

**Web Application Development: Outsourcing Software Engineering to Improve Outdated
Government Applications**
(Technical Paper)

**How the History of American Intervention in Latin America has Impacted the Agriculture
Sector of Guatemala**
(STS Paper)

A Thesis Prospectus
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On my honor as a University student, I have neither given nor received unauthorized aid
on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments.

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Prospectus

Introduction

Beloved bananas, catastrophic communism, and growing globalization combine to create a perfect storm leading to the downfall of a government. Chaos is the reality behind the current state of affairs in Guatemala, a country about the size of the state of Virginia located in Central America. The United States and Guatemala were involved in nefarious negotiations to allow the growth of multinational corporations within Guatemala, taking advantage of the Guatemalan people and land.

American military forces and government forces along with American corporations joined forces to establish power within the country, mostly during the Cold War era. Governmental intervention of the highest degree could not have been done without military aid. It is common knowledge that the military as it exists today uses one of the biggest portions of the annual budget. Military support does not only exist through governmental support but also through the support of many private companies, with many of these government contractors being located in the DC area. Interning, and working in general, at these companies provides further support to the military complex. The United States has a long history of military intervention within other countries, oftentimes finding creative ways to defend their intervention. However, oftentimes military intervention has profound negative effects on the foreign countries' economy and other sectors.

The negative effects of intervention can be seen in current day Guatemala, highlighted by high levels of immigration out of the country and into the U.S. to escape violence and overall instability. Widespread and far-reaching support of the military exists in multiple levels, which will be explored through the retelling of experiences interning within government contracting companies directly supporting military endeavors. Impacts on the agricultural sector in

Guatemala will be the focal point of analyzing the effects of American intervention, starting with a delve into the rich history behind some of the most popular Guatemalan exports, including the banana.

Software Developer Intern

To intern or not to intern, that is never the question because the obvious answer is to be an intern for whichever best opportunity a student is able to obtain. For many college students, especially within undergraduate studies, obtaining an internship is essential to their college careers. Internships provide real life experiences within industries they intend to pursue later on during the search for full-time positions. Getting an internship after completing their third year is highly encouraged or almost even obligatory, while getting an internship after completing their second year is encouraged. Completing internships demonstrates to future employers that the student is capable of collaborating within a team, be dependable to complete work, and solve problems among other skills. Many students aim to enter industry after graduating and understand that it is an essential step to acquiring future employment, increasing the motivation to get an internship soon and within a position building on skills they aim to use in their careers. Data has shown that, “Completing internships increases job offers by 16% (Zuckerman, 2021).” Obtaining an internship within any engineering major has been deemed essential.

Entering my third year of my computer science degree I had the opportunity to intern as a software developer intern at Expression Networks, a government contractor located in Washington D.C. Oftentimes prospective software engineering interns go through several rounds of interviews, commonly including a technical interview in which there is a live coding test. Through attending a networking event and speaking with the COO at the time, I was able to get an internship position. As a software developer, I worked on a team of about five developers

including the supervisor, or scrum master, who is the leader of the project team and in charge of tasks for the web application intended to be used by the military as a reporting system. The development method being used was Agile, therefore during biweekly sprints each developer would be assigned tasks through JIRA to complete within the given timeframe. Pair programming was encouraged among developers to complete tasks as well as communication through the company's slack channel for help. Over the 12 weeks I would complete my assigned tasks which ranged from fixing form input to prevent incorrect data entry, improving frontend bugs, implementing input features manipulating backend database tables, and creating applications within the greater application.

Over the time period, my aim was to take advantage of any new learning opportunities given to me. I made a conscious effort to accept tasks that would be difficult and involved using techniques I had never used before. At the time I was more familiar with doing frontend work but overtime my tasks started to grow toward including doing backend work. The internship was completed after 12 weeks of remote work, with my internship ending right as the next version was going to be released to the customer for testing and progress reporting. Overall, my internship opportunity synthesized the skills I was learning both through technical courses I would take as well as professional development meetings I would attend.

How American Intervention in the Agriculture Sector has Affected Guatemalan Society

In order to further understand the circumstances surrounding the Guatemalan agricultural sector, one must first understand the events that gave birth to Guatemala as it exists now. Wicked problem framing will be used to analyze information gathered about Guatemala's history to make revelations among "indirect and hidden connections between symptoms and root causes of an

Issue (Seabrook, 2021).” More specifically within the context of the Guatemalan agricultural industry, wicked problem framing will be used to explore the connection between the voices of small farmers and multinational corporations, highlighting the difficulty of solving issues coming from the rise of globalization. The history of globalization starts with the proliferation of fruit companies across Latin America, with one of the biggest actors being the United Fruit Company, or UFCO for short (Chapman, 2007). Some of the UFCO’s biggest plays to rise to the top and essentially establish a monopoly within Guatemala occurred during the Cold War. The UFCO could not have created a monopoly on their own, corrupt Guatemalan leadership allowed many corporations to establish themselves and gain a stronghold within the country. The drama only begins there, with the Cold War occurring in the background the United States had ample ammo to involve itself within other countries if they deemed communist seeds were growing within. Communist suspicions were the exact reasoning used to conduct a coup d’état against the Guatemalan government, allowing the chokehold corporations like UFCO had, to get stronger (Chapman, 2007). During these tumultuous years the U.S. government was led by Harry S. Truman then later Dwight D. Eisenhower, both of whom were instrumental to the success of the intervention. Leaders of the United Fruit Company along with U.S. agencies like the Central Intelligence Agency and their leaders were also influential players (Cullather, 1999). In order to achieve the profit sought after, land and transportation needed to be obtained. Expanding the transportation system was one of the promises made by these corporations in order to be granted access to land (Dosal, 1993).

Leadership within Guatemala who agreed to the trade got to the heart of decision making surrounding whether or not to implement technological fixes. Adjusting for the fact that the issue may be a wicked problem includes considering the problem “may appear amenable to a

technological fix, but remains intractable or unsolved (Seabrook, 2021).” A technological fix is described as “the use of technology to respond to certain types of human social problems that are more traditionally addressed via political, legal, organizational, or other social processes (Newberry, 2005, p. 1902).” Many critiques of technological fixes cite the lack of solutions for many of the problems being tackled or oftentimes how creating a technology to address an issue only ends up creating more problems, sometimes even worse issues. Some argue that technological fixes sometimes should not even be applied to a system and instead there should be a complete overhaul to genuinely improve the problem at hand because “this approach treats only the symptoms (Newberry, 2005, p. 1902).” Along these lines, wicked problem framing attempts to figure out a recourse to solve an issue that is essentially unsolvable by definition of being a wicked problem. Wicked problems are characterized by the problem definition depending on the solution and the solution depending on the problem definition, constraints changing over time, and stakeholders having different understandings of the problem (Seabrook, 2021). One could argue that the above definition is too broad and does not really help to find a possible solution to the problem at hand. The lack of solution finding in wicked problem framing can most easily be highlighted by the fact that climate change, a grave wicked problem, has become a political issue in which depending on the political party one belongs to, one will have vastly differing opinions on the ways in which to approach the problem (or even if it should be addressed at all).

When considering some of the major political issues of concern to many Americans besides climate change, one of the prominent issues that comes to mind for many is immigration. Oftentimes immigration comes from Mexico and Central America, through the Mexican border. Some of the factors influencing many to immigrate from places like Guatemala include the

increased violence and the overall destabilization of the country. The goal of analyzing U.S. intervention through the agricultural lens is to address an issue often not considered or even known by the greater American public. Bridging the knowledge gap could hopefully lead to movements and policies made toward correcting the wicked problem beyond just a technological fix.

Methodologies

How has historical and continuous intervention from American Corporations affected the agricultural sector of developing countries, like Guatemala? To explore this question there will be extensive sources used from authors who also explored this topic along with analysis of previously classified U.S. documents that have since been released. In order to gather data on how the agriculture sector is functioning today, sources delineating the current output and consumption of exports from the agricultural industry will be examined. Some of the main topics to be investigated include Guatemalan agriculture, the United Fruit Company's inception and rise, the Central Intelligence Agency's operations, and the existence of small farming within Guatemala. Both the history of American intervention within Guatemala and the current state of affairs of Guatemala will be explored to properly provide context and attempt to answer the question at hand. Using the resources and methods set forth provides adequate context and provides discourse to begin formulating possible solutions to the wicked problems existing within Guatemalan society, emphasizing the agricultural sector.

Conclusion

Both projects synthesize the pervasiveness of the military in different and subtle ways. The aim of interning as a software developer is to improve technical skills and most importantly to gain experience in a real-world position that can be applied later in the career. Reaching these

goals increases the possibility of getting full-time positions sooner rather than later. However, being a part of the military industrial complex has aided the military throughout history and the current day to interfere within the governments of foreign countries. The United States interference within Guatemala and specifically the agricultural sector created instability that has affected the present-day existence of Guatemala. Through analyzing the relationship between Guatemala and the United States using a wicked problem framework and analyzing how technological fixes have led to the current state of affairs would hopefully provide clarity to many of the challenges facing both countries. Shedding light on these issues could hopefully provide readers more insight into the complicated history of the United States to bring about meaningful discussions that can lead to policy changes or at the very least citizen led initiatives to right any past wrongs.

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