BEST PRACTICES FOR ETHICAL SOURCING FOR CONFLICT MINERALS IN THE ELECTRONICS INDUSTRY

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ABSTRACT

After decades of being plagued by horrific violence, the Democratic Republic of the Congo is still host to multiple armed rebel groups. For years these groups were motivated by revenue from natural resources in the region, more specifically the mining sector. Once they gained control of these mines, it was a revenue source that allowed them to maintain power. The minerals from these mines that fuel armed groups (specifically tin, tungsten, tantalum, and gold) eventually make their way into consumer electronics throughout the world. After international attention was brought to the issue and the U.S. government passed the Dodd-Frank Wall Street Reform and Consumer Protection Act, companies were required to report the origin of any minerals listed above from the Congo and neighboring regions. This responsibility fell to supply chain and procurement functions of companies. The electronics industry has made positive strides in ensuring a conflict free supply chain while working to still source from clean mines in the Congo. However, not every company has the same level of dedication with regards to this topic and there is still work to be done to truly reform the mineral industry in the Congo. This paper examines strategies and initiatives of companies who have been identified as leaders in creating a positive impact. Two electronics companies were interviewed on their strategies regarding conflict minerals. Corporate social responsibility and non-governmental organization reports were researched and analyzed. These results were compiled to create best practices for how to ethically source conflict minerals.
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Chapter 1
Introduction

Companies have always been challenged to provide customers with high quality products at reasonable prices. However, today in a post-2008 recession world there is an increasing awareness of Corporate Social Responsibility (CSR), and companies are tasked with proving their due diligence in acting in the highest ethical manner. One of those tasks includes creating products that are ethically sourced while maintaining the price and quality requirements.

In the past two decades a new issue has taken shape in the world of ethical sourcing: conflict minerals. Conflict minerals are defined as tin, tantalum, tungsten and gold (often referred to as the three “Ts” and “G”), and any of their derivatives that are used in many industries including personal electronics, jewelry, automotive, and aerospace (The Enough Project, 2013).

The term “conflict minerals” specifically refers to the minerals that are mined in eastern Congo and adjoining regions, smuggled out of the country to international smelters, and are said to be financing the violent conflict that has ravaged the Democratic Republic of the Congo (DRC) and bordering regions. Decades of deadly conflict in the region have created an economy fueled by violence from the few elite of the country. A major source of revenue for rebel groups is exporting natural resources for personal profit. ("Democratic Republic of the Congo: Conflict profile", 2009).

With the exponential development of technology such as the personal computer and cellphones, global prices of conflict minerals, specifically tantalum, surged creating a revenue
stream for the rebel armies of the region. (Seay, 2012). While the mining of these minerals did not create the conflict, it has helped to provide resources to the perpetrators of a conflict that has to date killed over five million people, displaced an additional two million and created a culture where violence as a means of control is nothing out of the ordinary (“Conflict Minerals, 2013).

In order to combat one of the worst humanitarian crises seen to date, activists have called for industries to stop sourcing conflict minerals. Today there is legislation, the Dodd-Frank Act, that requires companies to cite where the minerals in their products are sourced. However, as this paper will explain, this legislation is not enough, and while it may be a step in the right direction, it has led to unintended negative consequences in the region.

This paper will explore the impacts of sourcing conflict minerals through the electronics industry as it has actively worked on the topic of conflict minerals and allows for a realistic scope. Those organizations that are looking to enhance goodwill and reputation need to think long and hard on how they approach the topic of conflict minerals. Those that are merely complying with industry standards may find it is not enough to make a meaningful impact and is an inefficient use of resources. Technology companies need to leverage each other’s position and knowledge to create a more effective strategy on how to minimize and eventually eliminate the sourcing of conflict minerals while not compromising the economy of the DRC. Beyond increasing positive media coverage, companies that increase their commitment to ethically sourcing conflict minerals could see a direct impact on their profitability.

This paper will first look at what conflict minerals are and the mining process behind them. Then it will discuss the conflict in the Democratic Republic of the Congo and how the use of conflict minerals has helped to perpetuate the conflict as well as current legislation attempting to combat the inadvertent support of this violence. Once the background of the current issue has
been established, the paper will look into how companies are currently working to combat the use of conflict minerals and whether or not they are effective. Based on the findings, we will develop key recommendations for electronics companies to effectively ethically source conflict minerals.
Chapter 2

Background

What are Conflict Minerals?

The subject of Conflict Minerals first came to surface in the late 1990s when Conflict Resources were discussed by the United Nations. The discussion initially revolved around the topic of blood diamonds, diamonds being mined in the regions of Sierra Leone and Angola that financed regional rebellions (“Global Witness…” 1). Conflict resources are defined as natural resources that are extracted in conflict zones and often used as a source of revenue to perpetuate the violence. This source of revenue typically prolongs the conflict in the region and can lead to detrimental affects on the community (“Ernst & Young, 2012).

According to Section 1502 of the Dodd-Frank Act, which will be discussed further on, Conflict Minerals are defined as cassiterite, columbite-tantalite, gold and wolframite as well as their derivatives. Cassiterite is the ore from which tin is extracted, and it is primarily used for plating to join electronic circuits. Columbite-tantallite eventually becomes tantalum and is used for the electrical components found in cellphones, computers, and videogame consuls. Gold usually remains in its pure form and is obtained as a by-product of different mining operations. Gold is most commonly utilized by the jewelry, electronics, and aerospace industries. Finally, Wolframite is the ore from which tungsten is extracted. Everyday uses for tungsten include electrodes, metal wires, heating and welding applications. Conflict minerals are often referred to as the three T’s and G (tin, tantalum, tungsten and gold) (Ernst & Young, 2012). Overall, experts estimate that there is $24 trillion worth of gold, tantalum, tin and tungsten in the eastern region
of the Congo (Wolfe, 2015). In 2015, sixty-two percent of the world’s production of tantalum came from Africa, with forty-five to fifty-five percent coming from Central Africa (Rwanda and the Democratic Republic of the Congo). Analysts project the market to grow at a steady rate of 4.7 percent per year until 2020, with the highest growth rate coming from the superalloy industry due to projected increases in the commercial airline industry (Roskill, 2016). Only three percent of the world’s supply of tin is found in the DRC and surrounding regions. Although there are substantial deposits of cassiterite that can be turned into tin within the DRC, the mining capabilities of the region are not advanced enough to make a significant impact on the world supply. Most of the world’s supply of tin originates from either China or Indonesia (Anderson, 2017). Central Africa is the world’s sixth largest producer of tungsten. In 2014 and 2015, the region produced just over one percent of the world’s supply. Despite the regulations regarding conflict minerals and companies hesitance to procure from the region, output from this region has remained fairly steady (Investing News, 2016).

Violence in DRC

The Democratic Republic of the Congo (DRC) with a population of almost seventy million has a history rife with violence and civil war. It has hosted a conflict that has spanned decades and claimed the lives of over five million people since 1998. The Congolese government’s inability to effectively govern the region during this period disturbed the international community and caused global concern. (Seay, 2012).

One of the largest contributing factors to Congo’s history of violence has been one of its potentially greatest economic advantages: its abundant supply of natural resources. The DRC is home to oil, gold, cobalt, copper, uranium, diamonds, tantalum, cassiterite, wolframite, and
rubber. In fact, rubber is cited as the main reason for the Congo’s colonization. After the Berlin West Africa Conference in 1885, the Congo region was granted to King Leopold of Belgium as a personal concession. The king himself, not the government, was responsible for controlling the territory. Using barbaric methods to force natives to extract rubber from the rubber trees to amass his own personal wealth, King Leopold nearly depleted the land while essentially using slave labor committing horrific human rights violations. Eventually, as international protest grew against the treatment of the Congolese, the Congo became a formal colony of Belgium until 1960 when the country gained independence. During this time, Belgium had a “hands off” approach with governing its colony, especially when it came to education. Without a centralized education system, a few hundred missionaries took control of education of almost 50,000 students. With this lack of structured and accessible education, when the Congo finally became an independent nation in 1960, there was essentially an entire uneducated population. While that is not the only factor contributing to the country’s difficult transition to independence, it played a major role in the country’s history of instability. (Achberger, 2008). After gaining independence from Belgium in 1960, and becoming a free nation, the Congo experienced five years of civil war and fragmentation as it established itself. In 1965, Joseph Mobutu (who would later change his name to Mobutu Sese Seko) claimed power. While Mobutu was able to cultivate unity and establish a national identity (he even went so far as to rename the country Zaire in 1971), his policies depleted state institutions. He was paranoid and greedy. His corrupted regime contributed if not fully caused the collapse of the nation. Mobutu’s weakened government allowed ethnic rivalries and conflict to emerge, especially in the east. Additionally, Mobutu allowed rebel groups of bordering regions to exist in Zaire creating tension between himself and neighboring leaders.
Many cite that Mobutu was only able to maintain power for so long by leaning on cold war alliances (“DR Congo… 2016).

The wars and conflict that have plagued the Congo for well over two decades is a culmination of complex ethnic conflict, regional strife, ineffective leadership, and economic opportunism. There were many factors that lead to what has now been classified as two Congolese wars with a third episode of conflict. One of the greatest catalysts for these wars was the Rwandan Civil War and ensuing genocide. While most history books depict the genocide as a simple conflict between two ethnic groups, the Hutus and Tutsis, it goes far beyond that.

During colonial rule, Europeans developed the Hutu and Tutsi classifications and considered the Tutsis to be genetically superior. Tutsis stereotypically had “a slender frame, high check bones and an aquiline nose,” while Hutus were said to be short, broad nosed, farmers. Tutsis were favored by Europeans as the elite class during their rule. However after Rwanda gained independence in 1962, all of that changed. A small number of Hutu took control of the government through Tutsi pogroms. In the wake of this shift of power, over three hundred thousand Tutsi and others fled Rwanda to neighboring regions such as Uganda, Congo, and Burundi where as refugees they often lived as second class citizens and were unwelcome in their new home. After years of displacement and harsh treatment the refugees decided to rise up and take back their place in their homeland. In 1990, the Rwandan president, Juvénal Habyarimana opened Rwanda up to a multiparty democracy allowing dissidence and ethnic tensions to rise. However the tipping point for the initial conflict and eventual genocide was a Tutsi movement to reclaim their rights as Rwandan citizens through an armed group called the Rwandan Patriotic Front (RPF). They began attacking that same year, beginning a continuous back and forth of
violence that would continue on and off for four years and deepen the Hutu vs. Tutsi mentality (Sterns, 2011).

On April 6, 1994, President Habyarimana’s plane was shot down. The president’s death immediately ended the fragile cease fire of the civil war Rwanda was currently experiencing. Habyarimana and his government were of the Hutu ethnic group and with his death many feared an insurgency of Tutsi. The government played into people’s fears and deployed killing squads and militias for Tutsi’s and Tutsi sympathizers telling citizens they must kill or be killed. Two of the largest militias to respond to the government’s call to violence were the Interahamwe and the Impuzamugambi. They perpetuated the idea of a Tutsi vs. Hutu conflict although historically these identities had more to do with class than actual morphological differences (Stearns, 2011).

In one hundred days, over eight hundred thousand Tutsi and moderate Hutu were killed. While it was the Rwandan government who originated the massacre, it was the general population who carried it out. The Rwandan genocide was an anomaly in the fact that citizens rather than the government were responsible for the most horrific acts. Estimates anywhere from one hundred seventy-five thousand to two hundred ten thousand people participated in the genocide using clubs, machetes, hoes, and axes. Violence was carried out in public places such as schools and churches. The Rwandan genocide left no one untouched. One was an organizer, perpetuator, victim, or witness (Stearns 2011).

Eventually the Rwandan government could not hold out against the RPF, and in July of 1994, the Hutu led government and army (Rwandan Armed Forces, or FAR) was defeated. After the government’s collapse, over one million civilians and thirty thousand military personal fled the border to neighboring Zaire to seek protection. That did not signify the end of the conflict, however. Instead, the FAR used that time in Zaire to regroup and re-strategize all while under the
protection of Mobutu who had been a good friend of Habyarimana. In fact, Mobutu has sent troops to support FAR during the civil war, and allowed ex-FAR to keep their weapons when they fled the border into Zaire.

With the fall of the FAR, Zaire now had over one million refugees on their hands, mostly concentrated near their border with Rwanda. Not surprisingly, a humanitarian crisis erupted in the refugee camps. Mortality rates in the camps were high, disease was rampant, but perhaps the largest failing of the camps was that soldiers and military personal (the instigators and perpetrators of the genocide) were not separated from civilians. Military personal began to take charge in the camps denying humanitarian groups access, taking food and aid for themselves, and most importantly angering the new Rwandan government. The new RFP government began to threaten military action against the camps and Zaire for their “sympathy” toward those responsible for killing so many of their family, friends and neighbors. By July 1995, Rwanda had launched three targeted strikes against the refugee camps in Zaire. After months of threats to the international community, the Rwandan army under the guise of Congolese rebels attacked refugee camps just over the border of Zaire causing refugees to flee further into the country and even Burundi (see map, Appendix C). On November 2, the Rwandan army officially crossed the border into the city of Goma.

Simultaneously, the leader of Rwanda, Paul Kagame, began gathering support in neighboring regions to start an alliance to overthrow Mobutu. Over the years, Mobutu had been more than willing to support his neighbors’ enemies. That coupled with Zaire’s relaxed security prompted numerous rebel groups to be based in the nation (Sterns, 2011). The war that started in 1996 in Zaire can be considered a regional conflict of a new generation of African leaders rising against one of the continent’s oldest regimes. Kagame sought support from Uganda, Angola,
Zimbabwe, Eritrea, Ethiopia, and Tanzania. Together these powers helped to develop a Congolese movement to overtake Mobutu. The Alliance of Democratic Forces for the Liberation of Congo-Zaire (AFDL) was their strategy. The group was developed with the notion of overthrowing Mobutu after “liberating Rwanda.” The group consisted of many Tutsi-Congolese rebels who had been marginalized in Zaire and considered outsiders. However, the Congo War cannot be categorized as one war, but a multitude of wars. Local, regional, and international conflict fed into what is today defined as the Congolese wars (Sterns, 2011).

August 30, 1996 was the first official battle of the first Congo War with a small group of soldiers crossing the river into Zaire. Although there was suspicion of high Rwandan involvement, many Congolese viewed the rebels as their liberators from Mobutu’s reign. Yet in eastern Zaire at the heart of the conflict, ethnic strains came to a boil. After twenty years in rule, Mobutu had depleted the Zairian army for his own personal protection in the form of presidential guards. Rwanda and the AFDL were the David’s to Zaire’s Goliath, small in size but proved to be worthy opponents. Mobutu’s army was not only depleted of resources but incredibly disorganized. Military leaders continued to receive false and contradictory reports from each other on what was really happening. Additionally, now that it was apparent Mobutu’s power was not infallible, struggles within the government began to occur as others clamored for power. All of this contributed to the inevitable downfall of Mobutu’s regime. The eastern city of Goma was one of the first cities to fall in Zaire to the AFDL. Simultaneously, Ugandan soldiers attacked from the north and overtook the city of Mahagi (Sterns, 2011).

In March 1997, Kisangani, the third largest city in Zaire fell to Rwandan troops and the AFDL. Kisangani was said to be the gateway to the east with a major river port at the base of the Congo River. The capturing of Kisangani symbolized the effective end of Mobutu’s government.
The new government quickly set about undoing decades of Mobutu’s policy including replacing any reference of Zaire with Congo. While some may have viewed the AFDL as the saviors to Mobutu’s oppressive rule, they were not free of hate crimes. As the AFDL made their way through the Congo, soldiers committed horrendous acts. They had no regard for fleeing refugees or citizens and killed mercilessly. They pillaged villages and raped women. Additionally, the AFDL recruited child soldiers, imploring families to give them their children to help free the Congo. Over ten thousand child soldiers participated in the rebellion some as young as twelve years old (Sterns, 2011).

Laurent Kabila, who Rwanda had tapped as the next leader after Mobutu’s fall, officially took office in May 1997. Kabila, a revolutionary from the 1960s with outdated ideologies, inherited a multitude of problems. The Congo had a crumbling economy, an empty state treasury, a complete lack of infrastructure, and an overpopulated capital. While Kabila held the promise of a new era in the Congo, he utilized many of Mobutu’s tactics including suspending all political party activities and severely punishing anyone that defied that decree. Any form of dissidence or criticism was silenced by Kabila (Sterns, 2011).

Peace in the Congo would only last for fifteen months from May 1997 to August 1998. Fearing the influence of his neighboring country and in an attempt to maintain power, Kabila called for the removal of all Rwandan troops and military leaders in the Congolese government. He began to use ex-FAR prisoners, the very group he was fighting against months ago and the perpetrators of the Rwandan Genocide. The move was an attempt to create his own force of soldiers loyal to him. Meanwhile, anti-Tutsi sentiment still ran strong, especially in eastern Congo. The acts of the Rwandan army and Tutsi AFDL were not easily forgotten by the population and tensions continued after the official end of the conflict. When the Congolese
government began to roundup Tutsi soldiers and officers, Tutsis with the help of the Rwandan army began to form their own resistance movement. Rwanda, not willing to lose its influence in the region with Kabila’s new policies, offered assistance to the movement. They helped to develop the Congolese Rally for Democracy (RCD), a resistance group seeking to overthrow Kabila. However, the RCD was filled with problems. Comprised of leaders of different backgrounds, both Mobutuists and AFDLs, the group struggled to develop a unified plan. Hostility filled the group and it experienced leadership transitions. It was this resistance that began the second Congo war (Sterns 2011).

In August 1998, the RCD attacked. As the RCD made its way through the Congo, local militias formed claiming to protect citizens against this foreign aggression. The RCD responded by targeting civilians and executing several massacres in the region. Simultaneously as Rwandans began their attack on Kabila, a man named Jean-Pierre Bemba began his own rebellion in the north. Bemba’s movement, the Movement for the Liberation of the Congo (MLC) was supported by Uganda who was seeking alternative solutions to the Kabila problem other than the fractured RCD. In 2001 the MLC began to broaden its sphere of influence beyond the Equateur region it began in and moved into the resource rich Ituri region. Together with local militias the MLC executed a massacre on the locals completing human rights abuses. This unstable coalition quickly fell apart and Bemba was forced to retreat. The MLC eventually broke apart after the war with many of the party’s leaders taking positions in Kabila’s government.

Unlike the first Congolese war that had brought together a unified front of African leaders, the second Congo war was a fractured movement mainly brought upon by Rwandan forces. At first it seemed as if Rwanda would have no trouble overtaking Kabila and began to advance through the Congo. As they easily overtook cites, it appeared that hope was lost for
Kabila and his government until at the last minute, Zimbabwe, Angola, and surprisingly Uganda sent reinforcements, reasoning that it was better to have Kabila, someone they know in power, than an unidentified potential threat. This assistance was the turning point of the war.

Additionally, the second war served as an outlet for regional powers, specifically Rwanda and Uganda, to assert their dominance. The two forces came to blows in August of 1997. Ernest Wamba dia Wamba, the original leader chosen for the RDC before he was removed by the Rwandans for his pacifist attitude, was receiving support from Uganda. On a trip to Kisangani to gain support, fighting broke out outside the hotel Wamba was staying at and continued on for three days amassing countless casualties both of military personal and civilians (Sterns 2011).

Meanwhile Kabila managed to maintain power in the Congolese government. After surviving both the Ugandan and Rwandan armies’ aggression, Kabila began looking to transform his political image on the international stage. He wanted to rebrand himself as a leader global super powers could support and back both militarily and financially. However, those plans were short lived as Laurent Kabila was assassinated by his body guard on January 17, 2001. To this day it is unclear who orchestrated the attack, although several conspiracy theories exist pointing to international intervention (Sterns 2011).

After Kabila’s assassination, his cabinet decided that the best successor was Kabila’s son, Joseph who took power several days after his father’s death. Joseph Kabila could not have been more different from his father. While Laurent Kabila had often been cited as an idealist, Joseph was a pragmatist. He understood the precarious situation in which he inherited the nation he was now responsible for governing and acknowledged that certain things must change. He allowed political parties to operate several months after he took power and sought to immediately start the peace process in the Congo. In February of 2002 Joseph Kabila met with his largest
opponents in South Africa for peace talks that would last ten months. In June of that same year the Rwandan president committed to withdrawing troops within three months. Uganda followed suit in November. However, that did not stop the RCD and MLC from continuing to attack the region. Even with the loss of foreign allies, they proceeded to cause to havoc in the region. In 2006 and 2011, Kabila was reelected as president. While many foreign powers and citizens gave Joseph Kabila lead way his first several years in power, when things did not dramatically improve in the DRC, vocal opposition arose. Meanwhile the RDC launched an insurgency in 2004. It would take five years of conflict and peace talks before Kabila would reach out to the Rwandan army once again to have them arrest the leader of the insurgency and move the RCD troops into Rwanda. While many hoped Kabila would not follow in the footsteps of his father or Mobutu, many fear his unchecked exercise of power as he continues to build up his own personal guard over building up the national army. He continues to take more control for himself by extending the expiration of his presidency from December of 2016 to the end of 2017. It is yet to be determined whether Kabila will allow a peaceful transition to power (Frykberg, 2016).

From 1998 to 2004 an estimated three point eight million people had died because of the conflict in the Congo. Today the number of deaths related to violence in the Congo has climbed to over five point four million deaths. Most died from preventable diseases-malaria, diarrhea and typhoid fever. Sadly, half of the victims were children due to their increased susceptibility to malnutrition. Despite lush resources, families were starving to death. Throughout the wars and ensuing conflict, militias continued to pillage villages and steal harvests to feed themselves. Years of fighting and instability lead to dozens of factions of rebel groups who caused havoc on the general population. Sexual violence pervaded the Congo during this process as well. Militias and armies used rape and sexual violence has a tool to gain power in a way that has never been
seen before in modern history. Surveys suggest that up to thirty-nine percent of women in the DRC experienced some form of sexual violence during and after the wars. One of the largest questions from the Congo wars is how it was financed by a country with a paralyzed economy. Once again the answer lay underneath the Congo. Both Kabila’s government, foreign armies, and rebel groups utilized the natural resources to finance and prolong military operations. When the AFDL had gained possession of certain mines during their advances, investors made deals with the AFDL and not the Congolese government, calling into question the legitimacy of the deals as well as ethical implications of financing a rebellion (Sterns 2011).

For most of Mobutu’s thirty-two year rule, the mining sector in the Congo was nationalized and was the primary revenue source for Mobutu’s personal financing. In the early 1990s when a dip in global demand for some of the minerals occurred, Mobutu began to privatize the mining sector. However the privatization process slowed down the development of the sector by at least a decade as investors were hesitant to be involved in such a capital heavy industry. The Congo government used at least one third of mining profits to fund the wars and used millions in revenue to pay back war debts. Additionally, Rwanda and Uganda were guilty of profiteering. Both countries took advantage of the Congo’s natural resources through military power and the continuing conflict. Uganda and Rwanda’s exports of diamonds grew dramatically between 1998-2001 despite neither country having diamond mines. From November 1998 to April of 1999 the RCD and Rwandan army removed between two thousand and three thousand tons of tin ore from Congolese mines. Neighboring countries and rebel groups utilized the weakened Congo state and their military presence to financially gain from the natural resources of the region. It was nearly impossible to avoid any interaction and financially supporting these groups. Their influence reached nearly every corner of local economies. Even humanitarian
groups had no choice but to use local services tied to these military groups. Eventually the minerals these rebel groups mined and profited off of made their way into Western companies’ supply chains. Minerals were transported out of the Congo, processed, and consumed around the world (Sterns, 2011).

Mining Process

Within the DRC there are numerous prominent armed groups that profit from controlling mines. Some of these groups include the Democratic Liberation Forces of Rwanda (FDLR), renegade units of the Congolese army, and Mai Mai groups who have been cited as one of the most abundant users of child soldiers and human rights abuses inciting the use of torture and rape (Buchanan, 2017). Additionally, the National Congress for Defense of the People (CNDP) is responsible for controlling the border posts and profits from the taxation of conflict minerals. In 2008, armed groups earned $185 million from trade of these minerals (The Enough Project, 2009).

It is difficult to establish what a typical Congolese mine looks like as they range on a wide spectrum. A mine can be a large scale operation that employs two thousand miners or a small scale operation with a few dozen workers. Most mines in conflict regions utilize manual labor with basic tools. This does not differ from trends throughout the Congo. Even what are considered to be the most advanced mines are still in the exploration phase. A major problem with the mining sector in the DRC is that the artisanal mining described above is technically illegal and with the lack of legal framework government bodies find themselves in a precarious situation dealing with the armed groups (The Enough Project, 2009).
Minerals are mined in their original form. Armed groups profit from conflict minerals in two ways. First with the actual control of the mine while paying workers low wages, and second, by extracting bribes and taxes from buyers and transporters of the minerals. After mined from the eastern Congo, minerals are transferred to adjacent regions such as Rwanda, Uganda, and Burundi. Export taxes are high in the Congo incentivizing buying houses also known as “comptoirs” that export the minerals to underreport the number of minerals they export or smuggle them across the border. Up to thirty percent of minerals that leave the Congo are smuggled out. Another major issue with the mineral trade is that neighboring regions often misrepresent the actual origin of the minerals to avoid labeling them as conflict minerals (The Enough Project, 2009).

After this the minerals are shipped from ports in Mombasa, Kenya and De es Salaam, Tanzania to mainly East Asia. Once they reach Asia, the minerals are sent to international smelting companies. Smelters use heat to melt minerals down into pure metals. At this point in the process, it can be incredibly difficult to identify the origin of the minerals as smelters often combine minerals from different shipments and locations to create a single batch of metals. The metals are then acquired by companies who manufacture electronics components such as circuit boards or capacitors, which then are purchased by electronics’ device makers that eventually make their way to the end consumer. A diagram of the key players in each step of this process can be found in Appendix A.
Dodd-Frank Section 1502

The most prominent legislation with regards to conflict minerals is section 1502 of the Dodd-Frank Act. In an effort to make sourcing transparent, the act requires publicly traded companies in the United States to disclose the use of any conflict minerals coming from the DRC and nine other neighboring countries. Any company that uses these minerals in the manufacture of their products is applicable for Section 1502. The purpose was to discourage companies from engaging in trade with rebel groups through fear of public backlash and loss of goodwill. Industries most impacted by Dodd-Frank are jewelry, electronics, automobiles, aerospace and industrial products. Over six thousand public companies are directly impacted, and the supply chains of many other private companies are affected as a result of this legislation (Ernst & Young, 2012). Implementing Dodd-Frank cost companies anywhere from three to four billion U.S. dollars with annual costs of over two hundred million USD to maintain. Besides the DRC, companies must disclose use of minerals found in South Sudan, Uganda, Tanzania, Zambia, Angola, Congo Republic, Rwanda, Burundi, and Central Africa Republic. These regions account for anywhere from fifteen to twenty percent of the world’s supply of tantalum and an even smaller percentage of the other minerals (Ernst & Young, 2012).

The first piece of legislation to focus on increasing transparency for sourcing out of the DRC was the House Resolution 4128, the Conflict Minerals Trade Act. Representative James McDermott (D-WA) submitted the bill with the support of the Center for American Progress, Human Right’s Watch, Hewlett Packard, the International Labor Rights Forum, and the Information Technology Industry Council. Unfortunately, the bill never made it past committee hearings (Seay, 2012). In 2010 the Dodd-Frank Wall Street Reform and Consumer Protection Act added two provisions regarding reporting by public companies on the use of Conflict
Minerals. The first provision, Section 1502, discussed above, focused on the reporting process of companies that source these predetermined minerals from the DRC (Seay, 2012). The second provision, Section 1504, requires publically traded companies to disclose how much they pay foreign governments to access minerals, oils, and gas (Seay, 2012). After years with no concrete regulations in place, companies filed their first disclosure as of May 2014 (Wolfe, 2015).

Disclosure Process

With the implementation of Dodd-Frank, public companies and companies within their supply chain must follow a three-step process in disclosing sourcing of conflict minerals. The first step in the process is that the company needs to determine whether or not the product they manufacture have conflict minerals in them that would require them to comply with Dodd-Frank. This applies to companies that not only manufacture the product themselves but also to companies that contract manufacturing out. However, for the rule to apply to contract manufacturers, the manufacturer in question must directly relate to the production of the product. Besides determining whether or not the product contains conflict minerals, they must also look at the necessity of the minerals in the product. If the minerals do not contribute to the functionality of the product or to the product’s production process, the issuer will not be required to proceed further in the process. However, if all of the above apply, the organization must continue on to the next step in the disclosure process. (It should be noted a major difference between the original proposal of Dodd-Frank and the final rule established by the SEC. The SEC has determined that mining companies themselves are not considered to be manufacturers and are not responsible to the rule’s direct requirements) (Ernst & Young, 2012).
Once a company has established that minerals in their production could be subject to Dodd-Frank Section 1502, the origin of the minerals needs to be established. In order to determine this, companies need to complete a “reasonable country of origin inquiry” (RCOI). The act does not prescribe how specifically to complete a “reasonable country of origin inquiry” only that the inquiry depends on the facts and circumstances of the issuer and the determination should be completed in good faith. The inquiry needs to indicate whether any of the conflict minerals are recycled or scrap sources and if they came from one of the nine countries listed in Dodd-Frank. These regions are also known as “Covered Countries.” If a company determines the minerals did not originate from the “Covered Countries,” or if the minerals are considered recycled material, the organization is only required to provide an annual special disclosure report to discuss their RCOI process. These issuers do not have to move further on in the process (Ernst & Young, 2012).

If, however, it is discovered that these minerals do come from the “Covered Countries,” and are not considered scrap, a company must continue on to the third step in the disclosure process. At this point an issuer must complete due diligence and potentially create a Conflict Minerals Report. The due diligence must be completed on the source of the minerals and the proceeding chain of custody. The due diligence must be based on a national or international due diligence framework if one is available for that specific mineral. An example of a potential framework to follow in this case is the Due Diligence Guidance for Responsible Supply Chains from Conflict-Affected and High Risk Areas. The goal of this framework, approved by the Organization for Economic Co-operation and Development (OECD), is to help key decision makers in companies avoid sourcing to mines or smelters that contribute to the region’s conflict. The framework includes five steps to help create a responsible and ethical supply chain. The first
course of action is to establish strong management systems. The second step is to identify and weigh the risks in your supply chain. Next the company should develop policies to help protect against those risks where they then hire out independent third parties to complete audits and evaluate the smelters and refineries within their supply chain. Finally companies should conduct annual reports on their supply due diligences (Ernst & Young, 2012).

The purpose of completing due diligence such as the one described above is to validate whether or not the minerals a company is sourcing are “DRC conflict-free.” In other words, it helps to determine whether or not purchasing these minerals directly or indirectly contributes to the armed groups in these areas. If during this step, it is discovered that the minerals are not from the “Covered Countries” or are in fact recycled or scrap material, it is required to document the due diligence that leads to this conclusion, however a Conflict Minerals Report is not necessary. According to the final rule regarding conflict minerals using OECD guidelines, recycled or scrap material is defined as minerals from reclaimed end user or post-consumer products, or scrap process metals created during product manufacturing. Recycled materials can be obsolete, extra or defective metal materials that then can be repurposed in the production of tin, tantalum, tungsten and gold (Ernst & Young, 2012).

On the other hand, if it is determined the minerals are not scrap or recycled and do originate from one of the covered countries, an issuer must file a Conflict Minerals Report. The essence of the report is to illustrate the proper due diligence on the supply chain. This should include the minerals’ country of origin, efforts made to determine the specific location of the mine, information regarding facilities used to process the minerals such as refineries and smelters. The report should also contain a description of non “DRC conflict free” products, although there is no recommended way of completing the description as it can vary across
industries and product. Finally, the report must include the results of a third-party private sector audit of the Conflict Minerals Report itself. According to the SEC, seventy-five percent of companies subject to Section 1502 of Dodd-Frank will be required to complete both a Conflict Minerals report and third party audit (Ernst & Young, 2012 ). The purpose of the audit is not to determine the status of the minerals themself, but rather to validate whether or not a proper due diligence framework was followed in the report.

Problems with Dodd-Frank

While a well intended piece of legislation looking to shed light on businesses’ roles in human rights violations, there have been negative effects on the DRC and surrounding regions because of Dodd-Frank. It has become controversial calling to question whether it does more harm than good in the region.

The DRC began to draw international attention beginning in the 1990s with the introduction of personal computers, cellphone, and gaming systems. One of the Congo’s largest natural resources, columbite-tantalite, or coltan, can be transformed into tantalum, a key component found in personal electronics, and it’s price skyrocketed in the 1990s to the early 2000s. Rebel groups quickly realized they could utilize the extraction of this mineral as a potential revenue stream. As mentioned before, this trade has been able to finance certain rebel groups and allows them to continue to perform acts of unspeakable violence and destruction in the country. Minerals smuggled out of the DRC are responsible for financing security guards, militias, and Congolese soldiers as well as paying for weapons that help them maintain their regional stronghold (Wolfe 1).
However not every mine in the DRC is controlled by rebel groups, and mining plays a large role in the economy. For many, mining has been the only source of revenue for families for generations and is an integral part of a family’s survival. Eight to ten million Congolese earn a living through mining, and the mining sector accounts for eighty percent of the nation’s exports and almost thirty percent of the Congo’s Gross Domestic Product (GDP). Additionally according to Aloys Tegera of the Goma’s Pole Institute, other sectors of the economy such as agriculture depend heavily on the success of the mining sector (Seay 5).

In September of 2014, The Washington Post published an investigative report citing that Section 1502 of Dodd-Frank has triggered a series of events that has pushed families “deeper into poverty.” While many advocates of Dodd-Frank claim rebel groups control a significant portion of the mining sector, according to The Washington Post that was not necessarily the case. According to the Washington Post, a small number of mines are actually run by warlords. Due to the constant shifting of mine ownership, it is difficult to extract an exact, concrete number, but the fact remains at any given time far fewer mines are actually controlled by these violent rebel groups than was often portrayed through the media and certain advocacy groups. Additionally, only eight percent of the ongoing conflict can be directly attributed to natural resources, and many wonder if focusing on conflict minerals is the most effective approach. Even if these mines were completely devoid of rebel group participation that would not end their presence in the region. These groups have other sources of revenue other than conflict minerals. They can turn to palm oil, timber, or cannabis if they cannot access these mines or they are not generating enough revenue from them. Ironically, some civilians have turned to mining after militias overtook their agricultural land. Some have questioned the claim that the decreased presence of rebel groups in mining can be contributed to the implementation of Dodd-Frank (Wolfe 1). Laura Seay, an
assistant professor at Colby College and a staunch critic of Dodd-Frank claims that advocates of the bill may simply be mistaking causation rather than correlation.

When Dodd-Frank first passed in 2010, the Congolese president launched a ban on all mining from the North and South Kivu and Maniema provinces. Although the ban was lifted one year later, the damage was already done. Many of the mines remained closed even after the ban was lifted, taking the livelihood of five to twelve million. Besides that initial ban enacted by the Congolese government, the overall demand for minerals from the Congo has drastically fallen. Because the due diligence process can be expensive, many companies, including Malaysia Smelting, one of the largest producers of tin, stopped all sourcing from the Congo for fear of being unable to prove if the mines were actually conflict free. The North Kivu region lost ninety percent of its tin sales in one month from the inadvertent boycott of Congolese mining due to Dodd-Frank. For the business that remained in Congo, miners experienced a price decrease of up over fifty percent despite global prices rising.

Finally, the Congolese and other groups struggle to regulate the legislation. Smuggling of certain minerals, especially gold, out of the region is still prevalent. Many officials are still susceptible to bribes and allow “dirty” minerals to be tagged as conflict free. Another obstacle to regulating Dodd-Frank is the ability to claim a lack of visibility for these minerals. Conflict minerals can be smuggled through destinations, such as China and Brazil, where it is then difficult to identify the origin of the minerals allowing them to be labeled as conflict free. According to Dodd-Frank, a company only needs to trace the origin of a mineral to the best of their ability through a “country of origin inquiry,” which does not need to answer all of the questions regarding the origin of these minerals.
Chapter 3
Current Industry Participation

The Enough Project played an integral role in bringing major industry players to the forefront on the discussion of conflict minerals. During the first decade of the millennium, international news coverage heavily focused on the crisis in Darfur over covering the situation in the DRC despite the fact that the DRC was experiencing more violence. In 2006, *The New York Times* had four times more coverage on the crisis in Darfur than the DRC even though the Congolese were dying at ten times the rate of the Sudanese (Stearns, 2011). With a notable absence of coverage there lacked drive on the local level to institute change. In 2007 the Enough Project was launched with the intent of ending violence in Africa through American efforts and legislation. From its inception, the project highlighted the violence occurring in the DRC although it wasn’t until it released a report in 2009 entitled “Can You Hear Congo Now? Cell Phones, Conflict Minerals, and the Worst Sexual Violence in the World” that the project mentioned conflict minerals. The report linked Western consumption of electronics with the conflict mineral trade and the violence perpetuated by militia groups. It called for consumers to pressure electronics companies to stop sourcing minerals that linked to violence in the Congo. This strategy helped to mobilize a grassroots movement in the West to take an active role in trying to end this conflict (Seay, 2012).

In 2010 and 2012, Raise Hope for Congo, a campaign run by the Enough Project, released rankings of the top electronics companies and their efforts to use conflict free minerals. Raise Hope for Congo assigns a percentage to companies; the percentage represents how much
progress a company has made toward ethically sourcing conflict minerals (Lezhenev, 2012). Their 2012 report is their most recent formal report on electronic companies’ progress in creating conflict free minerals. Two years later the group released a report on the status of leaders in the jewelry industry. In February of 2017, the Enough Project released a statement saying they would again rank companies on their initiatives since the last report. According to the statement, the organization will be measuring companies on their efforts to trace and audit their supply chains to identify potential conflict minerals, their commitment to develop a conflict free minerals trade from the Congo with particular emphasis on gold, how much they support the local communities who depend on mining, and their work to develop effective public policy to combat the conflict mineral trade. According to the Enough Project almost eighty percent of mines for tin, tantalum and tungsten are no longer under the control of armed groups. However, companies need to turn their focus to gold mines as sixty four percent of them contribute to the rebel groups in some way (“2017 Conflict Minerals Company Rankings,” 2017).

Although the most current report for electronics companies is four years old, the information in the report can give a better understanding on what strategies the most successful companies have adopted and where their focus should have been moving forward. The Enough Project identified four companies who made significant progress from 2010 to 2012 as well as companies who are lacking in their efforts (the Enough Project released its first report in 2010). Enough has labeled Intel, Motorola Solutions, HP and Apple as “pioneers of progress” in the fight against conflict minerals. These companies have worked to develop smelter auditing programs, provided aid for struggling smelters so they may be better equipped for sourcing, and created direct sourcing and aid projects to the Congo to assist in the development of clean mineral trade in the industry. On the other end of the spectrum, Nintendo, Sharp, HTC, Nikon
and Cannon were all identified as companies who have not made significantly noticeable contributions towards having a conflict free supply chain (Lezhnev, 2012).

The Enough Project has identified three areas of progress that industry leaders have made over the two-year period from 2010 to 2012 (Lezhnev, 2012).

1. **Tracing**: Companies have worked to be able to trace further back into their supply chain and create greater visibility.

2. **Auditing**: From 2010 to 2012 there was an increase in the number of smelters who were audited by independent third parties using the Conflict Free Smelter Program (CFSP) discussed below.

3. **Certification**: In 2012 there was an increase in companies looking to only source from smelters and refineries that had been certified as conflict free. In an effort to keep business in the region, companies such as Motorola Solutions, Intel, and HP assisted in getting the audit program to accept more conflict free minerals from the Congo and surrounding regions that come from mines certified by government bodies (Lezhnev, 2012).

The Conflict Free Sourcing Initiative (CFSI) created the CFSP mentioned above. In 2008, members of the Electronic Industry Citizenship Coalition and Global e-Sustainability Initiative created CFSI to serve as a resource to companies in addressing the use of conflict minerals in their supply chain. Over 350 companies participate in CFSI today. The CFSP uses third party audits of smelter and/or refinery practices. The audits are meant to reveal if a smelter or refinery is following the prescribed practice of CFSI or other global standards in avoiding sourcing from mines controlled by rebel groups. The CFSI standards were developed from the OECD Due Diligence Guidance for Responsible Supply Chain of Minerals from Conflict Affected and High
Risk Areas and the U.S.’s Dodd-Frank Wall Street Reform and Consumer Protection Act. Besides the CFSP, the CFSI offers other initiatives and programs for companies. They run an annual Conflict-Free Sourcing Initiative Workshop for companies.

CFSI has also created a Conflict Minerals Reporting Template that helps to standardize the process of communicating information through the supply chain regarding conflict minerals. The template’s primary focus is identifying the country of origin for the minerals and smelters used. Their Due Diligence Guidance gives companies suggestions on the best practices and standards for reporting conflict minerals. Finally, one of the most important resources CFSI provides is their expertise from their stakeholder engagement. They work with NGOs, investors, and other stakeholders to learn more about emerging issues in the field, develop solutions and share knowledge with companies who are trying to mitigate the risk of their supply chain (About the Conflict-Free Sourcing Initiative, 2016).

According to the Enough Project, these steps have reduced the revenue stream to the rebel groups by sixty five percent (although some have contested that number and question if these actions can be cited as the source of the reduced presence of rebel groups in mines) (Lezhnev, 2012). However, within the same report, the Enough Project identified five areas that companies need to address in furthering their progress for creating a conflict free supply chain. As mentioned before, in an effort to avoid any potential association with conflict minerals, many companies are deciding to not source from the Congo at all. While that does help to reduce the revenue to the armed groups, it economically paralyzes many communities within the DRC. In order to both stop providing income to armed rebel groups as well as contribute to clean mines, the Enough Project recommends companies join the Public-Private Alliance, or PPA. The PPA is a partnership between the United State’s government, NGO’s, and corporations looking to
contribute the development of a clean mineral trade in the Congo (Lezhnev, 2012). Additionally, companies need to utilize the results of audits and only buy materials from smelters that have been deemed “conflict-free.” Furthermore companies should also be working toward getting all smelters audited. One suggestion the Enough Project provided was for companies to bypass suppliers to directly reach out to smelters and work with them (Lezhnev, 2012).

While electronics companies for the most part have recognized a need to participate in creating conflict-free supply chains, other industries lag behind in joining the conversation and taking action. If more companies participated in working to no longer source conflict minerals, smelters would be more inclined to participate in audits to satisfy a larger customer base. Finally, the Enough Project recognized that the certification process needed to be more inclusive to governing bodies of the region. In 2012 corporations mainly ran auditing programs and the Enough Project recommended creating a more balanced leadership that includes industry leaders, civil society and governing bodies. Creating this more balanced leadership role can increase the transparency of audits. Often times, companies will not publish the names of smelters who fail audits in order to protect where they source, whereas a government agency or NGO would not have that problem. Failing to report who does fail an audit does not contribute to helping other companies make informed decisions on where best to source to ensure a conflict free supply chain (Lezhnev 3). According to the Enough Project, a comprehensive, long-term strategy is necessary for creating sustained security in the Congo region. This strategy includes highlighting the supply chains of these electronics companies, identifying and securing strategic mines, reforming governance and creating and supporting efforts to contribute to the livelihood of miners.
Chapter 4

Methodology

The research and analysis conducted for this thesis looked at companies in the electronics industry making a significant impact in ethically sourcing conflict minerals without hurting the economy of the Democratic Republic of the Congo. The companies can serve as a model to other companies of what going beyond the minimum standards of reporting looks like. Two companies in the electronics industry who fit this description were interviewed. Official reports regarding the subject of conflict minerals and ethical sourcing from several other industry leaders were analyzed. Finally reports from non-government organizations, specifically the Enough Project, also helped to establish key players in the industry and their effective strategies as well as those companies who are currently lagging in participating in creating a conflict free supply chain.

The interviews conducted looked at current practices, future strategies regarding conflict minerals, and personal opinions of efforts done in and beyond the electronics industry. The interviews also discussed what potential strategies can be taken to help create visibility in the supply chain, engage more companies on this topic and how to make a positive impact in sourcing conflict-free minerals. The purpose of conducting interviews allowed the analysis to include opinions and experiences of experts who not only work in the industry but also directly work on the topic of conflict minerals that provided greater detail that would not be able to be found in reports.

To maintain consistency, both companies interviewed were asked the same series of questions, although based on conversations, varying follow up questions were asked to provide further explanation and clarification. The interview guide, found in Appendix C first sought to establish and ensure the company interviewed did in fact use tin, tantalum, tungsten or
gold in any of its products or processes and thus qualified for reporting under Dodd-Frank 1502. The interview guide then helped to establish the company’s disclosure process, specifically how the company communicated with stakeholders regarding the subject. Next the discussions revolved around these companies downstream supply chain, especially smelters. The guide included questions regarding benefits and costs of devoting resources to this topic. These questions were asked in order to help understand effectiveness of current strategies, the likelihood of future work toward this topic, and to help understand why some companies may lag in behind in conflict free sourcing.

The first company interviewed is an American multinational technology company. It is one of the most highly valued producers of semiconductors and microchip processors. It supplies processors for computer system manufacturers as well as manufactures motherboard chipsets, integrated circuits, flash memory and graphic chips. In 2016, it had reported revenues of nearly sixty billion dollars and is part of the Fortune 500. The second company interviewed is a privately held American company. Its main products include personal computers, servers, software, data storage devices, printers and other personal electronics. Before it’s privatization it was also a member of the Fortune 500, and is a top five vendor of personal computers.

Both companies interviewed are members of CFSI and ask their suppliers to encourage them to utilize CFSI and the resources provided.

The discussions from the interviews along with publically available information were consolidated and analyzed to identify set strategies that companies can take in protecting themselves from unethically sourcing conflict minerals. While companies create their own
strategies regarding this topic, several similarities were identified that helped to develop best practices and provide recommendations for future improvement.
Chapter 5
Discussion of Findings

Ethical sourcing is no longer an optional show of goodwill for companies; it has become a means of survival. Consumers are becoming more educated on the origin of their products and the humanitarian, societal, and environmental impacts they have. Meanwhile governments are becoming more active in their roles in regulating sourcing practices serving as a watchdog for those who may not have the means to protect themselves. The need for the tin, tungsten, tantalum and gold is not going away in the foreseeable future, nor should that be the goal, as the mining of these minerals can provide a legitimate source of income to many Congolese citizens. Rather, companies need to focus on minimizing or eliminating the negative impact they may unintentionally create in regions that are still recovering from decades of violence.

In reaction to Dodd-Frank Section 1502 and pressure from both consumers and their downstream supply chain, companies are developing strategies to ensure a conflict free supply chain. Electronics companies especially have been notorious for recognizing that increasing visibility within their supply chain is a key component to attaining that goal. However that is easier said than done. In an industry that commonly uses recycled materials and mixes minerals from different mines together, developing effective strategies can seem daunting and an ultimately futile process. The supply chains of these minerals can be so complex that it is nearly impossible to gain visibility at the mine level. Companies must instead rely on the information provided by smelters, which can be a problem within itself due to lack of motivation or interest from these smelters to source conflict free. Companies have vocalized their frustration with the
current processes and nature of the industry in helping to make a positive difference in these regions. But it is those companies who recognize those challenges and push beyond the bare minimum in spite of them who are making strides on this topic.

Main Issues

Visibility

As mentioned previously, at this point in time the farthest visibility electronics companies can gain in the sourcing of these minerals is at the smelters. Smelters have repeatedly been identified as the pinch point in this process, and as for the foreseeable future, that is not going to change. According to one company, there are numerous mines throughout the Congo and neighboring regions with countless downstream companies involved. Smelters are both the easiest and most logical touch points to audit. With that being said, for some companies smelters are fairly upstream in the supply chain. One company estimated that smelters were at least eight layers removed from the final product they sell to consumers. In this case the electronics companies are merely relying on reporting from suppliers on the smelters they directly source from reducing the visibility even further.

Because the mines are not always directly audited by electronics companies themselves, the electronics companies have to place trust in the list of mines smelters report to source from. While companies can assume that some smelters are being truthful and actually following prescribed due diligence there is no guarantee that they all are. When probed about whether or not companies trust the results of a supplier’s report on a smelter or the audit of a smelter itself, there were mixed reactions. According to one company, the trust is increasing although it still is not always there. One major issue with false reporting is that not every supplier
or smelter has the same resources to complete audits or dedicate resources to this issue. Merely telling a supplier to not use a smelter in no way guarantees that they will adhere to the request especially if that smelter is a more financially viable option.

Additionally, while most of these companies provide a list of approved smelters who have been audited by CFSI there are certain indicators that a supplier is not actually using the approved list. For example, one interviewee mentioned that if a supplier does not have a company policy in place regarding their approach to conflict minerals, yet still produces a list of approved smelters, the reports are most likely fabricated. Some suppliers will simply report that they do not use any of the minerals classified as conflict minerals under Dodd-Frank even though it is well known that that is untrue. One of the hardest situations for companies though is the “middle ground” supplier who may report some smelters they actually use and some they do not. It is difficult to identify which aspects of their report are false and which are real.

Smelter Participation

Because of the nature of the industry, it can be nearly impossible to get every smelter in a supply chain audited. Any one-consumer electronics company can have hundreds of suppliers and each supplier could use a multitude of different smelters. While some smelters may already be audited and approved by the CFSP, some may not. This begins a lengthy back and forth between suppliers and the company trying to gather information on the smelter and determine whether or not the smelter has been audited. If the smelter has not been audited some companies will work directly with the smelters to help them get audited by third parties or perform an internal audit for themselves. However smelters often open and close frequently making it more difficult to track and initiate the auditing process.
One of the largest obstacles to overcome in getting smelters audited is to increase incentives for them by enduring the cost in preparing and undergoing an audit. Dodd-Frank 1502 is legislation that strictly applies to U.S. companies. A majority of suppliers and smelters used for electronics companies fall outside of the United States, primarily in China. These suppliers do not have a legal requirement to make sure they are accurately reporting and moving toward a conflict free supply chain. As a single electronics company they can try to push for better strategies from their suppliers, but if a company only represents a small percentage of overall volume to a supplier it can be difficult to initiate change with the threat of lost business. In certain instances, although they are not commonplace, some suppliers especially in the semiconductor industry are merging to create a conglomerate that has the capability to refuse to comply with reporting requests.

One of the largest areas for improvement is with gold. It is difficult for the electronics industry to make significant progress with the mineral because they use significantly less of it compared to other industries. Gold is especially difficult to deal with because it is by nature an easier commodity to smuggle since small quantities are worth much more than the other conflict minerals. Additionally, gold can be recycled so it is a much more complicated process to track. Jewelry has been identified as an industry that needs to become more involved in the fight against conflict minerals. If a more prominent buyer from gold smelters (jewelry companies) were to get involved and threaten withdrawing business, smelters would feel the need undergo an audit and use conflict free mines. Unfortunately the electronics industry simply does not have enough pull with gold smelters. Being CFSI certified may not mean as much to smelters as one might think if it represents such an insignificant portion of their business. If other
industries do not step up and prioritize this issue, the initiatives started by the electronics industry are at risk of losing momentum.

Data Validation

One company interviewed identified data validation as the biggest area of improvement both internally and externally. As discussed previously, because visibility stops at smelters for most companies and smelters may not be incentivized to accurately report, issues of trust arise. According to one company interviewed, this is an industry wide problem that can be attributed to lack of resources as well as a lack of pull with the smelters themselves. Data collection from surveys of suppliers can take upwards of six months to validate, and it can be difficult to determine which aspects of the survey or reports are inaccurate.

Strategies

In order to address the above listed concerns, companies have developed and implemented strategies to reduce the risk and seek to eliminate root causes of them. The companies directly interviewed and researched have been identified as leaders in the fight against conflict minerals. They have worked to go beyond minimum reporting standards and are actively engaged in creating a conflict free supply chain. They have recognized the importance of this issue and the benefits of achieving the goal of ethically sourcing from the Congo and surrounding regions.
Engage Stakeholders

Although companies may have different specific strategies in how to ethically source conflict minerals, those that have made the most progress have one tactic in common: they engage their stakeholders about this topic. Every company identified by the Enough Project as leaders in conflict minerals openly discusses their policy regarding the subject. They have not only developed company policies but also publish them for anyone to see. They actively report on progress they have made regarding this issue, and do not just wait for official reports from NGOs such as the Enough Project. This group discusses conflict minerals in a general Corporate Social Responsibility Reports, although most have separate publications regarding this topic.

Additionally, they seek to educate stakeholders, especially suppliers, on the subject. One company provides supplier training not only regarding this topic but also on other Supply Chain Responsibility issues such as forced labor. They will also provide resources to make the reporting process easier. As members of CFSI they provide templates and information to help suppliers ethically source and follow appropriate due diligence. As supply chains become more complex, utilizing technology to educate is critical. One company has increased its commitment to developing online trainings to suppliers.

Besides educating suppliers, companies are educating other employees who may otherwise not understand the implications of this topic or how it involves different points of the supply chain. One of the companies interviewed discussed a program they have developed where every first and second level manager has identified a member of their team who is trained on this topic. This person receives training and acts as the advocate for conflict minerals. Through this program, change can more effectively be implemented on a team level.
**Increase amount/quality of audits**

As has been discussed in depth the amount and quality of audits are a major challenge in the process of ethically sourcing conflict minerals. Companies are well aware and are working toward improving the process. One strategy that most companies have taken is to ask their suppliers to follow the OECD five-step framework. This due diligence framework provides detailed recommendations for companies to avoid human rights violations and avoid contributing to conflict through the purchase of minerals. For a more comprehensive overview of what the framework entails, please see Appendix D.

In order to address the trust issue that arises from supplier reporting, companies are working directly with smelters. One company interviewed has dedicated personnel whose focus is to work directly with smelters and to help prepare them for audits from third parties such as CFSI as well as perform internal audits. This allows the company to validate for their purposes as well as contribute to the industry wide list of acceptable smelters to source from. Apple has committed to also directly engage in the auditing process. In 2015, they verified that one hundred percent of the refineries and smelters in their supply chain had undergone a third party audit. However, they are careful to recognize that just because all of the smelters and refineries have been audited does not mean they have a conflict free supply chain. Additionally, they have begun to audit their suppliers on their reporting and due diligence (Sewell, 2015).

All of this had lead to an increase in the number of audited smelters and refineries. Again while being audited does not guarantee a conflict free supply chain, it does contribute to establishing visibility. One of the rare characteristics of this topic is that it is not a zero sum game. Companies who would generally view themselves as competitors are working together on this topic to help eradicate any inadvertent support of these rebel groups while
remaining in the region. This allows them to share information freely especially through third party groups such as CFSI. When one company works to audit a smelter that allows another company to benefit with the knowledge the smelter is conflict free, contributing to the improvement of their supply chain.

_CONTRIBUTE TO ON THE GROUND INITIATIVES_

A common theme in discussions regarding conflict minerals is companies’ hesitance to have on the ground involvement in the Congo. Understandably, companies are hesitant to send employees to an area that still experiences conflict especially through armed rebel groups. Additionally, there is the ever present question as to whether a well-intentioned company could be doing more harm than good with direct intervention. However the most effective initiatives in directly addressing conflict minerals are those that take place in the Congo. Companies should work to support these initiatives even if they cannot provide direct assistance. One prime example of this is the bag and tag system. This system is one of the first conflict free initiatives on the ground level. A tag is applied to bags of minerals mined in the Congo that serves as a conflict free certification. The plastic tag has a bar code on it that directly corresponds to a certification document, and allows minerals to be legally exported. The initiative has been set up in the Kivus region, one of the hardest hit regions from the conflict. Overall, response from the project has been positive. Miners from the region claim it has helped to increase demand for minerals in the region and with the increase in demand has come a price increase. After the price of minerals dropped due to companies no longer sourcing from the Congo due to Dodd-Frank, the tagging system is cited as helping to get the price back to $3.50 per kilogram. Before the tagging system prices hovered around $1 per kilogram (Hogg, 2012). It is programs like these
that make measurable impacts on the ground and should be something companies look to support in their own way.
Chapter 6

Recommendations for Best Practices Moving Forward

Legislation was the first step in bringing the issue of conflict minerals to companies and initiating the process of a conflict free supply chain. According to the Enough Project and industry experts, Dodd-Frank Section 1502 has made a positive impact in the DRC and neighboring regions. Through field research they have found increased civilian security in mining areas, a reduction in armed groups controlling 3T mines, improved health and safety standards for miners, ground level initiatives, and the region’s first system to assess and certify mines. Additionally, organized local advocacy for this issue emerged, empowering Congolese to fight this issue within their communities.

Problems still remain however, including ongoing security threats (especially in regions with gold mines), corruption of the traceability system, and smuggling minerals from the Congo to Rwanda. The Enough Project has identified two key strategies moving forward that companies can take. First companies need to increase in-region sourcing. With an increasing number of certified mines, there are viable options for sourcing in the Congo and neighboring regions without contributing to rebel groups. As discussed previously, mining is a major source of revenue for civilians and communities. Providing income to these families helps to provide economic stability and development in the region. Additionally, the Enough Project calls for companies’ support for initiatives to support the formalization of artisanal mining as well as development of more alternative livelihood projects in eastern Congo. Formalizing the artisanal mining sector will increase legitimacy of mines and with that increase demand in the region. It will also contribute in increasing safety and providing job security. Developing other job opportunities in the region beyond mining is an important step in creating economic growth. Any
region that depends mainly on a single trade or industry is at the mercy of global demand for a few products and any down turn in demand or increase in other sources of supply could leave them economically paralyzed (Enough Project, 2017). As companies develop strategies moving forward, these two recommendations as well as their current impact should be kept in mind. While the Enough Project has developed these two initiatives as how companies can make the largest impact in the DRC moving forward, companies are currently making progress against conflict minerals in their own ways.

After extensive research on current initiatives, interviews, and evaluations from NGOs best practices will now be summarized.

**Best Practices for Electronics Companies for Ethically Sourcing Conflict Minerals**

*Leadership Involvement*

In large companies with complex supply chains it can be difficult to quantify the financial benefit from engaging in creating a conflict free supply chain. For that reason it can be challenging to have leadership in a company prioritize this issue when there is so many other concerns that also must simultaneously be addressed. Both companies interviewed have identified leadership involvement as a key factor to creating an impact. Even if there are dedicated resources in a company to address this issue, that can all be for naught if leadership does not act on their work and incorporate it into an overarching business model. According to one interviewee, “You need to have management on board to do your best.” When the topic is given priority and value that is when companies can make measurable differences. Leadership cannot merely support this issue, but understand how it incorporates into everyday operations,
and how it aligns with other business strategies. This is key in order to avoid conflicting interests within companies that compete against each other and compromise the success of both goals. As leadership recognizes and validates these issues more weight will be placed on strategies combating them.

*Engage, don’t direct suppliers*

One of the most successful electronics companies in creating a conflict free supply chain recognizes that engaging rather than directing suppliers is the best mindset. As discussed earlier, some suppliers are hesitant to engage in the reporting and auditing process for a multitude of reasons. For some suppliers the audits and reporting stretch resources too thin and force them to cut corners. Others are not incentivized to undergo the financial burden when they personally have no legal requirement and see little financial benefit. If a company were to merely direct a supplier as to what they can and cannot do, all of these factors could lead to a hostile relationship that could potentially be terminated.

Providing resources to suppliers to make this process easier is one tangible step companies can make in increasing the quality and quantity of reporting. Templates from CFSI, OECD Due Diligence, and a list of audited smelters from CFSP are just a few examples of such resources companies can provide to their suppliers. Additionally, educating suppliers on the topic, and working with them to create their own due diligence and company policies regarding conflict minerals will help ensure suppliers are committed to the issue and will follow prescribed steps. One company that was interviewed works directly with smelters that suppliers use to convince and prepare them to be audited or prepare an internal audit themselves. This alleviates the pressure from suppliers to do so while simultaneously not disrupting their supply chain.
No matter how devoted or well intentioned, no single company will be able to eradicate conflict minerals from their efforts alone. Companies must be willing and open to engage with other stakeholders. Unlike typical business transactions companies can and should work with competitors in their industry on this topic. Collaboration ensures that everyone is better off and contributing to making a difference in a developing region. Sharing information whether directly or through third parties such as CFSI is a great way for companies to build their knowledge base. Engaging with these companies may actually serve as a benefit as a company who may be looking to increase their engagement on this issue can learn from and participate in initiatives already in place. Working with NGOs and government bodies as well will be incredibly helpful in creating a conflict free supply chain. Agencies such as CFSI have a dedicated staff and resources as well as knowledge from other NGOs and ground level research. They can consult on projects and initiatives, provide input and advice, and provide research to companies. That is why this paper recommends that any company looking to make an impact on conflict minerals should become a member of CFSI or other coalitions dedicated to this topic. CFSI specifically has gained name recognition and being able to promote membership will increase goodwill among consumers.

Besides working with NGOs to gain knowledge on the topic, companies need to look to collaborate and support ground-level initiatives. Programs such as the bag and tag system are what most effectively make a difference in the Congo and neighboring regions. Even if a company just provides financial support, their ability to put their name on a successful program in the region will help to drive long-term profits while enhancing their brand.
Looking Forward:

Looking forward there are several strategies companies should take into consideration other than the ones listed above. These strategies will help to ensure that companies are ahead of the topic and being proactive in making a difference. As conflict minerals have gained notoriety and companies continue to devote resources to them, many have realized that the definition of conflict minerals may need to expand beyond the four listed in Dodd-Frank Section 1502. For example, cobalt, found in lithium-ion batteries that power laptops and smartphones, has been a topic of discussion for its high human cost. Conditions in cobalt mines are horrendous with constant threat of cave in and no safety standards. Child labor is also often used in the mining of cobalt. These are just a few of the issues the unregulated industry of cobalt mining is creating (Frankel, 2016). As companies look to negate any negative impact their supply chain has on communities, especially in the DRC, they need to expand their definition of conflict minerals as well as expand the types of issues they look at. During an interview, one company indicated that conflict minerals were just the beginning of eradicating human rights violations in a supply chain. When a company begins working on the topic of conflict minerals they may uncover countless other problems that need to be addressed such as forced labor, cobalt mining, environmental impacts and so on.

The next step major step in eradicating conflict minerals while still sourcing form the DRC is getting the jewelry industry more involved, specifically with gold. One of the main problems discussed throughout this paper is the lack of influence electronics companies have with some smelters. This makes it difficult for them to force an audit. However, if the jewelry industry, a much larger percentage of some of the smelter’s business got involved, they would
have a greater chance of success and the smelters would be more incentivized to participate. The question is how to bring the jewelry industry to confront this issue. One solution is to create awareness to consumers that this problem does not just touch their electronics but also their jewelry. This could help create pressure for jewelry companies to step up and take stronger initiatives on conflict minerals.

The next several years will be a unique and interesting time for conflict minerals. With the new United States administration, there have been repeated threats of repealing the Dodd-Frank Act. Some believe that 2017 will be the last year of SEC conflict mineral legislation. This would mean companies would no longer be required to go through the formal process of reporting on the origins of minerals in the supply chain. While this would have little impact on companies that already have their conflict minerals initiatives in place and are leading the fight to create a conflict free supply chain, this could have negative implications. One interviewee said that she believed Dodd-Frank was effective legislation against conflict minerals. According to her, if the law was not in place it would difficult to get any supply chain information. Even if all a company does is file and disclose their supply chain, it serves as a resource to those companies looking to make a larger impact. If those companies are no longer obligated to provide that information, many of the strategies of leaders on this topic will lose traction. However, that does not mean the end for the fight against conflict minerals. The EU has passed their own conflict minerals legislation that will affect EU importers from a wider range of regions other than the DRC. That fact, coupled with consumer pressure for ethical sourcing, indicates that companies will need to take this topic seriously and continue to implement and develop conflict minerals due diligence plans (Thomas, 2017). Consumers, especially the millennial generation, will
expect ethical sourcing and push for companies to make a positive impact in regions such as the DRC.
Appendix A

Supply Chain of Conflict Minerals in the Congo

The flow chart below demonstrates the process of how conflict minerals end up in consumer electronics. The graphic below is from the Enough Project published in 2009.

Appendix B

Map of Congo Region During Congolese Wars

Appendix C

Company Interview Guide

Interview Question Guide:

Please fill out the following survey below. Please allow at least 20 minutes to complete the survey. Please be as thorough as possible, and know that any company information will be kept confidential. Thank you for your time and participation!

1. Does your company fall under Dodd-Frank Section 1502 regarding the sourcing of conflict minerals?
   a. Is tin, tungsten, tantalum, or gold prevalent in any of the organization’s products?
   b. Are any of the above minerals necessary in your products?

2. Please explain your disclosure process if you answered, “yes” to the above question.

3. How do you determine origins of the metals?

4. Are the smelters within your supply chain audited or certified?
   a. If they are audited, how often are the audits performed and who completes them?
   b. Do the audits of these mines follow any
   c. On a scale from 1-10 how confident do you feel in the results of these audits? Do you think they depict an accurate representation of these mines and smelters?

5. In your personal opinion, do you think the current disclosure process is effective in helping to eliminate the use of conflict minerals in your supply chain? Why or why not?

6. What were the largest financial costs your company incurred due to complying with the disclosure process or other efforts in not sourcing conflict minerals?

7. How many people within the organization work on this topic?

8. How much priority does the leadership of your organization place on this topic?
9. Where do you see the largest area for improvement both internally and externally when looking to ethically source conflict minerals?

10. How closely do you work with your suppliers on this topic? Generally, how much do you feel they prioritize this issue?

11. Do you work with other companies about this topic, and if so please specify how?

12. Does your company work with NGOs (non-government organizations) or governing bodies regarding conflict minerals?

13. What benefits do you see for disclosing where you source these minerals from? What if any are the financial benefits?

14. Are you members of the Conflict Free Sourcing Initiative (CFSI)?

15. If you are, how often do you utilize their resources, and do you find them helpful?
Appendix D

OECD Five Step Due Diligence Framework

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