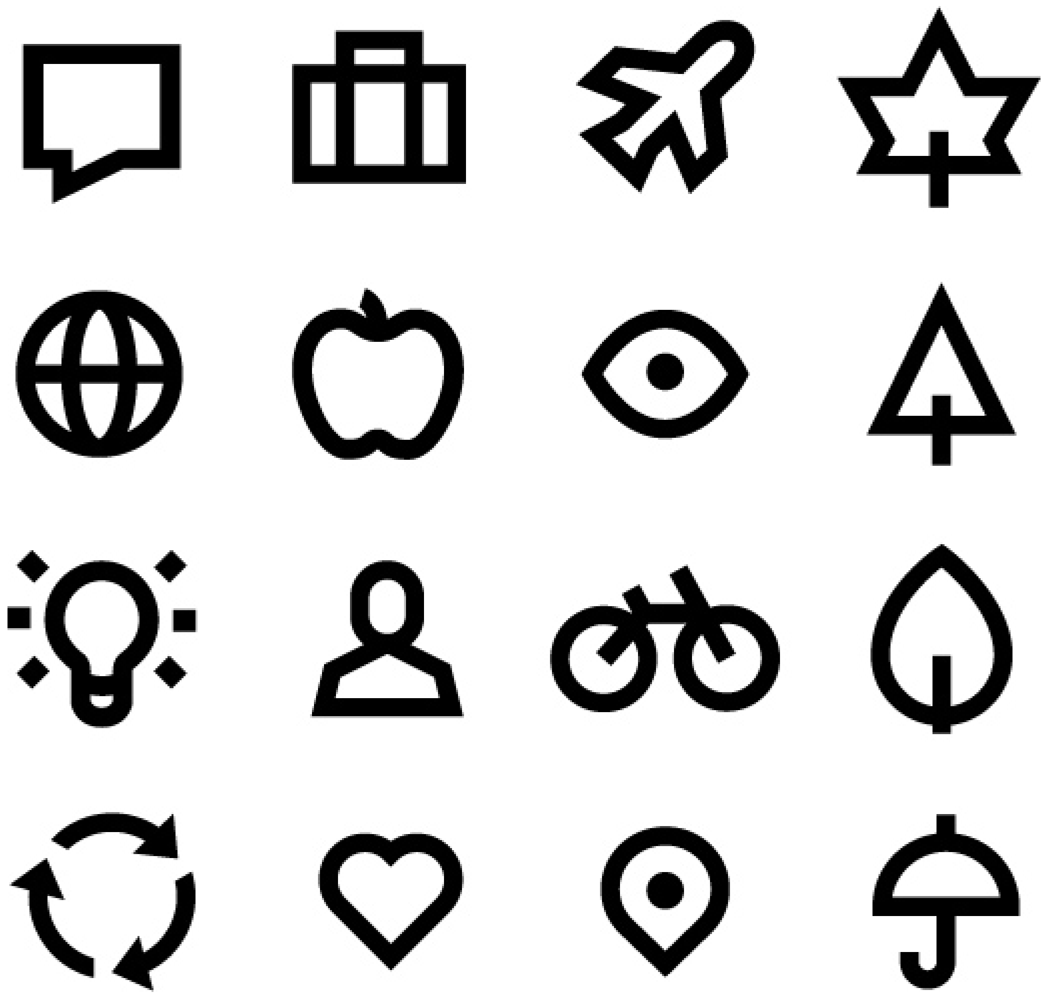
BACHELOR OF COMMERCE
BEST BUSINESS RESEARCH PAPERS

JUNE 2020 | VOLUME 13

Gustavson School of Business
University of Victoria

PRME AACSB ACCREDITED EFMD EQUIS ACCREDITED



(Cover photo courtesy of Remi Quaglia, Hong Kong)

CONTENTS

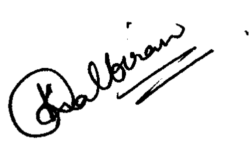
Note from the Editor

Business education is evolving. Particularly in the light of recent global events, it is vital for academia to closely work with industry to prepare our students for future careers in a rapidly changing international business environment. At the Gustavson School of Business, our goal is to provide our Bachelor of Commerce (BCom) students with critical thinking skills that can enable them to become global leaders. We believe that international experience is the key to inculcating cross cultural awareness and a global mindset, therefore it comes as no surprise that over 90 percent of our BCom students decided to go an international exchange in the year 2019-20. **COM 470 is an instrument through which our students develop a high level of international awareness.** As a part of this course, students develop their research and writing skills by analyzing the business environment of their host country.

In Volume 13 of Best Business Research Papers, we present the top eight of our most interesting research papers. This year, students researched topics ranging from the agricultural industry in Switzerland to the climate change mitigation in France and the challenges faced by China's manufacturing industry. We are extremely proud of the strength and determination showcased by our students while researching and writing on such stimulating issues.

We would also like to congratulate Annie Washington, Christine Wensink and Katharine Lazar on receiving the **Jamie Cassel's Undergraduate Research Awards (JCURA)** this year. Annie analyzed the role of family business in Czech Republic, Christine studied the socioeconomic costs associated with the increasing life expectancy in Spain, and Katharine focused on energy efficiency in Portugal.

The University of Victoria's Gustavson School of Business is proud to present these annual research papers from our 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 International Programs team members Dr. A.R. Elangovan, Director; Brian Leacock, Associate Director; Jane Collins, Manager, International Exchange; Allen Sun, Outgoing Exchange Advisor; Sheri Love, Global Engagement & Business Development; Elsa Yan, Exchange Student Advisor; and Christina Hernandez, International Student Advisor; as well as Audrey Audebert, Assistant Director, Undergraduate Programs, and Shannon Perdigao, Academic Projects Officer. On behalf of everyone involved, we hope you enjoy reading the BCOM Best Business Research Papers.



Komal Kalra and the Editorial Team
COM 470 International Business Research Instructor
Editor, *Best Business Research Papers, Volume 13*

International Business Research Experience

I was fortunate to spend a semester at the HHL Leipzig Graduate School of Management in Germany for my international exchange program. The rich, yet often overlooked culture in the regions surrounding Berlin and Leipzig have proven to be beneficial grounds for Start-ups to flourish, and my research analyzed the phenomenal growth and persisting cultural divide since the fall of the Berlin Wall thirty years ago. The COM 470 research paper served as a means to better understand the German culture, and it presented a great opportunity to exercise the academic traits I have developed while attending school at UVic and abroad.

Tyler Arseneault

My exchange semester was an amazing experience for me as it gave me an opportunity to go and experience another country's culture first hand. I was lucky enough to spend 5 months in the amazing city of Bangkok. Thailand is a country that will forever hold a special place in my heart because of all of the amazing people that I met while I was there, and all of the mouth-watering food that I got to try. The research project gave me an opportunity to dive deep into the inner workings of the business that I probably interacted with the most while there – 7-Eleven.

Teegan Johnson

China has always felt like an unfamiliar and mysterious nation to me. Yet, China's connection to the global economy and the direct impact it has on life and business in Canada is anything but distant. It was a pleasure to have the opportunity to study at China's premier university while researching one of the biggest questions facing China as it grows its presence on the world stage. Further, by immersing myself in the Chinese culture, I have grown a fond familiarity with the nation that has strengthened and added value to my global perspective ever since.

Wyatt Mathews

Last Fall, I had the incredible opportunity of studying just outside of Paris at ESSEC Business School. I truly enjoyed learning more about the history and culture of France which motivated me to specialize my research in the way I did; I always had interests in climate change, so being able to merge the global matter with my country of study allowed me to combine my pre-existing knowledge of both. The greatest thing I took away from my experience was that adaptability in new environments is an invaluable skill to develop - I was amazed to see how unique each and every country I visited was. I learned so much about myself and will never forget this experience.

Jeremy Mueller

While on exchange at the University of St. Gallen, Switzerland, I had the opportunity to develop a whole new perspective on International business and learn a new language. The incredibly welcoming professors and classmates I met along the way left me with a wonderful impression of Swiss culture, and fond memories to last a lifetime. While travelling across the country, I was struck by how important local agriculture was in the Swiss psyche and diet. Given my longstanding interest in International trade, this inspired me to delve deeper into the Swiss agriculture system from a trade policy perspective.

Ari Tsetsekas

Prior to leaving for exchange, I had not intended to write the COM 470 research paper. Due to various reasons, I ended up writing it and I can undoubtedly say that my exchange experience was more complete and well-rounded because of it. Not only did it allow me to engage more deeply in the Czech culture and better understand the history of the country, but it helped develop my independent research skills in a way that I had not before. This was an extremely valuable experience, both on a personal and educational level, and I would highly recommend students of all backgrounds to partake in this learning opportunity.

Annie Washington

My international exchange in Spain taught me more valuable life lessons than any job or lecture ever could. I am grateful for the experiences and memories made while exploring such a unique and thriving way of life. Moving away from home and immersing yourself into a new lifestyle and language is no easy task, but shows ambition, courage, and independence. My four months spent living in Madrid and traveling Europe proved to be the opportunity of a lifetime. In my mind, Gustavson's International Exchange program is the educational component that sets the business school apart from competitors. It is my hope that my research paper acts as a window into the extraordinary Spanish culture, and explains how Spain could become the nation with the highest life expectancy in the world.

Christine Wensink

On my exchange, I had the incredible opportunity to live in one of Germany's most friendly cities, Cologne. Germany is filled with such successful businesses and industries; it was hard to choose which one I wanted to research for this paper. The countless number of DHL trucks I saw every day seemed to point me a certain way. I enjoyed every second I spent investigating this topic. It was interesting to explore how a business recognized a change in its external environment - the growth in eCommerce sales - and strived to adapt to remain competitive in today's economy. Now, looking back on my research, it seems this topic will be relevant to almost all businesses that wish to stay competitive in an economy post-2020.

Audrey Wright

Reunification: How East Germany's Economic Discrepancies have paved the way for a Rising Start-up Industry

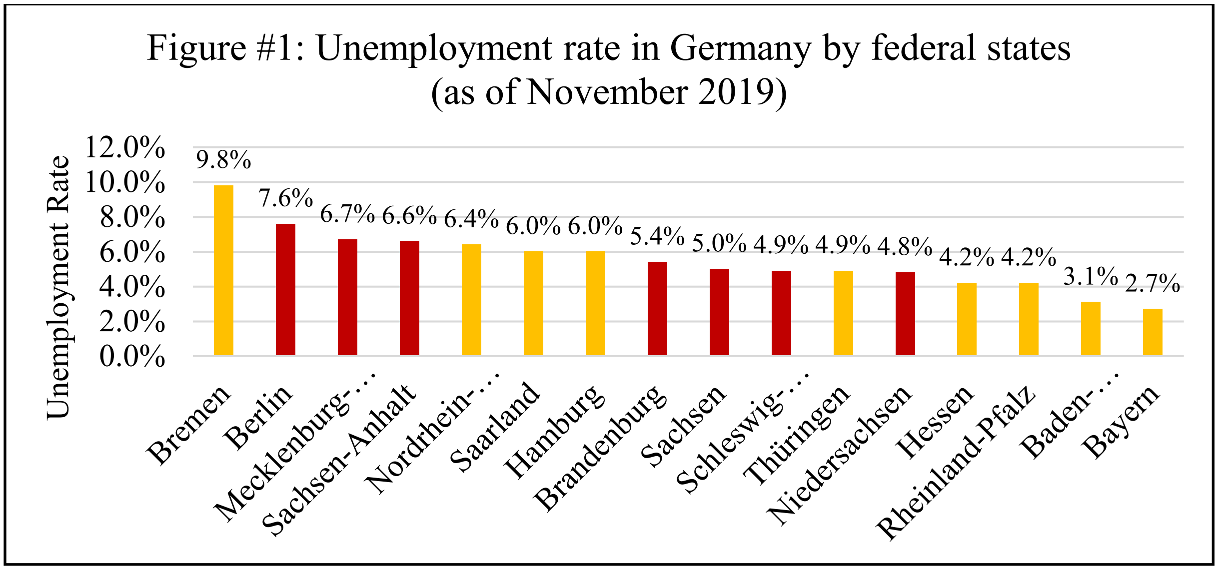
Tyler Arseneault

ABSTRACT

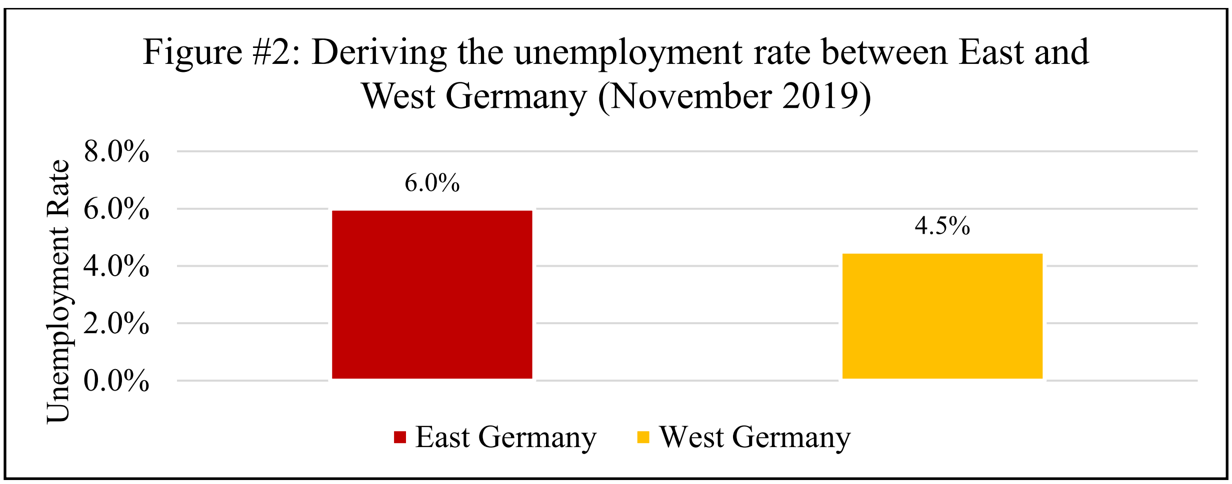
This text uses an analysis of historical circumstances to understand the discrepancies between the East and West German economies, and how Startup organizations can implement certain measures into their corporate governance and business structures to capitalize on cheap labour and infrastructure in East Germany. Historical events including the Zollverein Coalition, the Treaty of Versailles, and the differences between the Marshall Plan and the Soviet planned economy will be analyzed to determine the contributing factors behind East Germany's high unemployment rate and lower per capita GDP (Statista, 2019). The analysis will include the influence of key sectors and industries that effect the East German Startup economy, and how they have responded since the reunification of the country. Benchmarking for the analysis will include levels of unemployment, wages, and overall productivity in East German cities in comparison to their West German counterparts. The analysis of these factors will be used to determine the gaps in the East German economy that impede the area's growth, and how different organizations have tailored their structures and production methods to mitigate these concerns. Analyzing these areas will help determine how Startup organizations can implement certain features to continue to flourish with their future economic endeavours in the East German region.

HISTORICAL ANALYSIS OF THE EAST GERMAN ECONOMY

Germany has a history spanning over two millennia, coinciding with a drastic shift in ideologies and interests amongst her occupants during this time. Given the nation's central location within Europe, many regional influences have played a part in shaping the nation's culture, economy, and ideologies. While the Western regions of the country are predominantly multicultural, nationalist ideologies in the East have inhibited the region from developing similar traits. These regional discrepancies have been emphasized in the past century, producing a divide between those residing in the Eastern and Western States. While East Germany's economy has improved in recent decades following the German Reunification (The Local Germany, 2018), it still lags behind its Western counterparts. As of November 2019, all six of the former East German states (East Berlin, Mecklenburg-Vorpommern, Sachsen-Anhalt, Brandenburg, Sachsen, and Thüringen) sit at or above the national unemployment level of 4.8% (Statista, 2019), equating to an East German unemployment level of 6%, versus 4.5% in the former Western States (Statista, 2019).



(Statista, 2019)[1]



(Statista, 2019)

A self-reported life satisfaction survey conducted by the German Socio-Economic Panel between 2012 and 2016 found that individuals in the Eastern states still report a lower overall level of wellbeing, driven by lower household income and higher unemployment (Ortiz-Ospina, 2017). Despite the lower levels of employment in these regions, many organizations have capitalized on the surplus of available labour in these East German areas, establishing a flourishing Startup sector in Berlin that has expanded to Leipzig and Dresden. These markets have closed the socio-economic gap between the two regions and have led to the establishment of various successful companies in this area (Vollmer, 2015). In order to fully comprehend the East-West German ideological and socio-economic divide one must analyze the influence of key events the nation’s history, starting with the Zollverein Coalition of the nineteenth century.

[1] Yellow depicts former West German States, Red depicts Former East German States

SIGNIFICANT EAST-WEST GERMAN EVENTS

The Zollverein Coalition

The Zollverein Coalition was a series of policies implemented in the 1830s to manage the tariffs between the different states making up the German region. The Zollverein Coalition was significant in a variety of ways. The economic treaty of the nineteenth century between German states was the first and arguably most vital step in modernizing a new, uniformed Germany (Ploeckl, 2015). It was very progressive for its time; Ploeckl notes that it was the first example of an organized economic coalition between different nations anywhere in the world. The reasoning for this trade agreement stems from regional differences across the German States. Prior to the trade agreement, the Eastern areas of Prussia[2] had a predominantly agriculture-based and resource-heavy economy. At this time, the Western Prussian States began to industrialize their economy, and looked to modernize their production habits while maintaining a liberal political and economic view (Ploeckl, 2015). However, the Western States required goods from their Eastern counterparts to facilitate their production, which was difficult to achieve given the disadvantageous tariffs restricting the movement of goods. The Zollverein Coalition employed new moderate rates that enabled these trades to happen, however, the Prussian territory was quite expansive and made the trading process a lengthy endeavour.

The Prussian Empire capitalized on the rapid industrialization of the country's economy by creating an extensive rail network, which in turn diminished freight costs and shipping times alike (Ploeckl, 2015). During the nineteenth century, the economy went from being a mess of poor states to a unified empire; by 1890, Germany had become the one of the largest, most modern economies in the world (Geiss, 1997). However, at this time, many of the Eastern regions were still resource-based economies, relying on the West for much of their trade. Furthermore, many of the smaller Eastern States joined primarily for "fiscal reasons" (Geiss, 1997), so as to avoid any regional tension from their neighbours. This meant that, while they were still counted in as members of the coalition, their primary purpose of inclusion was for political reasoning (Geiss, 1997). That being said, the economic impact of the German Industrial revolution was seen as being mutually beneficial for the two regions, and "was the most important […] development for Germany's economic unification during the […] 19th century" (Ploeckl, 2015).

The Treaty of Versailles and protectionist policies

The Treaty of Versailles was a set of sanctions levied on the German empire following the First World War. The Treaty of Versailles had catastrophic effects on the once-great empire. In the early 1900s, Germany had developed a largely nationalistic sentiment, catalyzed by the fact that British nobility would often travel to Paris, but not the German capital of Berlin. The German Kaiser stated his disdain for Britain and France's sole recognition amongst world powers, and that they "paid no attention to what [he had] to say. Soon, with [his] great Navy to endorse my words, they will be more respectful" (Graebner & Bennett, 2011). By the end of the war, and despite succumbing to the Allied forces, Germany had also demonstrated their triumphant military feats. However, they had also suffered extreme casualties to both their population and infrastructure. US President Woodrow Wilson suggested that Germany had to be harshly punished so as to maintain peace in Europe after the war and to avoid further German desire for revenge (Graebner & Bennett, 2011). The harsh economic sanctions crippled the German economy, including forfeiture of resource-rich territory and enormous reparation payments, which renowned Economist John Maynard Keynes stated would destroy the German economy for many years to come (Keynes, 1919).

---

[2] Modern day Poland and East Germany

This nationalistic sentiment paved way for the immergence of the National Socialist German Worker's Party (Nazi) in the 1930s. The effects of these ideologies have re-emerged in recent years, and regions of East Germany now exhibit similar beliefs albeit to a far lesser extent (Knight, 2010). While the political divides have re-emerged from their roots in the policies in the Treaty of Versailles, one must look further to understand the impact that certain initiatives have had on the region's economy.

The Marshall Plan versus Soviet Planned economy

At the conclusion of Second World War, the ruling German government had been dissolved and taken over by the US, France, Britain, and Russia. The formation of the Federal Republic of Germany in the West and the German Democratic Republic in the East came about in 1949, and what transpired over the next four decades led to significant ideological and economic divides between the regions. In the West, the US implemented the "Marshall Plan", where they provided ample monetary aid to develop the Federal Republic's capitalist economy (Berle Jr., 2015). This enabled the new nation to benefit from reduced trade barriers between their NATO allies, modernizing their production industries, and providing access to the production goods they used to acquire from the Eastern states (Berle Jr., 2015). Additionally, the now-worthless hyper-inflated Reichsmark was replaced by a new currency in the West, immediately adding value and increasing productivity (Gethard, 2015). Gethard noted that at this time production in the Western region had surpassed the pre-war levels and increased in years following the implementation of the "Marshall Plan". At this point in time, the West was encouraged to trade with other countries, specifically due to the nation's integration into many trade organizations (Berle Jr., 2015).

The same could not be said for their Eastern counterparts, who, under the control of Russia, became a "planned economy" by the controlling Soviets (German Culture, 2019). The economy was still centred around natural resource extraction, similar to centuries prior, as well as a large automotive production industry. The country had very limited access to trade outside of those in the Eastern Bloc due to embargos, so the natural resources they extracted were sold at a fraction of their potential selling costs to the Soviets (German Culture, 2019). The closed borders meant that East Germany was not exposed to technological advancements made by those in the outside world, therefore they could not progress their economy at the same rate as those in the West. Despite having the highest per capita income in the Eastern Bloc (Protzman, 1989), they continued to operate using the Reichsmark, whose value had depreciated over time against the West German Mark. This had a severe impact for those in the East when the countries unified (Protzman, 1989), as the net worth of those living in these areas became far less due to the value of their currency.

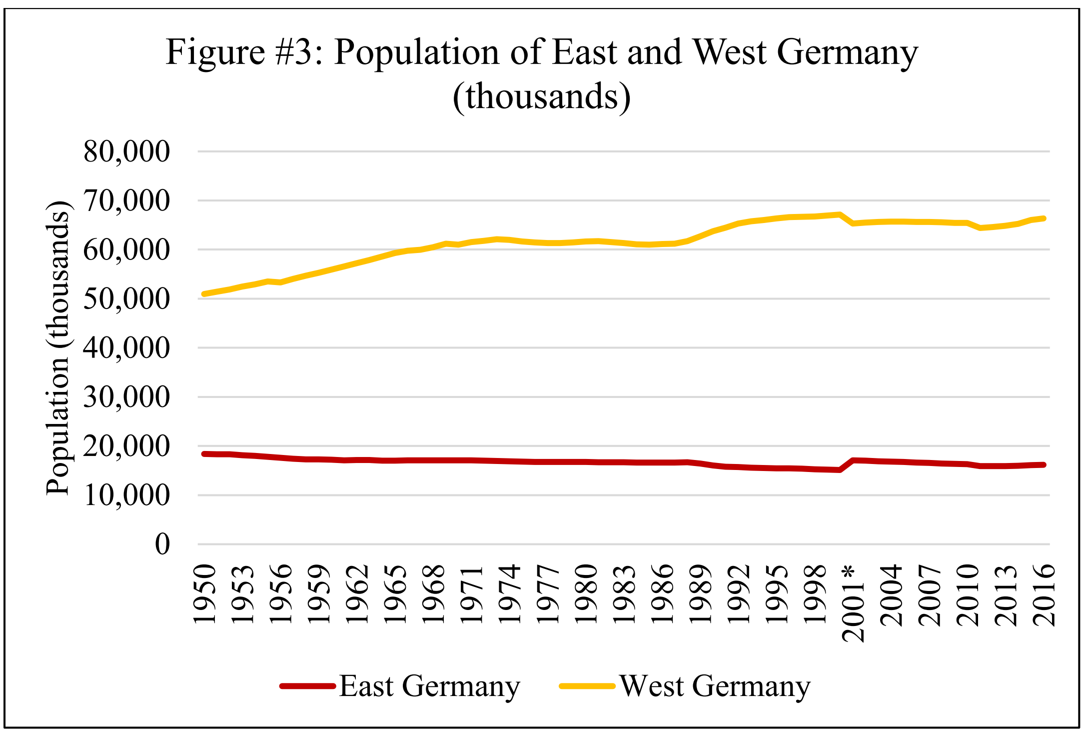
The physical barrier separating those in Berlin came down in 1989, however, an ideological and socio-economic divide persisted. Immediately, Germany became the world's third largest economy based on their GDP, however, a significant discrepancy between the former states immerged as well. It is important to analyze how East Germany is still hindered by its historical circumstance in order to grasp the region's current economic turmoil.

EAST GERMANY TODAY

The repercussions of the German divide are evident today. Currently, those living in the states of Saxony, Saxony-Anhalt, Brandenburg, Mecklenburg-Vorpommern, and Thuringia have a per capita GDP that is 20 percent lower than those from the West (Buck, 2019). And while the monthly per capita GDP has risen by nearly €700 in the past twenty years, the 20 percent gap has persisted over the same timeframe. Furthermore, East German citizens are more likely to suffer from poverty, at a rate of nearly 17.8 percent (The Local Germany, 2018). Much of East Germany is quite rural; the largest city outside of Berlin is Leipzig, which is only Germany's eighth most populated city. For this reason, many retail organizations will overlook these areas during their expansions due to their perceived lack of demand, with many "many rural areas lack[ing] shopping, schools, and medical practices" (The Local Germany, 2018). This makes it difficult for citizens living in these areas to access the goods that are abundant in the West German states. Furthermore, people in the East were taught Russian in school as their second language, so the number of English speakers in the East is less than those in the West (EF, 2019). Therefore, there are limitations on trade for those living outside German or Russian-speaking countries.

Outside of Berlin, only 17 of Germany's 500 largest companies are based in East German states (Buck, 2019). This means that many of the most valued activities for economic growth are not based in these regions, instead, they operate as an "extended workbench" for large corporations based in the West (Buck, 2019). This includes activities that create the most value for the organization, such as administrative work, executive work, and research and development (Buck, 2019). This aligns with the historical production of East Germany, centred around the area's automotive industry, however, it means that companies like Porsche and BMW can capitalize on the cheap labour while keeping the valued activities in "preferable" cities, such as Munich, Cologne, and Stuttgart. This is further inhibited by disadvantageous government policies relating to decreased production (Halle Institute for Economic Research (IWH), 2019).

The German federal and state governments offer subsides for companies to maintain jobs in East German regions. This has said to have reduced the incentive for productivity, as companies are still able to benefit despite earning lower profits, therefore paying less to their workers (Halle Institute for Economic Research (IWH), 2019).



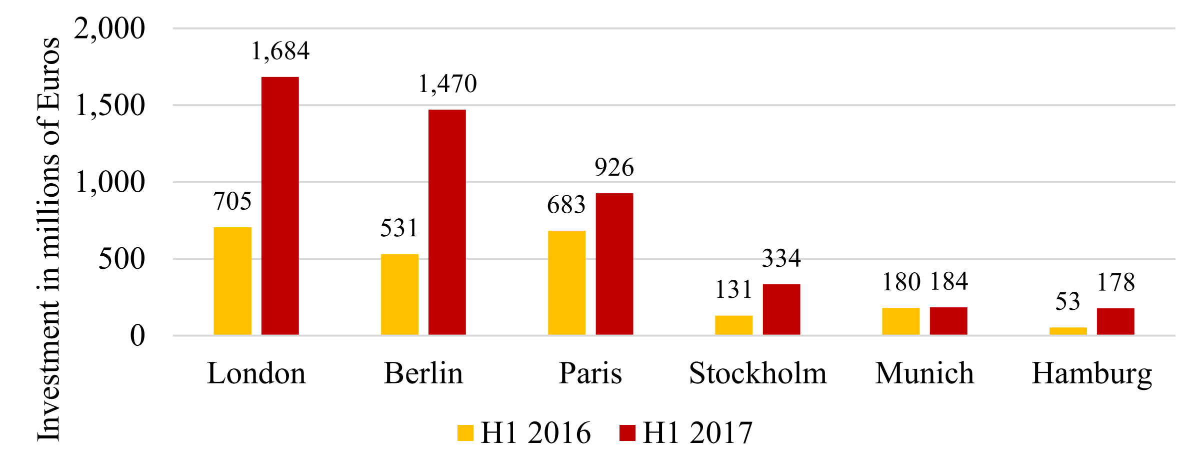
(Statistisches Bundesamt, 2017)

Since reunification in 1989, the East German population has decreased by nearly 2 million people, while West Germany's population has continued to increase, albeit at a relatively slow rate. This has been due to the migration of East German citizens to cities in the West that they perceive to be more "favourable", as well as increased non-EU immigration to the West versus the East (Buck, 2019). This decline in population may have dire consequences on the region in the coming years. Despite the fact that the gap between the two economies have closed, Prognos AG (The Local Germany, 2018) suggests that the gap will increase again by 2045 due to the aging workforce and low birthrates. This, coupled with a declining population, puts East Germany in a situation where they will have less access to skilled labourers, due in part to the dwindling population. The Halle Institute for Economic Research suggests that immigrants are more attracted to cities in the West, further limiting the supply of skilled labourers in the East (Halle Institute for Economic Research (IWH), 2019).

A study conducted by Vogel et al. (2015) determined that, indeed, East German citizens have a significantly lower life satisfaction than those in the West (Vogel, Gerstorf, Ram, Goebel, & Wagner, 2015), with the key contributing factors being the poorer health infrastructure and living conditions. This reiterates the points made by Uhlig's study (2008) which found that the aforementioned factors are major contributors to lower levels of life satisfaction, as well as lower wages and high unemployment.

Not all is bad in East Germany. The levels of unemployment have been falling since the peak in 2005, and current sits at around 6% (Deutschland.de, 2017). The larger cities in East Germany have also seen a newfound economic revival. Leipzig has been voted as the second-best German city with "future prospects", with Dresden also being featured in the top ten (Leipziger Volkszeitung, 2017). Some larger companies have begun moving to these cities to capitalize on their surplus of available infrastructure and resources, including Amazon, DHL, Porsche, BMW, Volkswagen, and Siemens. The capital city of Berlin has also benefited from increased productivity; in 2014 Berlin was able to attract more venture capital investments than London, UK (Vollmer, 2015). Companies like meal-kit group HelloFresh and the online bank N26 have immerged from the region as unicorns, companies that have valuations of over $1 billion. In order to understand how these companies have thrived, and how future Startups can achieve success, organizations must be conscious of the techniques they employ in their working environments.

Figure #4: Leading start-up cities in Europe in 1st half of 2016 and 1st half of 2017, by value of investments (in million euros)



(Ernst & Young, 2017)

Solving East Germany's economic woes has been a question amongst many economists for over three decades since the reunification, and by no means can one suggest a single macroeconomic change to revolutionize the region's economy. However, given the aforementioned information, there are three key aspects that Startup organizations may employ to become successful enterprises in East German cities:

1. Increase labour productivity by paying their workers at an appropriate rate
2. Embrace internationalization
3. Continue investing into their emerging Startup culture

Of course, it would be naïve to suggest that these three aspects are applicable in every circumstance. Rather, they can be useful in providing informational guidelines that organizations can implement into their business models when commencing operations in the Eastern region.

RESEARCHING EAST GERMANY'S ECONOMIC WOES

Increasing labour productivity

A top-down approach can be used to analyze East Germany's issues regarding labour productivity. Currently, labour productivity sits at 83% compared to that of the West (Ragnitz, 2007), but only at 67% in the private sector. There are many factors that contribute to this phenomenon, but two key problems surround wage gaps and lack of skilled labourers. The gap in productivity is nearly equal to the gap in wages; East German workers make around 81% of the national average income, compared to 104% of the West (Halle Institute for Economic Research (IWH), 2019), while the previously mentioned labour productivity is nearly identical at 83%. It is a vicious cycle for East German workers; lower pay means less incentive to work, thus lowering the production output for the company. This has been further catalyzed by lost jobs in the industrial sector; East Germany was fuelled by the production of automobiles and technology, however, the number of people employed in these sectors has fallen since the reunification in 1991 (Halle Institute for Economic Research (IWH), 2019). The service sector has grown during this time, but at a lower rate than in the West. These adverse conditions actually create viable opportunities for Startups, as they can capitalize off of the existing facilities and infrastructure in the region.

East Germany has a surplus of cheap, usable facilities to accommodate new production. As the industrial output has fallen since 1991, the number of vacant buildings has increased (AFP, 2017), so companies can capitalize off of cheap rent and facility use. This is especially important for emerging Startups as every dollar is of utmost importance as potential investors analyze their return on investments. Additionally, it can be attractive for young professionals to work in some of these cities because of the cheap living expenses. Groceries and rent are a fraction of the cost in East Germany compared to many other parts of Europe, so companies can profit off of newly graduated people who may have less income.

In the short run, companies may be able to turn higher profits by paying their employees at less of a premium than in the West. It was previously mentioned that the average citizen in East Germany makes only 81% of the national average salary, however, companies can afford to pay these employees at a rate higher than the regional average while still paying less than they would for similar work in the West. In turn, companies would have a higher productivity output than if they were to pay them at a lower rate. From a ground-up view, this would prove to be attractive to prospective employees. While they may earn less than they would in the West, their living expenses would be a fraction of what they would otherwise be paying. So, in the long run, they would end up with more disposable income.

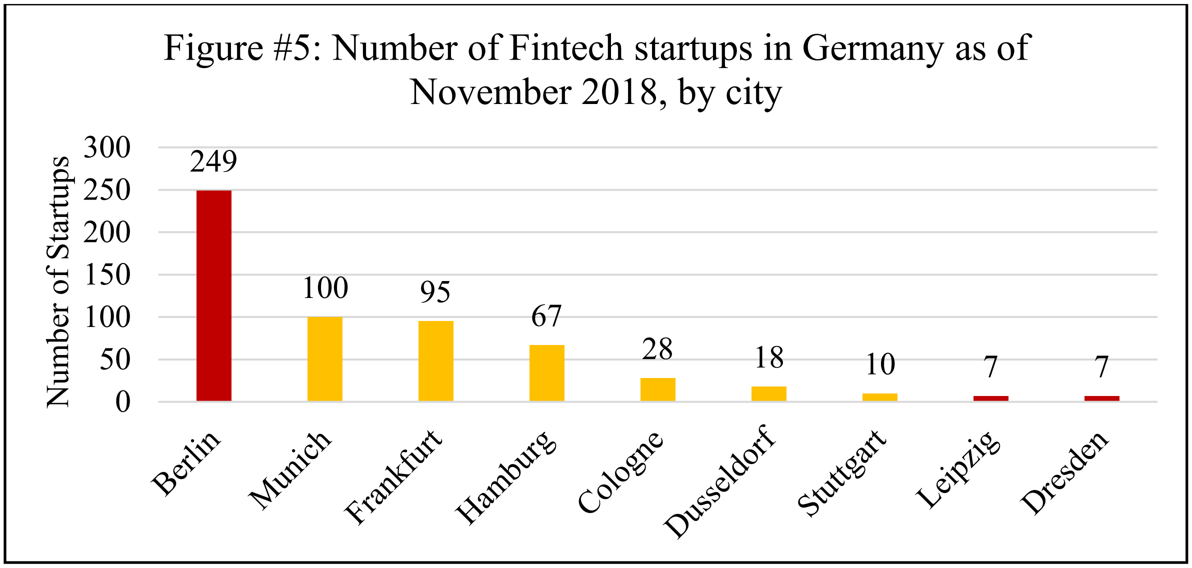
Productivity is lower in rural areas than urban sectors, and East Germany has a predominantly rural population (Halle Institute for Economic Research (IWH), 2019). To compensate for lower wages in these regions, the German government provided many traditional industries with subsidies, essentially as a form of equalization payments for those living in these areas. One half of those working in the East work in city regions, versus three quarters in the West (Halle Institute for Economic Research (IWH), 2019). This means that half of those employed in the East are working in traditional rural industries, however, they have far less of a production output than those in the cities. This phenomenon is also shocking considering East Germany does not have a deficit in physical capital to produce goods (Halle Institute for Economic Research (IWH), 2019). Therefore, one can conclude the adverse effects that the government subsidies have on the traditional economy. While the government has begun to support immerging industries through grants and accelerators (German Accelerator, n.d.), the subsidies impede the ability for new companies to gain access to monetary funding. However, some companies are choosing instead to gain funding from private institutions and angel investors, mostly centred out of the major metropolises in Berlin, Leipzig, and Dresden.

New companies in East Germany must be aware of the minimal government financing they have access to; however, they should also be aware of the plethora of private financing options available in the East as an alternative. This will be covered in further detail later into the analysis of the Startup scene investments.

Embracing internationalization

The majority of Startups in East Germany are in the tech industry. For this reason, Berlin has become the epicentre for Fintech, Blockchain, and E-commerce companies in Europe, despite not being home to any major banks. There are three key factors that play into the city being an ideal place to conduct business; it has a large population of English speakers, it is inexpensive compared to Munich or Cologne, and it attracts a “homogenous mix” of people from around the world (Yuko, 2016). Now, as the markets in the Fintech, Blockchain, and E-commerce sectors have grown, so has the economy in the city itself. Less people are moving to Berlin for the benefit of cost of living, rather, for the “network and internationality of entrepreneurs” (finleap, n.d.). The international culture of the city transcends to the Startup scene; nearly half of the Berlin tech scene is non-German (Yuipco, n.d.).

Berlin has the most women employed in the Startup sector in Germany, albeit only at 16.2 percent (Deutschland.de, 2017). As indicated in the previous table, Berlin also has a disproportionate number of Startups compared to other parts of Germany, especially in comparison to others in the East. Nearly 50 percent of those working in the Startup sector are “foreign-born” (Deutschland.de, 2017), which makes Berlin the most international city in Germany. This has been one of the reasons that the city has been able to excel; the ability to connect to diverse clients around the world is a major asset for new companies.



(comdirect Bank, 2018) [3]

However, most East German cities are very monocultural. Furthermore, there has been a negative aura surrounding immigration in these cities; far more people are unemployed in East Germany to excel; the ability to connect to diverse clients around the world is a major asset for new companies. However, most East German cities are very monocultural. Furthermore, there has been a negative aura surrounding immigration in these cities; far more people are unemployed in East Germany so some see immigrants from a far-right political stance, in that they are taking jobs from those native to the regions (DW, 2019). That being said, the number of non-EU nationals moving to Germany has increased year-to-year by 20 percent (DW, 2019). This has given the failing East German economy to access to more skilled workers, at a time where most young German professionals migrate West for more lucrative employment opportunities.

As the world becomes more and more interconnected, the importance of internationalization becomes all the more apparent. While East Germany still lags far behind in these efforts, evidence of the beneficial effects of a pro-immigration stance in Berlin has shown that the remaining cities can surely benefit from a progressive, international mindset. The increase of non-EU nationals moving to East Germany will prove to be beneficial in the coming years as more and more corporations will see the region as being diverse, so they will be more inclined to move there. Berlin has already proven this to be the case, and now many international companies are capitalizing on the region's cheap living costs, such as Coca Cola, Amazon, and Pfizer (Berliner Morgenpost, 2018).

Reinvesting into the Startup scene

East Germany has a legacy of being cold and dreary, comprised of old Soviet architecture. However, for many of the centralized areas, this could not be further from the truth. David Bowie once stated that Berlin is said to be the "greatest cultural extravaganza that one could imagine" (Ashraf, 2016). This has proven to be an attractive market for many Startups, as young enterprises flock to the city for its culture and emphasis on expressing creativity (Stokel-Walker, 2019). This desire for creativity has spilled over into surrounding metropolitan areas.

[3] Yellow depicts former West German cities, Red depicts Former East German cities

The HHL Leipzig Graduate School of Business has partnered with various regional investors to fuel a Startup accelerator known as the “SpinLab” (SpinLab, n.d.). The accelerator provides entrepreneurs with resources to begin operating their Startups, by partnering the organizations with different business professionals from the surrounding area. Furthermore, they provide the areas to facilitate their work, and they charge no fee for the companies to work there. It has proven to be an extremely profitable endeavour for both the Startups and the investors; the founders of Trivago and Delivery Hero both immerged as unicorns with help of those involved with this project. The overarching power behind this program is that it is exposing people to the potential benefits that East German markets can offering; cheap workplaces, ambitious entrepreneurs, and skilled labourers. So far, projects within the network have been able to generate nearly €52 million in funding (SpinLab, n.d.). Other metropolitan areas with immerging Startup scenes include Halle, Dresden, and Potsdam. These efforts have been aided by the German government through the German Accelerator project, partnering German Startup projects with mentors in overseas regions like New York, Silicon Valley, and Asia (German Accelerator, n.d.). One company out of Berlin has been particularly successful in achieving international acclaim through this program. COMATCH, a consultant intermediary, has used the program as a catalyst for international expansion, and now the company offers its services around the world, including New York, London, and Berlin (COMATCH, n.d.).
One major expense for new companies is finding a suitable location to commence their operations at a relatively low expense. Berlin has seen a growth in co-operative work environments; WeWork has seven different office spaces in the city (Belleville, 2019). And while the future of WeWork is unknown, many alternatives have sprung up in Berlin, including Betahaus and Factory Berlin (Belleville, 2019). Both of these offices offer ample perks and amenities that one would see in a large Startup’s office, at a fraction of the cost. Furthermore, these spaces offer companies the ability to interact with others to access diverse perspectives regarding their economic growth.

APPLYING RESEARCH TO FORMULATE GUIDELINES

Formulating a business model that adheres to changing preferences.

The contributing factors to economic growth have been identified, so a concise framework can be established for current and prospective organizations in East Germany. There are three key factors that successful Startups employ in their business models that have shaped them into exciting companies.

Cultivating productivity by increasing employee satisfaction

A study by the Harvard Business Review found that high levels of skill and experience do not translate to successful Startups, rather, a high level of passion is said to be of greater importance (de Mol, 2019). Organizations comprised of those with similar interests and ambitions are far more likely to succeed than those comprised for their experience alone (de Mol, 2019). In East Germany, people need to formulate a company cultures that enable and encourage productivity by providing sufficient compensation (at a level greater than the 80 cents on the dollar versus those in the West), by following a shared vision, and by encouraging equal work environments (only 16.2 percent of those in the Berlin tech sector are women). However, there have been initiatives set in place to invite Startup owners to Berlin to have them better understand the region’s ecosystem, and hopefully build on the number of female workers in the tech industry (Herzog, n.d.). This will prove to be very beneficial in coming years, and one would hope that these events will be expanded throughout other cities in the region.

Encourage diversity in the workplace

All multinational corporations benefit from globalized perspectives for their companies. By encouraging diversity in workplaces, companies have access to specialized expertise in different sectors that they may otherwise be ignorant to (Erixon, 2018). East Germany is an anomaly in that the country exhibits very nationalistic characteristics despite its central location, thus access to many different cultures. In order for East German brands to immerge as powerhouses, they need to embrace an international mindset that enables them to access human capital and resources from various different backgrounds, therefore ignoring the monopolistic tendencies that the government and private sector workers currently employ.

This point is made evident by the previously mentioned economic discrepancies between West and East Germany due to the West's trade partnerships with other regions. Startups in the major metropolitan hubs outside of Berlin need to consider hiring employees from outside of East Germany. While they may not benefit from the subsidies that the government offers companies in traditional East German industries, then can capitalize off of different backgrounds and specialties by hiring outside of the region. This hiring process is part of the reason why Startups in Berlin have been so successful, and it is also one of the ways that these regions can excel as well (Erixon, 2018).

Support Startup initiatives and finance East German Startup projects

Companies must continue to invest into accelerators in larger cities to provide the necessary financial and structural resources for Startups to grow. The aforementioned SpinLab and COMATCH initiatives have proven that the East German market is a viable place to build a company. Canadian E-commerce giant Shopify recently chose Berlin as its "first engineering hub outside of Canada" (Hemmadi, 2019), choosing the location for its central location and large technological network. Furthermore, the company has also supported entrepreneurial spaces in downtown Los Angeles, providing in person training and education to those living in the city. With the new opening of the engineering hub in Berlin, it is only a matter of time before the company capitalizes on the Startup growth within the city by establishing a similar initiative. Companies that invest into accelerator programs can benefit off of the companies that immerge as successful businesses. Bombardier, KPMG, GE, Pfizer, and P&G are among some of the larger corporations that have invested into the Berlin industry (Berliner Morgenpost, 2018). These companies bolster the local economy, and invest into local initiatives and projects that, in turn, generate more revenue for their shareholders.

Startups that are considering East Germany as a location to build should consider joining different industry-supported programs like Start Alliance and the Berlin Startup Unit (Herzog, n.d.). These programs can expose new companies to those with experience in dealing with the industry and can partner them with other innovators who can help build their companies.

CONCLUSION

West Germany's success can be largely attributed to the nation's ability to embrace an international mindset. The region was able to progress through trade with other economic powerhouses, and the region's economy has been able to withstand the economic pressures of reunification. This has been further catalyzed by inwards investments from many multinational corporations around the world. In order for East Germany to catch up, the region must embrace an international mindset, and move away from protectionist policies by encouraging internationalization in the Startup sector. The monopolistic tendencies that some companies employ have limited their ability for growth, and thus limits their potential outside of the East German region. The thriving Startup industry in Berlin is an example of the benefits that an international mindset can have on a cities industry, and these efforts should be encouraged across all major East German cities. These efforts have translated to higher pay, more skilled workers, and increased life satisfaction in Berlin, and if the other cities embrace a similar mindset, they too will be able to reap the benefits of a stronger economy.

REFERENCES

AFP. (2017, December 7). 'People had no prospects here': east German village put on market for €125,000. Retrieved from The Local: https://www.thelocal.de/20171207/people-had-no-prospects-here-east-german-village-for-sale-at-125000-price-tag

Ashraf, A. (2016, December 13). Famous Quotes About Berlin: From Bowie To Kennedy To Marlene Dietrich. Retrieved from Culture Trip: https://theculturetrip.com/europe/germany/articles/famous-quotes-about-berlin-from-bowie-to-kennedy-to-marlene-dietrich

Belleville, E. (2019, October 29). What's the future of co-working in Berlin? Retrieved from The Local: https://www.thelocal.de/20191029/who-works-the-future-of-berlins-co-working-scene-germany

Berle Jr., A. (2015). The Marshall Plan in the European Struggle. Social Research: An International Quarterly, 199-218.

Berliner Morgenpost. (2018). Berlin’s top 200 employers in 2017. Retrieved from Business Location Center: https://www.businesslocationcenter.de/en/information-for-new-berliners/working-in-berlin/employers-berlin/

Buck, T. (2019, August 28). East Germany’s economy struggles to catch up with the west. Retrieved from Financial Times: https://www.ft.com/content/e9fde68c-c8cd-11e9-a1f4-3669401ba76f

COMATCH. (n.d.). Retrieved from COMATCH: https://www.comatch.com/

Comdirect Bank. (2018). Number of Fintech startups in Germany as of November 2018. Statista.

de Mol, E. (2019, March 21). What Makes a Successful Startup Team. Retrieved from Harvard Business Review: https://hbr.org/2019/03/what-makes-a-successful-startup-team

Deutschland.de. (2017, October 2). On the path to unity. Retrieved from Deutschland.de: https://www.deutschland.de/en/topic/politics/on-the-path-to-unity

DW. (2019, April 15). More non-EU nationals moving to Germany for work. Retrieved from DW: https://www.dw.com/en/more-non-eu-nationals-moving-to-germany-for-work/a-48328038

EF. (2019). EF English Proficiency Index: Germany. Retrieved from EF Education First: https://www.ef.de/epi/regions/europe/germany/

Erixon, F. (2018). The Economic Benefits of Globalization for Business and Consumers. European Centre for International Political Economy.

Ernst & Young. (2017). Leading start-up cities in Europe in 1st half of 2016 and 1st half of 2017, by value of investments (in million euros). Die Welt.

finleap. (n.d.). Why Fintech in Berlin? Retrieved from finleap: https://www.finleap.com/

Geiss, I. (1997). The Question of German Unification: 1806-1996. Routledge.

German Accelerator. (n.d.). Empowering German Startups to Scale Globally. Retrieved from German Accelerator: https://www.germanaccelerator.com/

German Culture. (2019, December 21). Planned Economy in GDR. Retrieved from German Culture: https://germanculture.com.ua/germany-history/planned-economy-in-gdr/

Gethard, G. (2015, September 2014). https://www.investopedia.com/articles/economics/09/german-economic-miracle.asp. Retrieved from Investopedia: https://www.investopedia.com/
Graebner, N., & Bennett, E. (2011). The Versailles Treaty and its Legacy. Cambridge University Press.
Halle Institute for Economic Research (IWH). (2019). United country – three decades after the Wall came down. Halle: Halle Institute for Economic Research (IWH).
Hemmadi, M. (2019, December 16). Shopify picks Berlin for first engineering hub outside Canada. Retrieved from The Logic: https://thelogic.co/news/exclusive/shopify-picks-berlin-for-first-engineering-hub-outside-canada/
Herzog, D. C. (n.d.). Start Alliance Berlin. Retrieved from Berlin Partner: https://www.berlin-partner.de/en/the-berlin-location/the-place-to-be-for-startups/start-alliance-berlin/
Keynes, J. M. (1919). The Economic Consequences of Peace. London: Macmillan & Co., Limited.
Knight, B. (2010, September 21). The rise of the far-right in the East. Retrieved from DW: https://www.dw.com/en/the-rise-of-the-far-right-in-the-east/a-5996369
Leipziger Volkszeitung. (2017). Städteranking: Leipzig landet auf Platz zwei . Leipziger Volkszeitung.
Ortiz-Ospina, E. (2017, June 17). There is a 'happiness gap' between East and West Germany. Retrieved from Our World in Data: https://ourworldindata.org/there-is-a-happiness-gap-between-east-and-west-germany
Ploeckl, F. (2015). The Zollverein and the Sequence of a Customs Union. University of Adelaide, School of Economics.
Protzman, F. (1989). East Germany Losing Its Edge. The New York Times.
Ragnitz, J. (2007). Explaining the East German Productivity Gap –The Role of Human Capital . Kieler Arbeitspapiere.
SpinLab. (n.d.). SpinLab, The HHL Accelorator. Retrieved from SpinLab: https://spinlab.co/
Statista. (2019). Annual average unemployment rate in Germany 2004-2019. Der Monatsbericht zum Arbeits- und Ausbildungsmarkt in Deutschland.
Statista. (2019). Arbeitslosenquote in Deutschland nach Bundesländern. Bundesagentur für Arbeit.
Statistisches Bundesamt. (2017). Population in the former territories of the Federal Republic of Germany and the German Democratic Republic from 1950 to 2016. Statistisches Bundesamt.
Stokel-Walker, C. (2019, August 18). The hottest startups in Berlin. Retrieved from Wired: https://www.wired.co.uk/article/hottest-startups-berlin-2019
The Local Germany. (2018, October 2). The East-West divide is diminishing, but differences still remain. Retrieved from The Local: https://www.thelocal.de/20181002/the-east-west-divide-is-diminishing-but-differences-still-remain
Uhlig, H. (2008). The slow decline of East Germany. Journal of Comparative Economics, 517-541.
Vogel, N., Gerstorf, D., Ram, N., Goebel, J., & Wagner, G. G. (2015). Terminal decline in well-being differs between residents in East Germany and West Germany. International Journal of Behavioural Development, 115-126.
Vollmer, J. (2015, August 19). Berlin – Europe's New Start-Up Capital. Retrieved from Credit Suisse: https://www.credit-suisse.com/about-us-news/en/articles/news-and-expertise/berlin-europes-new-start-up-capital-201508.html
Yuipco, C. (n.d.). Berlin's rising tech start-up scene: a new hub for Europe. Retrieved from Medium: https://medium.com/berlin-beyond-borders/berlins-rising-tech-startup-scene-bacf7fd6b0e
Yuko, F. (2016, March 29). 3 Reasons Why I Chose to Live and Work in Berlin. Retrieved from Medium: https://medium.com/@wasabi_nomadik/3-reasons-why-i-chose-to-live-and-work-in-berlin-feb7a77684f3

7-Eleven: The King of Convenience in the Kingdom of Thailand

Teegan Johnson

ABSTRACT

In the late 1980’s Thailand was going through a period of rapid economic development and with it came a demand for new types of goods and services. One of the new industries that come out of this time was the convenience store, replacing the more traditional mom and pop shops that have been in Thailand prior. The evolution of the convenience store industry in Thailand is one that revolves around one major driving force, CP ALL, the parent company of 7-Eleven in Thailand. Throughout the time since its introduction in 1990, 7-Eleven has revolutionized its industry through innovation, on its way to becoming “Thailand’s one and only company amongst 100 World’s Most Innovative Companies” (CP ALL, 2019, p.8).

In this paper, I will take a look at the position that 7-Eleven has carved out for themselves in the convenience store market. I will analyze how 7-eleven gained its market dominance and wild popularity in the country, as well as how they used their market leader position to push this new industry to unimaginable heights as they continue to expand and innovate the industry.

INTRODUCTION TO THE CASE

According to Hays (2014) “Thailand had the world's fastest-growing economy for about a decade in the late 1980s and early 1990s.” This fast-growing economy made Thailand an area that was being flooded with newfound wealth. This new-found wealth brought an increased demand for luxuries and services of the western world. During this period in 1988 CP ALL Public Company Limited then known as “C.P. Convenience Store Co., Ltd. was granted a license by 7-Eleven, Inc., USA, to use the trademark of 7-Eleven” (CP ALL, 2019, p.33). This began the rise of one of the biggest and most recognizable and successful brands within all of Thailand.

RESEARCH METHODOLOGY

Data was gathered through a variety of secondary sources including CP ALL Annual reports from the years 2003 to 2018, news articles, case studies, and statistics gathered from Krungsri.

MARKET CAPTURE

“In 1987, the convenience store was first developed by Big C and Central Minimart but soon were drove off the business by the expansion of 7-Eleven of CP group, am-pm, and FamilyMart which started in 1989, 1990 and 1992 accordingly” (Tokrisna, 2005, p.2). These three companies were the major players during the 1990s, but from the very start, 7-Eleven was growing much faster. By 1996 7- Eleven had 715 stores compared to 15 for family mart and 190 for am-pm (TDRI, 2002, as cited in Tokrisna, 2005). The rate of growth was also much higher for 7-Eleven compared to their competitors; by the time 7-Eleven had 1100 stores in 1998, Familymart only had 73 and am-pm had 300(TDRI, 2002, as cited in Tokrisna, 2005). The complete growth in number of stores during the 1990s is shown in table 1.

Table 1. Convenience stores in the 1990s (TDRI (2002) as cited in Tokrisna, 2005)

Year	1995	1996	1997	1998	1999	2000	2001
7-Eleven	na	715	880	1100	1200	1501	1701
Family Mart	na	15	40	73	93	100	160
am-pm	na	190	260	300	330	330	256

From very early on 7-Eleven had established itself as the market leader. But, how was one company able to completely take over a market so early in the life cycle of this new market? The major factor of the early success of 7- Eleven in Thailand is the ownership of CP ALL's parent company, the Charoen Pokphand Group. Today the Charoen Pokphand Group is not only one of the biggest conglomerates in Thailand, but also one of the biggest in the entire world. As of 2018 Charoen Pokphand Group is a $63 billion a year, food, retail, and telecom empire (Yuda, 2019). However, the true size of the conglomerate is impossible to know as so much of the conglomerate is privately held (A bruiser from Bangkok, 1994, para. 4-5). Charoen Pokphand Group started out as a seed shop in the 1920s when brothers Chia Ek Chor and Chia Siew Whooy came to Thailand from China (Charoen Pokphand Group History, para. 1). In the 1950s when the original owner's sons took over that it took its current name and started to grow (Charoen Pokphand Group History, Sowing the Seeds of a Thai Feed Giant in the 1920s, Para. 3). The company entered the feed business and "By the end of the 1960s, CP was already able to claim the position as Thailand's leading feed producer" (Charoen Pokphand Group History, Para. 4) This is around the time that Dhanin Chearavanont took over as a leader, under his guidance the company would see the growth to its current position (Charoen Pokphand Group History, Para. 5). In the following couple of years CP was assisted by domestic political changes in the early 1970s. The collapse of the military regime in 1973 hastened the end of the government monopoly of livestock slaughtering and offered the company an important niche to fill" (Hewison, 1989, p. 144; Suehiro, 1996, p. 230, as cited in Goss, Burch, Rickson, 2000, The historical development of Charoen Pokphand, para. 2). It did not take long for CP to rise to the top and become a leader in this industry. During the 1970s and 1980s, CP made substantial investments in China in a variety of markets including, "the manufacture of motorcycles, machinery, televisions (including satellites), power generation and telecommunication" (Ampalavanar-Brown, 1998, p.620). Additionally, "CP emerged as the largest, broiler chicken and animal and fish feed producer in China by 1990" (Ampalavanar-Brown, 1998, p.625). By the time that CP acquired the rights for 7-Eleven in Thailand, they were already at the top of different industries within the Asian market. As they started to really grow the 7-Eleven brand in "the mid-1990s CP had become Thailand's largest transnational company and Asia's largest agro-industrial conglomerate" (Goss, Burch, Rickson, 2000. The historical development of Charoen Pokphand, para. 6).

During their time in the Chinese market, the Charoen Pokphand Group showed exactly how they are able to be successful in the majority of ventures that they take on. The Charoen Pokphand Group throughout its history was very aware of exactly how business works in their country and the surrounding region. They forged relationships with the local government of China which assisted in their emergence in that market. For example, Ampalavanar-Brown (1998, p.611) explains that "CP's excellent relations with the Beijing government and Shanghai municipal authorities also assisted their entry into the telecommunications, television and satellite and petrochemical industry". The Charoen Pokphand Group also maintained its good relationship with the Thai state. "In 1992, CP joined forces with the Thai state in an aggressive move into the petroleum industry in China." (Ampalavanar-Brown, 1998, p.630). Within this venture with the Thai state, they displayed another one of their keys to success. In this venture, their goal was to "establish an integrated oil/gas enterprise encompassing exploration, production, transportation, and retail of fuel as well as the manufacture of chemicals and plastics" (Ampalavanar-Brown, 1998, p.630). This is the model that the Charoen Pokphand Group likes to operate under, a fully integrated enterprise as it allows them to reach economies of scope and scale to get the most out of each company that they are focused on. The Charoen Pokphand Group also put on display their ability to finance their expansion and growth.

There are several major sources of finance for the CP group in China: the incredibly high ratio of profits accruing to the separate companies; generous bank credit, particularly large syndicated loans from off-shore banks; access to international capital markets; joint-venture finances; and the equally colossal speculative profits from its real estate investments (Ampalavanar-Brown, 1998, p.631).

This conglomerate had and still has access to astronomical amounts of funding so when they want to do something they do it the right way. When they set their sights on the convenience store market in Thailand they went all in, using their experience in other markets and relationships they have built to go in and immediately capture a huge market share.

INNOVATION & GROWTH

After the initial capture of the market, 7-Eleven did not stop, but instead, continued on a path toward success. There were many factors that led to the success of CP ALL and 7-Eleven in Thailand but chiefly among them was their desire for growth and their ability to innovate. Using the status, connections, and business strategy that the Charoen Pokphand Group brought they set out to push the convenience store market to new heights. On their way to achieving this, one of the things that they did was investing in opening a number of supporting the business to help grow 7-Eleven. This has been a tactic that their parent conglomerate had used throughout their rise to the top of the Asian business world.

CPRAM

When the Charoen Pokphand Group first joined the convenience store market they set up C.P. Retailing and Marketing Co., Ltd. (CPRAM, 2019). "C.P. Retailing and Marketing Co., Ltd. was created to support the expansion of their businesses in Thailand. The frozen ready to eat food business was set up in 1988 while the bakery business came a year later in 1989" (CPRAM, 2019, ERA 1: ESTABLISHMENT ERA, para. 1). According to CPRAM's (2019) website, they started very small only having a small bakery style set up in the early days; while frozen food was nothing more than frozen fruits and vegetables in the packaging. However, these early days did bring an innovation that is still a staple of Thailand to this day. 7- Eleven when still in its infancy stage started to sell siu mai and steamed buns, an idea they got while on a business trip in Taiwan (CPRAM, 2019, ERA 1: ESTABLISHMENT ERA, para. 5). These foods are extremely easy for customers to enjoy quickly as they are hot and ready anytime for customers- this is part of the reason why they caught on so quickly with the people of Thailand. CP ALL was constantly trying to create products that would help integrate them into the daily lives of the Thai people and with this invention, they did just that. Nowadays it is not just 7- Eleven that has these products, you can find them all over the city of Bangkok and Thailand as a whole. After the initial phase of this subsidiary, they expanded their operations.

Throughout the 1990s they went away from the bakery-style that they used in the early days and became a more streamlined factory-style set up to keep up with the growing demand from all of the new 7- Eleven locations (CPRAM, 2019, ERA 2: DEVELOPMENT ERA, para. 3). This factory-style enabled 7-Eleven to continue to grow over the coming years.

C.P. Retailing and Marketing Co., Ltd and CPRAM as it would later be known as was and still is innovative in many ways. In the early 2000s they put an emphasis on performance measurement according to international standard systems whether Quality Standard Management ISO 9001:2000, Hazard Analysis Critical Control Points (HACCP), Environmental Standard Management ISO 14001, Health and Safety Management system TIS 18001, and Total Quality Management (TQM) (CPRAM, 2019, ERA 3: GLOBALIZATION ERA, para. 1).

Adopting these standards facilitated growth for the company as it helped improve the quality and efficiency of the company's products (CPRAM, 2019, ERA 3: GLOBALIZATION ERA, para. 2). Another benefit of adopting these international standards is them being recognized by other countries so they could export their products easier (CPRAM, 2019, ERA 3: GLOBALIZATION ERA, para. 2). Over the next several years CPRAM would continue to innovate their operations and would be recognized for their efforts when they won the Total Quality Control (TQC) Award in 2005 (CPRAM, 2019, ERA 4: AIMING TOWARDS EXCELLENCE ERA, para. 2). In pursuit of being the best, CPRAM also invested in technology being used from other parts of the world like an ERP system developed by SAP (CPRAM, 2019, ERA 4: AIMING TOWARDS EXCELLENCE ERA, para. 2). This technology helped integrate the whole company's operations in real-time. Adopting technology like this allowed them to stay ahead of smaller competitors that did not have the capital to make investments like this. The desire to innovate their operations has continued all the way up to today as CPRAM has continued to invest in new technologies to make their operations run smoother. These investments have helped CPRAM become a strong organization that is able to assist the overall operations of CP ALL.

Retailink

Having the ownership of Charoen Pokphand Group and the capital that comes with it allows for investment in vertical integration by creating businesses to develop inputs for the 7- Eleven stores. Normally a convenience store would have to pay a 3rd party for all of the machinery in their store along with the maintenance of it. However, with the establishment of Retailink (Thailand) Co., Ltd. in 1999 CP ALL had a company to operate the business of selling and maintaining retail equipment under their corporate umbrella (CP ALL, 2019, p.33). This gives CP ALL a distinct advantage over their smaller competitors as something as simple as a refrigerator breaking could cripple a small family run business, but for 7- Eleven is just a phone call away from being fixed. This type of vertical integration was very common for the Charoen Pokphand Group. While they were operating their chicken business in China they were involved in all parts of the business.

Of three billion chickens eaten in China in 1994, 300 million were reared by CP while it also exported 220,000 tons of chicken meat as part of the forward integration into meat processing and fast-food retailing which led to joint ventures with KFC (Ampalavanar-Brown, 1998, p.626).

This vertical integration puts up barriers for competitors entering their industry as they have cut down on so many costs by having more control over the supply chain. Another benefit of this vertical integration is that 7-Eleven is able to gain a profit from other people starting up a convenience store, as they are a trusted name when it comes to equipment and maintenance needs.

Counter Service

One of the first businesses that they established was Counter Service Co., Ltd. a value-adding business of bill payment collection (CP ALL, 2019, p.33). They introduced this in 1994, allowing customers to pay bills directly at 7- Eleven locations (CP ALL, 2007, p.7). This was a revolutionary change, as it completely changed the way that the people of Thailand pay their bills forever. Over time CP ALL improved this service drastically. In 2007 they added a service that acted as a secretary to remind users of upcoming bills (CP ALL, 2007, p.7). Counter service also continued to add additional services that you could pay for including vehicle license plate fees, refilling money into Easy Pass, payment for bus tickets of Transport Co., Ltd., and payment for overdue water bills (CP ALL, 2013, p.26). Today “It offers payment service through more than 600 vendors, providing over 1,300 types of services” (CP ALL, 2018, p.41). With each added service it has brought in new potential customers into their 7- Eleven stores who may have come into the location to pay a bill but ended up buying something that they need.

Joint Ventures

According to an article in America banker from 1995 “NationsBank Corp. said it is the first bank to implement a pilot of the Visa Cash Card” (NationsBank, 1995). CP All wasted little time in adopting this new technology in Thailand when they Incorporated Thai Smart Card Co., Ltd. a few years later in 2001(CP ALL, 2019, p.33). These cards allow users to buy goods and services on a card that is pre-loaded with cash. When empty these cards can be reloaded at 7-Eleven locations all over the country, giving people another reason to go into 7-Eleven on a regular basis. This is a joint venture with Government Saving Bank, Krung Thai Bank Public Company Limited, which is two of the largest banks in Thailand (Thai smart card, 2019, About Thai Smart Card, para. 1). They are also partnered with some of the biggest companies in Thailand including True Corporation Public Company Limited, NTT DATA Corporation, Loxley Public Company Limited, and SVOA Public Company Limited (Thai smart card, 2019, About Thai Smart Card, para. 1). CP ALL is a company that was and still is trying to introduce new and exciting technology not only to their industry but their country as a whole.

An area that they did not innovate was opening up convenience stores in gas stations. By the year 2002 7-Eleven only had 180 convenience stores in gas stations compared to 1,120 for the rest of the market (CP ALL, 2004, p.15). This is surprising because as the market leader you would expect them to be to have the majority of locations. However, this position would quickly change when CP ALL and PTT Public Co., Ltd. co-operated to open 7-Eleven stores exclusively at national PTT locations (CP ALL, 2004, p.15). An important thing to note about PTT Public Co., Ltd. is that they are a state-owned organization and also one of the biggest gas stations throughout the country. A unique aspect of doing business in Thailand is the clear favoritism given to people and organizations that are closely tied to the government. 7-Eleven used this relationship that the Charoen Pokphand Group has with the Thai state to completely flip the script on their competitors and by 2010 they had 870 stores in gas stations while their competitors had 1,205 (CP ALL, 2011, p.39). 7-Eleven managed to achieve amazing growth through this co-operation, in the 8 years since it started they opened up 690 new stores, while their competitors only added 85.

Other Subsidiaries

Another factor to the success of CP ALL was instead of outsourcing functions of the business, they created subsidiaries to handle those parts of the operation. These include Gosoft Co., Ltd. to handle Information technology services, MAM Heart Co., Ltd. in charge of marketing and advertising activities, and Dynamic Management Co., Ltd. who was in charge of logistics services and distribution of merchandise (CP ALL, 2019, p.34). Having all of these functions in house gave them a competitive advantage over their competitors as all parts of their business were strategically aligned. This enabled CP ALL to create a company that had complete control of their industry.

Through the early years of 7-Eleven and CP ALL one thing is very clear, they were willing to spend money on new emerging ideas and technology. This forward-thinking attitude helped them quickly gain a dominant position within their industry. By the year 2003, they held a total of 2,397 stores out of 4,462 in the country (CP ALL, 2004, p.15).

Franchisee Model

A major factor that contributed to 7- Eleven's growth is the franchise model that they were partially operating under. 7- Eleven operates 3 different types of stores, corporate-owned stores, franchised stores and sub-area lease stores (CP ALL, 2019, pp.39-40). By the time of 2001 7-Eleven had 355 franchised stores and another 89 sub-area license stores accounting for 25% of all stores (CP ALL, 2004, p.15). There are many different reasons to adopt a franchising strategy, for 7-Eleven it was a way for them to reduce the costs of opening up all their stores as corporate-owned stores while still gaining the benefits of growth. These new stores also helped build up brand awareness throughout the country. These stores served as a way of expanding into new untested markets without assuming all the risks of doing so. There however may be another reason why 7-Eleven has used franchising in their growth, a complete lack of regulation. In Thailand "Franchises per se are governed by contract, and there is no franchise registration system requiring submission of documents (Wong, 2019, Thailand, para. 1)". This means that the deal is completely up to the franchisor and the franchisee, leaving the franchisee with little bargaining power. Despite the concerns of not having protection from the Thai government, many Thai people open up 7-Eleven franchises, as it gives entrepreneurial people an opportunity to run a franchise of a proven business model. According to Hofstede insights, Thailand has a moderately high level of uncertainty avoidance (Hofstede, 2019). This indicates that the Thai people would prefer to go with what is known instead of doing something new. Once 7- Eleven was able to build brand awareness they became a very popular destination for aspiring entrepreneurs. The result of this is that over time the amount of franchise has grown substantially.

MARKET GROWTH

Over the past 30 years, 7-Eleven has been operating in an industry that has rapidly grown. In the early days, the growth was very rapid however, this pace would only pick up as 7-eleven and other convenience stores expanded their operations exponentially. In 2005 7-Eleven operated 3311 out of a total of 6452 stores in Thailand (CP ALL, 2006, p.31). However, by 2018 Thailand had a total of 17,205 stores, of which 10,988 were 7-Eleven's (CP ALL, 2019, p.42). Over the past several years "Convenience stores have shown the highest rates of growth in investment of all modern trade store formats and have also taken the greatest market share from traditional retailers" (Ninkitsaranont, 2019, convenience stores, para. 1). This growth can be attributed to the expansion strategy that had been the aim of CP ALL from the moment they first entered the market. The early investments that the company made had started to pay off as they facilitated the rapid growth of the company and the industry. Table 2 illustrates the growth that the company has seen from 2005 to 2018.

Table 2. Growth of the convenience store market

Year	2005	2006	2007	2016	2017	2018
7-Eleven	3,311	3,784	4,279	9,542	10,268	10,988
Other	3,661	3,954	4,244	5,622	5,983	6,217
Total	6,972	7,738	8,523	15,164	16,251	17,205

CP ALL, 2008, p.39. CP ALL, 2019, p.42.

POPULARITY

I have discussed how the company grew their company throughout the years, but this perspective does not show just how popular 7-Eleven has become to an average person in Thailand (Thai, or otherwise). "On average, a total of 12 million customers nationwide per day purchased products and services from 7-Eleven stores in 2018" (CP ALL, 2019, p.40). According to the World Bank (2018), Thailand has a population of 69 million people, so this means that every day about 16% of the entire country goes to 7-Eleven. While this figure is not perfect, as it does not include tourists in the total population, it is still very clear that 7-Eleven has ingrained themselves into the culture of the Thai people. 7-Eleven has also managed to capture the tourist market and has become a place that they can always rely on during their travels in Thailand. The tourism industry is one of the biggest industries in Thailand, "tourism now rivals manufacturing in economic importance to Thailand when tourist reached 30 million in 2015 and tourism revenue accounted around 11% of GDP" (Amornvivat, Pruedsaradch, Akaraphanth, Charoenphon, Bunsupaporn, 2016, p. 9). As a retail company, 7-Eleven greatly benefits from this booming industry that helps bring in new customers.

Thai People

The fit of 7-Eleven into the lives of the Thai people has been a seamless fit. The Thai people have adopted 7-Eleven as their own and have made it an icon of the country. One of the major things that 7-Eleven offers is of course food. 7-Eleven offers all types of food from frozen foods to ready to eat snacks. This is very important for Thailand because as Panrit "Gor" Daoruang (2007, para. 2) says in his blog "In Thailand, we have 3 meals the same as other countries. Breakfast, lunch, and dinner are the main meals but Thai people like to have snacks between meals. A lot of snacks." 7-Eleven serves as a place that the Thai people can go for any meal of the day when they are going about their lives. The most important aspect of this is the tendency for the Thai people to snack a lot. The way that 7-eleven set up their operations was getting people to come in the store as often as possible, this was achieved through the previously mentioned services that 7-Eleven offers. When the Thai people go into 7-Eleven for one of these services it is very likely that they will also use that opportunity to grab a snack and as a result, give 7-eleven more business. The people of Thailand have a notorious sweet tooth, putting sugar on pretty much any food they eat.

In 1997, the average Thai person consumed 19 teaspoons of sugar a day. That's more than three times the amount of daily sugar intake recommended by the World Health Organization (WHO), which is only six teaspoons. A decade later, the Thai number had risen to 25 teaspoons per day. A further decade-plus has passed and, despite various campaigns and initiatives to tackle the nation's excessive sugar intake, it is currently around 28 teaspoons - more than four times the WHO's recommended amount (Pisuthipan, 2019, para. 1-2).

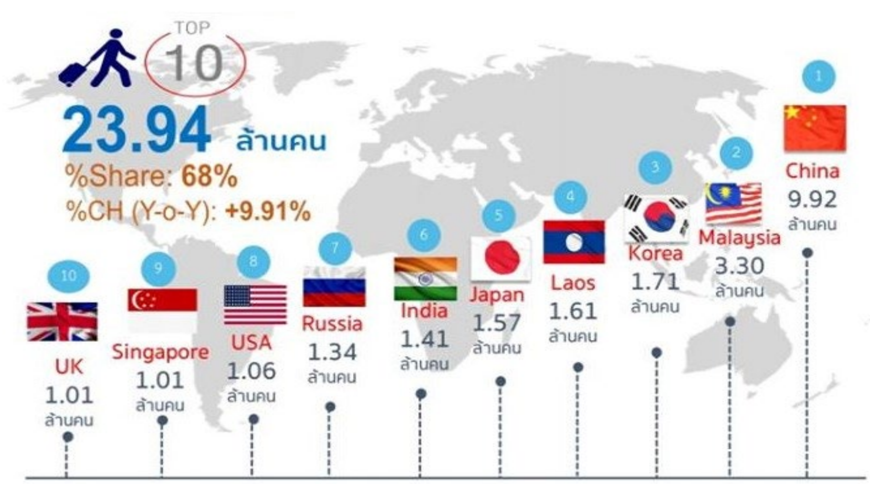
This is a serious problem for the country as a whole as this level of sugar intake can have disastrous effects on one's health. For 7-Eleven, on the other hand, this sweet tooth is a source of revenue from customers that come searching for a sugar fix. 7-Eleven is open 24/hrs in most of their locations in Thailand, so they are always there for people that need something sweet.

Maybe the most important thing about 7-Eleven is the convenience of it. In a big city like Bangkok, there is always a 7-Eleven within a 5-minute walk from where you are. There are often times where you can quite literally see another 7-Eleven from the inside of a 7-Eleven. In Bangkok alone, there are just under 5000 7-Eleven stores (CP ALL, 2019, p.30). This means that everyone in Bangkok has a local 7-Eleven that they can run to when they need something quickly. This is a model that Thailand has been using for a long time as 7-Eleven runs a somewhat similar model to the traditional mom and pop shops that they have been replacing.

While 7-Eleven is replacing some small mom and pop shops in Thailand, they are assisting other small businesses in running their operation. In a recent partnership "Counter Service and SCB is introducing "SCB Service," a banking agent service at over 11,100 7-Eleven Counter Service locations nationwide" (SCB, 2019, para. 1). This new service allows customers to use 7-Elevens as a bank outside of regular banking hours. This partnership "offers not only digital deposit and withdrawal services, but we also serve non-digital users with deposit service requiring an account number and a mobile phone number to proceed" (SCB, 2019, para. 5). With so many small Thai businesses running only on a cash basis, a place where they can deposit their money securely is a huge advantage. This also helps the older Thai generation who are not up with the latest technology to have banking services around the clock. Once again CP ALL has shown a desire to be at the forefront of change in what it means to be a convenience store.

Tourists

During the past 30 years that tourism has become a huge driving force for the economy of Thailand. Tourists from all over the world come to Thailand for a variety of different reasons. These reasons include vacation to see the beautiful scenery, backpacking, business, medical tourism, and sex tourism among others. In diagram 1 it shows the breakdown of the nationalities of tourists in Thailand. As you can see the country with the highest number of tourists is China with almost 10 million a year. There is also a lot of western tourists, with a lot coming from Russia, the United States and the U.K.



(Thailand's tourism accelerates, 2018)

7-Eleven relies on the tourism industry in order to open so many locations across the country, while Tourist relies on 7-Eleven for reliable consistent prices. In Thailand, there is a dual price structure where there is a local price and a tourist price. For example "Tourists in Thailand now pay almost 10 times more than local residents to visit national parks" (Mullin, 2015, para.1). This dual pricing exists for almost everything in the country. Smaller shops in Bangkok have this dual pricing policy in effect on the goods in their shops so many tourists just stick to 7-Eleven for a fair price. Another issue in smaller shops is there not being any posted price, so they can make up a price on the spot.

7-Eleven strives to be as accommodating as possible for all tourists no matter where they come from. 7-Eleven offers their employees training on different languages, including Chinese, English, Russian and Khmer (CP ALL, 2019, p.92). This makes 7-Eleven a very attractive location to go as you know you will be able to communicate with the store employees. There are many stores and places in Thailand where it is next to impossible to communicate with locals. When there is a store that actively encourage their employees to take language courses through their training program it instantly becomes a go-to for tourists.

7-Eleven has a huge advantage over their competitors because of the worldwide brand of 7-Eleven. Even if you come from a country that doesn't have 7-Eleven you have definitely heard of it through movies and television. For tourists coming from North America 7-Eleven serves as a reminder of home while far away from it. Even though 7-Eleven is very different in Thailand they still offer the comforts of home that you come to expect from 7-Eleven. The main attraction of 7-Eleven for any western tourists is the toastie. A toastie is a grilled cheese that you can get from 7-Eleven's in Thailand. 7-Elevens are often packed in busy areas of Bangkok at 2 am as hungry tourists wait around for their toasties. With the toastie, 7-Eleven has discovered the power of nostalgia as many westerners grew up on very similar food growing up and when they are able to get it again they are drawn to it. This brand awareness helped with people from Japan as well because they are the only country in the world that has more 7-elevens than Thailand. 7-Eleven also has products catered towards people from Japan with the sushi cubes and noodles that they offer. 7-Eleven does a very good job of identifying and meeting the needs of customers that aren't even from Thailand.

CONCLUSION

The last 30 years have seen the rise of one of the most successful and popular companies in all of Thailand. From the moment of the initial market capture, 7-Eleven has been on a path of growth and innovation in their industry. Using the knowledge and assistance of their parent company they were able to capture the position of early market leader and start on a path towards growth. This growth has been facilitated by the vertical integration that they have invested in to make their operations more cost-effective and run much smoother. 7-Eleven has continued to look for areas that they can add value, either in their own processor for their customers. 7-Eleven in Thailand is a company that is aimed to satisfy the needs of its customers and to offer them the best possible experience. 7-Eleven has ingrained themselves into the market that they serve in Thailand, so it is hard to imagine a future of Thailand without 7-Eleven.

REFERENCES

About Thai Smart Card. (n.d). Retrieved December 17, 2019 from https://www.thaismartcard.co.th/about.php

A bruiser from Bangkok: Charoen Pokphand, a conglomerate from Thailand, may be the largest single foreign investor in China. (1994, November 26). The Economist, 333(7891), 70+. Retrieved from https://link-gale-com.ezproxy.library.uvic.ca/apps/doc/A15906894/ITBC?u=uvictoria&sid=ITBC&xid=bc86a09b

Amornvivat, S., Pruedsaradch, P., Akaraphanth, L., Charoenphon, V., Bunsupaporn, K. (2016). Insight Thai Tourism: Sustaining Success. Retrieved from https://www.scbeic.com/en/detail/file/product/2953/ekn1rppsq7/EIC_Insight_ENG_Tourism_2016.pdf

Ampalavanar-Brown, R. (1998). Overseas Chinese Investments in China - Patterns of Growth, Diversification and Finance: The Case of Charoen Pokphand. The China Quarterly, (155), 610-636. Retrieved from www.jstor.org/stable/655952

Charoen Pokphand Group History. (n.d). Retrieved December 17, 2019 from http://www.fundinguniverse.com/company-histories/charoen-pokphand-group-history/

CP ALL. (2004). Annual Report 2003. Retrieved from https://www.cpall.co.th/wp-content/uploads/2018/05/Annual_Report_2003_EN.pdf

CP ALL. (2006). Annual Report 2005. Retrieved from https://www.cpall.co.th/wp-content/uploads/2018/05/Annual_Report_2005_EN.pdf

CP ALL. (2008). Annual Report 2007. Retrieved from https://www.cpall.co.th/wp-content/uploads/2018/05/Annual_Report_2007_EN.pdf

CP ALL. (2011). Annual Report 2010. Retrieved from https://www.cpall.co.th/wp-content/uploads/2018/05/Annual_Report_2010_EN.pdf

CP ALL. (2013). Annual Report 2012. Retrieved from https://www.cpall.co.th/wp-content/uploads/2018/05/Annual_Report_2012_EN.pdf

CP ALL. (2018). Annual Report 2017. Retrieved from https://www.cpall.co.th/wp-content/uploads/2018/05/AR2017-En-HiRes.pdf

CP ALL. (2019). Annual Report 2018. Retrieved from https://www.cpall.co.th/wp-content/uploads/2019/04/CPALL-AR2018_EN_Final_140519-1.pdf

Daoruang, P. (2007, February 6). The Meals I Eat. THAILAND LIFE. Retrieved from https://web.archive.org/web/20121124073511/http://www.thailandlife.com/1997-2001/the-meals-i-eat.html

ERA 1: ESTABLISHMENT ERA. (n.d). Retrieved December 17, 2019 from http://www.cpram.co.th/en/about-history-2531-2535.php

ERA 2: DEVELOPMENT ERA. (n.d). Retrieved December 17, 2019 from http://www.cpram.co.th/en/about-history-2536-2540.php

ERA 3: GLOBALIZATION ERA. (n.d). Retrieved December 17, 2019 from http://www.cpram.co.th/en/about-history-2541-2545.php

ERA4: AIMING TOWARDS EXCELLENCE ERA. (n.d). Retrieved December 17, 2019 from http://www.cpram.co.th/en/about-history-2546-2550.php

Goss, J., Burch, D., Rickson. R.E. (2000). Agri-Food Restructuring and Third World Transnationals: Thailand, the CP Group and the Global Shrimp Industry. World Development, 28(3), 513-530. Retrieved from https://www-sciencedirect-com.ezproxy.library.uvic.ca/science/article/pii/S0305750X99001400#BIB88

Hays, J. (2014). ECONOMIC HISTORY OF THAILAND: POST-WAR BOOM AND THE THAKSIN AND POST-THAKSIN YEARS. Retrieved December 15, 2019, from http://factsanddetails.com/southeast-asia/Thailand/sub5_8g/entry-3310.html

Hofstede Insights. (2018). Country Comparison - Hofstede Insights. Retrieved December 17, 2019 from https://www.hofstede-insights.com/country-comparison/thailand/

NationsBank in test of Visa Cash Card. (1995, October 13). American Banker, 160(198), 11. Retrieved from https://link-gale com.ezproxy.library.uvic.ca/apps/doc/A17596981/ITBC?u=uvictoria&sid=ITBC&xid=02768adf

Ninkitsaranont, P. (2019). THAILAND INDUSTRY OUTLOOK 2019-21 MODERN TRADE. Retrieved from https://www.krungsri.com/bank/getmedia/9fa1e9ce-7b5f-4191-af82-d4d6041d1914/IO_Modern_Trade_190829_EN_EX.aspx

Mullin, K.L. (2015, Febuary 15). Dual-pricing in Thailand: Should foreigners really pay more?. Asian Correspondent Retrieved from https://asiancorrespondent.com/2015/02/dual-pricing-in-thailand/

Pisuthipan, A. (2019, July 30). The problem of Thailand's sweet tooth. Bangkokpost. Retrieved from https://www.bangkokpost.com/life/social-and-lifestyle/1721303/the-problem-of-thailands-sweet-tooth

Ross, D. (2018, March 22). Thailand’s tourism accelerates. TTR Weekly. Retrieved from https://www.ttrweekly.com/site/2018/03/thailands-tourism-accelerates/

SCB and CP ALL announce key digital financial partnership, introducing. (n.d). Retrieved December 17, 2019 from https://www.scb.co.th/en/about-us/news/mar-2019/nws-digital-financial-partnership-7-11.html

Thailand. (n.d). Retrieved December 17, 2019 from https://data.worldbank.org/country/thailand

Tokrisna, R. (2005). THAILAND CHANGING RETAIL FOOD SECTOR: CONSEQUENCES FOR CONSUMERS, PRODUCERS, AND TRADE. Pacific Food System Outlook. Retrieved from https://www.pecc.org/resources/doc_view/394-thailand-changing-retail-food-sector-consequences-for-consumers-producers-and-trade

Wong, K. (2019). Franchise Registration Requirements in ASEAN Countries. Retrieved December 17, 2019 from https://gettingthedealthrough.com/guide/185/article/6575/franchise-franchise-registration-requirements-asean-countries

Yuda, M. (2019, June 14). Thai magnate grooms new generation for $63bn CP empire. Nikkei Asian Review. Retrieved from https://asia.nikkei.com/Spotlight/Asian-Family-Conglomerates/Thai-magnate-grooms-new-generation-for-63bn-CP-empire

China’s Rise to the World Stage: How China’s Manufacturing Industry is Adapting in the Face of Failure and the Implications of change for multinational enterprises

Wyatt Matthews

ABSTRACT

For decades, China has been the world’s exporter of cheap goods, with a market that is dependent on the business of developed economies. The central idea of this paper argues that China’s manufacturing industry has outgrown its comparative advantage in cheap manufacturing, as variable cost drivers increase with time. This has occurred through a rise in education, wage expectation, and environmental regulation, which are all correlated results of a growing industry and economy. The imposing pressure of these factors have created stress for multinational enterprises and the domestic Chinese economy alike. It is argued that the manufacturing industry must transition to an independent innovator of highly sophisticated and technologically advanced goods. ‘Made in China 2025’, a government lead initiative to develop the manufacturing industry, is likely the solution to such a needed transition. This initiative has proven, however, to stoke U.S.-China tensions and was a significant contributor to the trade war. Regardless of how capable China may be of achieving such a transition, the fate of its standard manufacturing practices, and the implications its failure could pose on multinational enterprises, are top of mind. Through analysing an assortment of primary and secondary works, with news articles to supplement, this paper seeks to provide a conversation regarding how the manufacturing industry has grown, and where it currently stands in the midst of an ambitious transition within the context of global competition and cost feasibility.

INTRODUCTION

China has a rich and expansive history, but its relationship with globalization and the acceptance of foreign capital began only 40 years ago. China is often viewed with awe, as a nation whose economic growth and rise to the world stage is mystifying. Up until now, the country has enjoyed consistent and continued growth, largely in part to their world-leading manufacturing industry. In the past decade, it has become clear, however, that continued dependence on its current position in the manufacturing industry is no longer feasible. The nation’s impressive economic growth is giving way to the increased costs associated with rising education rates, wage expectations, and environmental regulations. As these cost drivers increase, China’s place in the cheap manufacturing sector is becoming less competitive against the global market. This paper will discuss how these factors have come to fruition, and further, how China’s ‘Made in China 2025’ is a possible solution that will bring mainland manufacturing into a continuous, saleable, future. Additionally, this paper will discuss how China’s manufacturing transition has played a lead role in the U.S.-China trade war and how such a conflict impacts the industry. Through evaluating geographic competitors and examining how this major rift impacts economic regions, firms, and brands, this paper will arrive at an in-depth analysis of how China's manufacturing industry is adapting in the face of failure and the implications of change for multinational enterprises.

THE HISTORY OF CHINA'S RISE AND THE BIRTH OF DOMESTIC MANUFACTURING

After the leap

Mao Zedong, the first Chairperson of the People's Republic of China (PCBOC), was responsible for the economic policy famously coined by the Republic as the 'Great Leap Forward' (GLP) (Chan, 2001). The GLP's mission was to mobilize the Chinese proletariat in a rapid, 'all hands on deck' effort to transition China from an agrarian society to a socialist industrial state (Chan, 2001). This comprehensive development policy was to be rapid and accomplished without involvement from foreign markets. What resulted was shocking and traumatic to China's economy and people. An estimated 15 to 46 million people died in the peak of the disaster, between 1958 and 1961 (Chan, 2001). Until the late 1970s, under Mao's leadership, a private company was viewed as an enemy to the state and therefore prohibited (Lai, 2006). Mao's reign was the last true representation of textbook communism and sole-state self-reliance in China.

After the 1970s and Mao's fall, China began to open its doors to the rest of the world (Lai, 2006). The reasons for China's opening are extensive, but can be largely summarised by three elements: the value of trading domestic natural resources, interest in state performance on a global scale, and desire for foreign investment capital (Lai, 2006; Gittings, 2005). It was these factors which inspired the Republic Leader, Deng Xiaoping, to historically open China's doors to the global market in 1978, forever altering its future (Gittings, 2005). This was the beginning of China's journey to globalization and led to its eventual place on the world stage as seen today (Gittings, 2005). What resulted was private foreign businesses taking a significant stake in the market, along with state-owned enterprises (SOEs) and mixed ownership firms (Lai, 2006).

A timeline of the rise of manufacturing in China

China opening to private enterprise and foreign direct investment (FDI) is the largest contributor to its place on the world stage today. In the span of just 20 years, between 1980 and 2000, China went from exporting $18 million USD to $240 billion USD respectively (Zhang K. H., 2006). This brought China from a world ranking of 26 to seventh in terms of top exporting nations (Zhang K. H., 2006). Today, in 2019, only nineteen years later, China is the world's largest exporter with a total of $2.494 trillion USD, exceeding America by $829 billion and Germany by $937 billion (Workman, World's Top Export Countries, 2019).

In a report on China's manufacturing sector, Lianshui Li and Zhanyuan Du (2016) assert that in "…2010, the total output value of China's manufacturing sector was 60.96 trillion yuan, which was 11 times as much as that in 1995" (p. 4). It is further stated that transportation equipment, computers and other electronics, as well as metal smelting equipment, compose the manufacturing industry's largest outputs (Li & Du, 2016). By 2016, China had become the world's largest manufacturer (Li & Du, 2016).

On the topic of how increased wages are affecting China's economy, *Winners and losers from a commodities-for-manufactures trade boom,* performed in the Journal of Economics, states that "The OLS [linear regression] estimates…suggest that larger export demand shocks are associated with higher growth in wages over these ten years" (p. 59). This study later identifies that such a supply shock disproportionately impacts the manufacturing industry in China (Costa, Garred, & Pessoa, 2016). Labour size is controlled in these calculations with an assumed age range between 18 and 60 years old, with 60 years old being the mandatory retirement age for men and 50 years old for women (TRADING ECONOMICS, 2019).

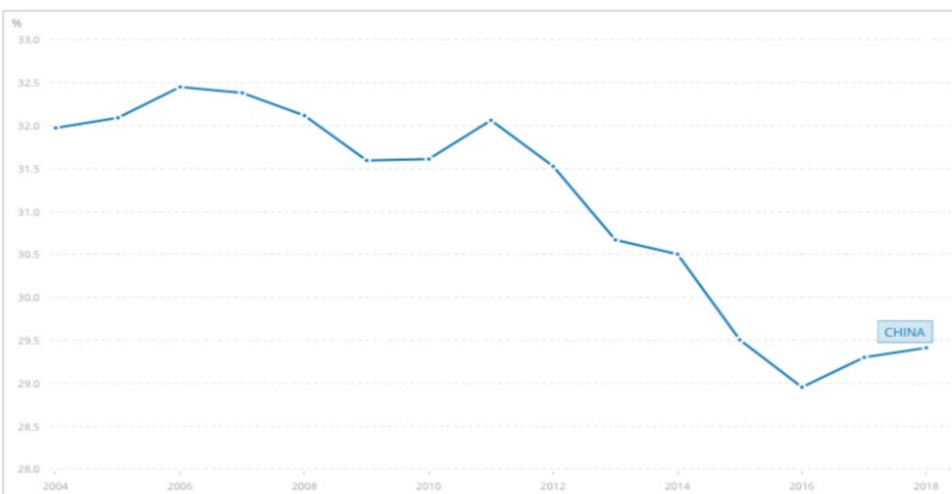
Despite China's consistent economic growth, manufacturing's contribution to China's total GDP between 2006 and 2018 has been consistently decreasing, as seen in Figure 1 (The World Bank, 2019). These contributions have gone from 32.45% to 29.41% respectively (The World Bank, 2019). It is highly likely that this 3.03% contribution drop is due to both exponential growth of other emerging industries, and the aforementioned export demand shock suffered due to the rising wage expectations (The World Bank, 2019; Costa, Garred, & Pessoa, 2016).

On an all-industry level, China's workforce employed by SOE's between the late 1970s and 2005 fell dramatically, by 54% (Brandt & Rawski, China's Great Economic Transformation, 2008). This brought state sector employees from a high of 78% in 1978, to a low of 24% in 2005 (Brandt & Rawski, China's Great Economic Transformation, 2008). Such a dramatic shift of labor dependence from state to private sectors shows how dependant labor is becoming on private enterprise. Further, this indicates that the growing portion of labour under private employment is now exposed to the risks associated with fluctuations in China's cost comparison to other countries and how private firms react to supply shock.

Foreign multinational use of manufacturing in China

It is important to understand China's major relationship with foreign nations and economic unions to attain a better understanding of how China serves its global partners. In the context of China's relationship with the United States and the European Union, it is also pertinent to understand how the U.S.-China trade war impacts these relationships.

Figure 1: China's manufacturing industry as a percent contribution to GDP (2004-18)



(The World Bank, 2019)

Unsurprisingly, America is China's largest export partner, trading $479 billion in 2018, or over 19% of China's total exports (Workman, China's Top Trading Partners, 2019). The existence of low production and cost efficiency in America has caused production to be exported to China (Hombert & Matray, 2018). It is difficult to measure China's true, consistent, export trade capacity with the United States in light of the recent trade war. Since the beginning of the trade war in March 2018, tariffs of 15% and higher have been imposed bilaterally between the nations, with a specific focus on production exports of raw metal materials from China (Liu, 2018). The trade war was largely started as a measure by the United States to protect domestic jobs, as well as a reaction to 'Made in China 2025', which will be discussed later in this paper (Liu, 2018). What the future holds for U.S.-China export trade in a post-trade war climate can only be speculated. Scholar Alexander Lukin argues that there will likely be no significant changes in the near future (Lukin, 2019).

It is also critical to analyse the Chinese export trade relationship with the European Union (EU) firms, as they are a significant trade partner. Interestingly, as a result of the negative impact from the U.S.-China trade war, the EU has experienced accelerated export trade with China as it becomes more expensive to export to the United States (Mau, 2017). Over the past ten years, the EU's participation in importing manufactured goods from China has fluctuated, but has remained on an upward trend (TRADING ECONOMICS, 2019). As of September 2019, China's exports to the EU are just over $36 million USD. EU firms that operate export and trade activities within China, however, have been adversely affected by this trade dispute, in contrast with the benefit EU firms have enjoyed in their respective domestic markets (DW, 2019).

Historic use of China's transitioning economy for cost-effective production is also popular in Japan. According to the Japanese External Trade Organization (JETRO), as of 2001, 54.4% of Japan's off-shore production activities, for both technology and labour-intensive production, are hosted in mainland China (Zhang K. H., 2006). Interestingly, before the 1990s, China only received 5% of Japanese off-shore, Asian, production activities. Kevin Zhang (2006), of the *Studies in the Growth Economies of Asia Series*, argues that this rapid increase is due to the "…flying-geese theory… [where Japan's] economic development at a high-level result in the migration of mature industries, especially those in which labor costs are critical for competitiveness, to less developed economies" (p. 118). This idea of developed nations using China as a low-cost option for manufacturing is common among multinational enterprises (MNE)s in market economies across the globe. The stressed importance around the cost for competitiveness is cause for concern as the cost of labour in China gradually increases.

CHINA REIMAGINED

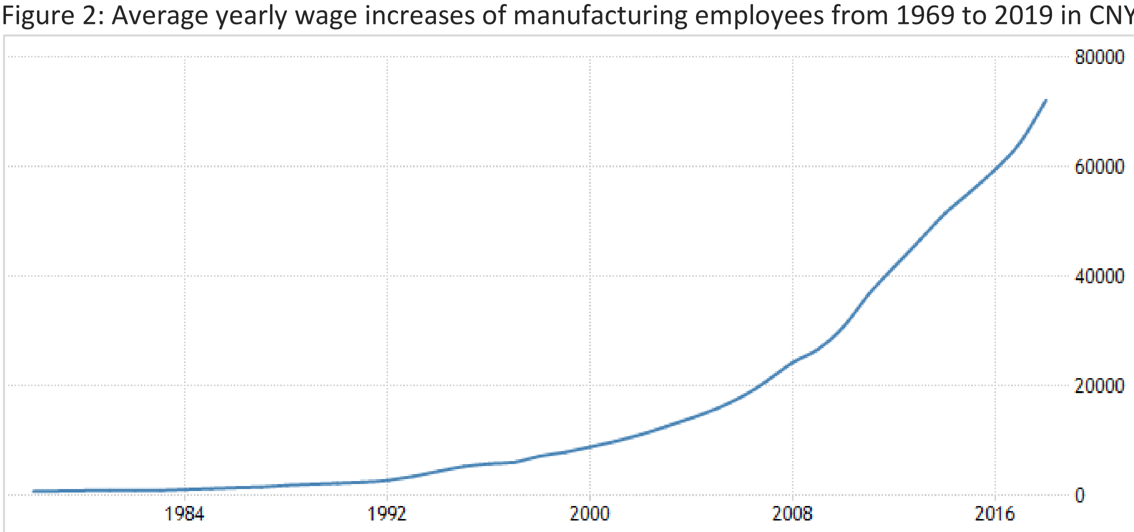
As China approaches its transition in the world economy, a plurality of factors disrupting its pre-transition activities and strengths can be observed. Namely, the nation's tremendous growth has seen the rise of average education and wage expectations. It is critical to discuss these trends in order to arrive at an understanding of what the possible implications are for the future of manufacturing in China. Additionally, it is equally impactive to evaluate 'Made in China 2025,' China's likely response to keep manufacturing competitive in the post-transition Chinese economy.

Growing education and wage expectations

In a sample study performed in 'China's Great Economic Transformation,' Loren Brandt and Thomas Rawski preformed a test comparing the rate of those without a basic level of education among a group of sample populations. As of 2000, 51% of males in the 60-year-old range were without education (Brandt & Rawski, Education in the Reform Era, 2008). In the same year, males without formal education was at 18% for 20-year-old males and a staggeringly low 6% for 10-year-old males (Brandt & Rawski, Education in the Reform Era, 2008). Similar statistical results were observed in the female test populations. This generational snapshot taken in 2000 paints a picture of the tremendous rise in the education of Chinese citizens who, in the coming decades, will comprise a significant majority of the domestic labour market. As of 2018, 7.5 billion students have graduated from Chinese post-secondary institutions – without respect to foreign graduates in China and Chinese graduates abroad (Han, 2019). Currently, the top five most-graduated majors are: medicine, economics, computer science, technology, and business administration (China Schooling, 2015).

It is natural to see wage expectation rise, incrementally, with the increased value of labour output as a result of higher education. The increased cost associated with this phenomenon has put tremendous strain on foreign business activities, distinctively so for the manufacturing sector (Zheng, Zhao, & Li, 2019). A news article from the International Business Times cites that for the last decade, wages have consistently increased by more than 10% each year (Zhang M., 2013). Figure 2 illustrates just how steeply average yearly wages have increased in the manufacturing industry between 1969 and 2019 (TRADING ECONOMICS, 2019). In 2015, Microsoft relocated production of their handsets as a direct result of this cost increase (Zheng, Zhao, & Li, 2019). Tengfei Zheng, Yao Zhao, and Jiarong Li (2018) cited that “world famous enterprises such as Panasonic, Sharp, TDK, Nike, Foxconn and Samsung have set up new factories in Southeast Asia and India” (p. 583). With more developing nations available for low-cost production, China is struggling to stay competitive, and its increased cost resulting from average wage is not helping. The rise of wage expectations is not just having a negative impact on the cheap labor market. Job-seekers are experiencing a unique struggle as well. In a proprietary study by Yang Po on earning expectations of post-graduation employment, it was found that many students are struggling to meet their wage expectations due to both educated labour competition, and lack of demand for such labour (Po, 2011). Po further asserts that many Chinese graduates have to take a material pay cut after graduation to find employment within their first six months of graduation (Po, 2011).

Figure 2: Average yearly wage increases of manufacturing employees from 1969 to 2019 in CNY/Year



(TRADING ECONOMICS, 2019)

Birthed in necessity – Made in China 2025

An *under-developed whirlpool* is a state in which a transitioning economy struggles to establish its independent niche in the global market (Popkova & Sukhodolov, 2017). This hinderance is not achieved by a limit of resources, but instead by a limit of time (Popkova & Sukhodolov, 2017). As China was late in opening to the world economy, it found its niche in serving developed economies with cheap forms of production and manufacturing (Popkova & Sukhodolov, 2017). This, however, is not a means to an end if China's goal is continued growth and market economy dominance. It is argued by Elena G. Popkova and Yakov A. Sukhodolov in a 2017, that the only way out of such a whirlpool is by "…creating the emergence of new circles of development that are based on new innovational cycles" (p. 18). China's manufacturing industry is taking large strides in the pursuit of developing these innovation cycles, as seen by the industry's 377.133 billion yuan investment in research and development, as well as the filing of over 100,000 patent applications in 2010 alone (Li & Du, 2016). 'Made in China 2025' and the biomedical and electric vehicle sectors in which it supports are the most likely innovation cycles to bring China out of its whirlpool and into an unhindered, scalable, future.

Made in China 2025

Just 57 years after Mao Zedong's 'Great Leap Forward', China is introducing another ambitious economic policy, and they couldn't look more different from each other. China's solution to uncertainty in the manufacturing industry, with respect to future positioning and growth, is the 'Made in China 2025' (MIC) economic reform plan (Ling, 2018).

MIC was born out of the realization that serious infrastructure and investment would be required to transition the manufacturing industry past its dependence on serving the world's market economies with cheap, low-cost goods and labour (Ling, 2018). MIC was established in 2015 and aims to develop the Chinese manufacturing market past these low-cost commodities and industrial exports, to high-end, high-tech goods (Cyrill, 2018). This plan is in direct reaction to the growing income of the average Chinese consumer and aims to, in part, serve a wealthier consumer base, both domestically and abroad (Cyrill, 2018). MIC is not just consumer facing, however, and aims to develop high-tech production in the B2B space, taking advantage of enterprise growth locally and globally (Cyrill, 2018). Some of the industries named in the MIC plan include: medical devices, computing, electric vehicles, aerospace equipment, and oceanic navigation equipment (Cyrill, 2018).

It is argued that MIC was one of the main factors which stoked the tensions that allowed for the U.S.-China trade war to take place (Liu, 2018). This is largely due to the concept that America's comparative advantage as a leader in the manufacturing space is in highly specialized and capital-intensive products (Hayes, 2019). Previously, China and the United States were able to exist in a somewhat mutually beneficial relationship, with China providing cheap labour for American MNE exports, and America providing highly sophisticated technology and products to China (Hayes, 2019). Now, with MIC seeking to challenge the United States on its comparative advantages, relationships are beginning to degenerate (Liu, 2018; Hayes, 2019).

The successful implementation of MIC will transition China's manufacturing industry from being hindered by elements of rising education and income, to being dependant on them for its growth (Ling, 2018). This is especially true in the research and development phase of production activities. Ling Li (2018) argues that "research and innovation rely on human talent, therefore, human capital should be nurtured by sound education" (p. 71). This is critical for the survival of China's manufacturing industry, as many emerging high-tech divisions of manufacturing, such as biomedical and electric vehicles, require educated labour to exist. What remains largely unknown is the health and longevity of China's traditional low-cost manufacturing industry, which will exist in tandem, and independently from, this new wave of high-tech manufacturing (Ling, 2018).

Biomedical

The biomedical industry, including biotechnology and biopharma, has seen significant growth recently (Xia, 2017). Vicky Xia (2017), author of the Pharmaceutical Technology Europe, reported that “in 2014, the [biopharma] market was approximately $5.0 billion USD, projected to be the second largest biologics market globally by 2020” (p. 6). This growth has drawn foreign interest as medical giants such as Boehringer Ingelheim, GE, and Pfizer have placed manufacturing and biocentres in mainland China (Xia, 2017). In contrast to the standard manufacturing industry’s struggle with rising education, China’s biomedical firms are struggling to find enough adequately educated and trained individuals to fulfill their workforces (Xia, 2017). It is cited that this is due to a lack of nuanced and up-to-date biomedical domestic university programs (Xia, 2017).

Electric vehicle

China is widely known to be a top polluter, with a significant portion of emissions coming from standard gas cars. In reaction to this, the Chinese Government has put in substantive investment and incentives for foreign and domestic enterprise to grow the electric vehicle (EV) market (Krumwiede & Liou, 2019). The extent of this initiative’s success may surprise those who don’t see China as a leader in environmental issues. Kip Krumwiede and Robert Liou (2019) from the Institute of Management Accountants report that “of the more than 2 million electric vehicles sold globally in 2018, 1.2 million were sold in China, which surpassed the U.S. in 2016 as the largest EV market in the world” (p. 44). The nation’s leading EV brand, BYD, has been having tremendous success, touting a six-fold increase in net income between 2014 and 2018 (Krumwiede & Liou, 2019). Few global players have entered China’s EV market, but those who have, such as Tesla, have also benefited from the industry’s tremendous growth (Makichuk, 2019; Krumwiede & Liou, 2019).

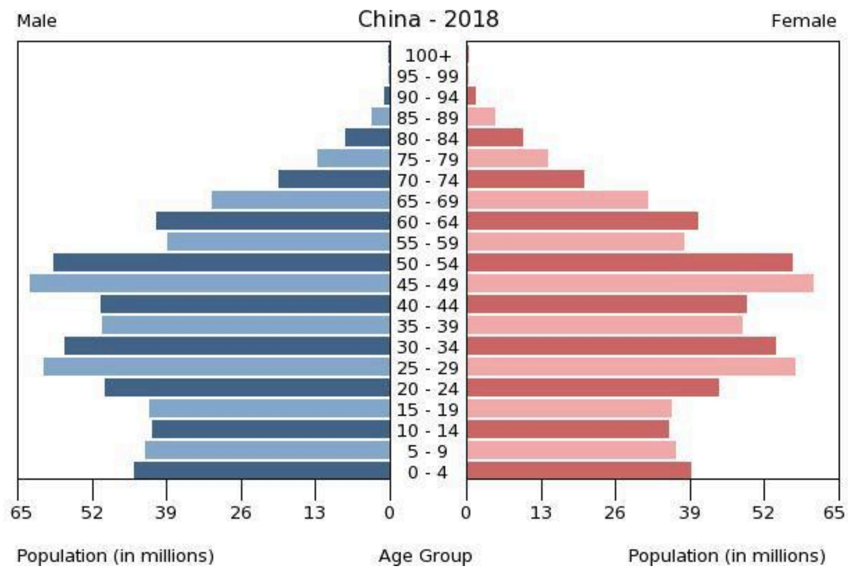
THE SQUEEZE ON MANUFACTURING

There are several external factors creating pressure on China’s manufacturing export industry. The most significant of these factors are the shift in china’s workforce, China’s low-cost competitors, and the cost associated with rising environmental regulation.

The generational transition

The impacts of China’s emerging workforce are accelerated by the speed of which its current workforce ages out. An article written by Deirdre Morris (2012) of CNBC Asia Pacific wrote, “a cheap and young labor force that gave China its reputation as the manufacturing capital of the world is fast eroding” (Morris, 2012). Given that the standard age of retirement for male and female workers in China is 60 and 50, respectively, the age pyramid in Figure 3 should illustrate the emerging concern in the Chinese labour market (TRADING ECONOMICS, 2019; China Age Structure , 2019). Deirdre Morris further supports this cause for concern by stating, “by 2050, more than a quarter of the population will be over 65” (Morris, 2012). With this generational transition fast approaching, MNE and China’s manufacturing economy alike must prepare for the changing climate of workers’ value and needs.

Figure 3: Age pyramid, displaying age range from zero to 100+ for males and females in millions



(China Age Structure , 2019)

Environmental regulation on production

As of 2019, China is the largest emitter of carbon dioxide, with approximately 30% of the world's share of pollution output (Acciona, 2019; Pollution By Country 2019, 2019). This, intuitively, is a direct result of China's industrial boom and the rise of manufacturing, which shows no signs of easing. The rise of healthcare costs associated with pollution, as well as China's global image as an emitter, has pushed the government to issue environmental policy and private sector regulation (Zheng, Zhao, & Li, 2019; Man, 2013).

China's environmental regulation has not yet risen to first-rate standards, however, every incremental price increase on the cost of doing business pushes MNEs closer to relocating manufacturing activities to a cheaper market (Zhang Z., 2013). One such regulatory initiative in China's capital is the Beijing Air Pollution Prevention and Control Ordinance (BAPPCO), which, as a result of stringent regulation, saw "more than 1200 enterprises…punished, [while] 598 enterprises were forced to increase pollution controls" (Zheng, Zhao, & Li, 2019, p. 583). Further, the result of such an increase in cost on low-margin firms is detrimental (Zheng, Zhao, & Li, 2019). As a direct result of BAPPCO, 390 MNEs withdrew from the market entirely (Zheng, Zhao, & Li, 2019).

China's competitors in the cheap manufacturing space

So far, this paper has discussed the rise of costs imposed by factors of education and wage expectation and environmental regulation. As these costs rise, MNEs will have to decide if relocating to a cheaper market is the best course of action. In this case, understanding the geographic competition China faces is imperative in evaluating the decisions in front of firms who are evaluating their future activities in China.

India shares a similar story to China as a country whose cheap production has helped its rise to a world power (Bosworth & Collins, 2008). These countries are developing in similar ways, but India, in terms of production, has not yet risen to the same level as China (Bosworth & Collins, 2008). From 1980 to 2004, India’s GDP doubled, whereas China’s increased by seven times (Bosworth & Collins, 2008). This disparity is, in part, due to India’s boarder constraints, lagging reform, and higher lending rates (Yusuf & Nabeshima, 2010). Despite these constraints, it is highly likely that India will benefit from the rising cost of manufacturing in China and the advent of the U.S.-China trade war (Zhang M., 2013). As of 2019, China’s monthly minimum wage equates to roughly $352 USD, whereas India’s monthly minimum wage is roughly $75 USD (TRADING ECONOMICS, 2019). This material difference of $277 USD in monthly wages alone may be enough to encourage MNEs to relocate to India. Additionally, due in part to the U.S.-China trade war, as well as a partnership between India and the United States, around 200 American companies are considering leaving China and shifting manufacturing to India (The Economic Times, 2019).

The United States’ comparative advantage is the production of high-cost, highly specialized product (Hayes, 2019). As such, the United States doesn’t pose a threat to China as a cheaper alternative to manufacturing labour. Instead, in China’s favour, the creation of MIC is putting the United States’ comparative advantage in jeopardy, as China prioritize more capital-intensive and technologically advanced projects. This brings to light the main reason that the United States is rightfully perturbed by such a progression of manufacturing. In fact, as previously mentioned, this is one of the main motivators behind the U.S.-China trade war (Liu, 2018). China has its work cut out for it, but if the manufacturing industry successfully transitions into MIC, MNEs might consider China as a cheaper alternative for highly sophisticated products in the future (Yang, 2012).

Vietnam is an additional neighbouring low-cost competitor to China and has shown pronounced benefit amid the turbulence caused by the U.S.-China trade war (Reed, 2019). United States President Donald Trump has been pressing American MNEs operating in China to bring manufacturing back to the States (Reed, 2019). American MNEs are leaving China, but as J.R. Reed from CNBC advocates, they are more proportionately moving to Vietnam, among other South-East Asian countries (Reed, 2019). As a result, midway through 2019, Vietnam surpassed China’s economic growth of 6.2% with a strong 6.7% (Reed, 2019). Reed further discusses that the political and financial factors pushing companies out of China outweigh the drop-in manufacturing infrastructure taken when relocating to Vietnam (Reed, 2019).

IMPACT ON MULTINATIONALS AND GLOBAL TRADE PARTNERS

Having completed an in-depth discussion of the timeline of manufacturing in China, rising costs, and the emergence of industry-level transition, it is now important to look at cases of how these factors have impacted MNEs.

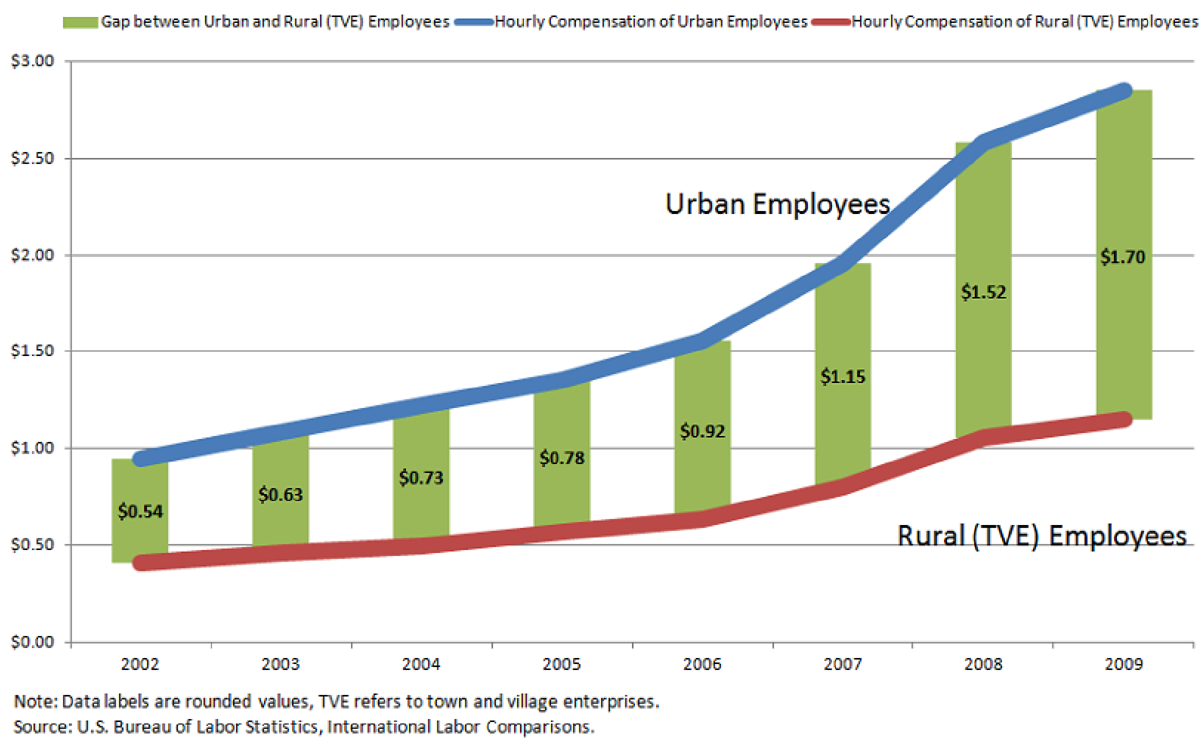
Cases of impact: regions, companies and brands

In leading manufacturing regions, such as the Pearl River Delta, Guangdong Province, the impact on the manufacturing industry is profound (Roberts, 2008). This quiet rice farming community, quickly turned manufacturing hotspot, has experienced an industry which crashed almost as fast as it begun (Roberts, 2008). The Delta was the perfect host for supporting manufacturing of lighting, shoes, toys, electronics and more due to low regulation and cheap labour (Roberts, 2008). After the beginning of 2008, newly imposed labour laws, increased price of commodities and the cancelation preferential exporter policies, quickly set the regional manufacturing industry to a sharp downturn, the impacts of which have been felt by both local and MNE producers (Roberts, 2008). In an article written by Bloomberg, the Federation of Hong Kong Industries (2008) states that “…10% of an estimated 60,000 to 70,000 Hong Kong-run factories in the Pearl River Delta will close this year” (Roberts, 2008). What may surprise some is that the Chinese government has been less responsive to these failures as they prioritize higher value, technologically sophisticated product manufacturing in light of 'Made in China 2025' (Roberts, 2008).

Toy manufacturing giant, Hasbro, has been subject to particular and developing strain as a result of the rising cost of manufacturing in China (Birchall, 2008). In 2008, the company, who sources a majority of their production from China, was anticipating a roughly 15% increase in costs on their Chinese-based manufacturing facilities as a partial result of increased wages (Birchall, 2008). In the same year, Hasbro attempted to lower the costs of their Chinese manufacturing activities by moving their facilities from coastal regions to inland communities (Birchall, 2008). This strategy, as supported by Chief Financial Officer David Hargreave, was said to lower costs due to the less developed nature of these communities as well as take advantage of lower wage requirements, as seen in Figure 4. This strategy came with the added barrier of having to navigate the development of production facilities in regions with less infrastructure, but acted as a good step to maintain production in China (Birchall, 2008). The company's CFO later indicated that even if other countries, such as Vietnam, could provide cheaper alternatives, the company is better off staying in China in order to forgo the cost of creating new production relationships and maintain their commitment to quality and safety standards (Birchall, 2008).

Just 11 years later, Hasbro's reaction to rising costs has changed significantly. The company has stated that by 2020, the firm will reduce their Chinese activities from roughly 66% to 50% (BusinessWorld, 2019). The countries that will be receiving the highest portion of increased production in light of this shift are India and Vietnam (BusinessWorld, 2019). The reason for this reduction is largely attributed to Hasbro aiming to reduce their production share in China, in order to be less impacted by wage increases, and as a result of strain created from the looming U.S.-China trade war (BusinessWorld, 2019; Birchall, 2008).

Figure 4: Gap in hourly compensation between urban and rural manufacturing employees



(Manufacturing in China, 2013)

Indiska is a curious example of a firm who is consciously sticking with China despite concerns of rising costs – in fact, they welcome them. Indiska is an Indian-inspired fashion, decoration, and furniture firm popular in the Nordic markets (Fang, Gunterberg, & Larsson, 2010). The principle reason Indiska is comfortable with rising prices is a part of a global move towards developing corporate social responsibilities (CSRs) (Fang, Gunterberg, & Larsson, 2010). To this extent, Indiska states that their corporate values are focused on "…humanism, presence, engagement, and close and long-term relations with suppliers" (Fang, Gunterberg, & Larsson, 2010). As a principle of Indiska's CSR framework, they haven't switched suppliers, even within China, for the purpose of attaining lower cost production (Fang, Gunterberg, & Larsson, 2010). Instead, Indiska sees that the value of China's capacity for producing high quality knitting, glass, and porcelain, as well as the intangible value that comes from a healthy supplier relationship (Fang, Gunterberg, & Larsson, 2010). Additionally, utilizing the supplier relationships that Indiska has developed, they have influenced the positive development of Chinese manufacturing working conditions for the betterment of laborers and product quality (Fang, Gunterberg, & Larsson, 2010). It is hard to say that Indiska is taking a widely traveled path in the face of rising costs on the manufacturing industry. The case of Indiska does, however, offer a possible future for China's traditional manufacturing industry through valuable supplier relationships and the popularization of CSR frameworks.

FINDINGS AND THE FUTURE

Yang (2012), of the *Washington Post*, had this to say about manufacturing in China:

> China's reliance on cheap labor has powered the country's economy to unprecedented heights. But China's manufacturing sector is running into problems these days: squeezed from one end by places with even lower labor costs, such as Laos and Vietnam, and yet struggling to move to higher ground making more advanced products because of competition from developed nations such as Germany and the United States. (p. 6)

It is not the purpose of this report to compose a highly quantitative analysis that measures cost feasibility of MNEs conducting, or continuing to conduct, manufacturing activities in China. It is, however, the goal to educate such firms on the history of success of the manufacturing industry and how imposing cost factors threaten its sustainability without facing tremendous transformation, as well as to discuss China's national competitors in the manufacturing space, and cases of how these regions, firms and brands have navigated quickly-shifting conditions. Considering all of the abovementioned information, it is appropriate to draw several conclusions.

In this report, it has been concluded that generational rates of education are rising, average year-by-year wages have consistently and exponentially increased, and costs associated with government-imposed environmental policies have made a significant impact on firms' cost structures. With the exception of education, as it is an indirect influencer, these factors have directly contributed to China losing its place as a highly competitive and cheap manufacturer.

China recognizes this issue and has enacted 'Made in China 2025' to transition their economy from the manufacturing model that built China – cheap manufacturing goods – to what they believe will carry the nation on to success in the future – highly sophisticated, technologically advanced goods. This, as the major cause for the U.S.-China trade war, is where China will emerge into direct competition with the

United States. The post-transition ‘Made in China 2025’ landscape and how it may compete with the United States requires an independent paper of its own.

With this transition underway, firms operating under China’s old manufacturing regime must now evaluate their future with mainland production. As discussed, in the face of rising costs, some firms have diversified their manufacturing, or completely relocated it, to locations like Vietnam and India. For brands like Indiska, staying in China to attain goods that manufacturers are known for, as well as prioritizing high-quality supplier relationships to improve working conditions is a part of a possible CSR path that more firms could follow in the future. Most evidently, however, stories of failed manufacturing regions, such as the Pearl River Delta and firms such as Hasbro, indicate the real threat these rising costs pose on continuing business in China.

CONCLUSION

From the ‘Great Leap Forward’ to ‘Made in China 2025’, China’s transformation in the past 70 years has been astounding – and big change is still on the horizon. The manufacturing industry, serving market economies across the globe, has played a lead role in bringing China to where it is today. China’s impressive economic growth gave way to higher rates of education, specialized jobs, and workers’ expectation of higher compensation for their labour. Additionally, factors such as public health, as well as China’s global image, has encouraged the nation to take serious efforts towards strengthening environmental policy. As results of a rapidly growing economy, these cost imposing factors are being observed as a major contributor to China being displaced as the world’s competitive manufacturer of cheap goods. China is transitioning between its old manufacturing model where it competes with countries like India and Vietnam on low costs, to its new manufacturing model of high value and a sophisticated product base where it has begun to compete with countries like the United States. As a result of cost pressure on the former, a variety of firms have left China entirely, while some seek geographic-diversification of their manufacturing strategy, and others feel there is value in continuing production in China. Additionally, the manufacturing transition has been a significant contributor to the U.S.-China trade war. Regardless of the reactions of the firms, it is clear that the implications of both cost and political factors during this economic transition are real and pressing for those multinational firms that are considering production in China, and for those who are already doing so.

REFERENCES

Li, L., & Du, Z. (2016). A Research Report on the Development of China’s Manufacturing Sector (2016). Singapore: Springer.

Acciona. (2019, December 11). TOP 5 MOST POLLUTING COUNTRIES. Retrieved from SUSTAINABILITY For All: https://www.activesustainability.com/environment/top-5-most-polluting-countries/

Birchall, J. (2008, February 12). Hasbro’s China suppliers shift gears. Retrieved from Financial Times: https://www.ft.com/content/3b1da2b2-d90e-11dc-8b22-0000779fd2ac

Bosworth, B., & Collins, S. M. (2008). Accounting for Growth: Comparing China and India. Journal of Economic Perspectives, 45-66.

Brandt, L., & Rawski, T. G. (2008). China's Great Economic Transformation. The Chinese Labor Market in the Reform Era, 168-214.

Brandt, L., & Rawski, T. G. (2008). Education in the Reform Era. China's Great Economic Transformation, 215 - 249.

BusinessWorld. (2019, July 25). World’s top toymaker Hasbro joins companies leaving China’s factories. Retrieved from BusinessWorld: https://www.bworldonline.com/worlds-top-toymaker-hasbro-joins-companies-leaving-chinas-factories/

Chan, A. L. (2001). Mao's Crusade: Politics and Policy Implementation in China's Great Leap Forward. Oxford : Oxford University Press.

China Age Structure. (2019, December 7). Retrieved from Index Mundi: https://www.indexmundi.com/china/age_structure.html

China Schooling. (2015, February 1). China Schooling . Retrieved from Most Popular Majors in China: https://chinaschooling.com/most-popular-majors-in-china/

Costa, F., Garred, J., & Pessoa, J. P. (2016). Winners and losers from a commodities-for-manufactures trade boom. Amsterdam: Elsevier.

Cyrill, M. (2018, December 28). What is Made in China 2025 and Why Has it Made the World So Nervous? Retrieved from China Briefing: https://www.china-briefing.com/news/made-in-china-2025-explained/

DW. (2019, May 20). One-third of EU firms hit hard by US-China trade war. Retrieved from DW: https://www.dw.com/en/one-third-of-eu-firms-hit-hard-by-us-china-trade-war/a-48800905

Fang, T., Gunterberg, C., & Larsson, E. (2010). Sourcing in an Increasingly Expensive China: Four Swedish Cases. Journal of Business Ethics, 119-138.

Gittings, J. (2005). The Changing Face of China : From Mao to Market. Oxford: Oxford University Press USA - OSO.

Han, S. (2019, November 8). Number of university graduates in China 2008-2018. Retrieved from Statista: https://www.statista.com/statistics/227272/number-of-university-graduates-in-china/

Hayes, A. (2019, June 25). Comparative Advantage. Retrieved from Investopedia: https://www.investopedia.com/terms/c/comparativeadvantage.asp

Hombert, J., & Matray, A. (2018). Can Innovation Help U.S. Manufacturing FirmsEscape Import Competition from China? The Journal of Finance, 2,003 - 2,039.

Krumwiede, K., & Liou, R. (2019, October 1). THE CHINA ELECTRIC VEHICLE INDUSTRY: Applying management accounting methods can help navigate the expiration of subsidies in the Chinese EV industry. Retrieved from GALE ONEFILE: https://go-gale-com.ezproxy.library.uvic.ca/ps/retrieve.do?tabID=T002&resultListType=RESULT_LIST&searchResultsType=SingleTab&searchType=AdvancedSearchForm&currentPosition=1&docId=GALE%7CA603753212&docType=Article&sort=RELEVANCE&contentSegment=ZBCI&prodId=

Lai, H. (2006). REFORM AND THE NON-STATE ECONOMY IN CHINA. New York: PALGRAVE MACMILLAN.

Ling, L. (2018). China's manufacturing locus in 2025: With a comparison of “Made-in-China 2025” and “Industry 4.0”. Norfolk: Elsevier.

Liu, K. (2018). CHINESE MANUFACTURING IN THE SHADOW OF THE CHINA–US TRADE WAR. London: Institute of Economic Affairs.

Lukin, A. (2019). Survival: Global Politics and Strategy. The US–China Trade War and China's Strategic Future, 23-50.

Makichuk, D. (2019, December 2). Will Tesla’s big gamble in China pay off? Retrieved from ASIA TIMES: https://www.asiatimes.com/2019/12/article/will-teslas-big-gamble-in-china-pay-off/

Man, J. Y. (2013). China's Environmental Policy and Urban Development . Cambridge: Lincoln Institute of Land Policy.
Manufacturing in China. (2013, June 7). Retrieved from U.S. BUREAU OF LABOR STATISTICS: https://www.bls.gov/fls/china.htm
Mau, K. (2017). US policy spillover(?) – China's accession to the WTO and rising exports to the EU. European Economic Review, 169 - 188.
Morris, D. W. (2012, November 28). China's Aging Population Threatens Its Manufacturing Might. Retrieved from CNBC: https://www.cnbc.com/id/49498720
Po, Y. (2011). Earnings expectation and graduate employment: Evidence from recent Chinese college graduates. Frontiers of Education in China, 549-570.
Pollution By Country 2019. (2019, October 25). Retrieved from World Population Review: http://worldpopulationreview.com/countries/pollution-by-country/
Popkova, E. G., & Sukhodolov, Y. A. (2017). Foreign Trade as a Factor of Economic Growth. Volgograd: Springer .
Reed, J. (2019, September 1). President Trump ordered US firms to ditch China, but many already have and more are on the way. Retrieved from CNBC: https://www.cnbc.com/2019/09/01/trump-ordered-us-firms-to-ditch-china-but-many-already-have.html
Roberts, D. (2008, March 27). China's Factory Blues. Retrieved from Bloomberg: https://www.bloomberg.com/news/articles/2008-03-26/chinas-factory-blues
Strategic Finance. (n.d.). THE CHINA ELECTRIC VEHICLE INDUSTRY: Applying management accounting methods can help navigate the expiration of subsidies in the Chinese EV industry. Retrieved from GALE ONEFILE: https://go-gale-com.ezproxy.library.uvic.ca/ps/retrieve.do?tabID=T002&resultListType=RESULT_LIST&searchResultsType=SingleTab&searchType=AdvancedSearchForm&currentPosition=1&docId=GALE%7CA603753212&docType=Article&sort=RELEVANCE&contentSegment=ZBCI&prodId=
The Economic Times. (2019, April 27). Foriegn Trade. Retrieved from The Economic Times: https://economictimes.indiatimes.com/news/economy/foreign-trade/about-200-us-companies-seeking-to-move-manufacturing-base-from-china-to-india-usispf/articleshow/69068781.cms
The World Bank. (2019, December 6). Manufacturing, value added (% of GDP). Retrieved from The World Bank Data : https://data.worldbank.org/indicator/NV.IND.MANF.ZS
TRADING ECONOMICS. (2019, December 14). China Average Yearly Wages in Manufacturing. Retrieved from TRADING ECONOMICS: https://tradingeconomics.com/china/wages-in-manufacturing
TRADING ECONOMICS. (2019, September 1). China Exports to European Union. Retrieved from TRADING ECONOMICS: https://tradingeconomics.com/china/exports-to-european-union
TRADING ECONOMICS. (2019, December 7). China Retirement Age - Men. Retrieved from TRADING ECONOMICS: https://tradingeconomics.com/china/retirement-age-men
TRADING ECONOMICS. (2019, December 12). Minimum Wages | Asia. Retrieved from TRADING ECONOMICS: https://tradingeconomics.com/country-list/minimum-wages?continent=asia
Workman, D. (2019, December 7). China's Top Trading Partners. Retrieved from World's Top Exports: http://www.worldstopexports.com/chinas-top-import-partners/
Workman, D. (2019, November 23). World's Top Export Countries. Retrieved from World's Top Exports: http://www.worldstopexports.com/worlds-top-export-countries/
Xia, V.Q. (2017, April 1). Staffing for China's rapidly growing biomanufacturing industry: new study shows China biopharma companies face staffing shortages. Retrieved from GALE ONEFILE : https://go-gale-com.ezproxy.library.uvic.ca/ps/retrieve.do?tabID=T002&resultListType=RESULT_LIST&searchResultsType=SingleTab&searchType=AdvancedSearchForm&currentPosition=1&docId=GALE%7CA493945713&docType=Article&sort=RELEVANCE&contentSegment=ZBCI&prodId=

Yang, J. L. (2012, November 23). China’s manufacturing sector must reinvent itself if it’s to survive. Retrieved from The Washington Post: https://www.washingtonpost.com/business/economy/chinas-manufacturing-sector-must-reinvent-itself-if-its-to-survive/2012/11/23/a00721b0-1e0c-11e2-ba31-3083ca97c314_story.html

Yusuf, S., & Nabeshima, K. (2010). Trade Dynamics in China and India. Changing the Industrial Geography in Asia : The Impact of China and India, 29-68.

Zhang, K. H. (2006). China As the World Factory. New York: Routledge.

Zhang, M. (2013, January 1). India And ASEAN Economies To Become The Next China For (Manufacturing) Foreign Direct Investment (FDI). Retrieved from International Business Times: https://www.ibtimes.com/india-asean-economies-become-next-china-manufacturing-foreign-direct-investment-fdi-1039684

Zhang, Z. (2013). China's Environmental Policy and Urban Development. Government Decentralization, Energy Saving, and Environmental Protection, 25-37.

Zheng, T., Zhao, Y., & Li, J. (2019). Journal of Cleaner Production. Rising labour cost, environmental regulation and manufacturing restructuring of Chinese cities, 583-592.

Climate Change Mitigation and the Implications for the French Energy Sector

Jeremy Mueller

ABSTRACT

This paper discusses the impacts that mitigation guidelines presented by the UN and its bodies have on the energy sector within France in a variety of aspects including the impacts on business procedures, changes in revenues and changes in emissions by firms. Background on the UN-organized climate conferences (Conferences of the Parties) and agreements (Kyoto Protocol, Paris Agreement) as well as the implications and history of climate change are also included. The paper examines the historical situation of the French energy sector; two individual firms with different business strategies in the sector within France are later analyzed with respect to the timing of the different climate agreements set out by the UN and participating governments. Potential decisions of managers facing challenges in the two firms are discussed from multiple angles with following implications. France is compared to other nations and the global average in CO2 emissions in which timing with global conferences and agreements is analyzed. What the future of the planet is dependent on and who has the power to influence it is also explored.

THE THREAT OF CLIMATE CHANGE

Climate change has been one of the greatest global issues for many years but was only recognized as so in recent decades (Intergovernmental Panel on Climate Change, 2015). It entails changes in climate patterns and is associated with changing global and regional temperature; these changes can be drastic for the planet, as "small changes in temperature correspond to enormous changes in the environment" ("The Effects of Climate Change," n.d.). Some of these changes include loss of sea ice, accelerated sea level rise, and more intense heat waves among other environmental consequences ("The Effects of Climate Change"). Apart from habitat loss and a rising sea level, sea ice melting is a major issue because ice is capable of reflecting 50% to 90% of the solar radiation that reaches it, while oceans reflect only 6% and absorb the rest which heats the Earth, and in turn, melts more ice ("Thermodynamics: Albedo," n.d.). As for the other two consequences, sea level rise leads to the submersion of cities and intense heat waves cause a variety of serious problems such as heat-related illnesses and cause catastrophic crop failures which may be primary food sources for certain countries and regions ("The Effects of Climate Change").

The Enhanced Greenhouse Effect

It is important to understand that climate change is caused by the greenhouse effect, a natural process that has been for millions of years. It is also important to realize that there are two parts to the greenhouse effect: the natural and the anthropogenic (Wagg, 2015**)**. The human-caused, anthropogenic side has been coined with the term "enhanced greenhouse effect" and is very likely responsible for a much greater proportion of the climate change that is seen today (Wagg, 2015). The 2014 Intergovernmental Panel on Climate Change (IPCC) report stated that "it is extremely likely that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in greenhouse gas (GHG) concentrations and other anthropogenic forcings together" (Intergovernmental Panel on Climate Change, 2015, p.5). Due to the emission of fossil fuels, the enhanced effect results in much more GHGs in the atmosphere which trap more heat; this results in less solar radiation escaping into space and more being re-emitted onto the surface (Figure 1). From these emissions, the GHG that poses the greatest threat for Earth's temperature rise is carbon dioxide (Lindsey, n.d.). While it does not absorb as much heat as other GHGs, it is "more abundant and it stays in the atmosphere much longer" and has been found to be responsible for "about two thirds of the total energy imbalance that is causing Earth's temperature to rise" (Lindsey) (Figure 2). Because of this, most goals of mitigating climate change focus on reducing carbon dioxide more than any other specific GHG (Lindsey).

Causation

The first prominent event that strongly contributed to the enhanced greenhouse effect was the First Industrial Revolution, which took place during the 18th century ("Changes Since the Industrial Revolution," n.d.). The revolution entailed the transition from hand production methods to machine production methods; it greatly increased productivity and resulted in lower production costs as machines began to do much more of the work. The revolution served as one of the first stepping stones to get people to where they are today in production, but it came at a cost; the environment suffered much more than before.

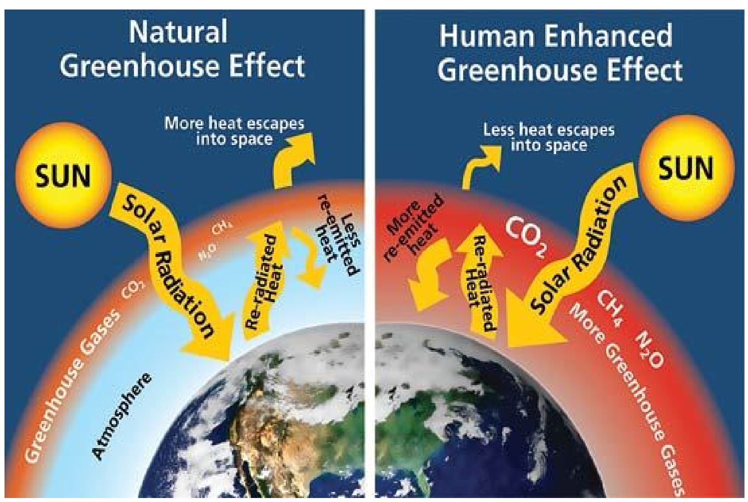


Figure 1. Wagg, G. (Author). Comparison of natural and human enhanced greenhouse effects. [Online image]. Retrieved from MrGeogWagg, https://mrgeogwagg.wordpress.com/2015/06/24/greenhouse-effect-and-anthropogenic-warming/

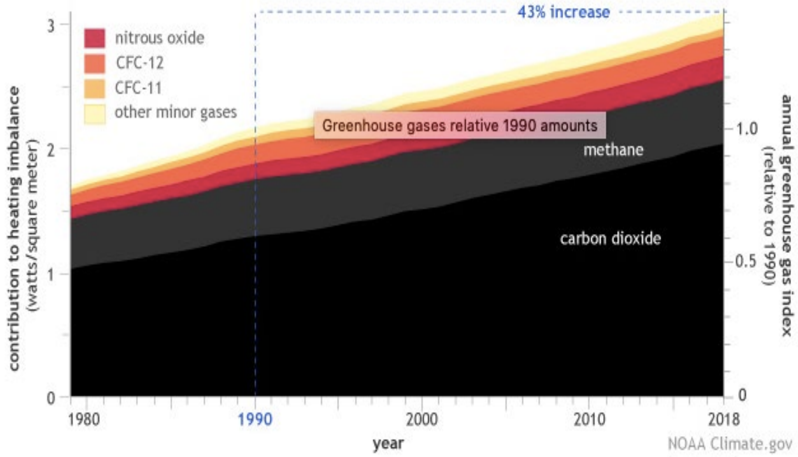


Figure 2. Lindsey, R. (Author). Influence of all major human-produced greenhouse gases (1979-2018). [Online image]. Retrieved from Climate.gov, https://www.climate.gov/news-features/understanding-climate/climate-change-atmospheric-carbon-dioxide

The second major event that boosted atmospheric carbon dioxide levels was The Great Acceleration in the years following 1950 ("The Great Acceleration," 2015). Humans began developing new technologies rapidly as the population continued to increase, but while humanity was making progress, the planet was paying a price. Higher levels of carbon dioxide began being released into the atmosphere by way of land use, coal, oil, gas, and cement ("The Great Acceleration"). The biggest contributor to climate change is the burning of fossil fuels, particularly for the energy sector ("Global Emissions," n.d.).

Scientists are confident that the effects of climate change seen today are because of humans, as stated in the IPCC's Fifth Assessment Report (Intergovernmental Panel on Climate Change, 2015). Carbon dioxide levels continued to fluctuate from about 175 to 300 parts per million (ppm), but during The Great Acceleration, carbon dioxide levels spiked; today, that amount has increased to over 410 ppm according to NASA (Figure 3) ("Climate Change: How do we Know?" n.d.). NASA shows that while the global temperature has been rising rapidly, solar activity (Figure 4) has remained constant and slightly decreased as of recent ("The Causes of Climate Change," n.d.).

Figure 3. Atmospheric carbon dioxide concentration over time. [Online image]. Retrieved from NASA, https://climate.nasa.gov/evidence/

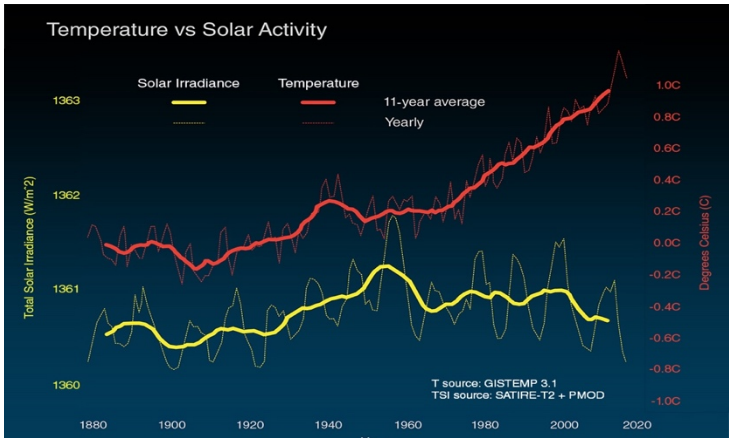


Figure 4. Comparison of global surface temperature and solar radiation received by Earth (1880-2019). [Online image]. Retrieved from NASA, https://climate.nasa.gov/causes/

Climate change is a pressing issue the world is facing, and more people are beginning to understand that if no action is taken, there will be devastating consequences in the long run. While eliminating all emissions is not a realistic option, mitigation is attainable; in many countries it is now compulsory. The purpose of this paper is to discuss the impacts that mitigation guidelines have on the energy sector within France in a variety of aspects including the impacts on business procedures, changes in revenues and changes in emissions by firms.

THE FRENCH ENERGY SECTOR PRIOR TO MITIGATION EFFORTS

The Energy Sector

A country's economic activities can be broken down into five primary sectors that produce the output to run an economy (and produce the emissions that enhance the effects of climate change); these include the energy sector, industry, agriculture (including forestry and land use), transportation, and buildings ("Global Greenhouse Gas Emissions Data," n.d.). According to the United States Environmental Protection Agency (EPA) and the 2014 IPCC report, the energy sector accounted for 35% of global GHG emissions in 2010, followed by agriculture at 24%, Industry at 21%, transportation at 14%, and buildings at 6% ("Global Greenhouse Gas Emissions Data").

France's Energy History

In France, before serious mitigation efforts (1995, when the first United Nations' Conference of the Parties took place), the country had much higher CO2 emission levels. According to the World Bank, carbon dioxide emissions peaked at 529,155 kilo-tonnes in 1979 ("CO2 Emissions – France," n.d.). This was primarily due to the fact that at the time, France was more-heavily reliant on oil. What dropped the country's total carbon emissions was not the result of actions to combat climate change, but because France had recently dealt with two oil crises (Lepoutre, Semeria, Beltran, Tardieu & Maisonneuve, 2015). The first took place in October of 1973, during the Arab-Israeli War; Arab nations that exported oil began charging four times the original price for all countries that supported Israel (Lepoutre et al.). The second crisis was due to the Iranian Revolution in which oil production decreased and prices rose nearly three times as high as the original over the next few years (Lepoutre et al.). The two crises enforced France's motive to pursue energy independence so that it would no longer have to rely on the production of other nations to meet their energy demands. Doing so would make the country far less subject to supply shocks and extreme price increases and in addition, put it in a better position to export more energy to the world, and improve the energy trade balance.

In order to move towards energy independence, France began intensively focusing on the development of nuclear energy sources after the first oil crisis (Lepoutre et al., 2015). The crisis paved the way for the creation of a Paris-based intergovernmental organisation called the International Energy Agency (IEA); according to its mission, it "works with governments and industry to shape a secure and sustainable energy future for all" ("Mission," n.d.). Its initial purpose was to respond to oil supply shocks like those in the cases of the 1970s' crises but is now primarily an energy policy consultant for members as well as non-member states ("History," n.d.). France's shift towards nuclear energy was made at the expense of more than a decade of research on renewable energy which had not been progressing successfully. France's move to nuclear power proved to be extremely effective; by 1990, the IEA reported that 35.9% of the nation's total energy supply was attributed to the new energy source (Figure 5) ("Data and Statistics," n.d.). This resulted in oil dropping to 36.9% of the total in 1990 (Figure 5), a substantial decrease since before the oil crises in the early 1970s. What this meant for the climate was less carbon dioxide emissions and re-emitted heat into the atmosphere for the same amount of energy creation in France; this demonstrated that sufficient energy could still be produced without excessively harming the well-being of the planet.

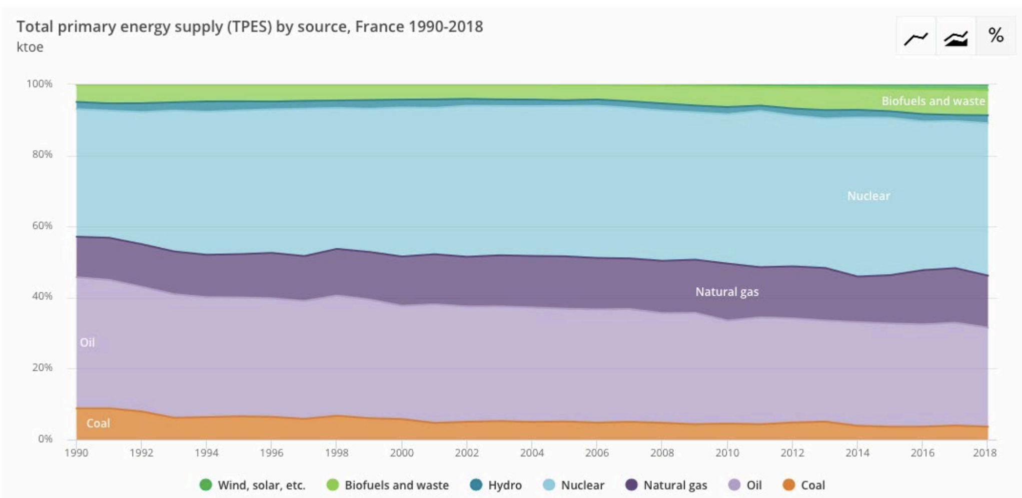


Figure 5. France's total primary energy supply by source (1990-2018). [Online image]. Available from International Energy Agency, https://www.iea.org/statistics/?country=FRA&isISO=true

ORGANIZATIONS, CONFERENCES AND MITIGATION MEASURES

The United Nations' Impact

Without coordinated global action against climate change, the planet would be in a far worse situation than it is now; thanks to the early efforts of the United Nations (UN), this is not the case. Much more action against climate change is still extremely necessary if the planet is to be sustained in the long run. In June of 1988, James Hansen, a NASA scientist, officially testified to the United States Senate that climate change (referred to as "global warming" at the time) was almost certainly caused by anthropogenic activity and that global action would be required to deal with a global problem (Shabecoff, 1988). In November of the same year, the UN Environment Program (UNEP) and the World Meteorological Organisation (WMO) worked together to establish the IPCC ("UNFCCC – 25 Years," n.d.). The purpose of the IPCC is to "provide policymakers with regular scientific assessments on climate change, its implications and potential future risks, as well as to put forward adaptation and mitigation options" (The Intergovernmental Panel on Climate Change, n.d.). The IPCC prepares regular reports on the different aspects of climate change and what they mean for humans. The most well-known reports are a series of comprehensive "Assessment Reports" that update the most-recent findings in climate science through large teams of nominated researchers (The Intergovernmental Panel on Climate Change). As of now, there are five such reports with the sixth currently being prepared and set for release in 2022.

Following the creation of the IPCC, the United Nations Framework Convention on Climate Change (UNFCCC) became open for signature in Rio and the Earth Summit in June of 1992 ("UNFCCC – 25 Years," n.d.). This framework served as the bridge to bring nations together to initiate a joint effort against climate change; in 1994, the framework came into effect ("UNFCCC – 25 Years"). It set out plans to meet once a year (known as Conference of the Parties (COP)) with the parties that signed to the framework to discuss the current climate situation and form goals and assess the necessary action plans to achieve those goals ("Conference of the Parties," n.d.). To be able to discuss the current situation of the climate, the meeting requires multitudes of information (primarily on emissions) from the parties in order to assess where they stand ("Conference of the Parties"). The first COP was held in Berlin during the spring of 1995 where the big takeaway was that the initial commitments of parties set out by the UNFCCC were found to be inadequate if they were to achieve the goals the framework set ("UNFCCC – 25 Years"). To achieve the targets, higher levels of mitigation would be necessary, and this led to the creation of the Berlin Mandate. Within it, it was decided that the majority of the increased contributions to the global climate effort should fall on the shoulders of developed countries because "the largest share of historical and current global emissions of greenhouse gases has originated in developed countries" and in addition they are in better positions to make emission adjustments (United Nations Framework Convention on Climate Change, 1995).

The Kyoto Protocol

The conclusion of the Berlin conference resulted in the formation of the Kyoto Protocol in Kyoto, Japan on December 11, 1997 at the third COP ("UNFCCC – 25 Years," n.d.). The protocol was the first introduced global greenhouse gas emission reduction treaty ("UNFCCC – 25 Years"). It split countries into three groups determined by their level of development: Annex I countries, Annex II countries and Non-Annex countries ("Parties and Observers," n.d.). Annex I countries were those that were industrialized and part of the Organisation for Economic Co-operation and Development (OECD) as well as any countries with economies in transition. Annex II countries include the Annex I countries of the OECD but exclude the countries with economies in transition. Lastly, the Non-Annex countries are those that are considered developing. According to the Kyoto Protocol Reference Manual, the protocol "[set] binding targets for developed countries, known as 'Annex I Parties', to limit or reduce greenhouse gas emissions" and it "established innovative mechanisms to assist these Parties in meeting their emissions commitments" ("Kyoto Protocol Reference Manual," 2008, p. 4). The protocol was active from 2008 until 2012 in what was referred to as the "first commitment period" with the second taking place from 2013 until 2020 ("Kyoto Protocol Reference Manual," p. 4). In addition to assisting parties with mitigation mechanisms, it also set emission targets and assigned amounts for each Annex I Party within the manual. An assigned amount is the maximum amount of emissions that a nation is permitted to emit during a commitment period in order to achieve its emissions target ("Kyoto Protocol – Targets," n.d.).

Within the Kyoto Protocol Reference Manual, it states that France, among the majority of developed countries, was assigned an 8% reduction target in total emissions over the first commitment period in reference to their base year (1990) emissions (Figure 6); this target determined France's assigned amount for the period ("Kyoto Protocol Reference Manual," p. 13). Referencing the World Bank, it was recorded that France's total carbon emissions in 1990 were 375,691 kilo-tonnes (kt), which means that in each year from 2008-2012 France's emissions were not to exceed 345,636 kt ("CO2 Emissions – France," n.d.). Data from the World Bank shows that France did not manage to meet this target through 2008 to 2010; however, it did in the final years of the commitment period in 2011 and 2012 ("CO2 Emissions – France").

Table II-1. **Quantified emission limitation or reduction targets as contained in Annex B to the Kyoto Protocol**

Annex I Parties[a]	Emission limitation or reduction (expressed in relation to total GHG emissions in the base year or period inscribed in Annex B to the Kyoto Protocol)[b]
Austria, Belgium, Bulgaria, Czech Republic, Denmark, Estonia, European Community, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Monaco, Netherlands, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom of Great Britain and Northern Ireland	−8 %
United States of America[c]	−7 %
Canada, Hungary, Japan, Poland	−6 %
Croatia	−5 %
New Zealand, Russian Federation, Ukraine	0
Norway	+1 %
Australia	+8 %
Iceland	+10 %

[a] At the time of publication of this manual, the amendment to the Kyoto Protocol that contains an emissions target for Belarus (−8%) had not been ratified by a sufficient number of Parties for it to enter into force.
[b] Countries with economies in transition have flexibility in the choice of base year.
[c] Country which has declared its intention not to ratify the Kyoto Protocol.

Figure 6. Quantified emission limitation or reduction targets as contained in annex B to the Kyoto protocol. [Online image]. Retrieved from United Nations Framework Convention on Climate Change, https://unfccc.int/resource/docs/publications/08_unfccc_kp_ref_manual.pdf

The protocol also allowed countries with commitments to take part in "emissions trading," which is when a country that has emitted less than it was required sells its excess capacity of allowed emissions to another country ("Emissions Trading," n.d.). It was reported by the European Commission that close to half of Europe's carbon emissions were affected positively by this trading scheme ("EU Emissions Trading System," n.d.). The scheme allowed nations that were on pace to fail meeting their emissions targets to acquire Assigned Amount Units (AAUs) (assigned amounts divided into groups of units) ("EU Emissions Trading System"). Emissions trading served to create flexibility for the Annex I parties as the aggregate level of emissions in the atmosphere would still meet the minimum criteria set out by the UNFCCC. What this meant was that countries were able to emit more greenhouse gases if they traded with others that did not use up all of their emissions permissions, and this could lead to certain emitters exceeding their assigned amounts by buying AAUs from other countries with emissions to spare. Since there was no limit for how many AAUs a country could buy, this could result in more environmental degradation in the region in which the emitter is based, even though global aggregate carbon dioxide emissions would fall in line with the targets set in the protocol.

While the Kyoto Protocol was a big step forward and brought together the majority of the countries of the world for the good of the planet, its methodology was not without criticism. One of those according to British Economist, Nicholas Stern, was that there was no concrete action laid out by the UNFCCC for countries to follow to reduce their emissions (2007, p. 542). This ambiguity contributed to the protocol being rather ineffective in achieving strict emissions reductions, as it allowed countries to go about doing so however they pleased and if they pleased. Had the protocol been brought into effect alongside specific required actions by parties, it could have proved to be more effective. Another criticism made by Stern was that the assigned reductions were perceived as unfair by developed countries (2007, p. 542). Developed nations that had historically emitted more of the total carbon were assigned stricter emission limits, while countries like China and India (who were, and still are the highest emitters of CO2) were not required to curb emissions as Non-Annex countries since they were technically still developing (Stern, p. 542). While it can be perceived as fair to give developing countries their time to "catch up" to developed countries, it can also be perceived as the opposite as scientists now know that the planet cannot afford this. The decision to not impose restrictions on them sparked discomfort among developed nations; the United States, for example, decided that it was unfair for the two fast, emerging economies to continue their business as usual, so it elected not to ratify the protocol. The end result was that instead of having all three major emitters reduce carbon emissions, the UNFCCC had none. A third major criticism was that there was nothing impactful enforcing countries to cut emissions despite the fact that the protocol was legally binding; the UNFCCC relied on countries to take it upon themselves to be held accountable ("Compliance Under the Kyoto Protocol," n.d.). The UNFCCC has stated that their Enforcement Branch on the Compliance Committee requires countries that are in non-compliance (exceeding their emissions limit) to make up "the difference between their emissions and assigned amount" plus an additional 30% in the second commitment period ("Compliance Under the Kyoto Protocol"). Those nations were also no-longer permitted to partake in emissions trading and were required to submit a compliance action plan ("Compliance Under the Kyoto Protocol"). This consequence did not have much impact as parties were not necessarily obligated to ratify the second commitment period. It remains possible that the main reason so many parties agreed to ratify the protocol despite its flaws was because it happened to be the only serious solution around; never before had there been an international action plan against climate change until then, so it made sense for countries to be optimistic towards it initially.

The Mitigation Impact of the Protocol

The protocol had its flaws, but according to the IEA, total carbon emissions had decreased on a global scale in the first half of the first commitment period (Figure 7). This was a considerable data point because this considered the fact that most developing parties (like China and India) with high emissions were not required to ratify the protocol. This likely meant that the countries that had ratified made intense emission cuts early on. This could be confirmed by analyzing different countries emissions over the commitment period separately. It was found that France had not only decreased emissions substantially in the first commitment period, it had also decreased them even further in the second commitment period (particularly in 2014, one year after it began). Between 2007, the year before the first period, and 2014, partway through the second period, France's total carbon emissions had decreased by 17.23% (Figure 8). Considering the recent growth in French economy (+1.73% in 2018), it confirms that France's efforts in cleaner energy production (primarily nuclear) are able to both sustain growth and curb emissions simultaneously ("GDP – France," n.d.).

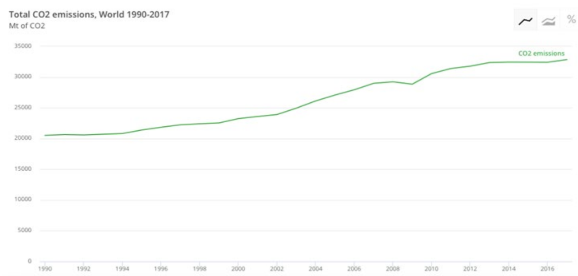


Figure 7. Total global CO2 emissions (1990-2017). [Online image]. Available from International Energy Agency, https://www.iea.org/statistics/?country=FRA&isISO=true

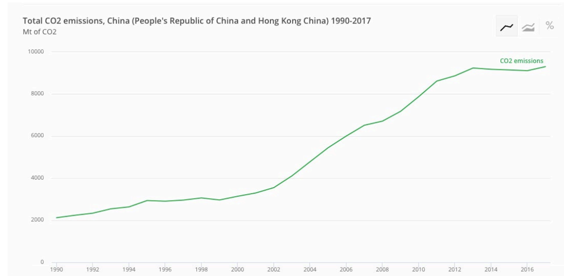


Figure 9. Total CO2 emissions by China (1990-2017). [Online image]. Available from International Energy Agency, https://www.iea.org/statistics/?country=FRA&isISO=true

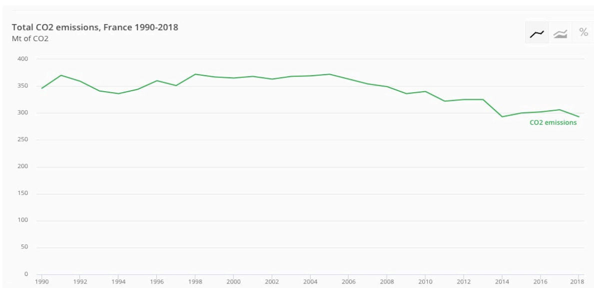


Figure 8. Total CO2 emissions by France (1990-2018). [Online image]. Available from International Energy Agency, https://www.iea.org/statistics/?country=FRA&isISO=true

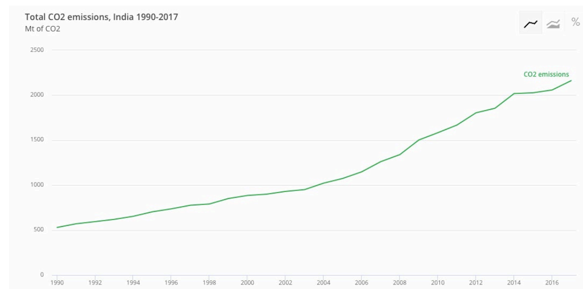


Figure 10. Total CO2 emissions by India (1990-2017). [Online image]. Available from International Energy Agency, https://www.iea.org/statistics/?country=FRA&isISO=true

In addition to France, other developed countries such as Italy, Spain, Germany, the United Kingdom, and many others showed similar trends in their total carbon emissions over the two commitment periods, which strengthens the likelihood that the Kyoto Protocol did have an impact early on ("Data and Statistics," n.d.). After seeing that the global decrease was only temporary for 2009, and that most developed countries had begun cutting emissions through the second commitment period, it was no surprise to see that emerging countries like China (Figure 9) and India (Figure 10) contributed to adjusting the global carbon output by having increases of 29.57% and 32.02% respectively from 2007 through 2013 ("Data and Statistics").

The Paris Agreement

While the continued decrease in total emissions for the majority of developed nations following the first commitment period seem to be directly related to the second commitment period, there was another major event that took place in 2015: the Paris Agreement. The agreement was similar to the Kyoto Protocol, but had a specific, long-term goal: to limit global temperature to 2 degrees Celsius, and soon after it had entered into force, even further to 1.5 degrees by 2050 ("The Paris Agreement," n.d.). This time, emission cuts were not decided by the UNFCCC, but by the parties themselves and defined as "nationally determined contributions" (NDCs) which declare the intended reductions in GHGs ("Nationally Determined Contributions," n.d.). Article 3 of the Paris Agreement states that the NDCs need to be "ambitious," "represent a progression over time," and set "with the view [of] achieving the purpose of this Agreement" (United Nations Framework Convention on Climate Change, 2015).While this agreement had a clearly defined objective of reducing the global temperature to a set level, unlike the Kyoto Protocol, it had less enforcement associated with it; it was not legally binding in regard to reducing emissions. Countries were free to do as they pleased, and this worked according to the global carbon emissions graph, but only briefly; in 2017, emissions started rising once again (Figure 7). A noticeable trend when looking at emission levels of both the world as well as individual parties is that the first year an agreement is in force, there is more effort made to curb emissions; however, when looking even one year later, it is evident that the countries go back to their business as usual and decrease their efforts toward mitigation and change.

The Reality of Human Progress

The poor efforts to help the planet are fueled by countries' needs to produce, grow, and compete; to progress as an economy and society. The United States, for example, does not want to limit productivity because it fears China's economic growth rate will cause trouble for businesses through trade while China does not want to limit productivity so that it can catch up to the United States. It is important to note that without the UNFCCC, its conferences, and its mitigation targets, the state of the planet would be much more unfavourable. Having knowledge on how to mitigate climate change is one thing; having the means for collective action to use that knowledge in practice is what makes the United Nations and its intergovernmental bodies so important today. The implications for the necessity of mitigation, the history of the French energy sector, and the most impactful conferences and their mitigation objectives have all been analyzed in depth; the current state of the French energy sector can now be better understood at the firm level.

IMPACTS ON BUSINESSES AND PROCEDURES

As seen in the previous section, it is evident that France was and still is a key player in making mitigation efforts when compared to most countries. What this impact of mitigation meant for different energy companies was that they needed to change the way their business processes were executed. While France has a more beneficial environmental impact than most nations on average, there is room for improvement.

Case: Total S.A.

France is home to the 6th largest oil and gas company in the world: Total S.A. (Total) (Garside, 2019). As a leading global energy provider, the impacts the firm has on the environment are also substantially larger than most energy companies' in France. In turn, it is regarded as an energy superpower that has the ability to more dramatically reduce the effects of climate change; however, Total has not made outstanding change efforts and has come under fire recently for not complying with the French Duty of Vigilance Law as well as the Paris Agreement (Drugmand, 2018). It was reported that in October of 2018, multiple communities and environmental organizations within France confronted the company for inadequately responding to the current state of the climate crisis (Drugmand). In March of 2017, The French Duty of Vigilance Law was adopted, which requires that "large multinational companies that operate in France to establish a plan that identifies and prevents human rights violations and environmental damage or health risks" (Drugmand). While Total has created a vigilance action plan in its Registration Document of 2017, the challenging French communities and organizations stated that the plan was still incapable of meeting the minimum requirements by the French law in addition to being no aid in achieving the Paris Agreement's objective of holding the global temperature at 1.5 degrees Celsius prior to 2050 (Drugmand). According to a 2017 report from the UK environmental organization known as the Carbon Disclosure

Project (CDP), Total alone is responsible for over two-thirds of France's total GHG emissions, and in addition, it was found that the firm is within the top 20 largest contributing firms to global carbon emissions ("New Report Shows," 2017). Total has a climate action plan on their official website that focuses on five drivers to combat the climate emergency: enhancing energy efficiency, growing in natural gas, increasing low-carbon electricity activities, promoting sustainable biofuels and investing in carbon storage ("Integrating Climate into Our Strategy," n.d.). This plan did not satisfy protestors, however, as just recently in October of 2019, Total was set to be taken to court in January 2020 by six environmental NGOs ("Total Sued Under Vigilance Law," 2019). The reasoning for this legal action was due to the fact that Total had begun an oil project in Uganda, in addition to the firm's previous failures to address their non-compliant invigilance plan ("Total Sued Under Vigilance Law"). Total made it clear that it did not plan to reform its approach to combating climate change in a statement it released earlier in the year stating that their plan "clearly identifies the risks to human rights…and the environment that could result from [its] activities" ("Total Sued Under Vigilance Law").

From a manager's perspective, it is evident that this situation is highly unfavourable for the firm's public relations, especially in France, where many other companies are making beneficial differences to the environment. While the firm has the size and revenue advantage as of now, this is likely to mean less in the future if stricter climate combat laws are introduced. Managers of Total face a major decision to make: the firm can keep producing at an environmentally-degrading level to generate higher revenues, or it can either cut production down or transfer more production towards renewable energy sources and potentially bring in less revenue. A third factor managers may need to consider is the impact that stakeholder's may have on the firm, given their business plans. Total's shareholder's equity was among its highest historical levels one year ago on September 30, 2018 at $120.62 billion USD, while its long-term debt totalled $41.09 billion USD ("Total S.A. Debt to Equity," n.d.). One year later, its third quarter showed that equity had dropped to $117.31 billion, while its debt rose to $47.92 billion USD ("Total S.A. Debt to Equity"). To comfortably purchase capital and meet its expenses, Total needed to issue more debt to account for the loss in equity. While it is difficult to say if the drop in equity was directly related to the coinciding public relations issues of the energy giant since small fluctuations like these happened in the past, it remains a possibility, and managers should consider how the strategy of their business impacts their shareholders, and how shareholders may then impact the business.

Case: Engie

While it is still the largest energy firm in France, Total does not speak for the majority of the French sector; many firms (as supported by Figures 5 and 8), are making a positive environmental difference in their business procedures by turning away from carbon-dense production and placing a higher degree of importance on improving environmental well-being. One of those firms, Engie, has much more effective solutions to climate change. In addition to being a player in favour of the environment, it is also currently the largest independent electricity supplier in the world ("Electricity," n.d.). Engie was the result of a merger in 2008 between the large energy firms, SUEZ and Gaz de France; combined, Engie became one of the biggest players in the market ("The History of the Engie Group," n.d.). Engie was a big emitter of CO2 a few years ago, as stated by its CEO, Isabelle Kocher, in the firm's 2018 Integrated CSR Report; however, in recent years the company has turned itself around and within 2 years, it cut its emissions by 40% compared to its 2012 base year ("2018 Integrated Report," 2018, p. 48). The company states that over 90% of its activities are now low carbon and that 100% of the electricity that it provides to both customers and businesses is green ("Our Climate Commitments," n.d.). In a section of Engie's website on its solutions for combating climate change, the firm states that "The choices made by our company impact not only on its financial results, but also on the communities in which it works, the environment, and more generally, every aspect of society" ("Our Climate Commitments"). Given that Engie provides transparent CSR reports, focuses much of its efforts on switching to clean energy, and has public support in its efforts, it is evident that the company has, and continues to, reform its business activities in order to help the environment. Whether this change of strategy was inspired directly by the UN and the guidelines France agreed to remains possible. Kocher stepped up to her new role as CEO in 2016 and made an instant impact on the strategy of Engie. In 2016 and 2017, she was ranked as the 3rd most powerful woman in the world for her efforts for change according to Fortune magazine ("Most Powerful Women International," n.d.). When she assumed her new role, she stated that Engie had to "take its responsibility" in fighting climate change as a world leader in energy; she believed that revolution in the energy sector was, and is, necessary to improve the current climate situation (Collingridge, 2017).

In this manager role, she had big decisions to make; it is one thing to implement the new strategy, and it is another to convince your employees to embrace the change. She fits the role of a good change champion because she carries a strong purpose with her motives – she did this to improve the future landscape of the environment by being one of the forward-moving energy players. Change is not easy, but sometimes it is necessary in order to get to somewhere better. As the leader, Kocher set the frame and made some big strategic changes: selling 20% of the firm's assets primarily in coal production (amounting to roughly 15 billion euros) in order to reinvest in renewables, investing more in employee training with the goal of making staff more autonomous, and setting a goal of reducing direct CO2 emissions by 85% from the 2012 base year (Collingridge, 2007; "Climate and Reduction of Greenhouse Gases (GHG) Emissions," n.d.). Kocher is a leader who values environmental change over profit maximization; the opposite of Total S.A., but shareholders are not align with Kocher just because she is putting more effort into sustainability. Since her change in direction in 2016, she has failed to deliver her projected returns for investors (Figure 11), which have continued to decrease; this has resulted in the French government, which holds the highest company stake at 24%, contemplating reducing its stake (De Beaupuy & Amiel, 2019). The government has doubts that Kocher's plan to transform the industry into a "clean power champion" will increase profits; she now faces increasing pressure on the foundation of her business strategy (De Beaupuy & Amiel).

Figure 11. De Beaupuy, F. & Amiel, G. (Authors). Engie's investor returns compared to competitors' (2016-2019). [Online image]. Retrieved from Bloomberg, https://www.bloomberg.com/news/articles/2019-05-13/engie-ceo-s-strategy-has-investors-asking-where-s-the-payoff

The Current State of the Firms

In her manager position, she faces a challenge: if she continues with this strategy, she will likely have further decreasing returns and lose support; if she changes her strategy back to the traditional way, she increases profits but goes back on what she set out to accomplish. What much of this information is showing is that it is currently very difficult to adjust a business to be more sustainably integrated and bring in high profits at the same time; if Total or Engie could excel at both, they likely would. While being sustainable is good for the environment, it is not typically the same for a business' bottom line; The U.S. Energy Information Administration's (EIA) 2019 Energy Outlook report showed average costs for different generating technologies ("Cost and Performance," 2019). In the report, it found that the average cost in USD per kilo watt ($/kW) of oil and gas was nearly $1,000/kW, while solar was about $2,000/kW and hydropower was roughly $2,700/kW ("Cost and Performance"). Numerous sources have shown similar comparisons between traditional fossil fuels and renewables, confirming that it is more expensive, on average, to rely on cleaner energy. However, the EIA did find that coal is currently around $3,500/kW and renewables are projected to be cheaper in coming decades ("Cost and Performance"). At this stage, it appears that the choice is one or the other, and it is clear which target each firm has set to achieve. What this means for the environment is that unless many firms undertake what Engie has done, it will suffer; firms like Total are profit-seeking, so without stricter emission regulations, these firms will continue producing as efficiently as they are able. The guidelines inspired by the UN and its global conferences to help protect the climate are not strong enough to force Total to reform its business operations like Engie has. To compare the different strategies, below is a comparison of the two firms' revenues (Figures 12 and 13) and carbon emissions (Figures 14 and 15) over time:

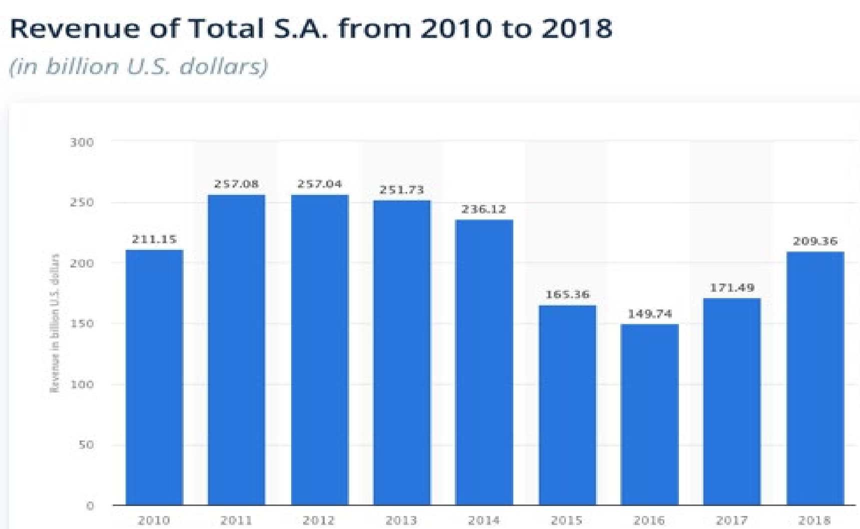


Figure 12. Samso, R. (Author). Revenue of Total S.A. (2010-2018). [Online image]. Retrieved from Statista, https://www.statista.com/statistics/268764/revenue-of-total-sa/

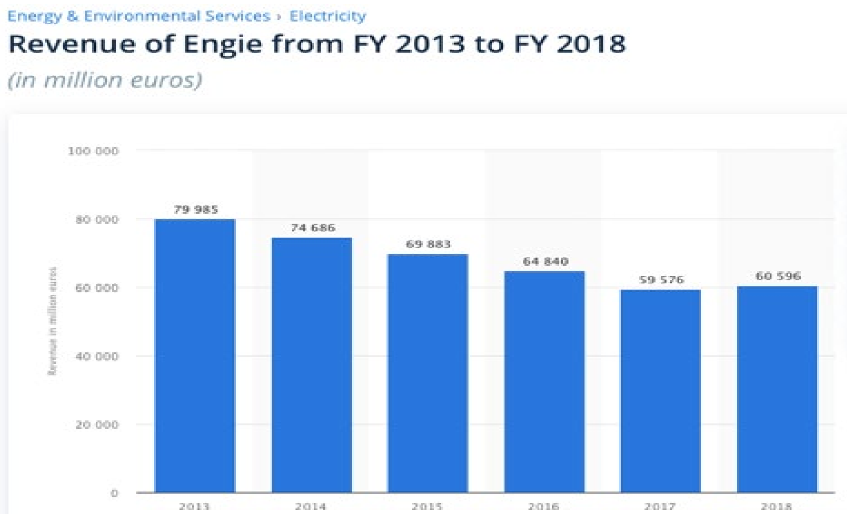


Figure 13. Wang, T. (Author). Revenue of Engie (2013-2018). [Online image]. Retrieved from Statista, https://www.statista.com/statistics/268329/revenue-of-gdf-suez/

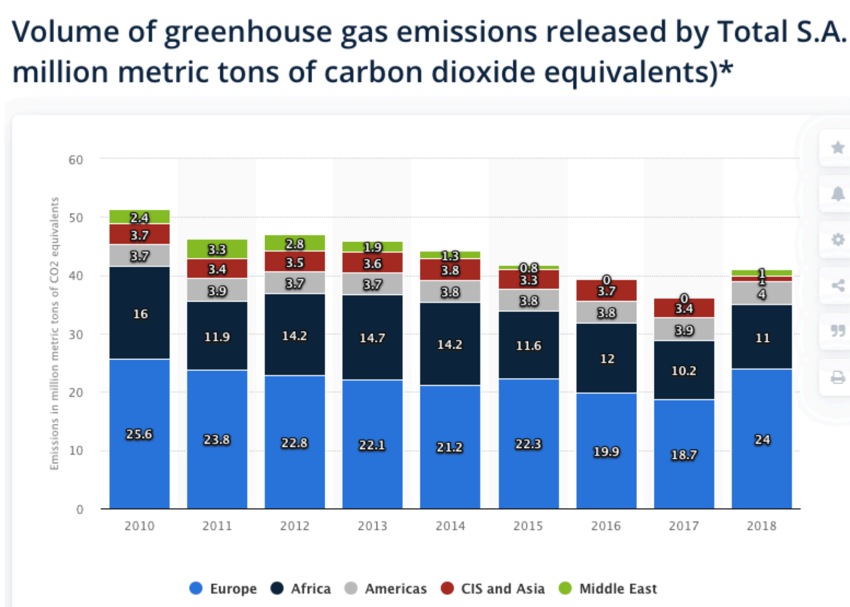


Figure 14. Wang, T. (Author). Total S.A. Greenhouse Gas Emissions by Region (2010-2018). [Online image]. Retrieved from Statista, https://www.statista.com/statistics/555549/volume-of-greenhouse-gas-emissions-of-total-sa-by-region/

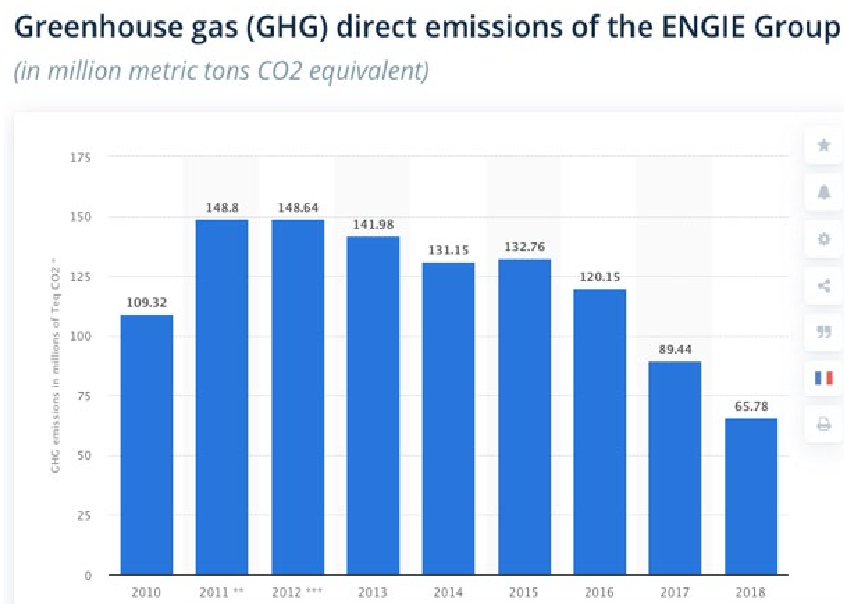


Figure 15. Samso, R. (Author). Engie Greenhouse Gas Emissions (2010-2018). [Online image]. Retrieved from Statista, https://www.statista.com/statistics/1078742/engie-emissions-of-gas-at-effect-of-greenhouse/

From the data, it is a likely case that climate change pressure (through government laws, public perception, and understanding of the need for change) has influenced each firm to trend in a decrease of emissions (Figures 12-15). While Total has not shifted its business strategy to aggressively accommodate for the current climate situation, it is still slowly moving in the right direction, along with the majority of firms in France (Figures 5 and 8). When looking at the total sources of energy supply in France, most of it is still currently nuclear (as seen in a previous section) because it had invested so much into it decades ago (Figure 5). According to the World Nuclear Association, nuclear power is the source of 75% of France's total electricity and the country remains the world's largest net exporter of the commodity in large part because of it ("Nuclear Power in France," 2019). What makes nuclear energy so valuable is that the reactors do not produce any CO_2; the fact that France relies so heavily on it helps to explain why its emissions are lower than the global average and why the annual total amount continues to diminish (Figure 8) ("Nuclear Explained," 2019). French energy firms seem to be taking steps in the right direction in being global leaders in combating climate change.

CONCLUSION

Firms of the French energy sector have made efforts to reduce the impacts of climate change primarily through limitations on emissions. Compared to the past, great strides have been made by business leaders in France and around the world. Firms like Engie display what it means to put the planet first and integrate sustainability into the strategy; what the implications are for businesses like these from a financial perspective vary with those like Total, who attempt to meet requirements, but still focus on profit rather than the environment. In both cases, emissions reveal a decreasing trend (Figures 14 and 15); the mitigation culture presented by the UN and its bodies onto France, among other nations, is a likely cause for the emissions shift. Without their actions, the state of the climate could be very different and likely for the worse. Looking to the future, France's government developed an action plan against climate change in 2017 (“Climate Plan,” n.d.). Some of the objectives include turning away from fossil fuels, making France a leader in the green economy, and scaling up international action on the climate through supporting NGO climate activists and developing countries (“Climate Plan”). Steps are still being taken to put the planet in a better position, but more work is needed to be done; the UN has done a good job of bringing climate change into the light and sparking action on change, but without stricter emissions laws, it may not be enough in the long term. As seen with Total, firms similar to these will do the minimum to comply with environmental standards set by their governments and continue to optimize their business financially. The future lies with the governments, business leaders, and their firms of the world. Their decisions are what will decide how climate change is handled.

REFERENCES

The causes of climate change (n.d.). Retrieved from https://climate.nasa.gov/causes/

The causes of climate change. [Comparison of global surface temperature and solar radiation received by Earth (1880-2019)]. Retrieved from https://climate.nasa.gov/causes/

Changes since the Industrial Revolution (n.d.). Retrieved on September 20, 2019, from https:// www.acs.org/content/acs/en/climatescience/greenhousegases/industrialrevolution.html

Climate and reduction of greenhouse gases (GHG) emissions (n.d.). Retrieved November 6, 2019, from https://www.engie.com/en/analysts/environment/reduction-of-ghg-emissions/

Climate change: How do we know? (n.d.). Retrieved from https://climate.nasa.gov/evidence/

Climate change: How do we know? [Atmospheric carbon dioxide concentration over time]. Retrieved from https://climate.nasa.gov/evidence/

Climate plan (n.d.). Retrieved December 8, 2019, from https://www.gouvernement.fr/en/climate-plan

Collingridge, J. (2017, April 30). French power broker charges into Britain. Retrieved November 6, 2019, from https://www.thetimes.co.uk/article/french-power-broker-charges-into-britain-7hfctr6zb

Compliance under the Kyoto protocol (n.d.). Retrieved October 24, 2019, from https://unfccc.int/process/the-kyoto-protocol/compliance-under-the-kyoto-protocol/introduction

Conference of the parties (n.d.). Retrieved October 8, 2019, from https://unfccc.int/process/bodies/supreme-bodies/conference-of-the-parties-cop

Cost and performance characteristics of new generating technologies (2019, January). Retrieved from https://www.eia.gov/outlooks/aeo/assumptions/pdf/table_8.2.pdf

CO2 emissions – France (n.d.). Retrieved September 21, 2019, from https://data.worldbank.org/indicator/EN.ATM.CO2E.KT?locations=FR

Data and statistics (n.d.). Available from https://www.iea.org/statistics/?country=FRA&isISO=true

Data and statistics (n.d.). [France’s total primary energy supply by source (1990-2018)]. Available from https://www.iea.org/statistics/?country=FRA&isISO=true

Data and statistics (n.d.). [Total CO2 emissions by China (1990-2017)]. Available from https://www.iea.org/statistics/?country=FRA&isISO=true

Data and statistics (n.d.). [Total CO2 emissions by France (1990-2018)]. Available from https://www.iea.org/statistics/?country=FRA&isISO=true

Data and statistics (n.d.). [Total CO2 emissions by India (1990-2017)]. Available from https://www.iea.org/statistics/?country=FRA&isISO=true

Data and statistics (n.d.). [Total global CO2 emissions (1990-2017)]. Available from https://www.iea.org/statistics/?country=FRA&isISO=true

De Beaupuy, F., & Amiel, G. (2019, May 13). [Engie's investor returns compared to competitors' (2016-2019)]. Retrieved from https://www.bloomberg.com/news/articles/2019-05-13/engie-ceo-s-strategy-has-investors-asking-where-s-the-payoff
De Beaupuy, F., & Amiel, G. (2019, May 13). French energy giant's transformation has investors asking: Where's the payoff? Retrieved November 30, 2019, from https://www.bloomberg.com/news/articles/2019-05-13/engie-ceo-s-strategy-has-investors-asking-where-s-the-payoff
Drugmand, D. (2018, October 25). French communities demand climate action by oil giant Total. Retrieved October 25, 2019, from https://www.climateliabilitynews.org/2018/10/25/total-oil-france-climate-change/
The effects of climate change (n.d.). Retrieved from https://climate.nasa.gov/effects/
Electricity (n.d.). Retrieved November 5, 2019, from https://www.engie.com/en/businesses/electricity/
Emissions trading (n.d.). Retrieved October 21, 2019, from https://unfccc.int/process/the-kyoto-protocol/mechanisms/emissions-trading
EU emissions trading system (n.d.). Retrieved October 21, 2019, from https://ec.europa.eu/clima/policies/ets_en
Garside, M. (2019, June 1). Top oil and gas companies by revenue 2019. Retrieved October 25, 2019, from https://www.statista.com/statistics/272710/top-10-oil-and-gas-companies-worldwide-based-on-revenue/
GDP - France (n.d.). Retrieved October 24, 2019, from https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=FR
Global emissions (n.d.). Retrieved September 20, 2019, from https://www.c2es.org/content/international-emissions/
Global greenhouse gas emissions data (n.d.). Retrieved September 22, 2019, from https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data
The Great Acceleration (2015, January 16). Retrieved from https://futureearth.org/2015/01/16/the-great-acceleration/
History (n.d.). Retrieved from https://www.iea.org/about/history
The history of the Engie Group (n.d.). Retrieved November 5, 2019, from https://www.engie.com/en/group/history-engie-group/
Integrating climate into our strategy (n.d.). Retrieved October 28, 2019, from https://www.total.com/en/commitment/environmental-issues-challenges/climate-change
Intergovernmental Panel on Climate Change (2015). Climate Change 2014 Synthesis Report. Retrieved from https://ar5-syr.ipcc.ch/ipcc/ipcc/resources/pdf/IPCC_SynthesisReport.pdf
The Intergovernmental Panel on Climate Change (n.d.). Retrieved October 8, 2019, from https://www.ipcc.ch/
Kyoto protocol reference manual (2008, November). [Quantified emission limitation or reduction targets as contained in annex B to the Kyoto protocol]. Retrieved from https://unfccc.int/resource/docs/publications/08_unfccc_kp_ref_manual.pdf
Kyoto protocol reference manual (2008, November). United Nations Framework Convention on Climate Change. Retrieved from https://unfccc.int/resource/docs/publications/08_unfccc_kp_ref_manual.pdf
Kyoto protocol – targets for the first commitment period (n.d.). Retrieved October 18, 2019, from https://unfccc.int/process-and-meetings/the-kyoto-protocol/what-is-the-kyoto-protocol/kyoto-protocol-targets-for-the-first-commitment-period
Lepoutre, M., Semeria, M., Beltran, A., Tardieu, B., & Maisonneuve, C. (Eds.) (2015, April 20). The history of energy in France. Retrieved September 24, 2019, from https://www.planete-energies.com/en/medias/saga-energies/history-energy-france

Lindsey, R. (n.d.). Climate change: Atmospheric carbon dioxide. Retrieved September 19, 2019, from https://www.climate.gov/news-features/understanding-climate/climate-change-atmospheric-carbon-dioxide

Lindsey, R. (n.d.). [Influence of all major human-produced greenhouse gases (1979-2018)]. Retrieved from https://www.climate.gov/news-features/understanding-climate/climate-change-atmospheric-carbon-dioxide

Mission (n.d.). Retrieved from https://www.iea.org/about/mission

Most powerful women international (n.d.). Retrieved November 6, 2019, from https://fortune.com/most-powerful-women-international/

Nationally determined contributions (n.d.). Retrieved October 24, 2019, from https://unfccc.int/process-and-meetings/the-paris-agreement/nationally-determined-contributions-ndcs

New report shows just 100 companies are source of over 70% of emissions (2017, July 10). Retrieved October 28, 2019, from https://www.cdp.net/en/articles/media/new-report-shows-just-100-companies-are-source-of-over-70-of-emissions

Nuclear explained: Nuclear power and the environment (2019, January 16). Retrieved from https://www.eia.gov/energyexplained/nuclear/nuclear-power-and-the-environment.php

Nuclear power in France (2019, October). Retrieved from https://www.world-nuclear.org/information-library/country-profiles/countries-a-f/france.aspx

Our climate commitments (n.d.). Retrieved November 5, 2019, from https://www.engie.com/en/commitments/our-climate-commitments/

Paris Agreement (n.d.). Retrieved October 24, 2019, from https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement

Parties and observers (n.d.). Retrieved October 9, 2019, from https://unfccc.int/parties-observers

Samso, R. (2019, December 4). [Engie greenhouse gas emissions (2010-2018)]. Retrieved December 6, 2019, from https://www.statista.com/statistics/1078742/engie-emissions-of-gas-at-effect-of-greenhouse/

Samso, R. (2019, November 6). [Revenue of Total S.A. (2010-2018)]. Retrieved December 1, 2019, from https://www.statista.com/statistics/268764/revenue-of-total-sa/

Shabecoff, P. (1988, June 24). Global warming has begun, expert tells senate. Retrieved October 3, 2019, from https://www.nytimes.com/1988/06/24/us/global-warming-has-begun-expert-tells-senate.html

Stern, N. (2007). The economics of climate change: The Stern review. Cambridge, United Kingdom: Cambridge University Press. doi:10.1017/CBO9780511817434

Thermodynamics: Albedo (n.d.). Retrieved September 19, 2019, from https://nsidc.org/cryosphere/seaice/processes/albedo.html

Total S.A. debt to equity ratio 2006-2019 (n.d.). Retrieved from https://www.macrotrends.net/stocks/charts/TOT/total-sa/debt-equity-ratio

Total sued under France’s new duty of vigilance law (2019, October 23). Retrieved October 28, 2019, from https://ens-newswire.com/2019/10/23/total-sued-under-frances-new-duty-of-vigilance-law/

2018 integrated report (2018, May 18). Retrieved from https://www.engie.com/wp-content/uploads/2018/06/engie_ri_2018_va_vf.pdf

UNFCCC – 25 years of effort and achievement (n.d.). Retrieved October 8, 2019, from https://unfccc.int/timeline/

United Nations Framework Convention on Climate Change (2015, November). Paris Agreement. Retrieved from https://unfccc.int/files/meetings/paris_nov_2015/application/pdf/paris_agreement_english_.pdf

United Nations Framework Convention on Climate Change (1995, June 6). Conference of the parties. Retrieved from https://unfccc.int/resource/docs/cop1/07a01.pdf

Wagg, G. (2015, June 24). [Comparison of natural and human enhanced greenhouse effects]. Retrieved from https://mrgeogwagg.wordpress.com/2015/06/24/greenhouse-effect-and-anthropogenic-warming/

Wagg, G. (2015, June 24). Greenhouse effect and anthropogenic warming. Retrieved September 19, 2019, from https://mrgeogwagg.wordpress.com/2015/06/24/greenhouse-effect-and-anthropogenic-warming/

Wang, T. (2019, December 5). [Total S.A. greenhouse gas emissions by region (2013-2018)]. Retrieved December 6, 2019, from https://www.statista.com/statistics/555549/volume-of-greenhouse-gas-emissions-of-total-sa-by-region/

Wang, T. (2019, April 25). [Revenue of Engie (2013-2018)]. Retrieved December 1, 2019, from https://www.statista.com/statistics/268329/revenue-of-gdf-suez/

Swiss Agricultural Trade Policy: Overview, Analysis & Implications

Ari Tsetsekas

ABSTRACT

Swiss agricultural trade policy stands-out against typically free-trade oriented Swiss policies. Switzerland, one of the wealthiest nations on earth in per-capita terms, heavily protects its domestic agricultural industry beyond levels seen in most industrialized western nations. This paper explores Swiss agricultural trade policy, its origins and implications by examining macro-economic factors, customs measures and domestic support schemes. It then analyses these factors to produce a set of implications and recommendations for firms and policy makers operating in the sector, as well as other actors who might be exposed in a second-hand manner to the implications of Swiss agricultural trade policy.

INTRODUCTION

Like many nations, Switzerland has a rich local agricultural tradition stemming from before modern advances in food preservation and trade, when countries relied on domestic production to feed their populations. While today, Switzerland is better known for its banking and financial services sectors than agriculture, which combined make up the bulk of its GDP, its population has maintained its preference for domestic products and has fiercely protected and supported its local industry. The more politically minded will also note the influence of agriculture in Swiss politics at a level some might find disproportionate to the industry's contribution to the Swiss economy. This paper seeks to provide an overview of Swiss agricultural trade, to give firms and policy makers in the industry the background necessary for effective decision making in the Swiss agricultural trade space.

BACKGROUND I: THE SWISS ECONOMY

Despite being a small landlocked nation, Switzerland is incredibly wealthy with a GDP per capita of $83,583 USD (Statistics Times, 2019), making its citizens some of the richest in the world. With a population of only 8.5 million people, it ranks 20th in terms of raw GDP with an economy of $679 Billion USD in 2017 (Worldometers, 2019). The Swiss economy, with its renowned financial industry, is primarily dependent on its service and industrial sectors which made up 74% and 25% of its GDP respectively in 2017. In contrast, the agricultural sector made up only about 1% of Switzerland's total GDP (FDFA, 2019a). Switzerland's internationally and internally-competitive economic model has incentivized low tax and tariff rates, making it the most open economy in Europe and the 4th freest economy globally in 2019 (Heritage, 2019). Despite its relative openness in most economic sectors, agriculture remains the notable exception (WTO, 2017, p. 13). Switzerland is a member of the European Free Trade Association (EFTA), a regional trade bloc and free trade area with Iceland, Norway, Switzerland and Lichtenstein as members. EFTA, in combination with a series of bilateral agreements, has promoted close regulatory alignment between Switzerland and the European Union and has allowed the Swiss to enjoy many of the associated privileges such as freedom of movement and goods. This close relationship is crucial for the Swiss economy, as we will explore in greater detail later in this paper.

BACKGROUND II: THE SWISS AGRICULTURAL SECTOR

To get a sense of just how important agriculture is to the Swiss national identity, one has only to look to Articles 104. and 104A. of the Swiss constitution. These provisions are the basis for the relationship between the Swiss government and agriculture. Paragraph one reads:

> *"The Confederation shall ensure that agricultural sector, by means of a sustainable and market oriented production policy, makes an essential contribution towards:*
> *a. the reliable provision of the population with foodstuffs;*
> *b. the conservation of natural resources and the upkeep of the countryside;*
> *c. decentralized population settlement of the country."*
> *(Article 104, Paragraph 1 of the Federal Constitution of the Swiss Confederation)*

These articles go on further to provide for state support through a variety of means to achieve certain objectives laid out in the articles including: "direct subsidies in order to achieve of fair and adequate remuneration for the services provided (Swiss FC, 2019)". As we will explore in the policy section of this paper, the subsidies outlined in the Swiss constitution form the backbone of the Swiss agriculture system, and are a sizeable (and fiercely protected) government expenditure.

Turning from constitutional to geographic features of Swiss agriculture; Switzerland has a semi-mountainous terrain and relatively colder climate that constrains the varieties of crops that can be grown locally (WTO, 2017, p. 95), as well as their production seasons. Sugar beet is by far the most widespread crop in Switzerland at 1,545 thousand tonnes (KT) in 2017, with cereals (975 KT), potatoes (461 KT), vegetables (427 KT) and some fruit and berries (206 KT) also featuring prominently (Federal Statistical Office, 2019, p. 14). Along with crop production, animal production is an important feature of the Swiss agricultural sector from which famous Swiss cheeses and *bratwurst* are produced. In 2017, the meat production from cattle, pigs, sheep and poultry, which are the mainstays of Swiss ranching, totaled 474,000 tonnes (139 KT, 239 KT, 5 KT and 91 KT, respectively). Additionally, Swiss farmers produced 3983 KT of cow's milk and 54 KT of chickens' eggs, with just over a third of that milk being used to produce Switzerland's famous cheeses (WTO, 2017, p. 102).

Because of the limitations of the Swiss climate and geography, Switzerland cannot produce all the foodstuff that it needs and its citizens demand. According to the Swiss Federal Agriculture Office, in 2015, Switzerland's gross self-sufficiency rate[1] was 59%, or 51% when adjusted for imported animal feed (Bondolfi & Hoi, 2018). However, there are important discrepancies between varieties of foodstuff. In 2016, Switzerland produced enough meat and animal products to cover practically all of its domestic consumption ('DC'), with milk production as high as 116% of DC. This is in stark contrast to crop based foodstuffs, such as potatoes (68% of DC), cereals (47% of DC) and fruits at (27%) (Bondolfi & Hoi, 2018).
Like many nations with agrarian cultures, Switzerland has an influential agricultural lobby that works to protect the interests of farmers and rural society. In the most recent federal elections in 2019, the Swiss People's Party (SVP), originally formed as a merger between the Party of Farmers, Traders and Independents and the Democratic Party in 1971, won the most seats with 53 of parliament's 200 seats. Although direct agriculture only makes up roughly 3% of total employment in Switzerland (150,600 jobs

[1] Defined as the ratio of domestic production to total domestic consumption.

in 2016), it's worth noting that these jobs often form the backbone of rural economies and, in a confederate system such as Switzerland's, these are important bases of support. When taking the entire food supply chain into account, the proportion of employment contribution by the relevant industries jump to 11% (548,000 jobs in 2016) (Federal Statistical Office, 2019, p. 5).

SWISS AGRICULTURAL TRADE

Tariff Measures

The Swiss economy, as a whole, is the most open in Europe in terms of barriers to trade and tariff levels. This reflects an economic liberalism that prevails in the Swiss political arena at both the federal and cantonal level. However, while this applies to the 99% of their economy made up of the service and industrial sectors, the remaining 1% of GDP generated by its agri-food sector is fiercely protected at levels beyond most western industrialized nations.

Table 1: Average Tariff Levels across product categories (WTO, 2019)

Non-agricultural products

Country/Territory	Year of MFN applied tariff	MFN applied: Avg MFN Tariff Level (%)*	MFN applied: Duty Free Tariff lines (%)†
Switzerland	2018	1.8	24.3
Canada	2018	2.1	78.8
United States of America	2018	3.1	48.8
European Union	2018	4.2	27.5

Agricultural products

Country/Territory	Year of MFN applied tariff	MFN applied: Avg MFN Tariff Level (%)*	MFN applied: Duty Free Tariff lines (%)†
United States of America	2018	5.3	30.6
European Union	2018	12.0	31.0
Canada	2018	15.9	68.5
Switzerland	2018	36.5	29.3

Source: World Trade Organization

* AVG MFN Tariff Level (%):	The level of tariffs, as applied to 3rd countries, under the WTO 'Most Favoured Nation' rule.
† Duty Free Tariff Lines (%):	The proportion of tariff lines in relevant section that enter duty free (0% tariff) on an MFN basis.
Note:	These figures represent tariff levels as applied, which can differ from the bound obligations of WTO members.

An important marker of the sensitive nature of the agricultural industry for Swiss policy makers is the significant difference in tariff levels between agricultural and non-agricultural goods. For example, in 2018, the average 'Most Favored Nation' (MFN[2]) tariff on Swiss imports was 6.6%. However, agriculture goods faced an average MFN import tariff of 36.5% compared to 1.8% for non-agricultural products. Even other relatively agriculturally protectionist industrialized countries such as Canada has only a 15.9% average MFN import tariff for agriculture (2.1% for non-agricultural goods, 4.0% overall) (WTO, 2019). According to the WTO, Switzerland has the 7th highest average MFN tariff level for agricultural products globally and 4th highest among Organization for Economic Cooperation and Development (OECD) nations behind only South Korea, Norway and Turkey. Under the Agriculture headings, the tariff levels on individual goods vary significantly, depending on the sensitivity of the product in the Swiss market. For example, while dairy products have an average 100% AVE[3] MFN tariff level, tariffs on individual products

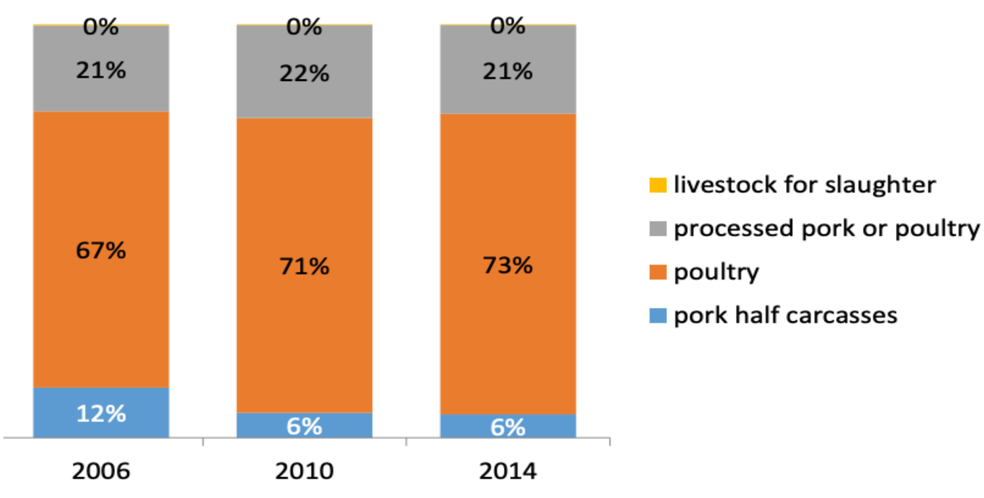
[2] The rate applied to all countries for which Switzerland does not have a trade agreement.
[3] Ad Valorem equivalent of the specific tariff rates employed by Switzerland.

range from 2% to 402%, with more sensitive or economically important products on the higher end of the scale (WTO, 2019). In addition, the Swiss use a system of quotas and 'Tariff-Rate Quotas' (TRQ's [4]) to manage the importation of sensitive products in line with the production capacity of domestic Swiss farmers. Such quota and TRQ mechanisms exist for sensitive agricultural products like beef, pork and poultry. However, for products which are additionally affected by supply seasonality in Switzerland (fruits and vegetables such as apples, tomatoes and potatoes) a mechanism of seasonally rotating quotas and TRQ's applies. In order to ensure that foreign-goods are imported primarily during times in which domestic production is not being placed on the market, the import volume permitted and tariff paid on seasonal products will vary throughout the year in accordance with the availability of domestic produce. The following is an example from a 2016 study commissioned by the Swiss Federal Office for Agriculture (FOAG):

> *"The production period of most domestic strawberries is only three and a half months long (from May 15th to August 31st); this is the period when [the] TRQ is managed. Outside this period, imports at the in-quota tariff are not limited. Within the managed period, the regulation is designed to meet the time-specific needs." (Areté, 2016, p. 8)*

In this example, during the production period of Swiss strawberries from May 15th to August 31st, imports of the product at the in-quota rate are limited to a certain amount (i.e. the TRQ's are managed). During the off-season, the TRQ is no longer managed and imports at the in-quota tariff rate are not limited.
The management of TRQ's provides a window into the trends of domestic production and consumption, as well as demonstrate the leeway customs authorities have to allocate quotas and TRQ's in such a way that facilitates the protection of the domestic industry

Figure 1 – Allocation of imports under the in-quota volume of Swiss TRQ No. 06 (Pork and Poultry) in 2006, 2010 and 2014.



Source: (Areté, 2016, p. 21)

Using TRQ No. 06 as an example, which covers the import of both pork and poultry products, poultry makes up the vast majority of the in-quota volume and is only increasing over time. This makes sense

[4] A Tariff-Rate quota is a hybrid quota and tariff mechanism under which a certain (low) tariff level applies for a volume of goods under a given 'in-quota' level, while higher rates apply at volumes above the given volume of 'out-of-quota' goods.

when we consider that for pork, Swiss domestic production nearly covers the totality of the domestic demand, whereas the country does not have a comparable level of domestic self-sufficiency for poultry.

1) Guarantee Fund Contributions

In addition to tariffs, Switzerland applies a unique set of levies on the import of certain goods that are subject to "compulsory reserve stock requirements". Provision a of Article 104 of the Swiss constitution (see above) relating to "*the reliable provision of the population with foodstuffs"* has manifested in a system of food reserves, managed by private entities on behalf of the government, to ensure adequate stocks of foodstuffs and other essentials for its population.

> *"As a small country without access to the sea and dependent on imports, Switzerland has taken measures since the Middle Ages to ensure the supply of vital foodstuffs in the event of a serious shortage… As early as 1955, a new federal law explicitly focused on the compulsory reserves imposed on the private sector" (Jaberg, 2019).*

As part of this system, levies ranging from 1.75 to 9.10 CHF / 100kg (see appendix 1) are applied to imports of animal feed, durum wheat, coffee, edible fats and oils, rice and sugar coming into Switzerland (WTO, 2017, p. 50). Consequently, the effective rate of duty on these products is materially higher than what might otherwise be indicated in Swiss tariff schedules or trade agreements.

Trade Agreements

While MFN tariff levels are useful for analysis of Swiss trade policy, much of Swiss trade takes place with its immediate neighbours in the European Customs area and with its EFTA partners for which trade-liberalizing agreements are in place. As Switzerland is part of EFTA, many of its trade agreements are negotiated as part of this bloc, such as the Canada – EFTA agreement, and apply to EFTA members collectively. However, some of Switzerland's most important agreements have been negotiated bilaterally, and no relationship is more important to Switzerland than that with the European Union.

1) EU

From 1972 to 1999, the Swiss-EU relationship was governed primarily by a 1972 FTA that focused heavily on free trade in industrial products. In 1994, when EFTA and the EU negotiated the European Economic Area (EEA) agreement that would create a single market between the two blocs, Swiss citizens rejected EEA membership by plebiscite. Thus, Switzerland remains the only EFTA member without membership in the EEA. Subsequent to the failed plebiscite, Switzerland and the EU began negotiating a package of wide-ranging bilateral agreements (now known as 'Bilaterals I'). These negotiations concluded in 1999 and importantly, included an agriculture chapter. Following Bilaterals I in 1999, Bilaterals II was concluded in 2004 which contained an agreement on Processed Agricultural Products. Collectively, these agreements reduced tariff and non-tariff barriers to trade as well as export subsidies for a variety of agricultural products including cheeses, coffee and chocolate. These agreements facilitated access to the European market for Swiss producers and created significant export opportunities for both partners (FDFA, 2019b). However, unlike their companion agreements on industrial goods, these agreements did not completely liberalize agricultural trade – in 2016, the average tariff rate on imports of agricultural goods into Switzerland was 28.1% and 27.8% from the EU and EFTA countries respectively (compared to 0% on non-agricultural goods) (WTO, 2017, p. 54). As with most agricultural trade agreements, restrictions, quotas and tariffs remain on sensitive products. For example, the importation of most beef and pork from the EU into Switzerland is still subject to TRQ's with high in-quota rates (e.g. strip sirloin: 159.00 CHF per 100 kg gross in-quota rate and 2212.00 CHF per 100 kg out-of-quota rate) (FCA, 2019). Even in cases where duties have successfully been eliminated, other restrictions occasionally apply. Fresh tomatoes, for example, are tariff-free under a 10,000 tonne annual TRQ. However, this TRQ is subject to the seasonality mechanism and thus is only available during the off-season of growing from October 21st to April 30th (EUR-Lex, 2019). Such seasonally applied TRQ's also exist for products such as apricots, strawberries and zucchini. On cheeses, Switzerland negotiated an elimination of the duties on its core products (Emmentaler, Gruyere, Appenzell…) with no quota limit (down from 85.80 EUR / 100 kg in-quota) (DG Trade, 2019). In exchange, eliminated duties on a variety of EU cheeses. However, they still preserved the occasional volume quotas and even tariffs on some products. For example, Raclette-style cheeses, a Swiss staple, are still subject to a 5000 tonne TRQ, albeit with no tariff on the in-quota amount.

2) Other trading relationships

Switzerland maintains a total of 34 free trade agreements, concluded either through EFTA or bilateral negations. While none are of the same economic importance as its agreements with the EEA (which represents over 58% of its agricultural exports[5]), they are a valuable *acquis* for the international trade reliant neutral-nation. Of the remaining, roughly 42% of Swiss agricultural exports that go to countries other than EEA members, there remains a significant market, representing roughly 14.4% of Switzerland agricultural exports with which they do not have an agreement: The United States. If reports are to be believed, such an agreement is likely already in the works (Shalal, 2019). While a US-Swiss agreement would likely focus heavily on trade in industrial products and services, which represent the bulk of both economies' existing trade with one another, agriculture could stand to benefit significantly as well – although with some caveats. It would not be the first time such an agreement has been discussed:

> *"Swiss Prime Minister Joseph Deiss' request to open official negotiations in January 2006 was rejected by the Federal Council and an agreement between the two partner countries was a long way off" (Dümmler & Anthamatten, 2019a).*

When the idea was first floated in 2006, there was significant backlash from farming as well as environmental groups which believe Switzerland has higher standards than the US when it comes to animal welfare, environmental requirements and human health (Dümmler & Anthamatten, 2019a). The prospects for a deal today are better than in 2006, but still faces some important hurdles. Unlike in 2006 when the Swiss parliament was openly critical of opening negotiations, the Swiss parliament has recently (Dec 6th, 2018) voiced its support for a deal, calling on the government to "seek a free trade agreement or at least a preferential trade agreement with the USA" (DeVore, 2018). Additionally, there seems to be an appetite from the Trump administration in the US for such deal in the wake of its failure to secure other large trade agreements with China and the EU (DeVore, 2018). However, it's unlikely that the opposition to the deal that existed in 2006 has simply vanished. There likely remains a significant amount of Swiss who would oppose any such an agreement, believing it comes at the expense of Swiss agriculture and environmental standards. In the 2019 Swiss federal elections, the Green party, which is far from supportive of a trade deal with the U.S. (Verts CH, 2019), made notable seat gains. This, along with ongoing concern from farmers could pose a serious challenge to getting any such agreement over the finish line. If the political will exists however, many observers see potential gains for both countries across many sectors, agriculture included:

[5] See appendix 2

"Swiss farmers could make a lot more money selling to the US than they do now."
- US Ambassador to Switzerland Edward McMullen (DeVore, 2018)

The enormous and wealthy U.S. market could be a valuable target for high-quality Swiss cheeses and wines (DeVore, 2018). Additionally, expanded free trade in processed goods could be a boon to large Swiss companies such as Nestle. Some estimates predict the creation of 13,500 jobs in Switzerland as well as 4.7B CHF of additional exports to the U.S. as a result of an agreement (Dümmler & Anthamatten, 2019b). Ultimately however, the U.S. would likely expect some form of reciprocal market access in agricultural goods as alluded to by the U.S. ambassador (DeVore, 2018). It remains to be seen whether such a deal will go ahead.

Trade Flows

Despite Switzerland having an overall positive trade balance in 2017, when it comes to agri-food, they imported roughly $3.4B USD more than they exported.

Table 2: Swiss Agri-Food Trade Flows 2017 (WITS, 2019)

2017 Exports	
Product Type	**Value (USD$)**
Foodstuffs	5,839,812.98
Animal Products	843,515.33
Vegetables	2,554,583.29
Total	9,237,911.60

2017 Imports		
Product Type	**Value (USD$)**	**Average Applied Tarriff**
Foodstuffs	6,009,239.33	30.09%
Animal Products	2,064,840.60	67.02%
Vegetables	4,578,718.28	19.53%
Total	12,652,798.21	32.30%

Source: World Bank / World Integrated Trade Solution ('WITS')

However, one of the repercussions of our highly interconnected global supply chains is the potential for products to be imported, reprocessed and subsequently exported. Because Switzerland is home to many international behemoths (e.g. Nestle), the impact of this phenomenon on agri-food trade flows is prominent in Switzerland. For example, in 2017, the largest Swiss export in the "vegetable" category of the Harmonized System ('HS')[6] was coffee with 67% of the total. This might seem strange. Coffee after all is grown in more tropical climates and is almost certainly not grown in Switzerland. This becomes clearer when looking at Swiss Imports: The number one Swiss import in the "vegetable" category is once again coffee, although this time it is primarily unroasted and of course, is arriving from coffee producing countries such as Brazil, Colombia, Costa Rica and Ethiopia (OEC, 2019). Swiss trade policy explicitly facilitates such flows: the import of roasted coffee is subject to a 67-182% Tariff + GCF[7] levies whereas the import of unroasted coffee is tariff free. Other examples of this phenomenon include chocolate, which is imported in its raw or bean form and subsequently transformed into the finished product. Given these situations, it's unsurprising that the bulk of Switzerland's agriculture exports are made up of coffee, non-alcoholic beverages, chocolate, and cheese (WTO, 2017, p. 95).

The vast majority of Swiss agricultural trade takes place with its closest neighbours: the constituent states of the EU and EFTA. Collectively, these form the European Economic Area (EEA) with which Switzerland

[6] The Harmonized System is a global system of tariff classifications. Some chapters can have misleading names
[7] See 3.1.1.

has forged close economic ties through the trade agreements identified earlier. As shown below, agricultural trade with EEA countries represents over 58% of Switzerland's total agricultural exports and nearly 75% of their total agricultural imports.

Table 3: Swiss agriculture trade balance with the EEA.

EEA - 2017	Export (US$ Thousand)	Import (US$ Thousand)	Net Balance	Export Product Share (%)	Import Product Share (%)
Food	$2,919,110.89	$4,996,546.92	-$2,077,436.03	49.99%	83.15%
Vegetables	$1,841,846.64	$2,796,257.46	-$954,410.82	72.10%	61.07%
Animal	$623,732.15	$1,603,438.95	-$979,706.80	73.94%	77.65%
Total	**$5,384,689.68**	**$9,396,243.33**	**-$4,011,553.65**	**58.29%**	**74.26%**

Source: World Bank / World Integrated Trade System ('WITS') (WITS, 2019)

The totality of Swiss agricultural trade is broken down across similar geographic regions and is set out in Appendix 2. When breaking down the net-negative agricultural trade balance, it's clear just how international trade-reliant the Swiss agriculture sector is. Switzerland maintains a significant negative trade balance in the agriculture sector with its EEA partners, which provides the vast majority of its imports (74.26%). This is then somewhat offset by its trade with other major geographic regions such as North America (+$1,203,195.56), Middle East and North Africa (+$470,985.19) and Asia (+$259,090.09). The notable exception to this trend is trade with Latin American and Caribbean countries (-$1,001,568.14) of which represents the smallest export market for Switzerland but a significant source of imports, particularly in the "vegetable" (i.e. Coffee) category. The level of trade diversification and the existence of complex supply chains are important considerations for firms and policy makers in this space.

Prices

Switzerland is a notoriously expensive place to live. In a 2018 price index, Switzerland was 51% more expensive overall than the EU-28 average, surpassed only by the remote island nation of Iceland among those in the European region. This jumps to 60% more expensive than the EU average for food products – again the second highest (Eurostat, 2019b). According to the World Trade Organization (WTO), Switzerland stands out as a "high-price island" in Europe for reasons such as trade barriers (both tariff and technical barriers) as well as the higher purchasing power and lower price sensitivity of Swiss consumers (WTO, 2017, p. 20). In 2018, the average annual salary in Switzerland was 87,716 CHF (64,109 USD), compared to 65,995 CAD (48 849 USD) in Canada or 63,093 USD in the United States (OECD, 2019a). This makes Switzerland second only to Luxembourg in purchasing power terms, although some metrics have Switzerland as the top performer when including other types of remuneration (UNECE, 2019). This is important, because despite the high food prices, the Swiss have clearly been able to more easily afford them than most. In 2017, the average Swiss person spent 6.4% of their income on food and non-alcoholic products (Office fédéral de la statistique, 2019). This is a surprisingly low figure when compared to other European countries. In fact, if Switzerland was an EU member, they would have the lowest average percentage of income spent on food and non-alcoholic products, beating out the United Kingdom with an average of 8.2% (Eurostat, 2019a). This is not to say that that these high prices are not an issue; it is an average measure. It's for good reason that Switzerland's "high-price island" status has been consistently identified as an issue both by international observers such as the WTO and OECD as well as local officials.

The combination of high prices across sectors, food included, can pose real challenges to even those living on an average Swiss salary (Mariani, 2017) never mind those living in poverty (Swissinfo, 2017).

DOMESTIC AGRICULTURAL POLICY

Subsidies

Switzerland maintains a system of subsidies and direct payments to farmers, linked to a series of policy objectives such as food security, animal welfare and ecological protection (See appendix 3). In 2018, these direct payments totaled 4.14 billion CHF, with 3.842 billion CHF originating from the federal government and 297 Million CHF spent by Cantons. However, when considering additional tax breaks offered to the agriculture sector, the total jumps to 4.9 billion CHF (Dümmler & Roten, 2018, p. 24). According to the OECD, this expenditure amounted to 1.05% of Swiss GDP in 2018, the highest in the western world – in contrast to the 0.7% of GDP generated by the recipients (OECD, 2019b). On a per producer basis, this support amounted to an average of 53.9% of Gross Farm Receipts (GFR). This means that nearly 54% of each agriculture producer's income is derived from these payments and benefits, rather than directly from the sale of their products. The EU in comparison, spends 0.67% of their GDP on agricultural support mechanisms (in aggregate) with average producer support at only 20% of GFR. Canada (0.33% of GDP and 8.8% of GFR) and the United States (0.48% of GDP and 12.2% of GFR) are even lower (OECD, 2019b).

Beyond direct payments and tax benefits, Swiss producers also benefit from above-market prices (See 3.4) via Market Price Support (MPS) mechanisms. Overall, its estimated that Swiss consumers pay an additional 4.1 billion CHF per year (above and beyond taxes spent on subsidies) due to price support mechanisms and the "isolation of the Swiss market" as a result of tariff and trade barriers (Dümmler & Roten, 2018, p. 27). According to a 2015 OECD report, these MPS mechanisms were often tied to individual staple Swiss products such as milk, eggs, beef, pork and crops such as sugar beet and canola. Such product-targeted support can often risk distorting production decisions, especially when used in conjunction with production requirements (OECD, 2015 p. 61-65).

1) Export Subsidies

Historically, Switzerland had maintained a series of export subsidies to compensate its agri-food industry for the additional costs and high prices associated with its agricultural policy. Export subsidies are a particularly damaging form of subsidy as they not only distort domestic markets, but international ones as well. Developing countries especially, with their more limited resources, are often particularly negatively impacted by such regimes (WTO, 2015) This led to the WTO Nairobi conference of 2015 where countries pledged to eliminate such export subsidies. As a result, as of January 1st 2019, Switzerland scrapped its main export subsidy law, the so-called Chocolate Law ("*Loi Chocolatière*") (Conseil Fédéral, 2018). This law helped its domestic agri-food firms compete on European and global markets by effectively subsidizing the difference between the high domestic Swiss prices and benchmark European prices (Olsommer & Courleux, 2019). However, since the law was eliminated, Switzerland has introduced new direct payments to compensate farmers and producers, while somewhat liberalizing and simplifying the importation of foreign milk and grains for use in processed food production for subsequent export ('*trafic de perfectionnement actif*') (Federal Gazette, 2017, pp. 4074-4075). Interestingly, according to the Swiss Milk Producers Association, the new system is explicitly designed to promote the "use [of] Swiss raw materials to produce competitive export products in the global market" (PSL-SMP, 2017). It remains to be seen if the new arrangement is WTO compatible, however Swiss WTO judge Christian Häberli believes that the arrangement is likely also in breach of the WTO agriculture agreement (Siegenthaler, 2017).

2) Impact of Domestic Agricultural Policy on International Opportunities

The Swiss system of subsidies, tax breaks, direct payments and not-quite-export subsidies for agriculture, represents a challenging hurdle to the conclusion of comprehensive trade agreements. Such trade agreements provide important benefits for the overwhelming portion of the Swiss economy made up of services and industry but also for agriculture. *Avenir Suisse*, estimated the cost of lost trade liberalization opportunities due to agricultural protectionist measures at 3.1 billion dollars annually (Avenir Suisse, 2019). The conclusion of trade agreements often requires mutual liberalization in a given sector, especially if both countries have an interest in that sector. It's helpful to use a potential U.S.-Swiss FTA as an example. While Switzerland stands to gain significantly from such an agreement (See section 3.2.2), as *Avenir Swiss* puts it: *"Without Swiss concessions on agricultural goods, there will be no FTA with the US. Currently the United States' main exports to the rest of the world are soybeans, corn, nuts, and meat" (Dümmler & Anthamatten, 2019b).*

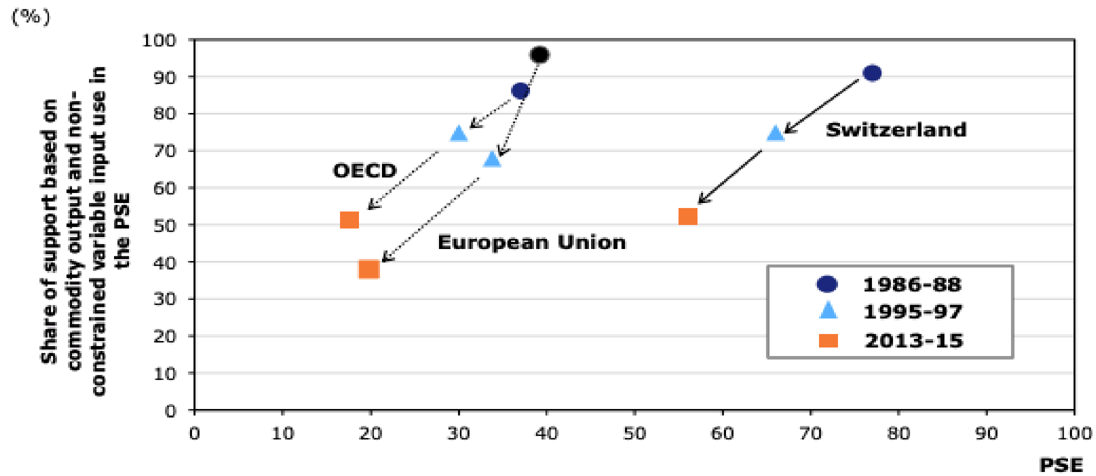
Thus, despite representing under 1% of Swiss GDP, agricultural protectionism has the potential to derail benefits to the remaining 99% of the Swiss economy generated by free trade deals. The existence of complex border measures and quasi-export subsidies are certainly unattractive features for countries with a similar domestic agricultural base who might be considering a trade agreement with Switzerland. After all, if the result of an agreement in agriculture is poor access for your domestic producers to the Swiss market due to technical barriers, and the subsequent displacement of domestic product consumption due to de-facto export-subsidized goods, why bother? While this is certainly a simplification of the situation and overlooks similarly complex systems in other countries, it illustrates an important hurdle to achieving truly comprehensive free trade, and the associated benefits. As Swiss Ambassador, Christian Etter, Delegate of the Federal Council for Trade Agreements put it:

> *In the previous free trade agreements, comparatively limited improvements in access to the Swiss agricultural market were sufficient. In ongoing negotiations, such as with Mercosur or Indonesia, whose main export interests are agricultural products, new solutions will be needed. However, more open markets also offer opportunities for Swiss agriculture. This has been demonstrated by the free trade in cheese between Switzerland and the EU, for instance. (Möhr, 2018)*

3) Liberalization Trends

Given the focus of this paper until now is on existing protectionist measures and support schemes, it may seem as if these measures are unshakeable fixtures of the Swiss system. It's important to recognize the reality that Switzerland is gradually trending, as with most countries, towards liberalization. The graph below shows that, despite Switzerland's still high levels of agriculture producer support, the gradual liberalizing trends occurring across the OECD and the EU also hold true for Switzerland, despite its higher overall level of protectionism.

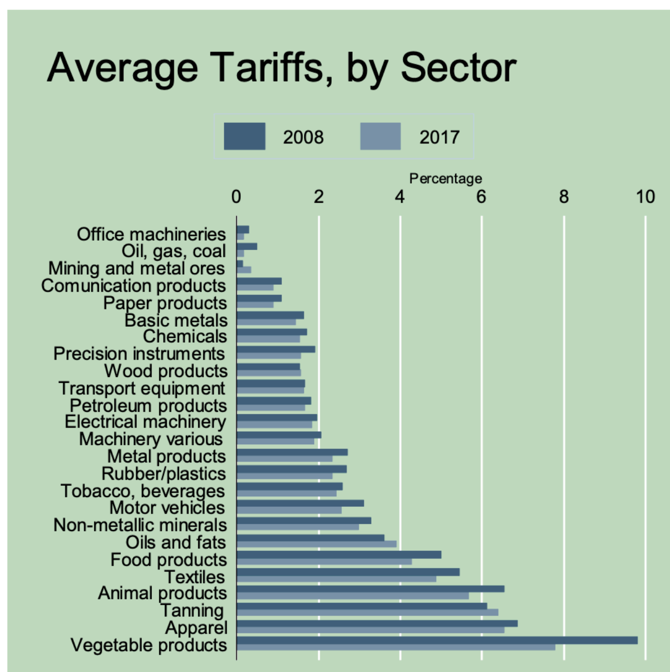
Figure 2: Liberalization Trends (WTO, 2017, p. 95)



Note: The level of support is presented by the percentage PSE. The composition of support is presented by the share in gross farm receipts of market price support, payment based on output, and payments based on non-constrained variable input use.

Source: WTO Secretariat representation based on OECD (2016), *Agricultural Policy Monitoring and Evaluation*, PSE/CSE database, Paris.

Figure 3: Average global tariffs, by sector



Source: UNCTAD secretariat calculations based on COMTRADE data and UNCTAD TRAINS data. (UNCTAD, 2019, p. 10)

Additionally, the results of recent agriculture-related referenda also point to a growing consensus among Swiss voters against further protectionist initiatives (Geiser, 2018). In 2018, three referenda were held: 1) The Fair Food Initiative, which would have restricted imports of food products not produced under the same standards as domestic Swiss products; 2) The Food Sovereignty Initiative, which would have also mandated the compliance of imported products with Swiss social and environmental standards and imposed a variety of import restrictions and; 3) Subsidizing farmers not dehorning their livestock, which would have created a new farming subsidy. All of these initiatives failed to pass, receiving only 38.7%, 31.6% and 45.3% of the votes, respectively (ChF, 2019a/b/c). While it's difficult to know the motivations of Swiss voters, the reasons cited by government officials for their negative opinion leading up to the votes included: the potential for the initiatives to result in further food price increases, the creation of excessive new bureaucracy, as well as the likelihood that the measures would violate Switzerland's international trade obligations (Geiser, 2018). These trends and recent events are not isolated. As the figure below shows, tariffs have been steadily decreasing nearly across the board, including in agricultural sectors, since the global financial crisis in 2008. Consequently, opportunities, challenges and implications for the Swiss market should be analyzed in light of these general trends. Some might point out, rightly so, that the world's largest economies have not necessarily been following this trend as of late (BBC, 2019). However, it is worth differentiating between countries such as the United States, which can rely on its enormous domestic market for growth, and medium-sized economies traditionally more dependent on international trade such as Switzerland and Canada (WTO, 2017, p. 13) which might be expected to more closely follow this gradual liberalizing trend.

IMPLICATIONS AND RECOMMENDATIONS

Implications for Business

The implications of Swiss agricultural trade policy are important not only for business entities operating (or seeking to operate) in the sector, but also for those exposed to import and export considerations in general. Additionally, these implications are relevant for both domestic Swiss firms, and foreign firms operating in these spaces. Given these considerations, the following implications are identified:

1) New Market Opportunities

As a result of the trend of gradual liberalization of the Swiss agriculture sector, and thus the possibility of existing protectionist hurdles being lifted (at the conclusion of new comprehensive trade agreements), both foreign and domestic firms should monitor for new cross-border trade opportunities. Foreign firms should seek out new opportunities to expand their agri-food exports into the Swiss market. Even foreign firms not directly engaged in the agriculture sector should seek new opportunities in the Swiss market. As negotiations are less burdened by agricultural concerns, advantageous trade agreements covering the service and industrial sectors will likely be concluded. For domestic firms, they should similarly seek out and prepare for entry into new export markets as new, more ambitious, trade agreements are concluded, especially in regards to markets for which existing relationships are present on the import side. In South America for example, EFTA is currently negotiating a trade agreement with the South-American trade bloc Mercosur. Given the volume of imports into Switzerland originating in the South American region (See Appendix 2), a new trade agreement should further facilitate trade between Switzerland and Mercosur and create new opportunities for Swiss businesses to balance the currently very negative trade flows between these actors.

2) Regulation Navigation & Risk Management

The current level of protection and regulation of the Swiss agriculture industry is a challenging hurdle to foreign firms seeking opportunities in this space. Stringent border measures, surcharges and the difficulty of competing with heavily subsidized domestic actors should be carefully considered by those firms seriously interested in the market. Additionally, while trends point in a liberalizing direction, there is a given measure of regulatory risk associated with operating in any country. The Swiss have not shied away from regulation in the past and, especially in a direct democracy such as Switzerland's, the possibility of future protectionist regulation remains present.

3) Operational Considerations

While Switzerland is traditionally perceived to offer many financial, tax and regulatory advantages, firms seeking to operate in Switzerland in any capacity should take note of the relatively high prices on goods when compared to its European neighbours. Additionally, firms considering basing operations in Switzerland and are seeking access to the European market must be aware of that Switzerland is not a member of the European Single market. Rather, they must consider the series of bilateral agreements regulating economic and political relations between the actors.

Implications for Policy Makers

Ultimately, the opportunities and risks identified for business are most heavily influenced by the policy direction of Swiss officials. The recommendations below set out how policy makers might facilitate the benefits for business of trade liberalization as well as mitigate some of the outlined risks and considerations.

1) Trade Agreements & Promotion

As a medium-sized economy with large proportions of its GDP dependent on reliable international trade, Swiss policy makers should continue to seek to expand the network of Switzerland's free trade agreements to facilitate access to foreign markets by Swiss businesses. Two important examples of negotiations either ongoing or in the preparatory stages which should be prioritized are the Swiss-Mercosur deal and a potential Swiss-US FTA. On Mercosur, Swiss companies have substantial existing trading relationships in the agri-food sector with Mercosur countries on the import side. A successful negotiation with Mercosur should try to leverage these existing supply-chain relationships to expand export opportunities for Swiss agricultural producers in a fast-growing market.

For a potential Swiss-U.S. agreement, Swiss policy makers should actively seek out compromises and engage skeptical stakeholders on the potential benefits provided by such an FTA. The enormous and wealthy U.S. economy stands to be a valuable export market for Switzerland high-quality agricultural products, however; some concessions will be necessary to secure a comprehensive deal.

2) Trade Liberalization & Distortion

To facilitate the above recommendations, Swiss policy makers should continue the gradual liberalization of the Swiss agricultural sector in-so-far as to reduce impediments to the conclusion of comprehensive trade agreements with like-minded countries. History has shown the Swiss to be fiercely protective of their domestic agriculture, thus radical liberalization would likely be intolerable and disruptive. As such, policy makers should pursue a gradual process of liberalization that seeks to reduce the most harmful and distorting measures which are the greatest impediments to trade such as (quasi) export subsidies, production-linked subsides and quotas, while continuing to supporting its domestic producers with non-production linked payments focusing on environmental measures. This would provide, in tandem, the benefits to consumers of market liberalization and the benefits to producers of better export market access without undue burden.

REFERENCES

Areté. (2016, November 18). POLICY EVALUATION OF TARIFF RATE QUOTAS. Retrieved from https://www.newsd.admin.ch/newsd/NSBExterneStudien/761/attachment/en/3210.pdf.

Avenir Suisse. (n.d.). Registre des privilèges de l'agriculture suisse. Retrieved from https://www.avenir-suisse.ch/fr/registre-des-privileges/.

BBC. (2019, December 16). A quick guide to the US-China trade war. Retrieved from https://www.bbc.com/news/business-45899310.

Bondolfi, S., & Hoi, G. W. S. (2018, September 11). Does Switzerland produce half of all the food it needs? Retrieved November 15, 2019, from https://www.swissinfo.ch/eng/fact-check_does-switzerland-produce-half-of-all-the-food-it-needs-/44380058.

ChF. (2019, December 17). Votation No 621. Retrieved from https://www.bk.admin.ch/ch/f/pore/va/20180923/det621.html.

ChF. (2019, December 17). Votation No 622. Retrieved from https://www.bk.admin.ch/ch/f/pore/va/20180923/det622.html.

ChF. (2019, December 17). Votation No 623. Retrieved from https://www.bk.admin.ch/ch/f/pore/va/20181125/det623.html.

Conseil Fédéral. (2018, September 21). Loi chocolatière : suppression des contributions à l’exportation au 1er janvier 2019. Retrieved from https://www.admin.ch/gov/fr/accueil/documentation/communiques.msg-id-72267.html.

DeVore, V. (2018, December 20). 'Swiss farmers could make a lot more money selling to the US'. Retrieved from https://www.swissinfo.ch/eng/us-ambassador-on-free-trade_-swiss-farmers-could-make-a-lot-more-money-selling-to-the-us-/44625744.

DG Trade. (n.d.). European Commission Directorate-General for Trade. Retrieved November 16, 2019, from https://madb.europa.eu/madb/euTariffs.htm?productCode=0406901500&country=CH.

Dümmler, P., & Roten, N. (2018, September 7). Une politique agricole d’avenir. Retrieved from https://cdn.avenir-suisse.ch/production/uploads/2018/08/2018_avenir_debat_politique_agricole_davenir.pdf.

Dümmler, P., & Anthamatten, J. (2019, October 30). Roadmap to America. Retrieved from https://www.avenir-suisse.ch/en/roadmap-to-america/.

Dümmler, P., & Anthamatten, J. (2019, August 23). Time for a Free Trade Agreement between Switzerland and the US. Retrieved from https://www.avenir-suisse.ch/en/publication/win-win-swiss-us-free-trade/.

EUR-Lex. (n.d.). Lex Access to European Union law. Retrieved December 20, 2019, from https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02002A0430(04)-20170701.

Eurostat. (n.d.). How much are households spending on food? Retrieved November 20, 2019, from https://ec.europa.eu/eurostat/web/products-eurostat-news/-/DDN-20181204-1?inheritRedirect=true.

Eurostat. (2019, December). Comparative price levels of consumer goods and services. Retrieved from https://ec.europa.eu/eurostat/statistics-explained/index.php/Comparative_price_levels_of_consumer_goods_and_services?_sm_au_=iVVtrvJDWrNB5kD6#Price_levels_for_food.2C_beverages.2C_tobacco.2C_clothing_and_footwear.

FCA. (n.d.). Federal Customs Administration FCA. Retrieved November 16, 2019, from https://xtares.admin.ch/tares/login/loginFormFiller.do;jsessionid=bx0kHZSAnJ3gVt5Sq570fZGNlbQv8WA2A8CXnxmNnrZ-DDtLupP2!-654679517.

FDFA. (2019, November 27). Swiss Economy – Facts and Figures. Retrieved December 2, 2019, from https://www.eda.admin.ch/aboutswitzerland/en/home/wirtschaft/uebersicht/wirtschaft---fakten-und-zahlen.html.

FDFA. (2019, December). The main bilateral agreements between Switzerland and the EU. Retrieved December 2, 2019, from https://www.eda.admin.ch/dam/dea/en/documents/folien/Folien-Abkommen_en.pdf.

Federal Gazette. (2017, May 17). Message concernant la suppression des contributions à l'exportation pour les produits agricoles transformés. Retrieved from https://www.admin.ch/opc/fr/federal-gazette/2017/4073.pdf.

Federal Statistical Office. (2019, June 13). Food and Agriculture - Pocket Statistics 2019: Publication. Retrieved November 14, 2019, from https://www.bfs.admin.ch/bfs/en/home/statistics/agriculture-forestry/farming.assetdetail.8706379.html.

Geiser, U. (2018, September 23). Ethical food proposals brushed off the table. Retrieved from https://www.swissinfo.ch/eng/vote-september-23--2018_food-production-standards-on-the-menu-for-swiss-voters/44408674.

Heritage. (n.d.). Switzerland. Retrieved October 20, 2019, from https://www.heritage.org/index/country/switzerland.

Jaberg, S. (2019, April 24). Why Switzerland stockpiles for possible emergencies. Retrieved from https://www.swissinfo.ch/eng/mandatory-reserves_why-switzerland-stockpiles-for-possible-emergencies/44917424.

Mariani, D. (2017, November 13). How far does CHF6,000 really get you in Switzerland? Retrieved from https://www.swissinfo.ch/eng/making-ends-meet_how-far-do-6-000-francs-really-get-you-in-switzerland-/43666358.

Möhr, S. (2018, January 26). "Free trade agreements can improve SMEs' competitive standing". Retrieved from https://www.s-ge.com/en/article/news/20181-interview-christian-etter-about-free-trade-agreements.

OEC. (n.d.). Switzerland. Retrieved November 20, 2019, from https://oec.world/en/profile/country/che/.

OECD. (n.d.). Average Annual Wages. Retrieved November 20, 2019, from https://stats.oecd.org/Index.aspx?DataSetCode=AV_AN_WAGE.

OECD. (n.d.). Agricultural policy monitoring and evaluation. Retrieved December 2, 2019, from http://www.oecd.org/agriculture/topics/agricultural-policy-monitoring-and-evaluation/.

OECD. (2015, March 27). OECD Review of Agricultural Policies: Switzerland 2015: READ online. Retrieved from https://read.oecd-ilibrary.org/agriculture-and-food/oecd-review-of-agricultural-policies-switzerland-2015_9789264168039-en#page65.

Office fédéral de la statistique. (2019, November 19). Des différences notables dans la consommation de denrées alimentaires - Enquête sur le budget des ménages 2017: Communiqué de presse. Retrieved November 25, 2019, from https://www.bfs.admin.ch/bfs/fr/home/actualites/quoi-de-neuf.assetdetail.10807901.html.

Olsommer, W., & Courleux, F. (2019, May 24). Repeal of the Swiss "chocolate law": a sleight of hand between export subsidy and aid coupled with production. Retrieved from http://www.agriculture-strategies.eu/en/2019/05/repeal-of-the-swiss-chocolate-law-a-sleight-of-hand-between-export-subsidy-and-aid-coupled-with-production/.

PSL-SMP. (2017, October 17). PSL INFO-EXPRESS: Remplacement de la loi chocolatière. Retrieved from https://www.aaremilch.ch/wp content/uploads/2018/10/SMP_IE_Nr9_18_f_V5.pdf.

Swiss FC. (n.d.). The federal Council - The portal of the Swiss government. Retrieved November 12, 2019, from https://www.admin.ch/opc/en/classified-compilation/19995395/index.html.

Shalal, A. (2019, May 16). Trump open to talks on U.S.-Swiss free trade deal: Swiss president. Retrieved from https://www.reuters.com/article/us-usa-switzerland/trump-open-to-talks-on-us-swiss-free-trade-deal-swiss-president-idUSKCN1SM2RH.

Siegenthaler, P. (2017, June 8). How 'wise-guy' Switzerland is outwitting the WTO. Retrieved from https://www.swissinfo.ch/eng/chocolate-law_how-wise-guy-switzerland-is-outwitting-the-wto/43243886.

Statistics Times. (n.d.). List of Countries by GDP (nominal) per capita. Retrieved from http://statisticstimes.com/economy/countries-by-gdp-capita.php.

Swissinfo. (2017, May 15). Poverty up to 7% among Swiss residents. Retrieved from https://www.swissinfo.ch/eng/the-hidden-poor_poverty-up-to-7-among-swiss-residents/43182490.

UNCTAD. (2019, February 4). Key Statistics and Trends in Trade. Retrieved from https://unctad.org/en/PublicationsLibrary/ditctab2019d1_en.pdf.

UNECE. (n.d.). Gross Average Monthly Wages by Country and Year. Retrieved November 20, 2019, from https://w3.unece.org/PXWeb2015/pxweb/en/STAT/STAT__20-ME__3-MELF/60_en_MECCWagesY_r.px/?rxid=0806c85a-23f8-4249-a4d0-10980df459d1.

Verts CH. (2019, March 13). Pas de libre-échange au détriment de l'environnement et des personnes. Retrieved from https://verts.ch/communiques/pas-de-libre-echange-au-detriment-de-lenvironnement-et-des-personnes.

WITS. (n.d.). World Integrated Trade Solution (WITS). Retrieved December 2, 2019, from https://wits.worldbank.org/.

Worldometers. (n.d.). GDP by Country. Retrieved October 20, 2019, from https://www.worldometers.info/gdp/gdp-by-country/.

WTO. (n.d.). WTO - Tariff Data. Retrieved November 16, 2019, from https://www.wto.org/english/tratop_e/tariffs_e/tariff_data_e.htm.

WTO. (2015, November). BRIEFING NOTE: TENTH WTO MINISTERIAL CONFERENCE, NAIROBI, 2015. Retrieved from https://www.wto.org/english/thewto_e/minist_e/mc10_e/briefing_notes_e/brief_agriculture_e.htm.

WTO. (2017, April 11). TRADE POLICY REVIEW - SWITZERLAND AND LIECHTENSTEIN. Retrieved from https://www.wto.org/english/tratop_e/tpr_e/s355_e.pdf.

Appendix 1 – Guarantee Fund Contribution levies – (WTO, 2017, p. 50)

Table 3.6 Guarantee fund contributions, 2016

	Guarantee fund contribution (GFC)
Réservesuisse (foodstuffs)	
Animal feed	SwF 0-5/100 kg gross
Bread cereals/Durum wheat	SwF 0-5/100 kg gross
Coffee	SwF 0-8.85/100 kg gross
Durum wheat	SwF 1.20/100 kg gross
Edible fats and oil	SwF 0-9.8/100 kg gross
Rice	SwF 0-4.75/100 kg gross
Sugar	SwF 0-5.0/100 kg gross
CARBURA (energy)	
Petroleum spirit and fractions	SwF 3.30/m^3
Diesel oil	SwF 3.30/m^3
Biofuels	SwF 3.30/m^3
Biodiesel	SwF 3.30/m^3
Bioethanol and petrol mixture	SwF 3.30/m^3
Agricura	
Fertilizers	SwF 3.00/100 kg gross
Helvecura	
Therapeutic products	0-2.2%/price ex-factory
Provisiogas	
Natural gas, liquefied/gaseous state	SwF 0.013 Ct./kWh

Source: Reservesuisse. Viewed at: http://www.reservesuisse.ch/en/goods/ [November 2016]; CARBURA. Viewed at: http://www.carbura.ch/fileadmin/user_upload/editors/web_dokumente/Zirkulare/MGL_Zirk/2016/Zirk21744_Info_B_C_Bioprodukte_ab_20160801_f.pdf [November 2016]; and information provided by the Swiss authorities.

Appendix 2 – Swiss Agricultural Trade – World Bank / WITS (WITS, 2019)

World - 2017	Export (US$ Thousand)	Import (US$ Thousand)	Net Balance	Export Product Share (%)	Import Product Share (%)
Food	$5,839,812.98	$6,009,239.33	-$169,426.35	100%	100%
Vegetables	$2,554,583.29	$4,578,718.28	-$2,024,134.99	100%	100%
Animal	$843,515.33	$2,064,840.60	-$1,221,325.27	100%	100%
Total	$9,237,911.60	$12,652,798.21	-$3,414,886.61	100%	100%

EEA - 2017	Export (US$ Thousand)	Import (US$ Thousand)	Net Balance	Export Product Share (%)	Import Product Share (%)
Food	$2,919,110.89	$4,996,546.92	-$2,077,436.03	49.99%	83.15%
Vegetables	$1,841,846.64	$2,796,257.46	-$954,410.82	72.10%	61.07%
Animal	$623,732.15	$1,603,438.95	-$979,706.80	73.94%	77.65%
Total	$5,384,689.68	$9,396,243.33	-$4,011,553.65	58.29%	74.26%

North America - 2017	Export (US$ Thousand)	Import (US$ Thousand)	Net Balance	Export Product Share (%)	Import Product Share (%)
Food	$1,200,047.70	$141,848.53	$1,058,199.17	20.55%	2.36%
Vegetables	$268,213.64	$166,604.39	$101,609.25	10.50%	3.64%
Animal	$110,160.00	$66,772.86	$43,387.14	13.06%	3.23%
Total	$1,578,421.34	$375,225.78	$1,203,195.56	17.09%	2.97%

US - 2017 (Within North America)	Export (US$ Thousand)	Import (US$ Thousand)	Net Balance
Food	$1,036,342.88	$125,096.27	$911,246.61
Vegetables	$206,974.79	$126,654.21	$80,320.58
Animal	$84,992.96	$51,575.05	$33,417.91
Total	$1,328,310.63	$303,325.53	$1,024,985.10

Asia & East Pacific - 2017	Export (US$ Thousand)	Import (US$ Thousand)	Net Balance	Export Product Share (%)	Import Product Share (%)
Food	$738,498.02	$272,098.43	$466,399.59	12.65%	4.53%
Vegetables	$207,416.79	$236,693.26	-$29,276.47	8.12%	5.17%
Animal	$45,320.80	$223,353.83	-$178,033.03	5.37%	10.82%
Total	$991,235.61	$732,145.52	$259,090.09	10.73%	5.79%

Middle east & North Africa - 2017	Export (US$ Thousand)	Import (US$ Thousand)	Net Balance	Export Product Share (%)	Import Product Share (%)
Food	493150.66	13313.12	$479,837.54	8.44%	0.22%
Vegetables	82820.99	107407.28	-$24,586.29	3.24%	2.35%
Animal	17782.63	2048.69	$15,733.94	2.11%	0.10%
Total	$593,754.28	$122,769.09	$470,985.19	6.43%	0.97%

Latin Americ & Caribbean - 2017	Export (US$ Thousand)	Import (US$ Thousand)	Net Balance	Export Product Share (%)	Import Product Share (%)
Food	$78,607.72	$302,376.29	-$223,768.57	1.35%	5.03%
Vegetables	$91,885.91	$749,310.97	-$657,425.06	3.60%	16.37%
Animal	$6,093.46	$126,467.97	-$120,374.51	0.72%	6.12%
Total	$176,587.09	$1,178,155.23	-$1,001,568.14	1.91%	9.31%

Europe & Central Asia - 2017	Export (US$ Thousand)	Import (US$ Thousand)	Net Balance	Export Product Share (%)	Import Product Share (%)
Food	3165662.85	5111287.67	-$1,945,624.82	54.21%	85.06%
Vegetables	1880293.2	2948363.44	-$1,068,070.24	73.60%	64.39%
Animal	658916.31	1617815.35	-$958,899.04	78.12%	78.35%
Total	$5,704,872.36	$9,677,466.46	-$3,972,594.10	61.76%	76.48%

Appendix 3 – Direct Payments by policy objective – (WTO, 2017, p. 100)

	2012	2013	2014	2015
General direct payments (AP 2011)	2,163	2,148	n.a.	n.a.
Ecological direct payments (AP 2011)	641	667	n.a.	n.a.
Payments for ensuring food security	n.a.	n.a.	1,096.1	1,093.5
Basic payment			824.0	820.7
Payment under difficult production conditions			160.3	160.5
Payment for open arable land and permanent crops			111.8	112.3
Farmland payments	n.a.	n.a.	495.7	504.4
Payments to maintain open landscape			140.6	140.8
Steep slope payments			107.3	108.1
Payments on very steep slopes			13.4	13.5
Steep slope payments for wine growers			11.7	11.9
Alpine pasturing payments			101.6	107.7
Summer pasturing payments			121.0	122.3
Payments for production systems	n.a.	n.a.	439.5	450.1
Payment for organic agriculture			40.4	42.5
Payments for extensive cereal and rapeseed production			31.9	33.5
Payments for pasture-based dairy and meat production			104.8	107.9
Animal welfare payments (outdoor)			186.8	188.2
Animal welfare payments (housing systems)			75.6	78.1
Biodiversity payments	n.a.	n.a.	364.1	386.6
Quality payment			284.0	296.1
Payment for bio-diversity networks			80.1	90.5
Payments for landscape quality	n.a.	n.a.	70.2	125.5
Resource efficiency payments	n.a.	n.a.	6.3	17.3
Payment for emission-reducing application techniques of manure			2.1	6.2
Payment for reduced tillage			3.8	10.4
Payment for precision application of pesticides			0.3	0.7
Payments for water protection and sustainable use of natural resources			31.0	25.5
Transitional payments	n.a.	n.a.	307.8	177.9
Other	13	15	6.3	-2.3
Total	2,791	2,798	2,773.5	2,777.9

n.a. Not applicable.

Note: Payments for water protection and sustainable use of natural resources are not direct payments but another type of financial support. Since they are financed by the federal direct payments budget (and co-financed by the cantons), they are included in this table.

Source: Federal Office for Agriculture (2015), *Annual Report on Agriculture 2015* and information provided by the authorities.

Analysis of the Role of Family Business in the Czech Republic

Annie Washington

ABSTRACT

The purpose of this research paper is to analyze the phenomenon of family businesses in the Czech Republic, including the past and current situation, and the important effects that family businesses have on the local Czech economy, as well as the EU as a whole. The history of the Czech Republic is a complex one, and the nature of communist rule in the nation hindered the growth of many sectors, family entrepreneurship included. Since 1989, there has been significant growth in this sector, which has resulted in the business landscape of the present day, with all of its current complexities and limitations, some of which include challenges this inquiry seeks to provide solutions to. Therefore, this paper will move into discussing how other countries have implemented family business policies, and how these policies compare to those of the Czech Republic. Following, will be a policy analysis portion to assess if any of these policies would ameliorate the domain of family enterprise in the Czech Republic.

FAMILY BUSINESSES, DEFINED

When one imagines the role of a family-run business, it can often be limited to imagining the mom-and-pop coffee shop that most people have experienced in their hometown, but family businesses can range from small shops to fortune-500 firms. Actually, family businesses make up a huge segment of the market, at around 80-90% of all firms worldwide ("The surprising stats," n.d., para.1). This shocking statistic perfectly demonstrates the scope and breadth that family-run businesses have. A family-run business is defined on the web as a business that is owned by two or more family members, and the family maintains majority control and ownership over this business (Westen, 2018, para.1). One of the key issues that will be expanded upon further in this paper is the absence of a formal definition of what qualifies as a family business in European legislation, which includes the Czech Republic. Therefore, this definition is a general 'working definition' for the purpose of this comparative study rather than officially defining what they are for specific analysis. Different literature defines family entrepreneurship according to several variables. Some of these variables include the family's percentage share of assets, amount of strategic control, involvement of generations of family members, or intention to remain family owned (Petrů & Havlíček, 2017). The "variety of definition[s] and criteria for determining a genuine family business" (Machová, 2018, p.49) causes large problems. Throughout researching different articles, many use dissimilar definitions of what qualifies as a family business. This inconsistency can lead to methodological problems, particularly when researchers are attempting to compare statistics on family businesses with other countries in the world, or within the European Union (Machová, 2018). Moreover, it is essential to gain a common and accepted definition of what a family firm is if the exchange and comparison of information is to be used accurately (Report on family businesses in Europe, 2009). The EU Commission found that as of 2009, there were over 90 different definitions of a family business in the EU (Report on family business in Europe, 2015). This is a significant, yet unnecessary amount of definitions that makes it extremely complicated to compare features within and between countries.

IMPACT OF FAMILY BUSINESSES ON THE ECONOMY

Family firms play an important role in economies in general, and very much so in Europe as well. They play an important role with impacts on regional and national economies; particularly contributing significantly to GDP due to their large presence. Odehnalová and Pirožek even go so far as to state that family businesses form the "backbone of [the] European economy" (2013). Referring to a 2015 KPMG study, over 14 million family firms provide over 60 million jobs, solely looking at the private sector (European family business trends, 2015, p. 3). The effect and proportion of family businesses throughout Europe varies from country to country, but they are certainly present in all sizes of business. For example, in France and Germany 40% of the 250 largest companies are family owned (European family business trends, 2015, p.3). The largest share of family businesses in the European Union (EU) is in Italy, where 95% of firms are family owned (Odehnalová & Pirožek, 2013); however, Spain, Austria, Italy, Germany, Switzerland, Norway, and the UK are typical EU countries with a high level of family business (Koráb & Petlina, 2015). For another specific example, the majority of the German economy is made up of small and medium sized firms called "German Mittelstand" which generate 52% of total economic output and employ 60% of employees in Germany (Basco & Bartkevičiūte, 2016). See Figure 1 for a useful chart that demonstrates the makeup of family vs non-family business in these regions.

There are certain characteristics that family businesses leverage in order to achieve great success. An important note on family businesses' effect on the economy is the crucial role they can play in addressing financial and economic crisis, and ability to "revive" the economy (Report on family businesses in Europe, 2015, p.12). European family businesses demonstrate great business confidence and stable growth. During times of economic downturn, over half of family businesses interviewed expressed a positive outlook (European family business trends, 2015, p.4). Family businesses, by the nature of their culture and defining traits, have a better chance to survive recession and in the long-term, which is a main factor that makes them "driving motors of national economies" (Koráb & Petlina, 2015, p.1). Why is this? Some reasons for their superior ability to survive is that family firms are capable of quickly adapting and being nimble to environmental changes than their competitors. This allows them to maintain the flexibility that is vital for long-term survival. For family businesses, they do not see their future solely about survival, but they seek sustainable growth (European family business trends, 2015, p.4). Family businesses are more often perceived as stable and trustworthy, as well as being socially important especially for local communities ("The surprising stats," n.d., para.2). This fact is confirmed in a study where the main advantage of family businesses was their flexibility (Breckova, 2016). PWC conducts an annual family business survey, and in their survey from 2018 which interviewed nearly 3,000 executives worldwide, it was stated that family businesses hold the competitive advantage of strong core values linked with a strong purpose that drives their operations in a way that non-family businesses often seek and cannot achieve to the same degree ("Global family business survey," 2019, p.15). To summarize, the role and effect that family firms have is huge, and should not be overlooked.

HISTORY OF CZECHOSLOVAKIAAND TRANSITION TO CZECH REPUBLIC

In order to understand the current business climate, it is necessary to understand the complex history of the Czech economy. The history starts in 1918 when the independent Czechoslovak state was established, following the collapse of the Austro-Hungarian empire at the end of WWI (Martínek, 2010). At this time, the regions were named Slovakia, and Bohemia and Moravia (present-day Czech Republic). Additionally, during these times Slovakia was lagging behind the more developed regions of Bohemia and Moravia; however, the two regions were very closely related, especially under the realms of language, religion, and culture (Martínek, 2010). By 1939 and continuing throughout the Second World War, the region of Czechoslovakia underwent a forced incorporation into Nazi Germany (Martínek, 2010). All of Bohemia and Moravia were controlled by Germany, and Slovakia was still dominated by Germany but they received a nominal autonomy, so experienced greater freedom (Martínek, 2010). Towards the end of WWII, the eventual liberalization of Czechoslovakia helped to boost the communist party. The Soviet Union was able to support the regions with the intention of cleverly maneuvering and staging a virtual coup in 1948 when a people's republic was formed (Martínek, 2010). From this year until 1990, Czechoslovakia was under a command economy as a part of the eastern bloc (Martínek, 2010). Throughout these years where Czechoslovakia was under communist rule, there were many defining historical events that took place. One of them was Prague Spring, which was a brief period of liberalization for the region including greater freedom of expression, rehabilitation for victims of political purges, a sweeping declaration for reform including more autonomy, and plans for democratization of the government (Prague Spring, 2018). This liberalized period came to an end in August 1968 when Soviet forces invaded Czechoslovakia and occupied it promptly. From the 1970s to the end of the 1980s, this region was actually one of the most successful and prosperous, but at the same time it was one of the most repressed regions in Eastern Europe. Similar to how Prague Spring came into effect, in 1989 there was a second wave of democratization that brought many very large demonstrations and protests in Prague demanding reform. Eventually, in 1990 free elections were held, which resulted in a non-communist government winning the majority (Czech Republic, 2018). This signified the end of communist rule in Czechoslovakia, and was coined the Velvet Revolution. As democracy had re-emerged, disagreements between the two halves (Czech Republic and Slovakia) of the united region also re-emerged, and separatism escalated promptly. Specifically, the Czech's preferred privatization and the Slovak's heavily resisted. Named the Velvet Divorce, shortly after the Czech and Slovak leaders discussed peaceful dissolution of the Czechoslovak federation and in 1993, two new countries – Czech Republic and Slovakia – were formed (Czechoslovakia, 2018). The independent country of Czech Republic experienced certain domestic troubles that were mitigated by acceptance into NATO and the EU. The Czech Republic applied for membership to the EU in 1996, and was accepted as a member in 2004 (Czech Republic, 2018).

HISTORY OF FAMILY BUSINESSES IN THE CZECH REPUBLIC

Breckova (2016) states that before 1938, family businesses flourished. A large reason was because during the post-revolutionary period it was more financially accessible for families to start a business, rather than individuals. Following this time, due to the history in the Czech Republic previously discussed, there was little attention paid to family businesses until 1989. Many family businesses were erased or disrupted completely during the war and communist period, and just began to be re-introduced after the Czech Republic was free from communist rule (Koráb & Petlina, 2015). A large number of current small and medium businesses throughout the Czech Republic also were only established after 1989. In fact, modern history of family businesses in the Czech Republic essentially restarted following 1989. At this time, democracy was being re-integrated into the economy and much of the Czech population was optimistic about the future and enthusiastic about starting new businesses or re-vitalizing old businesses (Petrů & Havlíček, 2017). Many family-run businesses that had been nationalized under communist rule were returned to the original owners, some were recovered, and others were opened brand new (Petrů & Havlíček, 2017). An example of such a family-run business in the Czech Republic is PETROF company and the Petrof family, who established business in 1864 and were the largest manufacturers of acoustic pianos and upright pianos in Europe (Petrů & Havlíček, 2017). Another example of a family business in the Czech Republic that is extremely popular is Kofola, which is a soft drink similar to Coca-Cola and is owned by the Samara family.

CURRENT SITUATION IN THE CZECH REPUBLIC

Although there are no formal and precise statistics about family businesses in the Czech Republic due to the lapse of a legislative definition of what qualifies as a family business, the small and medium Czech business sector comprises 99.84% of the total number of active Czech businesses (Koráb & Petlina, 2015). There is evidence that a very large number of small and medium enterprises are family companies. Family businesses have become a defining characteristic of the Czech economy due to the sheer number of family businesses, but also the position and potential they have in being able to withhold economic turmoil, and their large strength and development potential (Petrů & Havlíček, 2017). Petrů and Havlíček (2017) state that Czech family enterprises are specifically important for the development of the endogenous, or local growth of individual regions in the Czech Republic.

Czech family entrepreneurship history lagged behind when compared to other democratic economies, and this is because of the political history and turbulent changes in business environment (Breckova, 2016). Due to the history of many family businesses only starting up post-1989, currently most of the successful family businesses that have survived are on the verge of generational turnover (Petrů & Havlíček, 2017). This is where the successors, which are often children or other younger family members, take over the family business that their parents or elder family members created. Succession is inevitable in the lifecycle of any family business because of the nature of family businesses themselves. All primary owners will eventually pass away or decide to exit the ownership or managerial role; therefore, it is unavoidable to have a change in the ownership and control. Since the history of the independent Czech Republic is so limited, Czech family businesses do not have any historical record or experience with generational handovers (Petrů & Havlíček, 2017). A study by Petrů and Havlíček uses quantitative research to evaluate the generational representation of family businesses to analyze succession plans. For this specific study, a family business was defined as a business owned by one or multiple family members that have majority control over the business, and hold primary control and decision-making between these family members (Petrů & Havlíček, 2017). 650 questionnaires were distributed, and results found that 63.3% of family businesses are owned by the first generation. This number decreases to only 30.1% jointly owned by first- and second-generation family members, which are the top two categories of ownership (Petrů & Havlíček, 2017). These statistics confirm that due to the timing of the fall of communism, there are few companies that have successfully completed a generational turnover and most continue to be owned by the first generation. This is historically significant for the Czech economy, because this stage of transfer for family businesses is vital in the life cycles of the company if they are going to survive long-term. This trend is not specific to the Czech Republic; an article states that only 30% of family firms successfully pass on to the second generation, and this figure drops to 10-15% to third generation, and further to 3-5% for fourth generation handovers ("The surprising stats," n.d., para.4). Succession isn't like the passing of a baton. A successful family business develops its new owners over a period of mentoring, leadership training, and ongoing guidance.

Present day, the Czech Republic has the opportunity to become the eleventh country in the European Union to enact formal legislation regarding family businesses and their operations (Petrů, Havlíček & Tomášková, 2018). In January of 2018, the government started drafting up a bill to do with small and medium enterprises, which includes plans to create a formal definition of family business in the Czech Republic. One of the officials was quoted saying his "goal is to make family businesses… mainstream [and that] intergenerational responsibility transfer is the foundation of a stable economy and that maintaining a family business balances the influence of multinational companies…" (Petrů, Havlíček & Tomášková, 2018, p.139).

FAMILY BUSINESSES IN OTHER COUNTRIES

A recent article published by KPMG reveals recent legislative changes in the UK that affect family businesses in a positive way. In the UK, there were some changes and reforms to the tax system which result in family businesses having more tax relief ("UK tax regime," 2018). In general, the UK has one of the most favourable tax systems when it comes to tax rules for family businesses, and this is especially true when considering generational transfers ("UK tax regime," 2018). As stated in previous sections of this paper, companies undergo significant costs often when transferring ownership. What the tax reforms in the UK aim to do is offer tax breaks for family business owners that are transferring ownership. What this does is allows families to leave more wealth for the future business owners, which creates prosperity for these businesses and leaves their chances of future success greater. In turn, this creates a thriving family business sector which can contribute to a booming and vibrant economy. The UK inheritance tax system actually ranks above France, Spain, The Netherlands, and the United States in that they charge lower taxes when transferring ("UK tax regime," 2018). One of the main reasons that the UK is implementing this tax system is to create a more prosperous entrepreneurial sector in glooming times of Brexit to minimize negative effects and set the economy up in a more advantageous position ("UK tax regime," 2018). Setting up different policy and law changes, such as to the tax system, is an optimal way to help these sectors.

An interesting note about a personal experience encountered in Ireland was during a visit to Dublin. During a tour of the Guinness factory, it was revealed that in 1769 the first export of Guinness took place, and since then seven generations of the Guinness family have been at the heart of the company, making it a family-run, owned, and controlled enterprise (Siggins, 1997). If the Czech Republic had been home to the Guinness family business, over two and a half centuries of progress would not have played out the same way due to disruptions of free enterprise. For example, the free market in Ireland provided a framework for a competitive business, including policies and regulations that were not cultivated and ultimately illegal under communist rule.

Another example of a country that has posted legislation pertaining to family businesses in particular is Malta. Recently, a minister created the Family Business Act in Malta, which is the first country to create a specific family business act in Europe (Malta enacts family business legislation, n.d.). For some background information, 70% of Maltese businesses are family businesses, and the minister described Malta's family businesses as "its beating heart" (Malta enacts family business legislation, n.d., para.2). Due to the important role that family firms play in this economy, the government thought that family firms deserve government support. According to the minister, this legislation will support these firms through the successions, as only 30% of Maltese companies make it through. This framework includes laws that regulate investing and financing of the firms, and following this the firms will be eligible for different kinds of benefits such as grants. In addition to this, the act will be a legal framework for family firms to plan and receive guidance and consultation formally to assist with their business operations (Malta enacts family business legislation, n.d.). This legislation overall encourages family firms to operate effectively and succeed in the long-term.

COMPARISON

The Czech Republic has experienced a disruptive history, a dynamic not unique to this country. Many of the Eastern European regions also experienced this and as a result are not as developed as other non-Eastern European regions. The Eastern European countries analyzed were Estonia, Latvia, Lithuania, Bulgaria, Poland, Romania, Czech Republic, Slovenia, Slovakia, Croatia, Servia, Macedonia, and Kosovo; these are all countries that were under former communist rule, but are now independent regions (Güldenkoh & Silber, 2019). Güldenkoh and Silber's study compared the characteristics of Eastern European regions with several other regions. The comparative regions are Anglo (Australia, New Zealand, Canada, US, UK), Germanic (Germany, Netherlands, Austria, Switzerland), and Nordic (Finland, Sweden, Denmark, Norway, Iceland) clusters. This variety of regions was used to provide recommendations for family business development in the Eastern parts. Much of the family business research that has been conducted to date has been in Western countries (Güldenkoh & Silber, 2019). This study shows the diverse relationship that members of a family business have through the model of the three circles, which are management/business, ownership, and family (see Figure 4). The authors state that a member can be in any of the seven quadrants, and this is a contributing factor to what makes the categorization and relationship between members of a family business so complex (Güldenkoh & Silber, 2019). Using the three circles model to classify members will help specify the roles and break down interactions simply and transparently.

The GLOBE framework was used to understand the differences in cultural context between all of these different clusters. Some significant findings of this research is that Anglo clusters have the highest degree of boundary between family and business, Nordic clusters have the lowest, and Germanic clusters are somewhere in the middle (Güldenkoh & Silber, 2019). A few specific policy examples discovered are that in Poland, there are institutions that gather family business members in a platform to exchange experiences as a base for research (Güldenkoh & Silber, 2019, p.11). Similarly, Estonia has several organizations that have successfully made the generational transfer. In general, the public sector in Eastern European countries has greatly reduced the amount of administrative burdens on the private sector, in the form of tax breaks and electronic document submission for example, which has streamlined the business process for family businesses.

IMPACT OF EU SUPPORT

When analyzing the strategies and policies that the EU could implement as a whole, rather than country specific policy, once can see that even though family businesses play such a significant role in the European economy, for the most part they are omitted from public policy. An important factor to analyze regarding this topic is the use of European Union support funds towards the family business sector. An article published by Halasi, Schwarcz, Mura and Roháčiková (2019) evaluated the impact of EU support funds on family business enterprises mainly in Slovakia. Slovakia, similar to the Czech Republic and many other European countries, also lacks a formal definition and legal framework for family business governance. The two hypotheses that Halasi et al. analyzed is firstly if there is a significant relationship between subjective success of family businesses and active use of EU funds, and secondly if there is a significant relationship between the presence of a support system and consultation and success of a generational change (2019). It was found that hypothesis number one was accepted after statistical comparison and analysis, and hypothesis number two was recognized to have a relationship and impact, however it was not strong enough to be fully accepted (Halasi et al., 2019). The general findings confirmed that EU funds do seem to play an important role for family businesses. Some additional findings were that family businesses who had been supported by EU funding have developed faster and more steadily in the last three years than family businesses who had not received funding (Halasi et al., 2019). The primary take-away from this study is that external support and consultancy, as well as financial support, are very necessary for organizations and if these factors are present early in the business life cycle, they will bring success to the company. The Treaty of Lisbon that was developed in 2007 had the goal to make the

European Union the most competitive and dynamic economy in the world. With this goal, it brings a large responsibility to create a prosperous small and medium enterprise sector, seeing as this category of business is a main economic driver and needs support (Halasi et al., 2019). The EU has recognized this over the last several years, and has spent more than 450 million Euros on this initiative to create a booming small and medium enterprise sector (Halasi et al., 2019). The EU plans to continue this investment into this sector of the economy with European structural and investment funds.

Another article by Basco and Bartkevičiūte discusses the potential to integrate these subjects into the EU 2020 strategy. One of the main policies in the EU 2020 strategy is the cohesion policy, which closely supports entrepreneurship and small and medium enterprise growth, both which family firms fall under (Basco & Bartkevičiūte, 2016). The EU strategy needs to refine regional policy to accelerate changes in regional performance of this sector. Policies should be brought in that enhance the positive effects and minimize negative effects. Tailored policies are necessary according to different firms' requirements and needs. Figure 5 displays the variety of different types of family firms. For example, tax policies for a small café versus a large international firm with subsidiary branches will be different, and policy should reflect these individual needs (Basco & Bartkevičiūte, 2016). A specific example of tailored policy is in Italy. Italian family firms require face-to-face social interactions and relations for survival and success; therefore, public policy should promote "clustering strategies" that will increase collaboration, cooperation, and a social environment (Basco & Bartkevičiūte, 2016). Another primary concern of family firms that EU strategy can assist with is financing. Family firms are often more risk averse and want to keep control within the family more. In turn, this affects the sort of financing options that they will be more enthusiastic or reluctant to take part in. Public policy should make alternative funding sources available for these firms so that they are able to receive financing without giving up their control. An example of this is non-voting stocks, which were introduced in Norway and Spain (Basco & Bartkevičiūte, 2016). As an overview, research on family business up until recently has had a lot of gaps and has failed to explain thoroughly the effect that family businesses have on regional and economic growth, which explains the deficiency of public policy regarding these topics (Basco & Bartkevičiūte, 2016). Failing to integrate new policies currently will hinder the EU's diversity and economic growth.

PRACTICAL PROBLEMS

One of the main problems of family businesses in the Czech Republic, but in turn one of the biggest prospects for development, is the degree, or lack thereof, of professionalism. If family businesses can become more professional with the introduction of strategic management policies that will balance out innovation with tradition, this could be a large turning point for many family businesses that up until this point have only been getting strategic advice from internal sources (Koráb & Petlina, 2015). A factor in this is the weakness that family businesses possess of conservative decision making and high conflict potential between decision makers in the company. Introducing an external consultant or strategic partner could help with both these issues. Additionally, family enterprises can be reluctant to take external financing which is also an issue (Koráb & Petlina, 2015).

The lack of designing succession plans and having a roadmap has been identified in several sources of literature as a key impediment to longevity in family businesses. Through the combination of limited support, insufficient entrepreneurial frameworks and approaches that are taken at the last minute to transition, generational transfers often fail. According to Machová (2018), having more support and formals steps for success required would allow more businesses to make a successful transfer. In a survey conducted amongst 505 small and medium family enterprises in the Czech Republic, 90% agreed that the company handover should occur while the owner is still alive (Breckova, 2016).

A report conducted by Europa analyzed the 27 countries in the EU as well as the European Economic Area (EEA) countries to provide an overview of family businesses and the challenges they face. A practical concept that was used to model family businesses was the three-circle model of family business. This model separates the challenges that family businesses face under three categories; the categories are: challenges that arise from family business environment, challenges as a consequence of family firms' internal matters, and challenges that are related to educational aspects (Report on family businesses in Europe, 2009). Policy changes that can be implemented at a government-wide level are mostly related to the first and third level, as internal matters can only be addressed by the family members themselves. Family businesses themselves also have a role in overcoming challenges that they are facing, however the following section will be focusing on policies that can externally be implemented to assist.

ORGANIZATIONAL DEVELOPMENT

A useful concept when analyzing family businesses is Greiner's theory of organizational growth. Family businesses in one particular study were analyzed according to this framework. The three stages are creative management, crisis of leadership, and professional direction (Odenhnalová, 2014). Different family firms were examined according to this framework, which were all founded between 1991 and 1998, and were all medium sized firm owned by the original family and existed for ten years at the point of the survey. All businesses analyzed were found to be within the first two stages of the framework (Odenhnalová, 2014). The first stage, creative management, is how a business starts with its innovative roots in creative leadership. The following stage is crisis of leadership, where the growth of the business requires a more formal operational approach, which can cause a dilemma for firms (Odenhnalová, 2014). Professional direction is the final stage, where few family businesses reside, and this is where there are formal procedures and direction in place to run the business operations. Figure 2 shows an interesting table outlining the differences between family and non-family firms according to the creative (first) stage. All of the companies in this survey were in the first two stages, signifying that none of them had decentralized decision making. Each of the owners of these companies hoped and believed that their companies would be passed on successfully to the next generation, however their unwillingness to progress into the third stage and gain professional direction is a contributing factor to unsuccessful succession transfers (Odenhnalová, 2014). Greiner's theory can be applied to family businesses in the Czech Republic to analyze their stage and determine the best next course of action for them.

REGULATIONS/POLICIES THAT CAN BE IMPLEMENTED

Although policy and laws regarding family businesses vary depending on the country, policies from other countries can be transferred and implemented into the Czech economy. National governments should consider creating more favourable family business law due to the abundance of positive effects family businesses have on economies - large contribution to GDP, stability, local support, and strong values to name a few. Often policy makers can be unaware of effects that family businesses have and this leads to a lack of strong policies regarding family businesses, or an absence of these policies altogether (Report on family businesses in Europe, 2009). However, as there is more general awareness and more research being done on this topic, this has been changing. Possessing "good governance structures and processes" is consistently at the top of the list of most important factors driving success of family businesses, and in this particular study was reported by 85% of respondents (European family business trends, 2015, p.9-10). Policies favouring family businesses can be implemented in many different forms. Some examples are taxation, company law, succession/transfer plans, research, education, creating a family business contact point in national administration, and family governance. A project was undertaken with the objective to find successful practices that are being implemented to support family businesses, of which more than 100 were identified and ten best practices were selected. Below will dive deeper into the relevant policy changes for the Czech Republic.

Czech family small and medium enterprises appear to have a relatively positive future with high growth and success potential and with the proper adaptation to the changing business landscape and organizational transfers they will be able to guarantee solvency and long-term success (Koráb & Petlina, 2015). A potential resource that family businesses need that could be offered is a family business office network, that serves as a form of support for local family businesses to network and communicate with each other in an organized manner. Moreover, having a family business contact point in the European Commission and at government levels is an important change that would promote better communication between the family business sector and the government (Report on family businesses in Europe, 2009).

Another major issue, as argued previously, is that despite the vital role Czech family businesses play in the economy, there is still no formal definition of what a family business means in legislature, therefore there is no benchmark or uniform way for companies to keep track (Petrů & Havlíček, 2017). A universal definition of what a family business is would help overcome many of the challenges stated in this paper, primarily by having reliable information and statistics to collect and compare (Report on family businesses in Europe, 2009). To go along with introducing a common EU definition of family businesses, it would be important to implement a national statistics office that collects and regulates data on family businesses to analyze their effect, what can be improved and what is going well (Report on family businesses in Europe, 2009). If the European Commission continues to promote exchange and sharing of information between EU member states, existing policies will be better able to be shared between countries.

In addition, there is a lack of educational resources informing people about family entrepreneurship, or the handover process in Czech Republic (Petrů & Havlíček, 2017). It is crucial that succession be handled as a process and planned adequately in advance. The government can create tools available for the transfer, such as planning tools and early preparation education - which certain countries worldwide have already implemented effectively (Report on family businesses in Europe, 2009). Promoting education early can help mitigate these issues as well. National governments have the possibility to work with educational institutions with the common goal of providing information and even going as far to develop courses that have curriculum specific to family business challenges (Report on family businesses in Europe, 2009). In particular, family businesses "represent the largest pool of entrepreneurial potential and are natural incubators for future entrepreneurs" (Report on family businesses in Europe, 2015, p.16-17). Given this information, promotion of entrepreneurial information in school curriculum could be very helpful.

In a 2019 family business survey conducted by Deloitte that interviewed 791 executives from 58 different countries, retaining family ownership within a family enterprise was outlined as a common long-term goal ("Deloitte survey," 2019). Family governance that would assist this concern could range from provisions or subsidies to cover consulting services, or even developing a standardized text with solutions that family businesses can use for recurring problems they face.

Further, financial aspects are important for policy makers to consider. Similar to any company, family businesses face financial issues. Especially important for family businesses is that many countries' tax system favours debt financing over equity in terms of interest. This means in the corporate system, interest is not taxed, but equity interest is taxed which poses a large challenge (Report on family businesses in Europe, 2009). An article published by Europa says that "family businesses often have a significantly higher equity ratio than non-family businesses and this high equity ratio results in economic stability" (Report on family businesses in Europe, 2015, p.6). Although Europa points this out as a positive aspect - as it is - it is also a disadvantage when linked up with tax systems that disadvantage equity financing. For family businesses in these countries, they are at a large disadvantage; therefore, what governments can do is implement regulations regarding grant and financial assistance to combat the unfavourable tax rules. The national government could also consider re-designing the tax system, or lowering inheritance and/or gift tax to address succession planning.

A final section of policy change that relates more broadly to businesses in general, and not only family businesses are the steps required for business start-up. Some basic conditions, such as permits, licences, and regulations that are necessary to start a business or expand a business are lagging in the Czech Republic and can cause poor performance (Hamplová & Provazníková, 2014). Hamplová and Provazníková express that "these causes are certainly related to a weak and unstable legislative support" (2014, p.1229). Figure 3 shows a graph demonstrating the position of the Czech Republic ranked according to ease of doing business.

CONCLUSION

This paper began with introducing family businesses and their importance for economies. It then moved into the history of the former Czechoslovakia and present-day Czech Republic. The current and past state of family business in this region, was analyzed and compared to other regions to highlight strengths, weaknesses, historical factors and potential solutions for future improvements. Since business does not exist in a vacuum, it stands to reason that political, cultural, governmental systems and structures play an enormous role in the cultivation of family-business friendly environments. Should some of the limitations identified in this paper be addressed, there could be significant future competitive potential available to the sector, generally defined, of family business in the Czech Republic.

REFERENCES

Basco, R., & Bartkevičiūte I. (2016). Is there any room for family business into European Union 2020 strategy? Family business and regional public policy. Local Economy 31(6) 709-732. DOI: 10.1177/0269094216664485

Breckova, P. (2016). Family business in the Czech Republic. European Research Studies,19(4), 3-16. Retrieved from ftp://ftp.repec.org/opt/ReDIF/RePEc/ers/papers/16_4_p1.pdf

Czechoslovakia. (2018). Retrieved November 3, 2019, from https://www.britannica.com/place/Czechoslovakia

Czech Republic. (2018). Retrieved November 4, 2019, from https://www.britannica.com/place/Czech-Republic/Land

Deloitte survey: over half of family businesses are ready to face challenges posed by disruption, despite unclear leadership pipelines. (2019). Retrieved October 29, 2019 from

https://www2.deloitte.com/rs/en/pages/about-deloitte/articles/global-family-business-survey-2019.html
European family business trends (2015). KPMG Enterprise. Retrieved from https://assets.kpmg/content/dam/kpmg/pdf/2015/12/european-family-business-trends-2015.pdf
Global family business survey 2018. (2019). Retrieved November 16, 2019 from https://www.pwc.com/gx/en/services/family-business/family-business-survey-2018.html
Güldenkoh, M., & Silber, U. (2019). The characteristics of family businesses: a comparative analysis of east European countries. Estonian Discussions on Economic Policy 27(1-2) 63-82. DOI: https://doi.org/10.15157/tpep.v27i1-2.15453
Halasi, D., Schwarcz, P., Mura, L., & Roháčiková. (2019). The impact of EU support resources on success of family-owned businesses. Potravinarstvo Slovak Journal of Food Sciences 13(1) 846-853. Retrieved from https://doi.org/10.5219/1167
Hamplová, E. & Provazníková, K. (2014). Assessment of the business environment competitiveness in the Czech Republic and EU. Procedia – Social and Behavioural Sciences, 109 1225-1229. doi:10.1016/j.sbspro.2013.12.616
Koráb, V., & Petlina, A. (2015). Family business in the Czech Republic: actual situation. Trendy Ekonomiky a Mangementu, 9(23), 32-42. Retrieved from https://doaj.org/article/b4b672d82077463c839d1e06339a4399
Report on family businesses in Europe. (2015). Europa European Parliament. Retrieved from http://www.europarl.europa.eu/doceo/document/A-8-2015-0223_EN.pdf?redirect
Siggins, L. (1997). The Guinness business. The Irish Times. Retrieved from https://www.irishtimes.com/news/the-guinness-business-1.73356
Machová, K. (2018). The succession in family businesses in the Czech Republic. ACC Journal 24(2), 48-60. DOI: 10.15240/tul/004/2018-2-005
Malta enacts family business legislation. (n.d.) Retrieved December 4, 2019 from https://www.financemalta.org/publications/articles-interviews/articles-and-interviews-detail/malta-enacts-family-business-legislation/
Martin, J. (2017). Legal and economic context of the Czech civil code rules on family enterprises. Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis, 65(6): 1945–1951. Retrieved from https://doi.org/10.11118/actaun201765061945
Martínek, A. (2010). The history of the Czech economy Retrieved November 2, 2019 from http://www.czech.cz/en/87961-the-history-of-the-czech-economy
Odenhnalová, P. (2014). Family business governance in the Czech Republic. European Conference on Management, Leadership & Governance, 206-211. Retrieved from http://web.b.ebscohost.com.ezproxy.library.uvic.ca/ehost/detail/detail?vid=1&sid=f7a77b04-e36c-4827-bf2a-ab5c13c7f635%40pdc-v-sessmgr05&bdata=JnNpdGU9ZWhvc3QtbGl2ZSZzY29wZT1zaXRl#AN=99239852&db=bth
Odehnalová, P., & Pirožek P. (2013). Selected Characteristics of family business in the construction industry of the Czech Republic. Littera Scripta 6(2) 91-103. Retrieved from https://doaj.org/article/79d9e478681047869208f6caa719e6db
Overview of family business relevant issues: research, networks, policy measures and existing studies (2009). European Commission. Retrieved from https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=2ahUKEwjqlvTv3cfmAhUgQ0EAHXkVCKgQFjAAegQIAhAC&url=https%3A%2F%2Fec.europa.eu%2Fdocsroom%2Fdocuments%2F10388%2Fattachments%2F1%2Ftranslations%2Fen%2Frenditions%2Fnative&usg=AOvVaw1w_6Mdh6Iech2s9RoZ68ur

Petrů, N., & Havlíček, K. (2017). Family entrepreneurship in the Czech Republic on the verge of first generation handover. Journal of International Studies, 10(4), 119- 130. doi:10.14254/2071-8330.2017/10-4/9
Petrů, N., Havlíček, K., Tomášková, A. (2018). Comparison of marketing vitality of family and non-family companies doing business in the Czech Republic. Economics and Sociology, 11(2), 138-156. doi:10.14254/2071-789X.2018/11-2/10
Prague Spring (2018). Retrieved November 3, 2019, from https://www.britannica.com/event/Prague-Spring
Rodrigues, J. & Marques, M. (2013). Governance bodies of family business. Revista de Empresa Familiar 3(1) 47-58. Retrieved from www.revistadeempresafamiliar.uma.es
The surprising stats about succession in family business. (n.d.). Retrieved October 23, 2019, from https://www.allstrategy.net/the-surprising-stats-about-succession-in-family-business/
UK tax regime gives UK family businesses a boost in succession through the generations – finds global report. (2018). Retrieved December 13, 2019, from https://home.kpmg/uk/en/home/media/press-releases/2018/05/uk-tax-regime-gives-uk-family-businesses-a-boost-in-succession-t.html
Westen, B. (2018). What makes a family business successful? Retrieved October 25, 2018, from https://www.allstrategy.net/the-surprising-stats-about-succession-in-family-business/

APPENDIX

Figure 1.

Table 1. Family Business and its Share in the Number of Registered Companies in Different Countries.

Country	Shares in the number of registered companies (%)	GDP Shares (%)
Australia	75	50
Belgium	70	55
Brazil	90	65
Finland	80	>40
France	>60	>60
India	Data not available	65
Italy	>95	Data not available
Germany	60	55
Netherlands	74	54
Poland	50–80	35
Portugal	70	60
Spain	75	65
Sweden	>80	Data not available
Switzerland	85	Data not available
Great Britain	75	Data not available
USA	>95	40
Middle East countries	>95	Data not available

Source: Neuber et al.,1998.

Figure 2.

Table 1: Creative stage

Family business	Non-family business	Source
Directive leadership focused on a positive relationship with staff	Directive leadership focused on a neutral relationship with staff	Sundaramurthy, 2008
Investment in staff	Smaller investment in staff	Pricewaterhouse Coopers, 2007
Aversion to risk	Inclination towards risk	Donckels, Fröhlich, 1991, Naldi et al. 2007
Orientation towards maintaining the company	Orientation towards profit	Donckels, Fröhlich, 1991, Sundaramurthy, 2008, Donckels, Fröhlich, 1991
Family financing	Credit financing	Lussier, 2004
Emphasis on quality	Lesser emphasis on quality	Koráb et al., 2008, Taguiry and Davis, 1996

Figure 3.

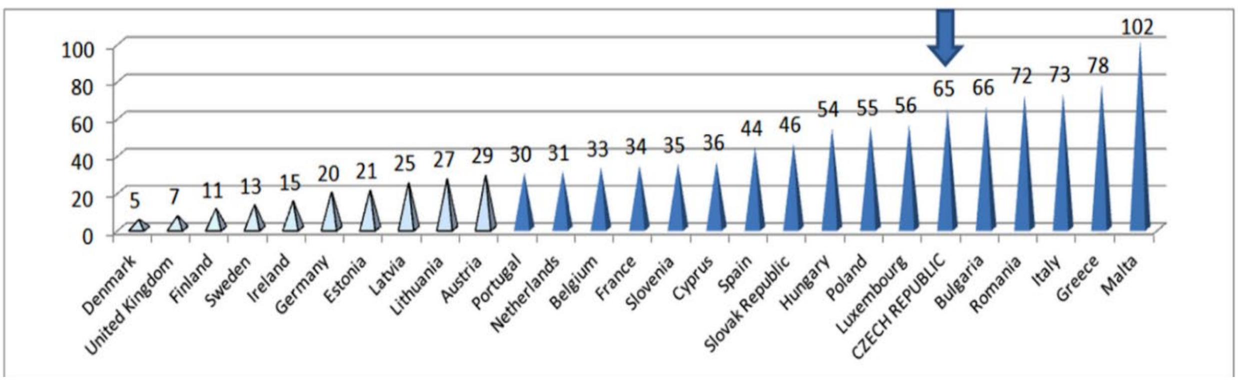


Figure 4.

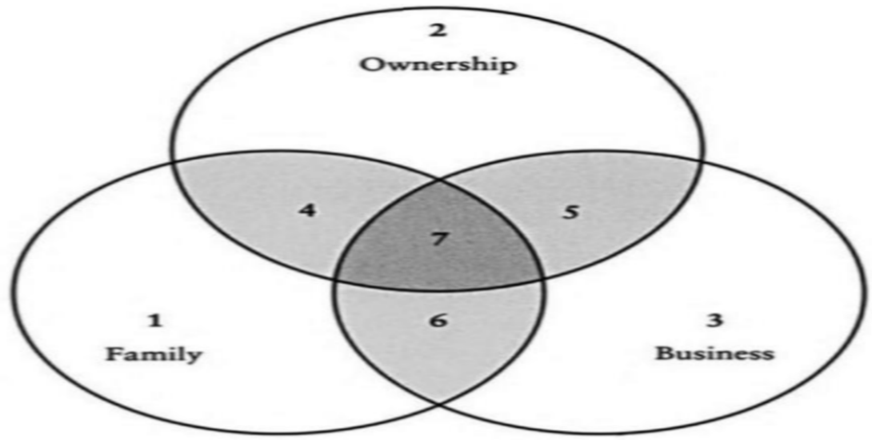
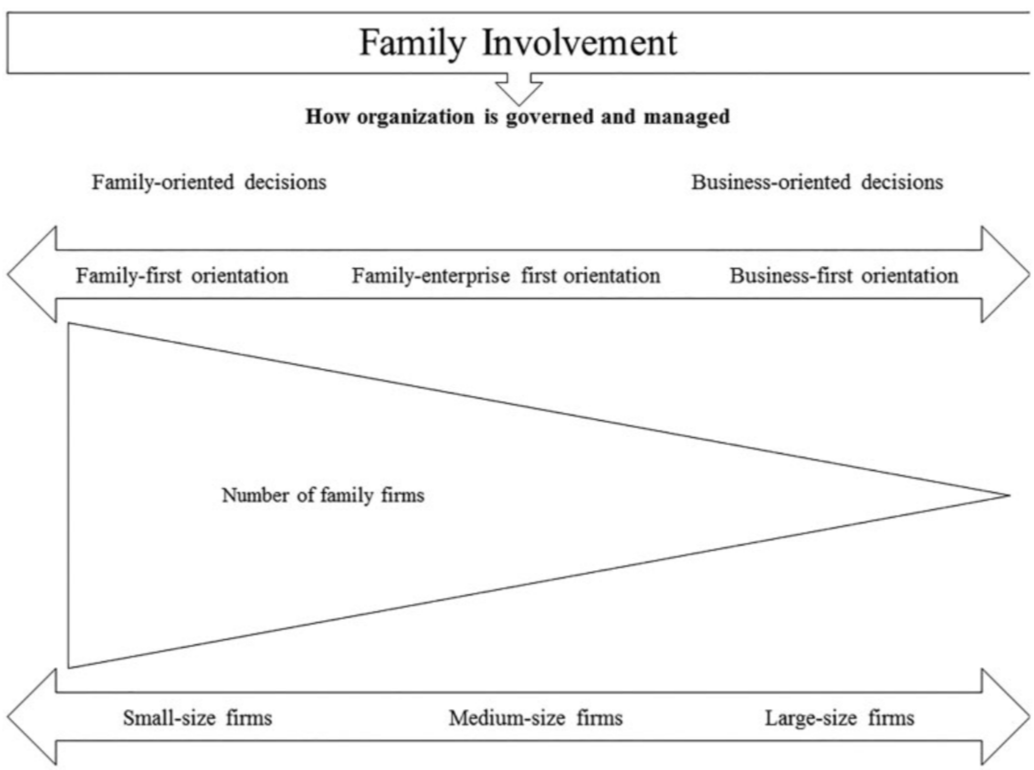


Figure 5.



Increasing Life Expectancy in Spain and the Disregarded Socioeconomic Costs

Christine Wensink

ABSTRACT

As a human population, life expectancy has continued to increase for the past century. This phenomenon is encouraging, because more time on earth allows for people to witness advancements in technology, experience changes in culture, and most importantly spend time with loved ones. However, life expectancy impacts pensions, benefits, healthcare, and retirement, which are areas that need to be addressed from a business perspective. Spain acts as a real-life example to discuss this topic, as life expectancy is predicted to reach an average of 85.8 years in 2030, surpassing Japan as the country with highest life expectancy in 2018 (Papadopoulos, 2019).

To understand what differentiates Spain and puts the nation in a position to have the highest life expectancy in the world, aspects of their unique culture and way of life will be examined. These factors help paint a picture of life in Spain. Furthermore, the challenges and socio-economic costs involved with increasing life expectancy are often overlooked, but are an important factor in forecasting, not only for individuals, but governments and businesses as well.

As a final consideration, aspects of life in Canada will be drawn for the purpose of comparison. Major factors that differentiate these countries such as diet and climate offer an explanation as to the variances in life expectancy. Some factors influencing life expectancy are out of the control of an individual, but there are elements all Canadians could learn from Spain.

INTRODUCTION

Definitions

Understanding how life expectancy is calculated and the factors that contribute to the numerical findings is crucial when analyzing the impact on a country. First, Ortiz-Ospina (2017) defines life expectancy as "the number of years a person can expect to live…based on an estimate of the average age that members of a particular population group will be when they die" (para. 3). A simple definition yet becomes complicated when comparing cohort life expectancy: "the average life length of a particular cohort – a group of individuals born in a given year" (para. 6) and period life expectancy "estimating the average length of life for a hypothetical cohort… from birth through death, to the mortality rates observed at one particular period – commonly a year" (para. 8). Period life expectancy is used by reliable, unbiased international organizations, such as the United Nations (UN) and the World Bank. For the purpose of this paper, period life expectancy will be the metric used to interpret the economic impact on a nation, unless otherwise indicated.

Often confused with life expectancy, population aging “refers to changes in the age composition of a population such that there is an increase in the proportion of older persons” (Land & Lamb, 2008, para 1). According to the UN “by 2050, one in six people in the world will be over age 65 (16%), up from one in 11 in 2019 (9%)” (Trends in Population Ageing section, n.d., para. 1). This is consistent with Spain, as seen in table 1, the median age in 2015 was 42.5 years. By 2050, this number is expected to increase to 53.2 years (Statista, 2019). Obviously, the increasing median age worldwide will impact commerce across the globe and is a phenomenon companies should consider in their business model strategy, because stakeholders will be heavily impacted.

Another thought-provoking trend that has seen massive changes globally in the past century is fertility rate: “the average number of children per woman” (Roser, 2017, para.1). It is easy to think that since our world population is growing, and has surpassed the seven- billion mark, that fertility rates would have a positive correlation, and would therefore also be increasing. However, this assumption is false and is often misinterpreted. Fertility rates have halved globally since 1950 to 2015, 5.05 children per woman to 2.49, respectively (see table 2). In comparison, the average number of children in Spain per woman is significantly lower than the world average, 1.35 in 2015 (see table 2).

Fertility rates, population aging and life expectancy are terms often associated with each other and are trends that should be researched from a business perspective. First, if the median age of a demographic is increasing, this means the work force is getting older. It is a common understanding that the older people become, the more demanding they are on social services such as healthcare, and prescription drugs. Thus, the workforce will put more pressure on employers to improve workplace benefits. In the twenty-first century, more women are becoming educated and taking on leadership roles in the business world, which were previously dominated by men. The increasing number of women in the workplace could be a factor in explaining the decrease in fertility rates. Another explanation is that mortality rates at birth are decreasing due to improvements in medicine and health services. Decreasing morality rates at birth and increasing life expectancy could be reasons why women are having less children. From a manager’s perspective, increasing life expectancy, decreasing fertility rates and an ageing population are critical factors that must be considered when developing workplace policies, because in the near future there will be more demand for extensive benefits.

History of Life Expectancy in Spain

Data documenting life expectancy in Spain dates to 1882, when the average life expectancy rate was 29.5 years (see table 3). It is fascinating to think that in 150 years, life expectancy in this region has nearly tripled, which begs the question how can a population increase their life span by 283%? By researching significant events, and history in Spain, this surge in life span can be better understood. First, by analyzing data from a study by González (2014), as seen in table 4, there was a large plummet of life expectancy in 1918, due to a highly contagious influenza, known as “the Spanish Flu, Grippe, the Spanish Lady, or the Three-Day Fever” (Rosenberg, 2019, Introduction section, para. 4). Spain was not the only country affected by this epidemic, the flu spread across Europe, Asia and parts of North America during the first World War. It is unclear where the flu originated, but took the name ‘The Spanish Flu’, because Spain was the country most significantly affected, and the government was quick to announce a public epidemic (Flu Spreads and Gets a Name section, para. 3). Evidently, the Spanish flu had a devastating impact on life expectancy in Spain, killing millions and put unimaginable strain on clinics and hospitals.

On a more positive note, by 1922 a steady increase in life expectancy can be observed “due to a drastic reduction in infant mortality… enormous improvement in the reproductive health of women and postpartum conditions" (González, 2014, p. 43). Once again, there is a significant drop in life expectancy, particularly in men around 1940. This was due to the Spanish civil war that broke out in 1936 and ended in 1939. There were many notable events during this war, such as The Battle of Madrid and the Bombing of Guernica, which resulted in what experts estimate to be more than 500,000 deaths ("The Spanish Civil War," 2012, Other Important Battles section, para. 5). Ultimately, the number of fatal casualties from this war, decreased the average life expectancy among men.

For the next thirty years, life expectancy grows at a stable pace until a period between 1972 and 1982 when these rates skyrocketed 2.5 years for males and a staggering 3.2 years for females (Chenet, McKee, Otero, Ausin, 1997, p. 510). This is a considerable increase in a span of ten years and has drawn a lot of attention from researchers. Some argue this dramatic increase was due to "reduced mortality among infants, while the older ages experienced large gains through reduced mortality from cardiovascular diseases and some malignant neoplasms" (Chenet et al., 1997, pp. 511-512).

As of 2018, Spain has the second highest life expectancy in the world with an average of 82.9 years, second only to Japan at 83.7 years (Papadopoulos, 2019). Clearly, Spain's restless history of war, disease and mortality impacted the country's life expectancy rates, but have since improved drastically. Undoubtedly, Spaniards have a unique history, and a lively culture, but what differentiates them from other nations in terms of longevity?

CULTURE IN SPAIN

Siesta

To understand why Spain has a significantly higher life expectancy than neighboring countries, one must examine what differentiates Spain and makes their nation unique. One custom that is unfamiliar to North America and Asian countries is the 'siesta'. The term 'siesta' is Latin for "hora sexta" or "sixth hour", meaning noon (Jones, 2018, History section, para. 2). Jones states that traditionally the siesta was a nap taken during the hottest part of the day, which allowed farmers to rest and get out of the direct sun (History section, para. 1). Today, the siesta is much less common in Spain, especially in urbanized tourist areas. However, it is still a normal practice for shops and family owned businesses to close from two in the afternoon and reopen at five. This midday break allows workers to return home for lunch, spend time with family, and even nap if so desired. Spaniards are very family orientated, which helps explain the dedication to eating together, even during the middle of the day. Researchers believe the siesta also has extensive health benefits, which "can reduce stress, help cardiovascular functions, and improve alertness and memory" (Govan, 2012, Introduction section, para. 1). Perhaps the Spanish know best, and this short nap is allowing this culture to thrive and live longer.

Stress Levels

An interesting concept previously mentioned regarding Spanish culture and siesta, is the reduction of stress. Zipjet is a company based in the United Kingdom, whose mission is to develop technology to reduce stress in people's lives ("Most and Least Stressful Cities," 2019, Introduction section, para. 1). Zipjet (2019) completed a study ranking cities worldwide on account of how stressful it is to live there. Numerous triggers and factors related to stress were considered, including density, security, mental health, gender equality, unemployment, pollution and debt. Out of 150 cities studied, Madrid was ranked 57th with a stress score of 4.32 out of 10 (one being the least stressful, ten being the most) and Barcelona ranked 85th

with a score of 5.79. The largest factors discouraging Spain's score are high levels of stress due to unemployment and population density. One area to highlight in this report is the correlation between levels of stress and life expectancy. Cities perceived to be the most stressful, such as Baghdad, Kabul, Lagos and Cairo, belong to countries who have some of the lowest life expectancies in the world: Iraq, Afghanistan, Nigeria and Egypt (see table 5). Whereas cities with low levels of perceived stress such as Luxemburg, Bern, Munich, and Bordeaux are a part of countries (Luxemburg, Switzerland, Germany and France) with life expectancy well above the world average (see table 6). This would indicate stress is a factor that impacts life expectancy globally.

Heart Condition

Cardiovascular health is also related to stress, and thus life expectancy. There is no doubt that stress is directly linked to Cardiovascular Disease (CVD) and Ischaemic Heart Disease (IHD). There is:

> A strong body of evidence from prospective studies in Europe and North America shows that stressful work factors, including demands, control, job strain, effort- reward imbalance, job security, and long work hours play a substantial role in the etiology of CVD and contribute to many of the standard CVD risk factors. (Cooper & Quick, 2017, p. 114).

Therefore, the reduction of stress in the workplace and various areas could lead to a healthier heart and better long-term health. To explore this idea, a comparison has been made between number of deaths from CVDs in Spain, compared to Europe and the EU. Data gathered from the European Cardiovascular Disease Statistics Edition (Wilkins et al., 2017), calculates the percentage of deaths from a CVD. In 2014, CVDs accounted for 29.8% of all deaths in Spain, both male and female (see table 7). In comparison, this number was 37.17% for the EU and significantly higher average for all European countries, 44.6%. These calculations indicate that Spain suffers significantly less deaths from heart disease, compared to the European average. If less people are dying from IHD and other CVDs, this means that less stress and better heart health could be a major factor as to why Spain's life expectancy is much higher than similar European countries.

Smoking

Another area of concern outlined by the European Heart Network (EHD) is the trend in smoking, a common social habit for men and women in Spain, starting as early as the age of fifteen. According to Wilkins et al., (2017), smoking rates are decreasing throughout the majority of Europe, but the rate of decline has slowed, especially among women (p.9). On a more positive note, Spain saw decreases in the prevalence of smoking among males and females from 2001 to 2014 (pp.120-121). As a contributor to the European Heart Network (EHD), Wilkins et al. found that in 2001, 39.2% men and 24.6% of females above the age of fifteen smoked. Fast forward thirteen years, and the same study found decreases in smoke rates: 21.8% of men and 18.6% of women (p.23). These findings are encouraging for Spain, because of the adverse health threats smoking and second-hand smoke has on a population.

As outlined by the EHD, "tobacco smoking is an important modifiable risk factor for a number of diseases and the most common cause of premature death in Europe" (p.120), therefore the reduction of smoking decreases cases of CVDs, lung cancer, and improves the overall health of citizens. This could be another factor that is improving life expectancy in Spain.

Climate

Every country on earth experiences a variation in climate due to their geographic location. Not to be confused, NASA describes "the difference between weather and climate is a measure of time. Weather is what conditions of the atmosphere are over a short period of time, and climate is how the atmosphere "behaves" over relatively long periods of time" (NASA, 2005, para. 1). Therefore, by examining Spain's climate, one may provide another answer as to what makes the country unique. Madrid, the capital of Spain, has a geographic location of 40° 25' N, 3° 42' W, roughly the same latitude as New York for reference. Spain experiences "a Mediterranean climate, characterized by hot, dry summers and mild, rainy winters," ("Weather Online," 2019, para.1) making it one of the warmest countries in Europe. A study by Moore (n.d.) of Stanford University explored the relationship between life, death, and climate. By analyzing death rates from 89 counties in the United States, the statistical evidence found "that warmer weather cut death rates, not only in Washington but throughout the country" (Weather Heats Up, Deaths Drop section, para. 1). Moreover, they found an increase of 2.5°C in the United States could decrease morality by 40,000 people annually (Weather Heats Up, Deaths Drop section, para. 6). Likewise, Bentham, a researcher from the United Kingdom, found similar results. His research estimated "that an increase of 3°C would reduce mortality in a population of 50 million by 17,500" (Bentham, 1997, as citied in Moore, n.d, Further Confirmation section, para 1). These remarkable findings indicate that warmer climates reduce morality, and therefore, in the long run would increase life expectancy. Thus, an inference can be made that there is a connection between Spain's high life expectancy and warm climate.

Education

There is a commonality between increases in education levels and life expectancy. New generations are achieving higher levels of education than their parents, because it is becoming a requirement for more jobs to obtain an education beyond high school. Martin, Domínguez- Rodríguez, & Bacigalupe (2019) conducted a study comparing life expectancy, morality rates and level of education in Spain. Their findings concluded that after the age of sixty-five: "life expectancy increased as the level of education increased, from 18.2 years in men and 22.4 in women with primary education to 20.4 years in men and 24.7 in women with university studies" (Results section, para. 8). These staggering results reaffirm the notion that education and life expectancy are in fact related. To further explore this theory, education among Spaniards since 1970 has been explored. Roser & Oritz- Ospina (2019) found that the percentage of the Spanish population over 25, with a secondary education has increased from 3.55% in 1970 to 41.72% in 2010 (see table 8). Secondary education in Spain is equivalent to high school in Canada, the stage after compulsory education. Moreover, this dramatic increase in education levels in Spain also follows patterns of life expectancy. Therefore, improving education is another factor to explain how Spain will become the country with the highest life expectancy.

Diet

The last factor to mention that makes Spain unique is their diet. Spain is characterized by a Mediterranean diet: "which includes olive oil, vegetables, nuts and fruits; moderate amounts of fish, wine and dairy products; and low consumption of non-fish meat." (Johnson, 2019, para. 5). Spain is known for dishes such as Paella, Tortilla Espanola, Jamón Ibérico, and of course Tapas. In February of 2019, Bloomberg released its annual 'Global Health Index' (see table 9). This index ranks countries primarily on environmental factors and eating habits. Spain came out as the healthiest nation, with a score of 92.8/100, largely due to their healthy diet. In comparison, the United States ranked 35th, due to their high consumption of fast food. In addition, table 10 and table 11 illustrate how on average Spain has higher consumption of fruits (72-98kg person/year) and vegetables (111-141kg person/year) compared to other European countries (Wilkins et al., 2017, p. 106). In summary, Spain's Mediterranean diet, and high consumption of fruits and vegetables helps to explain the connection between the nation's health and their increasing life span.

SOCIO ECONOMIC COSTS AND COMPLICATIONS

Pensions

As a result of life expectancy increasing globally, governments and businesses have been faced with a challenge regarding pensions and are changing policies and redefining 'pensionable age'. The Organization for Economic Cooperation and Development (OECD) finds that "by 2050, the average pensionable age in OECD countries will reach nearly 65 for both sexes: an increase of nearly 2.5 years for men and 4 years for women on 2010" (OECD, 2017, p. 19). Not only is pensionable age: "the age at which people can first draw full benefits" (p. 20) being reformed, but also the duration of benefits included in the pension. For example, France has recently updated pension policies to increase the number of coverage years from 37.5 years to 40 years in 2008 and 41 years in 2012 (p. 21). Similar legislation has been imposed in Turkey (p.21). However, the problem still exists that legislation and government policies are not keeping up with the changes in life expectancy. In the case of Spain, there have been no significant reforms in pensionable age since 1949 and is not expected to any changes in the foreseeable future for men or women (see table 12 & 13).

Like most European countries, Spain has a public pension system available to citizens who have contributed a minimum of fifteen years of work to receive partial benefits and 38.5 years for full benefits (OECD, 2017, Qualifying Conditions section, para. 1). Pensions are a complicated issue for many individuals, not just in Spain. People spend decades planning and saving for a comfortable retirement, which is why Spain's social security program attempts to support individuals in their decisions by founding the program on "universality, unity, solidarity and equality" (Camino, Raull & González, 2014, p.121). It is considered a 'pay as you go system', which depends on contributions from two separate areas: employees and employers, and from taxes (p. 121). The problem Spain faces in terms of growing life expectancy, is that "the number of pensioners will grow from nine million today to 15 million in 2050" (Doménech & Díaz, 2013, para 1). This is a dramatic increase, which has forced Spain and many countries around the world to link pensions to life expectancy. In the case of Spain, they introduced the 'Sustainability Factor' to public pensions. Commencing in 2019, the Sustainability Factor is an "adjustment tool" that "takes into account the growth of the life expectancy of the new pensioners" (Camino, Raull & González, 2014, p.125). The creation of the Sustainability Factor is an example of how pensions are becoming more complicated and more variables, including life expectancy, need to be considered.

Pensions are a complex, and fraught with risk, due to liability on all parties and because they are considered "long-term contracts" (Whitehouse, 2007, p. 4). For this reason, Whitehouse outlines five types of risks that affect pension systems: myopia, social and labour- market, purchasing- power, policy, and investment (p.4). As life expectancy continues to grow, individuals experience more risk depending on their country of origin and the type of retirement contribution plan. To account for this risk, new types of pension reforms associated with life expectancy have been created: Defined Contribution, Notional Accounts, Benefit Levels, and Qualifying Conditions (pp. 15-16). As of 2007, 13 out of 30 OECD countries (Australia, Hungary, Norway, Poland, Mexico, Slovak Republic, Sweden, Portugal, Italy, Finland Germany, Denmark and France), had implemented at least one of these pension reforms (see table 14). Now that

Spain is in the process of implementing the Sustainability Factor, their pension system will also be linked to life expectancy.

Healthcare

Spain's healthcare system is experiencing more patients and medical cases than ever before, due to the aging population and increasing life expectancy. The pressure on the medical systems is resulting in higher expenditure and usage of resources. It is a common understanding that the older people become, the more dependant they are on health services; such as doctors, hospitals and prescription drugs. The global increase in life expectancy is primarily due to the improvements and developments of medicine, diagnosis, and drugs. Now, the human body is dependent on healthcare systems to outlive previous generations. For instance, in 2017 it was found that in Spain "almost 80% of the consumption of health resources occurs in individuals above 65 years old" (Avanzas, Pascual & Moris, 2017, Demand and Use of Services section, para.1). Spain is known for having one of the best public health systems in the world, as all citizens have access to the Spanish National Health System (SNS). In 1986, the General Healthcare Act was implemented, which "guarantees universal coverage and free healthcare access to all Spanish nationals, regardless of economic situation or participation in the social security network" ("Overview of the Spanish Healthcare System," 2010, para. 1). This is crucial for most Spaniards, because the average cost for a trip to the emergency room is 200 Euros ("Healthcare in Spain," 2017, Quick facts on the Healthcare System in Spain section, para. 1). Similar to Canada, Spain's healthcare system is primarily funded through taxation ("Overview of the Spanish Healthcare System," 2010, Funding the System section, para. 1). To put the impact Spain's healthcare system has on their economy into perspective, the "total healthcare expenditure amounts to 88,828 million euro, which accounts for 8.5 percent of the GDP" (Funding the System section, para. 1). Evidently, the healthcare system in Spain accounts for a large portion of taxes and is a service that is requiring more attention and resources, especially with an aging demographic. To demonstrate the strain on Spain's health care system compared to other countries in Europe, in 2017, Spain had 7.5 visits to the doctor per capita per year, compared to Sweden which had an average of 2.9. (Avanzas, Pascual & Moris, 2017, Demand and Use of Services section, para. 1). This proves that as life expectancy continues to grow, so will the demand and use of the health care system.

GDP and Unemployment Rate

By focusing on Spain's economy, GDP and unemployment rates, it provides insights on the everyday lives of Spanish workers and the setting for commerce in the country. In 2017, Spain accounted for 9.1% of the European Union's (EU) population but only 7.6% of the EU's GDP (Eurostat, 2017, p.1; Eurostat 2018, para. 2). This could be due to Spain's consistent high levels of unemployment for the past decade.

Table 15 shows how Spain's unemployment rate has been significantly higher than the EU average since 2013. In July of 2019, the EU reported an average unemployment rate of 6.3%, where as Spain had 14.02%. Ever since the financial crisis of 2008, Spain's unemployment rate has not been able to reach a level below 13%. At the peak of Spain's economic crisis in 2012, unemployment rates reached an astounding 26% (see table 15). According to Eavis 2016, this is largely to do with the fact that almost one third of Spain's workforce was on temporary contracts prior to the financial crisis, and they were the easiest to lay off following the downturn in the economy (para. 8). In addition, the unemployment rate among Spanish youth (below the age of 25) was 45.5% in 2016 (para. 5). Perhaps a reason behind the astoundingly high youth unemployment rate is that people are living longer and retiring later, resulting in less demand for new hires. In the past, it was a common practice to have one job with one employer for the duration a career. This has drastically changed, and it is becoming more common for people to change careers and advance their education throughout their lifetime. This concept of changes in the work cycle and a longer career are considerations managers should consider when addressing organizational policies.

COMPARISONS WITH CANADA

History of Life Expectancy

As of 2019, Canada had the 17th highest life expectancy in the world at 82.4 years, compared to Spain with 83.5 years ("Life Expectancy by Country," 2019). It is important to note that 1.1 years is a significant difference in terms of life expectancy. By comparing life expectancy factors between the two nations, a more comprehensive understanding can be made regarding life expectancy determinants and explain a theory behind the difference. For further analysis, table 16 analyzes life expectancy rates between Canada and Spain from 1960 until 2017. From this graph there are three notable time periods. The first from 1960 until 1975. During this fifteen-year span, Canada had a higher life expectancy than Spain by approximately two years. Statistics Canada (2014) attributes life expectancy increases in Canada from 1951 onwards to reduced number of deaths from circulatory diseases (p.6). Then, from approximately 1975 until 2005, Spain and Canada's life expectancy were very consistent with each other and had little differentiation. Lastly, the most recent period from 2005 to 2017 is when Spain's life expectancy surpassed Canada's. The reasoning behind Spain's dramatic increase in life expectancy since 2005 can be attributed to numerous factors such as diet, levels of stress, and climate, as previously discussed.

Climate

Being the second largest country in the world, Canada has a massive spread of land, with different cultures and ways of life throughout the country. This notion of having an immense area of land impacts life expectancy more than one would expect. Nichols (2013) examined life expectancy throughout different regions in Canada, particularly the north versus the south. Canada is organized by 136 health regions, and the "findings paint a gloomy picture of life and death in the North - particularly in areas with large aboriginal populations" (para 2). This is thought to be contributed to high cancer rates, respiratory diseases, and suicide in these areas (paras. 5- 6). Another area to consider is the climate in the north. These northern regions of Canada have short summers, and long, dark, dismal winters with temperatures well below freezing. To compare the climate between Spain and Canada, table 17 illustrates the average day time temperatures in the region's capitals. Although temperatures fluctuate in different areas of the country, this data provides a brief glimpse at the country's capital, where a large portion of the population resides. It is clear Spain has a much warmer climate, and very rarely would see temperatures below freezing. As previously discussed, a warmer climate is linked to longer life expectancy, which could be a factor in the discrepancy between rates in the northern and southern parts of Canada, as well as between Spain and Canada.

Diet

Unlike Spain, Canadians do not have a unique diet, one that is exclusive to the country. Canada's diet is a combination of a European and western diet "with a heavy focus on processed grain and dairy products, farm-grown beef and chicken, certain cooked or fresh fruits and vegetables, and questionable amounts of salt and sugar" (The Canada Guide, 2019, Canadian Foods section, para 1). There is no doubt that high levels of sugar, fats, and processed foods contribute to obesity and other major health issues such as diabetes, cancers, and CVDs, which cause premature death. In 2015, the average of obese adults in OECD countries was 19.5% (OECD, 2017, p. 3). Spain was below the average at 16.7%, and Canada was well above at 25.8% (p. 3). The higher rates of obesity in Canada can likely be attributed to similarities in diet with the United States: high consumption of fast food and sugary soft drinks.

Overall, it is difficult and nearly impossible to pinpoint one reason behind Canada's lower life expectancy, but climate and diet are two factors that should be weighted heavily. Obviously, climate is not something everyday individuals can control, but diet is. If Canadians want to see an increase in life expectancy, diet is an area with room for improvement.

As seen in table 14, Canada has not incorporated Defined Contribution, Notional Accounts, Benefit Levels, or Qualifying Conditions into their public pension system. These four methods are ways other OECD countries are linking life expectancy to pensions. This is something from a Government's perspective to consider when updating public pension policies, because in the future, life expectancy is likely to increase.

CONCLUSION

From a manager's point of view, increasing life expectancy is an area that should be highlighted, and given more thought. If people are living longer, benefits, retirement age, and pensions will be impacted. There are many factors that contribute to life expectancy forecasts, but by focusing on what makes a country unique, it helps provide insights. For the case of Spain, healthy diet, a public health system, lower levels of stress, and a warmer climate have made a great contribution to high life expectancy. More times than not, governing bodies disregard life expectancy because of the slow incremental changes overtime. Evidently, changes in life expectancy rates have social, political and economic implications on a country's resources, services and commerce. Therefore, nations who adapt and prepare for these changes will be better equipped to cope with the challenges associated with life expectancy and aging population.

REFERENCES

Avanzas, P., Pascual, I., & Moris, C. (2017). The great challenge of the public health system in Spain. Journal of thoracic disease, 9(Suppl 6), S430–S433. doi:10.21037/jtd.2017.04.59

Camino, A.H., Raul, M.B.G., & González, D.H. (2014). The sustainability factor and the Spanish public pension system. Economía Española y Protección, 6, 119-157. Available from https://dialnet.unirioja.es/servlet/articulo?codigo=4745595

Chenet, L., McKee, M., Otero, A., & Ausin, I. (1997). What happened to life expectancy in Spain in the 1980s?. Journal of epidemiology and community health, 51(5), 510–514. doi:10.1136/jech.51.5.510

Cooper, C. L., & Quick, J. C. (Eds.). (2017). The handbook of stress and health: A guide to research and practice. Retrieved from https://ebookcentral-proquest-com.ezproxy.library.uvic.ca

Doménech, R., & Pérez-Díaz, V. (2013, December 11). The new sustainability factor of the public pension system in Spain. Retrieved from https://voxeu.org/article/sustainability-factor-spanish-pensions

Eavis, P. (2016, May 2). The mystery of Spain's perpetual jobs problem. The New York Times. Retrieved from https://www.nytimes.com/2016/05/03/upshot/spains-jobless-numbers-almost-look-like-misprints.html

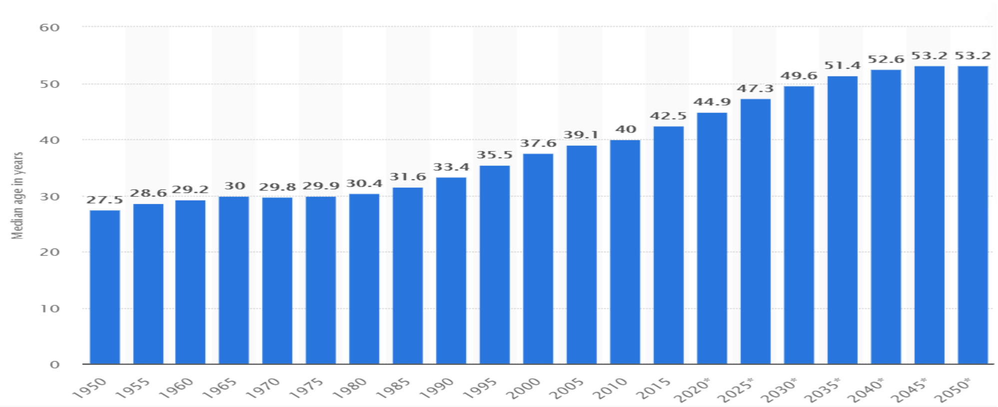
Eurostat. (2017). EU population up to almost 512 million at 1 January 2017. Retrieved from https://ec.europa.eu/eurostat/documents/2995521/8102195/3-10072017-AP-EN.pdf/a61ce1ca-1efd-41df-86a2-bb495daabdab

Eurostat. (2018). Which member states have the largest share of EU's GDP. Retrieved from https://ec.europa.eu/eurostat/web/products-eurostat-news/-/DDN-20180511-1?inheritRedirect=true
González, J.M.G. (2014). Why do we live longer? Decomposition by cause of life expectancy in Spain between 1980 and 2009. Revista Española De Investigaciones Sociológicas (REIS), 1(148), 39-60. doi:10.5477/cis/reis.148.39
Govan, F. (2012, August 7). Spanish scientists prove the siesta is good for you - and issue guidelines for a perfect nap. The Telegraph. Retrieved from https://www.telegraph.co.uk/news/worldnews/europe/spain/9458799/Spanish-scientists-prove-the-siesta-is-good-for-you-and-issue-guidelines-for-a-perfect-nap.html
Health Management. (2010). Overview of the Spanish healthcare system. 12(5). Retrieved form https://healthmanagement.org/c/hospital/issuearticle/overview-of-the-spanish-healthcare-system
Johnson, S. (2019). Spaniards are healthiest people in world, Bloomberg reports. Retrieved December 3, 2019, from https://bigthink.com/culture-religion/worlds-healthiest-countries-bloomberg?rebelltitem=1#rebelltitem1
Jones, J. (2018). A brief history of the Spanish siesta. Retrieved November 4, 2019, from https://theculturetrip.com/europe/spain/articles/a-brief-history-of-the-spanish-siesta/
Land, K.C., & Lamb, V.L. (2008). Demography of ageing. International Encyclopedia of Public Health, 89-95. Retrieved from https://www.sciencedirect.com/topics/social-sciences/ageing-population
Martin, U., Domínguez- Rodríguez, A., & Bacigalupe, A. (2019). Social inequalities in health in the older population: an insight into the debate on delayed retirement age in Spain from a public health perspective. Gaceta Sanitaria, 33(1), 82-84. doi.org/10.1016/j.gaceta.2017.10.010
Miller, L. J., & Lu, W. (2019, February 24). These are the world's healthiest nations. Bloomberg. Retrieved from https://www.bloomberg.com/news/articles/2019-02-24/spain-tops-italy-as-world-s-healthiest-nation-while-u-s-slips
Moore, T.G. (n.d.) Life death and climate. Retrieved November 19, 2019, from https://web.stanford.edu/~moore/HealthBenefitsofWarmer.html
Most and least stressful cities. (2019). Retrieved November 3, 2019, from https://www.zipjet.co.uk/2017-stressful-cities-ranking
NASA. (2005). What's the difference between weather and climate?. Retrieved November 17, 2019, from https://www.nasa.gov/mission_pages/noaa-n/climate/climate_weather.html
Nichols, N. (2003). Life expectancy in Canada. The Canadian Encyclopedia. Retrieved from https://www.thecanadianencyclopedia.ca/en/article/life-expectancy-in-canada
OECD. (2011). Pensions at a glance 2011: retirement-income systems in OECD and G20 countries. Paris, France: OECD Publishing. doi.org/10.1787/pension_glance-2011-5-en
OECD. (2017). Obesity update 2017. Retrieved December 4, 2019, from https://www.oecd.org/els/health-systems/Obesity-Update-2017.pdf
OECD. (2017). Pensions at a glance 2017: country profiles- Spain. Paris, France: OECD Publishing. Retrieved from https://www.oecd.org/els/public-pensions/PAG2017-country-profile-Spain.pdf
Oritz- Ospina, E. (2017). "Life Expectancy" – What does this actually mean?. Retrieved October 22, 2019, from https://ourworldindata.org/life-expectancy-how-is-it-calculated-and-how-should-it-be-interpreted
Papadopoulos, A. (2019, February 28). Countries with the highest average life expectancies in 2030. CEO Magazine. Retrieved from https://ceoworld.biz/2019/02/28/countries-with-the-highest-average-life-expectancies-in-2030/
Rosenburg, J. (2019). 1918 Spanish Flu Pandemic. Retrieved 28, 2019, from https://www.thoughtco.com/1918-spanish-flu-pandemic-1779224

Roser, M. (2019). Fertility Rate. Retrieved October 27, 2019 from https://ourworldindata.org/fertility-rate
Roser, M. (2019). Life Expectancy. Retrieved October 28, 2019 from https://ourworldindata.org/life-expectancy
Roser, M., & Oritz-Ospina, E. (2019). Primary and secondary education. Retrieved November 28, 2019, from https://ourworldindata.org/primary-and-secondary-education
Statista Website. (2019). Retrieved October 27, 2019, from https://www.statista.com/statistics/275398/median-age-of-the-population-in-spain/
Statistics Canada, 2014 Ninety years of change in life expectancy, Statistics Canada Catalogue no. 82-624-X. Retrieved from https://www150.statcan.gc.ca/n1/pub/82-624-x/2014001/article/14009-eng.htm
The Canadian Guide. (2019). Canadian Foods. Retrieved December 6, 2019, from https://thecanadaguide.com/symbols/foods/
The Spanish civil war. (2012). Retrieved October 29, 2019, from https://www.spanishwars.net/20th-century-spanish-civil-war.html
The World Bank. (2019). Life expectancy at birth, total (years) -Spain, Canada. Retrieved December 4, 2019, from https://data.worldbank.org/indicator/SP.DYN.LE00.IN?locations=ES-CA
Trading Economics. (2019). European Union unemployment rate. Retrieved October 21, 2019, from https://tradingeconomics.com/european-union/unemployment-rate
Trading Economics. (2019). Spain unemployment rate. Retrieved October 19, 2019, from https://tradingeconomics.com/spain/unemployment-rate
TransferWise. (2017, November 14). Healthcare in Spain: a guide to the Spanish healthcare system. Retrieved from https://transferwise.com/gb/blog/healthcare-system-in-spain
United Nations. (n.d). Ageing. Retrieved from November 5, 2019, from https://www.un.org/en/sections/issues-depth/ageing/index.html
Weather Online. (2019). Retrieved November 28, 2019, from https://www.weatheronline.co.uk/reports/climate/Spain.htm
Whitehouse, E. (2007). Life-expectancy risk and pensions: Who bears the burden? OECD Publishing. doi:10.1787/060025254440
Wilkins, E., Wilson. L., Wickramasinghe, K., Bhatnagar, P., Leal, J., Luengo-Fernandez R… Townsend, N. (2017). European Cardiovascular Disease Statistics 2017. Brussels, Belgium: European Heart Network. Retrieved form http://www.ehnheart.org/images/CVD-statistics-report-August-2017.pdf
World Population Review. (2019). Life expectancy by country 2019. Retrieved October 29, 2019 from http://worldpopulationreview.com/countries/life-expectancy-by-country/

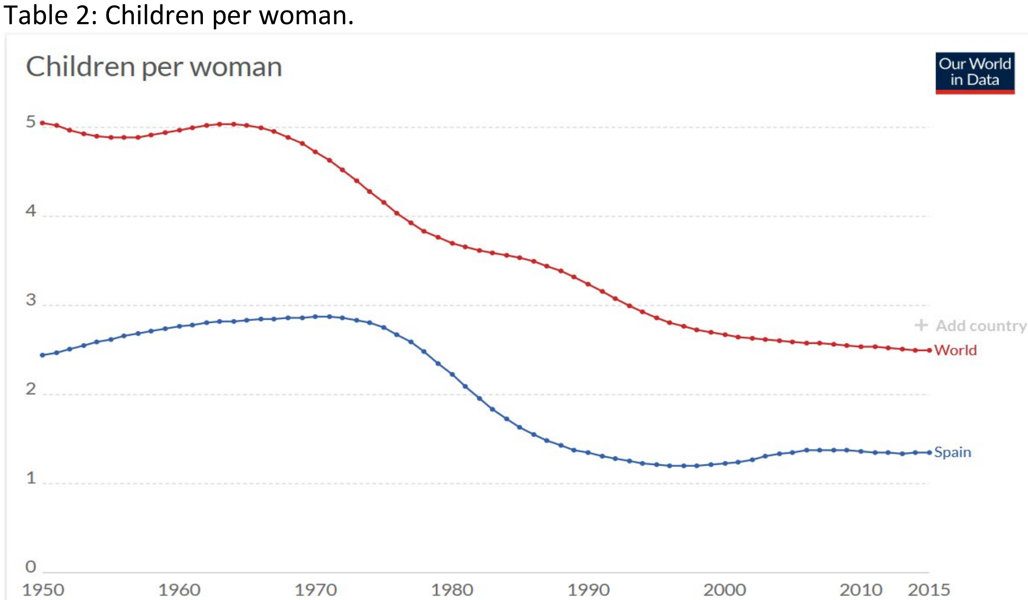
APPENDIX

Table 1: Spain: Median age of the population from 1950 to 2050 *(in years).*



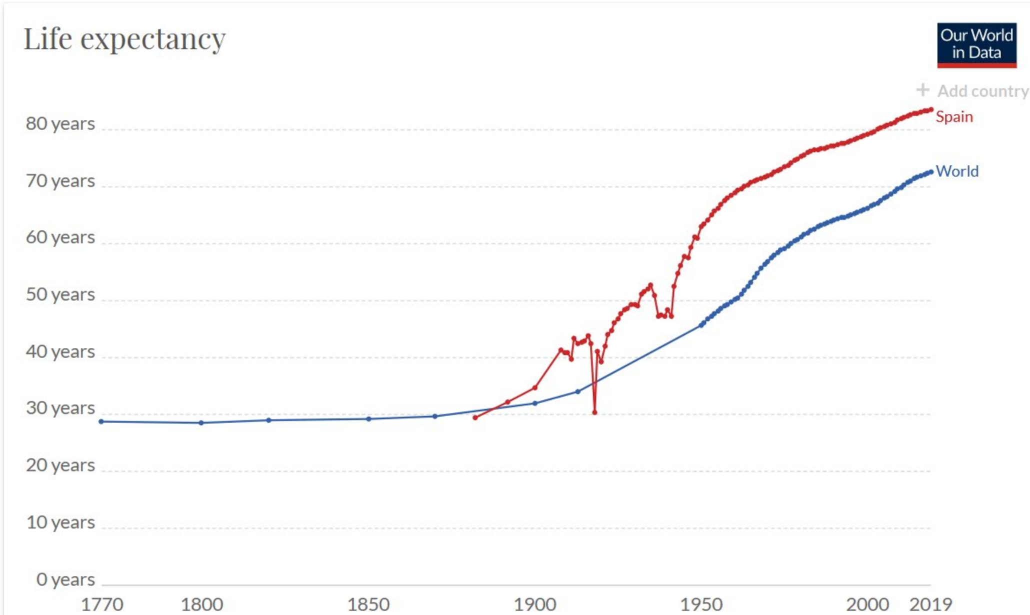
(Statista, 2019)

Table 2: Children per woman.



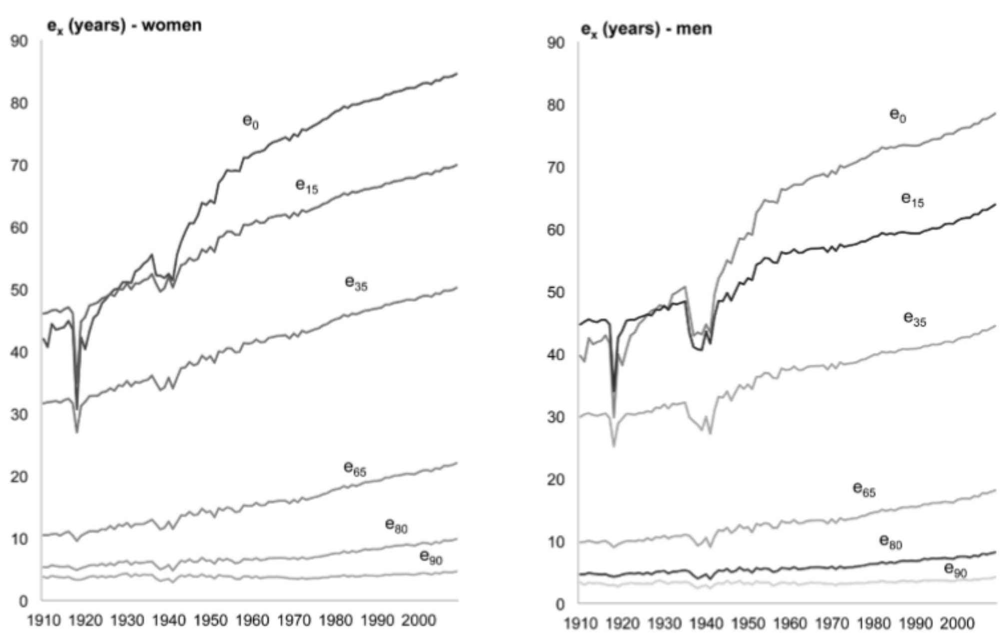
(Roser, 2017)

Table 3: Life Expectancy



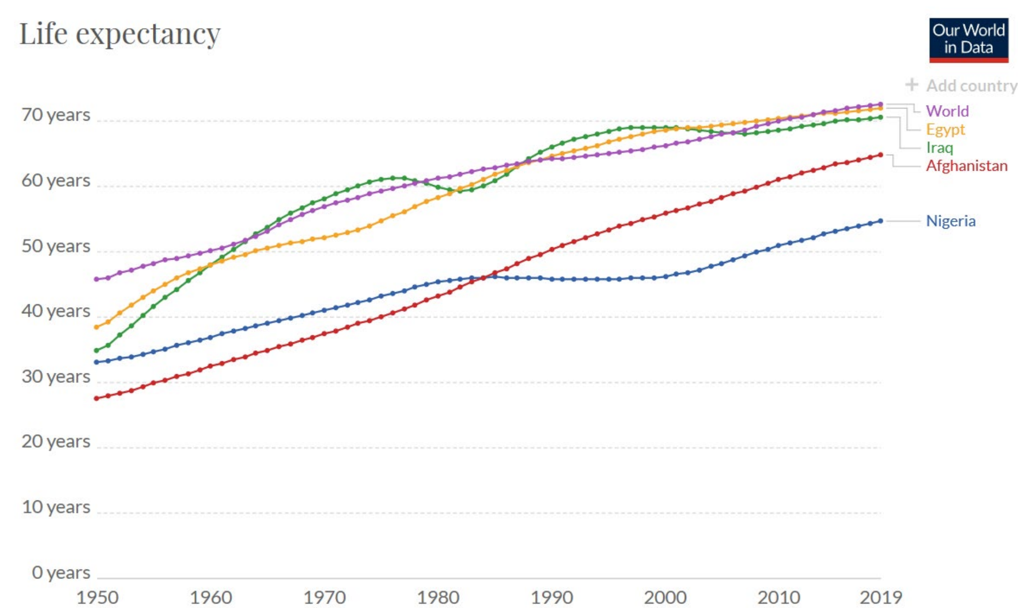
(Roser, 2019)

Table 4: Life expectancy at birth by sex at age 15, 35, 65, 80 and 90. 1910-2009.



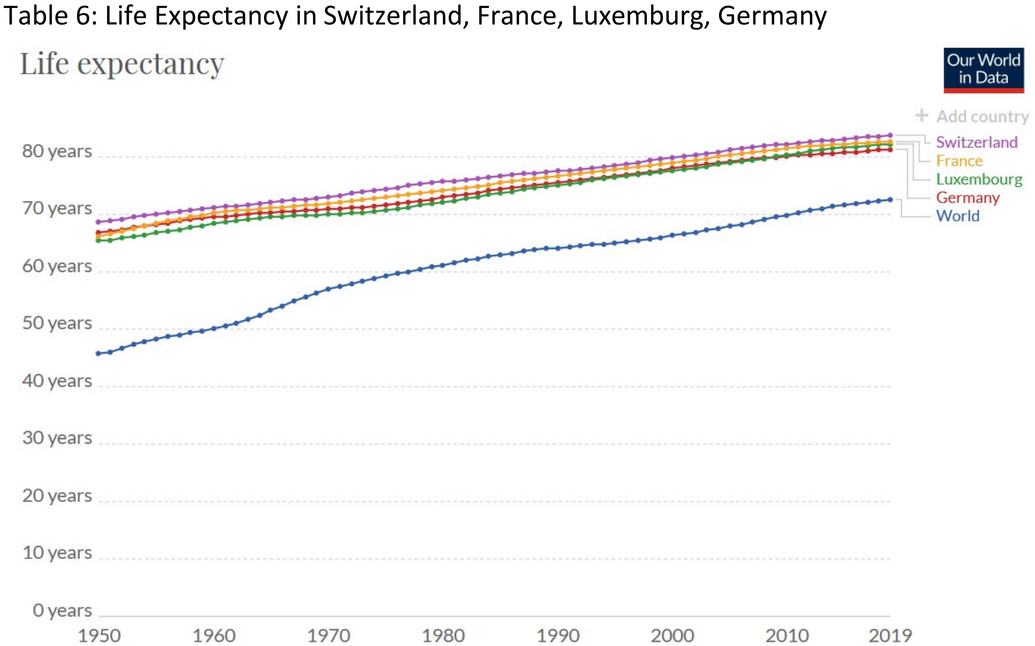
(Human Morality Database, n.d, as cited in González, 2014)

Table 5: Life Expectancy in Egypt, Iraq, Afghanistan, Nigeria



(Riley, 2005; Infra, (2015); UN Population Division, 2019; as cited in Roser, et. al., 2019)

Table 6: Life Expectancy in Switzerland, France, Luxemburg, Germany



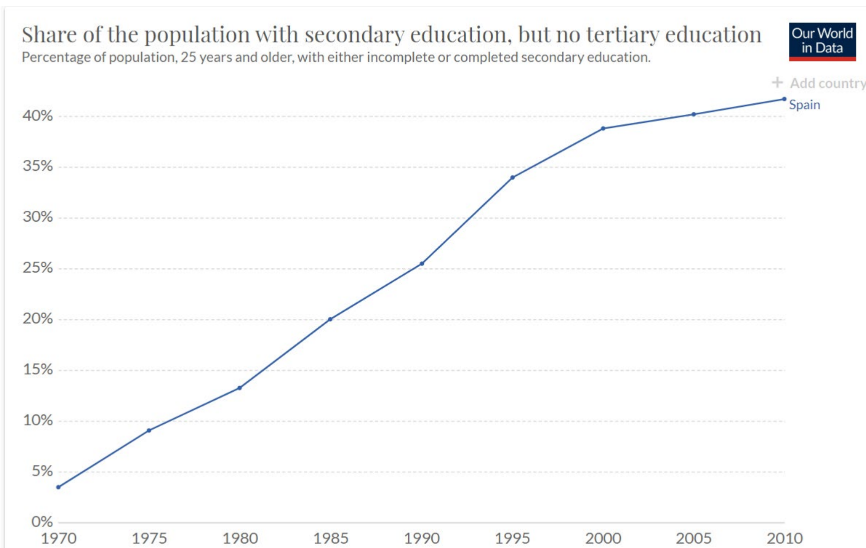
(Riley, 2005; Infra, (2015); UN Population Division, 2019; as cited in Roser, et. al., 2019)

Table 7: Number of deaths from Cardiovascular Diseases

	Spain		EU		Europe	
	Male	Female	Male	Female	Male	Female
# of Deaths by IHD	19,510	13,573	335,517	297,411	862,219	877,216
# of Deaths by Stroke	11,647	16,071	176,504	249,539	405,415	583,158
# of Deaths by other CVD	23,098	34,434	331,854	457,649	535,495	677,162
Total # of Deaths by CVD	54,255	64,078	843,875	1,004,599	1,803,129	2,137,536
Total # of Deaths (All Causes)	203,028	194,898	2,471,355	2,499,396	4,475,990	4,370,306
% of deaths by CVD	26.72%	32.88%	34.15%	40.19%	40.28%	48.91%
Avg % of deaths by CVD (male and female)	29.80%		37.17%		44.60%	

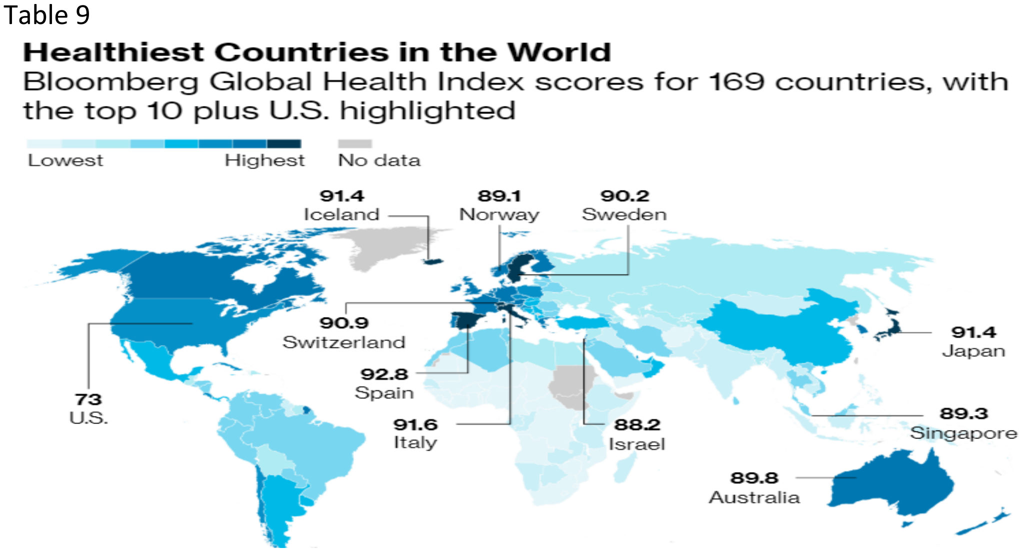
(Adapted from Wilkins et al., 2017)

Table 8



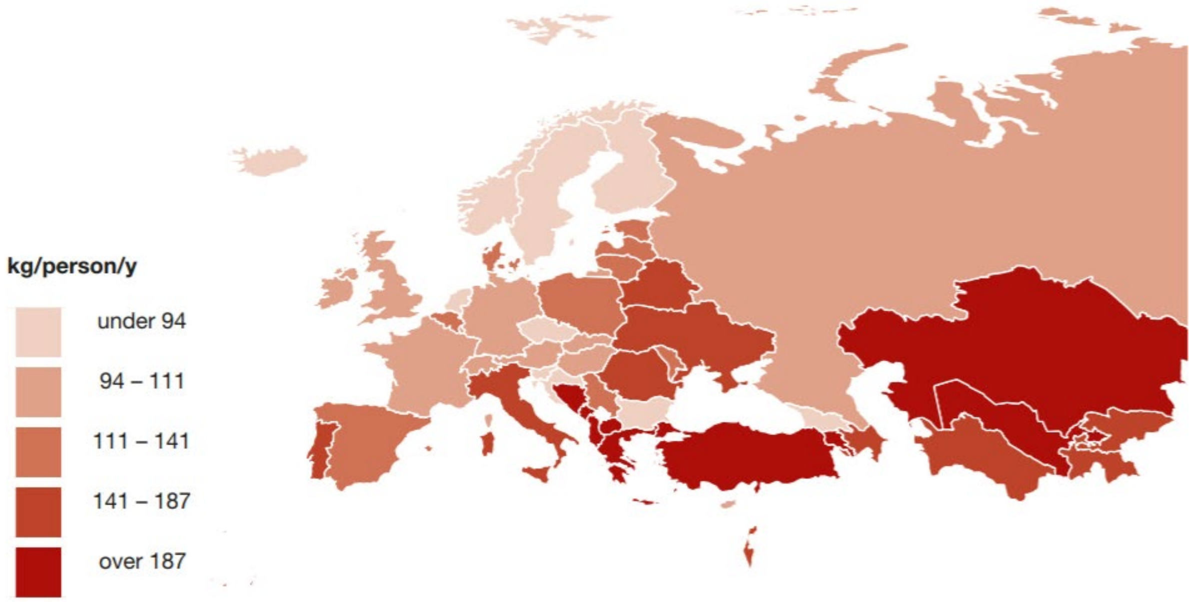
(World Bank, 2017, as cited in Roser & Ortiz-Ospina, 2019)

Table 9



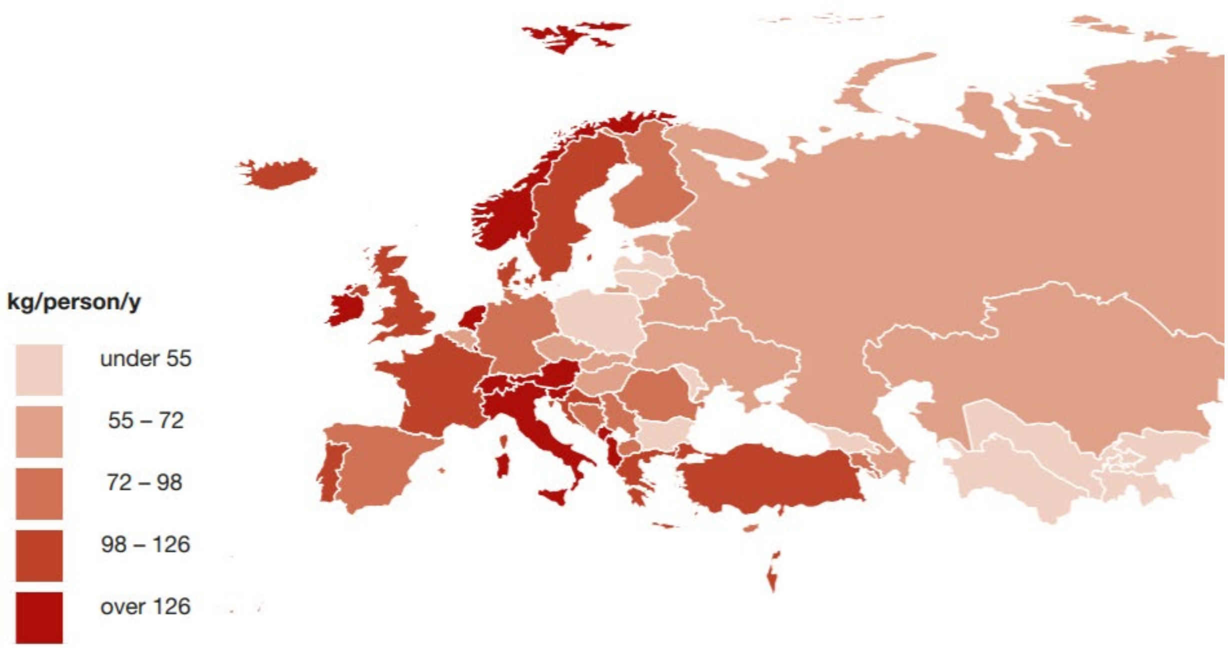
(WHO, 2019, UN Population Division, 2019, World Bank, 2019, as cited in Miller & Lu, 2019)

Table 10: Vegetable consumption kg/person/year, 2011, Europe



(Wilkins et al., 2017)

Table 11: Fruit Consumption kg/person/year, 2011, Europe



(Wilkins et al., 2017)

Table 12: Men's pensionable age in OECD countries, 1949-2050

	1949	1958	1971	1983	1989	1993	1999	2002	2010	2020	2030	2040	2050
Australia	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	66.0	67.0	67.0
Austria	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
Belgium	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Canada	70.0	69.0	68.0	67.0	66.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
Czech Republic		60.0	60.0	60.0	60.0	60.0	60.0	60.5	61.0	62.2	63.5	65.0	65.0
Denmark	65.0	65.0	67.0	67.0	67.0	67.0	67.0	67.0	65.0	65.0	67.0	67.0	67.0
Finland		65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
France		65.0	65.0	65.0	60.0	60.0	60.0	60.0	60.5	61.0	61.0	61.0	61.0
Germany	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.5	65.0	65.0	65.0	65.0	65.0
Greece	55.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	60.0	60.0	60.0	60.0
Hungary	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	64.5	65.0	65.0	65.0
Iceland		67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0
Ireland	70.0	70.0	70.0	70.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
Italy	60.0	60.0	60.0	55.0	55.0	55.0	55.0	57.0	59.0	61.0	65.0	65.0	65.0
Japan		60.0	60.0	60.0	60.0	60.0	60.0	61.0	64.0	65.0	65.0	65.0	65.0
Korea						60.0	60.0	60.0	60.0	60.0	62.0	64.0	65.0
Luxembourg	65.0	65.0	65.0	65.0	65.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Mexico		65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
Netherlands	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
New Zealand	65.0	60.0	60.0	60.0	60.0	60.0	61.1	64.1	65.0	65.0	65.0	65.0	65.0
Norway	70.0	70.0	70.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0
Poland	60.0	60.0	60.0	60.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
Portugal	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
Slovak Republic		60.0	60.0	60.0	60.0	60.0	60.0	60.0	62.0	62.0	62.0	62.0	62.0
Spain	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
Sweden	67.0	67.0	67.0	67.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
Switzerland		65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
Turkey			60.0	45.0	45.0	45.0	45.0	44.0	44.9	48.6	53.1	57.7	62.3
United Kingdom	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	66.0	67.0	68.0
United States	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	66.0	66.0	67.0	67.0	67.0
Average	**64.3**	**63.9**	**63.8**	**62.9**	**62.7**	**62.4**	**62.4**	**62.6**	**62.9**	**63.5**	**64.1**	**64.4**	**64.6**

(OECD, 2011)

Table 13: Women's pensionable age in OECD countries, 1949-2050

	1949	1958	1971	1983	1989	1993	1999	2002	2010	2020	2030	2040	2050
Australia	**60.0**	**60.0**	**60.0**	**60.0**	**60.0**	**60.0**	**60.0**	**61.0**	**62.0**	**64.0**	66.0	67.0	67.0
Austria	65.0	**60.0**	**60.0**	**60.0**	**60.0**	**60.0**	**60.0**	**60.0**	**60.0**	**60.0**	**63.0**	65.0	65.0
Belgium	**55.0**	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Canada	70.0	69.0	68.0	67.0	66.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
Czech Republic		60.0	**55.0**	**57.0**	**57.0**	**57.0**	**57.0**	**58.0**	**58.7**	**60.7**	**63.3**	65.0	65.0
Denmark	65.0	**60.0**	**62.0**	**62.0**	**62.0**	67.0	67.0	67.0	65.0	65.0	67.0	67.0	67.0
Finland		65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
France		65.0	65.0	65.0	60.0	60.0	60.0	60.0	60.5	61.0	61.0	61.0	61.0
Germany	**60.0**	**60.0**	**60.0**	**60.0**	**60.0**	**60.0**	**60.0**	**60.5**	65.0	65.0	65.0	65.0	65.0
Greece	55.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	60.0	60.0	60.0	60.0
Hungary	**55.0**	**55.0**	**55.0**	**55.0**	**55.0**	**55.0**	**55.0**	**55.0**	**59.0**	64.5	65.0	65.0	65.0
Iceland		67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0
Ireland	70.0	70.0	70.0	70.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
Italy	**55.0**	**55.0**	**55.0**	55.0	55.0	55.0	55.0	57.0	59.0	61.0	65.0	65.0	65.0
Japan		**55.0**	**55.0**	**55.0**	**56.0**	**58.0**	**60.0**	**60.0**	**62.0**	65.0	65.0	65.0	65.0
Korea						60.0	60.0	60.0	60.0	60.0	62.0	64.0	65.0
Luxembourg	65.0	65.0	65.0	65.0	65.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Mexico		65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
Netherlands	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
New Zealand	65.0	60.0	60.0	60.0	60.0	60.0	61.1	64.1	65.0	65.0	65.0	65.0	65.0
Norway	70.0	70.0	70.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0
Poland	60.0	60.0	60.0	60.0	**60.0**	**60.0**	**60.0**	**60.0**	**60.0**	**60.0**	**60.0**	**60.0**	**60.0**
Portugal	65.0	65.0	65.0	65.0	**62.0**	**62.0**	**62.0**	65.0	65.0	65.0	65.0	65.0	65.0
Slovak Republic		60.0	**55.0**	**57.0**	**57.0**	**57.0**	**57.0**	**57.0**	**57.0**	62.0	62.0	62.0	62.0
Spain	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
Sweden	67.0	67.0	67.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
Switzerland		**60.0**	**60.0**	**60.0**	**62.0**	**62.0**	**62.0**	**62.0**	**63.0**	**64.0**	**64.0**	**64.0**	**64.0**
Turkey			60.0	45.0	45.0	45.0	45.0	**40.0**	**41.0**	**45.2**	**50.4**	**55.6**	**60.8**
United Kingdom	**60.0**	**60.0**	**60.0**	**60.0**	**60.0**	**60.0**	**60.0**	**60.0**	**60.0**	65.0	66.0	67.0	68.0
United States	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	66.0	66.0	67.0	67.0	67.0
Average	**62.9**	**62.3**	**61.9**	**61.3**	**61.0**	**61.0**	**61.1**	**61.3**	**61.8**	**62.9**	**63.7**	**64.1**	**64.4**

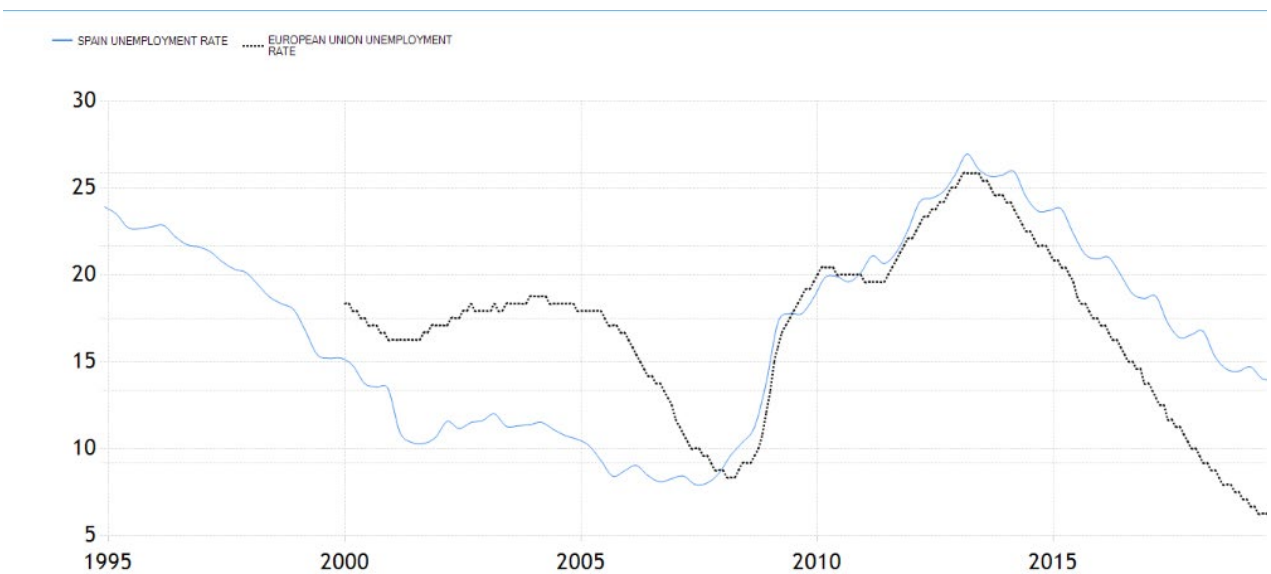
(OECD, 2011)

Table 14: How pensions depend on life expectancy. 17 OECD Countries

	Defined contribution	Notional accounts	Benefit levels	Qualifying conditions
Australia	●			
Canada				
Denmark	●			●
Finland			●	
France				●
Germany			●	
Hungary	●			
Italy		●		
Japan				
Mexico	●			
Norway	●			
Poland	●	●		
Portugal			●	
Slovak Republic	●			
Sweden	●	●		
United Kingdom				
United States				

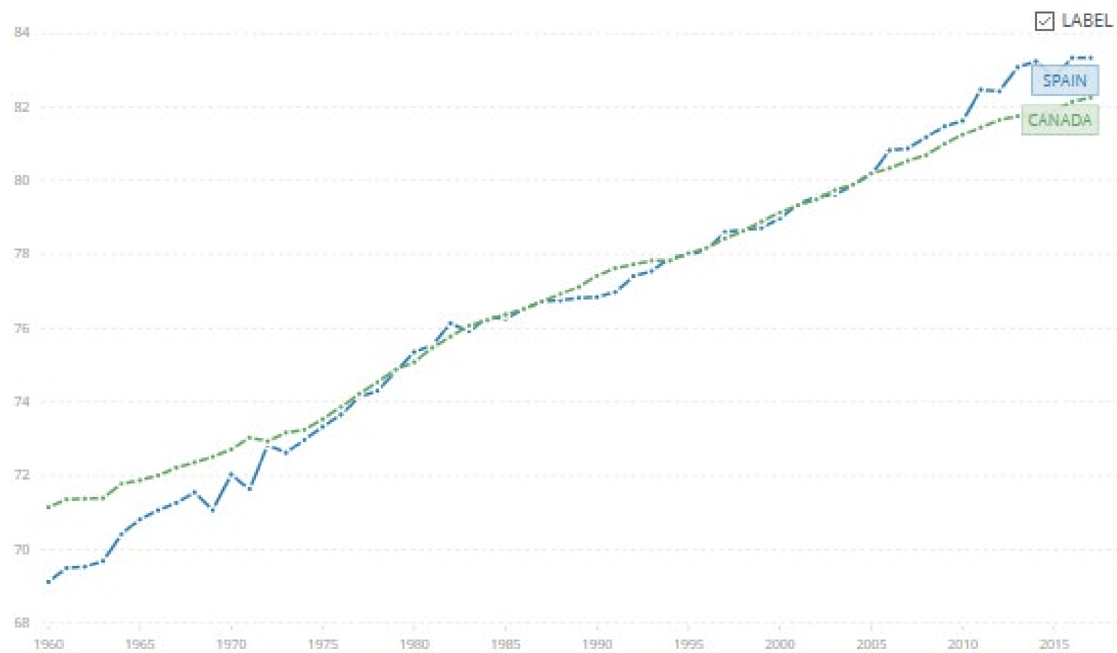
(OECD, 2007, as cited in Whitehouse, 2007)

Table 15: Unemployment rate % - Spain, European Union



(National Statistics Institute, 2019, as cited in Trading Economics, 2019)

Table 16: Life Expectancy at birth, total (years) – Spain, Canada



(World Bank, 2019)

Table 17: Average daytime temperatures for Madrid, Spain vs Ottawa, Canada

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average
Ottawa, Canada	-6.1 °C	-4.1 °C	2.2 °C	10.8 °C	19.1 °C	23.8 °C	26.5 °C	24.9 °C	19.5 °C	12.5 °C	4.8 °C	-3.0 °C	10.9 °C
Madrid, Spain	9.8 °C	12.0 °C	16.3 °C	18.2 °C	22.2 °C	28.2 °C	32.1 °C	31.3 °C	26.4 °C	19.4 °C	13.5 °C	10.0 °C	20.0 °C

(World Meteorological Organization, 2019, as cited in Weather Averages, 2019)

How Technology and a Changing Consumer Behaviour Instigated Change in the Deutsche Post DHL Group: An Analysis on Organizational Change

Audrey Wright

ABSTRACT

This paper will depict a detailed analysis of Germany's leading logistics company, Deutsche Post DHL Group, and their recent organizational change. Technological advances and eCommerce will be explored as an external factor influencing the company's success and internal decision-making. This analysis will include an examination of the group's innovative efforts to develop useful and sustainable operations in their changing industry. The paper will also include the group's previous response to a corporate challenge. Key performance indicators, such as a Carbon Efficiency Index and EBIT, will portray the company's progress shortly after their response and assume future performance.

INTRODUCTION

The Deutsche Post DHL Group

The Deutsche Post DHL Group, headquartered in Bonn, Germany, is one of the world's largest logistics service providers. In 2002, the German corporation Deutsche Post acquired American company DHL, forming what is now the Deutsche Post DHL Group (DPDHL). DHL runs the company's international services in over 220 countries, while Deutsche Post operates solely in Germany. The acquisition supported the group's efforts to develop a worldwide presence in domestic markets. DHL is one of the world's most recognized brands and was valued at US$20.6 billion(b) in 2018 by research institute Kantar Millward Brown (DPDHL, 2019). Deutsche Post was ranked the 21st strongest German brand in the Brand Finance Germany 100 in 2018 (Brand Finance, 2018). They employ approximately 550,000 people worldwide, 155,000 being domestic German employees. Deutsche Post trades on the Frankfurt Stock Exchange under the symbol DPW (DPW.F).

Prior to 2019, the company consisted of four corporate divisions: Post- eCommerce – Parcel (PeP), Express, Global Forwarding and Freight (GFF), and Supply Chain (SC) (Figure 1). As of January 2019, DPDHL has restructured its PeP division into two separate business units: Post & Parcel Germany (P&P) and DHL eCommerce Solutions (DeCS) (Figure 2). The DHL brand is used for all divisions except the German domestic post and parcel which is branded by Deutsche Post.

Figure 1: DPDHL structure of corporate divisions before 2019 restructuring.

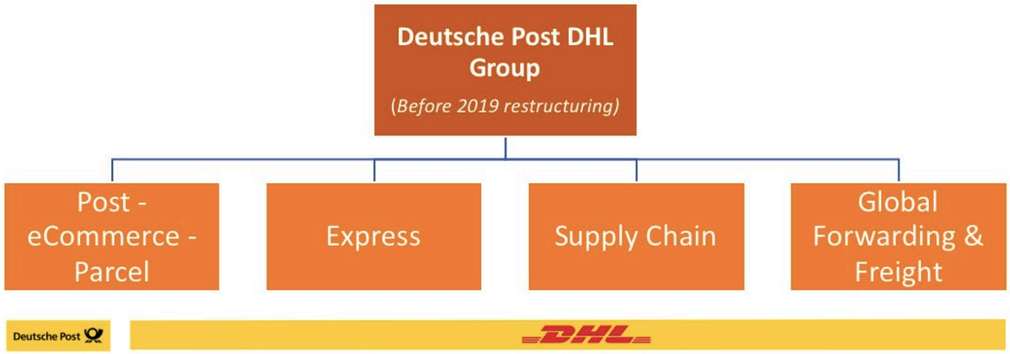
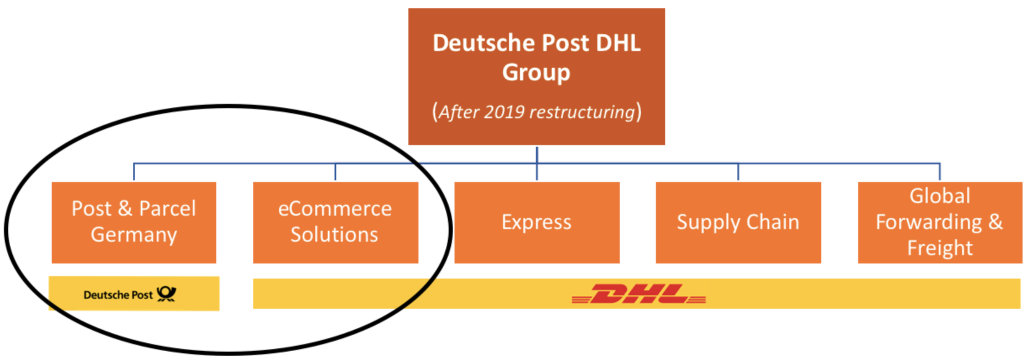


Figure 2: DPDHL structure of corporate divisions after 2019 restructuring.



In their 2018 fiscal year, the group reported total revenue of €61.5b and an EBIT of €3.2b (DPDHL, 2019). The firm actively participates in creating sustainable innovations that benefit the environment, having received a rating of A- by CDP, an external reporting agency for the environmental impact of major corporations. The firm operates every aspect of its business with strong discipline towards its stated corporate strategy; to be the customer, investment, and employer of choice, which supports its dedication towards conducting accountable business (DPDHL, 2019).

Logistics, Post and Parcel in Germany

Germany is considered Europe's biggest logistics hub given its central location. It was ranked number one in the World Bank's Logistics Performance Index in 2018, scoring high in timeliness, infrastructure, and logistics competence (The World Bank, 2018). Germany carries out significant investments in road, rail, air, and inland waterway infrastructure, totaling an estimated investment of €20.7b in 2017 (OECD, 2017). However, in 2017, Germany accounted for 20.9% of the European Union's total greenhouse gas emissions (Eurostat, 2019). Located in the German state of North Rhine-Westphalia (NRW) and conveniently close to DPDHL's headquarters, is the research initiative EffizienzCluster LogistikRuhr. This initiative carries out research to develop sustainable logistics services such as the Hub2Move, whose aim is to increase the flexibility of the flow of physical materials (EffizienzCluster LogistikRuhr. n.d.). The NRW also hosts the Zukunftskongress Logistik (Future Logistics Congress) in Dortmund every year.

Although Germany's logistics network is large, the country has been experiencing a decline in demand for physical letter mail communications. According to the European Commission, domestic mail traffic between the years 2014 and 2017 declined by 2.5% (European Commission, 2019). Between 2017 and 2018, the German mail communications market for business customers decreased by €200million (m) (DPDHL, 2017, 2018). In contrast, the German parcel market has had an increase of €800m during the same time period. In 2016, it was predicted that parcel market volumes in Germany could double by the year 2025 (McKinsey & Co., 2016).

Table 1: Total greenhouse gas emissions by country, 1990-2017.

Total greenhouse gas emissions by country (incl international aviation, indirect CO2 and excl LULUCF), 1990 - 2017
(Million tonnes of CO2 equivalents)

	1990	1995	2000	2005	2010	2015	2017	Share in EU-28*
EU-28	5 722.9	5 397.8	5 287.2	5 362.0	4 917.5	4 470.3	4 483.1	100.0%
Belgium	149.7	157.6	154.5	148.9	137.1	121.6	119.4	2.7%
Bulgaria	102.6	75.5	59.8	64.5	61.1	62.2	62.1	1.4%
Czechia	199.8	158.7	151.1	149.5	141.7	129.5	130.5	2.9%
Denmark	72.1	80.1	73.2	68.8	65.5	50.8	50.8	1.1%
Germany	1 263.2	1 138.1	1 064.7	1 016.5	967.0	931.8	936.0	20.9%
Estonia	40.5	20.3	17.4	19.3	21.3	18.3	21.1	0.5%
Ireland	56.5	60.3	70.3	72.0	63.4	61.7	63.8	1.4%
Greece	105.6	111.8	128.9	138.9	121.0	98.2	98.9	2.2%
Spain	293.3	335.3	397.1	452.6	370.1	351.8	357.3	8.0%
France	556.6	553.8	567.0	570.7	528.0	477.3	482.0	10.8%
Croatia	32.4	23.2	26.1	30.3	28.4	24.6	25.5	0.6%
Italy	522.1	538.3	562.1	589.2	514.7	443.7	439.0	9.8%
Cyprus	6.4	7.9	9.2	10.2	10.3	9.1	10.0	0.2%
Latvia	26.5	13.0	10.6	11.6	12.7	11.6	11.8	0.3%
Lithuania	48.6	22.5	19.6	23.0	20.9	20.5	20.7	0.5%
Luxembourg	13.1	10.7	10.6	14.3	13.4	11.6	11.9	0.3%
Hungary	94.2	75.9	73.9	76.2	65.7	61.3	64.5	1.4%
Malta	2.3	3.0	3.1	3.2	3.2	2.5	2.6	0.1%
Netherlands	226.4	239.3	229.8	225.8	224.1	207.5	205.8	4.6%
Austria	79.6	80.9	82.1	94.5	86.8	81.0	84.5	1.9%
Poland	475.0	445.7	396.3	404.3	413.1	392.3	416.3	9.3%
Portugal	60.8	70.8	84.3	88.1	71.7	71.1	74.6	1.7%
Romania	248.9	187.8	143.6	151.7	124.4	117.2	114.8	2.6%
Slovenia	18.7	18.8	19.1	20.6	19.7	16.9	17.5	0.4%
Slovakia	73.4	53.3	49.2	51.3	46.4	41.8	43.5	1.0%
Finland	72.3	72.8	71.3	71.2	77.4	57.2	57.5	1.3%
Sweden	72.7	74.7	70.4	68.6	66.4	55.7	55.5	1.2%
United Kingdom	809.9	767.6	741.9	726.2	642.1	541.5	505.4	11.3%
Iceland	3.8	3.7	4.4	4.4	5.2	5.4	5.9	0.1%
Lichtenstein	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.0%
Norway	51.9	51.8	55.7	56.3	56.8	56.1	54.4	1.2%
Switzerland	56.7	56.1	57.2	58.3	58.5	52.9	52.6	1.2%
Turkey	219.8	248.4	300.5	340.6	404.6	483.4	537.4	12.0%

*Share in EU-28 total in year 2017

Source: European Environment Agency (online data code: env_air_gge)

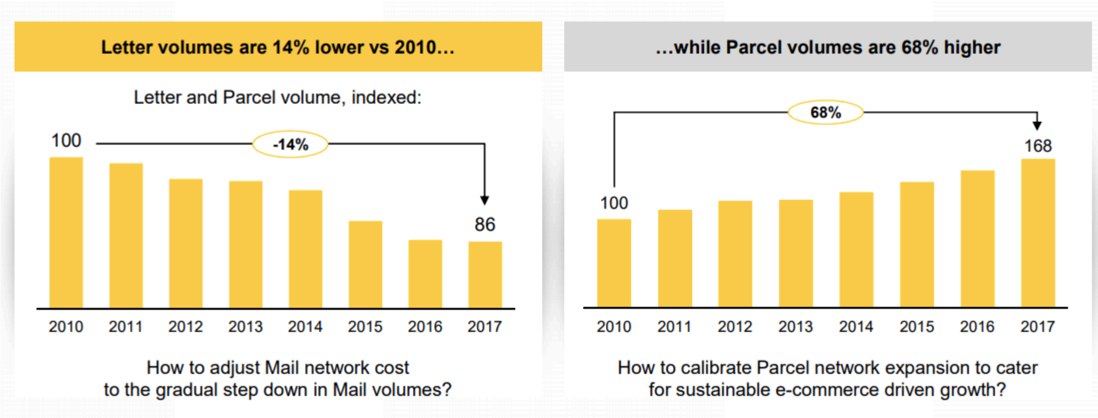
(Eurostat: European Environment Agency – Total greenhouse gas emissions by country, 2019)

PROBLEM

German post & parcel in DPDHL's PeP division

DPDHL is faced with a declining supply in its domestic post market. This decrease in volume had a negative effect on revenues in the PeP division. Mail communication volumes continued to decline from 7,964m to 7,707m between 2017 and 2018 (DPDHL, 2019). The firm indicated that this decrease correlates with the increase in electronic substitutions. The Bundestag election of 2017 played a role in increasing mail volumes, however, this would have to be considered a temporal anomaly rather than a reversal of trend. Table 2 shows the PeP division's revenue associated with the German post. Revenue from mail communications has been consistently decreasing over the years but remains a large portion of the total revenue associated with this sector. DPDHL's PeP division heavily depended on external activities for revenue. This reliance strongly supports the Resource Dependence Theory (Pfeffer & Salancik, 1978). This theory focuses on how external factors influence organizational behaviour and suggests that corporations can adjust their dependency and uncertainty through change. In DPDHL's case, their dependency currently lies in customer-supplier relationship. Described further in this paper is DPDHL's response to their dependence on a declining resource which involved organizational restructuring and adjustments to internal processes to optimize performance.

Figure 3: DPDHL's Letter mail and parcel volumes from 2010 to 2017.



(DPDHL: PeP Measures, June 2018)

Table 2: DPDHL's PeP division's revenue from the Post segment.

Post: Revenue (€m)										
Fiscal Year	2014*		2015*		2016*		2017*		2018	
Total Revenue	10,014	100.0%	9,784	100.0%	9,741	100.0%	9,956	100.0%	9,709	100.0%
Mail Communications	**6,641**	**66.3%**	**6,537**	**66.8%**	**6,527**	**67.0%**	**6,401**	**64.3%**	**6,303**	**64.9%**
Dialogue Marketing	2,232	22.3%	2,200	22.5%	2,225	22.8%	2,333	23.4%	2,205	22.7%
Other	1,141	11.4%	1,047	10.7%	989	10.2%	1,222	12.3%	1,201	12.4%

*based on adjusted numbers

Information taken from DPDHL Annual Reports 2015-2018

International parcel & eCommerce in DPDHL's PeP division

Online retailers are increasing sales by 10% - 15% solely by reaching international markets (DPDHL, 2017). The group's global network reaches more than 220 countries and territories which provides it with an opportunity to become a leading eCommerce logistics company. In previous years under the PeP division, the group's international eCommerce and parcel business had performed well. The European parcel market is thriving, revenues increasing from 12% to close to 25% of total revenue for the division. Table 3 shows the revenues related to the PeP division's eCommerce and parcel activities (the remaining revenues for this division are related to the post sector (Table 2)). In contrast to the increasing revenues in this segment, an analysis of EBIT shows that profits have not achieved the same growth. Over the past four fiscal years, the PeP division has relied heavily on domestic post and parcel, as their international eCommerce activities have not been profitable (Table 4).

Table 3: DPDHL's PeP division's revenue from the eCommerce – Parcel segment.

eCommerce - Parcel: Revenue (€m)										
Fiscal Year	2014*		2015*		2016*		2017*		2018	
Total Revenue	5,672	100.0%	6,347	100.0%	7,337	100.0%	8,482	100.0%	9,073	100.0%
Parcel Germany	3,992	70.4%	4,372	68.9%	4,814	65.6%	5,190	61.2%	5,556	61.2%
Parcel Europe (excluding Germany)	**676**	**11.9%**	**744**	**11.7%**	**1,138**	**15.5%**	**2,004**	**23.6%**	**2,216**	**24.4%**
Consolidated Parcel	*not available*		*not available*		*not available*		(256)	-3.0%	(349)	-3.8%
DHL eCommerce (excluding Europe & Germany)	**1,004**	**17.7%**	**1,231**	**19.4%**	**1,385**	**18.9%**	**1,544**	**18.2%**	**1,650**	**18.2%**

*based on adjusted numbers

Information taken from DPDHL Annual Reports 2015-2018

Table 4: DPDHL's PeP Division's EBIT.

Post - eCommerce - Parcel: EBIT (€m)										
Fiscal Year	2014*		2015*		2016*		2017*		2018	
Total EBIT	1,298	100.0%	1,103	100.0%	1,446	100.0%	1,503	100.0%	656	100.0%
operations in Germany	*not available*		**1,089**	**98.7%**	**1,447**	**100.1%**	**1,495**	**99.5%**	**658**	**100.3%**
eCommerce & International Parcel	*not available*		**14**	**1.3%**	**(1)**	**-0.1%**	**8**	**0.5%**	**(2)**	**-0.3%**

*based on adjusted numbers

Information taken from DPDHL Annual Reports 2015-2018

Overview of the PeP division's problem

For DPDHL to shut down all post operations because of a declining trend would be harmful to its revenue and brand reputation. DPDHL accounts for 63.4% of the German business mail communications market and 12.3% of the international outbound mail market in Germany (DPDHL, 2019). Simply reducing post services in response to lower demand would be harmful to German businesses and individuals that still rely on post and could potentially be both socially and politically detrimental for DPDHL. Furthermore, reducing services in the German post division would put the company at risk of losing a substantial source of revenue and cash flow. In 2018, post revenue declined 2.5% but still represented over 15% of the group's revenue as a whole. As seen in Figure 3, letter mail volumes had decreased by 14% between 2010 and 2017. In addition to this decline, DPDHL has struggled with other external forces such as steady but low postage prices between 2016 and 2018 (The Local Europe, 2019), and an increase in transportation costs from higher crude oil prices (DPDHL, 2018, 2019).

International parcel and eCommerce, on the other hand, continues to thrive. Between 2014 and 2018, revenues for the international DHL services (Parcel Europe and DHL eCommerce) have increased by 130% (Table 3). Nevertheless, this also comes with its challenges. EBIT from eCommerce has not shown consistent growth (Table 4). DPDHL maintains that the reduced profits in the eCommerce sector have been from increased investments to expand its international parcel services. In addition to these investments, the company has to take into consideration the effect that individual eCommerce deliveries will have on the environment such as increased CO2 emissions due to a larger number of last-mile delivery routes. To reach their 2050 goal of zero emissions, the development of sustainable solutions will be essential (DHL, 2017).

When it came to the financial reports, the PeP division recorded its revenue in different categories than its EBIT. The division's revenue would be recorded based on the type of item; Post revenue would be segmented from eCommerce – Parcel revenue. The Post segment would include mail communications and dialogue marketing. The eCommerce – Parcel segment would include parcel Germany, parcel Europe, the remaining regions (mostly Asia and the USA) would be grouped into DHL eCommerce. However, when recording EBIT, the activities would be segmented based on geographic location; “operations in Germany” and “international parcel & eCommerce”.

The structure of the PeP division divided the focus between two very different businesses with individual operating conditions and challenges. The initiatives to improve productivity by reducing direct costs are different when working with domestic and international deliveries. For example, the replacement of fuel-based vehicles with cargo bikes and electric vehicles is beneficial when delivering products domestically, however international shipments require larger and faster transportation equipment that usually is not as sustainable. Additionally, German domestic post and parcel shipments are completed by one brand, Deutsche Post, while some international post and parcel require communication and collaboration between foreign post companies. Domestic post and parcel services include the sorting and delivery of products as they are received by a business or individual customer. However, with eCommerce logistics, it is often required to have more steps such as warehousing, inventory management, and packaging. Products sold by eCommerce have fluctuating orders and require much more advanced predictive software to analyse the demand for products that need to be stored and packaged for delivery (Atkins 2019; DPD Laser, 2014). In June 2018, the company highlighted two main issues related to the PeP division. The first being how to effectively adjust the operations associated with mail communications to deal with the declining market. The second, how to sustainably service customers in the growing eCommerce market. The company’s response to these identified problems will follow, however, to further understand the origins of the company’s problem, it is important to first consider what influenced the external behaviours to change.

LOGISTICS & TECHNOLOGY

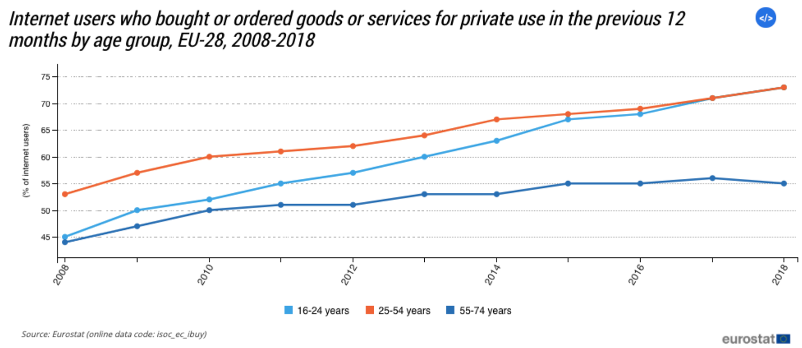
Improvements of modern-day logistics stimulated by technology

Before the disruptive advances in technology, logistics involved a larger amount of paper documents, manual data inputs into multiple information technology (IT) systems, and slower deliveries (Bento, 2019). Advances in technology have allowed for modern logistics to improve efficiencies and reduce costs such as material expenses. Radio Frequency Identification (RFID) systems have improved accuracy in inventory management allowing for a reduction in inventory (Milić D. C. & Zorić B., 2017). The Electronic Data Interchange (EDI) process has cut costs due to the elimination of paperwork which has also improved the efficiency of exchanging information between channel members. RFDI and EDI are just a few examples of how IT can improve logistics operations in the supply chain. Additionally, this implementation positively corresponds with creating “green supply chains” which is attractive to businesses looking to outsource their logistics services.

Advances in technology have transformed customer preferences and communication habits (Copenhagen Institute for Future Studies, n.d.). The way people communicate with friends, read the news, and even conduct business meetings has all changed due to technology allowing customers to utilize preferred modern methods of communication. The biggest online communication platform, Facebook, has recorded 2.45b users in 2019 (Statistica, 2019), 1.3b of which communicate through Facebook Messenger daily (West, 2019). This behavioural change to a more efficient way of communication has led to reductions in the use of physical means of communication such as letter mail. For logistics companies who rely on the demand for physical communication to generate revenue, this shift to technological interaction poses a threat.

While customer preferences worldwide have resulted in a decrease of letter mail, there is an opportunity for logistics firms to utilize another change in customer preferences to their advantage. As technology develops, people generally become reliant on its functionality for their day-to-day activities. Younger generations will most often be “early -adopters”. This is certainly true in the case of eCommerce transactions (Rainie & Anderson, 2017).

Figure 4: Internet users who bought or ordered goods or services for private use in the previous 12 months by age group, EU-28, 2008-2018.



(Eurostat, E-Commerce statistics for individuals, 2018).

As younger generations attain more disposable income it can be assumed that eCommerce revenues will continue to increase as customers build on a preference for utilizing online channels of distribution. This represents a departure from the traditional distribution channels of manufacturer-wholesaler-retail-customer. Supply chains now rely less on retailers and wholesalers and allow manufacturers to sell directly to their customers. This has started the seemingly revolutionary Retail Apocalypse, resulting in many retail store closures and bankruptcies (Bhattarai, 2019). Although this is harmful to those channel members, it is a new opportunity for logistics firms. They can provide their expertise on shipping, warehousing, and inventory management, to manufacturers who may lack this knowledge or prefer to concentrate on their corporate strengths.

eCommerce and how it instigates change in logistics services

Electronic commerce, or eCommerce, is the purchase and sale of products and services online. Retail eCommerce sales in 2018 amounted to an estimated amount of US$2,982b and are forecasted to rise to US$6,542b by 2023 (Statistica, 2019). According to the eCommerce platform Shopify, the number of online shoppers on their platform was recorded at 218m in 2018 (Shopify, 2019). A recent survey has found that millennials (ages 22 – 37) transact 60% of their shopping online (Melton, 2019). The customer demand from younger generations for convenient online access to goods and services and the expected growth in revenue has made eCommerce an attractive market. There are many benefits to companies that implement eCommerce channels. They have the opportunity to reach a broad customer base by expanding internationally. To illustrate, the online consumer shopping trends in Brazil, Indonesia, and Thailand suggest greater use of international websites than domestic ones (Deloitte, 2014). Additionally, there is the advantage of omitting retailers which can allow companies to have more control over their marketing and brand. However, a challenge arises for manufacturers when internal logistics can no longer keep up with domestic or international demand. Outsourcing a logistics provider who can effectively package, and transport products is essential in the success of an eCommerce business and can allow manufacturers to focus and reinvest in their core business.

A manufacturer who implements an eCommerce platform but does not keep up with modern logistic IT trends will find it difficult to compete. This means implementing newer warehousing and inventory management technologies such as smart glasses, drones, and augmented reality to increase the efficiency of the supply chain (Atkins, 2019). Big Data Analytics (BDA) can be implemented to improve storage, recognizing patterns, and interpretation of information (Yu, Wang, Zhong, & Huang, 2017). Cloud Computing can improve efficiency by allowing on-demand access to documents and data to all relevant channel members.

The modification of technological logistics services to support a specific industry, product, and vision is essential. However, the investment in automated equipment can be costly, and the development of effective logistics strategies needs certain expertise. This is why companies often outsource their logistics to third parties. Successful logistics firms understand how to provide unique, timely services and will have the extensive domestic and global infrastructure and equipment that will increase the value and efficiency for all customers. Successful logistics firms will also understand the importance of last-mile delivery, showcasing the delivered brand in a way the manufacturer desires.

DPDHL's previous efforts to enter market for eCommerce logistics

DPDHL strives towards building eCommerce services that benefit the individual needs of their e-customers. In 2009, one of their retailers, Ben Sherman, launched its online eCommerce platform to reach a broader customer base (DPDHL, 2009). The retail brand produces fashionable men's clothing and appropriate delivery to preserve the quality of their items is essential. DPDHL considered this while developing their eCommerce delivery system. They utilized the combined expertise of eCommerce and fashion experts to develop a structure that best worked for Ben Sherman. Alan Higgins, the Global Logistics Director for Ben Sherman in 2009, stated the implementation of DPDHL's eCommerce services was "smooth" and had "consistently high levels of service". Ben Sherman is said to have had saved money, time, and space with DPDHL's services, allowing them to concentrate on what they do well – design and manufacturing of men's clothing.

After the success of Ben Sherman's online platform, DPDHL took another step towards building eCommerce expertise. In 2010, the company began the development of its online marketplace; MainPaket.de, later renamed Allyouneed.com. The company sold the platform to Delticom AG in 2018 and recorded a €10m impairment loss associated with the sale (DPDHL, 2019). Some outside sources view this initiative as a waste of company resources, having spent 8 years developing the platform and receive no financial return (Weidemann, 2018). With established eCommerce platforms such as Amazon beginning to develop their own logistics services (Yu, et al. 2017), DPDHL must stay competitive with this rising trend. According to DPDHL, the Allyouneed.com initiative provided the firm with the opportunity to understand online commerce from the point of view of their customers.

DPDHL'S PREVIOUS RESPONSE TO CHANGE

DHL Express has not always been one of the group's top performing divisions. After 2006, the division did not see an operating profit until 2010. They recorded an adjusted operating loss of €272m in 2007 and further losses of €2,194m in 2008 (DPDHL, 2019). The main reasoning behind why the division was underperforming was related to the DHL – Deutsche Post merge in 2002. Before the acquisition, DHL was an American company with international presence but had focused a lot of their operations on intra-US deliveries. When acquired by cross-border experts Deutsche Post, there were challenges associated with managing profits as the US Express division required high volumes with small margins (Allen, 2019). One problem mentioned by DHL Express CEO, Ken Allen, was that the company did not take advantage of partnerships with other post services in domestic areas to reduce their costs (Machatschke, 2010). Allen emphasizes the problem the Express division faced in 2007 was the result of DPDHL focusing too much on the US domestic market and not on what it had been good at for decades – cross-border trade. Allen proposed moving away from unprofitable activities in domestic markets to focus on international express delivery as it offered a higher return. Unfortunately, the future success of this division also meant the company had to terminate 10,000 of its employees as their positions became redundant.

Allen focused his strategy on his remaining employees and the important role they had in redefining the direction of the division. The biggest challenge faced by employees was the shift in duties. Employees that were accustomed to domestic operations had to learn different processes that included difficult routing, customs approvals, sanction compliance and more. Allen saw the future success of this division was reliant on the development of a workforce that would accept change and be motivated to provide quality services. To convey his message to the 88,000 worldwide employees, Allen and his management team generated videos to span across the organization and communicate this new initiative. Singing songs like "What the World Needs Now Is Love" and "Ain't No Mountain High Enough" Allen and other management staff conveyed the desired customer loyalty and motivation they would need employees to demonstrate. Allen connected his workforce with music they all recognized and understood. This was a positive method to encourage an underperforming division (Heryati R., n.d.; Square, n.d.). Allen continued his efforts to integrate employees into the company by developing the Certified International Specialists (CIS) program. This 2-day program allowed DHL Express employees to develop their knowledge of international shipping and familiarize themselves with the company's strategy. Since its implementation, results from Employee Opinion Surveys have seen an increase in employee engagement which can be associated with the success of the CIS program.

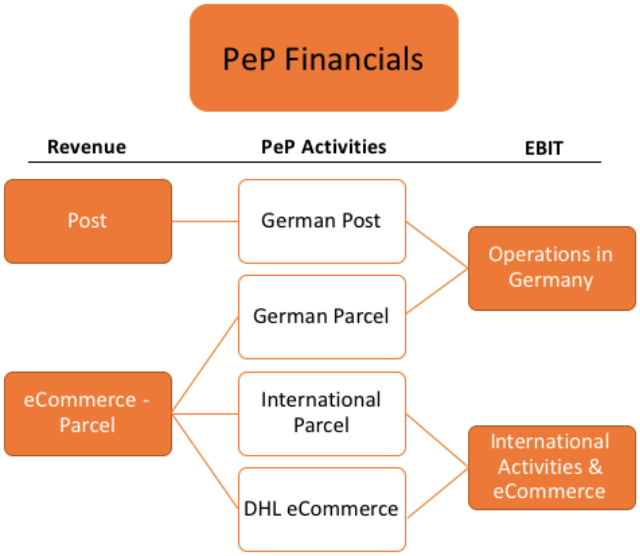
Allen has demonstrated his ability to innovatively turn an underperforming division into a profitable and motivational workplace. To this day, the CIS program is still active, providing a resource for employees to learn international trade processes and to ensure worldwide consensus towards a corporate goal. In 2018, Fortune partner Great Place To Work conducted a survey that resulted in DHL Express achieving sixth place for the World's Best Workplaces (Fortune, n.d.).

DPDHL'S 2019 CHANGE STRATEGY

Overview

Faced with different problems and challenges in their PeP division, the company decided it best to focus on the future of both divisions separately. In January 2019, the company executed plans to separate all DHL activities, international post and eCommerce, from Deutsche Post's post and parcel activities (Figure 2). The new divisions were created in correlation with the EBIT categories in the old PeP division. EBIT from "Operations in Germany" now has its own division, where revenues are segmented as Post Germany and Parcel Germany. International activities which were "International Post and eCommerce" are now a stand-alone division which includes detailed segments based on geographical regions (Figure 5).

Figure 5: Visual of how the PeP division grouped activities for revenue and EBIT calculations.



The implementation of new business divisions in 2019

1) German Post & Parcel (2019 -)

   a. Structure and Services: The P&P division continues the transport, sorting, and delivery of mail communication and dialogue marketing (Post) and parceled goods to individual and business customers in Germany (Parcel Germany), in addition to exports. This division runs under the Deutsche Post brand.

   b. 2019 Revenue: In Germany, the division holds the number one market position in both post and parcel. The revenue mix consists of 62% business post and 38% parcel (DPDHL, October 2019). Volumes, like before, are increasing for parcel (between 5% and 7%) due to eCommerce trends and decreasing for post (between 2 and 3%) due to an increase in electronic alternatives. By the company's third quarter (Q3), they reported a 2.5% increase in revenue from the Q3 in 2018.

2) DHL eCommerce Solutions (2019 -)

   a. Structure and Services: The DeCS division provides last-mile delivery service outside of Germany in selected countries, services eCommerce platforms, and constructs unique processes for new eCommerce businesses. The division combines the previously separated Parcel Europe and DHL eCommerce services (from the PeP division) to effectively assess the opportunities and performance of international eCommerce. This division runs under the DHL brand.

   b. 2019 Revenue: The profitable core of this division is the delivery of domestic last-mile parcel in America, Europe and Asia, with emphasis on the growing market in Europe. In the first nine months (9M) of 2019, DeCS revenue increased by 6.8% since the 9M2018. All of the division's operating regions contributed to the 9M2019 revenue increase, 9.7% increase in the Americas, 5.5% in Europe, 5.4% in Asia. In correlation with previous reporting periods, the region generating the most parcel revenue (excluding Germany) continued to be Europe. In 2019, revenue from Europe consisted of 56% of the DeCS total revenue.

New management

The restructure also saw a change in division CEOs. The former PeP division CEO, Jürgen Gerdes, is no longer with the firm because of a difference in opinion on the company's strategic focus. The domestic P&P division is now run by Tobias Meyer, a DPDHL employee since 2013 and a newly appointed board member. The international DeCS division was taken over by previous Express division CEO, Ken Allen, whose appointment is exciting for the group as his cross-border expertise will help the division develop its profitable core in international markets, specifically within Europe.

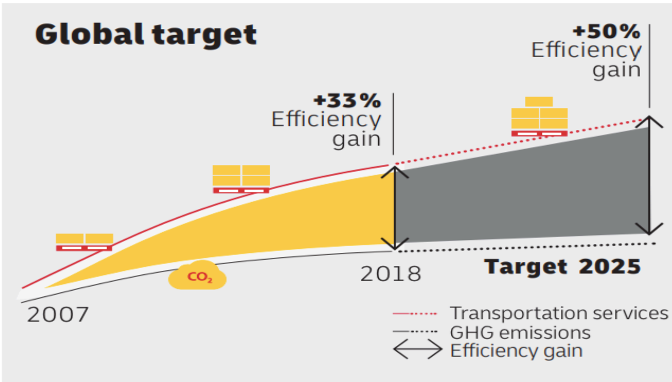
Restructuring costs

The restructuring came at a substantial cost. An early retirement program was introduced to reduce the number of domestic employees in redundant positions who were not hireable elsewhere. This initiative will reduce overhead in new divisions but cost the PeP division €400m in 2018. Further DeCS restructuring costs in 2019 resulted in a total write-down of €502m, mostly from portfolio optimization costs associated with their Austrian Post contract agreement and staff cuts (DPDHL, 2019).

DPDHL's sustainable activities and innovations

The popularity of online shopping has resulted in the growth of residential parcel shipping and a subsequent increase in carbon emissions. The group has taken its initiatives towards developing solutions and improving industry trends by establishing DHL Innovation Centers in Singapore, Troisdorf, and Chicago. One of the company's main areas of focus is the reduction in fuel-based vehicles used for transport. A recent development in DPDHL's innovation centers is its electric vehicle produced by its subsidiary, StreetScooter. In 2016, the group's efforts to collaborate with third-party conventional van manufacturers did not succeed, which resulted in the company taking initiative to produce the vehicles in house (King, 2016). In 2018, the production of the vehicles cost the company €257m. These regular sized vehicles are said to save three tonnes of diesel per year and hold up to 720kg of goods each. In August 2019, the group announced the operation of its 10,000th StreetScooter vehicle. The company also operates around 12,000 electric bikes and trikes (DPDHL, 2019). The company's entire e-transport endeavours are estimated to save 36,000 tonnes of CO2 a year and reduce greenhouse gas emissions as transportation increases (Figure 6). eCommerce is also challenging the company's other sustainability efforts as the smaller, more numerous shipments are producing more waste from packaging. DPDHL conducted a survey in October 2019 that showed there is a popular trend among customers in demand for sustainable packaging and reduced waste (DPDHL, 2019). The group highlighted that reducing packaging waste and finding environmentally friendly solutions is an important responsibility in the logistics industry. Their initiatives include the OptiCarton packaging optimization tool, for example, maximizes pallet space by analysing the size and weight of packages which decreases product damage and reduces environmental impact. Many innovations have an additional benefit of allowing companies to relay information towards their customers easier and faster, improving the customer experience (Hyken, 2018). For example, DPDHL's ProView service allows customers to track the status of their shipments as it moves through the DHL network.

Figure 6: DPDHL's previous performance and global target for efficient GHG emissions related to transportation activities.



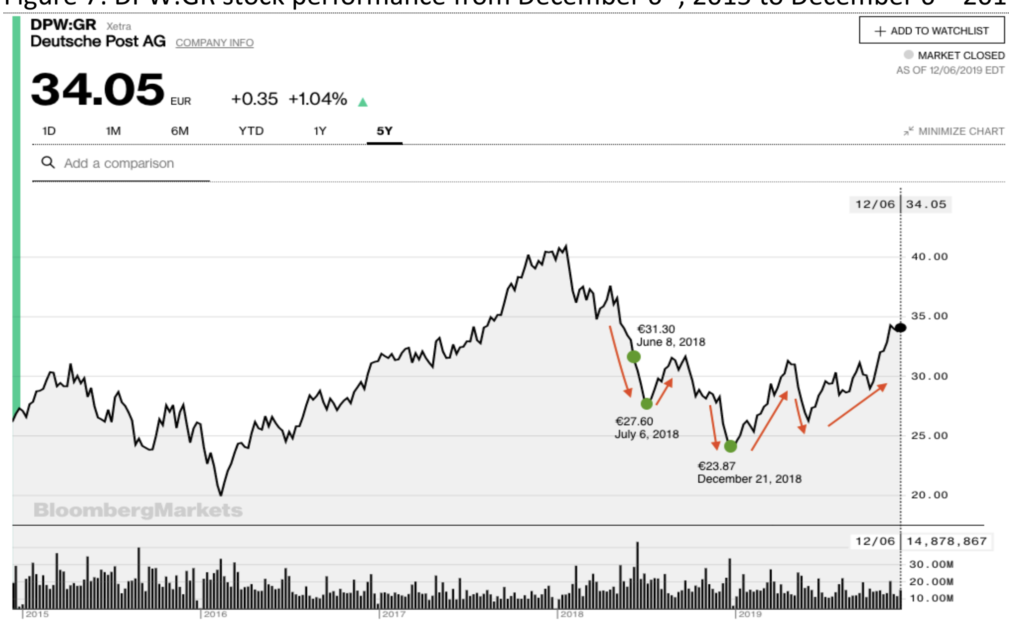
(DPDHL, 2019)

PERFORMANCE ANALYSIS

Stock performance

The company's stock suffered a decline of 12% (€31.30 to €27.60) a month after the release of the company's planned restructuring (Bloomberg, 2019). The stock recovered slightly in mid-July 2018 only to decline again right before the company implemented its structural change in January 2019. The company began 2019 with a stock price of €24.04, one of the lowest prices since the beginning of 2016. The stock began increasing again at the beginning of June, possibly due to the release of information regarding an increase in postage prices (Bundesnetzagentur, 2019; The Local Europe, 2019). Basic earnings per share (EPS) decreased in 2018 from 2017 which can be highly correlated with a reduction in EBIT due to increased restructuring expenses. The 9M2019 EPS increased by €0.4 from the EPS in 9M2018.

Figure 7: DPW:GR stock performance from December 6th, 2015 to December 6th, 2019.



(Bloomberg, 2019)

Internal key performance indicators

DPDHL has a wide range of performance measures for the whole corporation. Financial performance is measured by profit from operating activities (EBIT), earnings after asset charge (EAC) and free cash flow (FCF). Non-financial performance indicators mainly include outcomes of EOS, Customer Satisfaction Surveys, and calculation of the carbon efficiency index (CEX).

1) EOS: DPDHL strives towards creating a workplace that enhances the lives of its employees. The group conducts annual Employee Opinion Surveys (EOS) and uses the results as management performance indicators to help gauge employee satisfaction. Bonuses for executives are highly leveraged on the results from the EOS which conveys how employees rate their opportunities for engagement and leadership behaviour. In 2018, DPDHL recorded a positive rating of 76% in active leadership and employee engagement (DPDHL, 2019). The 2018 target for improving this score by 1% was met, and the same goal has been set for 2019.

2) CEX: DPDHL critically focuses on its CEX as a performance indicator towards its environmental impact. The CEX target was met for 2018, having improved its CEX by one point since 2017. The improvement can be correlated with the use of renewable resources mostly in its SC and Express divisions. In 2017, the company recorded 6.34m tonnes of CO2 emissions (direct and indirect), which accounted for 0.7% of Germany's total CO2 emissions (Table 1) (DPDHL, 2018). The group works with the Aviation Initiative for Renewable Energy in Germany to work towards developing renewably fueled aircraft (29% of the group's 2018 fuel consumption was due to air transport). In 2018, the amount of CO2 emissions had increased by 3.6%, however, other statistics show promising increases in sustainability such as a 14% increase in green electricity use. DPDHL's corporate goal to operate with zero emissions by 2050 benefits the EU's 'Green Deal' initiative towards keeping the global temperature increase by 2050 below 2°C (European Commission, 2018). Cooperation from large corporations such as DPDHL will hopefully reduce Germany's contribution to EU carbon emissions and support the Union's 2050 goal.

Performance of the P&P Germany division

The company has stated that its goals for the German P&P division lie in recovering and sustaining earnings in the division. They have highlighted digitalization as a key focus, expected to lead them to efficient operations that will yield greater profits and reduce environmental impact (DPDHL, 2019). In 2019, the division deemed itself successful in digitalizing procedures. For example, the company's use of Optical Character Recognition (OCR) technology has improved the read rate in its domestic mail sorting operations. OCR technology can establish patterns to help with recognizing items that belong to specific customers, delivery points, etc. (Cook, n.d.).

At the end of 2018, the 2019 EBIT targets for the P&P division were set between €1b and €1.3b. In a more recent presentation, the company adjusted the target to between €1.1b and €1.3b This restatement is attributed to a positive development of internal operations from restructuring and increased control on costs (DPDHL, 2019). Figure 14 shows the company's adjusted targets as of October 1, 2019.

Figure 8: DPDHL’s EBIT guidance for 2019 and 2020 fiscal year ends.

Guidance 2019 / 2020 reiterated

In € bn

	2019	2020
Group EBIT	4.0-4.3	>5.0
P&P Germany	1.1-1.3	>1.6
DHL	3.4-3.5	>3.7
Corporate Functions	-0.5	-0.35

DPDHL GROUP CAPITAL MARKETS DAY | 1 OCTOBER 2019 | CFO PRESENTATION

(DPDHL. 2025 Strategy Presentation, October 2019)

The performance of the division at 9M2019 reported an accumulative EBIT of €708m, meaning a profit from operating activities of €392m is needed in Q4 for the company to reach their adjusted 2019 target. To predict the attainability of 2019 targets, a comparison between previous Q4 figures associated with this sector is needed. Historically, the business unit will experience a higher demand for post and parcel services during the holiday season. Based on Q4 from 2016 and 2017, Table 5 suggests that the P&P Division will likely exceed the Q42019 target. 2018 EBIT was not used for the prediction as the restructuring expenses had a significant irregular effect on the outcome.

Table 5: Projections for Post & Parcel Germany 2019 EBIT.

2019 Target Calculations	
2019 Target	1,100
2019 9M EBIT	708
2019 Q4 Target	392

Post & Parcel Germany: EBIT (€m)								
Fiscal Year	2016*		2017*		2018		2019 Targets	
Total EBIT	1,447	100%	1,495	100%	658	100%	1,100	100%
Q4	496	34%	505	34%	364	55%	392	36%

EBIT from years before 2019 were calculated from 'EBIT from Germany' in the PeP department

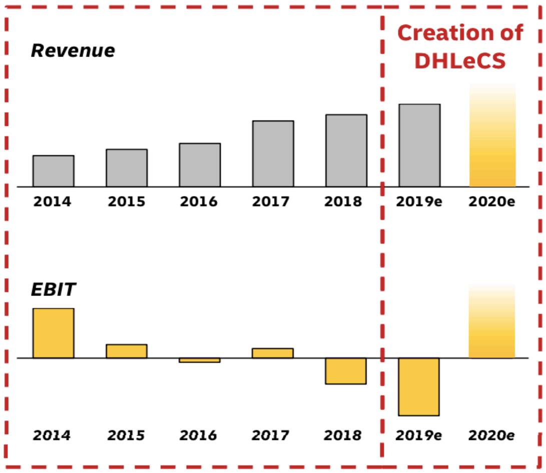
*based on adjusted numbers

Performance of the eCommerce Solutions division

The company’s 2019 EBIT targets for this division have been included in the DHL targets set between €3.4b and €3.5b (Figure 8). The DHL targets include all international divisions: SC, GFF, Express, and DeCS. With all divisions grouped together, it is difficult to see what financial targets were set for DeCS and assess whether they are on track to achieve those targets. Figure 9 shows a rough estimate of the DeCS division’s performance for the upcoming fiscal year ends. The loss in 2019 mostly due to €60m restructuring expenses but an expected profitable EBIT in 2020. The majority of these costs were incurred for portfolio developments, reductions in overhead and loss allowances as mentioned above. The 2019 interim reports show the DeCS division began its Q1 at a loss of €28m. Q2 performed better at a loss of €18m and Q3 showed a profit of €6m. The Q3 profit reflected the good performance of the division’s core business and the success of the restructuring processes.

The focus has been set on improving the profitable core in countries such as the Netherlands, Poland, Czech Republic, and Sweden, as well as the domestic and cross-border business in the USA (DPDHL, 2019). The division has challenged itself to look at other European Post Offices as partners instead of competitors. As previously mentioned, in 2019 Allen and his DeCS team were successful in signing the collaboration agreement with Austrian Post which services Austria, Czech Republic, and Slovakia. This partnership will allow Austrian Post to deliver products sent by DPDHL customers and brings DPDHL closer to optimizing their cross-border deliveries. It is also thought that the relationship with Austrian Post will demonstrate how DPDHL can expand further into international partnerships and broaden the scope of their eCommerce business.

Figure 9: Revenue and EBIT projections for eCommerce Solutions division.



(DPDHL, June 2018)

CONCULSION

DPDHL's problem initially stated at the beginning of the paper highlighted two issues: how to optimize operations in a decreasing market and how to effectively and sustainably offer services in the eCommerce logistics industry. The two separate problems led to a decision to separate the focus on each division as they require different activities. Domestic post was refocused to enhance last-mile deliveries in short distances, improve sustainability which reduced operating costs, and apply IT to allow for efficient processes. The DeCS division was highly invested in to improve international relations and develop an improved gateway into profitable regions. As the group's restructuring has only been implemented recently, it is not completely certain whether it will solve the problems previously stated. However, the recent performances of the new divisions in the first three quarters of 2019 are promising.

In every industry, companies struggle to deal with changes in their external environments. Frequently, when business resources are scarce, companies must accept that change is the solution to support the business and industry in the long-term. In today's modern society, it is becoming more apparent that external change is due to technology. Technology is changing consumer behaviour and multiple business operations, making it necessary for many companies to shape their business into a new desired service with cooperative intra-business functions that suit their stakeholders. Embracing IT is the first step to becoming more accessible to today's society. A few takeaways from DPDHL's recent endeavors is using IT to change internal operations can increase profitability by reducing costs, strengthen brand reputation by creating sustainable services, and open doors to new and highly demanded services which could potentially lead to becoming a leading service provider in a new market.

REFERENCES

Deutsche Post DHL Group (DPDHL) Web Site. (2019). Retrieved in 2019 from https://www.dpdhl.com/en.html.

DPDHL. (2019). 2018 Annual Report of Deutsche Post DHL Group. Retrieved on October 29, 2019 from https://www.dpdhl.com/content/dam/dpdhl/en/media-center/investors/documents/annual-reports/DPDHL-2018-Annual-Report.pdf.

DPDHL. (2018). 2017 Annual Report of Deutsche Post DHL Group. Retrieved on October 29, 2019 from https://www.dpdhl.com/content/dam/dpdhl/en/media-center/investors/documents/annual-reports/DPDHL_2017_Annual_Report.pdf.

DPDHL. (2017). 2016 Annual Report of Deutsche Post DHL Group. Retrieved on October 29, 2019 from https://www.dpdhl.com/content/dam/dpdhl/en/media-center/investors/documents/annual-reports/DPDHL_2016_Annual_Report.pdf.

DPDHL. (2016). 2015 Annual Report of Deutsche Post DHL Group. Retrieved on October 29, 2019 from https://www.dpdhl.com/content/dam/dpdhl/en/media-center/investors/documents/annual-reports/DPDHL_2015_Annual_Report.pdf.

Brand Finance. (May 2018). Retrieved Brand Finance Germany 100: The annual report on the most valuable German brands. Retrieved on November 29, 2019 from https://brandfinance.com/images/upload/germany_100_locked.pdf.

The World Bank. (2018). The Aggregated LPI. Retrieved on December 12, 2019 from https://lpi.worldbank.org/international/aggregated-ranking.

Organization for Economic Co-operation and Development. (2017). Infrastructure investment. Retrieved on December 12, 2019 from https://data.oecd.org/transport/infrastructure-investment.htm.

Eurostat. (2019). Greenhouse gas emission statistics – emission inventories. Retrieved on December 11, 2019 from https://data.oecd.org/transport/infrastructure-investment.htm.

EffizienzCluster LogistikRuhr. (n.d.). Retrieved on December 13 from https://www.effizienzcluster.de/en/spitzencluster_wettbewerb/projekt.php?proPid=17.

European Commission. (July 29, 2019). Domestic postal traffic, letter mail and parcel services. Retrieved on December 2, 2019 from https://webgate.ec.europa.eu/grow/redisstat/databrowser /view/POST_CUBE1_X$POST_DTR_1/default/table?category=GROW_CURRENT

Pfeffer, J., & Salancik, G. R. 2003. The external control of organizations: A resource dependence perspective. Retrieved from https://books.google.co.uk/books?hl=en&lr=&id=iZv79yE--_AC&oi=fnd&pg=PR9&dq=resource+dependence+theory+external+control&ots=VktqPy7mvO&sig=2OrP6YfPcZ5LFuvWs1wkhUkB2Fg#v=onepage&q=resource%20dependence%20theory%20external%20control&f=false.

DPDH. (February 2017). Cross-border e-commerce is one of the fastest growth opportunities in retail, according to DHL report. Retrieved November 13, 2019 from https://www.dpdhl.com/en/media-relations/press-releases/2017/cross-border-e-commerce-growth-opportunities-etail-dhl-report.html.

DPDHL. (June 2018). PeP Measures presentation. Retrieved on November 13, 2019 from https://www.dpdhl.com/content/dam/dpdhl/en/media-center/investors/documents/shares/DPDHL_PeP_measures_2018-05-08.pdf.

McKinsey & Co. (September 2016). Parcel Delivery: The future of last mile. Retrieved from https://www.mckinsey.com/~/media/mckinsey/industries/travel%20transport%20and%20logistics/our%20insights/how%20customer%20demands%20are%20reshaping%20last%20mile%20delivery/parcel_delivery_the_future_of_last_mile.ashx

The Local Europe. (June 2019). Postage costs set to Spike in Germany. Retrieved on November 5, 2019 from https://www.thelocal.de/20190604/this-is-how-much-it-will-cost-to-send-a-letter-in-germany.
DHL Delivered. (February 2017). Zero emissions by 2050: DHL announces ambitious new environmental protection target. Retrieved November 3 from http://www.delivered.dhl.com/en/articles/2017/05/zero-emissions-by-2050.html.
DPD Laser. (April 2014). Traditional Logistics Versus eCommerce Logistics. Retrieved on December 12 from http://www.dpdlaser.co.za/traditional-logistics-versus-ecommerce-logistics-serious-post/.
Atkins, B. (May 2019). Logistics In The eCommerce Era. Retrieved on December 12 from https://www.forbes.com/sites/betsyatkins/2019/05/06/logistics-in-the-e-commerce-era/#7e82adc1574d.
Bento, N. (2019, July 22). What is the difference between digital and traditional logistics? [Web blog post]. Message posted to https://www.mixmove.io/blog/what-is-the-difference-between-digital-and-traditional-logistics.
Milić D. C. & Zorić B. (2017). Trends in the use of information technology in logistics systems management. Retrieved from https://www.semanticscholar.org/paper/TRENDS-IN-THE-USE-OF-INFORMATION-TECHNOLOGY-IN-Mili%C4%87-Zori%C4%87/8f7487f2a7acdee1f169ad80782fe0c431ecf006.
Statistica. (2019). Social Media & User-Generated Content: Number of monthly active Facebook users worldwide as of 3rd quarter 2019. Retrieved from https://www.statista.com/statistics/264810/number-of-monthly-active-facebook-users-worldwide/
West, C. (February 2019). Social media demographics to drive your brand's online presence. [Web blog post]. Retrieved from https://sproutsocial.com/insights/new-social-media-demographics/.
Shopify. (2019). 2018 Year in Review. Retrieved on December 10, 2019 from https://s2.q4cdn.com/024715446/files/doc_downloads/year_in_review/2018/Shopify-Year-in-Review-2018.pdf.
Copenhagen Institute for Future Studies. (n.d.). Communication trends and the role of mail. Retrieved from https://www.ipc.be/-/media/documents/public/cifs_communications.pdf.
Rainie, L. & Anderson, J. (June 2017). The internet of things connectivity binge: What are the implications? Retrieved from https://www.pewresearch.org/internet/2017/06/06/theme-1-people-crave-connection-and-convenience-and-a-tech-linked-world-serves-both-goals-well/.
Bhattarai, A. (April 2019). 'Retail apocalypse' now: Analysts say 75,000 more U.S. stores could be doomed. Retrieved from https://www.washingtonpost.com/business/2019/04/10/retail-apocalypse-now-analysts-say-more-us-stores-could-be-doomed/.
Statistica. (2019). Retail e-commerce sales worldwide from 2014 to 2023. Retrieved from https://www.statista.com/statistics/379046/worldwide-retail-e-commerce-sales/.
Melton, J. (March 2019). Millennials now do 60% of their shopping online. Retrieved from https://www.digitalcommerce360.com/2019/03/26/millennials-online-shopping/.
Deloitte. (2014). From bricks to clicks: Generating global growth through ecommerce expansion. Retrieved from https://www2.deloitte.com/content/dam/Deloitte/za/Documents/consumer-business/za_generating_growth_through_ecommerce_24112014.pdf.
Yu, Y., Wang, X., Zhong, R., & Huang, G. (2017). E-commerce logistics in supply chain management. Industrial Management & Data Systems, 117(10), 2263-2286. doi: 10.1108/imds-09-2016-0398
DPDHL. (2009). Trusted partnership creates total multi-channel solution for Ben Sherman. Retrieved from https://www.mydhl.dhl.com/content/dam/downloads/g0/logistics/case_studies/ben_sherman_case_study_final1.pdf.
Weidemann, T. (2018). DHL schleißt Online-Marktplatz Allyouneed. Retrieved from https://t3n.de/news/dhl-schliesst-online-marktplatz-allyouneed-1098011/.

Allen, K. (2019). The Former CEO of DHL Express on Leading the Company Through an Existential Crisis. Retrieved from https://hbr.org/2019/03/the-former-ceo-of-dhl-express-on-leading-the-company-through-an-existential-crisis.

Machatschke, M. (2010). Customer instead of chaos. Retrieved from https://www.manager-magazin.de/magazin/artikel/a-708038-4.html.

Square. (n.d.). 10 Scientifically Proven Ways to Motivate Employees. [Web Blog Post]. Retrieved from https://squareup.com/us/en/townsquare/how-to-motivate-your-employees.

Heryati R. (n.d.). How to Motivate your Employees in 12 Easy Steps. [Web Blog Post]. Retrieved from https://inside.6q.io/how-to-motivate-your-employees-in-12-easy-steps/.

Fortune. (n.d.). World's Best Workplaces. Retrieved from https://fortune.com/2018/10/15/worlds-best-workplaces-2018/.

King, G. (2016). VW not happy with DHL for building its own EV van. Retrieved from https://www.motor1.com/news/101143/vw-not-happy-with-dhl/.

Suberg, T. (2018). The Future of Logistics Tech: Sustainability Impossible? [Web Blog Post]. Retrieved from https://medium.com/predict/the-future-of-logistics-tech-sustainability-impossible-2de427e3a73.

DPDHL. (2019). Milestone on the way to the "green zero": 10,000 climate-protecting StreetScooters are now in service. Retrieved from https://www.dpdhl.com/en/media-relations/press-releases/2019/milestone-on-the-way-to-the-green-zero.html.

DPDHL. (2019). Rethinking Packaging: DHL Trend Report discovers how e-commerce era drives wave of sustainability and efficiency. Retrieved from https://www.dpdhl.com/en/media-relations/press-releases/2019/rethinking-packaging-dhl-trend-report-discovers-how-e-commerce-era-drives-wave-of-sustainability-and-efficiency.html.

Hyken, S. (2018). Customer Experience Is The New Brand. Retrieved from https://www.forbes.com/sites/shephyken/2018/07/15/customer-experience-is-the-new-brand/#e5902787f528.

DPDHL. (October 2019). Capital Markets Day: Strategy 2025. Retrieved from https://www.dpdhl.com/content/dam/dpdhl/en/media-center/investors/documents/capital-markets-days/DPDHL-Capital-Markets-Day-2019.pdf.

Bloomberg. (2019). Deutsche Post AG. Retrieved on December 6th, 2019 from https://www.bloomberg.com/quote/DPW:GR.

Bundesnetzagentur. (2019). Bundesnetzagentur veröffentlicht Price-Cap-Entscheidung im Postbereich. Retrieved from https://www.bundesnetzagentur.de/SharedDocs/Pressemitteilungen/DE/2019/20190603_PriceCap.html.

DPDHL. (June 2018). Post – eCommerce – Parcel Measures. Retrieved from https://www.dpdhl.com/content/dam/dpdhl/en/media-center/investors/documents/shares/DPDHL_PeP_measures_2018-05-08.pdf.

European Commission. (2018). 2050 Long-Term Strategy. Retrieved December 18 from https://ec.europa.eu/clima/policies/strategies/2050_en.

Cook, M. (n.d.). 3 Practical Applications of OCR Technology that make Business Easier. Retrieved from https://supplychainminded.com/3-practical-applications-ocr-technology-business-easier/.

DPDHL. (2019). Deutsche Post DHL Group and Austrian Post enter into a long-term partnership to accelerate parcel business. Retrieved from https://www.dpdhl.com/en/media-relations/press-releases/2019/deutsche-post-dhl-group-austrian-post-enter-long-term-partnership-to-accelerate-parcel-business.html.

Gustavson
School of Business
University of Victoria