, 2009, para 4). The art of blending, which be described in further detail within the production section of this paper, involves mixing multiple grapes from multiple vineyards to create a unique blend of wine. Originally the bubbles generated through production were an undesired outcome and Dom Pérignon initially spent a lot of his time trying to avoid the bubbles from occurring, his failure to do so however, is praised by many champagne consumers' years later (Long, 2009, para 6). After Pérignon's death in 1715, 47 years as cellar master of the Abby of Hautvillers, the basic principles he used for making Champagne continued to be practiced and are still readily used in production today (Intowine, 2016).

When King Louis XV passed the Royal Decree allowing sparkling wine to be shipped in glass bottles, another turning point for the industry, the first champagne house opened in 1729, Maison Ruinart (Ruinart, 2017). Opening the first champagne house jumpstarted the industry and quickly it was booming competitors such as Moët & Chandon opening in 1743 and has since grown to become the largest champagne house in the world today (Intowine, 2016). For this paper two of the top champagne houses in Reims, Champagne's largest city, will be compared in further detail.

The Champagne industry continued to boom throughout the next centuries. Many inventions introduced during the early years of are still used today in the production of champagne. The art of *dégorgement*, first practiced in 1813, was introduced to rid the fermenting wine of yeast sediment, a process that will be explained further in the production segment of this essay (Intowine, 2016). Corking machines, wine muzzles, and many other instruments were invented throughout the 19th century and by 1853, sales for Champagne surpassed 20 million bottles (Intowine, 2016).

The beginning of World War I brought disaster, destruction, and decline in sales for the Champagne industry in France. By the end of the war 90% of the city Reims had been destroyed and the champagne industry depleted (Grand Marques & Maisons de Champagne, 2017). Champagne had by then grown to a successful industry but the war destroyed many of the production buildings and vineyards, extinguishing many resources for the industry.

Amidst the destruction and terrors the war brought, the industry of Champagne was able to provide a safe haven for much of the population through the underground caves. In Reims there are over 250km of underground cellars where champagne is produced and stored; during the war these caves provided shelter to the residents of the city from the German attacks (Grand Marques & Maisons de Champagne, 2017). The many kilometers of underground caves allowed the city to continue to function by providing spaces for administrative services, schools, and hospitals. Additionally the cellars became a place for soldiers to rest and for the general population to take refuge, sheltered from bombs and shells (Grand Marques & Maisons de Champagne, 2017).

Yet arguably the most important role champagne played in the war was keeping up morale for the nation and army (Grand Marques & Maisons de Champagne, 2017). A little bit of champagne was enjoyed over dinner between friends, or celebrated with during a victory; champagne gave soldiers something to look forward to, a light at the end of a tunnel. When the war ended that is what people of the region remembered the role of champagne to be: the cellars provided refuge but the product itself provided happiness.

After the war the economy took a while to rebuild itself, the Great Depression negatively affected the champagne industry so much that the market dried up and there wasn't enough demand for production to continue (Intowine, 2016). However just as the city of Reims had to rebuild itself, so did many industries throughout Europe. The end of the Prohibition in 1934 drastically changed the direction of the industry again and by the end of World War II champagne sales were booming and "nearly quadrupled between 1945 and 1966" (Intowine, 2016).

Champagne has changed over the years from when it was first introduced as "wine with bubbles" (Ruinart, 2017), a sweet luxurious drink you occasionally enjoy to the now popular bottle you buy for many celebrations. Historically only the rich and top of the social status would indulge in a glass or bottle but as the years have progressed more and more people buy and drink it reflecting the point that it is no longer considered just as a luxury (Intowine, 2016).

Even though the social status of champagne consumers has shifted over time, the traditional production process of champagne has not. History is still a major part of the industry and each bottle produced and distributed will continue to possess a sense of culture from the Champagne region in France.

Champagne Production

Many of the same production techniques used to make wine are the initial steps in creating champagne, but the key in producing champagne is within the second fermentation process inside a sealed bottle. The official method used for production in this AOC region is called the 'methode champenoise', some producers outside of Champagne have adopted this method however still cannot legally label their sparkling wine as champagne (Wickes, 2003). The complex process of achieving the final result of a bubbly wine can take many years to reach the level of quality desired. The Comite Interprofessionnel du Vin de Champagne (CIVC) is a government organization committed to ensuring the authenticity of champagne production, specifically in this region (Wickes, 2003), more details on the CIVC will be discussed later in this paper. The CIVC produced an international document, translated into many languages, to help explain and outline the complex traditional production process 'methode champenoise', which can be simplified into nine main steps.

The first step is alike producing conventional wine, harvesting and pressing the grapes to reach the desired level of juices needed before the first fermentation begins, a point where alcoholic fermentation and clarification of the wine is prepared (CIVC, 2013). After the first fermentation, the producer must select which cuvée they want to blend to create the desired champagne; the cuvée defined simply as the base wine (Henri-Reserve, 2017, Education: How Champagne is Made, para. 2). There are three main categories of champagne: blanc de noirs, blanc de blancs, and rose wine or pink champagne. These three kinds of wine are differentiated by the type of grape used to make the cuvee; white wine produced from black grapes otherwise known as Pinot Noir, white wine produced from white

grapes known as Chardonnay, and light pink wine produced from either clear juice and the skin of black grapes or by adding Pinot noir directly into the white wine (Henri-Reserve, 2017, Education: How Champagne is Made, para. 3-5). The third step is the art of blending the wines traditionally named 'assemblage'. This process is unique to each champagne house and therefore is the determining factor of producing high quality champagne than sparkling wine. The cellar master of each house controls the assemblage stage and his goal is to create the blend of champagne that is unique to the house, one that is constant through history and articulates the style and quality of the house (CIVC, 2013). The extent of the blending process is categorized again by which type of champagne the winemaker is preparing; whether it be a vintage replication of an exceptional harvest year, a non-vintage, a blanc de blancs, or a blended rose, the winemaker must have impeccable tasting skills to match the desired product of the house (CIVC, 2013).

The next step, second fermentation, is the defining step that distinguishes champagne from wine, where the still wine is transformed into sparkling wine and establishes its famous bubbly characteristic. The wine is transported into bottles, the same bottle the champagne is eventually sold in, and a yeast and sugar solution is added which begins the process (CIVC, 2013). The bottle is then sealed with a temporary stopper and transferred to spend 6-8 weeks horizontally in the caves, where the yeast transforms the sugar into alcohol and carbon dioxide thus completing the second fermentation (CIVC, 2013). After the second fermentation the bottles must age in the cooler caves for at least 15 months allowing the champagne to fully mature (CIVC, 2013). The length of the aging process determines the quality and price of champagne, where the most expensive bottles are aged for five or more years (Henri-Reserve, 2017, Education: How Champagne is Made, para. 8).

The completion of the second fermentation process leaves a sediment of yeast that must be removed in the next step. The process of 'riddling' begins towards the end of a bottle's resting period, where the bottle is slowly rotated progressively tilting more towards the ground until it sits in a vertical neck down position (CIVC, 2013). This evidently causes the sediment to slide to the bottom and then can be removed in the next step: 'disgorgement'. Removal of the sediment can be done so either by machine or, often with the bigger bottles, by hand (CIVC, 2013). One must be careful not to allow too much of the bubbly wine or pressure out of the bottle.

In the final steps a 'liqueur de dosage', a mixture of cane sugar and wine, is added to each bottle; whether the champagne will be a doux, demi-sec, brut, or extra brut determines how much of the dosage is added, sometimes up to 50 grams of sugar per litre for the sweetest of champagnes (CIVC, 2013). The bottle is then re-corked and labelled with the individual producers' signature designs.

As stated earlier, there are many regulations around producing champagne and the governing body who oversees the production process, ensuring producers are abiding by their rules is called the CIVC. This organization is committed to ensure that the champagne name remains authentic to this region and reflects the traditional production methods used in Champagne (Wickes, 2003). The corporation is dedicated to protecting and preserving the champagne name, ensuring high quality as can be seen through the CIVC's mission:

To defend and protect the exclusive nature of the appellation, whatever the commercial sector involved, [additionally] progressively make the world admit that champagne is the proper name for wines produced in the Champagne region and therefore, can neither be used or associated with any other product, even though it may have a similar appearance or an equivalent prestige (Wickes, 2003, p. 6).

Furthermore, the CIVC is an innovative organization, continually exploring new techniques and methods for improving the production process; for example, what companies can do to handle climate change in the world and how it will affect the grape harvests each year. They focus a lot of their energy on maintaining good relationships between elements along the supply chain in hopes of keeping symmetry among producers in the industry (Wickes, 2003). Together with vineyards and champagne houses in Reims and Epernay, the governing body has developed an alliance to preserve the internationally recognized Champagne title (Wickes, 2003).

The Champagne production region is divided into four main growing areas: the Montagne de Reims, Vallée de la Marne, Côte des Blancs and Côte des Bar which altogether make up an average size of 34,000 hectares of vineyards (CIVC, 2013). Lying just outside of busy Paris, each of the four regions produces their specialty of grapes. There are 320 villages spread across the hectares where 17 rank as 'Grands Crus' and 42 as 'Premiers Crus', translated as Great Wines and First Vintages (CIVC, 2013). The cool climate, chalk soil texture, and steep terrain creates an ideal and unique region for Champagne. All these factors along the production process are combined and used as competitive advantage for businesses in this region, distinguishing their high-quality champagne from other sparkling wine around the world.

Economic Perspective

From a business perspective, champagne is a fascinating product; one which is powerfully and internationally branded yet still is committed to its place of origin, combining agricultural context with the world of luxury in present society. The introduction and continuous production of champagne in this appellation of France gives a competitive advantage for businesses in this region over others worldwide. The intimate correlation between champagne and quality has given France yet another opportunity to prove its excellence. From 2005-2015 Champagne shipped an average of 315 million bottles worldwide, as illustrated in Table 1 of the Appendix. The consistency of champagne sales over the past century, not including the year after the 2008 economic crisis, can predict a positive increase for future champagne sales worldwide. The champagne name remains intact and even after the region's destruction caused by two world wars that destroyed most of Reims, production and sales of champagne have continued to increase (Sharp & Smith, 1990). Exportation around the world is not equally distributed, as more demand for champagne lies in specific countries; the U.K. remains the highest importing country of champagne in 2015, as illustrated in Table 2 of the Appendix.

Today, the United States produces their own sparkling wine and together with the importation of French champagne, citizens of America "consumed more than 25.5million 9L cases" (Sethi, 2017, para. 3). Countries such as the United States and Australia produce their own sparkling wines, however studies show that consumer sales of imported champagne exceed the domestic sales (Sethi, 2017), proving the excellence of champagne in France.

Many Champagne houses purchase grapes from vineyards in the surrounding areas, instead of growing the grapes themselves. Reasoning behind this decision is in part due to space, most Maisons de Champagne are in the busy cities of Reims and Epernay where there isn't acreage for the vineyards. Even when buying from vineyards has proven to be more successful, some houses continue to produce about 10% of grapes themselves (Declerck, 2005). Thus, the houses must balance their charging prices with many expenses of production including how much they purchase each harvest for, while attempting to maintain market share with pressures from competitor retail prices.

As illustrated in Table 3 of the Appendix, the prices for grapes have slowly increased, therefore champagne houses must adjust bottle prices to balance the increase in production costs. Over the years, both grape and champagne producers have developed strategies to negotiate pricing terms in hopes to keep the industry booming (Declerck, 2005).

Champagne as a region is a major economic player representing over 10% by volume of the world's consumption of sparkling wines (CIVC, 2016). The economy alone can support the AOC region by shipping more than 306.1 million bottles to 190 different countries, providing 30,000 direct jobs each year and 120,000 seasonal positions as grape pickers within the 340 Maison de Champagne; generating 4.7 billion euros in turnover for the economy (CIVC, 2016). Therefore, as the industry continues to boom it is predicted to successfully support this region in France for years to come.

CHAMPAGNE HOUSES

G.H.Mumm

Maison Mumm, one of the finest Champagne houses in the region, began long before its official founding date of 1827. The Mumm Family which dates to the 12th century, was a long line of successful businessmen specializing as wine producers and merchants. Originally their family was based in Germany before recognizing the potential of the Champagne region and establishing a new branch of the family business (G.H.Mumm, n.d., History). The company was immediately recognized as a high-quality seeking brand, establishing the motto “Only the Best” (G.H.Mumm, n.d., History) still used as a daily reminder to their founders’ vision. It wasn’t until 1852 when the son of one of the founding partners, Georges Hermann Mumm, took over the company and renamed the brand to the well-known G.H.Mumm it is today (G.H.Mumm, n.d., History). Georges Hermann Mumm’s goal was to establish excellence throughout the company focusing on differentiating the company from other competitors in the area.

The turning point for the Mumm brand was in 1876 when Georges Hermann Mumm had the neck of each of his champagne bottles encircled with a red silk ribbon, inspired by the highest French honour awards recognizing prominent individuals for their excellence (G.H.Mumm, n.d, History). Following this indication of the red ribbon on all of Mumm’s bottles the company became well associated with high class and distinction, served at Buckingham palace for the Derby Day Banquet in 1904 specially labelled and printed with the coat of arms and thereafter became the official supplier of champagne to Her Majesty Queen Elizabeth II (G.H.Mumm, n.d., History). The first-class bottles were nothing but the best for Her Majesty.

Another turning point for Maison Mumm was in 1913 when exporting three million bottles worldwide meant becoming the leading champagne house of the region (G.H.Mumm, n.d., History). At this point Mumm’s vineyards cover nearly 218 hectares of the Champagne region and achieve a 98% rate for quality as 25% of Mumm’s production is held in the Grands Crus region and the remaining 75% through strong relationships with independent growers (G.H.Mumm, n.d., Savoir-Faire). In 1920 the company gained a new president, René Lalou, who was arguably responsible for the successes for Mumm in the 20th Century. René Lalou started by linking the company with artists like Leonard Foujita; an artist who designed a piece of work to embellish the top of the cork of all Mumm’s Rosé champagnes (G.H.Mumm, n.d., History). The bond between these two men was reflected by the branded rose on top of the bottles.

Today, G.H.Mumm encompasses many of its original traits, keeping the “Only the Best” motto, the signifying red ribbon, and many of its other markers established throughout history. The Maison Mumm is located in Reims, France and has a total of 25km of underground cellars for fermenting and storing their champagne, where a total of 25 million bottles can be held at one time (G.H.Mumm, n.d., Savoir-Faire).

Each house has their own art of blending the wines from different grapes to achieve their acquired champagne style, represented as their “signature” taste. Mumm’s style and philosophy of “close scrutiny over grape quality” (G.H.Mumm, n.d., Savoir-Faire) when blending their wines is one that represents their high quality once again. Consistent style is achieved by a careful process executed each year by the Chef de Caves Didier Mariotti and a team of expert tasters; these connoisseurs choose and taste a total of 5,000 samples before blending up to 77 different tastes to create the signature Cordon Rouge champagne (G.H.Mumm, n.d., Savoir-Faire). Many houses, including Mumm, keep a select few of wines in reserve to ensure each year’s consistency with the original champagnes of the house. Some years where the harvest is particularly good, the Cellar Master may choose to make a vintage champagne where wines from only that year may be blended together (G.H.Mumm, n.d., Savoir-Faire).

Visiting Maison Mumm

The unique experience of visiting each house shows customers the steps of the production process but also gives them insight into the values of each house. The experiences are different depending on which house you visit, in terms of the history and showcase of the house, however are very similar in the production explanations. It was discovered that in order to gather research on the production of champagne and getting a sense for the industry, visiting two to three houses in the Champagne region is sufficient.

The Maison Mumm is located in the city of Reims, the biggest city in the Champagne region. The house, which sits atop of their miles of caves down 20 meters below ground, is situated in the busy city center making it one of the most accessible champagne houses from the 'Centre-Ville' of Reims. The visit at G.H.Mumm is an intimate gathering that begins with a welcoming speech and history of the house. The tour continues with a walk through the production facilities, including the vintage wine storage techniques and a short video of the cellar master himself. Throughout the tour, customers are consistently reminded of Mumm's motto "Only the Best". At the end of the tour is where customers are encouraged to try a glass of the Mumm Cordon Brut, a glass from Her Majesty's favorite selection. The intimacy and completely seamless continuity of this tour gives customers an understanding of the Mumm core values.

Veuve Clicquot

The next Champagne house discussed in this paper is an internationally recognized brand for expensive and high quality Champagne: Veuve Clicquot. Champagne consumers around the world acknowledge Veuve Clicquot as a luxury brand, consumers who may not necessarily purchase champagne on a regular basis will still distinguish Veuve as high quality whereas they may not recognize the name G.H.Mumm.

The story of Veuve began in 1772 when Phillippe Clicquot decided to break into the wine industry and open a family based business (Veuve Clicquot, n.d., Discover our History), which evolved into a highly successful champagne house with the motto "Only one quality, the finest" (Veuve Clicquot, n.d., Madame Clicquot). The business continued for over 30 years, running primarily through the founder and his son, François Clicquot, until in 1805 François died which regrettably left his wife as a widow at 27 years old (Veuve Clicquot, n.d., Discover our History). Madame Clicquot, being a strong and independent woman decided to continue her husband's family legacy and become the first businesswoman of that time (Veuve Clicquot, n.d., Discover our History). Taking lead over the company in the next few years following her husband's death proved to the world how strong of a woman she was. She became known as the "Grande Dame of Champagne" (Veuve Clicquot, n.d., Madame Clicquot) as she evolved the family business into a brand of excellence. An influential businesswoman and committed inventor, she managed to build not only a company but an empire for champagne today.

Madame Clicquot's first invention was the Riddling Table: a tool used to create crystal-clear wine opposed to murky remnants from the grapes (Veuve Clicquot, n.d., Madame Clicquot), the design of the original table is still used today in the house during the production process. Her second invention was the very first blend of rosé champagne, or 'rosé d'assemblage' mixing her red wines with champagne instead of the traditional method of adding elderberry (Veuve Clicquot, n.d., Madame Clicquot). Her inventions were critical for the success of the house and as production of champagne continues to use these methods, not only in the house of Veuve Clicquot but in many other production facilities, they were influential for her success as a businesswoman.

By 1855, Veuve was shipping bottles internationally to Canada when Ryan Brothers and Co. requested the first order in Montreal (Veuve Clicquot, n.d., Discover our History), a big step for international expansion outside of France; today Veuve Clicquot can be found on the shelf of almost every Canadian liquor store. In 1877 the Yellow Label Trademark became the beacon for Veuve Clicquot Champagne, one that can be easily seen on a shelf of neutral colored labels (Veuve Clicquot, n.d., Discover our History).

Another significant turning point in history for Veuve Clicquot was when Madame Clicquot became the first creator of the vintage champagne. As described earlier, a vintage champagne is a blended mix of grapes from a particularly good harvest year, and only that year. In 1811 there was a remarkably good harvest for Veuve Clicquot, arguably due to the incident of the comet flying over Champagne that year, thus the Comet Vintage was produced for Veuve (Veuve Clicquot, n.d., Discover our History).

Visit the House of Veuve

Another unique experience visiting the house of Madame Clicquot; located in Reims, Champagne, a region listed as a UNESCO'S world heritage site (Veuve Clicquot, n.d., Discover our History). The experience of visiting Veuve encompasses everything about the brand: its high quality products, luxury partnerships, and success of Madame Clicquot. It is very important to the house, even after Madame Clicquot has passed on, to maintain her legacy and one of the ways they achieve this is by awarding Annual Business Woman awards, "a tribute to the entrepreneurial spirit of Madame Clicquot" (Veuve Clicquot, n.d., Discover our History), something that will be discussed further in this paper. The visiting experience concludes with a class of the classic Veuve champagne, leaving customers with a bubbly memory.

RESULTS

Marketing Strategies

Champagne has increasingly become a product that more consumers around the world are enjoying. In the past, champagne was enjoyed as a sweet drink and as it evolved the trend toward drier champagne as an aperitif became more popular (Jay & Taylor, 2013). As it evolves the consumer market progresses with it, shifting from exclusively high class to a variety of everyday consumers. However, it was discovered that many of the general champagne marketing strategies within the champagne region remain to be focused on displaying champagne as a primary luxury product, targeting upper class consumers (Jay & Taylor, 2013).

Marketing strategies are integrated into a business plan to actively promote products with the goal of steadily increasing sales and hopes of expanding brand awareness. As shown in Table 4 of the Appendix, G.H.Mumm and Veuve Clicquot had a high sales volume and market share of the champagne industry in 1987, selling 9.5 and 7.1 million bottles while achieving a place on the list of top ten champagne houses. With the increasing sales intention in mind, champagne houses continue to target a specific segment of consumers: the upper class. This is shown through pairing celebrities or popular movie stars with their favourite champagne brands in movies or media, an attempt to increase brand awareness and label champagne yet again as a luxury product associated with high class and distinction (Sharp & Smith, 1990).

Competitors within the champagne industry adjust their own marketing strategies to fit with their vision of the company. Both G.H.Mumm and Veuve Clicquot have adjusted their marketing strategies in ways that fits with the company's goals while promoting the champagne in hopes of ultimately increasing sales. Both companies use many social media platforms such as Facebook, Twitter, Instagram, and YouTube to help promote their products. Mumm uses the hashtag: #darewincelebrate to help promote their engaging and exciting videos of the company distributing bottles of champagne in daring ways; the videos involve private jets, extravagant sports cars, high fashion and delivery at many luxury events (G.H.Mumm, n.d., The most daring delivery in Australia, 2016). Whereas Veuve uses a hashtag: #liveclicquot where customers are encouraged to share their champagne experiences on various online platforms, a reverse pull-strategy where Veuve is, to an extent, trusting their customers to post photos they believe would align with the values of the company (Veuve Clicquot, n.d., Live Clicquot)

Another popular marketing strategy for international brands is to partner with another well-established worldwide brand. G.H.Mumm and Veuve Clicquot have both managed to successfully associate themselves with popular brands such as Porsche and Ferrari, respectively; two extremely high quality and luxuriously recognized

international companies. A champagne and sports car partnership simultaneously gives both brands and increased international awareness.

Branding Strategies

Another aspect that can be seen differentiating between companies is their branding efforts and strategies. A company's brand image is what they value for their organization, the core expression of what they are trying to achieve. The way they communicate these values is where the branding strategies become important and can characterize the company in ways they want to be seen. It was discovered that customers looking to purchase champagne are more attentive to the brand rather than choosing to be price sensitive, in part due to the customers' income being generally higher when purchasing high quality champagne (Jay & Taylor, 2013). Many companies choose branding strategies, such as a memorable motto, to increase their brand recognition to as many sectors as possible. As discussed earlier, G.H.Mumm and Veuve Clicquot have noteworthy mottos that help to distinguish them yet show the similarities between the two high quality brands: "only the best" and "only one quality, the finest" respectively. Both brands, through these statements, are conveying to the world the extent of their quality, and in a way determining their target market.

Veuve Clicquot is recognized as a high-quality champagne worldwide. The company continues to celebrate Madame Clicquot's efforts to grow the brand into a committed to excellence champagne. In addition, Veuve has an environmental commitment that they frequently identify with and is impressively displayed on their website; recognizing the responsibility in the vineyards, the wines, and having a five-step process in hopes to reduce their environmental impact (Veuve Clicquot, n.d., Our commitments). Veuve Clicquot's branding strategy continues with the many signs of the house: the first distinguishing mark of the anchor, Madame Clicquot's signature, the excellent harvest year comet, and the distinguishing dry champagne yellow label all show a different significance for the brand (Veuve Clicquot, n.d., Madame Clicquot). The signs of the house have evolved with the brand and introduced at intervals throughout history to help embellish the brand.

Veuve introduced two business awards for women, where a leading female figures in the business world can be recognized as exceptional and awarded for their success. The two awards: the Veuve Clicquot Business Woman Award and the New Generation Award were established in 1972 in the hopes of paying respect to Madame Clicquot herself and acknowledging her successes as the first female entrepreneur of her time while simultaneously appreciating new business women in today's society (Veuve Clicquot, n.d., Business Woman Awards). These awards as a brand strategy resonates with the original company and Madame Clicquot herself, allowing the company to express her core values once again.

G.H.Mumm, similarly to Veuve Clicquot, has a very interactive and informative website. Immediately on the home page the reader's eye is drawn to the elegant events and luxurious sponsorship of the company. It was discovered that Mumm is very involved in special occasions or popular events, such as sponsoring the Formula E street racing or the Melbourne Cup (G.H.Mumm, n.d., Homepage). As interactive Mumm's website design is, with the tips for success section where one can find articles on 'how to make a champagne fountain' or 'which are the most class cocktails with champagne?' (G.H.Mumm, n.d., News – tips), Mumm has yet to elaborate on its branding strategies. The brand of Mumm itself is alike Veuve in the high quality luxurious sense, however the company seems to be focusing its website design on pursuing a crowd of first time purchasers, customers who have yet to experience expensive champagne. Mumm is targeting a potential market segment whereas in contrast, Veuve's high brand recognition establishes it as the popular brand for the experienced champagne purchasers.

CONCLUSION

The champagne industry continues to boom in Northeastern France, where the climate and many acres of vineyards allows for a continuous cycle of production every year. Together, the champagne houses in Reims and Epernay and the CIVC are committed to ensuring the legitimacy of the champagne name; producing champagne for the world only from this region. The industry continues to support the region and provides a consistently positive impact for Champagne and the rest of the country. G.H.Mumm and Veuve Clicquot are worthy examples of the quality of champagne produced in France. Committed to ensuring high quality as well as encouraging new customers to enjoy the champagne experience, both brands have successfully established their international presence. Veuve Clicquot invests more efforts into branding strategies to maintain Madame Clicquot's values for the company, whereas G.H.Mumm focuses more on innovation and reaching new market segments. Both companies have achieved high success for their brand and are among the most popular champagne brands worldwide today. Furthermore, demand for champagne appears to be steady worldwide and therefore the region of Champagne will continue to produce millions of bottles and thrive as the sole producer for champagne.

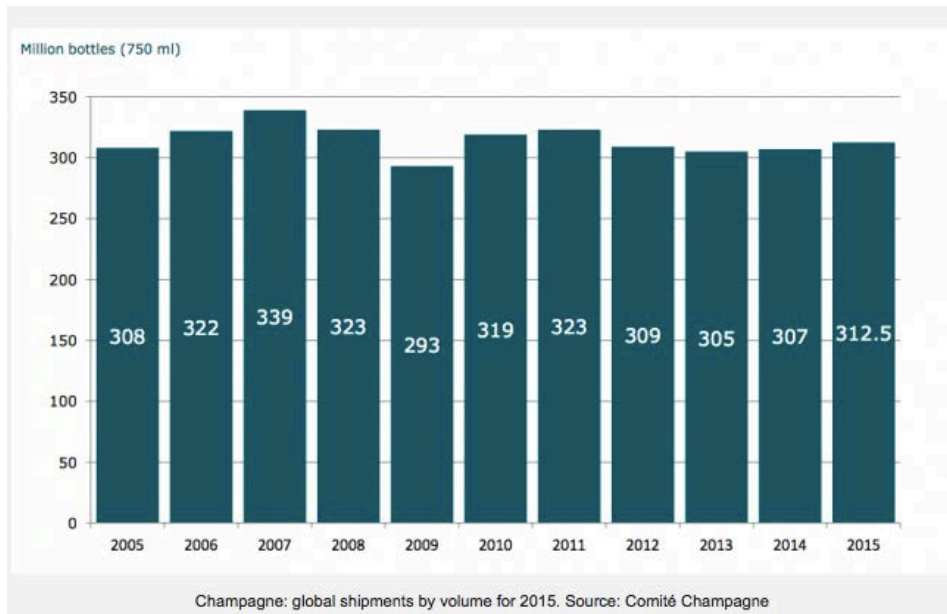
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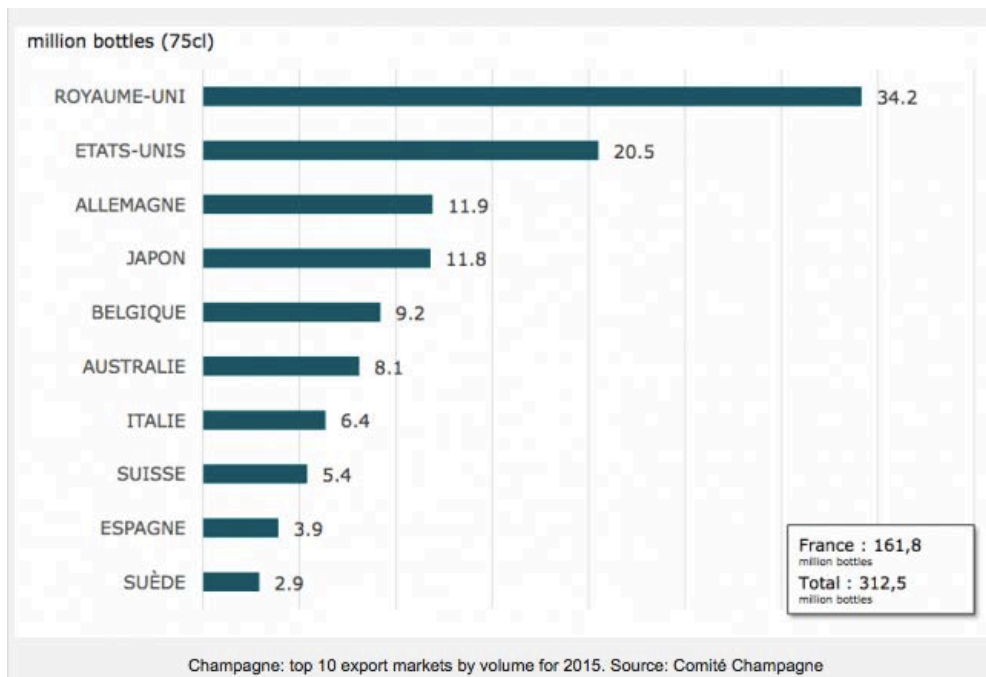
APPENDIX

Table 1: Global shipments in volume from 2005-15



(Schmitt, 2016)

Table 2: Top 10 export markets by volume in 2015



(Schmitt, 2016)

Table 3: Average champagne grape prices from 2006-2015

Average Champagne Grape prices over the past 10 vintages (€ per kilo)	
2006	4.81
2007	5.11
2008	5.40
2009	5.35
2010	5.36
2011	5.60
2012	5.73
2013	5.80
2014	5.89
2015	5.89

(Schmitt, 2016)

Table 4: Sales made by the top ten selling champagne houses in 1987

	Bottles ('000s)
Moët & Chandon	26,300
Centre Vinicole de Champagne (co-operative)	12,000
G.H. Mumm	9,500
Jacquart	8,000
Laurent Perrier	7,800
Veuve Clicquot	7,100
Lanson	6,500
Piper Heidsieck	6,500
Mercier	5,400
Pommery	5,300
Taittinger	4,100

(Sharp, A. & Smith, J., 1990, p. 24)

