

DEVELOPMENT ASSISTANCE AND COUNTERINSURGENCY:
UNDERSTANDING PHILANTHROPY AND CHARITY WITHIN A CLEAR-HOLD-
BUILD STRATEGY

by

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DEDICATION

This is dedicated to my parents, Darwin and Cecilia, and my brother Trey.

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LIST OF ABBREVIATIONS

Counterinsurgency	COIN
United States	US
United States Agency for International Development	USAID
Agent-Based Model	ABM
Gross Domestic Product	GDP
Gross National Product	GNP
Complex Adaptive System	CAS

ABSTRACT

DEVELOPMENT ASSISTANCE AND COUNTERINSURGENCY: UNDERSTANDING PHILANTHROPY AND CHARITY WITHIN A CLEAR-HOLD- BUILD STRATEGY

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This dissertation explores the ineffectiveness of development assistance as an intervention into a complex system, and makes a contribution in explaining how and why this is so. Specifically, this issue is explored within a charity-philanthropy context. As the build component of counterinsurgency (COIN) in Afghanistan is currently the most high-stakes, policy relevant example of US development assistance, this dissertation explores these issues within a COIN context.

There are six chapters. First, the introduction outlines the context, problem statement, and structure for the rest of the dissertation. As this dissertation builds upon a wide range of literature, the second chapter presents a review of the research. Chapter three is a theoretical chapter outlining what self-sustaining development is, why it is important, and the necessary conditions for it to exist.

To provide an empirical basis, chapter four analyzes the USAID programs in Afghanistan from 2002-2012. The main finding of this chapter is that while the US relied (and still relies) upon philanthropy to develop, its approach in Afghanistan is primarily one of subsidization. In other words, the US approaches development within a COIN context in a fundamentally different (and possibly incompatible) manner than which it approaches its own development. This is unlikely to lead to self-sustaining development in Afghanistan.

The fifth chapter builds upon the fourth, exploring the implications of charity, philanthropy, and preferences for charity using a computational simulation. Its main contribution is that philanthropy can be beneficial even without development, but charity and charity preferences are highly destabilizing for the recipient country. The implication of this is that the US development assistance strategy in Afghanistan is unlikely to lead to self-sustaining development, and is likely to be destabilizing, working against overall COIN objectives. Finally, the sixth chapter presents conclusions and policy implications.

CHAPTER ONE: INTRODUCTION

The ineffectiveness of development assistance is no longer theoretical conjecture but supported empirically. There is not a single case of development assistance actually ever leading to development (Root 2008). However, the mechanisms underlying how and why this assistance is ineffective remain to be explored.

There are two types of giving that can be thought of as opposite ends of a spectrum. Charity has been prevalent throughout human history and is not associated with or designed to foster development. It is a short-term solution designed to alleviate immediate suffering. On the other hand, philanthropy has been integral to self-sustaining development in the US. Philanthropy involves thoughtful investment of resources to create opportunity in the long-run. It can be speculated that development assistance involves more charity than philanthropy, undermining its ability to foster development. However, we cannot be sure of this until the issue is empirically explored.

Since the invasions of Afghanistan and Iraq, the issue of development assistance not leading to development has become increasingly important for the US. Within this counterinsurgency (COIN) effort, the United States government has incurred significant costs in terms of financial resources, human lives, and foregone opportunities. This COIN effort incorporates what is known as a clear-hold-build strategy. Within this strategy, counterinsurgents clear the area of insurgents, hold (keep secure) the population and area,

and then build. Clearing requires a military effort and holding requires policing. Both of these are generally well understood.

Building, however is much less clear. Generally speaking, “build” refers to a civilian-led effort to improve/build infrastructure; promote development, even nation building, using development assistance. Tying the effectiveness of development assistance to military outcomes has raised the stakes of success significantly. Therefore, exploring development assistance within a COIN effort is the most policy relevant context at this time. It is especially important to understand empirically the charity-philanthropy breakdown of this development assistance.

There are three inherent and untested assumptions within the “build” component of the clear-hold-build strategy. First, there is the assumption that development and/or nation building is an achievable goal for foreign counterinsurgents. Second, the US government implicitly assumes that development assistance is a successful way to foster development. Another way to state this is that the means are appropriate to an achievable set of stated policy goals or ends. Third, there is an explicit assumption that development will benefit US counterinsurgent efforts (FM 3-24).

These assumptions provide the basis for the “build” component. This is problematic since development assistance has not historically promoted development (Root 2008). It is also problematic that such an integral part of COIN strategy is not based on evidence, but assumptions. Much of this is likely due to a lack of coherent

theory surrounding issues relevant to both development and COIN, along with a lack of data¹². This dissertation seeks to provide insight into these issues.

Research Questions

This dissertation explores both the ends (nation building and development) and means (development assistance) within the US COIN context. The first research question assesses if the ends of nation building and development are feasible in this context. To address the question, this dissertation formulates a theory based on the development literature (focused on the US story) and complexity theory, as development emerges and becomes self-sustaining within a complex adaptive system.

The second research question explores the appropriateness of the means of development assistance within COIN, even if development were possible in this context. First, it examines the breakdown of USAID programs in Afghanistan according to charity, philanthropy, and subsidies. The hypothesis is that these programs (as with development assistance historically) are primarily charity-based, in sharp contrast to the US development story. Second, an agent-based model is presented, exploring how different charity-philanthropy and charity preference breakdowns affect a recipient society. The main hypothesis for this chapter is that charity is destabilizing for a recipient society.

¹ This study acknowledges that some data is not collectible. A good example of this is the novelty of US COIN efforts. There are few, if any other examples of a foreign counterinsurgent force that has successfully invaded an area, provided stability and development, and left.

² While it may be tempting to make a comparison between current COIN efforts and the Marshall Plan, a key difference is that Germany and Japan were already developed when they lost the war. Also, both countries were clear losers in a conventional war, surrendered to the Allies, and accepted temporary foreign domination to the extent that there was no large-scale insurgency after WWII.

Primary Contributions

To provide insight into the relevant theory and policy, as well as set the stage for future data collection, this research formulates a coherent theory, and tests this theory in the most rigorous way possible within the scope of this dissertation. The main contributions provide insight into if and how the US can have increased success in building within a COIN context. This involves increased understanding as to what are appropriate and achievable policy goals for building.

From a COIN practitioner's perspective, the Army-Marine field manual is largely based on Galula's work (2006), along with a few others such as Kilcullen (2008). Even though practitioners rely heavily on this research, modern COIN literature is an emerging field. What building can and should entail is not well understood or detailed. Practitioners can benefit from understanding better what foreign insurgents can and cannot build sustainably within this context, including dynamics between charity, philanthropy, and development. This will be useful in guiding COIN and development assistance policy to be as effective and realistic as possible.

While this research is set within a US COIN context, the policy implications are relevant to development assistance in general. For example, a contribution of this research is providing insight into the most helpful (or least harmful) form of giving, philanthropy. Part of this is how philanthropy relates to development emergence and sustainability, along with what is achievable within a development assistance framework. It can also help both philanthropists and development assistance practitioners to distinguish between philanthropy, subsidies, social entrepreneurship and charity, guiding their program design and resource allocation.

While there is a literature that covers the distinctions between charity and philanthropy, the impacts of using one or the other in a development assistance context is not well covered. One contribution of this research is in exploring how the charity/philanthropy composition of development assistance can affect development outcomes. It is a first step in rigorously developing theory relating to charity, philanthropy, development assistance, and the effects within a social system. Currently this is not at the forefront of the discussions in the literature or in policy. This dissertation provides insight into the relationship between these aspects of giving.

Since this dissertation explores the development-focused aspect of COIN, it is important to have a good understanding of development processes. Key to this is the role of the entrepreneur. It is not controversial to assert that productive entrepreneurship creates wealth. Without productive entrepreneurship, development does not emerge. This research provides insight into the conditions necessary for development to both emerge and become self-sustaining.

Dissertation Structure

This dissertation presents a literature review, three research chapters, and a final policy chapter discussing policy conclusions, limitations, and directions for future research. The literature review primarily focuses on development, development assistance, and insurgency/ counterinsurgency, drawing upon complexity theory where appropriate. While this literature review covers an extremely broad scope, it provides the knowledge base necessary for this dissertation. Below are descriptions of the research and policy chapters, along with their main contributions.

Theory-Building

Chapter 3 builds a theory of self-sustaining development. It draws from both the development literature and complexity theory. The development literature provides and explores many pieces of the development puzzle, but does not present a coherent, process-oriented, holistic story. As development emerges within a social system, and social systems are complex and adaptive, complexity is a highly appropriate framework for this. Complexity theory describes complex phenomena as a system, but to this date has not been rigorously applied to development broadly. This chapter is a first step towards this theory development, defining and presenting a set of necessary conditions for self-sustaining development to emerge and exist. Specifically, self-sustaining development is defined as development that emerges and continues to emerge and recreate itself through continuous innovation and creative destruction.

Data Analysis

While philanthropy is at the heart of self-sustaining development in the US, charity and subsidies are at the heart of US-based development assistance. Instead of assuming that the development assistance provided within the COIN effort in Afghanistan is charity, this chapter presents a framework for distinguishing charity, philanthropy, subsidies, and social entrepreneurship. It then takes USAID program data from the Afghanistan COIN efforts during 2002-2012 and analyzes the breakdown of development assistance programs using this framework. This chapter contributes to the literature by determining how much charity, philanthropy, and subsidies are used in this attempt at development and nation building, along with possible development implications. The main findings are

that the USAID development assistance framework within COIN is primarily one of subsidization, both for local projects and for donor country industry through consulting.

Computational Model

To test the hypotheses presented in this dissertation and provide more generalizable insight with data limitations, Chapter 5 presents an computational agent-based model (ABM). This type of model computationally simulates complex phenomena, including social systems such as development and insurgency. It is a highly useful way to observe emergent phenomena, processes, and test a wide range of hypotheses. The model presented in this chapter simulates the effects of development assistance on a pre-development society (without entrepreneurship). Specifically, the effects of charity prevalence, philanthropy prevalence, and agent preferences for charity are explored. The main findings from the computational model suggest that charity and preferences for charity can be destabilizing for a recipient society.

Policy Conclusions

The final chapter of this dissertation discusses policy implications of the findings. Specifically, it is organized into five sections: self-sustaining development, US counterinsurgency policy, computational modeling, development assistance, and modern-day philanthropy. Within each section, sub-sections are presented discussing policy implications, limitations, and directions for future research.

Generally, it presents an argument that development is an emergent phenomenon and that the sustainability of development may be as important or more so than the issue of its emergence. With that, nation building through development assistance are not ends

and means that are reasonably achievable for US counterinsurgents (or any other foreign power). Since self-sustaining development (and nation building) is emergent and not created in an artificial, top-down manner, this is not a realistic goal for US COIN policy. With that, the more charity involved in the development assistance/building component, the more destabilizing this is likely to be for Afghanistan. Redefining the build component to focus on brokering stability is a more appropriate and achievable goal than development and nation building for US COIN policy.

Also, this chapter concludes that more research is needed into development assistance programs to better understand the charity/philanthropy/subsidy breakdown. Additional transparency is absolutely needed, along with a greater focus on philanthropic development assistance programs. Finally, what we understand of philanthropy as a major mechanism to keep development self-sustaining is limited to a US context. As philanthropy takes on an increasingly international flavor, it is important to better understand this as well as any other possible mechanisms that enable development to be self-sustaining.

CHAPTER TWO: LITERATURE REVIEW

To provide background and context, the literature review for this dissertation is structured as follows. First, a section covering the process and emergence of development within a complex social system is presented. Development is discussed, including sections on institutions and allocation of entrepreneurial talent. Building on the notion that development is an emergent phenomenon, this section also provides the specific case of how Anglo-American capitalism evolved with the emergence of development. As productive entrepreneurship and philanthropy (as opposed to charity) are key to the process, these concepts are also covered in this section.

The next section provides an overview of foreign assistance. It specifically covers the charity-based framework for humanitarian and development assistance, and the fact that US foreign assistance often has a security purpose and has been unsuccessful in leading to development. Such security policy goals provide a coherent bridge to the development assistance context for this dissertation: counterinsurgency (COIN). As COIN has its own distinct literature and theory, a third section follows, providing an overview and context for this research. Within this section, agent-based insurgency models are presented to provide a relevant context for the agent-based model presented in Chapter 5 of this dissertation.

The Process and Emergence of Development

This section discusses the process and emergence of development drawing upon complexity theory where relevant and appropriate. It then lays out the institutions and incentive structures necessary for development. Finally, this section places these concepts in the context of Anglo-American capitalism.

Development: Definition and Overview

Development is defined in this research as an overall increase in the standard of living, or social value³, for a society. This definition of development goes beyond growth in GDP or GNP to include a social value component. Development does not emerge in a vacuum but within the context of a society and its institutions. At the heart of development is the high-impact, productive entrepreneur. While a society can have policies and institutions that either enable or hamper development, entrepreneurs are the actors who innovate, cooperate, and compete within this context to create or destroy social value (Acs and Audretsch 2010).

Entrepreneurs and other individuals interact with each other and their environment, whether physical, environmental, economic and/or social. They respond to incentives and help shape their environment, often simultaneously. In this way, people interact to form a complex, adaptive social system that on a macro level is distinct from its components. In certain cases, development emerges from this, taking on a form distinct from the aggregate individual actions. Therefore, by definition, a social/economic

³ This definition of development acknowledges that social value is subjective. When social value is discussed in this research, it refers to the social value within a society, however that society happens to see and define it. It is outside the scope of this research to provide a clear and objective definition of social value beyond this that is applicable across cultures.

system is a Complex Adaptive System (CAS), best understood through a complexity framework (Waldrop, 1992; Diaz, 2003; Beinhocker, 2006; Root 2013).

Complex social systems, like all CASs, emerge, adapt, and evolve through an evolutionary trial and error process, taking shape without a designer or planner. This property is referred to as emergence. Development (and insurgencies) are emergent phenomena within complex social systems and have certain environmental properties (such as institutions) allowing for this to occur (Beinhocker, 2006; Root 2013).

A complex system has many interdependent parts, the behavior of which is distinct from its components. This interdependence distinguishes a complex system from a complicated one. In a complex system, a removal or change in one of the component parts changes the behavior of the other components. However, in a complicated system (such as a car), removal or change in a component does not result in the other components changing, even if it stops functioning. Complex systems are capable of self-organizing, making accurate behavioral predictions impossible. Understanding the highly complex collective behavior of a social system requires us to think about it differently than conventional, linear approaches (Root 2013).

A crucial aspect needed for development (or insurgency) to emerge is evolutionary stability. Technically this means that no individual or small group can make meaningful changes to the structure or rules of the game (Ginitis 2000; Leininger 2006). What evolutionary stability means for this research is that nobody can be coordinated and powerful enough to stop the emergence of a phenomenon such as an innovation, development, or insurgency.

Creative destruction is central to why someone would want to prevent development from emerging. Through innovation, creative destruction involves one business, technology, etc. flourishing at the expense of another, but in a way that fosters development (Schumpeter 1934). For development to emerge, those with something to lose (whether outdated businesses or developing world elites) must not be powerful enough to stop it. In other words, it must be sufficiently evolutionarily stable.

We tend to see development not emerge when the existing elites (economic, political, or otherwise) are powerful and/or coordinated enough to prevent this creative destruction. On the other hand, when power (economic, political, etc.) is sufficiently disbursed, it is much more difficult to prevent creative destruction from presenting its challenge (Acemoglu & Robinson 2012). The implications of and the need for continuous creative destruction and innovation for development to emerge and become self-sustaining are discussed in more detail in the following chapter.

Institutions

Institutions are human-designed constraints shaping interaction, otherwise known as rules of the game. By increasing structure, coordination, and predictability, they decrease uncertainty and shape society over time. Institutions can be formal or informal, defining and limiting individual choices. Rules are understood, and people have strategies based on perceived costs and benefits (North 1990; Gibson, et al. 2005).

Those beneficial for development such as rule of law and enforced property rights tend to exist where political power is disbursed. These institutions can provide the incentives necessary for social/productive entrepreneurship to flourish and to minimize

destructive entrepreneurship (described in the following section). Many factors can lead to institutional change, including crisis, growth, revolution, resources, and leadership (Johnson & Subramanian 2006; Appleby 2010; Acemoglu & Robinson 2012).

Institutions develop within a specific context and are highly path dependent, meaning that history and context matter. A complex social system is highly nonlinear, easily seen in its sensitivity to initial conditions, effects of which are amplified over time (Root 2013). Even if complexity terminology such as this is not used, these concepts are common in the literature. For example, Acemoglu (1995) implies path dependence in his discussions on culture and development. The implications make interventions within a complex social system highly unpredictable, limiting our ability to simply transplant institutions into other societies without context. It is unclear as to if and how external actors can influence an institutional environment for the better (Johnson & Subramanian 2006; Appleby 2010; Acemoglu & Robinson 2012).

Allocation of Talent

Entrepreneurs, acting within a social context, actively drive or impede development. Within any context it can be assumed that there are people who are willing and able to act entrepreneurially. However, entrepreneurship does not necessarily have to result in social value creation⁴. It can be productive (net increase in social value), unproductive (no change in overall social value), or destructive (net decrease in social value). Profit incentives can affect the degree to which various kinds of entrepreneurship are prevalent within a society. Within the economics literature, this is referred to as

⁴ As noted earlier, it is social value creation that distinguishes development (increase in an overall standard of living) from mere growth.

allocation of entrepreneurial talent (Baumol 1990; Murphy, et al. 1991; Desai 2008; Desai, Acs & Weitzel 2010). It is assumed in this research that entrepreneurially talented individuals and profit incentives exist within all social contexts, including conflict and insurgency.

Since the outcomes and processes of both development and insurgency involve institutions, creativity, and the presence of winners and losers, this literature is relevant. It discusses how people choose to allocate their talent given various incentive structures. Baumol (1990) defined entrepreneurs as “persons who are ingenious and creative in finding ways that add to their own wealth, power, and prestige” and did not assume this was necessarily through productive activities. The rules of the game (institutions) and payoff structures are determinants, and changes in these can result in entrepreneurs changing activity and/or deciding to become entrepreneurs or workers. According to Acs, et al. (2011), productive entrepreneurship increases social value (however defined). Unproductive entrepreneurship can be rent-seeking behavior and/or tax evasion/avoidance (Baumol 1990; Coyne & Leeson 2004). Destructive entrepreneurship reduces the productive capacity of an economy, essentially shrinking the size of the pie, reversing or counteracting the development process (Desai 2008).

From a policy perspective, the best way to achieve more productive entrepreneurship is to change the rules of the game. According to Baumol, these are what determine payoff structures from various activities, affecting allocation of entrepreneurial talent (Baumol 1990; Coyne & Leeson 2004). It is prevalent in economics literature that talented people are likely to choose occupations in which the expected payoff is highest.

This means that if the expected payoffs of unproductive or destructive activities are higher, then people will be more likely to participate in these activities. Instead of being productive, a talented individual could become a criminal, an insurgent, a corrupt government official, or simply become less productive or underemployed.

For development to emerge and become self-sustaining, productive entrepreneurship is absolutely required. Therefore, much can be riding on the occupational choices of these people (Baumol 1990; Murphy et. al, 1991; Desai 2008; Acs, et al. 2011). The best and the brightest have the most potential to do the most good for society, or could cause the most damage.

Anglo-American Capitalism: A Success Story

To understand development, it is important to understand the ultimate success story, the US (and with it, England). This section outlines how capitalism evolved and development emerged, both historically and culturally. Capitalism is “based on individual investments in the production of marketable goods”. This system replaced traditional ways of producing and exchanging goods and is as much cultural as it is political and economic (Appleby 2010).

The development of capitalism was not inevitable, but a sharp deviation from millennia of traditions and norms throughout the world. Individuals in capitalistic societies can control and direct resources for ends they choose, which is a radical concept. It was only in England at the beginning of the Industrial Revolution did innovations start to become cumulative. Somehow this system based on innovation and mutually beneficial exchange was able to displace tradition (Appleby 2010).

Social systems, including capitalism, include a set of laws, customs, and culture. Anglo-American capitalism evolved; societies and individuals who imitate capitalistic behavior do not necessarily have the culture and values originally associated with capitalism. The cultural and moral emphasis on hard work, responsibility, honesty, fairness, and wise use of resources is a foundation of capitalism and central to its ability for wealth generation and development (Appleby 2010).

Pre-Industrial Revolution England

Many scholars have suggested that pre-Industrial England was a peasant/agrarian society in the 15th and 16th centuries. However, MacFarlane (1978) has found a lack of evidence for this. For example, the English were much more geographically and socially mobile than what would normally be seen in an agrarian society. Social classes in England emerged not from a strict class structure and hoarding, but from the increased likelihood of a successful person having at least one successful child. Young people often moved away to work, living on their own. Society was much more open and mobile, with less focus on the family and close community. Another difference is the use of hired labor instead of family, and a greater division of labor. In fact, using the criteria for a capitalist society that Marx and Weber described, England would be considered as capitalist in the 13th Century as it was in the 16th or 18th Century.

English social values gradually evolved to accept capitalistic values intellectually and culturally. This was a major advantage. Culture and values that embraced technological change and inventiveness are likely to have encouraged the most talented to pursue careers in invention and innovation. Novelty was popular in 18th century England;

creative people amassed wealth, enjoying popularity and a community of other innovators/inventors. Innovation is uncertain, but there are policies and cultures that encourage it, increasing the likelihood of a talented individual making this occupational choice (Appleby 2010).

It was important to have culturally embedded individualistic values, freedom of expression, and the ability to trust strangers enough to conduct business. England's cultural and linguistic homogeneity helped, along with the widespread use of courts. The English trusted courts to enforce contracts fairly and impartially. With this, they also had property rights and a notion of inviolable rights as Englishmen (Appleby 2010).

Not only were property rights and production individualized, but there was also a high degree of labor specialization and mobility in the 13th Century. For example, the land market was well developed in England, and individuals (including women) owned land. In fact, women in many ways had equal legal status and property rights to men. Even though a husband could manage and rent out a wife's property, he could not sell it. Also, dating back to at least the 13th Century, children had no right to the father's property after death. Primogeniture⁵ and other inheritance customs only held when there was no will (MacFarlane 1978).

Industrial Revolution

During the Industrial Revolution, agricultural innovation redistributed wealth in England from those who did not innovate to those who did. The social order changed, but did so gradually over five or six generations. This uprooted people from traditional

⁵ In the case of England, primogeniture favored the eldest child for inheritance.

stations and duties in life, but they had time to adapt. Landlords wanted fewer restrictions to increase profit, and food stability over time gradually alleviated any fear of famine. Without this fear, people became less risk-averse and less subservient (Appleby 2010).

The institution of enclosure, leading to private farming, also had profound impacts. Through individuals' ability to keep a higher return to hard work and innovation, it also punished those who were less skilled and/or hard working. This increased the income disparity, but also encouraged innovation and increases in food production. Ultimately, more people were able to survive, as England has not experienced famine since 1819 (Appleby 2010).

Increasing productivity involves improving worker skills, division of labor, and/or technology. This increase requires capital, coming from savings. Accumulation of capital is therefore necessary for development and division of labor. Investors can contribute to real productivity increases and wealth accumulation in this way (Smith 1776).

Mutually beneficial exchanges gives rise to the division of labor. People exchange out of self-interest, and appeal to others' self-interest in exchanging. Only beggars live completely from the benevolence of others without contributing anything. Division of labor also has a utilitarian advantage in its creation of wealth and development for society as a whole (Smith 1776; Weber 1920).

Innovation enables the middle classes to continue to exist and prosper with a high degree of social and geographic mobility. Development, innovation, and values associated with it extended to social institutions and globally through trade and other influences, increasing interdependence and complexity. This was a force that once

unleashed, was impossible to restrain and/or reverse (Marx 1848). In this manner, development is highly evolutionarily stable with positive feedback mechanisms.

English workers enjoyed higher wages, worked longer hours, and ate better than those on the continent. A new market-dependent culture evolved, and material goods and spending became valued in middle class society. Another radical idea was that consumers, as rational, self-interested people can make decisions, have rights, and produce. This was incompatible with the aristocratic ideas of people from different classes having different inherent abilities. These steps toward a cultural notion of natural equality seen toward the end of the 17th century were also manifest in an increasingly meritocratic system (Appleby 2010).

Capitalism replaced the feudal system in England with one enabling free exchange and markets, with a supporting social, economic, and political structure. Since capitalism involves a system of values, it cannot be imposed. People had to work, but they had more choice in when, where, and how. Producers sold through persuasion and intellectuals such as Smith argued effectively the merits of capitalism. This was instrumental in spreading capitalism and its values globally, and allowing for deeper roots to form in England (Marx 1848; Appleby 2010). The transition from a system that primarily works through coercion to one that primarily works through persuasion for achieving goals is worth noting.

Societies that allocate more resources to increasing their productive capacity through both capital and productive labor accumulate more wealth and achieve greater development. Funds to replace capital can only go to productive labor, while it is not the

case with profits and rent. Transferring productive resources into unproductive uses hinders wealth accumulation (Smith 1776). In other words, not only does allocation of talent drive or impede development, but also impacts the allocation of investment dollars.

According to Adam Smith (1776), if a person spends money on helping friends, hospitality, and/or charity, it is unproductive, even if generous. If the money was spent instead on durable goods for him/herself, the person was seen as selfish. However, he argued that it was a more productive use of resources since goods were acquired in exchange for money, given to productive individuals. Therefore, spending on durable goods contributes to development more than spending on charity.

A key to capitalistic success is getting control of resources to those who can use them best. Part of this is the ability to lend money for interest, hence profit, but the Catholic Church outlawed usury. Protestants, however, argued that usury could be legal if participants took into account charity and the Golden Rule. English lawmakers responded by permitting, but regulating usury. Once capitalism took hold, it was unstoppable (Appleby 2010).

The economies on the continent had to adapt to this new system, but did not have as much time as the English to do so. In France, the physiocrats supported an active government role in planning. They did not see any other option than top-down policy, legislating freedoms that had not evolved. While they were unable to overcome the cultural and institutional hurdles, theirs is an important example of how a country may try to emulate capitalism without having the individualistic values and culture necessary to sustain this system. When reforms are dependent on a person or group, they can be

undone much more easily than if they emerge endogenously from a gradual, evolutionary process (Appleby 2010).

US Development Model

A fundamental difference between traditional societies and capitalism is in the productive nature of the merchants' work. Profit could be reinvested, earning even more profit through innovation. Through competition, others had to be just as rational and systematic about earning profit to stay in business. Culture evolved and adapted; and while competition was always present, it developed to become acceptable and a social norm (Weber 1920; Appleby 2010).

Toqueville considered the willingness and ability to take only the useful traditions and leave the rest, along with the continuous searching and striving for improvement as the American philosophical method. America is exceptional in its emphasis on meritocracy, egalitarian social relations, equality of opportunity, and social mobility. Hard work and wealth creation are ingrained in classical liberalism, supported by increasing growth and education. The U.S. leads the world in the proportion of its young people pursuing higher education, as well as the diversity and competitiveness among its higher education institutions and participants (de Toqueville 1835; Lipset 1997).

Weber uses the expression "spirit of (modern) capitalism" to describe rational and systematic profit seeking. He also saw certain cultural attitudes best expressed through capitalism, and capitalism, in turn, fueled by these attitudes. Specifically, people in the middle classes fueled capitalism. Work, and earning a profit, is seen as honorable, necessary, and honest. Wealthy Americans feel obliged to work toward some public

good, even when they are done accumulating wealth. In fact, it is necessary for their reputation to do so (de Toqueville 1835; Weber 1920).

At the time of de Toqueville's observations, Americans had few inventions, but many innovations. They had an advantage in sailing and trade because they were enterprising and less risk-averse than their competitors. De Toqueville described Americans as inherently entrepreneurial. They associated new with better, change with excitement, and the potential for development limitless. With rapidly circulating wealth and social mobility, there were no idle rich. De Toqueville saw this as America's competitive advantage, and it would lead the US to be the major world trading power (de Toqueville 1835).

A major challenge in society is how to use wealth to maintain harmony between the rich and poor. As a country develops and accumulates wealth, there is increasing inequality. However, Carnegie saw this inequality as good, if not essential for increasing standards of living for everyone. With development and innovation, the poor can obtain better goods at lower prices. Carnegie argued that the poor of his time were better off than the rich of traditional societies. Competition that allows for economic progress comes at a price. It inevitably hurts some, but Carnegie saw this as being worth the cost, ensuring survival of the fittest in an economic system (Carnegie 1901).

Competent investors create wealth by making profitable investments. The businesses in which they invest must always move forward or backward; nothing is constant. Businesses must both make profit and pay interest on its capital. Through this process wealth accumulation is the most effective way to develop and living standards to

increase. Self-interest, rightly understood, is integral to American culture and values. It assumes that acting in one's own interest, in fact, can also benefit others (de Toqueville 1835; Carnegie 1901; Schumpeter 1934).

The 18th and 19th Century morality treated wealth generation and capitalism as natural, normal, and good for society as long as it was earned honestly. There was also a prevailing theme of responsibility and leadership within one's community for those who were economically successful. Some of this was religiously motivated, but others were motivated through secular and ethical reasons (Carnegie 1901; Hamer, 1998).

Religion can bring a sense of modesty to innovators. Americans do not trust great power into any one person's hands and profess virtues of equality. This value goes hand in hand with the need for decentralized power for development to emerge and become self-sustaining. While there seems to be a conflict between religion and wealth accumulation, the two may be closely related, especially with Calvinism and similar doctrines (de Toqueville 1835; Weber 1920).

According to Calvinism, enjoying wealth led to idleness and temptation. For them, leisure was the reward for hard work while alive, but happiness in the afterlife was the reward for increasing the glory of God. Therefore, wasting time was considered the deadliest of sins. Ascetic hard labor in a specific calling was valued. If a person were unwilling to work, it was a sign of lack of grace, slothfulness, and an abandonment of duty. This view that labor is the manifestation of a calling had real social and psychological consequences. Earning a profit had moral overtones, since a profit earned honestly was a measure of how effectively a person was glorifying God (Weber 1920).

Also important was the view that a wealthy person was a trustee of resources that should be used to create social value. The greater a person's wealth, the greater the responsibility he or she carries. Therefore, it was not wealth accumulation that was looked down upon, but extravagance and waste. This led to saving and its use for reinvestment, contributing to the development of a rational bourgeois culture (Weber 1920).

While the capitalistic culture had somewhat religious origins, it no longer needs religion to persevere. Entrepreneurs have often seen inherent value in development, the ability to employ many people, and overall improvement in community well being. Seen as typical today, Carnegie felt that anyone could be successful if given the proper tools and work ethic. Philanthropy was not charity, but enabling those who are willing to help themselves. One of his most influential pieces was his Gospel of Wealth, articulating his theory of philanthropy that inspires and provides direction to entrepreneur/philanthropists even today (Carnegie 1901; Weber 1920; Appleby 2010).

Carnegie viewed philanthropy as the only proper way to dispose of wealth, maintaining harmony between the rich and poor. He saw philanthropy as a way to use wealth, instead of giving it away through charity and/or bequests (Carnegie 1901). Inherent in his argument is the distinction between equality of opportunity and outcome, along with a sense of fairness. In the long run, philanthropy is likely to be more stabilizing than charity in terms of the health and resilience of a social system. Philanthropy is and has been essentially a capitalist investment in society (Zunz 2012).

According to Carnegie, charity is destructive for society, enabling people to live as beggars, without having to earn wealth or create value. He saw charity as rewarding bad behavior, and its only benefit in providing self-gratification to the donor. Charity was a sign of laziness to Carnegie, in that the donor did not take the time to donate thoughtfully to worthy individuals. Instead, he argued that resources should be given to those who are willing to help themselves, and therefore, deserving of such a gift. He also argued that people who are worthy of charity rarely need it, except for sudden changes or accidents (Carnegie 1901).

Carnegie saw philanthropy as creating opportunities to help people help themselves, and as the best way to provide lasting benefit to the community. Instead of forced wealth redistribution, the wealthy act as trustees for the public benefit, creating opportunity for those who would use such resources productively (Carnegie 1901).

Reinvestment of wealth through foundations put resources into the hands of those who wanted to invest them thoughtfully, addressing problems as they arise, in an open-ended manner. The wealthy were (and still are) empowered and only limited by their imaginations and vast wealth, funding libraries, research, hospitals, museums, universities, and other philanthropic projects and institutions. Philanthropy has enabled accumulated wealth to expand civil society and address long-term solutions to problems facing society, focusing on the root causes instead of the symptoms (Zunz 2012). It is essentially reinvesting the benefits of wealth and social value creation to create more social value, and opportunity for this cycle to continue indefinitely.

After the turn of the century, philanthropy became inclusive beyond wealthy industrialists to include millions of middle and working class Americans wanting to invest in a worthy cause. Philanthropy gained even more traction and engaged millions of Americans in strategic, thoughtful giving. This mass philanthropy has reciprocity at its core and has become an integral part of civil society. Philanthropy is woven into the fabric of American society as a way to actively participate in addressing societal issues, funding and helping to maintain civil society (Zunz 2012).

The American capitalist system may be the only sustainable model for development.⁶ American capitalism is based on entrepreneurship, development, and continuous innovation. While entrepreneurship is necessary for development, it is not sufficient for its sustainability and the transition to an entrepreneurial society. It is philanthropy that creates the positive feedback loop that is unique to the American system, contributing to its sustainability. Philanthropy is well suited to address problems in society, since it is outside both the market and state system, and due to its independent funding, is highly adaptable. Foundations reconstitute wealth through opportunity creation and act as institutional entrepreneurs and innovators. Charity treats symptoms of social ills, philanthropy works toward a cure (Acs & Phillips, 2002; Acs & Audretsch, 2007; Acs & Desai, 2007; Acs, et al. 2011; Zunz 2012).

American capitalism is unique from other forms of Western capitalism in its focus on both entrepreneurship and philanthropy. People have created great wealth, then reinvested it into society, building institutions and providing opportunity. This has been a

⁶ Seelos and Mair (2005) present a useful perspective on sustainable development, where development meets present needs without impairing the ability to meet future needs.

major contributor to both economic and social institutional development, creating a positive feedback loop in providing opportunity for future entrepreneurs to create wealth. In fact, to truly benefit from philanthropy, recipients must themselves be active agents for change (Acs & Phillips, 2002; Acs & Audretsch, 2007; Zunz 2012).

Philanthropy has been strong as a U.S. institution, even after the rise of the welfare state. In fact, the U.S. leads the world in private philanthropic efforts, in part due to the cultural propensity for private and voluntary associations, along with a distrust of government. Compared with other developed nations, the U.S. is the least generous as a welfare state, but the most generous with private giving. Much of this comes as a result of a value system that emphasizes equal opportunity, merit, and outcomes reflecting merit. Material wellbeing is not an entitlement but something to be earned. While the U.S. has more poverty and income inequality than other developed nations, it also has more opportunities and social mobility (Lipset 1997).

While some see charity as stabilizing in the short run, philanthropy is likely to be more stabilizing over time and provide lasting benefit (Carnegie 1901; Acs, et al. 2011). Such notions of philanthropy in the US reflect ideas about wealth as a means for creating social value and public benefit. In this scenario, wealth is an outcome of productive entrepreneurship that, in turn, produces opportunities for further social entrepreneurship and social value creation (Acs, et al. 2011). Productive entrepreneurship, philanthropy, and opportunity constitute a sustainable cycle for economic and social institutional development (Auerswald & Acs, 2009, Schramm, 2006).

Acs, et al. (2011) define productive entrepreneurship as resulting in social value creation⁷, whereas unproductive and destructive entrepreneurship do not have this component. They consider social entrepreneurship to include commercial entrepreneurship that creates both social and economic value. Also, social entrepreneurship and philanthropy are voluntary. Instead of imposing a structure, social entrepreneurship and philanthropy work within the context of an evolving society.

Social enterprises can be self-sustaining and/or generate profit while simultaneously creating social value (Dart 2004; Auerswald 2009). Social entrepreneurship is not necessarily purely altruistic, and commercial entrepreneurship can be socially responsible and ethical in practice. Commercial entrepreneurs, concerned with their own best interests, can generate both economic and social value. Profit does not necessarily exclude or negate other motives (Mair & Marti 2006), and economic value can reflect social value, depending on its context and effect (Acs, et al. 2011).

Social/productive entrepreneurship is symbiotic with its social environment in that success is determined through the provision of benefit to one's community, be it local, regional, or global in scope. Altruism is not necessary, nor is awareness to create social value. By creating wealth through mutually beneficial exchanges and/or innovation, the entrepreneur also can create social value, measured as wealth or other social benefit. As individuals can play multiple roles, so do entrepreneurs and their ventures (Acs, et al. 2011).

⁷ When resources are shifted from destructive to productive entrepreneurship, or to more productive activities, social value is created (Weitzel et al., 2010).

Foreign Assistance

US Foreign Assistance Policy

There are three main US policy objectives regarding foreign assistance:

humanitarian, development, and strategic (or security). Therefore, this section is divided into three subsections, one for each policy objective. While humanitarian and development objectives may appear altruistic, generally security issues have taken priority over the others (Ruttan 1996; Root 2008).

Humanitarian Assistance

The US provides more humanitarian assistance than any other country. It is designed to provide immediate relief to victims of disasters, ideally being need-based, neutral, and without conditionality (Hansch 2007; Riddell 2007). Because of its form and function, humanitarian assistance can be thought of as charity, even if it is the US government as the donor. Most humanitarian aid is food aid, and there is a significant mismatch between needs and donations (Riddell 2007). Generally donations reflect donor country political priorities more than what is best for the recipient country (Coyne 2013).

Development Assistance

Regarding development assistance, liberal internationalists tend to assume that development is straightforward and that development, democracy, and human rights are associated with each other (Packenham 1973; Ruttan 1996). However, growth and democracy are not inherently linked. Democracy does not guarantee a liberal society with widespread opportunities, rights, and an ability to have peaceful public discourse and resolution of grievances (Root 2008). As the institutions, culture, human rights, etc. needed for development and development evolved together, it is impossible to say which comes first and then translate this successfully into policy.

The Monterrey Consensus replaced the Washington Consensus, advocating that development comes from within, along with recipient country program ownership, mutual accountability, and partnership leads to increased growth (Isard, et al. 2006). This paved the way for the Millennium Development Goals (MDGs). For 2015, they are: poverty and hunger eradication, universal primary education, gender equality and female empowerment, decreasing child mortality, improving maternal health, combat HIV/AIDS, environmental sustainability, and global partnership for development (Easterly 2006).

Many development economists agree on four generalities. First, the Washington Consensus debate is out of proportion. Second, the long-run goal is good governance, public goods provision, etc. Third, going straight to these goals has failed, and fourth, new solutions involve good governance and organizational heterogeneity. Beyond these generalities, there is much disagreement (Pritchett & Woolcock 2008).

While central planning does not promote development, aid is often reflective of central planning. Societies and social problems are too complex for planning and social engineering to be effective. Some scholars argue that poverty traps exist and scaling up aid can help break the cycle. (Easterly 2006; Isard, et al. 2006; Easterly 2008; Coyne 2013).

Often donors are incentivized more to show that something is being done than implementing effective policy. For example, effectiveness is often measured in outputs or money spent, regardless of its effect on development (Easterly 2006; Coyne 2013). Politicians have incentives to cater to their constituents in the US, and foreign aid has

been used as a bargaining tool. Aid policy often changes due to domestic interests, economic concerns, government interests, and popular ideology. Donor objectives frequently take priority over recipient needs. Congress establishes foreign assistance budgets annually, with the amount and recipients being politically determined, with priorities varying each year. Part of the reason why the US has been so persistently ineffective in development assistance is due to the capacity for self-delusion (Ruttan 1996; Flickner 2007; Root 2008; Coyne 2013).

Strategic/Security Assistance

US foreign assistance tends to go to the most corrupt, internally divided, and unstable regimes. While development assistance is designed to benefit the population, strategic/security assistance is designed to benefit the government, often in exchange for an alliance. This can create and/or worsen problems when authoritarian governments lack legitimacy. Nearly all development assistance has addressed short-term solutions without long-term development. Even when there are constitutional reforms and rule of law on paper, there can be capture by elites, hampering effectiveness (Ruttan 1996; Westad 2005; Root 2008).

Gains from alliances tend to go to a small ruling coalition instead of to the general public. This maximizes individual rents; it is more effective to gain policy concessions from a small than a large coalition. Similar to natural resources, foreign aid reduces the need to raise revenue through meeting public needs and concerns. Alliances foster a patron-client relationship between countries. The relationship results in recipient country dependency and opportunity to manipulate US policy, fostering US dependence on unstable regimes (Westad 2005; Root 2008).

Development Assistance Outcomes

Hernando de Soto (1989) argues that excessive state involvement stifles entrepreneurship and development. Critics come from the left as well, arguing that assistance is a way for wealthy countries to control the poor (Ruttan 1996). In fact, there is vigorous research on both sides of the argument trying to demonstrate or refute the effectiveness of aid (Riddell 2007). Often these are conflicting claims about the potential for development assistance to reduce poverty. While there is talk about reforming the system, it is more difficult than increasing assistance. Planners promise to end poverty, but their plans so far have not worked, making the false assumption that planning is necessary to alleviate a “poverty trap” (Easterly 2008; Coyne 2013).

In fact, planners intervening in complex systems tend to think in terms of engineering problems and cannot fully anticipate all consequences of their actions. This is increasingly problematic because bureaucratic, linear thinking is the norm in anything that is state-led, including development assistance. Assuming complexity and systems thinking is far more appropriate than this engineering mindset and linear thinking. Individual people and organizations have insufficient knowledge to replicate the complexities inherent in markets and outcomes to allow for individuals to allocate resources best. However, it does not stop them from trying (Coyne 2013).

Development assistance takes place outside of the market context, generally within many layers of bureaucracy, without information such as prices to guide aid workers and allocate resources. There is a major reliance on central planning to allocate aid resources. Adaptability is crucial for development, but centrally planned assistance delivery tends to undermine this. In part, the aid distorts the information necessary for

economic calculation. People cannot allocate scarce resources where they are most useful without economic calculation, and markets with profit and loss accounting are absolutely necessary for this. Centrally planned allocation undermines economic calculation.

Economic development happens when resources are continuously allocated and reallocated to where they are most valued. Even if trial and error were replicated, without the knowledge inherent in a market economy, this can only make planning less inefficient, without solving the planner's problem (Coyne 2013).

Complicating matters, decisions made by donor countries tend to more closely reflect donor country political priorities than recipient needs, even if these overlap. Tied aid is a good example of this. Political competition replaces market competition in allocating resources. Feedback mechanisms from political competition are much weaker compared to markets. Lobbying, NGO, and contractor fundraising efforts spend resources to more effectively rent-seeking instead of engaging in productive activities. Also, as NGOs and other contracting companies compete for funds, they use up resources that would have otherwise gone to aid and are rewarded more for visibility than they are for meaningful results. This results in donor country political interests playing the central role in foreign aid allocation (Coyne 2013).

Integral to development is the ability for individuals to solve collective action problems effectively through institutions in a way that increases social value. Unless aid improves this, it can do more harm than good. In those cases, the solutions are usually unsustainable. Also, donor country citizens advocating for aid are generally not able to monitor effectiveness, constituting a broken feedback loop. Projects with beneficiaries

participating in provision, production, consumption, and alienation of goods and services tend to be more sustainable. Development assistance generates incentives that affect the sustainability of outcomes (Gibson, et al. 2005).

While in donor countries incentives allow people to realize gains from cooperation, in recipient countries incentives can hamper this, impacting development. Promoting development involves increasing public goods, investment in human and social capital, property rights, and low cost dispute resolution. Development often leads to increased equality of opportunity, but those in power have the most to lose (Gibson, et al. 2005). This ties into the requirement for development (or a high-impact entrepreneurial venture) to be evolutionarily stable.

Quality of government tends to have more of an effect than aid for development, and well-governed poor countries tend to grow faster than the rich on average. Empirically, foreign aid is associated with an increase in recipient country corruption and undermines its political institutions. While markets are crucial for development, they are emergent phenomena that donor countries have tried artificially engineer. While analogous to free markets in many ways, democracies are even trickier to establish and maintain. They involve complex systems of arrangements and institutions, and must also be limited and protect individual and minority rights to be beneficial for development (Easterly 2006; Coyne 2013).

Development assistance also faces adverse selection problems, since recipients tend to be those least able to meet the conditions. Signaling problems are prevalent, and moral hazard problems such as dependence on donor funding have positive feedback

mechanisms that can hamper development. Often in developing countries the public sector has rules and enforcement that can undermine development. The incentives are few to change this when there is more incentive to rent-seek and change the rules to gain an advantage rather than improve the system. Added to this, the Samaritan's Dilemma, where the donor has an incentive to help regardless of the recipient's level of effort, is highly prevalent (North 1990; Gibson, et al. 2005).

Institutions exist to decrease uncertainty, but this does not imply efficiency or benefit to development. As specialization and complexity increase in an environment, institutional effectiveness should also increase. Institutions must evolve as exchanges become increasingly impersonal, to enable doing business with strangers. Third-party contract enforcement and a state able to monitor and enforce property rights is key. Political and economic institutions, such as property rights and contracts, are interdependent (North 1990).

Evidence generally does not support a positive relationship between aid and development indicators (Root 2008). The literature examining the relationship between aid and growth is inconclusive, largely due to data limitations and measurement difficulties. While grants do not lead to unsustainable debt and distress, loans tend to be available in greater quantities (Isard, et al. 2006; Banerjee & He 2008). As with any subsidy, aid can become a crutch and undermine development, and grants tend to be more distorting than loans (Moss, et al. 2008).

The successful East Asian model of development involved autocrats who promoted an inclusive form of capitalism, investing in education and other public goods,

along with rule of law and property rights (Westad 2005; Root 2008). Investments in education (i.e. human capital) and health have high economic growth payoffs (Ruttan 1996). The evidence suggests the direct effect of aid alone in reducing poverty is quantitatively small if anything (Isard, et al. 2006).

Economic assistance for non-economic objectives tends to lead to decreased effectiveness. Recipient governance and policies matter for this (Ruttan 1996; Easterly 2006; Isard, et al. 2006). Aid can undermine the ability to budget effectively, create a set of perverse incentives, and lead to unsustainable government spending, especially given increasing volatility. It also may decrease incentives for taxation, institution building, project ownership, participation, and accountability (Isard, et al. 2006; Moss, et al. 2008; Reinikka 2008). The Dutch Disease theory suggests that aid can have similar effects as natural resources, in the appreciation of local currency, decreasing export competitiveness, and increased demand (Isard, et al. 2006). Empirically aid has had similar effects to a resource curse (Easterly 2006; Root 2008).

Development Assistance: Charity versus Philanthropy

The way in which the United States experienced development was very different than the charity-based assistance model. First of all, the institutional and social environment necessary for social/productive entrepreneurship to emerge developed endogenously over hundreds of years. The United States (and England) has had a culture that is exceptionally more individualistic with a greater notion of rights such as limited government and private property (MacFarlane 1978). For the United States, development

has been an endogenous process that is still ongoing, which is in stark contrast to development being attempted exogenously over a period of decades or even years.

The key difference focused on in this dissertation is the form and function of giving. Specifically, instead of charity, or giving with the short-term vision of alleviating immediate suffering, the United States benefitted from institutionalized and widespread philanthropy. This was conceived as a preferable alternative to charity and a way to use wealth that is morally consistent with a Calvinist doctrine. If the true purpose of giving is to alleviate human suffering, long-term solutions are more effective. Philanthropy accomplishes this by providing a way to not simply give but to invest wealth back into society, creating opportunity and fostering social mobility (Carnegie 1901; Weber 1920; Acs et al. 2011; Coyne 2013).

The distinctions between charity and philanthropy are deep, structural, and have an impact on society and development. For example, charity, as a vehicle to mitigate immediate suffering, does not necessarily result in social value creation over a long period of time. It does not, nor is it designed to mitigate any root causes of poverty, suffering, etc. Recipients of charity rarely have to do anything other than receive the benefits. Charity is not sustainable due to its reliance on donor funds. (Acs, et al. 2011).

On the other hand, philanthropy reinvests capital into society, purposefully creating opportunity through vehicles such as education, research, and public investments. Opportunity creation helps people to help themselves and therefore requires active participation from those seeking to benefit. It is designed to have long-term, structural impacts, often without realizing short-term gains. Increased opportunity also

creates social value (albeit indirectly), and fosters social mobility and meritocracy (Acs, et al. 2011).

It is not a stretch to suggest that given the very real differences between charity and philanthropy, that different charity/philanthropy compositions of development assistance is likely to affect incentives differently. Development assistance composed primarily of charity provides immediate payoffs to recipients with these recipients having to do little in return, and does not develop institutions. However, philanthropy has primarily long-term payoffs with recipients having to earn the benefits (such as finishing college). These long-term payoffs are designed to increase opportunity and the productive capacity of a society. In other words, philanthropy is designed to foster social/productive entrepreneurship and to keep it sustainable within a society.

Therefore, the focus of charity versus philanthropy in terms of development assistance can significantly affect incentive structures related to entrepreneurship (and therefore development). Different incentive structures drive choices to engage in different types of entrepreneurship, and different development outcomes as a result. In other words, the more social/productive entrepreneurship vis-à-vis destructive entrepreneurship exists within a society, the greater the development. The opposite is also likely to be true (Baumol 1990; Murphy et al, 1991; Desai 2008; Acs, et al. 2011). Thus, the charity/philanthropy structure in development assistance programs is likely to have an effect on development outcomes generally and within a COIN context specifically.

Insurgency/Counterinsurgency

Insurgencies and terrorism have dominated conflict since WWII, and continue to increase in prevalence relative to conventional conflict. An insurgency is a competition for the support and/or compliance of the population between the government and insurgents. Insurgencies are highly complex and involve many levels of strategic interactions. Insurgent groups are distinct from terrorists and criminals because they rely on broad support from the population and are actually somewhat willing and able to replace the government.⁸⁹ However, they are weaker than the government in terms of military strength and resources, and instead tend to use a combination of asymmetric warfare and persuasion (Galula 1964; FM 3-24; Boot 2013).

Counterinsurgency (COIN) describes the effort of the government and/or its allies to defeat an insurgency. This can include both military and civil operations, the latter including public safety, social service provision, and persuasion to win back or maintain the population's loyalty to the regime (FM 3-24). The COIN literature has received new interest and vigor due to the challenges that the US and its allies have faced in Iraq and Afghanistan.

⁸ The main distinction between communal civil war and insurgency is coherence. Communal civil war involves various groups vying for power, and often appears chaotic to an outsider. For more detailed information on civil war, see The Logic of Violence in Civil War by Stathis Kalyvas. A classical insurgency, ala China, Vietnam, or Algeria on the other hand, is a coherent movement, rooted in ideology, and struggling against an established power. For more information on insurgency cases, see Counterinsurgency in Modern Warfare, edited by Daniel Marston and Carter Malkasian.

⁹ Terrorism is a concept that is distinct from insurgency. While it is a common tactic, terrorist groups do not have political agendas other than having their policies adopted. They use strategic violence, generally against civilians, to invoke fear and uncertainty to gain policy concessions. Insurgents, while at times using terror tactics, actually strive to eventually replace the government and control territory. Within controlled territory most insurgent groups provide social services such as health, schooling, dispute resolution, etc., while terrorist groups have no such ambitions (Bartholomees 2010; Boot 2013).

T.E. Lawrence was the first theorist to write about insurgency. Instead of conventional warfare, the purpose of which was to win the decisive battle, the guerilla sought to have the longest possible defense. However, it was Mao Tse-Tung who developed the theory of insurgency warfare that serves as the foundation for modern theory. He saw a long defense and war of attrition as necessary, along with popular support. Eventually, as the enemy became weaker, the ratio of power would shift and the ultimate victory would be through conventional warfare (Mao 2005; Bartholomees 2010).

A common, defining feature of insurgency is a cause. This cause distinguishes insurgents from the government and motivates at least some of those who fight for and/or support the insurgency. Often insurgencies stem from legitimate grievances, can be ideologically or identity-based, and are exacerbated by power vacuums where they exist. As a country starts developing, population expectations rise, possibly leading to a sense of relative deprivation. These expectations (and disappointment) are also exploitable grievances. Societal problems, limited national consensus, ineffective government leadership, and lack of population control/safety can enable an insurgency to emerge (Galula 1964; FM 3-24).

Insurgents have an advantage in that only they can start the conflict. However, once this has started, they are up against counterinsurgents that have more resources, power, and conventional forces. Therefore, insurgents often resort to terror and guerilla tactics, leveraging intangible assets, and prolonging the conflict to exhaust the counterinsurgents. They do not fight “fair” by conventional standards but also may use nonviolent tactics, such as political mobilization (Galula 1964; FM 3-24).

Initially, the counterinsurgents have an advantage in greater resources, but they must also maintain order and provide social services. The insurgents initially have an advantage in that they do not have this responsibility. Social service provision sends a strong signal. If the group in control of an area (whether insurgent or counterinsurgent) does not provide these services, then it signals incompetence and/or lack of concern, decreasing support. However, if the group in control is effective at maintaining order and providing social services, it shows competence and concern, which can lead to increased support. Without outside help, it is difficult for the local government to fight an insurgency indefinitely, given an exhaustion strategy on the part of the insurgents (Galula 1964; FM 3-24). That being said, it is nearly impossible for a foreign counterinsurgent force alone to win in an insurgency struggle. The best it can hope for is to enable the local government to defeat the insurgency (Nagl 2002).

According to Galula (1964), an insurgency is approximately 80% political and 20% military. This is what winning over “hearts and minds” refers to. In order to win, either party must essentially gain the population’s consent to be governed. The only way to win is to truly gain support of the population and to be at least somewhat effective as a government. Strategies such as this and clear-hold-build are population centric. These are much more difficult to execute than enemy centric strategies, focused only on killing insurgents or guerillas. Population centric strategies combine sticks and carrots to gain the local population’s acquiescence to counterinsurgent rule and work best when local elites are willing to cooperate. Political reform and addressing legitimate grievances can be a counterinsurgent’s most powerful tool (Boot 2013).

In fact, a local, popular regime can afford to be harsher than a foreign counterinsurgent force. This is especially true if the foreign force answers to a democratically elected government, sensitive to public opinion. Ultimately, it is the local non-combatant civilians who suffer the greatest (Boot 2013).

Policy Context

Since the invasion of Afghanistan after 9/11, the US government has incurred significant costs in terms of financial resources, human lives, and foregone opportunities toward a counterinsurgency (COIN) effort. The justifications for this include improving national security, increasing regional and global stability, and decreasing the incidence of terrorism fueled by violent Islamist extremism. This effort has expanded beyond traditional COIN to include nation building and faces an insurgency with greater complexity than traditional insurgency. Instead of a coherent movement struggling for national identity or ideology, the United States faces insurgents with often-conflicting tribal, ethnic, and religious loyalties. They do not constitute a coherent group of people with whom to compete, or a coherent enemy to fight. While the traditional COIN framework can be effective in defeating an insurgency, it is not as applicable when facing such complexities (Walker 2009).

Specifically, the United States has adopted a clear-hold-build strategy. This strategy involves three components. The “clear” component involves clearing an area of insurgent activity and has a primarily military focus. This could involve arresting or killing insurgents, driving them out, and/or persuading insurgents to support the counterinsurgency. Then, the “hold” component involves bringing stability to an area and

keeping it relatively free from insurgent activity. Holding primarily involves policing the community, useful for population control and to provide security. Finally, the purpose of the “build”¹⁰ component is to improve infrastructure and foster development (Galula 1964, FM 3-24). Comprised primarily of development assistance in various forms, it is the build component that is the focus of this research.

How the US Government Sees/Defines Build

There are three inherent and untested assumptions within the “build” component of the clear-hold-build strategy. First, there is the assumption that “building”, which is largely development, is possible within a COIN context. Second, the US government assumes that stability plus development assistance and infrastructure is a successful way to foster development. Third, there is an explicit assumption that development will benefit US counterinsurgent efforts and policy goals (FM 3-24).

These assumptions are problematic since charity-based development assistance has not historically promoted development (Root 2008). It is also problematic that such an integral part of COIN strategy is not based on empirical evidence, but upon assumptions. Much of the reason for this is a lack of coherent theory surrounding issues relevant to both development and COIN, along with a lack of data. With a coherent theory to guide data collection, some of this lack of evidence could be addressed¹¹¹².

¹⁰ For the purposes of this dissertation, “build” or “building” refers to how the US government has defined and described this component in FM 3-24. This field manual is official policy and guidelines for conducting COIN activities. Building includes development assistance and other development-focused activities, infrastructure development, institution building, etc.

¹¹ This study acknowledges that some data is not collectible. A good example of this is the novelty of US COIN efforts. There are few, if any other examples of a foreign counterinsurgent force that has successfully invaded an area, provided stability and development, and left.

¹² While it may be tempting to make a comparison between current COIN efforts and the Marshall Plan, a key difference is that Germany and Japan were already developed when they lost the war. Also, both

In fact, most of the recent research on insurgency and counter-insurgency has been descriptive, mainly case studies and experience. The US Army/Marine Field Manual (FM-23) is rich in its attempt to generalize from particular conflict situations, developing an overall theoretical framework and COIN strategy for U.S. forces. However, comprehensiveness is attained at the expense of clarity and rigor.

The build component in a clear-hold-build strategy is seen as important but is the least straightforward of the three components. According to the Army-Marine Counterinsurgency Field Manual (FM 3-24), building involves economic and institutional development, along with improving and protecting infrastructure. It should be primarily administered by civilians such as other US government agencies, NGOs, private companies, multinational government organizations, etc.¹³ However, what the field manual is not explicit about is how it defines development and building beyond this.

Since it is US military doctrine to involve civilians with the build component whenever possible, often it is administered through the form of development assistance. The development assistance could come from the US military, USAID, or other agencies and organizations. It is reasonable to assume that the US government is doing the best it can with what it knows and what it can deploy. However, there is a real disconnect between the stated end of economic and institutional development and the ability of development assistance as means to achieve this end.

countries were clear losers in a conventional war, surrendered to the Allies, and accepted temporary foreign domination to the extent that there was no large-scale insurgency after WWII.

¹³ However, FM 3-24 acknowledges that often it is the military that must build.

The US government also assumes that development and COIN outcomes are related within a clear-hold-build strategy. If the group in control of an area (whether insurgent or counterinsurgent) has policies that enable development, it could be stabilizing with a positive effect on that group's effort (FM 3-24). Therefore, if the means for building (improving infrastructure and development assistance) in this context has a positive effect on promoting development, then it is also hypothesized to have a positive effect on COIN efforts. Since development emerges as a result of social/productive entrepreneurship, the build component would necessarily have to result in improved incentives for this. However, the opposite could be true; if incentives promote destructive entrepreneurship, then it could hamper development.

While there are data on individual programs and activities, it is not clear if the building and other activities actually lead to development (or at least stability). If current programs are not effective in this regard, it is also unclear if and how these programs should be administered, changed, structured, etc. to increase effectiveness. What is unfortunate is that the very means used to build, or foster development, could hamper the host nation's ability to have good governance and promote development on its own.

Insurgency and Development

Another lens to view insurgency emergence is through development, defined in this research as an aggregate increase in the standard of living, or social value¹⁴ for a society. When two opposing sides compete for the support of the population, both sides

¹⁴ This definition of development acknowledges that social value is subjective. When social value is discussed in this research, it refers to the social value within a society, however that society happens to see and define it. It is outside the scope of this research to provide a clear and objective definition of social value beyond this that is applicable across cultures.

are attempting to send a message that they are willing and able to provide a better standard of living, or greater social value. Even if the insurgents and counterinsurgents do not explicitly discuss development, the increase in overall social value is consistent with the definition used here.

For this competition to take place through conflict (instead of elections or other nonviolent means), certain conditions are necessary. First, at least some of the population has to be disappointed enough with the current level of social value or standard of living to constitute a grievance. They also have to be convinced that the current regime is not willing and able to address the grievance(s) nonviolently. Then, the insurgents have to provide a message that is convincing to enough people that social value or standard of living would improve (i.e. development) under a regime controlled by the insurgents. This message has to be so convincing that some people are willing to take risks and even possibly die for the cause.

Agent-Based Insurgency Models

Agent-based modeling (ABM) is a novel methodology that attempts to recreate complex phenomena using computer simulations. It is a bottom-up approach focusing on individual agents, their interactions, and the resulting emergent phenomena. A computer can pursue the logic of scenarios many orders of magnitude further than a human brain can. Therefore, it is a good way to study complex adaptive systems, including social systems such as insurgencies. ABM also presents an opportunity to understand processes and dynamics, and possibly an early warning system (Cioffi-Revilla & Rouleau 2010).

A model is a representation at some level of abstraction, and a simulation as operating the model over time. It is up to the modeler to determine which level of abstraction is appropriate. In ABM, modelers start with defining agent behavior through a simple set of rules that reflect agent goals. Initially the model is very basic, but complexities can be added in future iterations. As agents interact and have experiences, certain individual attributes change (Banks & Sokolowski 2010). However, explanatory power decreases as interactions and environments increase in complexity (Camerer 2003). It is also impossible to completely remove all arbitrariness from the modeling.

Chaturvedi (2005) modeled how tensions emerge within a state, and turn into violent conflict. Relying primarily on rebellion theory, the paper focused on grievances, resources, and mobilization. Chaturvedi modeled Indonesia as a case study through a Virtual International System developed in the Synthetic Environment for Analysis and Simulation (SEAS-VIS).

Another model based on rebellion theory is MASON RebeLand. This model builds on others to address how a polity responds to stress and government performance, along with instability emergence. It is written in MASON, a Java-based simulation toolkit. This model makes three main contributions: a complete polity model with structure and processes, social and natural components, and emergent dynamics between an insurgency and the polity. Complex systems and processes are incredibly important to understand, especially when faced with having to create policy and resulting unintended consequences. RebeLand has been able to replicate real world dynamics, including a

Pareto (power-law) income distribution and bimodal distribution of public satisfaction (Cioffi-Revilla & Rouleau 2009, 2010).

On a different note, McCormick & Giordano (2007) modeled dynamics of nascent insurgency and the use of symbolic violence in gathering public support. Symbolic violence signals that the insurgents are powerful, in order to alter civilian beliefs about the probability of an insurgent victory.

Also, since insurgencies are spatial, understanding these dynamics is important. A relevant model is the contribution from Farley (2007), focusing on public opinion, how it spreads, and how it relates to territorial control. In addition to this, Berman, et al. (2008) presented a geospatial model demonstrating that the largest service provision is in the most violent areas, having a robust effect on reducing violence.

Doran (2005) draws from classical theory such as Guevara and Debray's theory of "foco", as well as sufficient conditions discussed by T.E. Lawrence. His Iruba model of guerrilla warfare involves recruitment and attack dynamics. Victory is achieved when the other side is eliminated, with positive feedback dynamics, so that the larger an insurgency becomes, the more likely the insurgents are to win.

Other models focus more on trade-offs between strategies. With one exception, they generally show consistent evidence supporting a "hearts and minds" or recruitment strategy. Good examples of this include the papers by Findley & Young (2006, 2007), which examine the success of a "hearts and minds" strategy versus one of attrition. Their 2006 paper examines this from a cost-structure perspective, and their 2007 paper dealt

more with public opinion as a response to counterinsurgent and insurgent actions and propaganda.

Bennett (2008a,b) built upon Findley & Young's work and modeled population dynamics in response to government forces counterattacking insurgents. A tradeoff between accuracy and effectiveness emerged, showing that insurgencies are short-lived when the government is both accurate (minimizes collateral damage) and effective (kills/captures insurgents). Then, in Bennett 2008b, he addressed the tradeoff between fighting and persuasion and found that persuasion is a dominant strategy for both insurgents and counterinsurgents.

However, amidst agreement in the literature supporting a hearts and minds approach to counterinsurgency, Downes (2007) presents a counterexample to this. He finds that when the population supporting the insurgency is small and relatively isolated, indiscriminate killing of civilians is actually effective.

Banks and Sokolowski (2010) present a case study of Nigeria and produce a basic model demonstrating the effects of increases in security forces on insurgency. In their model, the relative importance and methods of the counterinsurgents and insurgents are the determinants of insurgency progression. According to this simulation, adding more police has little to no effect, implying a better strategy would be to change police methods instead of increasing numbers.

Agent-based models can be used to test hypotheses that are relevant to complex, emergent phenomena, such as theories behind insurgency and development. Often refining the questions to be asked is more important than the answers. For example,

Silverman (2010) created a synthesis of social and cognitive models to create a virtual social system. In this framework, policy makers could test policies and make mistakes in the virtual world before testing them in the real world.

Currently the Office of the Secretary of Defense is financing the Human Social Culture Behavior (HSCB) Modeling Program to support the need of modeling and applications to decision making. The complexities of current operations outpace capabilities of traditional modeling and theory, and are connected with the density and speed of interactions. Computational simulations are useful for addressing this, especially in generating what if scenarios for military operations (Schmorrow, et al. 2009).

Not only have these models been useful in providing insights into insurgency, counterinsurgency, and conflict more broadly, computational models have much to offer when attempting to model entrepreneurship. Specifically, computational models would be good for modeling the effect entrepreneurs have on society at a systemic and process-oriented level.

The COIN literature can also benefit from testing the hypotheses surrounding the “build” component of the clear-hold-build strategy. Specifically, the US government (and her allies) assumes that once the counterinsurgents are in control of an area, they can, through what is essentially development assistance, “build” the area under control. There is an inherent assumption in this strategy that development assistance in these controlled and relatively stable areas leads to development. It also assumes that this development, if it occurs, benefits foreign counterinsurgents.

Conclusion

Essentially, the quantitative and qualitative literature covering entrepreneurship, development, and COIN provide a set of compelling and intuitive stories. However, until the processes are understood in a rigorous fashion—until we understand the micro-level actions of the entrepreneur and how development may or may not emerge, there is a missing link. This dissertation is a first step to testing the stories we tell and works to fill in this gap.

While there is a literature that covers the distinctions between charity and philanthropy, the impacts of using one or the other in a development assistance context is not well covered. This research explores how the charity/philanthropy breakdown of development assistance can affect development outcomes. This is a first step in rigorously developing theory relating to charity, philanthropy, development assistance, and the effects within a social system. Currently this aspect is not at the forefront of the discussions in the literature or in policy. This research provides insights into the relationship between these aspects.

Finally, this dissertation seeks to inform COIN practice and theory to clarify and guide conceptual understanding for what it takes for the build component to be successful. Having a greater insight into incentives, philanthropy, development assistance, entrepreneurship, and how they all relate to COIN and development more broadly, could help practitioners in constructing their development efforts.

CHAPTER THREE: TOWARD A THEORY OF SELF-SUSTAINING DEVELOPMENT

This chapter explores development as something beyond writing constitutions and building infrastructure—it involves people solving problems. Specifically, entrepreneurs do this within the context of a market-based social system. All social systems, whether market-based or not, developed or developing, are complex and adaptive. As with any other complex adaptive system (CAS), individuals act in ways that both react to and shape their environment. When the majority of these solutions involve mutually beneficial exchanges and/or innovation, development emerges on a system-wide level.

Development involves both the productive entrepreneur solving problems within the market and the social system that allows for this. The social system has to allow for productive entrepreneurship to occur and for this type of entrepreneurship to be generally more profitable than unproductive or destructive entrepreneurship. Development involves institutions such as rule of law and property rights, as well as a widespread acceptance of creative destruction and enough social mobility to allow talented entrepreneurs to become successful.

Certainly the phenomenon of development emergence (and if it exists at all) is important. However, this is not the entire story. What is even more important is the

continuity and sustainability of this development. Self-sustaining¹⁵ development is not guaranteed. Once development emerges, new elite classes and social structures can form and become rigid enough to stifle any future development to maintain the status quo.

A major purpose of this chapter is to define self-sustaining development and create a framework through which a country's development can be categorized. It starts by defining self-sustaining development and outlining the conditions necessary for self-sustaining development to emerge and exist. This set of necessary conditions is presented across a set of dimensions, drawing primarily from institutions and complexity theory. Each dimension is then discussed in greater detail, both on a theoretical level and how it applies to both Anglo-American capitalism and what the US is attempting in its COIN efforts.

Self-Sustaining Development: An Overview

Describing development has taken many forms and is has been seen through many lenses. These lenses can be historical, institutional, economic, even cultural. However, there are two main limitations—first, these development stories and explanations lack a common thread tying them together with a framework applicable to any society. This chapter takes a first step in creating such a framework, drawing from institutions and complexity theory.

¹⁵ This dissertation uses the term “self-sustaining” instead of “sustainable” development for two main reasons. First, the concept of sustainable development often has a focus on the physical environment. While this is a valid and important type of sustainability, the environment for entrepreneurship and development is more than this but also includes social, institutional, cultural, etc. environments. Both the social and physical worlds are important. The second reason is that self-sustaining implies that sustainability is not only possible but develops and sustains itself from within. This concept is a more accurate description of the development phenomena discussed.

Second, a common, unfortunate assumption is that the social system(s) of interest are complicated, not complex. The distinction between a complicated and a complex system is important and can have serious policy consequences. While both complex and complicated systems have many interacting components, this is where the similarities end. For example, a car is a complicated system. There are many working parts, each of which must perform in a certain way for the car to function. In a complicated system, when a component is removed or stops working, the consequences are predictable. Then, the part can be replaced, leading to another predictable result. However, a complex system such as a society does not function like a car. We cannot simply pull a policy lever or make a change with a completely predictable result.

In contrast to a complicated system such as a car, a social system is a type of complex adaptive system (CAS). Social systems are complex in that they consist of a network of dynamic interactions and are not simply an aggregate of components. It is not just the individuals that matter, but how they connect with each other and interact with their social, physical, and institutional environment. A social system is also adaptive in that people both are influenced by, and influence, other people and their environment. Changes in response to these interactions are apparent over time both on system and individual levels. Such evolution is present throughout social systems, as with any other ecosystem.

Specifically, this dissertation posits that development is both a process and emergent phenomenon, occurring within a complex, adaptive social system. As important and interesting the process of development emergence is, emergence (i.e. development

happening) is not the entire story. Even if development emerges, it is not guaranteed to continue. It is possible that development eventually plateaus, especially if those with the most to lose are powerful and/or coordinated enough to prevent any threats from creative destruction to emerge. In this case, the development story is little more than its emergence (and eventual plateau).

Self-sustaining development, however, is beyond emergent. What distinguishes self-sustaining development is not simply in its emergence, but in its continued existence and dynamism over time. With all the benefits of development, the inherent creative destruction is destabilizing. Instead of leveling off, or regressing, a social system with self-sustaining development experiences this destabilizing creative destruction continuously, but with enough stability and predictability for the social system to continue functioning.

Self-Sustaining Development: Necessary Conditions

This section provides an overview of the necessary conditions for development to emerge and become self-sustaining. Without exception, when the conditions have been right for development, it has emerged. As the phenomenon of self-sustaining development is not as well understood, a framework that consists of necessary conditions/dimensions and their implications is a useful place to start.

A set of necessary conditions as an initial theoretical framework is useful for a couple of reasons. First, necessary conditions help to create a mental model that draws upon incredibly diverse literature that spans complexity theory and development. Instead of finding the sheer volume and diversity of knowledge overwhelming, a set of necessary

conditions helps to make this concept accessible enough to build upon through research. Second, each of these necessary conditions can be seen independently and jointly as a set of testable and verifiable hypotheses.

While testing these hypotheses in a broad manner across countries, economic systems, and time is beyond the scope of this dissertation, this set of conditions can be empirically tested to determine if they are truly necessary (individually or jointly). Generally, this should be an important consideration when formulating theory, and creating a framework that is testable and verifiable is especially important for a public policy dissertation. Therefore, presenting a set of conditions or dimensions is a logical first step in building a theory of self-sustaining development.

Table 1 below describes different methods or forms of development and how each can be categorized and described, integrating concepts and conditions from institutions and complexity theory. While there are four categorizations presented in the table for comparison, the focus of this dissertation is on self-sustaining development, central planning, and the attempted transformation from non-development (as seen with COIN in Afghanistan). Therefore, this section focuses on elaborating upon these types specifically.

Self-sustaining development is discussed because this is the category within which the US fits. Considering the US to be a success story in terms of experiencing development in a continuous and self-sustaining manner, it is important to understand this success. It is especially relevant considering the importance of understanding the donor country development context. The US is not attempting to conduct development and nation building in a vacuum, but is shaped by its own experiences, viewpoints, and

development story. Second, an attempt at centrally planned development from non-development is discussed using this framework because this is what the US is attempting to do within its counterinsurgency efforts. This “building” is a top-down, planned attempt at development and nation building that is fundamentally different from how the US developed.

Table 1 Development Emergence and Sustainability Framework

Dimension	Development: Self Sustaining	Development: Non-Self Sustaining	Development: Centrally Planned	Non- Development
Development Emergence	Yes	Yes	No	No
Creative Destruction/ Innovation	Continuous	Initially, then decreases over time	Minimal if any	Minimal if any
Social Mobility	High, meritocratic	Moderate-high, decreases over time	Minimal if any	Minimal if any
Institutional Inclusivity	High	Initially high, decreases over time	Initially low, may increase over time	Low
Individual Resource Control/ Distribution	High	Initially high, decreases over time for non-elites	Initially low, may increase over time	Varies
Time Inconsistency of Preferences	Low	Low-Moderate	Low-Moderate	High
Stability-Individual	Low	High	Moderate-High	Varies
Stability-Social System	High	Moderate-High	Low	Varies

Development Emergence

Emergence is a concept central to complex adaptive systems generally and development specifically. Development is a phenomenon that emerges over time and has the potential to sustain itself through an adaptive process. Self-sustaining development is not something that can be centrally planned (Coyne 2013; Root 2013). This type of development is adaptive at the system level, with individuals solving problems that arise at its heart. Individual problem solving (such as productive entrepreneurship) drives the adaptive process of self-sustaining development.

While central planning can facilitate some development, without the social system being able to adapt to new problems in a productive way, development cannot sustain itself. This explains in part the continuing success of development in the US—individuals (and not just elites) are continuously empowered to solve problems in a way that is beneficial for both the individual and the social system as a whole. American capitalism as we know it today was not created overnight, nor was it created with the Constitution. In fact, the American capitalist system was not created at all—development in the US emerged over time and continues to adapt, evolve, and grow. Productive entrepreneurs solve problems within the market, and philanthropists create the opportunity that helps to keep the system self-sustaining.

Philanthropy emerged from an American need to balance self-interest and generosity. In fact, it is integral to American capitalism, yet not discussed or understood to the same extent as other components. Philanthropy is part of a social contract that compels those who create and amass great wealth to reinvest it so the system they benefitted from may continue to thrive (Acs 2013). In other words, it is philanthropy that

enables American capitalism to go beyond development emergence to experience self-sustaining development. The true success of American development is not its emergence but its continuous, self-sustaining success. Philanthropy, integral to self-sustaining development in the US, must be understood thoroughly in order to meaningfully understand self-sustaining development.

A sharp contrast to this is the US COIN efforts in Afghanistan. Instead of development emerging from individuals solving problems, the US is attempting a top-down, centrally planned development effort in a system in which development has not emerged on its own. Foreign counterinsurgents are attempting to perform this problem solving and development function for the Afghans through allocating resources and attempting to create institutions almost from scratch. Without Afghans being empowered and able to solve their own problems, this effort is likely to hamper the emergence of development over time.

Creative Destruction/Innovation

Creative destruction is a condition necessary for development to emerge.

However, this process is destabilizing and can be seen as stressful. It certainly poses a threat to those who currently hold wealth and/or power and have something to lose (Schumpeter 1934). Different social systems have different tolerances for this, if at all.

When self-sustaining development is present, there is continuous creative destruction and innovation. In contrast, a system that does not sustain development would exhibit decreasing creative destruction over time, and a system with centrally planned development would primarily focus on integrating the innovations of others. Any creative

destruction in a centrally planned system would be primarily top-down, inorganic, and therefore is not sustainable without this deliberate interference.

American capitalism may be the only form of self-sustaining development, in the continuous opportunity it provides and the creative destruction it accepts. Innovation and creative destruction continuously drive development in the US as new technologies and processes are continuously brought to market. This continuous innovation and creative destruction are such an integrated part of the US system that they are routine in many markets (such as mobile technology). In fact, productive entrepreneurs in the US practically invented the phenomenon of “planned obsolescence”. It is through this continuous creative destruction that the US experiences self-sustaining development. Through this process, superior innovations replace inferior ones, with intense competition disrupting entire markets and even regions. This dynamism is part of the US market structure.

There is a tension that comes along with creative destruction, not between specific winners and losers, but if it is allowed to exist at all (Acs 2013). A balance is maintained in the US that allows the system to generate both wealth and opportunity for future generations to create such wealth and opportunity. It is a virtuous, but highly delicate cycle that has been necessary for self-sustaining development in the US. Philanthropy, at the heart of this cycle, works because it is entrepreneurial opportunity creation. The same energy that entrepreneurs use to create wealth is then used to help ensure others can do the same. This is the opposite of behavior that focuses effort on ensuring that others are

not able to become entrepreneurs, decreasing the ability for development to be self-sustaining.

Philanthropists strengthen the American capitalist system by fueling knowledge creation, providing the opportunity for others to innovate and commercialize these innovations. They are entrepreneurial in that they innovatively create opportunity, solving problems outside of the market in similar ways that many of these same individuals have done within the market. In this way, philanthropy can be seen as a force of creative destruction, working with other forces to maintain this.

However, creative destruction in many societies is treated as a threat. It is entirely possible that a society can experience development emergence, but then focuses more energy into preventing further creative destruction than continuing to participate in this innovative process. This would be the opposite of what philanthropists are working to achieve. Whether developed or not, this acceptance of continuous creative destruction is a main distinction between societies that exhibit self-sustaining development, and those that have not.

As a sharp contrast to experiences within the US, development assistance resources within the COIN effort are more focused on incorporating and using existing technology than of teaching people to be innovators. Even the programs that focus on technological assistance and improvement, at best they teach people to learn from others, not to solve their own problems. The following chapter explores this issue in greater detail by providing the breakdown between charity, philanthropy, and subsidies.

Social Mobility

The phenomena described in this framework can only be observed over several generations. Integral to the notion of self-sustaining development is that there is a high degree of inter-generational social mobility. What this means is that a generation of highly successful productive entrepreneurs does not guarantee the elite status and/or wealth of their children or grandchildren.

The economic sphere is not the only realm in which creative destruction is accepted and expected. The US is incredibly socially mobile, both for those born in the US and for immigrants. In fact, philanthropists in the US purposefully create opportunity that attracts large numbers of talented and hard working immigrants. Becoming a self-made success and moving ones status up socially and/or economically is highly valued.

The American wealthy class consists mainly of self-made entrepreneurs, fundamentally different than the systems in which wealth is primarily inherited. In fact, philanthropy is an American invention that is specifically designed to actively work towards meritocratic social mobility. It provides opportunity for the middle classes to continue to better society through hard work and innovation, with the most successful rising up to the wealthy class. Even with relatively low social welfare provision and high income inequality, the US is the most socially mobile and meritocratic. Americans generally reject the notion of a class system based on inheritance and highly value self-made wealth. In fact, the American wealthy class consists mainly of self-made entrepreneurs, fundamentally different than the systems in which wealth is primarily inherited. Simply put, the productive entrepreneur-turned philanthropist is the American hero (Carnegie 1901; Acs 2013).

For individuals to take advantage of entrepreneurial opportunity created by philanthropy, they must be willing and able to do so. This involves hard work. What philanthropy is designed to do is provide opportunity for and improve the ability of those who are willing to work for it to succeed. It is important because individual initiative and hard work is required to both benefit from philanthropy and engage in productive entrepreneurship. Philanthropy enables those who are willing to solve problems to do so.

Philanthropy has its own creative destruction in that it dismantles accumulated wealth, and with it, massive inheritances, to pave the way for future generations' entrepreneurial successes. This process also answers the question of what to do with accumulated wealth in a way that is ethical, stabilizing for society, and helps to provide opportunity to those willing and able to work hard for it. Philanthropy, in this way, softens the blow of free market uncertainty with minimal government intervention. Without philanthropy, all that is left is rent seeking, concentrated wealth, and a socioeconomic class structure that suffocates innovation, meritocracy, and social mobility (Acs 2013).

The mechanisms that drive development to a halt are the opposite of philanthropic—instead of working to ensure social mobility and widespread opportunity, elites would work to entrench the social position and wealth to decrease social mobility and opportunity creation outside of ones class, group, or interests. Philanthropists help to keep development self-sustaining through giving away their wealth strategically to ensure that their position or that of their family is never secure, and that others in the future could gain wealth and rise socially. This is in direct opposition to entrenching ones self

and ones family in an elite social class indefinitely. If entrepreneurs become more interested in retaining the wealth and position they have gained than investing in the system that allowed for them to gain this wealth and position, development is likely to decrease, if not stop altogether.

A contrast to the US system is one in which social structures are fairly rigid, such as gender roles within Afghanistan. While some USAID programs are focused on female empowerment, there is minimal if any social mobility in Afghan society. Social mobility is tied to individuals, regardless of family background or gender, being empowered to become productive problem solvers. The successful problem solvers would be subsequently accepted into the elite ranks of society. This issue is also relevant to the prevalence of charity and subsidies (as opposed to philanthropy) in the development assistance package, explored in the next chapter.

Institutional Inclusivity

The degree to which the political and economic institutions in a society are inclusive directly impact the ability for development to emerge and become self-sustaining. When institutions and incentive structures are beneficial for development, people respond accordingly. They cooperate around conjectures beneficial for development, and are able to engage in productive entrepreneurship. This, in turn, strengthens the institutions that enabled development (Coyne, 2008; Acemoglu & Robinson 2012). The opposite is also the case—exclusive institutions inhibit development and tend to incentivize cooperation around conjectures that are detrimental to development, such as corruption and destructive entrepreneurship.

There is synergy between political and economic institutions—whether extractive or inclusive. Both types constitute a strong positive feedback loop, meaning that inclusive institutions reinforce inclusivity, and extractive institutions reinforce exclusivity (Acemoglu & Robinson 2012). One specific way in which institutional inclusivity directly affects the ability for self-sustaining development to exist is that in extractive economic institutions, there are higher individual payoffs to political power. Individuals who hold political power in extractive institutions also tend to hold economic power and have the most to lose. The people who have the most to lose through competition and development often hold sufficient power to prevent this from happening or to allow it on terms that are favorable to them. This decreases the likelihood of social mobility and/or creative destruction to be present, which then decreases the likelihood of development to emerge and become self-sustaining.

Even though, as Acemoglu and Robinson (2012) argue, some development is possible under exclusive institutions, it is limited to catching up to current technology. Within this framework, it is part of central planning and most relevant to US building under COIN. Under these institutions, development does not emerge but is imposed from the outside or top down. It does not allow for continuous adaptation, creative destruction, and/or innovation. While some development indicators such as education and infrastructure may appear to be improving, this is not self-sustaining.

Specific examples of inclusive institutions include rule of law (and a state strong and accountable enough to enforce this) (Fukuyama 2011; Acemoglu & Robinson 2012). However, no person or institution actually knows how to effectively implement inclusive

institutions from scratch. In the US, these institutions developed over time, often hand in hand with economic development. These institutions are highly complex and path dependent (rooted in a specific historical context). For example, the system in the US is so complex that lawyers are needed to navigate it. Somehow this works well enough for development to continue. However, these complexities suggest that the US legal system cannot be transplanted into a different society such as Afghanistan with similar or even beneficial results. While creating institutions is part of nation building, and the stated goal is to have inclusivity for Afghanistan, this is likely to be too complex of a project for US counterinsurgents to successfully accomplish.

Individual Resource Control/Distribution

The degree to which individuals (such as entrepreneurs) can control allocation and flow of resources impacts the degree to which development can emerge and become self-sustaining. This dimension ties directly into institutions such as individual property rights and rule of law, but stems from Hayek's insight (1948) that a social system is too complex for a central planner to be as effective, even if competent and well-meaning. Since the ability for an individual to use and dispose of resources as he or she sees fit is central to entrepreneurship, the implications are massive for self-sustaining development.

For example, the US has sufficient property rights and ability for individuals to control, distribute, and allocate resources as each person sees fit. Even if the legal system is highly complex and imperfect, property rights are sufficient for entrepreneurs to be the primary drivers of development and for individuals to become successful problem solvers. Without the ability of the individual to use resources at his or her discretion,

entrepreneurship at the level required for development is not possible. For example, in the US COIN effort, US government authorities have more control over how resources are used than individuals on a local level. The US and coalition governments have a major say in how resources and aid are distributed. Foreign counterinsurgents have more control over the government than the Afghans. This is likely to stifle entrepreneurship and individual problem solving more broadly in Afghanistan.

Time Inconsistency of Preferences

The ability for development to emerge and become self-sustaining depends on the success of a society's productive entrepreneurs. This involves planning (decentralized throughout a society) and the ability for individuals to delay gratification long enough to invest, innovate, and acquire enough skills and education to be productive. Development cannot emerge or become self-sustaining if the entire society operates in the very short term while undermining their best interests in the long term.

While it would be a stretch to argue that there is no time inconsistency of preferences problem in the US, it is not too severe for people to become educated, invest in retirement plans, along with starting and growing businesses¹⁶. However, the case is very different in Afghanistan. One main time inconsistency of preferences problem lies with the relatively short time horizons of US political priorities. This is reflected in the nature and degree of program funding throughout the COIN effort (detailed in the next chapter). Another lies with the inherent instability in Afghanistan. This degree of

¹⁶ However with the stock market being primarily focused on quarterly profits and short-term bets, this issue is likely to be increasing.

instability makes it difficult if not impossible for enough investment and individuals planning for their future for development to emerge.

Evolutionary Stability

Evolutionary stability has significant importance for development. However, this means different things at different levels. At the individual or micro level, evolutionary stability is necessary for a high-impact productive entrepreneur to actively participate in this creative destruction. Those with something to lose from the creative destruction cannot be powerful and/or coordinated enough to prevent the threatening person or enterprise from achieving success.

On an industry or system level, in order for there to be continuous creative destruction, the position of a business, individual, group, etc. cannot be too well protected. Continuous creative destruction, and therefore self-sustaining development, depends upon agents being constantly vulnerable to this force. Unless a social system allows for dramatic change, development is difficult, if not impossible.

Even if a system allows for dramatic change, the system as a whole can be relatively stable. The stability of a system relies more on processes and institutions than the success of individuals. For example, in the US, productive entrepreneurs can both participate in and are subject to creative destruction. The ability to continuously innovate is a major factor in the ability of a company to stay in business over time, possibly more so than the company's ability to keep competitors out of the market. While dramatic change does occur, it occurs according to the rules and within certain parameters. Even when the rules change in response to changing conditions, there are processes for this.

While the stability and status of a company or individual is not guaranteed, the institutions, culture, and general business environment are relatively stable. The system in the US does change, but it changes with enough time to adapt and has a somewhat predictable process requiring coordination. This is in contrast to a system that is dependent upon the decisions of a single individual or small group, such as in an autocratic system or nation building. The US system bends and evolves over time but does not break. In fact, the continuous opportunity creation through philanthropy helps to ensure this balance of stability and dynamism—institutionalized creative destruction.

The US is unique in that it has successfully balanced self-interest and generosity, along with stability and dynamism. These are incredibly important for sustaining development, consistent with the Calvinist (and American) ethic. This ethic calls for hard work, wealth creation, and for wealth to be reinvested in society as opportunity creation (Acs 2013). In fact, successful productive entrepreneurs often become philanthropists, dismantling their own fortunes and any guaranteed economic status of their heirs to create opportunity for others to follow in their footsteps and become the next rising stars. It is through this philanthropy that the balance exists and opportunity creation successfully flourishes.

An insurgency situation, however, lacks this balance of dynamism and stability. It is important for development that individual's wealth, standing, business, etc. to be more vulnerable to competition and creative destruction than to an overwhelming amount of instability within the social environment. While the US has a process to manage political change and creative destruction, such a system is lacking in Afghanistan. Even if a person

wanted to engage in high-impact productive entrepreneurship, the environment does not provide the right combination of stability and dynamism. Given the insurgency situation with a local government dependent on foreign counterinsurgent support, the social system is not stable enough for self-sustaining development to emerge.

Implications

A social system that allows for creative destruction provides the conditions for development to emerge. When this creative destruction (economically and socially) is continuous within a system with inclusive institutions, individual control of resources, sufficiently high time horizons, and the right balance of stability and change, a social system can experience self-sustaining development. In the US, philanthropy is a mechanism that is key to self-sustaining development.

However, entrepreneurs in the US created philanthropy within a US context to address US challenges. Trying to artificially implant this mechanism to a different social system, with different history, institutions, culture, etc. is not guaranteed to be beneficial, even if possible. Institutions are highly path dependent—an institution or mechanism that evolved in one context is not necessarily suited to be transplanted and successful elsewhere. In this case, attempting philanthropy in a developing world context may not be effective or beneficial.

Building from the insight that complex systems can behave unpredictably, large-scale planning and intervention has very real limits. We have limited knowledge on how a complex, developed political and economic system works, and even less knowledge on how to create such a system. Even if we can identify all of the key components, getting

them to fit together is yet another challenge. Large-scale interventions tend to be destabilizing because they do not fit within the existing system and structure. Such interventions interfere with the local social system functioning, often having counterproductive results. As with any complex system, an economy has a relationship to its natural and social environments. These should be taken into context when implementing development efforts and/or interventions.

For example, mechanisms that historically have been used in Afghanistan are similar to charity and patronage and have not been shown to be beneficial for development. If development assistance is too similar to this, it is unreasonable to expect this to lead to development. In a similar vein, philanthropy that is designed too much in a developed world context is not guaranteed to work, or even to have predictable effects. A key insight from complexity theory is that complex systems can behave in unpredictable ways. When an environment changes (such as with the addition of development assistance) people will adapt to this, interacting with each other and directly with this new environment.

In order to understand the implications of different forms of development assistance on development beyond theory, actual data is necessary to move forward. To explore this situation in further detail, the next chapter assesses the charity/philanthropy composition of aid in an actual development assistance case. USAID programs in Afghanistan from 2002-2012 were chosen as the case study.

CHAPTER FOUR: PHILANTHROPY, CHARITY, AND BUILDING: USAID PROGRAMS IN AFGHANISTAN (2002-2012)

As much of this dissertation is theoretical, it is important to provide an empirical base to frame the context and inform the theory and model presented in the next chapter. A case study was chosen as the method to explore in detail a particular issue. Since the framework presented in this dissertation is fairly novel, a first step is needed to collect and organize data according to this framework.

Specifically, USAID programs in Afghanistan from 2002-2012 were chosen for the following reasons: policy relevance, potential donor impact, and data availability. The US counterinsurgency (COIN) strategy for Afghanistan has specifically outlined a primary civilian role for building (FM 3-24), and USAID spent over \$15 Billion in Afghanistan from 2002-2012 supporting this effort¹⁷. Few development assistance cases are relevant to so many, since it not only affects development-related issues, but also lives and resources that the US spent in Afghanistan. For better or worse, the US has a stake in Afghanistan's success.

The US has adopted the "clear-hold-build" strategy for its counterinsurgency (COIN) efforts in Afghanistan. While the "clear" (primarily military) and "hold" (primarily police) components are fairly straightforward, the "build" component is much less so. Within this current context, the "build" component has been expanded to include

¹⁷ http://afghanistan.usaid.gov/en/about/about_usaid_afghanistan

nation building. This is more complex than traditional COIN and requires political and economic development to be integrated into the overall strategy (Galula 2006; FM 3-24; Walker 2009).

According to the US government, development is an important part of the “build” component and should be primarily civilian-led when possible. While the US government appears to have an understanding about the basic conditions for development such as institutions, infrastructure, rule of law, property rights, etc., it is much less clear if and how external actors, such as the US government, can influence such development for the better (FM 3-24; Johnson & Subramanian 2006).

From a policy perspective, this is a unique opportunity to understand the impact on development assistance, especially since it is being used as a component of nation building. The US has attempted to train Afghans to govern themselves, but realistically, the US has as much or more control over policy and how the money is spent than anyone. Therefore, the potential donor impact is likely to be greater and more meaningful (for better or worse) than with any other country.

With the policy relevance and potential donor impact, Afghanistan from 2002-2012 is a clear choice. More specifically, USAID was chosen to be the most appropriate in terms of its role in the building component and scope of operations, but also specifically because it is a civilian agency. The civilian nature of this agency makes the case study much more feasible and accurate. In fact, the data needed for this case was

found publicly available on the USAID website.¹⁸ Any supplemental data was also publicly found, and any data gaps could be clearly identified.

On the other hand, if military data were needed for this case study there could be complications. Since this research involves an ongoing conflict, military data may be incomplete and/or inaccurate to protect people and resources currently engaged. Even if this were not an issue, it can also be reasonably assumed that military data on their role in building may be integrated into other functions such as clearing and holding. The data on building would have to be extrapolated from the other functions, leading to a more time intensive effort and data that is likely to be less accurate and useful for the purpose of this research. Since USAID has publicly available and relatively complete data on building only, it is a clear and useful choice.

This case study goes beyond simply reporting data and makes a meaningful contribution to the literature. Specifically, the research analyzes the role USAID has played in administering development assistance within the build component and through the charity-philanthropy framework discussed earlier. It uses budgetary data and project descriptions found in USAID reports, then categorizes each project according to a modified version of the charity/philanthropy framework presented in Acs, et al. (2011). This chapter also presents definitions for charity and philanthropy, justifications for the categorization of the USAID programs, and identifies ambiguities where appropriate. Not only does this research help to inform theory, but it also can provide insight for scholars

¹⁸ <http://afghanistan.usaid.gov/en/home>

and practitioners interested in the building component of counterinsurgency, development assistance, and charity/philanthropy.

Problem Statement/Research Question

There is much reason to be skeptical that the US (or any foreign power) can conduct successful COIN operations involving nation building without being a colonizer or having the host nation government as a reliable partner. In fact, the thought leadership driving US COIN policy and doctrine has also expressed growing doubt as to the likelihood of successful nation building in Afghanistan. The clearing (military) and holding (police) components are much more straightforward than building or development. In this case, the foreign power is faced with attempting development with development assistance as its primary tool for building. Historically, successful COIN campaigns have either been led by the local government, a colonizing power, or with the foreign power having a primarily advisory role to a determined host nation government. (Galula 1964; Kilcullen 2010; Davidson 2011).

This development assistance comes from a variety of agencies and organizations, including the US military, USAID, and the UN. It is reasonable to assume that the US government is doing the best it can with what it knows and what it can deploy. However, there is a real disconnect between the stated end of economic and institutional development and the ability of development assistance as means to achieve this end.

Historically US development assistance has been functionally akin to administering charity to foreign governments and other organizations. When a government experiences such an influx of resources without having to raise them through

taxes, then there is less of a need to be responsive, minimally corrupt, provide adequate services, etc. Root (2008) refers to this as an “alliance curse”, with development assistance having a similar effect to a resource curse. What is unfortunate is that the very means used to build, or foster development, could hamper the host nation’s ability to have good governance and promote development on its own. This has significant implications for the “build” component in a COIN effort, since the means used to foster development could be counterproductive to the stated ends.

An analogy can be made with regard to development assistance. While some philanthropic projects can be founded in this manner, as in the case of Afghanistan, development assistance provides mostly subsidies, if not outright charity. According to Root (2008), there is not a single case of development assistance actually leading to development. In fact, large amounts of aid tend to generate corruption (Fukuyama 2011).

Development assistance can have several forms, among them being charity and philanthropy. Each is likely to affect entrepreneurship and development differently, since the payoff structures and time frames are different. Because charity involves short-term payoffs requiring nothing in return, this can incentivize entrepreneurship in unproductive (or destructive) ways. At the same time, since philanthropy requires an investment from the beneficiary with long-term payoffs (such as a scholarship), this is likely to create the opportunity needed to promote productive entrepreneurship. However, it is important to root this theory in an empirical reality. This chapter is a step in that direction.

Specifically, this chapter asks the following research question: What is the composition of development assistance projects in Afghanistan, in terms of charity,

philanthropy, and possibly other categories? The hypothesis for this chapter is that USAID has been providing more assistance (in terms of USD and number of programs) going toward charity than philanthropy in Afghanistan from 2002-2012.

Methodology

This chapter uses a case study method to address the research question and test the hypothesis. At this point, there is not a well-established, coherent theory covering the structure of development assistance, development, and “building” within a COIN effort. Therefore, a case study will help provide the in-depth insight needed to refine theory and guide further empirical research. As this dissertation attempts to address the theoretical gaps and formulate a more coherent theory, this chapter provides an empirical basis, along with making its own theoretical contributions.

Specifically, this chapter explores this issue through empirically evaluating development assistance projects, using the USAID programs in Afghanistan as a case study. Several categories (such as charity and philanthropy) are presented, along with precise definitions and hypotheses as to how each relates to development. Then, data from the USAID projects in Afghanistan from 2002-2012 are categorized, with an analysis of the results presented. This research makes a contribution to both the development and COIN literatures.

There were several considerations in selecting the data to be used for this case study. First, there are serious limitations in collecting high quality primary data in an insurgency situation, so secondary data was used. Limitations include logistics, security for data collectors, and security issues related to the military effort. Second, data from a

US civilian agency (USAID) was chosen as opposed to a military or multinational agency. Since the US government is very clear that this should be a civilian-led effort, and it is a justifiable assumption that civilian development agencies focus primarily on the “build” component, a civilian agency made the most sense (FM 3-24). Also, since USAID is prominent in this effort and assumed to be less complex than a multinational development agency, data from USAID projects was a clear choice.

There were two types of data collected: project data and budget data. Project data collection was primarily completed in the first round from individual project data and fact sheets from the USAID website. The second round of data collection was focused on finding budget data for the individual projects. Taking no more than 30 minutes per project, budget data was found for 178 projects, with missing budget data for 52 projects. This data has provided enough insight into these activities without a third round of data collection.

Once the data was collected, each project was categorized according to function. The theoretical framework for this was originally presented in Acs, et al. (2011) in their distinctions between charity, philanthropy, and productive/social entrepreneurship. In their paper, they draw clear distinctions between these three categories along six dimensions. This chapter builds upon their framework by adding two dimensions and several categories relevant to development assistance in this context.

Dimensions

Role: This refers to the role in society that the activity plays. At the most macro level, the role in a society and/or an economy is what activities of this type do.

Social Structure: All types of aid in some way operate within certain social structures.

Some take the structure as given (socioeconomic status, class, caste, etc.), while others either actively or passively alter this structure.

Purpose: This is the ultimate goal of the activity, project, or entity, broadly speaking.

Sustainability: In this context, sustainability refers to the ability of the activity, project, or entity to sustain its own funding indefinitely. The inverse of this would be a dependence on donor funding, which could dry up or decrease, and is outside of the recipient's control.

Financing: This dimension describes how activities, projects, entities, etc. are financed.

Financing could be constructed through an endowment, donations, a business model, or a combination of these.

Time Frame: This dimension describes the time frame relevant to the activity. Generally speaking, the effects of the activity could be intended to achieve goals in the immediate or short term (such as feeding the homeless), medium term (such as businesses), or long term (such as endowing a university).

Active Recipient: In some projects or activities, a recipient has to do something in order to benefit. For example, the recipient has to give up money to purchase the goods/services an enterprise offers in order to benefit. A scholarship recipient has to attend classes and graduate in order to fully benefit as well. In these cases, the recipient is active. However, as in the example of feeding the homeless, some activities do not require a recipient to do much, if anything in order to benefit. In this case, the recipient is passive.

This dimension was added for several reasons. Development occurs when people solve problems. In order to do this, individuals have to be willing and able to take action to solve their own problems—essentially be willing to help themselves. Assistance that helps those who will help themselves is fundamentally different and should be distinguished from forms of assistance that do not require this.

True Beneficiary: In some cases, the recipient is not always the true or only beneficiary. For example, an enterprise's activities benefit both the enterprise and the buyer or recipient.

This dimension was the last to be added, but found to be important in distinguishing among various categories of assistance in this context. For example, certain projects are very explicitly designed to alter local incentive structures, furthering US policy ends. Even if the projects temporarily benefit local Afghan participants, the projects deemed successful will also benefit the donor(s). Another example is consulting. As described in further detail below, while the stated beneficiary is the Afghan people, the scale to which consulting takes place, along with limited results, provides a strong argument that the true beneficiaries are the companies and NGOs that win the consulting contracts and grants. In essence, this is a subsidy for donor country interests. Who stands to benefit matters.

Categories

Given that many projects often entail multiple elements, a project's category was determined by assessing its core function and purpose. Each category is detailed and

defined below. As part of the definition of each category, this section details where the category falls along all eight dimensions.

Charity: Charity is defined here as outlined in Acs, et al (2011), and is designed to alleviate immediate suffering through wealth redistribution. It treats social structures such as class or socioeconomic status as given and is completely donor financed. Since charity has this reliance on donor funding, by definition it is not sustainable. An additional element is that of beneficiary participation. For charity, beneficiaries are passive recipients and do not need to earn the benefits of the aid. Food aid is one example of this.

Consulting: This is a category that was added somewhat unexpectedly. The main purpose of these projects has been to provide consulting services to various Afghan institutions and groups. While many other projects involve some consulting, a project is categorized as consulting when the primary purpose and activities appear to involve this. An example would be providing advice to various Afghan government agencies and conducting surveys to assess needs, progress, etc. Given the scale of the consulting projects and funding, it is likely that the true beneficiaries are the contracting companies that win the contracts and/or grants. Most of these are companies are from donor countries.

Consulting as a category, in this case, should be treated as a type of subsidy, with donor country entities benefiting.

Subsidy-General: Subsidies fall somewhere between charity and philanthropy. While there is some active beneficiary participation, the ability of subsidies to increase the productive capacity of a society in the long run is questionable at best. A good example

of this includes the Cash for Work projects, which actively create jobs without creating a way to have these employment opportunities become self-sustaining.

Subsidy-Military: This is a specific type of subsidy where the main purpose of the activity is likely (or explicitly) to be for military/COIN purposes, however beneficial it may be for the local community. An example of this is building and maintaining roads between strategically important locations.

Subsidy-Alternatives: This is a specific type of subsidy where the main purpose of the activity is to actually alter the preferences of the local populations through incentives. In the most common case, these subsidies are designed to make other activities more profitable than growing poppy and/or insurgent participation.

Subsidy-Financing: This is a specific type of subsidy where the main purpose of the activity is to provide financing. It is possible that some of the institutions that primarily issue loans can eventually become (or may already be) self-sustaining. An example of this is microfinance with USAID providing the initial capital.

Subsidy-Entrepreneurship: This is a type of subsidized entrepreneurship, where the enterprise has a double bottom line of both profit and social value creation. Part of the enterprise is financed through donor funding/subsidies, and part of the enterprise is financed through a business model.

Productive/Social Entrepreneurship: The very nature of this type of activity implies the lack of development assistance or any other form of subsidy. Therefore, productive entrepreneurship is outside the scope of this study. However, below are the dimensions defined earlier, along with how Productive/Social Entrepreneurship is categorized.

Philanthropy: Philanthropy is defined here as outlined in Acs, et al (2011). Purposefully investing in opportunity creation such as education, research, etc., philanthropy helps people to help themselves and therefore requires active participation from those seeking to benefit. Philanthropy is primarily financed through foundations that allow philanthropic projects to be self-sustaining and bypass the need for fundraising (Desai & Acs 2008).

It is important to note with Philanthropy the nature of opportunity and in a sense, markets for this opportunity. In a developed world context, Philanthropy creates opportunity for which there is demand. An example of this is endowing a university, with potential students and faculty ready to participate, and a society willing and able to benefit from the knowledge created through research. Demand for opportunity is met with supply through the philanthropic activity. Without this, the money used doesn't create opportunity and is little better than charity. As with Productive Entrepreneurship, Philanthropy must have a symbiotic relationship with its environment (social and otherwise) to be successful.

Table 2 Data Categories and Dimensions

Dimension	Charity	Consulting	Subsidy-General
Role	Income Redistribution	Income Redistribution	Income Redistribution
Social Structure	Takes Structure as Given	Takes Structure as Given	Takes Structure as Given
Purpose	Alleviate Immediate Suffering	Promote Donor Objectives	Promote Donor Objectives
Sustainability	Not Sustainable	Not Sustainable	Not Sustainable
Financing	Donations	Donations	Partial Donations
Time Frame	Immediate	Varies	Short-Term
Active Recipient	No	No	Yes

True Beneficiary	Recipient	Private Contracting Companies	Recipient
Dimension	Subsidy-Military	Subsidy-Alternatives	Subsidy-Financing
Role	Income Redistribution	Income Redistribution	Income Redistribution
Social Structure	Takes Structure as Given	Attempts to Alter Incentives	Attempts to Alter Structure
Purpose	Promote Donor Objectives	Promote Donor Objectives	Promote Donor Objectives
Sustainability	Not Sustainable	Not Sustainable	Not Sustainable
Financing	Donations	Partial Donations	Partial Donations
Time Frame	Medium-Term	Short-Term	Short-Term
Active Recipient	No	Yes	Yes
True Beneficiary	Recipient/ Donor	Recipient/ Donor	Recipient/ Donor
Dimension	Subsidy-Entrepreneurship	Productive Entrepreneurship	Philanthropy
Role	Income Redistribution/Change Agents/Social Innovation	Change Agents/ Social Innovation	Reconstitution of Wealth
Social Structure	Attempts to Alter Structure	Alters Structure	Realigns Structure
Purpose	Promote Donor Objectives	Improve Social Conditions	Opportunity Creation
Sustainability	Not Sustainable	Sustainable	Self-Sustaining
Financing	Donations/Business Model	Business Model	Foundations
Time Frame	Medium-Term	Medium-Term	Long-Term
Active Recipient	Yes	Yes, within the Market	Yes, outside the Market
True Beneficiary	Recipient/ Donor/Market Participants	Market Participants	Active Recipients

Data/Analysis

There are two ways in which this chapter assesses the relative importance of the various types of development assistance: number of projects and funding. In either case, the data did not support the hypothesis. Instead of a charity-heavy assistance package, subsidies were the primary form of assistance for both the number of projects and funding. For the purposes of this discussion, there are two general types of subsidization:

consulting and traditional subsidies. Consulting in this case is considered to be a form of subsidy, given its scale and scope compared to other activities. The key distinction is that instead of Afghans being the primary beneficiaries, they are the companies and organization that win the grants and contracts to perform the consulting work. Traditional subsidies were broken down further into the more specific categories defined in the previous section. Also, while philanthropy projects are the second most numerous, they are not nearly as well funded as consulting and subsidies.

Table 3 Data Categories

	Projects	Percentage-Total Projects	Funding (Millions)	Percentage-Total Funding
Charity	6	2.61%	\$421.10	3.65%
Consulting	98	42.61%	\$4,594.04	39.81%
Philanthropy	58	25.22%	\$1,146.60	9.94%
Subsidy-Alternatives	21	9.13%	\$1,119.30	9.70%
Subsidy-Entrepreneurship	5	2.17%	\$331.00	2.87%
Subsidy-Finance	8	3.48%	\$449.50	3.89%
Subsidy-General	25	10.87%	\$2,859.60	24.78%
Subsidy-Military	9	3.91%	\$619.50	5.37%
Total	230	100.00%	\$11,540.64	100.00%

It is important to discuss the missing budgetary data. In this case, the projects that had missing data did not resemble the overall distribution of all projects. Throughout the data collection in general, the ease with which data could be found and the depth of the data reported was used as a proxy for transparency. As seen in Table 2, Consulting projects represent the bulk of those with missing budget data. In addition, the Consulting, Subsidy-Alternatives, and Subsidy-Military categories have higher percentages with missing data compared to the rest. This indicates that the proportion of overall funding for Consulting, Subsidy-Alternatives, and Subsidy-Military projects is likely to be

underestimated, especially regarding Consulting. The implications of this are that transparency is most lacking in these categories.

Subsidy-Military, as a category having lower transparency, is expected and understandable, since there could be security reasons behind some budget data being unavailable or difficult to find. Also, for Subsidy-Alternatives and for Subsidy-Military, the number of projects with missing data is too low to confidently say that there is a general lack of transparency. However, it is a stretch to make the same justifications regarding Consulting. When over half of the projects with missing budgetary data have a similar function, without a plausible security concern (as with Subsidy-Military), and these projects account for over 12% of the total, this points to a lack of transparency.

What this also means is that since Subsidy and especially Consulting projects are overrepresented with missing budgetary data, the total expenditures are likely to be underestimated in the data presented. While it does not change the conclusions, it implies that there may be stronger evidence for a Consulting/Subsidy heavy USAID package.

Table 4 Missing Budget Data

	Projects	Percentage-Total Category	Percentage-Missing	Percentage-Total Overall
Charity	0	0.00%	0.00%	0.00%
Consulting	29	29.59%	56.86%	12.61%
Philanthropy	4	6.90%	7.84%	1.74%
Subsidy-Alternatives	8	38.10%	15.69%	3.48%
Subsidy-Entrepreneurship	1	20.00%	1.96%	0.43%
Subsidy-Finance	1	12.50%	1.96%	0.43%
Subsidy-General	4	16.00%	7.84%	1.74%
Subsidy-Military	4	44.44%	7.84%	1.74%
Total	51	22.17%	100.00%	22.17%

The categories presented in this chapter are not designed to replace those put forth by USAID. Instead, they can serve as a complement. While these categories describe overall structure and function, USAID designates categories that describe different sectors and overall goals. Assessing the overlap can provide data that is either consistent or inconsistent with current literature that describes the relationship between these categories. (Carnegie suggesting that a function of philanthropy is to fund education is an example of this.) Below are matrices representing how the categories presented in this chapter relate to the project categories put forth by USAID, along with descriptions by sector. These results were mostly as expected.

Agriculture: This is one of the most economically productive sectors in Afghanistan.

However, a large part of this productivity is poppy—the production of which goes against stated US policy. Therefore, the functional categories hypothesized to be most prevalent were Subsidy-Alternatives, with some Consulting, Philanthropy (for building entrepreneurial capacity), and possibly other types of subsidies. As it turns out, not only was Subsidy-Alternatives the largest functional category present, but also Agriculture accounts for 17 of 21 total Subsidy-Alternative projects. Other categories such as Consulting (10), Philanthropy (8), and other various types of subsidies were present.

Democracy & Governance: For this purpose, hypothesizing was difficult. Philanthropy, while in a developed world context could be appropriate, in this case there is reason to assume minimal demand for philanthropic opportunity. Charity, Subsidy-Entrepreneurship, Subsidy-Finance, and Subsidy-Military do not appear to be relevant. The most likely categories were seen as Subsidy-General (for items such as on-budget

support) and Consulting. In this case, Consulting was the category most prevalent by far (33 projects), with Subsidy-General having only four. The spending on Consulting also reflected this. In addition, Democracy and Governance represented the largest category of Consulting projects.

Economic Growth: The categories hypothesized to be prevalent for this sector were Consulting, Subsidy-Entrepreneurship, Subsidy-Finance, and Philanthropy. Specifically, the latter three are the categories that would be theoretically most geared toward promoting Economic Growth. Charity and Subsidy-Military especially appeared to have different purposes altogether. However, it was Consulting that was the most prevalent in this sector by far in terms of projects, and Consulting and Subsidy-Finance in terms of financing. Part of this could be the lack of development (and likely associated lack of demand for traditional philanthropic opportunity) existing before the COIN effort.

Education: As Education is the sector most traditionally linked with Philanthropy, this category, along with some Consulting, was estimated to be most prevalent. The data did support this hypothesis, both in terms of projects and in terms of spending.

Gender & Participant Training: The assumption with this sector is that it is different than currently existing priorities and values in Afghan society. Therefore, Subsidy-Alternatives and Consulting were hypothesized to be most prevalent. However, it was Consulting (three projects) with one Philanthropy project in this sector.

Health: Consistent with Health promoting projects worldwide, Philanthropy, Subsidy-General, with some Consulting were hypothesized to be the most prevalent. In terms of number of projects, Consulting and Philanthropy were most prevalent. However, in terms

of funding, Consulting and Subsidy-General were much more prevalent than Philanthropy.

Infrastructure: In a society where there could be sufficient demand for additional infrastructure (such as developed or developing countries exhibiting steady growth), to consider this to be opportunity creation. Philanthropy would, then, be a clear choice to address this. However, Afghanistan is so underdeveloped, that this chapter hypothesizes instead that Subsidy-Military, Subsidy-General, and some Consulting would be most prevalent. This is because it is a reflection of donor priorities, not necessarily a response to local demand for opportunity. As it turns out, Consulting was by far the most prevalent in terms of projects, then Philanthropy (surprisingly) and Subsidy-General and Subsidy-Military. This was also reflected in terms of funding.

Stabilization: Activities focused on this sector border on “holding” functions and are inherently short-term. Therefore, the least likely categories hypothesized to be prevalent are Philanthropy, Consulting, Subsidy-Entrepreneurship, and Subsidy-Finance. The categories hypothesized are Charity, Subsidy-Military, Subsidy-General, and possibly Subsidy-Alternatives. While there were only 11 projects included, all hypothesized categories were represented to some extent, with the addition of one Consulting project. In terms of financing, Subsidy-General was by far the most prevalent, followed by Subsidy-Alternatives and Consulting.

Table 5 USAID Category Comparison-Projects

	Agriculture	Democracy & Governance	Economic Growth	Education	Gender & Participant Training	Health	Infrastructure	Stabilization	Total
Charity	4	0	0	0	0	0	0	2	6
Consulting	10	33	16	1	3	11	23	1	98

Philanthropy	8	0	4	22	1	12	11	0	58
Subsidy-Alternatives	17	0	0	0	0	0	0	4	21
Subsidy-Entrepreneurship	3	0	2	0	0	0	0	0	5
Subsidy-Finance	2	0	6	0	0	0	0	0	8
Subsidy-General	5	4	0	0	0	5	8	3	25
Subsidy-Military	0	0	1	0	0	0	7	1	9
Total	49	37	29	23	4	28	49	11	230

Table 6 USAID Category Comparison-Budget

	Agriculture	Democracy & Governance	Economic Growth	Education	Gender & Participant Training	Health	Infrastructure	Stabilization	Total
Charity	\$281.60	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$139.50	\$421.10
Consulting	\$159.80	\$1,292.74	\$373.80	\$0.00	\$37.20	\$399.30	\$1,982.20	\$349.00	\$4,594.04
Philanthropy	\$101.00	\$0.00	\$120.60	\$520.90	\$17.20	\$81.40	\$305.50	\$0.00	\$1,146.60
Subsidy-Alternatives	\$767.80	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$351.50	\$1,119.30
Subsidy-Entrepreneurship	\$192.00	\$0.00	\$139.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$331.00
Subsidy-Finance	\$150.00	\$0.00	\$299.50	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$449.50
Subsidy-General	\$616.20	\$232.70	\$0.00	\$0.00	\$0.00	\$417.70	\$569.00	\$1,024.00	\$2,859.60
Subsidy-Military	\$0.00	\$0.00	\$0.50	\$0.00	\$0.00	\$0.00	\$576.00	\$43.00	\$619.50
Total	\$2,268.40	\$1,525.44	\$933.40	\$520.90	\$54.40	\$898.40	\$3,432.70	\$1,907.00	\$11,540.64

Table 7 USAID Category Comparison-Projects

	Charity	Consulting	Philanthropy	Subsidy-Alternatives	Subsidy-Entrepreneurship	Subsidy-Finance	Subsidy-General	Subsidy-Military	Total
Agriculture	4	10	8	17		3	2	5	49
Democracy & Governance	0	33	0	0		0	0	4	37
Economic Growth	0	16	4	0		2	6	0	29
Education	0	1	22	0		0	0	0	23
Gender & Participant Training	0	3	1	0		0	0	0	4
Health	0	11	12	0		0	0	5	28
Infrastructure	0	23	11	0		0	0	8	49
Stabilization	2	1	0	4		0	0	3	11
Total	6	98	58	21		5	8	25	230

Table 8 USAID Category Comparison-Budget

	Charity	Consulting	Philanthropy	Subsidy- Alternatives	Subsidy- Entrepreneurship	Subsidy- Finance	Subsidy- General	Subsidy- Military	Total
Agriculture	\$281.60	\$159.80	\$101.00	\$767.80	\$192.00	\$150.00	\$616.20	\$0.00	\$2,268.40
Democracy & Governance	\$0.00	\$1,292.74	\$0.00	\$0.00	\$0.00	\$0.00	\$232.70	\$0.00	\$1,525.44
Economic Growth	\$0.00	\$373.80	\$120.60	\$0.00	\$139.00	\$299.50	\$0.00	\$0.50	\$933.40
Education	\$0.00	\$0.00	\$520.90	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$520.90
Gender & Participant Training	\$0.00	\$37.20	\$17.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$54.40
Health	\$0.00	\$399.30	\$81.40	\$0.00	\$0.00	\$0.00	\$417.70	\$0.00	\$898.40
Infrastructure	\$0.00	\$1,982.20	\$305.50	\$0.00	\$0.00	\$0.00	\$569.00	\$576.00	\$3,432.70
Stabilization	\$139.50	\$349.00	\$0.00	\$351.50	\$0.00	\$0.00	\$1,024.00	\$43.00	\$1,907.00
Total	\$421.10	\$4,594.04	\$1,146.60	\$1,119.30	\$331.00	\$449.50	\$2,859.60	\$619.50	\$11,540.64

Much can also be told about this data by looking into the various project and budget priorities over time. The data is analyzed according to the start year for the project, since this is likely to reflect priorities most accurately, and project durations vary greatly.

Charity: Charity projects were not a large priority generally. Over time, they were spread thinly and did not cluster into any year or set of years.

Consulting: Out of all of the categories, consulting had one of the larger ranges (2-19 in any given year). The three years with the largest numbers of projects started were 2006 (15), 2009 (19), and 2010 (13). Interestingly, 2004 (11 projects), 2006, and 2009-2010 appear to be spikes in the number of new Consulting projects added. Funding priorities were somewhat, but not exactly consistent with this. For example, 2004 represented an increase in funding, but not proportionate to the spike in number of programs. Also, number of programs increased from 2005 to 2006 threefold, but in terms of funding it increased 30-fold. New project funding showed a slower decrease from 2006-2010 than

what was represented in number of projects. Without further detail, all this data tells us is which years were most important for new Consulting projects.

Philanthropy: Philanthropy projects varied much less than Consulting projects, with a spike in the number of new projects in 2008, represented less so in terms of funding.

Regarding funding priorities, there was some variation, but it was much more steady than with Consulting.

Subsidy-Alternatives: For this category the spikes of 2005 and 2009 were consistent with both increases in number of programs and funding. However, in 2002, there was the highest number of new programs (6) with only \$1 million of funding, which is highly inconsistent with other levels of funding. For example, in 2009 there were 5 new projects with \$501.5 million of funding.

Subsidy-Entrepreneurship: Overall, this was not a large priority and the new projects and funding were spread relatively thin across time.

Subsidy-Finance: Similar to Subsidy-Entrepreneurship, this was not a large priority and the new projects and funding were spread relatively thin across time. However, there was a small spike in funding in 2010.

Subsidy-General: Priorities for this category varied over time. There was a gradual spike in number of new projects in 2008 and new project funding from 2008-2010, with zero or minimal projects or new project funding from 2004-2006 and 2012.

Subsidy-Military: With the exception of a spike in both number of programs and budget in 2007, this was not a large priority and the new projects and funding were spread relatively thin across time. This was expected since USAID is a civilian agency.

Overall, spikes tended to coincide with a surge in activity from 2008-2010, declining in 2001 and becoming either zero or negligible in 2012. Consulting was the only category that appeared to be a high priority for new projects and funding in 2012. Generally speaking, these results were not surprising.

Table 9 Categories by Year-Projects

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total
Charity	1	0	0	0	0	1	0	0	1	2	1	6
Consulting	2	4	11	5	15	10	9	19	13	6	4	98
Philanthropy	1	4	9	3	9	3	17	5	3	3	1	58
Subsidy-Alternatives	6	0	1	4	0	3	0	5	1	1	0	21
Subsidy-Entrepreneurship	0	1	0	0	1	0	1	1	1	0	0	5
Subsidy-Finance	0	0	1	1	1	0	1	1	2	1	0	8
Subsidy-General	3	2	1	0	0	2	8	4	3	2	0	25
Subsidy-Military	1	0	1	0	0	4	0	2	1	0	0	9
Total	14	11	24	13	26	23	36	37	25	15	6	230

Table 10 Categories by Year-Budgets

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total
Charity	\$130.00	\$0.00	\$0.00	\$0.00	\$0.00	\$75.50	\$0.00	\$0.00	\$42.60	\$163.00	\$10.00	\$421.10
Consulting	\$0.00	\$47.80	\$129.60	\$70.00	\$2,161.90	\$547.20	\$469.70	\$514.20	\$267.34	\$158.30	\$228.00	\$4,594.04
Philanthropy	\$6.50	\$113.10	\$178.90	\$9.60	\$235.60	\$35.00	\$226.80	\$113.60	\$70.00	\$89.50	\$68.00	\$1,146.60
Subsidy-Alternatives	\$1.00	\$0.00	\$2.30	\$553.00	\$0.00	\$19.20	\$0.00	\$501.50	\$34.90	\$7.40	\$0.00	\$1,119.30
Subsidy-Entrepreneurship	\$0.00	\$153.00	\$0.00	\$0.00	\$114.00	\$0.00	\$39.00	\$0.00	\$25.00	\$0.00	\$0.00	\$331.00
Subsidy-Finance	\$0.00	\$0.00	\$0.00	\$5.00	\$100.00	\$0.00	\$0.00	\$60.50	\$210.00	\$74.00	\$0.00	\$449.50
Subsidy-General	\$1,181.00	\$120.00	\$7.20	\$0.00	\$0.00	\$25.00	\$494.40	\$575.00	\$417.00	\$40.00	\$0.00	\$2,859.60
Subsidy-Military	\$0.00	\$0.00	\$0.50	\$0.00	\$0.00	\$576.00	\$0.00	\$0.00	\$43.00	\$0.00	\$0.00	\$619.50
Total	\$1,318.50	\$433.90	\$318.50	\$637.60	\$2,611.50	\$1,277.90	\$1,229.90	\$1,764.80	\$1,109.84	\$532.20	\$306.00	\$11,540.64

Table 11 Categories by Year-Projects

	Charity	Consulting	Philanthropy	Subsidy-Alternatives	Subsidy-Entrepreneurship	Subsidy-Finance	Subsidy-General	Subsidy-Military	Total
2002	1	2	1	6	0	0	3	1	14
2003	0	4	4	0	1	0	2	0	11
2004	0	11	9	1	0	1	1	1	24
2005	0	5	3	4	0	1	0	0	13
2006	0	15	9	0	1	1	0	0	26
2007	1	10	3	3	0	0	2	4	23
2008	0	9	17	0	1	1	8	0	36
2009	0	19	5	5	1	1	4	2	37
2010	1	13	3	1	1	2	3	1	25
2011	2	6	3	1	0	1	2	0	15
2012	1	4	1	0	0	0	0	0	6
Total	3	88	54	20	5	7	23	9	230

Table 12 Categories by Year-Budgets

	Charity	Consulting	Philanthropy	Subsidy-Alternatives	Subsidy-Entrepreneurship	Subsidy-Finance	Subsidy-General	Subsidy-Military	Total
2002	\$130.00	\$0.00	\$6.50	\$1.00	\$0.00	\$0.00	\$1,181.00	\$0.00	\$1,318.50
2003	\$0.00	\$47.80	\$113.10	\$0.00	\$153.00	\$0.00	\$120.00	\$0.00	\$433.90
2004	\$0.00	\$129.60	\$178.90	\$2.30	\$0.00	\$0.00	\$7.20	\$0.50	\$318.50
2005	\$0.00	\$70.00	\$9.60	\$553.00	\$0.00	\$5.00	\$0.00	\$0.00	\$637.60
2006	\$0.00	\$2,161.90	\$235.60	\$0.00	\$114.00	\$100.00	\$0.00	\$0.00	\$2,611.50
2007	\$75.50	\$547.20	\$35.00	\$19.20	\$0.00	\$0.00	\$25.00	\$576.00	\$1,277.90
2008	\$0.00	\$469.70	\$226.80	\$0.00	\$39.00	\$0.00	\$494.40	\$0.00	\$1,229.90
2009	\$0.00	\$514.20	\$113.60	\$501.50	\$0.00	\$60.50	\$575.00	\$0.00	\$1,764.80
2010	\$42.60	\$267.34	\$70.00	\$34.90	\$25.00	\$210.00	\$417.00	\$43.00	\$1,109.84
2011	\$163.00	\$158.30	\$89.50	\$7.40	\$0.00	\$74.00	\$40.00	\$0.00	\$532.20
2012	\$10.00	\$228.00	\$68.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$306.00
Total	\$248.10	\$4,207.74	\$989.10	\$1,111.90	\$331.00	\$375.50	\$2,859.60	\$619.50	\$11,540.64

Conclusions

The purpose of this chapter has been threefold: provide a first step in empirically testing and refining the theory first laid out in Acs, et al. (2011), establish an empirical basis for this dissertation broadly, and elucidate why the “building” component is fraught with challenges and minimal success in development. While the theoretical framework presented in Acs, et al. (2011) is highly useful, it was created in a developed-world context. Given the different contexts and challenges present, new categories and dimensions were necessary.

Given the composition of assistance types within the USAID Afghanistan project, it would be a stretch to suggest that the current set of projects foster development that is not dependent on donor funding. Instead, the focus appears to be on subsidies—both on the donor and recipient side. Even assuming that the project activities have a positive impact on development, without these subsidies, it is unlikely that the current projects would continue. If the success of the US COIN effort hinges upon the success of the “build” component, and if this depends upon the ability of the US to foster self-sustaining development, then current activities could be at best ineffective and at worst counterproductive.

A consulting-heavy program is likely to be even less beneficial for development than a charity heavy program, in that with charity most of the resources stay with the beneficiaries. This chapter acknowledges that consulting can be beneficial for the recipient country. Especially if the productive capacity is being increased, it makes sense to help transfer knowledge so that people in the recipient country are set up to succeed in

using the additional resources. However, if an assistance package is mostly consulting services (that the recipient country did not necessarily request), it is likely that most of the benefits go back to the donor country.

As mentioned earlier, subsidies lie somewhere between charity and philanthropy. Like philanthropy, they do require active recipients to function. This can have an advantage over charity in that recipients have to buy in to the project and at least to some extent solve problems for themselves in the market. However, like charity, subsidy projects are dependent on donor funding to operate. Between this and the fact that subsidies shelter recipients somewhat from market forces, they also provide a shelter against the full consequences of their decisions. Market forces are beneficial for development in the feedback participants receive.

While the data analyzed in this chapter is specific to a case, one way to draw inferences on the greater picture within the scope of this dissertation is through an agent-based model. Such modeling can take theoretical frameworks such as in this dissertation and explore the possible implications, view processes, and test a range of relevant hypotheses. The next chapter takes the building blocks of this data and framework and creates a simulation exploring the effects of different charity/philanthropy compositions and preferences on a simple society.

CHAPTER FIVE: A MODEL OF GIVING

This dissertation has put forth hypotheses related to charity, philanthropy, and the development process. To test these hypotheses, this chapter builds upon the last in testing hypotheses surrounding the notion that philanthropy and charity as development assistance have very different impacts on the recipient society. Development and development assistance are so complex, even if there were more robust data than what was presented in the case study, little can be said with much confidence about the actual process and isolated effect. The main contribution of this chapter is to take a first step in addressing this gap.

Specifically, this dissertation has hypothesized that charity hampers the development process and can have destabilizing effects for a society. The reasoning behind this is straightforward. When there is an influx of resources in a society without the society doing anything to generate this wealth, it interferes with and possibly destroys the underlying mechanisms for individuals to solve their own problems (Root, 2008). In addition to this, the funding mechanisms behind charity are not stable but are subject to unpredictable donor priorities. Therefore, charity-based development assistance brings resources into a society that may or may not have anything to do with the underlying social structure and/or priorities. The recipient society may or may not be able to predict the flow of resources and plan accordingly.

In contrast to charity, the other half of the story has discussed what has been successful in enabling development to emerge and sustain itself. Productive entrepreneurship is argued to be a necessary requirement for development to initially emerge. Philanthropy, combined with productive entrepreneurship, is hypothesized to promote self-sustaining entrepreneurship and development over time.

However, philanthropy was created in a developed world context with existing productive entrepreneurship and the institutions that support it. Without productive entrepreneurship, philanthropy still may provide some benefit. It is hypothesized to not harm the recipient society, even if philanthropy alone is not enough for development to emerge. The reason for this is that unlike charity, philanthropy works to help people become better problem solvers. This problem solving is within the existing context and is much less disruptive to underlying structures than charity. Without productive entrepreneurship, philanthropy is likely to help the recipients become more efficient at acquiring the resources that are available over time.

Methodology

While the previous chapter presented a case study that helped to illuminate the breakdown of development assistance, it can only do so much to test these hypotheses in a rigorous and generalizable manner. Computational, agent-based modeling (ABM) provides a way to address this limitation. ABM simulates complex systems, such as societies, and can test alternative competing hypotheses. It also provides a bridge between qualitative research that has a narrow but deep focus, and quantitative research that is broad but relatively shallow and not process-oriented.

Agent-based modeling (ABM) is a methodology that attempts to recreate complex and emergent phenomena, such as development, using computer simulations. It is a bottom-up approach focusing on individual agents, their interactions, environment, and the resulting emergent phenomena. A computer can pursue the logic of scenarios many orders of magnitude further than a human brain can. Therefore, it is a good way to study complex adaptive systems, including societies (Cioffi-Revilla & Rouleau 2010).

A model is a representation at some level of abstraction, and a simulation as an operation of the model over time. It is up to the modeler to determine which level of abstraction is appropriate. In ABM, modelers start with defining agent behavior through a simple set of rules that reflect agent goals. Initially the model is very basic, but complexities can be added in future iterations. As agents interact and have experiences, certain individual attributes change (Banks & Sokolowski 2010). However, explanatory power decreases as interactions and environments increase in complexity (Camerer 2003). It is also impossible to completely remove all arbitrariness from the modeling.

What is most compelling about using ABM to test these hypotheses is the opportunity to understand processes, dynamics, and emergent phenomena (Cioffi-Revilla & Rouleau 2010). Development is both a process and an emergent phenomenon. Case studies, statistics, theoretical research, and experiments each can provide a piece of the puzzle but do not illuminate the entire picture in a rigorous and intuitive manner. An agent-based model, on the other hand, can explore the implications of a researcher's hypotheses and assumptions by taking them to their logical conclusions. Using such a

model, researchers can actually visualize these interactions, processes, and emergent phenomena and/or patterns.

Specifically, researchers can have a hypothesis (or set of hypotheses) about a phenomenon. From there, they can program this into a model to test these hypotheses. Many alternative competing hypotheses can be tested, giving the researchers a range of likely phenomena if the model presents findings. If it does not present findings, the researchers can then use that feedback to modify their theory and assumptions, continuing with the research.

Agent-based models compel researchers to define and describe their theory in an extremely rigorous and precise manner. In fact, this description has to be so precise that it can be written into code for a computer program. This program not only has to function, but resemble the underlying theory. The process of transforming theory into a computational model helps to tighten theoretical work and sort through any logical inconsistencies or other issues that may exist. Computational models (in this case ABM) can take testable hypotheses within a theoretical framework a step further and explore what the implications might be.

The hypotheses that charity and philanthropy are fundamentally different, and that these differences affect social systems (including development) are fairly intuitive. Testing these hypotheses using an agent-based model is the best first step in moving forward theoretically. Output generated from simulation runs cannot take the place of real-world data, but it provides a low-cost, ethical way to test hypotheses without having to experiment with different policies (and hence people's lives). It can also refine theory

and provide guidance for data collection and therefore make the best use of scarce resources. Knowing what questions to ask is a very important first step, and agent-based models can help refine and guide this process.

This research seeks to make a contribution to development theory and to the literature covering agent-based insurgency models such as described in the literature review. To construct these models, agents are programmed with various aspects and interact with their environment and other agents according to rules. Over time (or a set of “ticks” or rounds within a simulation) phenomena and patterns may or may not emerge.

A good model will help to tease out what is most relevant and what is noise or less relevant. To model well, it is best to start at the simplest possible set of agents and rules, then increase levels of complexity from there. The strength of an agent-based (or any model) comes from providing a powerful explanation from as simple of a model as possible.

The entrepreneurship literature is rich with descriptions and explanations of entrepreneurship. This includes the entrepreneurial function, entrepreneurial personality traits, types of entrepreneurship, history, etc. In addition to this, the development literature provides very rich explanations as to what is necessary for development, how it emerges, how policy can influence this, and many other factors. However, these pieces do not present a holistic, coherent picture for what matters most for the development process. This chapter contributes by filling in a part of this gap.

The counterinsurgency (COIN) literature can also benefit from testing these hypotheses. As relevant as charity and philanthropy are to development assistance, this

assistance is central to the “build” component of the clear-hold-build COIN strategy. Specifically, the US government (and her allies) assumes that once the counterinsurgents are in control of an area, they can, through assistance, “build” the area under control. There is an inherent assumption in this strategy that development assistance in these controlled and relatively stable areas leads to development or at least stability. It also assumes that this development (or stability) benefits foreign counterinsurgents, in this case the US. Testing these hypotheses will shed light into how realistic these goals truly are and provide insight into how and why neither development nor stability emerges.

There is no empirical evidence to justify the assumptions underlying this “building” in COIN for a very simple reason: no foreign counterinsurgent force has conducted COIN operations that have led to development. Beyond this, even if development had occurred, there are no success stories to justify or refute this assumption. This model is a first step towards testing these underlying assumptions, along with starting to unpack the implications of the prevalence of charity and philanthropy in the development assistance package.

Model Description

This chapter presents a basic development assistance model, specifically showing the impacts of development assistance on a simulated society. It is designed to explore various charity/philanthropy combinations, preferences, and overall prevalence in the society. Entrepreneurship is a main element that is left out at this stage. While it is through entrepreneurship that wealth is created, the focus of this research is to understand the development assistance effects, if any. Adding entrepreneurship at this point would

have required major assumptions and/or data to make it accurate and applicable to the recipient country. Societies that receive development assistance have varying levels of productive entrepreneurship, and it is important to focus on one type of phenomena that is generalizable to all before adding more complexity to the model.

This model is a variation of Sugarscape, an agent-based model created by Epstein and Axtell (1996).¹⁹ The reason why this model was chosen to modify for this dissertation is because it is the simplest model that simulates population dynamics and resources. In Sugarscape, agents move, use resources (sugar in this case), are born, die, and can even accumulate wealth. Sugarscape does not include wealth creation, or entrepreneurship, but simply population dynamics given a resource distribution within an environment.

Also, Sugarscape is currently in NetLogo, and this model builds upon it using the same platform. This provides continuity, along with the fact that NetLogo is a platform powerful enough for the model in this chapter, yet is intuitive, accessible and relatively easy to learn. It is a main goal of this chapter to present a model that is easily understandable, reproducible, and can be a platform upon which additional research can build. Using NetLogo (as opposed to Java) has made the model more feasible to construct, and will hopefully make this more accessible to a wider range of researchers.

The purpose of this model is to assess and understand on very simple terms, the impacts of development assistance, the charity/philanthropy breakdown, and preferences

¹⁹ The specific variation modified in this model is Sugarscape 3: Wealth Distribution (Li and Wilensky 2009, Wilensky 1999, Epstein and Axtell 1996). Sugarscape 3 has only one resource (sugar) and no trade. The wealth distribution that emerged in the original version of this model resembled what is observed using actual data.

on a recipient country. As in society, charity is an influx of resources to a certain population with immediate payoffs. Philanthropy, also an influx of resources, has long term payoffs that result in an increased productive capacity for those who participate in programs to benefit. These resources are not necessarily stable—they do not grow back endogenously and donors are not always predictable. Also, charity does not necessarily correlate to the previously existing resources or to the productive capacity of a society.

Sugarscape Description

Sugarscape is currently in NetLogo, an agent-based modeling platform well suited for constructing simple models. For every round, or “tick”, each agent looks around, and travels to the open spot it sees with the most sugar and consumes it. It acquires the sugar on the spot and metabolizes sugar as well. If the agent has less sugar than is required, it dies, and if it has more than its metabolism requires, it saves the sugar for future rounds.

In Sugarscape, the agents have two attributes: metabolism and vision. Metabolism determines how much sugar is consumed per round, and vision determines how far the agents can see (between 1 and 4 spaces). Agents consume sugar, which is set on the model landscape as two hills. This sugar grows during each tick.

Each simulation starts with the agents randomly distributed throughout the model landscape. After a while, most agents accumulate around where most of the sugar is, and this becomes relatively stable. Also, certain real-world phenomena are reproduced, such as income inequality, as measured by the GINI index, which also appear relatively stable over time. The agents with greater vision and slower metabolisms accumulate wealth, which in this model is unused sugar.

Modifications to Sugarscape

Charity is a redistribution of resources, whether endogenously or from external sources. Endogenous charity is seen locally, while charity from external sources is seen in phenomena such as development assistance. In addition, philanthropy is often endogenous. However, since the model for this dissertation involves development assistance, both charity and philanthropy are treated as exogenous.

It is acknowledged that in reality charity and philanthropy are not necessarily random. However, this model assumes that predicting development assistance on any given patch is difficult if not impossible. The USAID data supports this assumption in that the programs and program types tend to vary greatly from year to year. Shifting donor country priorities tend to be the main driver, making the level and type of assistance fairly unpredictable for a given “patch” in a recipient country. Therefore, random assistance allocation throughout the simulated landscape is the best way to simply model this phenomenon.

Specifically, charity and philanthropy are added to the landscape at random locations. The resource landscape from the original Sugarscape model is still initially in place, but the allocation of charity and/or philanthropy are unrelated to this landscape. For any given patch, the probability of there being charity and/or philanthropy are represented by sliders and varied throughout the simulations. In ABM, sliders are ways in which a researcher can easily alter the parameters of a model within a given range. For example, the probability of there being charity (or philanthropy) on any given patch can vary from 0 to 100%. The slider is a type of button that allows the researcher to literally

slide across to set the value (i.e. 65%). Sliders such as these make it easy to alter the parameters of the model for various simulation runs.

Also, the ability to delay gratification was added to the model so that agents could prioritize between looking for and using charity versus philanthropy. For this, agents are assigned a random number from 1-100, to act as a proxy for the ability to delay gratification. During each tick, an agent can either move to an empty space with sugar and immediately eat, or move to a space with “vision” increases, which will increase their vision over time.

Another difference involves agent reproduction. Just as in the original model, they can run out of sugar or die of old age. However, instead of an agent reappearing automatically in the model when another dies, agents reproduce in this model when their wealth accumulates above a certain threshold (in this case, 2000 but the slider allows for a larger range).²⁰ When an agent reproduces, they metabolize the same amount of sugar otherwise used in a move. The reason for this is that population stability is not something that should be assumed, and this provides a way for a lack of stability if appropriate. It also simulates more realistically how humans require a certain degree of health and/or resources to reproduce, and they reproduce at some cost.

²⁰ As the birth and death rules are an artifact of the model, the numbers selected for the simulations allowed for enough stability in the model to form conclusions in a relatively short time frame. If agents live longer and/or reproduce with less sugar, overpopulation can result more quickly. The opposite is true for agents having a lower max-age and/or needing more sugar to reproduce—it takes longer for the model to show stability or instability. The parameters selected allowed for either all agents dying or the model stopping due to overpopulation within 200-300 ticks. By 400-500 ticks, if the model run was to be stable, it had reached stability by this point. Altering these parameters should not influence the simulation in any substantive way, only how quickly the model reaches stability or ends on its own.

Agents metabolize sugar whether or not they move, unlike the original Sugarscape where they only metabolize sugar when they move. This serves two purposes. First, without this and the sugar consumed upon reproduction, agents quickly overpopulate within the first few ticks, shutting down the model and consuming all of the sugar. Not only does the simulation not run, but also it is unrealistic to have an area full of agents with nothing left to consume. Secondly, it is more realistic for agents to consume sugar when they move, reproduce, gain productive capacity, and with the passage of time.

A final major change to Sugarscape was visual. Since each patch could hold more sugar than the original model, the range of color was increased to reflect this. Other rules in this model have stayed the same as the original Sugarscape. These include agent vision, metabolism upon movement, the rules governing agent movement, and the ability for them to accumulate wealth. Also, while additional sugar was added to the model, the original distribution was kept intact. Finally, the actual landscape (other than the additional sugar) is identical to the original model.

Model Description

Agents in this model have the following characteristics: sugar, metabolism, vision, ability to delay gratification, age, and the maximum age an agent can attain. Sugar represents the level of wealth an agent has at any given point, and metabolism represents how much is used up during a tick, or round of the simulation. Vision represents how far an agent can see, and is a proxy for the productive capacity of an agent. This representation is appropriate since greater vision translates directly to a greater ability to acquire the most

sugar in any given round. Over time, this is expected to lead to greater wealth accumulation.

As described earlier, agents have variables that approximate the ability to delay gratification called “discount” and “discount-cutoff”. Discount-cutoff is represented as a slider in the model. If discount (determined randomly) is higher than discount-cutoff, agents look for vision first, and then look for sugar if no vision squares are available. At the same time, if discount is lower than discount-cutoff, the reverse is true. Agents do not distinguish between sugar grown back naturally and sugar placed in the simulation from charity. To measure a proxy for average productive capacity, a monitor for average vision was added to the model.

Squares, or patches, on a grid represent the environment. Patches have attributes, and in this model, these are the resources. There is sugar that grows naturally, or psugar, and sugar that is added externally and at random.²¹ This is charity in the model. Specifically, the variable charity represents the probability of a given patch having natural growback rules (1 unit of sugar per tick) or charity. If a patch receives charity, then it is assigned a sugar value randomly between 0 and 4.

This charity rule is especially important when modeling development assistance. In the real world, development assistance projects are difficult to predict. Sometimes, an area or program can receive a lot of resources, but other times they can receive nothing. Most of project resource allocation is external to the recipient environment. This can include agency rules and/or priorities, political dynamics, or many other factors that

²¹ Max-psugar is the maximum amount of sugar that can be on the patch and is set to a very high number so as not to place artificial limits.

overall make resource allocation extremely difficult to predict, especially for the local recipients. Random allocation between 0 and 4 was the most appropriate way to simply model a very unpredictable dynamic.

Patches also have philanthropy, which are vision points that agents can consume and accumulate. For this model, one unit of vision is added at a time. The rule is based on the assumption that unlike sugar (resources), there are limits to which a single agent (person) can benefit from philanthropy at any given time. This assumption is justified in that philanthropy takes time and effort to truly reap the benefits and is not a short-run solution. For example, if a person is benefitting from a university scholarship, there are limits to how fast he/she can earn the degree. Benefitting from philanthropy is often a gradual, long-term process and it was important to reflect this in the model.

Model Steps

Each simulation begins with an empty grid. It then creates and distributes the initial agent population and the resources onto the grid. Agents are assigned random locations and attributes such as metabolism, vision, and initial sugar. Metabolism is set randomly between 1 and 4. In other words, agents consume between 1 and 4 units of sugar each tick. Sugar is initially set randomly between the minimum and maximum sugar variables (represented as sliders). Vision is initially set randomly between 1 and 6. All of these numbers are integers.

They are also assigned preferences, or a “discount” variable as a random number between 1 and 100. That number will dictate if the agent will look for vision or sugar first. Specifically, if the discount number is greater than the discount-cutoff (represented

by a slider that can have values between 0 and 100), the agent will look for vision first. If the discount number is less than the discount-cutoff, the agent will look for sugar first. The discount-cutoff number is the probability of an agent preferring charity to philanthropy.

During a tick, each agent first looks around. It can look horizontally and vertically but not diagonally for resources and can see as far as its vision points allow. If it has vision points of 4, for example, it can see a distance of 4 squares in each direction. Then, if it prefers vision, it looks around for unoccupied patches with vision. If there are any available, it moves to the closest patch with the highest amount of vision. It then consumes the vision and any sugar that may also be on that patch.²² Then, it metabolizes sugar according to its metabolic rate (so a metabolism of 2 means that the agent consumes 2 units of sugar for each tick). Finally, it updates its parameters by adding 1 to age, updating sugar and vision values, and reproducing or dying if applicable. The patch on which the agent consumed resources sets all resources to 0.

If an agent prefers vision but does not find any unoccupied patches with vision, it then looks for sugar. If there are any unoccupied patches with sugar, it goes to the closest patch with the most sugar, consumes the sugar, and updates its parameters according to the same rules. The same rules apply if an agent prefers sugar, only it looks for sugar first, then vision.

²² Patches with vision may also have sugar on them. The reason for this is that people who benefit from philanthropy do not necessarily stop consuming, but in this model they are not necessarily active rent-seekers. An example of this is a college student who still eats, pays rent, etc. It would have been more unrealistic to have vision and consumption be mutually exclusive and would have been likely to affect the simulation outcomes in a substantive way.

Regardless of preference, if an agent finds neither vision nor sugar, it consumes an amount of sugar equal to its metabolism and updates accordingly. When all patches have agents on them (as with the case of simulated overpopulation), then there are too many agents consuming to move and seek resources. The simulation ends at that point. At the same time, if all agents die, the simulation ends as well.

After each tick, the environment updates. Patches grow back according to a variety of rules and recolor themselves accordingly. The philanthropy variable is a slider that dictates the probability of a patch having vision. If a patch has vision, it will increase its vision by 1. The charity variable is similar to the philanthropy variable in that it is a slider dictating the probability of a patch being subject to charity growback rules. If the patch is subject to charity, then the sugar is set to a random number between 0 and 4, for reasons explained earlier. If it is not subject to charity, then sugar is increased by 1. It is entirely possible that a patch can have both charity and philanthropy on the same patch. However, this is not likely to be problematic since it is the preference of the agent that dictates which type of resource it looks for first and is indifferent to how the resource grew.

Finally, the global variables are updated after each tick. Global variables include the GINI index and Lorenz curve, along with keeping track of average wealth and average vision. The Lorenz Curve, GINI Index, and average vision all have their own methods, or actions that update these global variables. Average wealth (measured by average sugar) is calculated as a part of updating Lorenz and GINI. A simple way to track

these over time in any given simulation is through the reporters that continuously update graphs.

Assumptions

Most people respond to incentives that are perceptible. Therefore, agents in this model respond to incentives present and apparent to them. This model assumes that the incentive structures present and visible encompass enough of the incentive structures in real life for this model to be informative and useful.

Another assumption is that people within an insurgency may plan for the future enough to prioritize gaining from philanthropy over charity. The simulation runs cover every possible combination, but this assumption may be incorrect and in reality the recipient population may not value philanthropy. This assumption is especially critical when testing the hypotheses relevant to COIN.

Model Setup

Parameters

This model contains a set of parameters displayed below in Table 13. It includes the parameter name, definition, base case, and range. In this case, for the parameters that did not vary in the simulation runs (Max_Age and Reproduction), the base case was the parameter value used. For Philanthropy and Charity, the base case was that of no development assistance (or zero), as null hypotheses. While the USAID data may have been used, subsidies and consulting (not in this model) were far too prevalent for this to be a meaningful base case. Also, since the focus of this dissertation is on countries that are experiencing violence and instability, time preferences can be assumed to be very short-run focused as a base case. Therefore, the base case for charity preferences was set

to 100, meaning that an agent had 100% probability of preferring Charity to Philanthropy. As described in the Parameter Sweep section, most of the parameters were varied across a given range when performing the simulation runs. When the range for a parameter is wider than that used in the simulations for this chapter, it is indicated by a footnote.

Table 13 Model Parameters

Parameter	Definition	Base Case	Range
Max_Age	The maximum age (or number of steps) an agent can survive in a simulation	100 steps	50-150 steps ²³
Reproduction	The amount of sugar (resources) needed for reproduction	2000 units of sugar	1000-2500 units of sugar ²⁴
Philanthropy	The probability of any given patch in a simulation of having vision in a particular step	0%	0-100%
Charity	The probability of any given patch in a simulation of having charity growback rules in a particular step	0%	0-100%
Preferences ²⁵	The probability of any given agent in a simulation preferring charity to philanthropy.	100%	0-100%

Variables

Final Pop: This is the population level of a particular simulation run at the final step or tick. The final step could be at 500, or it could be whenever the simulation ends on its own in less than 500 steps.

Final Gini: This is the Gini coefficient of a particular simulation run at the final step or tick. The final step could be 500, or it could be whenever the simulation ends on its own in less than 500 steps.

²³ This parameter was set to 100 steps for all simulation runs for this chapter.

²⁴ This parameter was set to 2000 units of sugar for all simulation runs for this chapter.

²⁵ To make the statistical analysis more descriptive, this parameter name was changed from Discount_Cutoff to Preferences.

Final Avg Wealth: This is the average wealth in a particular simulation run at the final step or tick. The final step could be 500, or it could be whenever the simulation ends on its own in less than 500 steps.

Final Avg Vision: This is the average vision, or distance agents can see in a particular simulation run at the final step or tick. The final step could be 500, or it could be whenever the simulation ends on its own in less than 500 steps.

Min Pop: This is the minimum population level in a given simulation run. If all agents die, then this value will be zero.

Min Gini: This is the minimum Gini coefficient in a given simulation run.

Min Avg Wealth: This is the minimum average wealth in a given simulation run. If all agents die, then this value will be zero.

Min Avg Vision: This is the minimum average vision, or distance agents can see in a given simulation run. If all agents die, then this value will be zero.

Max Pop: This is the maximum population level in a given simulation run. If there is simulated overpopulation, in the case of there being an agent on every patch, then this number will be equal to the number of patches.

Max Gini: This is the maximum Gini coefficient in a given simulation run.

Max Avg Wealth: This is the maximum average wealth in a given simulation run. There are no limits to how high this value can be.

Max Avg Vision: This is the maximum average vision in a given simulation run. There are no limits to how high this value can be.

Mean Pop: This is the mean population level in a given simulation run.

Mean Gini: This is the mean Gini coefficient in a given simulation run.

Mean Avg Wealth: This is the mean average wealth in a given simulation run. There are no limits to how high this value can be.

Mean Avg Vision: This is the mean average vision in a given simulation run. There are no limits to how high this value can be.

Final Steps: This is the number of steps, or ticks, representing the duration of the simulation run.

Parameter Sweep

NetLogo has a useful tool called BehaviorSpace. What this does is perform a parameter sweep for any parameters/variables of interest. In this case, max-age and reproduction were fixed (100 steps and 2000 units of sugar), while charity, philanthropy, and discount-cutoff (preferences) were varied. All three variables have a range from 0-100. The parameter sweep was performed using every combination of values for these variables at 5-point intervals. This resulted in a total of 9,888 simulation runs. During the parameter sweep, the following output was generated:

Population: This was measured at each step, along with minimum, maximum, mean, and final agent population.

Gini: This was measured at each step, along with minimum, maximum, mean, and final Gini coefficient. In this way, income inequality can be examined.

Average Wealth: This was measured at each step, along with minimum, maximum, mean, and final average wealth measured in units of sugar.

Average Vision: This was measured at each step, along with minimum, maximum, mean, and final average vision measured in vision points.

Final Steps: This is an integer variable measuring the number of steps the simulation went through before either ending itself or ending at 500 steps. It tells the researcher if the simulation run achieved stability.

Part of performing simulation runs involves knowing when to stop. Sometimes the simulation stops itself, such as when the population goes to zero (simulating famine) or when the environment is completely full (simulating overpopulation). However, when a simulation run is stable, it can go on indefinitely without telling the researcher much more from letting it go on. With these parameters, if a simulation run was going to be stable, it generally made it past 300-400 steps. The output from the simulation runs supported this, as few simulations had their final number of steps be between 300 and 400 steps.

Figure 1 shows this using a histogram of the Final_Steps variable. This histogram shows the density of the various Final_Steps values across all simulation runs and parameters. The purpose of this figure is to provide a visualization of simulation stability or lack thereof. Specifically, if a simulation run reaches 300 steps without ending on its own, it almost always makes it to 500 steps. Therefore, automatically ending a simulation run at 500 steps, assuming it would go on indefinitely, is justified.

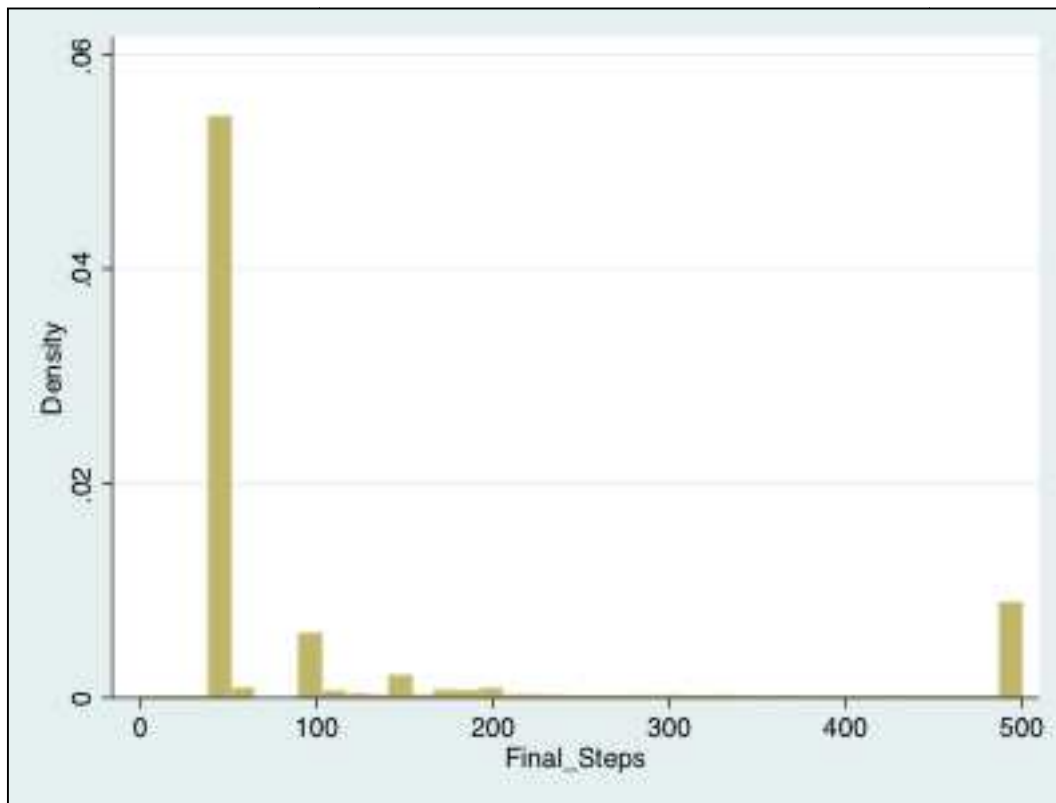


Figure 1 Histogram—Final Steps

Model Output Analysis

The model output analysis in this chapter is divided into four sections. First, typical simulation runs are presented. Second, the relationships between philanthropy, Charity, and preferences for Charity and population stability are explored. Then, hypothesis testing is conducted to test whether the effects of philanthropy and Charity are statistically significantly different from each other. Finally, regression analysis is performed to explore the relationships between philanthropy, Charity, and preferences for Charity and the following dependent variables: population, Gini coefficient, average wealth, and average vision.

Typical Simulation Runs

Understanding the aspects of a typical simulation run can provide meaningful insight into a computational model. Often, there is an empirical and/or theoretical foundation on which to base the parameters of the typical simulation run. The original intent in this dissertation was to use the data from Chapter 4 as an empirical foundation for this. However, as discussed in Chapter 4, the USAID programs in Afghanistan (both in number of programs and funding) consisted of subsidies and consulting more than Charity and/or Philanthropy. As subsidies and consulting are not included in the model at this stage, a typical run using parameters set from the USAID program data available would not be very useful or meaningful.

Instead, this section describes a set of several typical runs with various sets of parameters. This model is constructed in such a way that provides the potential for literally thousands of typical runs, depending on the combination of parameters set for the run or set of runs. Four of these are presented in this section. As this model is theoretical, it made sense to first cover the theoretical base cases of zero Charity or Philanthropy (no development assistance), all Charity with no Philanthropy, and all Philanthropy with no Charity. The three cases explore what a typical model run would look like, given these theoretical extremes.

A fourth theoretical base case is presented with 75% Charity and 25% Philanthropy, to describe what a charity-heavy assistance package could look like. This is the parameter set that most closely resembles the USAID program data. While effectively lumping subsidies with charity, the focus is more on short-run versus long-run payoffs. With that, in all base cases, typical runs are presented with the parameter of Charity

Preferences for any given agent set to 75%. This captures the hypothesis that in a conflict-laden, uncertain environment such as Afghanistan, people are more likely to seek out short-term gains than they are to make long-term investments. Finally, to understand a typical run given a set of parameters, 500 simulation runs were conducted for each of these four cases.

No Development Assistance

Out of 500 runs with this set of parameters, the final steps (model stability) ranged from 49 to 134 ticks, indicating a lack of stability before intervention²⁶. The average number of final steps was only 54, with a standard deviation of roughly 13. On average, the final population was only 6 agents, and with a standard deviation of around 50. However, the range was between 0 and 435 agents, which is rather large. In most, but not all cases, the agents run out of sugar and die off. This paints a picture that with no development assistance intervention and a high Preference for Charity, the majority of the simulation runs do not become stable.

For the simulation run presented below, agents simply ran out of resources, but did exhibit increasing wealth per agent over time.

²⁶ While the original Sugarscape is stable, the modifications made to this model (such as reproduction rules and maximum age) are a contributing factor. The parameters and reproduction rules chosen for this model (and these simulation runs) outline where stability can be found across a wide range of parameters. Since this model is theoretical at this point, and since a lack of stability is in line with an insurgency situation, this is not problematic.

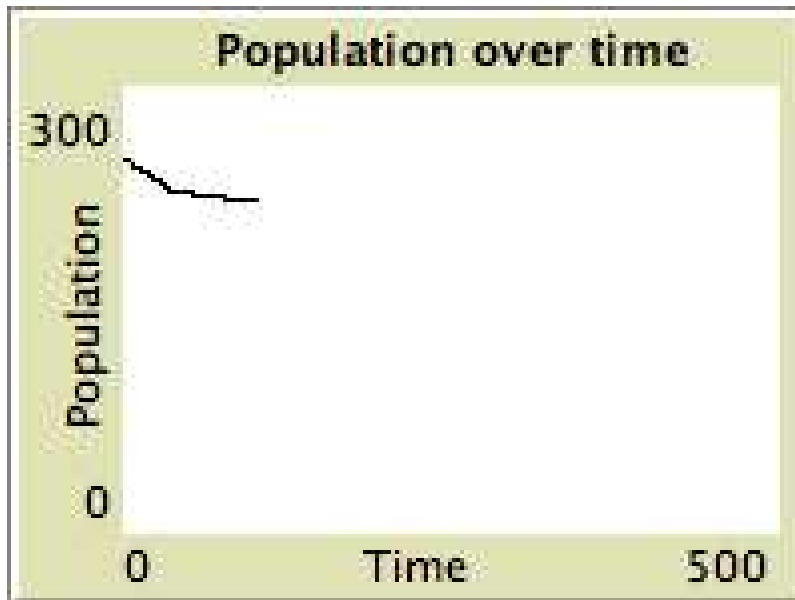


Figure 2 No Development Assistance—Population Over Time

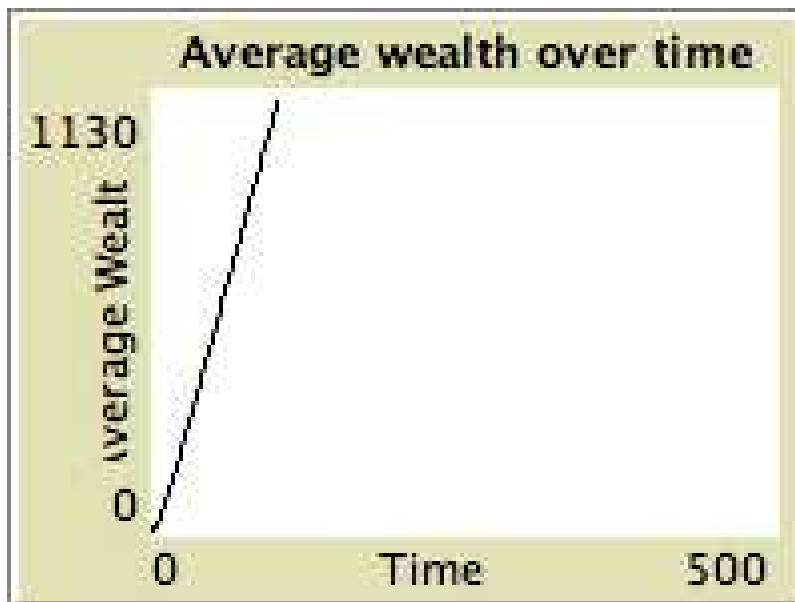


Figure 3 No Development Assistance—Average Wealth Over Time

Charity Only

Out of 500 runs with this set of parameters, the final steps (model stability) ranged from 49 to 500 ticks (or model stability). The average number of final steps was only 139, with

a standard deviation of roughly 171. On average, the final population was 440 agents, and with a very large standard deviation of around 1032. The range was between 0 and 3312 agents (or likely overpopulation), which is also rather large. Overall this would indicate that Charity alone adds instability to the model in most (but not all) cases.

Below are graphical representations of a typical all-Charity simulation run.

Regarding the population over time, it appears to spike and then crash. In addition to this, even for the simulation's short duration, average wealth also appears to spike and then crash over time. This indicates a lack of predictability in the model when only Charity is introduced. As the rest of this section demonstrates, Charity is also strongly associated with a lack of model stability, which would be consistent with what is shown here. The notion that Charity alone has unpredictable and potentially destabilizing consequences supports the hypothesis presented in this dissertation.

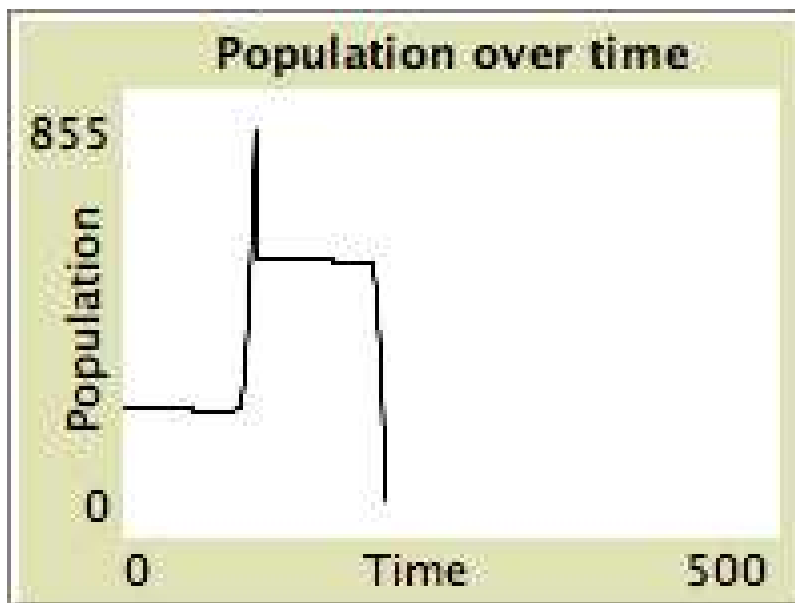


Figure 4 Charity Only—Population Over Time

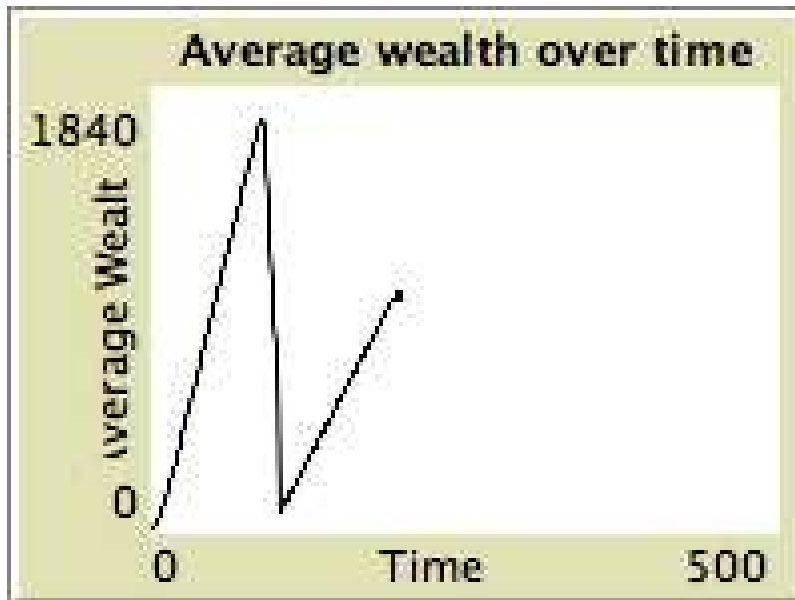


Figure 5 Charity Only—Average Wealth Over Time

Philanthropy Only

Out of 500 runs with this set of parameters, the final steps (model stability) ranged from 49 to 169 ticks. The average number of final steps was only 54, with a standard deviation of roughly 14. On average, the final population was only 4 agents, and with a comparatively large standard deviation of around 44. The range was between 0 and 449 agents, which is also rather large. Overall this would indicate that Philanthropy alone changes the model very little when compared to no intervention at all.

Below are graphical representations of a typical all-Philanthropy simulation run. Regarding both the population over time and wealth over time, this looks very similar to the typical run with no intervention. This indicates that Philanthropy alone neither harms nor helps a system with high Preferences for Charity. The rest of this section supports this

claim and suggests overall that while Philanthropy alone is not a magic fix, it is also less likely than Charity alone to add instability to an already unstable situation.

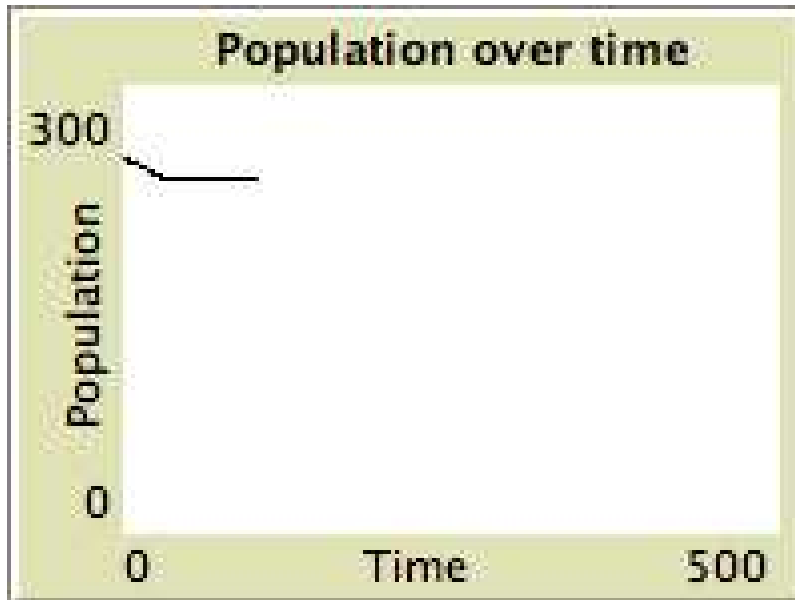


Figure 6 Philanthropy Only—Population Over Time

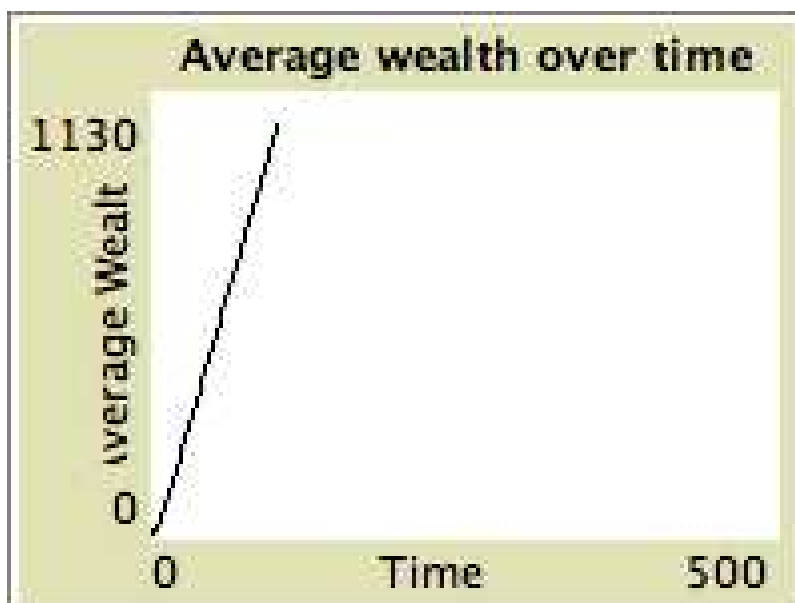


Figure 7 Philanthropy Only—Average Wealth Over Time

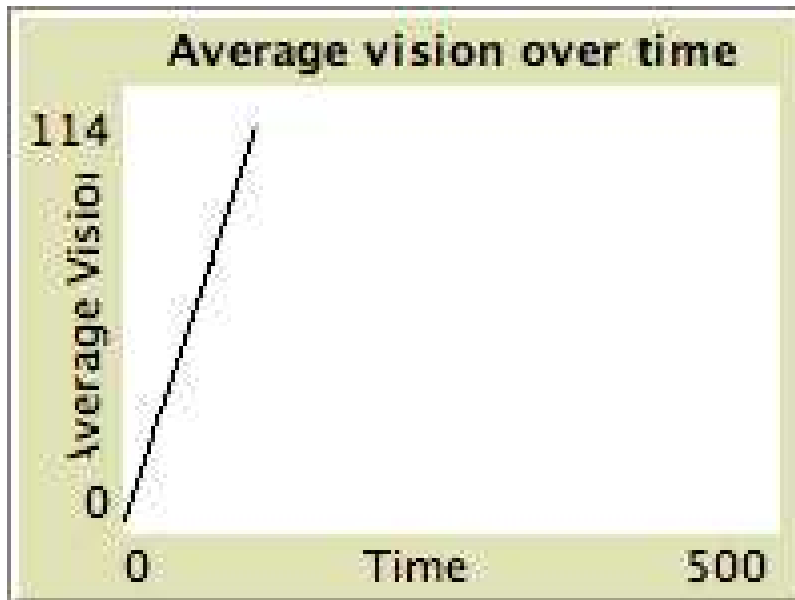


Figure 8 Philanthropy Only—Average Vision Over Time

Charity-Heavy Assistance Package

Out of 500 runs with Charity at 75% and Philanthropy at 25%, the final steps (model stability) ranged from 49 to 289 ticks. The average number of final steps was 63, with a standard deviation of roughly 38. On average, the final population was only 6 agents, and with a comparatively large standard deviation of around 54. The range was between 0 and 500 agents, which is also rather large. Overall this would indicate that a small amount of Philanthropy could mitigate the instability associated with Charity and Charity Preferences. However, it does not seem to be sufficient to have much meaningful improvement over no assistance at all.

Below are graphical representations of a typical Charity-heavy assistance package simulation run. While the averages and standard deviations appear to be more similar to the zero-assistance and Philanthropy only runs, the simulation over time shows similar (but less extreme) instability to the Charity-only simulation run. This indicates that some

Philanthropy can mitigate the negative overall effects of the high degree of Charity and Charity Preferences, and is consistent with the rest of this section.

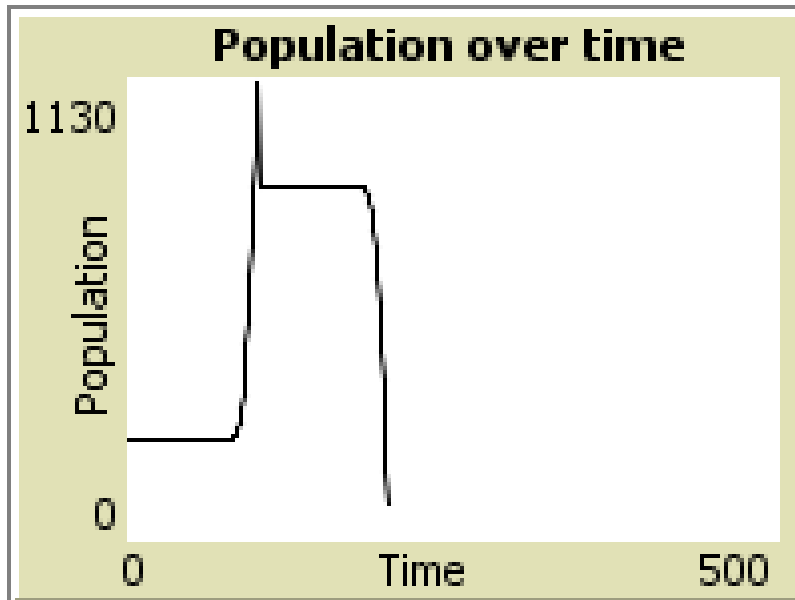


Figure 9 Charity-Heavy Assistance Package—Population Over Time

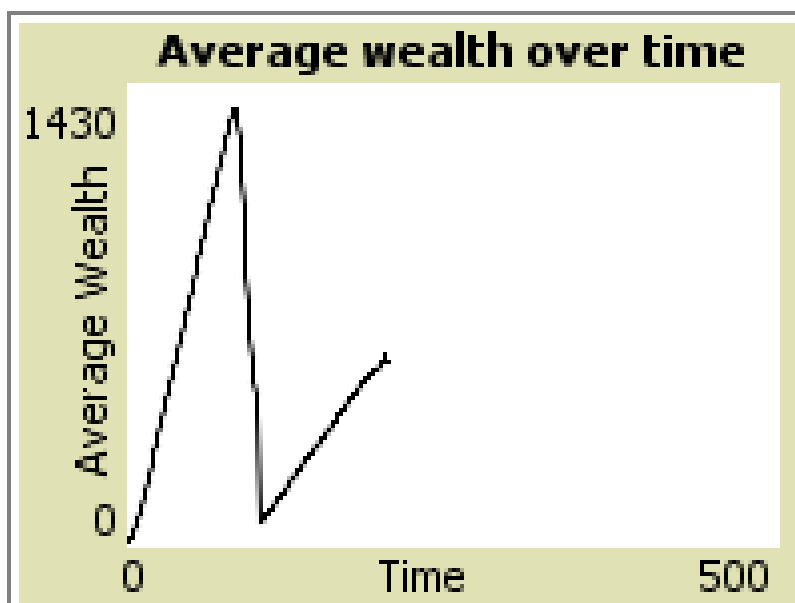


Figure 10 Charity-Heavy Assistance Package—Average Wealth Over Time

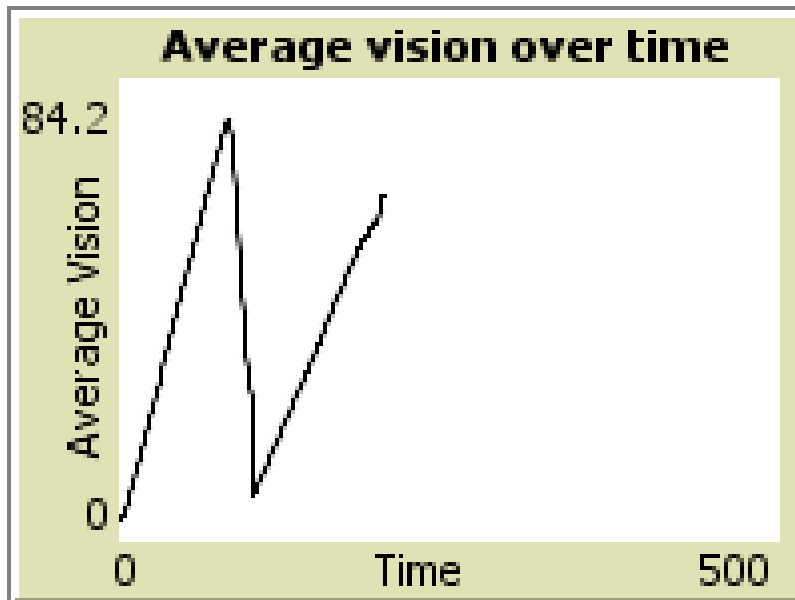


Figure 11 Charity-Heavy Assistance Package—Average Vision Over Time

Population Stability

As described earlier, a simulation run was seen as stable if it made it to 500 steps. This is incredibly theoretically important since Charity is seen as destabilizing for a society and Philanthropy is seen as stabilizing. Histograms were used to visually display the relationships between Philanthropy and stability, Charity and stability, and Preferences for Charity and stability. The computational model produced the following results:

Philanthropy: Figure 2 is a histogram portraying the relationship between Philanthropy and population stability (Final_Steps were set to equal 500). Philanthropy did not have much of an effect on stability, whether stabilizing or destabilizing. Regression results were consistent with this in showing almost no relationship.²⁷

²⁷ For this regression, the relationship was extremely statistically insignificant, with the relationship being only significant at the $p > .938$ level. The r-squared was zero, and the coefficient was $-.0001647$, so close to zero.

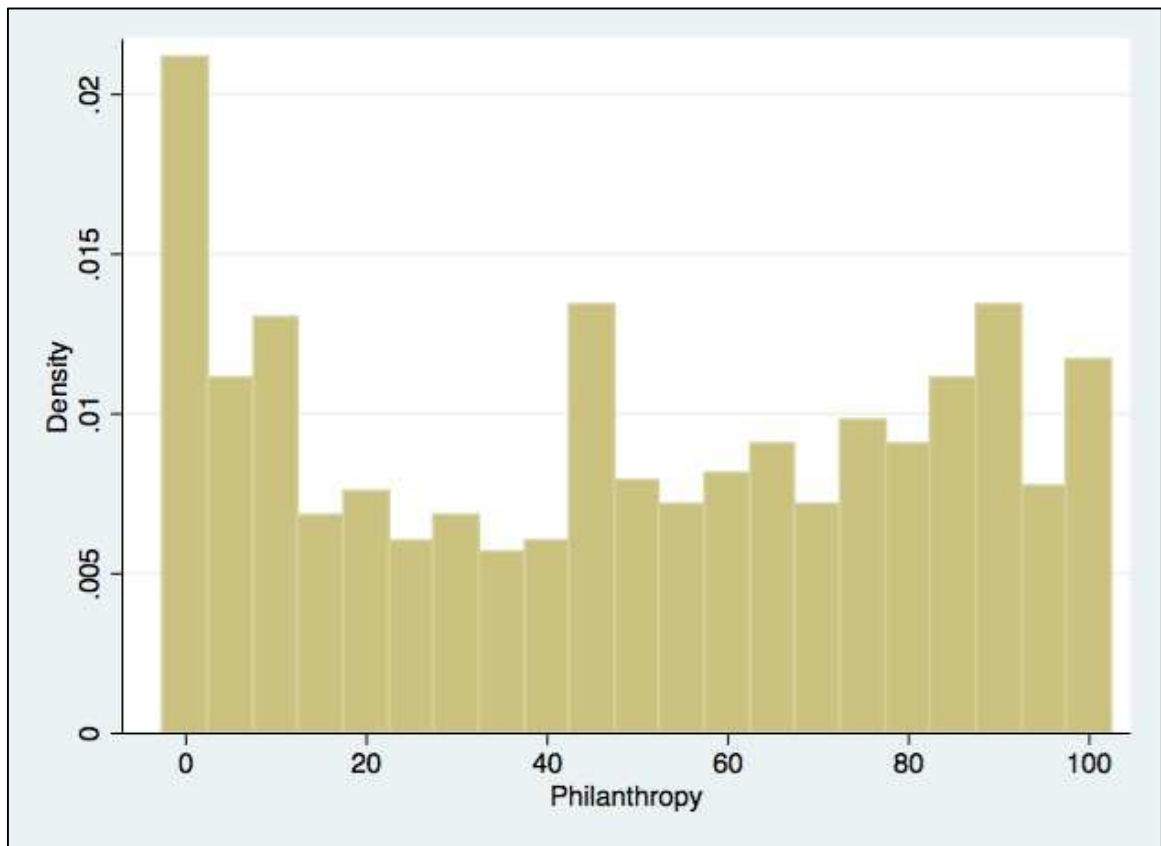


Figure 12 Histogram—Philanthropy and Population Stability

Charity: Figure 3 is a histogram portraying the relationship between Charity and population stability (Final_Steps were set to equal 500). The histogram shows a clear relationship between Charity and population stability, supporting the hypothesis that Charity is destabilizing. Regression results were consistent with this in showing a negative relationship between Charity and Final_Steps, significant at the $p > .001$ level.²⁸

²⁸ While the relationship is highly statistically significant, the coefficient was only $-.0545453$, meaning that for every percentage increase in Charity, Final_Steps decreased by approximately 1/20 of a step. In addition, the r-squared was only 0.0684, meaning that the presence of Charity only explained 6.8% of the variation in Final_Steps.

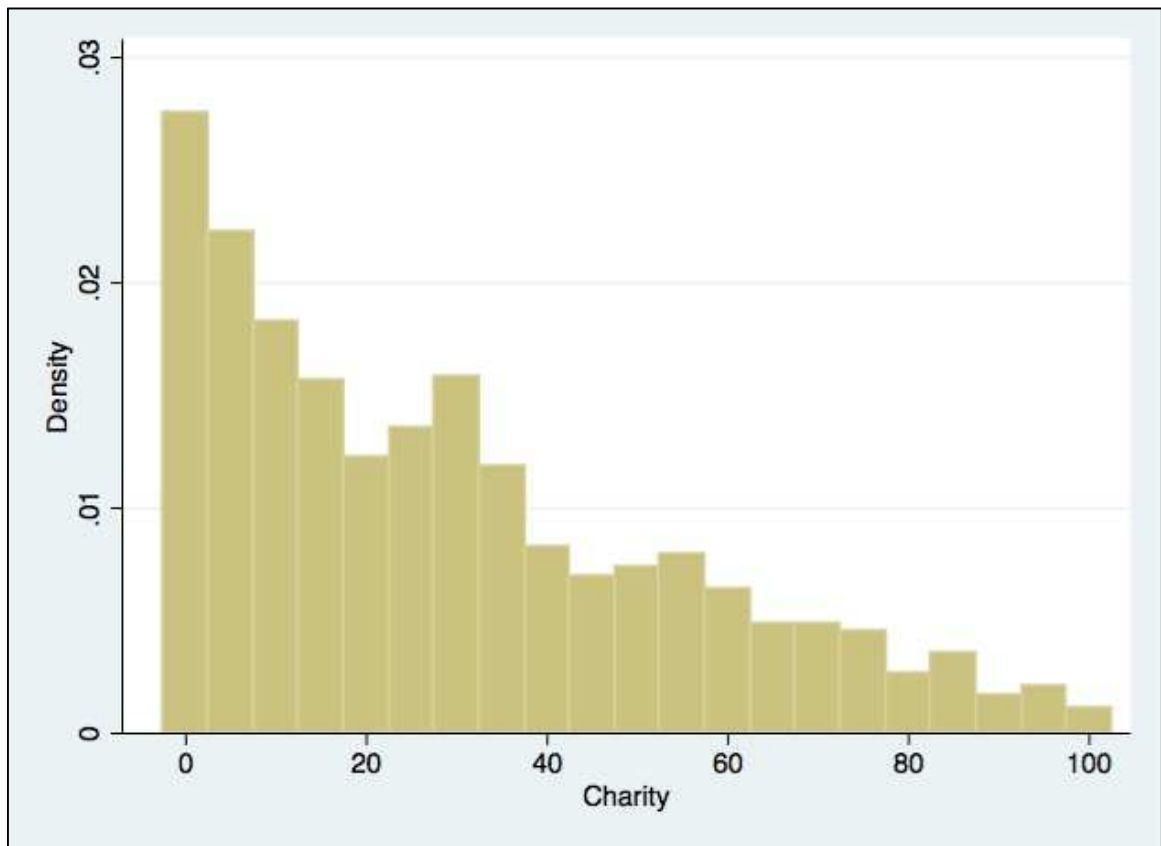


Figure 13 Histogram—Charity and Population Stability

Charity Preferences: Figure 4 is a histogram portraying the relationship between Preferences for Charity and population stability (Final_Steps were set to equal 500). The histogram shows a clear relationship between Preferences for Charity and population stability, supporting the hypothesis that preferring Charity over Philanthropy is destabilizing. Regression results were consistent with this in showing a negative relationship between Preferences and Final_Steps, significant at the $>.001$ level.²⁹

²⁹ While the relationship is highly statistically significant, the coefficient was only $-.0976262$, meaning that for every percentage increase in Preferences, Final_Steps decreased by approximately 1/10 of a step. In addition, the r-squared was only 0.2208, meaning that preferences for charity only explained 22% of the variation in Final_Steps.

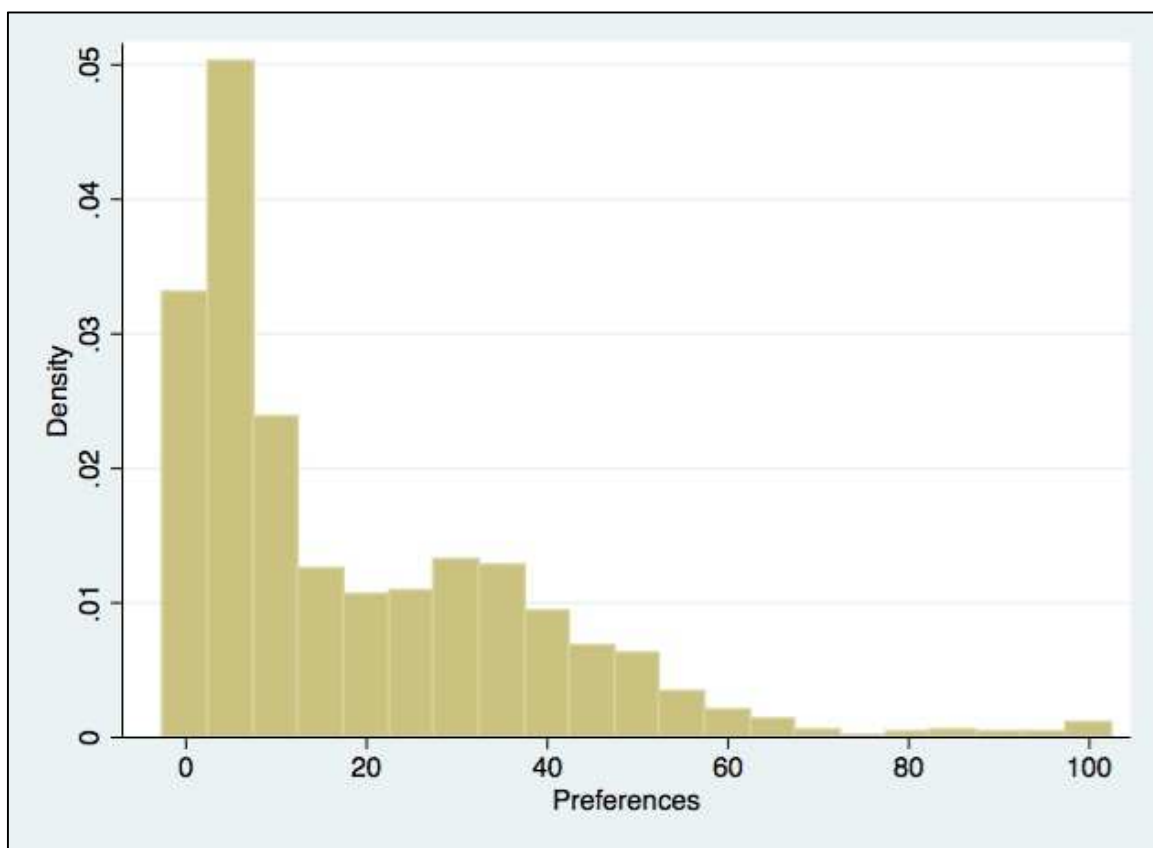


Figure 14 Histogram—Charity Preferences and Population Stability

T-tests (Mean Comparisons)

As this dissertation has hypothesized that Charity and Philanthropy have different effects in society, it was important to test and see if the output generated from these simulations support this hypothesis. Mean comparison t-tests were used to perform the hypothesis testing in this stage.

When there is population stability (Final_Steps=500), Philanthropy and Charity are statistically significantly different at the $>.001$ level. Mean Philanthropy is approximately 45.65 and mean Charity is approximately 29.14. The mean Final_Steps if Philanthropy is more prevalent than Charity is approximately 37 steps greater than if Charity is more prevalent than Philanthropy. This difference is statistically significantly different at the $>.001$ level.

What this means is that, on average, the prevalence of Charity is associated with population instability in the model. This relationship is statistically significant with a meaningful difference between the effects of Charity and Philanthropy on population stability. The conclusion supports the hypotheses that Charity is destabilizing while Philanthropy is either stabilizing or at the very least is minimally destabilizing.

Also, the mean population if Philanthropy is more prevalent than Charity is roughly 160 agents more than if Charity is more prevalent. This difference is statistically significantly different at the $>.001$ level. Also, the mean Average Wealth if Philanthropy is more prevalent than Charity is nearly 200 units of sugar higher than if Charity is more prevalent. This difference is also statistically significantly different at the $>.001$ level. The implications of this are that, on average, a greater prevalence of Philanthropy is associated with higher population levels and average wealth.

Finally, if Philanthropy is more prevalent than Charity, agents can see 9 patches farther on average than if Charity is more prevalent. This difference is statistically significantly different at the $>.001$ level. The mean Gini if Philanthropy is more prevalent than Charity is on average 75 points higher than if Charity is more prevalent. This difference is also statistically significantly different at the $>.001$ level. This supports the hypothesis that Philanthropy is associated with a higher productive capacity of those who benefit. However, since not all agents (or all people in a society) value this, the average effects on Gini are not surprising.

Regression Results

Finally, regression analysis was performed to explore the relationships, if any, between Philanthropy, Charity, and Preferences for Charity on population, Gini, Average Wealth, and Average Vision. Generally speaking, Philanthropy, Charity, and Preferences for Charity had highly statistically significant relationships with the main dependent variables (Mean_Pop, Mean_Gini, Mean_Avg_Wealth, and Mean_Avg_Vision) but were able to explain very little of the variation. Even though the coefficients were very low, the negative or positive associations were as expected for the most part. Since the parameters for sugar and vision were chosen relatively arbitrarily (4 units of sugar does not directly translate to actual wealth), the low coefficients could be an artifact of the output. Future research with actual data could address this issue, but for purposes of this discussion, the focus is on the significance of the relationships and the negative or positive associations.

Philanthropy: The prevalence of Philanthropy had statistically significant relationships at the $>.001$ level with Mean_Pop, Mean_Avg_Wealth, and Mean_Avg_Vision, and a statistically significant relationship at the $>.05$ level with Mean_Gini. The only negative association was with Mean_Avg_Wealth. This is most likely a function of agent priorities being the same throughout the duration of a simulation run. In reality, a person is likely to acquire human capital (i.e. going to college), and then at some point alter preferences towards accumulating wealth. Future research could make agent preferences more dynamic once vision reaches a certain point.

For Mean_Pop, Mean_Gini, and Mean_Avg_Wealth, the regression explained very little of the variation.³⁰ However, as seen below, the prevalence of Philanthropy explained approximately 41% of the variation in Mean_Avg_Vision. Also, for each percentage increase of Philanthropy prevalence, vision increases on average by 1.28 vision points, which shows a meaningful relationship between the two variables.

³⁰ Specifically, the regression model from Philanthropy on Mean_Pop explained less than 1% of variation in Mean_Pop with a coefficient of only .0024588. The regression model from Philanthropy on Mean_Gini explained less than 1% of variation in Mean_Gini with a coefficient of only .00262. The regression model from Philanthropy on Mean_Avg_Wealth explained less than 1% of variation in Mean_Avg_Wealth with a coefficient of -.018359. The full regression output is in Appendix 4.

Table 14 Regression Results for the Effects of Philanthropy Prevalence on Mean_Avg_Vision

```
. reg Philanthropy Mean_Avg_Vision
```

Source	SS	df	MS	Number of obs =	9388
Model	3513502.7	1	3513502.7	F(1, 9386) =	6623.53
Residual	4978879.35	9386	530.45806	Prob > F =	0.0000
				R-squared =	0.4137
				Adj R-squared =	0.4137
Total	8492382.05	9387	904.696074	Root MSE =	23.032

Philanthropy	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
Mean_Avg_Vision	1.283233	.0157674	81.39	0.000	1.252326 1.314141
_cons	-3.597725	.6993739	-5.14	0.000	-4.96865 -2.226801

Charity: The prevalence of Charity had statistically significant relationships at the >.001 level with Mean_Pop, Mean_Gini, Mean_Avg_Wealth, and Mean_Avg_Vision. Charity was negatively associated with Mean_Pop, Mean_Gini, and Mean_Avg_Wealth as expected.³¹ The more surprising finding was that Charity was positively associated with Mean_Avg_Vision. Specifically, for each percentage increase in Charity prevalence, vision increases on average by roughly .28 vision points, which shows a meaningful relationship between the two variables. However, this regression only explains roughly 2% of the variation in Mean_Avg_Vision.

³¹ Specifically, the regression model from Charity on Mean_Pop explained only 13% of variation in Mean_Pop with a coefficient of only -.0243091. The regression model from Charity on Mean_Gini explained only 9% variation in Mean_Gini with a coefficient of only -.0344843. The regression model from Charity on Mean_Avg_Wealth explained only 23% variation in Mean_Avg_Wealth with a coefficient of -.174921. The full regression output is in Appendix 4.

Table 15 Regression Results for the Effects of Charity Prevalence on Mean_Avg_Vision

```
. reg Charity Mean_Avg_Vision
```

Source		SS	df	MS	Number of obs =	9388
-----+-----					F(1, 9386) =	182.57
Model		165495.332	1	165495.332	Prob > F	= 0.0000
Residual		8508131.39	9386	906.470423	R-squared	= 0.0191
-----+-----					Adj R-squared =	0.0190
Total		8673626.72	9387	924.004125	Root MSE	= 30.108

Charity		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
-----+-----						
Mean_Avg_Vision		.278502	.0206116	13.51	0.000	.2380988 .3189053
_cons		37.87685	.9142411	41.43	0.000	36.08474 39.66896

Charity Preferences: The prevalence of Preferences for Charity had statistically significant relationships at the $>.001$ level with Mean_Pop, Mean_Gini, Mean_Avg_Wealth, and Mean_Avg_Vision. Charity Preferences were negatively associated with Mean_Pop and Mean_Gini as expected. Not surprisingly, Preferences for Charity was positively associated with Mean_Avg_Wealth (consistent with Philanthropy findings) and Mean_Avg_Vision (consistent with Charity findings).³² Interestingly, Preferences for Charity was able to explain more variation in the dependent variables than Philanthropy or Charity Preference. For example, as seen below, Preferences explain

³² Specifically, the regression model from Charity preferences on Mean_Pop explained only 6% variation in Mean_Pop with a coefficient of only -.0168825. The regression model from Charity preferences on Mean_Gini explained only 13% variation in Mean_Gini with a coefficient of only -.0418089. The regression model from Charity preferences on Mean_Avg_Vision explained less than 1% of variation in Mean_Avg_Vision with a coefficient of only .0684722. The full regression output is in Appendix 4.

12% of the variation in Mean_Avg_Wealth. Also, each additional percent of the population preferring Charity is associated with an average additional 1/8 unit of sugar increase in average wealth.

Table 16 Regression Results for the Effects of Preferences for Charity on Mean_Avg_Wealth

```
. reg Preferences Mean_Avg_Wealth
```

Source		SS	df	MS	Number of obs =	9388
-----+-----					F(1, 9386) =	1286.68
Model		1037677.61	1	1037677.61	Prob > F	= 0.0000
Residual		7569572.12	9386	806.474763	R-squared	= 0.1206
-----+-----					Adj R-squared =	0.1205
Total		8607249.73	9387	916.932964	Root MSE	= 28.398

Preferences		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
-----+-----						
Mean_Avg_Wealth		.1252248	.003491	35.87	0.000	.1183816 .1320679
_cons		5.959435	1.262125	4.72	0.000	3.485396 8.433474

Robustness

While both the prevalence of Charity and Preferences for Charity are generally associated with instability in the model, it was important to understand the robustness of the model and some boundary conditions. To do this, the model was explored computationally to search for simulation runs in which stability was achieved with high levels of Charity and/or Preferences for Charity. Out of a total of 9,888 simulation runs, 1,059 of these achieved stability, reaching 500 steps. Out of these runs, 82 had Charity prevalence greater than or equal to 75%, and 249 simulation runs had Charity prevalence greater

than or equal to 50%. In other words, less than a quarter of the stable simulation runs had Charity prevalence of 50% or greater, and less than a tenth of these had Charity prevalence of 75% or greater.

Regarding Preferences for Charity, out of the 1,059 simulation runs achieving stability, 15 runs had Charity Preference greater than or equal to 75%, and only 87 simulation runs had Charity Preference greater than or equal to 50%. In other words, less than a tenth of the stable simulation runs had a Charity Preference of 50% or greater, and even less had a Charity Preference of 75% or greater.

Of these, there was only one simulation run with both high Charity prevalence (90%) and high Charity Preferences (100%). However, this was also accompanied with 75% Philanthropy prevalence. Out of 12,500 additional simulation runs (for a total of 21,888), 3,262 achieved stability. 380 of these had both high Charity prevalence and Charity Preferences, which is less than 15% of all stable simulation runs. However, most of these were accompanied with a high degree of Philanthropy prevalence (at least 75%) as well.

These results imply that while Philanthropy alone is neither stabilizing nor destabilizing, in a Charity-heavy environment, high Philanthropy prevalence can be the stabilizing element needed. In fact, roughly 2/3 (2181 simulation runs) had at least 50% Philanthropy prevalence. A low Charity Preference rate (same as high Philanthropy Preference rate) tells a similar story with 1960 simulation runs achieving stability.

Conclusions

This output generated from these simulation runs supports the hypothesis that charity has destabilizing effects for a society. However, since entrepreneurship was not included, inferences on the direct effects of charity on entrepreneurship and development cannot be made. That being said, the destabilizing effects of charity are important and make a strong case that charity on such a system-wide level would have a negative effect on development. It would be useful for future versions of this model to include entrepreneurship and test this hypothesis directly.

Also, the output generated from these simulations supported the hypothesis that philanthropy without productive entrepreneurship may provide some benefit even if this alone is not enough to lead to development. Specifically, the increases in average wealth associated with philanthropy, while statistically significant, were minimal. Any increases in average wealth are likely due to a higher population that is more efficient at obtaining resources (higher average sugar). Even though wealth increases are inherently limited due to the lack of entrepreneurship, it can be inferred that philanthropy provided benefit to the extent possible.

CHAPTER SIX: CONCLUSION

This final chapter presents policy implications, research limitations and directions for future research. One overall finding is that this dissertation addresses is an incredibly complex topic with many components. Therefore, instead of a conclusions chapter with one overarching theme, this chapter is organized into a series of five sections, each with its own theme. Within each section, there are subsections covering policy implications and recommendations, along with relevant limitations and directions for future research. The sections are as follows: self-sustaining development, US Counterinsurgency policy, computational modeling, development assistance policy and programs, and implications for modern-day philanthropy.

Self-Sustaining Development

Policy Implications

One of the main contributions of this dissertation reframes a fundamental question in development economics. As development is a highly contextual emergent phenomenon, it cannot be treated as a one-size fits all policy solution. Instead, development should be understood as something that emerges endogenously, within a particular context, and not something that the US or any other powerful entity can “do” in a self-sustaining manner. This is especially true regarding top-down, centrally planed attempts at development in another country.

In addition to asking the binary question of if development happens, it is good policy and research to examine the nature and type of that development. If a country is developing, the next questions should entail how the development is occurring, and what the nature of this development is likely to be. The framework presented in Chapter 3 is a first step in providing guidelines to determine this. The nature of a particular country's development can have serious strategic implications. Whether a country's development appears or does not appear to be self-sustaining should be understood in order to develop appropriate and effective policy.

For example, if all signs point to a country's development not being self-sustaining, then anticipating future instability before it happens can be highly beneficial. A good example of this is the collapse of the Soviet Union. Within the framework presented in Chapter 3, the Soviet Union exhibited development that was not self-sustaining over time. It was top-down, centrally planned development that did not prepare individuals to constructively solve problems through productive entrepreneurship. Instead of anticipating its collapse (or other instability or plateau), this took many in the US by surprise. It is not controversial to suggest that policy professionals, businesses, and other entities could not have benefitted from some foresight in anticipating this collapse before it happened.

Moving forward, the framework presented in this dissertation provides insight beyond the binary issue of development or non-development. It can help policy professionals and researchers dig deeper into the nature of that development. From there, deeper understanding and foresight may be gained, helping those interested to better

understand the level of stability in developing nations. Understanding why some developed nations plateau and why some underdeveloped nations do not develop are also insights to be gained.

Limitations

The self-sustaining development framework at this point is theoretical. It has been a first step in synthesizing a wide array of literatures from several various disciplines.

Empirical, longitudinal data is necessary to test and refine this framework. Specifically, each of the necessary conditions should be subject to hypothesis testing, both individually and jointly. Understanding development within a complexity framework is important and valuable, and should also be explored further.

Directions for Future Research

As this dissertation is a first step in creating this framework, additional precision will be beneficial moving forward. Some of this can be theoretical, such as refine the terms and definitions more precisely. Other research moving forward can and should be empirical and possibly computational. For example, the framework consists of a set of testable hypotheses. Longitudinal data exists for a wide variety of countries, and should be used to explore these hypotheses. Further research can dig deeper into the factors underlying the nature of a society's development. For example, data exists that examines entrepreneurship across the globe, such as the GEDI index (Acs and Laszlo 2010). Data such as this can be useful in discovering the degree to which individuals within a society are empowered to solve problems in a way that is beneficial for them and for their society. In turn conclusions and hypotheses can be generated from this as to the nature of

a country's development, creating opportunities for even further data collection, empirical research, and theory refinement.

As creative destruction, innovation, and social mobility go hand in hand, and are almost by definition necessary conditions for development (self-sustaining or otherwise), further research into the level of acceptance for this in different societies and contexts should be conducted. This research would help to gauge the potential for self-sustaining development (if any), and/or contribute to explaining continued movement or stagnation. As acceptance of creative destruction and social mobility has many aspects, including culture, psychology, historical context, economic and political systems, etc., greater understanding of this should have as much of a multidisciplinary approach as possible.

Further research can also focus on the relationship between phenomena such as institutional inclusivity, individual resource control, and the ability for development to emerge and for a society to sustain this development over time. Research can also delve into learning how to measure time consistency (or inconsistency) of preferences. Such research, as with acceptance of creative destruction and social mobility, would need to be multidisciplinary. Once this is measured, its relationship to self-sustaining development over time can be assessed and empirically tested.

Regarding the concept of evolutionary stability, the most feasible way to move forward would be through agent-based modeling (ABM). These computational models can simulate a society with a wide variety of parameters, gaining insight into phenomena such as tipping points and evolutionary stability. In fact, Chapter 5 in this dissertation is a

step in this direction, showing which parameter combinations and ranges are likely to result in stability or instability.

US Counterinsurgency Policy

Policy Implications

This dissertation assumes that the US government is doing the best it can at development and nation building within the scope of its ability and the complexity of the insurgency environment. In fact, this section argues that development and nation building are not appropriate or feasible policy goals for foreign counterinsurgents.

It is not within the scope of a government to develop a country in a way that is self-sustaining, but to help provide the conditions necessary for this to emerge. It is not the government that creates self-sustaining development, but individual entrepreneurs tackling problems accessible to them. Social systems are fundamentally too complex for any one group or individual to take on most or all problems facing a society.

Entrepreneurs have the right idea in that they pick a solvable problem and a clear goal, even if that goal changes over time. When the conditions are right for this to happen on a broader scale, multiple entrepreneurs tackle a multitude of problems. The beauty of the entrepreneurial system is that while no one person or entity can understand or address all of a society's problems, they are not expected to. Development emerges from many individual entrepreneurs and organizations solving the problems that are accessible and solvable to them.

Foreign counterinsurgents can perform some building functions. However, self-sustaining development is too complex and relies too much on the ability of individuals

within a society to solve problems over the span of several generations. Development as a goal for other societies is something beyond US (or any other) government expertise. This is especially true considering that the US developed in a fundamentally different manner than the top-down nation building that is being attempted.

Added to this is the fact that the foreign counterinsurgents, attempting to provide government functions, are not endogenous to the local society and environment. Nation building is outside the scope of what a foreign power can feasibly do, short of colonization. Simply put, a foreign power cannot send people into a foreign country and create from scratch the rule of law, effective governance, a thriving private sector primarily engaged in productive entrepreneurship, or a culture that accepts creative destruction. Eventually, the foreign counterinsurgents have to leave. Any development that an outside force “does” is not likely to teach the local population how to solve their own problems in an independent, self-sustaining manner. This means that even if a foreign counterinsurgent force can somehow develop a country dealing with insurgency, it is all the less likely to be sustainable.

If the US genuinely wants a successful counterinsurgency effort as a matter of policy, then a focus on solvable problems is needed. Specifically what is needed is a set of clear expectations for achievable goals. This is both incredibly challenging and crucial to have a successful “build” component to the clear-hold-build strategy. A much more achievable goal and definition of the build component would be one of fostering stability instead of development and nation building. While development as a goal may be more popular, stability is more feasible. True stability that has the potential to last after

withdrawal will more likely provide a foundation for and lead to self-sustaining development than outside development and an unsustainable, shaky peace dependent upon outsiders.

To achieve success with stability as the focus of the build component, there are at least three minimum conditions: an exit strategy, minimization of charity within the build component, and minimization of aid dependency throughout the COIN effort. An exit strategy is important because a foreign counterinsurgent force can remain indefinitely without it. The details of the exit strategy can be modified with changing conditions, but it is absolutely necessary to have a plan clearly laid out. An exit strategy is not development or nation building. It can, however, involve helping a local population through brokering some peace and stability negotiations. The quicker stability can be achieved, the quicker a foreign counterinsurgency force can withdraw and redirect its resources to other priorities.

In today's complex environment in Afghanistan, the struggle is not simply against the government and a coherent set of insurgents. This most likely means that an outside counterinsurgent force helping to broker peace between competing factions is all the more necessary. Especially in Afghanistan, negotiating and brokering peace with some of these entities (such as the Taliban) are likely to be deeply unpopular. However, as Bapat (2010) points out, negotiations with the Taliban are likely to be inevitable.

As the computational model has shown, charity can have destabilizing effects on a society. Such effects work to directly undermine a goal of stability. Much of the reason for this is how the incentive structures become distorted. A good example of this is food

aid. While food aid is intended to help people (especially in a conflict or post-conflict situation), it can leave them more vulnerable to famine than before. Charity disrupts, if not eliminates, the structures that were previously in place, increasing the aid dependency. Administering charity requires no social structure, and therefore a structure that is beneficial for individuals to solve problems (such as finding ways to feed themselves) is not likely to develop. In fact, rent-seeking social structures often evolve surrounding aid distributions (Bar-Yam 2004).

Such structures forming around (primarily charity) aid distributions work against the long-term stability of a society. Instead of the best and brightest achieving benefits from productive entrepreneurship, the incentives reward rent seeking. Such rent seeking channels talent and energy toward more unproductive or destructive uses. Especially when the situation involves foreign counterinsurgents providing goods and/or services through charity that previously were provided through productive entrepreneurship, this leads to an increase in unproductive or destructive entrepreneurship. The combination of distorted incentive structures, instability associated with charity-based assistance, and the option to profit from violent behavior can make an insurgency increasingly problematic for both the local government and the foreign counterinsurgents.

The US should attempt to minimize dependence on foreign assistance beyond charity and find an exit strategy. The problem of dependence is prevalent throughout the COIN effort. Instead of focusing on countering the insurgency, social service provision, development, good governance, etc. the local government is likely to become

increasingly ineffective from allowing the foreign counterinsurgents to shoulder these responsibilities. The weakening Karzai regime is an example of this (Bapat 2010).

Reducing aid dependence in a broader sense is necessary for stability and foreign counterinsurgent exit. Development assistance is not the only form of assistance that can result in very serious dependency issues, especially in an insurgency/counterinsurgency environment. For example, as the Karzai regime is increasingly dependent on the security and stability foreign counterinsurgents provide, it reduces his ability to remain a strong player without US and coalition support (Root 2008; Bapat 2010).

Dependence on foreign counterinsurgent help is similar to the Alliance Curse framework (Root 2008) but is more pronounced in an insurgency situation. This dependence, combined with the insurgency, reduces the recipient country government effectiveness. Assuming an exit strategy as a policy goal, a weak Karzai regime undermines this. According to Bapat (2010), this aid dependency and its resulting government ineffectiveness will worsen over time. This weakens the Karzai regime's negotiating position with the Taliban. As ironic as it sounds, negotiating with these people sooner rather than later may be the best way to minimize Taliban power and influence.

A foreign counterinsurgent force cannot remain in a country indefinitely without colonization. Clearing and holding an area is only a temporary solution and does not provide sustainable help for the local society or the foreign counterinsurgents. Building, if it is development and/or nation building, is not a realistically attainable goal. Certainly not in a way that leaves the local society independent and able to sustain development.

Building, if seen as brokering stability with a planned exit strategy, is the best way forward for the US and any other foreign counterinsurgent power.

Limitations

This dissertation was a first step in many ways. There are certain constraints such as scope, time frame, and data limitations in this research. Regarding scope, the research examined a very specific aspect of US counterinsurgency policy. It did not address the conflict management, military/police aspects, or the decision to engage, only the attempt at development and nation building as an external power. It is entirely plausible that the other aspects affect the build component in ways outside the scope of this dissertation.

Even without involving nation building and/or development, counterinsurgency is incredibly difficult. This is especially true when a foreign power is involved with more than a funding and advisory role, having actual skin in the game. As a foreign power, choosing to engage in such an effort is something that should rarely if ever be a first choice. That being said, the decision to become foreign counterinsurgents in Iraq and Afghanistan is not the focus of this dissertation.

The reason for this is twofold. First, others have covered in detail the difficulties of counterinsurgency, especially the challenging role of the foreign counterinsurgent (Lawrence 1926; Galula 1964; Nagl 2002; Marsten & Malkasian 2008; Kilcullen 2010). As counterinsurgency is expensive in terms of resources, time, lives, and opportunity costs, it is well understood in the literature that this is not a course of action that should be decided upon lightly. There was not much else this dissertation could have contributed to this aspect.

Second, the US had already chosen to become foreign counterinsurgents at the time of this writing. The decision behind making this choice is not as policy relevant as what the course of action should be, moving forward. Limited insight can be gained from making the argument that the US should or should not have conducted COIN operations in Iraq and/or Afghanistan. A more productive discussion involves one that treats the US involvement as given.

There were also limitations related to available time and data. To make the research feasible for this dissertation (especially collecting and analyzing program data for Chapter 4), time limits were necessary. At the same time, there was missing budget data that, even if attainable, was not on the margin worth spending excessive time on the search. This is especially true since a key finding came from the nature of the missing budget data itself.

Data limitations also include specifics regarding each USAID program. Only so much of the story is reported, especially publicly. The data used in this dissertation reflected only a surface level of information for each project. While a surface-level understanding for each program was adequate for the scope of this dissertation, it is assumed and acknowledged that it does not necessarily capture the entire story.

Finally, the data limitations for Chapter 4 include data from other assistance programs, whether they are international, military, NGO, etc. Limiting the scope of the research to USAID programs ensured that this research was doable, but there are a multitude of programs that were ultimately and necessarily excluded from this research.

Directions for Future Research

Future research should include expanding the framework presented in Chapter 4 to include other program data. This could include data from other organizations such as the UN and various NGOs. It can also include program data from military efforts (where public information is available), along with program data within other past and present COIN efforts. The most obvious opportunity for this would be to apply the same framework and data collection methods to USAID programs in Iraq. At the same time, future research could also dig deeper into individual programs. This could provide a richer story of how money was used, and what the effects were over time.

The implications of this research can and should also be integrated into the broader COIN context. “Building” within a clear-hold-build context is often the least clear and most complex. This research is a step forward in explaining some of the difficulties and placing bounds on what can be done. Further research is needed to explore where the bounds lie on what a foreign counterinsurgent force can successfully achieve, both in its own capacity, and any dependency on host nation capacity.

Computational Model

Policy Implications

Computational, agent-based modeling (ABM) is likely the best tool we have so far to measure, assess, and better understand evolutionary stability at the level of a social system. A main contribution of the model in Chapter 5 is in how it shows the range and combinations of development assistance parameters that are likely to result in stability or instability in the model society. While it is a first step, the thinking behind the model has

profound implications for using computational modeling to address and better understand development, and importantly, development sustainability.

Further iterations of this model can be of use to policy makers, especially those designing a development assistance package for a donor country. Policy professionals can use such models to explore how likely certain combinations of programs are to generate instability, promote stability, or at least do minimal harm. At this point, ABM is probably the best tool for such experimentation. A computer can run an indefinite number of experiments with a wide variety of parameters, without this impacting a single vulnerable life. Also, these models already do an incredible job of simulating real world phenomena, and are likely to get even better moving forward.

Limitations

While the computational model in this dissertation is a useful first step, some of the limitations are inherent in its generality. This is a model of a social system, which in reality is far more complex. Aspects of a social system that are being modeled include social, political, economic, and to some extent psychological. For instance, culture, while likely important, is greatly simplified in this model as agent preferences. In reality, culture is likely to affect development in much more complex ways. Other aspects of a social system are to some extent incorporated in the model but are not the phenomena of interest. For example, any spatial elements are relatively arbitrary and do not reflect actual geography.

Also, this model is theoretical. Without actual data, it is limited in its ability to guide and inform policy, along with its ability to reflect reality. Data collection is needed moving forward to refine and guide this theory and model construction.

Directions for Future Research

The main contribution the model from Chapter 5 made was to show various ranges and combinations of parameters that result in evolutionary stability or instability in the model. This concept ties closely to the notion that evolutionary stability is necessary for development to emerge and remain self-sustaining. Moving forward, the model can and should be refined to illuminate this further. This and other models building upon this can also computationally explore the ramifications of path dependence and sensitivity to initial conditions for development.

However, the most intuitive next step would be to add subsidies to the model to make it more closely resemble the actual development assistance portfolio presented in the USAID case study (and likely cases to follow). While describing the typical runs, or base cases, is theoretically useful, the model should be built upon and refined to better incorporate project data. This way, the model could be more effective in informing policy in a way that is both theoretically interesting and empirically grounded.

From there, subsidies can be broken up into the various types identified. As discussed in the USAID chapter, not all subsidies are created equal and can have different effects on the underlying social system. Consulting should also be added, with having some of the resources leave the model altogether (the previous chapter identified consulting as subsidizing donor country industry). Computationally, once subsidies are

incorporated into the model, consulting could be feasibly added as subsidy resources (or a percentage of this) leaving the model. It is reasonable to hypothesize that USAID programs in Afghanistan are not unique in being consulting-heavy. Adding consulting to the model will not only shed more light on this case, but is likely to be applicable to a wide variety of development assistance programs.

Another direction forward would be to incorporate entrepreneurship and relevant institutions to see if, when, and under which circumstances development emerges. For example, even with entrepreneurs, if the institutions do not promote productive entrepreneurship, then it is possible that the beneficiaries of philanthropy over time become efficient rent seekers and/or destructive entrepreneurs. It could even test various institutions and other cultural aspects hypothesized to contribute to the sustainability of a country's development. Philanthropy is just the start of this. There are various types of institutions seen as important for entrepreneurship and development, and programming these in could provide for testing to see which are the most important.

Various aspects of entrepreneurship could also be added to this model. For example, there are computational models of decision processes such as SOAR and ACT-R. Other characteristics such as optimism, risk attitudes, confidence, etc. could be programmed into entrepreneur agents and tested to see how much they matter. This could even be used to test the hypotheses presented in the allocation of talent literature (Baumol 1990; Murphy, Schleifer, et al. 1991; Coyne 2008; Desai 2010).

Development Assistance Programs

Policy Implications

This dissertation takes a step beyond asking if development assistance works, or why it doesn't work, but looks at the structure of that assistance and its implications for aid effectiveness (or at least minimal harm). In fact, development assistance program structure may be more important than the relevant sector (agriculture, health, etc.). While sector is likely to be important, categorizing assistance programs according to the framework presented in Chapter 4 is also necessary. Without a framework such as this, it is much more difficult to tell if an agriculture program is likely to lead to instability, or improve the local productive capacity, for example.

Chapter 5 presents two main findings with serious implications for development assistance. First, charity is likely to be destabilizing.³³ Second, while philanthropy isn't likely to lead to development on its own, it is the option that appears to be least harmful or destabilizing. Choosing whether to design development assistance programs or packages as primarily charity or philanthropy is something relatively doable from a policy perspective. Organizations have been choosing to engage in philanthropy over charity for over a century. Even if this is not necessarily currently politically feasible, this framework can help to change perspectives in this direction. After all, philanthropy is a valued institution in the US—helping people to help themselves achieve long term goals is likely to be more popular than giving money away for an attempt at (or illusion of) a quick fix.

³³ While charity preferences are also likely to be destabilizing, it is not mentioned in this section because preferences such as these should be seen as exogenous to a COIN effort. It is much more straightforward to control whether a program is charity or philanthropy than it is to change the time preferences of the host nation population.

The heavy amount of consulting appears to actually be subsidization for donor country industry and interests, packaged as an attempt to help others. Combined with the fact that this was the least transparent type of giving in terms of funding, this is a highly problematic situation. Efforts should be made to reduce this and increase transparency—possibly a cap on consulting within a development assistance program, along with public reporting requirements. Adopting and integrating a framework such as this can help illuminate the issues both in terms of how the public thinks about it and how the policy community addresses this. Specifically, adopting policies that improve transparency and limit donor country subsidization would better align development assistance programs with US goals and fundamentally, US values.

Limitations

Due to limitations related to data and the scope of the research, the assistance programs analyzed were limited to a single civilian agency. Therefore, it can only tell us the story of USAID in Afghanistan from 2002-2012. To be more generalizable, a broader range of programs should be analyzed and categorized according to the framework presented in Chapter 4. This includes different recipients, time frames, donor agencies, even donor countries. Such a data using this framework could even be compared to programs privately funded.

Within the context of this research, there have also been limitations related to both incomplete project and budget data. While sufficient data was collected to make inferences (about both the complete and missing data), without a complete data set one cannot be certain. Also, there are limitations in terms of time and scope. A project such as

this can go on indefinitely—analyzing development assistance projects in this manner could constitute a lifetime of research to get a sense of the entire picture.

Another issue involves this being a first step, with a framework created in a developed world context. Specifically, the focus was on understanding which programs were charity as opposed to philanthropy, a US invention. It is entirely probable that this study did not capture all relevant categories and structures of development assistance. Also, our understanding of philanthropy in an international context is limited. It is entirely possible that this definition will need to be refined moving forward.

Directions for Future Research

Consulting was a category discovered and applicable to the development assistance programs discussed in Chapter 4. The finding that the scale and scope of consulting was enormous is significant and implies that consulting is actually donor country subsidization. Combined with the fact that consulting budgetary data was the least transparent, these results are troubling. Even more problematic is that this level and degree of consulting cannot be assumed to be a special situation in terms of development assistance. At this point, the scope of donor country subsidization through “consulting” is uncertain and likely to be troubling. Further research should delve further into this issue not only in terms of US development assistance in Afghanistan but also understanding the scope of this within the development assistance industry as a whole. It would be especially interesting to see how much of the awarded money is spent trying to win additional contracts and grants. In other words, it would be interesting to have empirical data on the cost of rent seeking in the development assistance consulting industry.

Taxpayers deserve to know how much resources are spent subsidizing donor country interests in the name of generosity.

The broader issue of subsidization should also be explored more deeply. As this relatively narrow case study has shown, not all subsidies are created alike. Further research should explore further into development assistance in Afghanistan, and assistance programs and subsidization more generally. Questions covering the long-term implications of various types of subsidies (within this framework, not simply sector) should be explored.

The effects of various types of giving (especially subsidization and consulting) on a recipient society can and should be explored further computationally. In Chapter 5, the model presented is a useful first step, but did not include subsidies or consulting. Both of these categories should be added to the model, ultimately with subsidies having various parameters, building upon the insight gained from Chapter 4. This could improve understanding into if and how various types of subsidies have various types of effects within a society.

Modern-Day Philanthropy

Policy Implications

Modern-day philanthropy policy is not necessarily a straightforward concept. Policy is often equated with government action, and philanthropy is primarily a private sector phenomenon. The assumption that policy means that a government entity must actively do something is not necessarily a good one to hold.

Specifically, there are three ways in which the concepts of philanthropy and policy can be reconciled. First (and possibly the most obvious), is that a government entity can learn from and emulate philanthropic giving. This is being and has been done in the US and elsewhere for over a century. The clear example of this is the higher education system in the US. Initially, universities were founded and endowed by philanthropists and spread across the US. Then, (usually state governments) emulated this, founding state-run educational institutions such as land grant universities (Carnegie 1901; Zunz 2012). This combined public and private effort has helped to expand opportunity and social mobility for generations and contributes to entrepreneurial success in the US (Zunz 2012).

An opportunity exists to expand this positive learning into development assistance and other programs designed (at least in name) for giving and improving the lives of others. With the focus on opportunity over the long term, addressing the root of problems, and helping those willing to help themselves, it has the best hope of success. While governments have historically been redistributive and participated in more charity than philanthropy, this does not necessarily have to be the case moving forward. It is the difference between thoughtful and mindless generosity.

Second, a policy that involves government action could be the choice to enable more than act directly. This involves letting go of the assumption that good policy equates to a government entity actively doing something. Instead, the government can have a cooperative relationship with philanthropic foundations, developing (or in the case of the US continuing to develop) along side of them. The policy can and should be that of

enabling individuals and private entities to invest in solving problems in society that they observe and can address, arguably in a more effective and efficient manner than a government entity.

Third, policy does not necessarily confine itself to government organizations. Private businesses also have policy, and especially in this case, can go the most good. Many entrepreneurs and private organizations actively engage in philanthropy, whether through distinct foundations or through philanthropic activities within the company. Philanthropists, academics, and other stakeholders should be continuously reaching out to these private companies and entrepreneurs, encouraging them to give thoughtfully through philanthropy.

Another note on giving, part of the role of a philanthropist is to persuade others to give thoughtfully as well. A good example of this is Bill Gates's giving pledge (Acs 2013). Philanthropy is integral to self-sustaining capitalism in the US, arguably part of our fabric as a nation. However, it is only now an emerging field of study. All too common, people use the terms charity and philanthropy interchangeably, which is more problematic than it seems.

As discussed earlier, philanthropy and charity are fundamentally, structurally, even ethically distinct. This distinction should be understood to the point where it is common knowledge and the terms are understood for their true meaning and implications. From a policy perspective, philanthropists and philanthropic organizations should not give quietly. Following Gates's example, they should be vocal about what they do, why they do it, and why it is absolutely not charity. The degree to which an

organization gives philanthropically measures its willingness to invest so that the system that provided opportunity for them can continue to grow and provide opportunity for future generations. Ultimately, the stakeholders with the most to lose and the most to gain from widespread philanthropy are entrepreneurs: past, present, and future.

Limitations

Philanthropy was originally designed to address challenges within a very specific context.

At the time philanthropy emerged, the US was a developed nation with a thriving productive entrepreneurship sector and a population that valued social mobility and hard work. Creating libraries, endowing educational institutions, and funding research were straightforward ways in which philanthropists could help those willing to work for it to help themselves. These beneficiaries could then find a productive place in American society, at times becoming productive entrepreneurs themselves. Culturally, such giving and enabling hard work was both expected and seen as heroic.

The framework presented in Chapter 3 came from such a context, with such values, and undoubtedly, the resulting bias. Philanthropy, as a US concept and institution, has been broken down into component parts in an attempt to apply this concept and institution more broadly in an international development context. International philanthropy is incredibly new and not well understood at this time. This places an inherent limit on the applicability of the framework without further research in an international context.

Also, while philanthropy is key for self-sustaining development in the US, it is entirely possible that other institutions play a similar enabling role in other countries and

societies. A broader framework is needed to understand this and explore implications for philanthropy in an international context.

Directions for Future Research

Philanthropy has been rapidly expanding beyond the US to address international challenges. Philanthropists are faced with solving problems in completely different cultural and institutional contexts. Also, philanthropic giving is becoming much more dispersed, as middle-class Americans want to donate with philanthropic goals in mind. However, the way forward is much less clear. This is where additional research on this subject can help.

For example, the theory chapter defined self-sustaining development and presented the case for why it is just as, if not more important than development emergence. This understanding contributes both to understanding our development story as Americans and can contribute to how people think about this as the ultimate goal internationally. Sustainability is broader than the physical environment, and philanthropic programs can be geared toward helping people in ways that allow them to continuously help themselves.

The dimensions presented in Chapter 4 provide a framework for researchers to analyze specific programs in specific contexts to better understand if they are charity, philanthropy, subsidies, social entrepreneurship, or something completely different. In addition to this, one key insight gained from the research presented in Chapter 4 is the possible need for additional categories. In this case, it was more of a beneficial byproduct than a goal. However, it can and should be a research goal to further tease out and

explore possible categories of giving. At the very least, researchers should be open to discovering these new categories. Instead of trying to make programs fit into present categories, at times new categories should be devised. International giving is a rapidly evolving phenomena—researchers and other policy professionals should keep this in mind and remain open to the changes that occur.

All too often charity and philanthropy are used interchangeably. What this means is that a framework that is both useful and widely understood is much needed. The framework presented and used in the chapter covering USAID programs is also applicable to the programs that a foundation funds and could be used in this manner. Especially for general-purpose foundations, this framework can help philanthropists set program and funding priorities, hopefully along philanthropic lines. Even just a deeper understanding of how and why charity and philanthropy are different is useful.

In addition to research, communicating these ideas to the general public (including philanthropists) is also necessary to have a meaningful impact. Acs (2013) is an important step in this direction, but more can be done in terms of reaching this audience. Deeper understanding of the role of the philanthropist and just why it is so crucial is continuously unfolding. Both publishing and outreach to philanthropists would make this knowledge not just interesting, but practical and meaningful.

As philanthropy necessarily entails delay of gratification, at least some time consistency of preferences is necessary, both for the donors and the beneficiaries. Therefore, as in the section on self-sustaining development, research on time consistency

or inconsistency of preferences can shed much light on modern day, international philanthropy and its potential to create opportunity in a variety of contexts and cultures.

APPENDIX 1: USAID PROGRAM DATA

<i>Program</i>	<i>Category 1</i>	<i>Category 2</i>	<i>Type</i>
Afghan Civilian Assistance Program (ACAP)	Stabilization	Strengthening the Reach and Legitimacy of the Central Government in Outlying Regions	Charity
Afghan Civilian Assistance Program II (ACAP II)	Stabilization	Strengthening the Reach and Legitimacy of the Central Government in Outlying Regions	Charity
USAID Office of Foreign Disaster Assistance (OFDA) Afghanistan	Agriculture	Food Security and Humanitarian Support	Charity
USAID Office of Foreign Disaster Assistance (OFDA) Afghanistan-Emergency Winter Aid Distribution	Agriculture	Food Security and Humanitarian Support	Charity
USAID_Washington DCHA Office of Food for Peace (PRRO)	Agriculture	Food Security and Humanitarian Support	Charity
USAID_Washington DCHA Office of Food for Peace (PRRO)	Agriculture	Food Security and Humanitarian Support	Charity
Accelerating Sustainable Agriculture Development	Agriculture	Comprehensive Agriculture and Alternative Development	Consulting
Advisor to the Secretariat of the Inter-Ministerial Commission for Energy (ICE)	Infrastructure	Energy and Water Activities	Consulting
Afghan Electoral Reform Project	Democracy & Governance	Elections and Political Competition	Consulting
Afghanistan Biodiversity and Community Forestry (ABCF)	Agriculture	National Water and Natural Resource Management	Consulting
Afghanistan Civil Service Support (ACSS)	Democracy & Governance	Governance	Consulting
Afghanistan Energy Assistance Project	Infrastructure	Stabilizing, Improving Access, and Expanding Reliable Energy Sources	Consulting
Afghanistan Engineering Support Program (AESP)	Infrastructure	Management and General Services Activities	Consulting
Afghanistan Famine Early Warning System Network (FEWS-NET)	Agriculture	Food Security and Humanitarian Support	Consulting
Afghanistan Infrastructure and Rehabilitation Program (AIRP) - General Management and Administration	Infrastructure	Management and General Services Activities	Consulting

Afghanistan Infrastructure and Rehabilitation Program (IRP) - Quick Response General Services	Infrastructure	Management and General Services Activities	Consulting
Afghanistan Local Governance Assistance Project (ALGAP)	Democracy & Governance	Governance	Consulting
Afghanistan Media Development and Empowerment Project (AMDEP)	Democracy & Governance	Civil-Society and Independent Media	Consulting
Afghanistan National Innovation and Competitiveness Program	Economic Growth	Reducing Poverty by Promoting Economic Growth	Consulting
Afghanistan Parliamentary Assistance Program (APAP)	Democracy & Governance	Governance	Consulting
Afghanistan Rule of Law Project (ARoLP)	Democracy & Governance	Rule of Law	Consulting
Afghanistan Social Outreach Program (ASOP)	Democracy & Governance	Governance	Consulting
Aid Management and Coordination and Public Information	Economic Growth	Reducing Poverty by Promoting Economic Growth	Consulting
Air Traffic Controllers Training to the Ministry of Transportation and Civil Aviation (MoCAT) (Phase II)	Economic Growth	Interagency Agreements	Consulting
Arazi (Afghan Land Authority) via MAIL (Ministry of Agriculture, Irrigation and Livestock) On-Budget Component	Economic Growth	Economic Policy and Governance	Consulting
Assistance to Afghanistan's Anti-Corruption Authority (4A)	Democracy & Governance	Rule of Law	Consulting
Basic Support for Institutionalizing Child Survival-III (BASICS-III)	Health	Bilateral Projects	Consulting
Biodiversity Conservation and Natural Resources Management	Agriculture	National Water and Natural Resource Management	Consulting
Biodiversity Support Program (BSP)	Agriculture	National Water and Natural Resource Management	Consulting
Building Independent Media in Afghanistan	Democracy & Governance	Promoting the Free Exchange of Information and Ideas Vital to the Democratic Process	Consulting
Capacity Development Program (CDP)	Democracy & Governance	Governance	Consulting
Center of Government (CoG) Project	Democracy & Governance	Governance	Consulting
CityLinks Project	Democracy & Governance	Governance	Consulting
Civilian Technical Assistance Program (CTAP)	Gender & Participant Training	Ensuring Aid Effectiveness through Evaluation, Training, and Donor Coordination	Consulting
Commercialization of Afghanistan Water and Sanitation Activity (CAWSA)	Infrastructure	Energy and Water Activities	Consulting

Comprehensive Disabled Afghans Program_National Program of Action on Disability	Health	Bilateral Projects	Consulting
Design for Ghazi Boys and Kabuli Sardar Girls High Schools	Education	Increasing Access to Quality Education and Suitable Learning Environments	Consulting
E-Governance Resource Center (EGRC)	Economic Growth	Business Development and Trade	Consulting
Economic Governance & Private Sector Strengthening (EGPSS)	Economic Growth	Reducing Poverty by Promoting Economic Growth	Consulting
Economic Governance in Afghanistan	Economic Growth	Reducing Poverty by Promoting Economic Growth	Consulting
Economic Growth and Governance Initiative (EGGI)	Economic Growth	Economic Policy and Governance	Consulting
Election Observation Mission – 2010 Wolisi Jirga	Democracy & Governance	Elections and Political Competition	Consulting
Electoral Reform and Civic Advocacy (AERCA)	Democracy & Governance	Elections and Political Competition	Consulting
Energy Partnership	Infrastructure	Stabilizing, Improving Access, and Expanding Reliable Energy Sources	Consulting
Engineering Design Support Activity (EDSA)	Infrastructure	Vertical Structures Activities	Consulting
Engineering Quality Assurance and Logistical Support (EQUALS)	Infrastructure	Management and General Services Activities	Consulting
Enhancing Legal and Electoral Capacity for Tomorrow (ELECT)	Democracy & Governance	Elections and Political Competition	Consulting
Environmental Assessment of the Alternative Livelihoods Program	Agriculture	Accelerating Regional Economic Growth to Provide Licit Alternatives to Poppy Production	Consulting
Establishment of National Payment System	Economic Growth	Reducing Poverty by Promoting Economic Growth	Consulting
Foreign Affairs Institutional Reform (FAIR)	Democracy & Governance	Governance	Consulting
Health Care Improvement (HCI) Project	Health	Field Support Projects	Consulting
Health Research Challenge for Impact_ Reproductive Age Mortality Survey (RAMOS) II	Health	Field Support Projects	Consulting
Health Service Support Project (HSSP)	Health	Bilateral Projects	Consulting
Health Systems 20_20	Health	Field Support Projects	Consulting
Health Systems 20_20	Health	Field Support Projects	Consulting
Human and Institutional Capacity Building for Afghanistan Energy and Natural Resources (AECB)	Infrastructure	Energy and Water Activities	Consulting

Human Resources and Logistical Support (HRLS)	Infrastructure	Stabilizing, Improving Access, and Expanding Reliable Energy Sources	Consulting
Improving Livelihoods and Governance through Natural Resource Management Project (ILG-NRMP)	Agriculture	National Water and Natural Resource Management	Consulting
Industrial Estates Development	Economic Growth	Reducing Poverty by Promoting Economic Growth	Consulting
Infrastructure and Rehabilitation Program (IRP) - Power (LBG_B&V)	Infrastructure	Stabilizing, Improving Access, and Expanding Reliable Energy Sources	Consulting
Infrastructure and Rehabilitation Program (IRP) - Roads (LBG_B&V)	Infrastructure	Expand and Improve Access to Economic and Social Infrastructure	Consulting
Infrastructure Rehabilitation Program (IRP) - USACE	Infrastructure	Expand and Improve Access to Economic and Social Infrastructure	Consulting
Initiative to Promote Afghan Civil Society (I-PACS II)	Democracy & Governance	Civil-Society and Independent Media	Consulting
Kabul City Initiative (KCI)	Democracy & Governance	Governance	Consulting
Kabul Electricity Directorate (KED) Commercialization	Infrastructure	Stabilizing, Improving Access, and Expanding Reliable Energy Sources	Consulting
Kabul Electricity Service Improvement Project (KESIP)	Infrastructure	Energy and Water Activities	Consulting
Kandahar Commercialization Support	Infrastructure	Energy and Water Activities	Consulting
Land Reform in Afghanistan (LARA)	Economic Growth	Economic Policy and Governance	Consulting
Land Titling and Economic Restructuring Activity (LTERA)	Economic Growth	Reducing Poverty by Promoting Economic Growth	Consulting
Local Governance and Community Development (LGCD)	Stabilization	Strengthening the Reach and Legitimacy of the Central Government in Outlying Regions	Consulting
Measure DHS_ Afghanistan Mortality Study	Health	Field Support Projects	Consulting
Media Development in Afghanistan	Democracy & Governance	Promoting the Free Exchange of Information and Ideas Vital to the Democratic Process	Consulting
National Load Control Center	Infrastructure	Energy and Water Activities	Consulting
National Media Assessment	Democracy & Governance	Promoting the Free Exchange of Information and Ideas Vital to the Democratic Process	Consulting
On-budget Support for Independent Administrative and Civil Service Commission (IARCSC)	Democracy & Governance	Governance	Consulting
Private Community Forestry for Natural Resource Management	Agriculture	National Water and Natural Resource Management	Consulting
Promoting Sustainable Private Sector Development	Economic Growth	Reducing Poverty by Promoting Economic Growth	Consulting

Provincial Reforestation and Integrated Environmental Protection Project (IEPP)	Agriculture	National Water and Natural Resource Management	Consulting
Provision of Technical Advisor to the Ministry of Finance_Treasury	Economic Growth	Reducing Poverty by Promoting Economic Growth	Consulting
Road Operation and Maintenance Capacity Building Project	Infrastructure	Roads Activities	Consulting
Rule of Law Stabilization Program – Formal Component	Democracy & Governance	Rule of Law	Consulting
Rule of Law Stabilization Program – Informal Component	Democracy & Governance	Rule of Law	Consulting
Services Under Program and Project Offices for Results Tracking (SUPPORT)	Gender & Participant Training	Ensuring Aid Effectiveness through Evaluation, Training, and Donor Coordination	Consulting
Sheberghan Gas Generation Project	Infrastructure	Energy and Water Activities	Consulting
Special Projects_ Watershed Studies, Multi-purpose Dam Designs, and Technical Assistance	Infrastructure	Energy and Water Activities	Consulting
Strategic Support to the Islamic Republic of Afghanistan	Democracy & Governance	Governance	Consulting
Strengthening Pharmaceutical Systems (SPS)	Health	Bilateral Projects	Consulting
Strengthening Private Sector through Capacity Building	Economic Growth	Reducing Poverty by Promoting Economic Growth	Consulting
Support for Increased Electoral Participation in Afghanistan	Democracy & Governance	Governance	Consulting
Support to National Area Based Development Program	Agriculture	Accelerating Regional Economic Growth to Provide Licit Alternatives to Poppy Production	Consulting
Support to Sub-National Governance Institutions	Democracy & Governance	Governance	Consulting
Support to the Afghanistan Independent Human Rights Commission (AIHRC)	Democracy & Governance	Rule of Law	Consulting
Support to the Elections Process (STEP)	Democracy & Governance	Elections and Political Competition	Consulting
Supporting the International Observation Mission	Democracy & Governance	Elections and Political Competition	Consulting
Survey of the Afghan People	Democracy & Governance	Governance	Consulting
Sustainable Water Resources Management	Infrastructure	Expand and Improve Access to Economic and Social Infrastructure	Consulting
TB CARE 1	Health	Field Support Projects	Consulting
Technical Support to Afghan Energy Information Center (AEIC)	Infrastructure	Energy and Water Activities	Consulting

Technical Support to the Central and Provincial Ministry of Public Health (Tech-Serve)	Health	Bilateral Projects	Consulting
The Ministry of Women's Affairs Initiative to Support Policy and Advocacy (MISPA)	Gender & Participant Training	Advancing the Role of Women and Removing Constraints on Their Potential	Consulting
Trade and Accession Facilitation for Afghanistan (TAFA)	Economic Growth	Business Development and Trade	Consulting
Urban Revitalization Project	Democracy & Governance	Governance	Consulting
Voter Registration and Election Implementation Program	Democracy & Governance	Elections and Political Competition	Consulting
Voter Registration Project (VRP)	Democracy & Governance	Elections and Political Competition	Consulting
Advancing Afghan Agriculture Alliance (A-4)	Agriculture	Comprehensive Agriculture and Alternative Development	Philanthropy
Afghan eQuality Alliances (AeQA)	Education	Increasing Access to Quality Education and Suitable Learning Environments	Philanthropy
Afghan Sustainable Water Supply and Sanitation (SWSS)	Infrastructure	Energy and Water Activities	Philanthropy
Afghanistan Farm Service Alliance (AFSA)	Agriculture	Comprehensive Agriculture and Alternative Development	Philanthropy
Afghanistan Primary Education Program (APEP)	Education	Increasing Access to Quality Education and Suitable Learning Environments	Philanthropy
Afghanistan Water, Agriculture and Technology Transfer (AWATT) Project	Agriculture	Agricultural Research, Extension, and Education	Philanthropy
Afghanistan Workforce Development Program (AWDP)	Economic Growth	Business Development and Trade	Philanthropy
Agroenterprise Support Program	Agriculture	Comprehensive Agriculture and Alternative Development	Philanthropy
Ambassador's Small Grants Program to Support Gender Equality in Afghanistan (ASGP)	Gender & Participant Training	Advancing the Role of Women and Removing Constraints on Their Potential	Philanthropy
America's Rapid Response to the Education Needs of Afghanistan	Education	Increasing Access to Quality Education and Suitable Learning Environments	Philanthropy
American University of Afghanistan (AUAF)	Education	Higher Education	Philanthropy
Better Health for Afghan Mothers and Children Project	Health	Bilateral Projects	Philanthropy
Building Education Support Systems for Teachers (BESST)	Education	Basic Education	Philanthropy
Building Livelihoods and Trade by Turquoise Mountain Foundation (TMF)	Economic Growth	Business Development and Trade	Philanthropy

Child Protection and Psychological Support for Afghan Children and Youth Program_Assistance for Afghanistan's Most Vulnerable Children	Health	Bilateral Projects	Philanthropy
Child Survival Support Grant_ Better Health for Afghan Mothers and Children Project	Health	Centrally Funded Projects	Philanthropy
Communication for Behavior Change_Expanding Access to Private Sector Health Products and Services in Afghanistan (COMPRI-A)	Health	Bilateral Projects	Philanthropy
Construction of Health and Education Facilities (CHEF)	Education	Increasing Access to Quality Education and Suitable Learning Environments	Philanthropy
Construction of Health and Education Facilities (CHEF)	Infrastructure	Vertical Structures Activities	Philanthropy
Disease Early Warning System (DEWS)	Health	Field Support Projects	Philanthropy
English and Computer Basic Training for Afghanistan Geology Survey (AGS)	Economic Growth	Financial Sector and Investment Promotion	Philanthropy
Establishment of Management Services for the American University of Afghanistan	Education	Increasing Access to Quality Education and Suitable Learning Environments	Philanthropy
Faculties of Education	Education	Increasing Access to Quality Education and Suitable Learning Environments	Philanthropy
Faculties of Higher Education (FoHE)	Infrastructure	Vertical Structures Activities	Philanthropy
Field Epidemiology and Laboratory Training Program (FELTP)	Health	Field Support Projects	Philanthropy
Global Development Alliance for Strengthening Market Chains for Afghan Raisins and Pomegranates (GDA)	Agriculture	Comprehensive Agriculture and Alternative Development	Philanthropy
Higher Education Project (HEP)	Education	Higher Education	Philanthropy
Higher Education Project_ Kabul Medical University	Health	Bilateral Projects	Philanthropy
International School of Kabul (ISK)	Education	Basic Education	Philanthropy
International School of Kabul (ISK)	Education	Basic Education	Philanthropy
Kabul Schools Program	Education	Increasing Access to Quality Education and Suitable Learning Environments	Philanthropy
Kabul Schools Program	Infrastructure	Vertical Structures Activities	Philanthropy
Kabul University Facility Renovations and Construction	Infrastructure	Vertical Structures Activities	Philanthropy
Learning for Community Empowerment Program (LCEP-2)	Education	Youth and Workforce Development	Philanthropy
Literacy & Community Empowerment Program	Education	Increasing Access to Quality Education and Suitable Learning Environments	Philanthropy

National Men's Dormitory	Education	Increasing Access to Quality Education and Suitable Learning Environments	Philanthropy
Partnership for Advancing Community Education in Afghanistan (PACE-A)	Education	Basic Education	Philanthropy
Pastoral Engagement, Adaptation, and Capacity Enhancement (PEACE) Project	Agriculture	National Water and Natural Resource Management	Philanthropy
Rebuilding Agricultural Markets and Conserving Biological Diversity	Agriculture	Comprehensive Agriculture and Alternative Development	Philanthropy
Rehabilitation of Women's Dorms - University of Kabul	Education	Increasing Access to Quality Education and Suitable Learning Environments	Philanthropy
Schools and Clinics Construction and Refurbishment Program - CHF	Infrastructure	Expand and Improve Access to Economic and Social Infrastructure	Philanthropy
Schools and Clinics Construction and Refurbishment Program - IOM	Infrastructure	Expand and Improve Access to Economic and Social Infrastructure	Philanthropy
Schools and Clinics Construction and Refurbishment Program - LBG	Infrastructure	Expand and Improve Access to Economic and Social Infrastructure	Philanthropy
Schools and Clinics Construction and Refurbishment Program - Shelter for Life	Infrastructure	Expand and Improve Access to Economic and Social Infrastructure	Philanthropy
Schools and Clinics Construction and Refurbishment Program - UMCOR	Infrastructure	Expand and Improve Access to Economic and Social Infrastructure	Philanthropy
Schools and Clinics Construction and Refurbishment Program - UNOPS	Infrastructure	Expand and Improve Access to Economic and Social Infrastructure	Philanthropy
Skills Training for Afghan Youth (STAY+)	Education	Youth and Workforce Development	Philanthropy
Special Initiatives in Education	Education	Increasing Access to Quality Education and Suitable Learning Environments	Philanthropy
Strengthening Afghan Agricultural Faculties (SAAF) Project	Agriculture	Agricultural Research, Extension, and Education	Philanthropy
Strengthening Education in Afghanistan (SEA) Project	Education	Higher Education	Philanthropy
Textbook Printing	Education	Basic Education	Philanthropy
Tuberculosis Control Assistance Program (TB CAP)	Health	Field Support Projects	Philanthropy
UNICEF Health and Immunization Response Support	Health	Field Support Projects	Philanthropy
UNICEF Nutrition Program in Afghanistan	Health	Bilateral Projects	Philanthropy
WHO Cross Border Malaria Program	Health	Bilateral Projects	Philanthropy
WHO Health and Emergency Response Support Grant_ Polio Eradication Activities	Health	Field Support Projects	Philanthropy
Women Enterprise Development (WED)	Economic Growth	Reducing Poverty by Promoting Economic Growth	Philanthropy

Youth Empowerment Project	Education	Increasing Access to Quality Education and Suitable Learning Environments	Philanthropy
Afghanistan Immediate Needs Program	Agriculture	Accelerating Regional Economic Growth to Provide Licit Alternatives to Poppy Production	Subsidy-Alternatives
Alternative Development Program_Eastern Region (ADP_E)	Agriculture	Accelerating Regional Economic Growth to Provide Licit Alternatives to Poppy Production	Subsidy-Alternatives
Alternative Development Program/Northern Region (ADP/N)	Agriculture	Accelerating regional economic growth to provide licit alternatives to poppy production	Subsidy-Alternatives
Alternative Development Program/Southern Region (ADP/S)	Agriculture	Accelerating Regional Economic Growth to Provide Licit Alternatives to Poppy Production	Subsidy-Alternatives
Badakhshan Alternative Employment for Rural Workers	Agriculture	Accelerating Regional Economic Growth to Provide Licit Alternatives to Poppy Production	Subsidy-Alternatives
Cash for Work Hilmand Program	Agriculture	Accelerating Regional Economic Growth to Provide Licit Alternatives to Poppy Production	Subsidy-Alternatives
Commercial Horticulture and Agricultural Marketing Project (CHAMP)	Agriculture	Comprehensive Agriculture and Alternative Development	Subsidy-Alternatives
Community Development Agriculture in Paktya, Paktika, Khost and Southeast Ghazni (CDA-P2KG)	Agriculture	Comprehensive Agriculture and Alternative Development	Subsidy-Alternatives
Community Development Program – Kabul (CDP-K)	Stabilization	Strengthening the Reach and Legitimacy of the Central Government in Outlying Regions	Subsidy-Alternatives
Community Development Program – North (CDP-N)	Stabilization	Strengthening the Reach and Legitimacy of the Central Government in Outlying Regions	Subsidy-Alternatives
Community Development Program – South, East & West (CDP-SEW)	Stabilization	Strengthening the Reach and Legitimacy of the Central Government in Outlying Regions	Subsidy-Alternatives
Cotton & Alternative Crops Pilot Project in Helmand Province	Agriculture	Comprehensive Agriculture and Alternative Development	Subsidy-Alternatives
Food Insecurity Response for Urban Populations (FIRUP) - West	Stabilization	Strengthening the Reach and Legitimacy of the Central Government in Outlying Regions	Subsidy-Alternatives
Fund to IFDC For Seed_Fertilizer	Agriculture	Accelerating Regional Economic Growth to Provide Licit Alternatives to Poppy Production	Subsidy-Alternatives
Good Performance Initiative (GPI)	Agriculture	Accelerating Regional Economic Growth to Provide Licit Alternatives to Poppy Production	Subsidy-Alternatives

Hilmand Food Zone Project (HFZP)	Agriculture	Comprehensive Agriculture and Alternative Development	Subsidy-Alternatives
Incentives Driving Economic Alternatives for the North, East, West (IDEA-NEW)	Agriculture	Comprehensive Agriculture and Alternative Development	Subsidy-Alternatives
Incentives to Reduce Poppy Cultivation in Afghanistan	Agriculture	Accelerating Regional Economic Growth to Provide Licit Alternatives to Poppy Production	Subsidy-Alternatives
Nangahar Canal and Alternative Crops Program	Agriculture	Accelerating Regional Economic Growth to Provide Licit Alternatives to Poppy Production	Subsidy-Alternatives
Quick Impact Shamli	Agriculture	Accelerating Regional Economic Growth to Provide Licit Alternatives to Poppy Production	Subsidy-Alternatives
Village-Based Watershed Reforestation in Ghor Province	Agriculture	Accelerating Regional Economic Growth to Provide Licit Alternatives to Poppy Production	Subsidy-Alternatives
Afghanistan Small and Medium Enterprise Development (ASMED)	Economic Growth	Business Development and Trade	Subsidy-Entrepreneurship
Afghanistan Small and Medium Enterprise Development (ASMED)	Economic Growth	Business Development and Trade	Subsidy-Entrepreneurship
Alternative Licit Livelihoods Initiative (ALLI) (formerly Agro-enterprise Development Alliance)	Agriculture	National Water and Natural Resource Management	Subsidy-Entrepreneurship
Rebuild Agriculture Markets Program (RAMP)	Agriculture	Comprehensive Agriculture and Alternative Development	Subsidy-Entrepreneurship
USAID_Washington DCHA Office of Food for Peace (MYAP)	Agriculture	Food Security and Humanitarian Support	Subsidy-Entrepreneurship
Afghan Growth Finance (AGF)	Economic Growth	Financial Sector and Investment Promotion	Subsidy-Finance
Afghanistan Credit Support Program (ACSP)	Economic Growth	Reducing Poverty by Promoting Economic Growth	Subsidy-Finance
Afghanistan Renewal Fund	Economic Growth	Reducing Poverty by Promoting Economic Growth	Subsidy-Finance
Agricultural Development Fund (ADF) and Agricultural Credit Enhancement (ACE)	Agriculture	Comprehensive Agriculture and Alternative Development	Subsidy-Finance
Agriculture, Rural Investment, and Enterprise Strengthening (ARIES)	Economic Growth	Reducing Poverty by Promoting Economic Growth	Subsidy-Finance
Development Credit Authority (DCA)	Agriculture	Comprehensive Agriculture and Alternative Development	Subsidy-Finance
Financial Access for Investing in the Development of Afghanistan (FAIDA)	Economic Growth	Financial Sector and Investment Promotion	Subsidy-Finance
Rural Finance and Cooperative Development (RUFCD)	Economic Growth	Financial Sector and Investment Promotion	Subsidy-Finance
Afghan Clean Energy Project (ACEP)	Infrastructure	Energy and Water Activities	Subsidy-General

Afghanistan Municipal Strengthening Program (AMSP)	Democracy & Governance	Governance	Subsidy-General
Afghanistan Reconstruction Trust Fund (ARTF)	Stabilization	Strengthening the Reach and Legitimacy of the Central Government in Outlying Regions	Subsidy-General
Afghanistan Vouchers for Increased Production in Agriculture (AVIPA)	Agriculture	Comprehensive Agriculture and Alternative Development	Subsidy-General
Afghanistan Vouchers for Increased Production in Agriculture—Plus (AVIPA Plus)	Agriculture	Comprehensive Agriculture and Alternative Development	Subsidy-General
Alternative Development Program/Southwestern Region (ADP/SW)	Agriculture	Accelerating Regional Economic Growth to Provide Licit Alternatives to Poppy Production	Subsidy-General
Dairy Industry Revitalization	Agriculture	Comprehensive Agriculture and Alternative Development	Subsidy-General
Darunta Hydroelectric Power Plant Rehabilitation	Infrastructure	Energy and Water Activities	Subsidy-General
Diesel Thermal Power Plants Operations and Maintenance	Infrastructure	Stabilizing, Improving Access, and Expanding Reliable Energy Sources	Subsidy-General
District Delivery Program (DDP)	Stabilization	Strengthening the Reach and Legitimacy of the Central Government in Outlying Regions	Subsidy-General
Governance Annual Program Statement (GAPS)	Democracy & Governance	Governance	Subsidy-General
Health Services Delivery Grant - Partnership Contracts for Health (PCH)	Health	Bilateral Projects	Subsidy-General
Health Services Delivery Grant - Performance-based Partnership Grants (PPG)	Health	Bilateral Projects	Subsidy-General
Kandahar-Hilmand Power Project (KHPP)	Infrastructure	Energy and Water Activities	Subsidy-General
Performance Based Governors Fund (PBGF)	Democracy & Governance	Governance	Subsidy-General
PRT Quick Impact Projects	Stabilization	Strengthening the Reach and Legitimacy of the Central Government in Outlying Regions	Subsidy-General
Reactive Power Compensation for NEPS	Infrastructure	Energy and Water Activities	Subsidy-General
Regional Afghan Municipalities Program for Urban Populations (RAMP UP)	Democracy & Governance	Governance	Subsidy-General
Rehabilitation of Economic Facilities and Services (REFS) - Power	Infrastructure	Stabilizing, Improving Access, and Expanding Reliable Energy Sources	Subsidy-General
Rehabilitation of Economic Facilities and Services (REFS) - Roads	Infrastructure	Expand and Improve Access to Economic and Social Infrastructure	Subsidy-General
Rural Expansion of Afghanistan's Community-based Healthcare (REACH)	Health	Bilateral Projects	Subsidy-General

Southern Region Agricultural Development Project (SRADP)	Agriculture	Comprehensive Agriculture and Alternative Development	Subsidy-General
Tarakhil Power Plant	Infrastructure	Energy and Water Activities	Subsidy-General
UNICEF Salt Iodization in Afghanistan	Health	Centrally Funded Projects	Subsidy-General
WHO TB	Health	Bilateral Projects	Subsidy-General
Afghan New Beginning Program	Economic Growth	Reducing Poverty by Promoting Economic Growth	Subsidy-Military
Community Based Stabilization Grants (CBSG)	Stabilization	Strengthening the Reach and Legitimacy of the Central Government in Outlying Regions	Subsidy-Military
Demining	Infrastructure	Expand and Improve Access to Economic and Social Infrastructure	Subsidy-Military
Design and Construction of Uruzgon Bridge	Infrastructure	Roads Activities	Subsidy-Military
Design and Initial Construction of of Bamyan and Dushi Road	Infrastructure	Roads Activities	Subsidy-Military
District Center Roads (DCR) Program	Infrastructure	Expand and Improve Access to Economic and Social Infrastructure	Subsidy-Military
Kishem to Faizabad National Highway	Infrastructure	Expand and Improve Access to Economic and Social Infrastructure	Subsidy-Military
Reconstruction of the Gardez to Khost Road	Infrastructure	Roads Activities	Subsidy-Military
Strategic Provincial Road-Southern and Eastern Afghanistan (SPR-SEA)	Infrastructure	Roads Activities	Subsidy-Military

APPENDIX 2: USAID PROGRAM DATA SOURCES

<i>Program</i>	<i>Data Source</i>	<i>Data Source 2</i>	<i>Data Source 3</i>
Demining	http://afghanistan.usaid.gov/en/USAID/Activity/98/Demining	http://oig.state.gov/documents/organization/133663.pdf	
Design for Ghazi Boys and Kabuli Sardar Girls High Schools	http://afghanistan.usaid.gov/en/USAID/Activity/55/Design for Ghazi Boys and Kabuli Sardar Girls High Schools		
Establishment of Management Services for the American University of Afghanistan	http://afghanistan.usaid.gov/en/USAID/Activity/51/Establishment of Management Services for the American University of Afghanistan		
Afghan Electoral Reform Project	http://afghanistan.usaid.gov/en/USAID/Activity/249/Afghanistan Electoral Reform Project		
Afghanistan Energy Assistance Project	http://afghanistan.usaid.gov/en/USAID/Activity/66/Afghanistan Energy Assistance Project		
Afghanistan Engineering Support Program (AESP)	http://afghanistan.usaid.gov/en/USAID/Activity/199/Afghanistan Engineering Support Program AESP	http://afghanistan.usaid.gov/documents/document/Document/2068/Fact Sheet AESP FINAL June 2011	
Afghanistan Local Governance Assistance Project (ALGAP)	http://afghanistan.usaid.gov/en/USAID/Activity/72/Afghanistan Local Governance Assistance Project ALGAP		
Aid Management and Coordination and Public Information	http://afghanistan.usaid.gov/en/USAID/Activity/42/Aid Management and Coordination and Public Information		
Arazi (Afghan Land Authority) via MAIL (Ministry of Agriculture, Irrigation and Livestock) On-Budget Component	http://afghanistan.usaid.gov/en/USAID/Activity/254/Arazi Afghan Land Authority via MAIL Ministry of Agriculture Irrigation and Livestock OnBudget Component		
CityLinks Project	http://afghanistan.usaid.gov/en/USAID/Activity/73/CityLinks Project		

E-Governance Resource Center (EGRC)	http://afghanistan.usaid.gov/en/USAID/Activity/251/EGovernance_Resource_Center_EGRC
Economic Governance in Afghanistan	http://afghanistan.usaid.gov/en/USAID/Activity/35/Economic_Governance_in_Afghanistan
Election Observation Mission – 2010 Wolisi Jirga	http://afghanistan.usaid.gov/en/USAID/Activity/184/Election_Observation_Mission_2010_Wolisi_Jirga
Electoral Reform and Civic Advocacy (AERCA)	http://afghanistan.usaid.gov/en/USAID/Activity/249/Afghanistan_Electoral_Reform_Project http://afghanistan.usaid.gov/documents/document/Document/2441/Fact_Sheet_AERCA_August_2012
Energy Partnership	http://afghanistan.usaid.gov/en/USAID/Activity/67/Energy_Partnership
Engineering Design Support Activity (EDSA)	http://afghanistan.usaid.gov/en/USAID/Activity/198/Engineering_Design_Support_Activity_EDSA
Environmental Assessment of the Alternative Livelihoods Program	http://afghanistan.usaid.gov/en/USAID/Activity/18/Environmental_Assessment_of_the_Alternative_Livelihoods_Program
Establishment of National Payment System	http://afghanistan.usaid.gov/en/USAID/Activity/36/Establishment_of_National_Payment_System
Improving Livelihoods and Governance through Natural Resource Management Project (ILG-NRMP)	http://afghanistan.usaid.gov/en/USAID/Activity/175/Improving_Livelihoods_and_Governance_through_Natural_Resource_Management_Project_ILGNRMP http://afghanistan.usaid.gov/documents/document/Document/2452/Fact_Sheet_NRMP_September_2012
Media Development in Afghanistan	http://afghanistan.usaid.gov/en/USAID/Activity/234/Media_Development_in_Afghanistan
National Media Assessment	http://afghanistan.usaid.gov/en/USAID/Activity/171/National_Media_Assessment http://afghanistan.usaid.gov/documents/document/document/976
Road Operation and Maintenance Capacity Building Project	http://afghanistan.usaid.gov/en/USAID/Activity/214/Road_Operation_and_Maintenance_Capacity_Building_Project http://afghanistan.usaid.gov/documents/document/Document/1839/Fact_Sheet_Roads_OM_FINAL_June_2011

Services Under Program and Project Offices for Results Tracking (SUPPORT)	http://afghanistan.usaid.gov/en/USAID/Activity/172/Services_Under_Program_and_Project_Offices_for_Results_Tracking_SUPPORT
Strategic Support to the Islamic Republic of Afghanistan	http://afghanistan.usaid.gov/en/USAID/Activity/149/Strategic_Support_to_the_Islamic_Republic_of_Afghanistan http://afghanistan.usaid.gov/documents/document/document/395
Support to National Area Based Development Program	http://afghanistan.usaid.gov/en/USAID/Activity/24/Support_to_National_Area_Based_Development_Program
Support to Sub-National Governance Institutions	http://afghanistan.usaid.gov/en/USAID/Activity/148/Support_to_Sub_National_Governance_Institutions http://afghanistan.usaid.gov/documents/document/Document/1747/Fact_Sheet_Support_to_Subnational_Governance_June_2011
Supporting the International Observation Mission	http://afghanistan.usaid.gov/en/USAID/Activity/170/Supporting_the_International_Observation_Mission http://afghanistan.usaid.gov/documents/document/Document/1748/Fact_Sheet_Supporting_International_Observation_Mission_Fact_Sheet_June_2011
Sustainable Water Resources Management	http://afghanistan.usaid.gov/en/USAID/Activity/10/Sustainable_Water_Resources_Management
TB CARE 1	http://afghanistan.usaid.gov/en/USAID/Activity/244/TB_CARE_1
Technical Support to Afghan Energy Information Center (AEIC)	http://afghanistan.usaid.gov/en/USAID/Activity/197/Technical_Support_to_Afghan_Energy_Information_Center_AEIC
Voter Registration and Election Implementation Program	http://afghanistan.usaid.gov/en/USAID/Activity/61/Voter_Registration_and_Election_Implementation_Program
Agroenterprise Support Program	http://afghanistan.usaid.gov/en/USAID/Activity/5/Agroenterprise_Support_Program
WHO Cross Border Malaria Program	http://afghanistan.usaid.gov/en/USAID/Activity/138/WHO_Cross_Border_Malaria_Program http://afghanistan.usaid.gov/documents/document/document/930
Women Enterprise Development (WED)	http://afghanistan.usaid.gov/en/USAID/Activity/30/Women_Enterprise_Development_WED

Cash for Work Hilmand Program	http://afghanistan.usaid.gov/en/USAID/Activity/12/Cash for Work Hilmand Program	http://www.unodc.org/pdf/Alternative%20Development/Afghanistan Mapping.pdf
Community Development Agriculture in Paktya, Paktika, Khost and Southeast Ghazni (CDA-P2KG)	http://afghanistan.usaid.gov/en/USAID/Activity/111/Community Development Agriculture in Paktya Paktika Khost and Southeast Ghazni CDAP2KG	
Cotton & Alternative Crops Pilot Project in Helmand Province	http://afghanistan.usaid.gov/en/USAID/Activity/8/Cotton Alternative Crops Pilot Project in Helmand Province	
Fund to IFDC For Seed_Fertilizer	http://afghanistan.usaid.gov/en/USAID/Activity/22/Fund to IFDC For Seed Fertilizer	
Incentives to Reduce Poppy Cultivation in Afghanistan	http://afghanistan.usaid.gov/en/USAID/Activity/17/Incentives to Reduce Poppy Cultivation in Afghanistan	
Nangahar Canal and Alternative Crops Program	http://afghanistan.usaid.gov/en/USAID/Activity/11/Nangahar Canal and Alternative Crops Program	
Quick Impact Shamli	http://afghanistan.usaid.gov/en/USAID/Activity/16/Quick Impact Shamli	
Village-Based Watershed Reforestation in Ghor Province	http://afghanistan.usaid.gov/en/USAID/Activity/114/VillageBased Watershed Reforestation in Ghor Province	
Alternative Licit Livelihoods Initiative (ALLI) (formerly Agro-enterprise Development Alliance)	http://afghanistan.usaid.gov/en/USAID/Activity/113/Alternative Licit Livelihoods Initiative ALLI formerly Agroenterprise Development Alliance	
Development Credit Authority (DCA)	http://afghanistan.usaid.gov/en/USAID/Activity/174/Development Credit Authority DCA	
Diesel Thermal Power Plants Operations and Maintenance	http://afghanistan.usaid.gov/en/USAID/Activity/220/Diesel Thermal Power Plants Operations and Maintenance	http://afghanistan.usaid.gov/documents/document/Document/1214/Diesel Thermal Power Plants Fact Sheet282011
Reactive Power Compensation for NEPS	http://afghanistan.usaid.gov/en/USAID/Activity/223/Reactive Power Compensation for NEPS	http://afghanistan.usaid.gov/documents/document/Document/1838/Fact Sheet Reactive Power Compensation for NEPS FINAL June 2011

Southern Region Agricultural Development Project (SRADP)	http://afghanistan.usaid.gov/en/USAID/Activity/246/Southern_Region_Agricultural_Development_Project_SRADP		
WHO TB	http://afghanistan.usaid.gov/en/USAID/Activity/137/WHO_TB		
Design and Construction of Uruzgon Bridge	http://afghanistan.usaid.gov/en/USAID/Activity/212/Design and Construction of Uruzgon Bridge	http://afghanistan.usaid.gov/documents/document/Document/2071/Fact Sheet Design and Construction of Uruzgan Bridge FINAL June 2011	
Design and Initial Construction of Bamyan and Dushi Road	http://afghanistan.usaid.gov/en/USAID/Activity/213/Design and Initial Construction of Bamyan and Dushi Road	http://afghanistan.usaid.gov/documents/document/Document/1831/Fact Sheet Design of Bamyan and Dushi Road FINAL June 2011	
District Center Roads (DCR) Program	http://afghanistan.usaid.gov/en/USAID/Activity/96/District Center Roads DCR Program		
Kishem to Faizabad National Highway	http://afghanistan.usaid.gov/en/USAID/Activity/216/Kishem to Faizabad National Highway	http://afghanistan.usaid.gov/documents/document/Document/1762/Fact Sheet Keshim Faizabad Road FINAL June 2011	
Advisor to the Secretariat of the Inter-Ministerial Commission for Energy (ICE)	http://afghanistan.usaid.gov/en/USAID/Activity/224/Advisor to the Secretariat of the InterMinisterial Commission for Energy ICE	http://afghanistan.usaid.gov/documents/document/Document/1223/Advisor to the Secretariat for ICE282011	http://www.hitech-eng.net/USAID_AIRP.html
Afghanistan Infrastructure and Rehabilitation Program (IRP) - Quick Response General Services	http://afghanistan.usaid.gov/en/USAID/Activity/235/Afghanistan Infrastructure and Rehabilitation Program IRP Quick Response General Services	http://afghanistan.usaid.gov/documents/document/Document/1834/Fact Sheet IRP Quick Response FINAL June 2011	http://www.hitech-eng.net/USAID_AIRP.html
Infrastructure and Rehabilitation Program (IRP) - Power (LBG_B&V)	http://afghanistan.usaid.gov/en/USAID/Activity/64/Infrastructure and Rehabilitation Program IRP Power LBGBV	http://afghanistan.usaid.gov/documents/document/document/1035; http://afghanistan.usaid.gov/documents/document/document/1034	http://www.hitech-eng.net/USAID_AIRP.html

Infrastructure and Rehabilitation Program (IRP) - Roads (LBG_B&V)	http://afghanistan.usaid.gov/en/USAID/Activity/95/Infrastructure and Rehabilitation Program IRP Roads LBGBV	http://www.hitech-eng.net/USAID_AIRP.html
Infrastructure Rehabilitation Program (IRP) - USACE	http://afghanistan.usaid.gov/en/USAID/Activity/65/Infrastructure Rehabilitation Program IRP USACE	http://www.hitech-eng.net/USAID_AIRP.html
Kabul Electricity Directorate (KED) Commercialization	http://afghanistan.usaid.gov/en/USAID/Activity/193/Kabul Electricity Directorate KED Commercialization	http://afghanistan.usaid.gov/documents/document/document/1034 http://www.hitech-eng.net/USAID_AIRP.html
Child Survival Support Grant_ Better Health for Afghan Mothers and Children Project	http://afghanistan.usaid.gov/en/USAID/Activity/253/Child Survival Support Grant Better Health for Afghan Mothers and Children Project	http://www.hvcassistance.org/find-projects.cfm?PF=0,1&BU=&IN=&IP=&TG=&cc=AF&SS=&format=PDF
Construction of Health and Education Facilities (CHEF)	http://afghanistan.usaid.gov/en/USAID/Activity/208/Construction of Health and Education Facilities CHEF	https://ronna-afghan.harmonieweb.org/education/Shared%20Documents/USAID%20Education%20Project%20Portfolio%20-%20Sept%202011.pdf
Kabul Schools Program	http://afghanistan.usaid.gov/en/USAID/Activity/157/Kabul Schools Program	https://ronna-afghan.harmonieweb.org/education/Shared%20Documents/USAID%20Education%20Project%20Portfolio%20-%20Sept%202011.pdf
Schools and Clinics Construction and Refurbishment Program - IOM	http://afghanistan.usaid.gov/en/USAID/Activity/57/Schools and Clinics Construction and Refurbishment Program IOM	ANE Initial Environmental Examinations and Categorical Exclusions
Schools and Clinics Construction and Refurbishment Program - LBG	http://afghanistan.usaid.gov/en/USAID/Activity/102/Schools and Clinics Construction and Refurbishment Program LBG	ANE Initial Environmental Examinations and Categorical Exclusions

Schools and Clinics Construction and Refurbishment Program - Shelter for Life	http://afghanistan.usaid.gov/en/USAID/Activity/58/Schools and Clinics Construction and Refurbishment Program Shelter for Life	ANE Initial Environmental Examinations and Categorical Exclusions
Schools and Clinics Construction and Refurbishment Program - UMCOR	http://afghanistan.usaid.gov/en/USAID/Activity/59/Schools and Clinics Construction and Refurbishment Program UMCOR	ANE Initial Environmental Examinations and Categorical Exclusions
Schools and Clinics Construction and Refurbishment Program - UNOPS	http://afghanistan.usaid.gov/en/USAID/Activity/101/Schools and Clinics Construction and Refurbishment Program UNOPS	ANE Initial Environmental Examinations and Categorical Exclusions
Afghanistan Renewal Fund	http://afghanistan.usaid.gov/en/USAID/Activity/103/Afghanistan Renewal Fund	http://pdf.usaid.gov/pdf_docs/PDaci031.pdf
Rehabilitation of Economic Facilities and Services (REFS) - Roads	http://afghanistan.usaid.gov/en/USAID/Activity/97/Rehabilitation of Economic Facilities and Services REFS Roads	http://pdf.usaid.gov/pdf_docs/PCAAB145.pdf
Tarakhil Power Plant	http://afghanistan.usaid.gov/en/USAID/Activity/225/Tarakhil Power Plant	http://afghanistan.usaid.gov/documents/document/Document/1208/1477/Journalists Tour Tarakhil Power Plant Fact Sheet282011
Afghanistan Infrastructure and Rehabilitation Program (AIRP) - General Management and Administration	http://afghanistan.usaid.gov/en/USAID/Activity/93/Afghanistan Infrastructure and Rehabilitation Program AIRP General Management and Administration	http://www.hitech-eng.net/USAID_AIRP.html
Afghanistan Reconstruction Trust Fund (ARTF)	http://afghanistan.usaid.gov/en/USAID/Activity/200/Afghanistan Reconstruction Trust Fund ARTF	

Afghanistan Vouchers for Increased Production in Agriculture—Plus (AVIPA Plus)	http://afghanistan.usaid.gov/en/USAID/Activity/122/Afghanistan_Vouchers_for_Increased_Production_in_Agriculture_Plus_AVIPA_Plus		
Strategic Provincial Road-Southern and Eastern Afghanistan (SPR-SEA)	http://afghanistan.usaid.gov/en/USAID/Activity/106/Strategic_Provincial_RoadSouthern_and_Eastern_Afghanistan_SPRSEA	http://afghanistan.usaid.gov/documents/document/1840/Fact_Sheet_Strategic_Provincial_Roads_FINAL_June_2011	http://www.devex.com/en/projects/strategic-provincial-roads-southern-and-eastern-afghanistan/secure?member=cm&src=tender
Alternative Development Program/Southern Region (ADP/S)	http://afghanistan.usaid.gov/en/USAID/Activity/19/Alternative_Development_ProgramSouth_ern_Region_ADPS	http://www.devex.com/en/projects/alternative-development-program-in-afghanistan-2	
Local Governance and Community Development (LGCD)	http://afghanistan.usaid.gov/en/USAID/Activity/90/Local_Governance_and_Community_Development_LGCD	http://afghanistan.usaid.gov/documents/document/1641/Fact_Sheet_LGCD_June_2011	https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=5&ved=0CFQQFjAE&url=https%3A%2F%2Fronna-afghan.harmonieweb.org%2Feducation%2FShared%2520Documents%2FUSAID%2520TVET%2520Programs%2520OVERVIEW_2010.docx&ei=ms3QULK3O-m40QGzroHgBw&usq=AFQjCNEG2T08rZnUcBtmiGRXxbxVsb7nHA&bv=1355534169,d.dmq&cad=rja
National Load Control Center	http://afghanistan.usaid.gov/en/USAID/Activity/222/National_Load_Control_Center	http://afghanistan.usaid.gov/documents/document/1837/Fact_Sheet_National_Load_Control_Center_FINAL_June_2011	http://afghanistan.usaid.gov/en/USAID/Article/1477/Journalists_Tour_Power_Facilities
Kandahar-Hilmand Power Project (KHPP)	http://afghanistan.usaid.gov/en/USAID/Activity/217/KandaharHilmand_Power_Project_KHPP	http://afghanistan.usaid.gov/documents/document/2073/Fact_Sheet_KHPP_FINAL_June_2011	http://spectrum.ieee.org/energy/the-smarter-grid/reengineering-afghanistan/11

Health Services Delivery Grant - Partnership Contracts for Health (PCH)	http://afghanistan.usaid.gov/en/USAID/Activity/125/Health_Services_Delivery_Grant_Partnership_Contracts_for_Health_PCH	http://afghanistan.usaid.gov/documents/document/Document/1823/PCH_Fact_Sheet_FINAL_June_2011	
Afghanistan Civil Service Support (ACSS)	http://afghanistan.usaid.gov/en/USAID/Activity/165/Afghanistan_Civil_Service_Support_ACS_S	http://afghanistan.usaid.gov/documents/document/Document/1731/Fact_Sheet_ACSS_June_2011	S. prt. 112-21
Capacity Development Program (CDP)	http://afghanistan.usaid.gov/en/USAID/Activity/120/Capacity_Development_Program_CDP	http://afghanistan.usaid.gov/documents/document/document/391	http://pdf.usaid.gov/pdf_docs/PDADM814.pdf
Community Development Program – South, East & West (CDP-SEW)	http://afghanistan.usaid.gov/en/USAID/Activity/147/Community_Development_Program_South_East_West_CDP_SEW	http://afghanistan.usaid.gov/documents/document/Document/1638/Fact_Sheet_CDP_Jun_2011	Stabilization project portfolio Jan 2011
Rehabilitation of Economic Facilities and Services (REFS) - Power	http://afghanistan.usaid.gov/en/USAID/Activity/63/Rehabilitation_of_Economic_Facilities_and_Services_REFS_Power	http://pdf.usaid.gov/pdf_docs/PCAAB145.pdf	
Health Systems 20_20	http://afghanistan.usaid.gov/en/USAID/Activity/134/Health_Systems_2020	http://afghanistan.usaid.gov/documents/document/Document/1821/HS2020_Fact_Sheet_FINAL_June_2011	http://www.abtassociates.com/newsreleases/2012/abt-associates-awarded-major-grant-by-usaid-to-inc.aspx
Afghanistan Social Outreach Program (ASOP)	http://afghanistan.usaid.gov/en/USAID/Activity/167/Afghanistan_Social_Outreach_Program_ASOP	http://afghanistan.usaid.gov/documents/document/Document/1736/Fact_Sheet_ASOP_June_2011	http://www.aecom.com/News/news/AECOM+awarded+USAID+contract+for+Afghanistan+Stability+in+Key+Areas+(SIKA)-East+program+worth+up+to+US\$177+million?languagechoice=fr_CA&Go=Go&localeHidden=fr_CA&localeFlash=es_ES

Reconstruction of the Gardez to Khost Road	http://afghanistan.usaid.gov/en/USAID/Activity/215/Reconstruction of the Gardez to Khost Road	http://afghanistan.usaid.gov/documents/document/Document/2403/Fact Sheet Gardez to Khost Road July 2012 FINAL	http://www.nytimes.com/2011/05/01/world/asia/01road.html
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Agricultural Development Fund (ADF) and Agricultural Credit Enhancement (ACE)	http://afghanistan.usaid.gov/en/USAID/Activity/180/Agricultural Development Fund ADF and Agricultural Credit Enhance%20ment ACE		
Regional Afghan Municipalities Program for Urban Populations (RAMP UP)	http://afghanistan.usaid.gov/en/USAID/Activity/183/Regional Afghan Municipalities Program for Urban Populations RAMP UP	http://afghanistan.usaid.gov/documents/document/Document/978 ; http://afghanistan.usaid.gov/documents/document/Document/1363/RAMPUP East Newsletter ; http://afghanistan.usaid.gov/documents/document/Document/1815/Fact Sheet RAMPUP North FINAL June 2011 ; http://afghanistan.usaid.gov/documents/document/Document/1816/Fact Sheet RAMPUP West FINAL June 2011	http://icma.org/en/international/Article/100533/New Funding RAMP UP in Afghanistan

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Afghanistan Small and Medium Enterprise Development (ASMED)	http://afghanistan.usaid.gov/en/USAID/Activity/32/Afghanistan Small and Medium Enterprise Development ASMED	http://afghanistan.usaid.gov/documents/document/Document/2336/ASMED Five Years of Private Sector Developmentlowres; http://afghanistan.usaid.gov/documents/document/Document/1752/Fact Sheet ASMED June 2011; http://afghanistan.usaid.gov/documents/document/Document/1753/Fact Sheet ASMED GD A June 2011; http://afghanistan.usaid.gov/documents/document/Document/999/ASMED Business Development Services; http://afghanistan.usaid.gov/documents/document/Document/1001/ASMED Human Capacity Building; http://afghanistan.usaid.gov/documents/document/Document/1002/ASMED Market Information; http://afghanistan.usaid.gov/documents/document/Document/381/Afghanistan Womens Business Federation; http://afghanistan.usaid.gov/documents/document/Document/404/Assistance to the Gemstone Sector	https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=5&ved=0CFQQFjAE&url=https%3A%2F%2Fronna-afghan.harmonieweb.org%2Feducation%2FShared%2520Documents%2FUSAID%2520TVET%2520Programs%2520Q&view=docx&ei=ms3QULK3Q-m40QGzroHqBw&usq=AFQjCNEG2T08rZnUcBtmiGRXxbxVsb7nHA&bv=m=bv.1355534169.d.d.mQ&cad=rja
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Afghan Sustainable Water Supply and Sanitation (SWSS)	http://afghanistan.usaid.gov/en/USAID/Activity/151/Afghan_Sustainable_Water_Supply_and_Sanitation_SWSS	http://afghanistan.usaid.gov/documents/document/Document/1841/Fact_Sheet_SWSS_FINAL_June_2011	http://reliefweb.int/report/afghanistan/afghanistan-ministry-rural-rehabilitation-and-development-and-usaid-sign-crucial
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UNICEF Nutrition Program in Afghanistan	http://afghanistan.usaid.gov/en/USAID/Activity/142/UNICEF_Nutrition_Program_in_Afghanistan	http://afghanistan.usaid.gov/documents/document/document/502	http://pdf.usaid.gov/pdf_docs/PCAAC324.pdf

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APPENDIX 3: COMPUTATIONAL MODEL CODE

```
globals [  
    gini-index-reserve ;; the gini coefficient for the simulation at a given step  
    avg-wealth ;; the average amount of sugar per agent at a given step  
    lorenz-points ;; the lorenz points for the simulation at a given step  
    average-vision ;; the average amount of vision points per agent at a given step  
]  
  
turtles-own [  
    sugar          ;; the amount of sugar this agent has  
    metabolism     ;; the amount of sugar that each agent loses each step  
    vision         ;; the distance that this agent can see in the horizontal and  
vertical directions  
    vision-points  ;; the points that this agent can see in relative to it's  
current position (based on vision)  
    discount       ;; approximates the ability to delay gratification, specifically  
dictates if an agent will look for sugar or vision first when searching for resources  
    age           ;; the current age of this agent (in steps)  
    max-age       ;; the age (number of steps) at which this agent will die of  
natural causes  
]  
  
patches-own [  
    philanthropy   ;; the amount of additional vision on this patch, symbolizes  
philanthropy  
    charity        ;; the amount of additional sugar on this patch, symbolizes  
charity  
    psugar         ;; the amount of sugar on this patch  
    max-psugar     ;; the maximum amount of sugar that can be on this patch
```

```

]

;;

;; Setup Procedures

;;

to setup ;; sets up the simulation

  if maximum-sugar-endowment <= minimum-sugar-endowment [ ;; the maximum sugar
endowment cannot be larger than the minimum sugar endowment

    user-message "Oops: the maximum-sugar-endowment must be larger than the
minimum-sugar-endowment"

    stop
  ]

  clear-all ;; the simulation begins with a clear grid

  create-turtles initial-population [ turtle-setup ] ;; creates the turtles
(agent) and calls the turtle-setup method to do this

  setup-patches ;; calls the setup-patches method to set up the environment

  update-lorenz-and-gini ;; calculates an initial value for the lorenz points and
gini, the average wealth is also calculated within this method

  update-average-vision ;; calculates an initial value for the lorenz points and
gini

  reset-ticks ;; sets the number of ticks (steps) to zero

end

to turtle-setup ;; sets up the agents in the simulation

  set color red

  set shape "circle"

  move-to one-of patches with [not any? other turtles-here] ;; there can be only
one agent per patch

  set sugar random-in-range minimum-sugar-endowment maximum-sugar-endowment ;; the
initial amout of sugar an agent has is a random integer between the minimum and maximum
sugar endowments

  set metabolism random-in-range 1 4 ;; the initial metabolism an agent has is a
random integer between 1 and 4 units of sugar

```

```

        set max-age maximum-age ;; sets the maximum age for the agents in the model
(measured in ticks or steps)

        set age 0 ;; sets the initial age for the agents at zero

        set discount random-in-range 1 100 ;; sets the discount (number that determines
charity preference) as a random integer between 1 and 100

        set vision random-in-range 1 6 ;; the initial vision points an agent has is a
random integer between 1 and 6

        ;; turtles can look horizontally and vertically up to vision patches

        ;; but cannot look diagonally at all

        set vision-points []

        foreach n-values vision [? + 1]
        [
            set vision-points sentence vision-points (list (list 0 ?) (list ? 0) (list 0
(- ?)) (list (- ?) 0))
        ]

        run visualization
    end

to setup-patches

    file-open "sugar-map.txt" ;; uses the same landscape from sugarscape 3 (the
sugar-map text file) to set up the initial, natural sugar distribution on the patches

    foreach sort patches
    [
        ask ?

        [
            set psugar file-read ;; find the corresponding sugar amount from the sugar-
map file

            set max-psugar (psugar + (random-in-range 1 1000)) ;; set the maximum amount
of sugar a patch can hold as the psugar amount plus a random integer between 1-1000

            patch-recolor ;; color the patch accordingly
        ]
    ]

    file-close ;; close the text file

end

```



```

;;

;; Runtime Procedures
;;

to go
  if not any? turtles [ ;; stop the simulation if there are no turtles (agents)
    stop
  ]
  ask patches [ ;; patches grow sugar according to the growback rules below and
color themselves accordingly
    patch-growback
    patch-recolor
  ]
  ask turtles [ ;; each agent moves, eats, ages (adding 1 to their previous age),
and possibly dies or reproduces
    turtle-move
    turtle-eat
    set age (age + 1)
    if sugar <= 0 or age > max-age [ ;; an agent dies if its sugar gets to (or
below) zero, or if it reaches its maximum age
      die
    ]
    if sugar >= reproduction-sugar [ ;; an agent reproduces if its sugar gets to
(or above) the amount needed to reproduce, if so:
      hatch 1 [ turtle-setup ] ;; an agent is added to the model, according to the
turtle-setup rules above
      set sugar (sugar - metabolism) ;; an agent reproduces at a cost, in this
case, it uses up an amount of sugar equal to its metabolism
    ]
    run visualization
  ]
  update-lorenz-and-gini ;; updates lorenz, gini, and average wealth for the step
(or tick)

```

```

    update-average-vision ;; updates average vision for the step (or tick)

    tick ;; tracks the number of ticks in the simulation run
end

to turtle-move ;; agent behavior rules

    let move-candidates (patch-set patch-here (patches at-points vision-points) with
[not any? turtles-here]) ;; an agent considers moving to unoccupied patches within its
vision range, as well as staying at the current patch

    if discount > discount-cutoff ;; if an agent's discount number is higher than
the discount-cutoff parameter, then it prefers philanthropy over charity

        [let vision-winners move-candidates with-max [philanthropy] ;; look for
unoccupied patches with the highest amount of vision points (if any)

            if any? vision-winners [ ;; if there are any such patches move to one of the
patches that is closest

                move-to min-one-of vision-winners [distance myself]

            ]

            if not any? vision-winners [ ;; if there aren't any unoccupied patches within
vision that have philanthropy, then look for unoccupied patches with sugar

                let sugar-winners move-candidates with-max [psugar + charity] ;; sugar-winners
have the highest amount of sugar

                if any? sugar-winners [

                    ;; if there are any such patches move to one of the patches that is closest

                    move-to min-one-of sugar-winners [distance myself]

                ]

                if not any? sugar-winners [ ;; if there are not any sugar-winners, the agent
does not move and consumes the amount of sugar equal to its metabolism

                    set sugar (sugar - metabolism)

                ]

            ] ]

    if discount < discount-cutoff ;; if an agent's discount number is lower than the
discount-cutoff parameter, then it prefers charity over philanthropy

        [let sugar-winners move-candidates with-max [psugar + charity] ;; it then looks
for sugar first, using the same rules above

            if any? sugar-winners [

```

```

        ;; if there are any such patches move to one of the patches that is closest
        move-to min-one-of sugar-winners [distance myself]
    ]

    if not any? sugar-winners [ ;; if there are no sugar-winners, it then looks for
vision points (philanthropy)

        let vision-winners move-candidates with-max [philanthropy] ;; this is the same
as above

        if any? vision-winners [

            ;; if there are any such patches move to one of the patches that is closest
            move-to min-one-of vision-winners [distance myself]
        ]

        if not any? vision-winners [ ;; if there are no vision-winners, then the agent
does not move and consumes the amount of sugar equal to its metabolism

            set sugar (sugar - metabolism)
        ] ] ]

end

to turtle-eat ;; turtle procedure

    ;; metabolize some sugar, and eat all the sugar on the current patch

    set vision (vision + philanthropy) ;; allows the agents to increase its vision
range

    set philanthropy 0 ;; resets the patch to 0

    set sugar (sugar - metabolism + psugar + charity) ;; the agent consumes sugar
equal to its metabolism, and adds sugar equal to both psugar and the additional sugar
related to charity (if any)

    set psugar 0 ;; resets the patch to 0

    set charity 0 ;; resets the patch to 0
end

to patch-recolor ;; patch procedure

    ;; color patches based on the amount of sugar they have

    set pcolor (yellow + 15 - psugar)
end

```

```

to patch-growback ;; patch procedure

  ;; gradually grow back all of the sugar for the patch

  if random 100 < giving-philanthropy [set philanthropy 1] ;; if a random
integer between 1 and 100 is less than the value of the philanthropy parameter, then
vision points increase by 1

  set charity random-in-range 0 4

  if random 100 > giving-charity [set psugar min (list max-psugar (psugar + 1))]
;; if a random integer between 1 and 100 is greater than the value of the charity
parameter, then sugar increases by 1 (normal sugarscape growback rules, no charity)

  if random 100 <= giving-charity [ set psugar ((psugar)) + charity ] ;; if a
random integer between 1 and 100 is less than or equal to the value of the charity
parameter, then sugar increases by a random integer between 0 and 4, without normal
growback rules

end

to update-lorenz-and-gini ;; calculates lorenz and gini, same code as with
sugarscape

  let num-people count turtles

  let sorted-wealths sort [sugar] of turtles

  let total-wealth sum sorted-wealths

  let wealth-sum-so-far 0

  set avg-wealth 0

  let index 0

  set gini-index-reserve 0

  set lorenz-points []

  repeat num-people [

    set wealth-sum-so-far (wealth-sum-so-far + item index sorted-wealths)

    set lorenz-points lput ((wealth-sum-so-far / total-wealth) * 100) lorenz-
points

    set avg-wealth (total-wealth / num-people)

    set index (index + 1)

    set gini-index-reserve

    gini-index-reserve +

```

```

        (index / num-people) -
        (wealth-sum-so-far / total-wealth)
    ]
end

to update-average-vision ;; calculates the average vision per agent in a step
    let num-turtles count turtles
    let sorted-vision sort [vision] of turtles
    let total-vision sum sorted-vision
    set average-vision 0
    repeat num-turtles [
        set average-vision (total-vision / num-turtles)
    ]
end

;;

;; Utilities

;;

to-report random-in-range [low high]
    report low + random (high - low + 1)
end

;;

;; Visualization Procedures

;;

to no-visualization ;; turtle procedure
    set color red
end

to color-agents-by-vision ;; turtle procedure
    set color red - (vision - 3.5)
end

```

```
to color-agents-by-metabolism ;; turtle procedure
  set color red + (metabolism - 2.5)
end
```

```
; Copyright 2009 Uri Wilensky.
```

```
; See Info tab for full copyright and license.
```

APPENDIX 4: REGRESSION OUTPUT

. reg Philanthropy Final_Steps

Source	SS	df	MS	Number of obs =	9388
Model	5.40575371	1	5.40575371	F(1, 9386) =	0.01
Residual	8492376.64	9386	904.791886	Prob > F =	0.9384
				R-squared =	0.0000
				Adj R-squared =	-0.0001
Total	8492382.05	9387	904.696074	Root MSE =	30.08

Philanthropy	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
Final_Steps	-.0001647	.0021302	-0.08	0.938	-.0043402 .0040109
_cons	49.95233	.4039153	123.67	0.000	49.16057 50.7441

. reg Charity Final_Steps

Source	SS	df	MS	Number of obs =	9388
Model	593250.422	1	593250.422	F(1, 9386) =	689.11
Residual	8080376.3	9386	860.896687	Prob > F =	0.0000
				R-squared =	0.0684
				Adj R-squared =	0.0683
Total	8673626.72	9387	924.004125	Root MSE =	29.341

Charity	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
Final_Steps	-.0545453	.0020778	-26.25	0.000	-.0586184 -.0504723
_cons	56.11118	.3939957	142.42	0.000	55.33886 56.8835

. reg Preferences Final_Steps

Source	SS	df	MS	Number of obs =	9388
Model	1900448.5	1	1900448.5	F(1, 9386) =	2659.63
Residual	6706801.24	9386	714.553722	Prob > F =	0.0000
				R-squared =	0.2208
				Adj R-squared =	0.2207
Total	8607249.73	9387	916.932964	Root MSE =	26.731

Preferences	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
Final_Steps	-.0976262	.001893	-51.57	0.000	-.101337 -.0939155
_cons	61.83721	.3589496	172.27	0.000	61.13359 62.54083

. reg Philanthropy Charity Preferences Final_Pop

Source	SS	df	MS	Number of obs =	9388
Model	785.746315	3	261.915438	F(3, 9384) =	0.29
Residual	8491596.3	9384	904.901567	Prob > F =	0.8331
				R-squared =	0.0001
				Adj R-squared =	-0.0002
Total	8492382.05	9387	904.696074	Root MSE =	30.082

Philanthropy	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
Charity	.0050685	.0105529	0.48	0.631	-.0156174	.0257545
Preferences	.0021895	.0105348	0.21	0.835	-.0184609	.02284
Final_Pop	.0004346	.0004863	0.89	0.372	-.0005187	.0013879
_cons	49.48799	.8570682	57.74	0.000	47.80795	51.16802

. reg Charity Philanthropy Preferences Final_Pop

Source	SS	df	MS	Number of obs = 9388		
Model	548161.329	3	182720.443	F(3, 9384)	=	211.02
Residual	8125465.39	9384	865.885059	Prob > F	=	0.0000
Total	8673626.72	9387	924.004125	R-squared	=	0.0632
				Adj R-squared	=	0.0629
				Root MSE	=	29.426

Charity	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
Philanthropy	.00485	.0100979	0.48	0.631	-.014944	.024644
Preferences	-.0575069	.0102881	-5.59	0.000	-.0776737	-.03734
Final_Pop	-.0115851	.0004605	-25.16	0.000	-.0124877	-.0106825
_cons	54.36792	.7985194	68.09	0.000	52.80265	55.93319

. reg Preferences Charity Philanthropy Final_Pop

Source	SS	df	MS	Number of obs = 9388		
Model	453674.177	3	151224.726	F(3, 9384)	=	174.05
Residual	8153575.56	9384	868.880601	Prob > F	=	0.0000
Total	8607249.73	9387	916.932964	R-squared	=	0.0527
				Adj R-squared	=	0.0524
				Root MSE	=	29.477

Preferences	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
Charity	-.0577058	.0103237	-5.59	0.000	-.0779425	-.0374692
Philanthropy	.0021024	.0101154	0.21	0.835	-.0177261	.0219308
Final_Pop	-.0105989	.0004638	-22.85	0.000	-.0115081	-.0096896
_cons	54.79558	.7974672	68.71	0.000	53.23237	56.35879

. reg Philanthropy Charity Preferences Mean_Pop

Source	SS	df	MS	Number of obs = 9388		
Model	15034.7297	3	5011.57656	F(3, 9384)	=	5.55
Residual	8477347.32	9384	903.383133	Prob > F	=	0.0008
Total	8492382.05	9387	904.696074	R-squared	=	0.0018
				Adj R-squared	=	0.0015
				Root MSE	=	30.056

Philanthropy	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
Charity	.0193159	.0109916	1.76	0.079	-.00223	.0408619
Preferences	.0116572	.0106356	1.10	0.273	-.0091908	.0325053
Mean_Pop	.0031251	.0007677	4.07	0.000	.0016203	.0046299
_cons	46.35931	1.151907	40.25	0.000	44.10132	48.6173

. reg Charity Philanthropy Preferences Mean_Pop

Source	SS	df	MS	Number of obs = 9388		
Model	15034.7297	3	5011.57656	F(3, 9384)	=	501.62
Residual	8477347.32	9384	903.383133	Prob > F	=	0.0008
Total	8492382.05	9387	904.696074	R-squared	=	0.0018
				Adj R-squared	=	0.0015
				Root MSE	=	30.056

Model		1198706.18	3	399568.728	Prob > F	=	0.0000
Residual		7474920.54	9384	796.56016	R-squared	=	0.1382
<hr/>							
Total		8673626.72	9387	924.004125	Adj R-squared	=	0.1379
					Root MSE	=	28.223

Charity	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
Philanthropy	.0170319	.0096919	1.76	0.079	-.0019663	.03603
Preferences	-.096583	.0099378	-9.72	0.000	-.1160631	-.0771028
Mean_Pop	-.0259815	.0006698	-38.79	0.000	-.0272944	-.0246686
_cons	70.38481	.9187009	76.61	0.000	68.58396	72.18566

. reg Preferences Charity Philanthropy Mean_Pop

Source		SS	df	MS	Number of obs	=	9388
<hr/>							
Model		621922.851	3	207307.617	F(3, 9384)	=	243.62
Residual		7985326.88	9384	850.951288	Prob > F	=	0.0000
<hr/>							
Total		8607249.73	9387	916.932964	R-squared	=	0.0723
					Adj R-squared	=	0.0720
					Root MSE	=	29.171

Preferences	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
Charity	-.1031779	.0106163	-9.72	0.000	-.1239882	-.0823676
Philanthropy	.0109807	.0100183	1.10	0.273	-.0086574	.0306187
Mean_Pop	-.0194177	.0007183	-27.03	0.000	-.0208257	-.0180098
_cons	67.19261	.9922151	67.72	0.000	65.24766	69.13757

. reg Philanthropy Charity Mean_Pop

Source		SS	df	MS	Number of obs	=	9388
<hr/>							
Model		13949.455	2	6974.72748	F(2, 9385)	=	7.72
Residual		8478432.59	9385	903.402514	Prob > F	=	0.0004
<hr/>							
Total		8492382.05	9387	904.696074	R-squared	=	0.0016
					Adj R-squared	=	0.0014
					Root MSE	=	30.057

Philanthropy	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
Charity	.0181155	.010937	1.66	0.098	-.0033235	.0395544
Mean_Pop	.0028991	.0007395	3.92	0.000	.0014496	.0043486
_cons	47.14862	.8990587	52.44	0.000	45.38627	48.91097

. reg Philanthropy Mean_Pop

Source		SS	df	MS	Number of obs	=	9388
<hr/>							
Model		11470.9934	1	11470.9934	F(1, 9386)	=	12.70
Residual		8480911.06	9386	903.570323	Prob > F	=	0.0004
<hr/>							
Total		8492382.05	9387	904.696074	R-squared	=	0.0014
					Adj R-squared	=	0.0012
					Root MSE	=	30.059

Philanthropy	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
Mean_Pop	.0024588	.0006901	3.56	0.000	.0011061	.0038115
_cons	48.33189	.5459094	88.53	0.000	47.26179	49.40199

. reg Charity Philanthropy Mean_Pop

Source	SS	df	MS	Number of obs =	9388
Model	1123467.12	2	561733.561	F(2, 9385) =	698.25
Residual	7550159.6	9385	804.492232	Prob > F =	0.0000
				R-squared =	0.1295
				Adj R-squared =	0.1293
Total	8673626.72	9387	924.004125	Root MSE =	28.364

Charity	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
Philanthropy	.0161321	.0097396	1.66	0.098	-.0029596	.0352237
Mean_Pop	-.0243488	.0006516	-37.37	0.000	-.025626	-.0230715
_cons	64.53829	.6978018	92.49	0.000	63.17044	65.90613

. reg Charity Mean_Pop

Source	SS	df	MS	Number of obs =	9388
Model	1121260.02	1	1121260.02	F(1, 9386) =	1393.49
Residual	7552366.7	9386	804.641669	Prob > F =	0.0000
				R-squared =	0.1293
				Adj R-squared =	0.1292
Total	8673626.72	9387	924.004125	Root MSE =	28.366

Charity	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
Mean_Pop	-.0243091	.0006512	-37.33	0.000	-.0255856	-.0230326
_cons	65.31798	.5151585	126.79	0.000	64.30816	66.3278

. reg Preferences Mean_Pop

Source	SS	df	MS	Number of obs =	9388
Model	540810.207	1	540810.207	F(1, 9386) =	629.28
Residual	8066439.53	9386	859.41184	Prob > F =	0.0000
				R-squared =	0.0628
				Adj R-squared =	0.0627
Total	8607249.73	9387	916.932964	Root MSE =	29.316

Preferences	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
Mean_Pop	-.0168825	.000673	-25.09	0.000	-.0182018	-.0155633
_cons	60.98396	.5324027	114.54	0.000	59.94033	62.02758

. reg Preferences Mean_Gini

Source	SS	df	MS	Number of obs =	9388
Model	1110001.54	1	1110001.54	F(1, 9386) =	1389.64
Residual	7497248.19	9386	798.769251	Prob > F =	0.0000
				R-squared =	0.1290
				Adj R-squared =	0.1289
Total	8607249.73	9387	916.932964	Root MSE =	28.263

Preferences	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
Mean_Gini	-.0418089	.0011215	-37.28	0.000	-.0440073	-.0396104
_cons	59.08235	.3801497	155.42	0.000	58.33718	59.82753

. reg Preferences Mean_Avg_Wealth

Source	SS	df	MS	Number of obs =	9388
				F(1, 9386) =	1286.68

Model		1037677.61	1	1037677.61	Prob > F	=	0.0000
Residual		7569572.12	9386	806.474763	R-squared	=	0.1206
<hr/>							
Total		8607249.73	9387	916.932964	Adj R-squared	=	0.1205
					Root MSE	=	28.398

Preferences	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
Mean_Avg_Wealth	.1252248	.003491	35.87	0.000	.1183816	.1320679
_cons	5.959435	1.262125	4.72	0.000	3.485396	8.433474

```
. reg Preferences Mean_Avg_Vision
```

Source		SS	df	MS	Number of obs	=	9388
<hr/>							
Model		10003.6441	1	10003.6441	F(1, 9386)	=	10.92
Residual		8597246.09	9386	915.964851	Prob > F	=	0.0010
<hr/>							
Total		8607249.73	9387	916.932964	R-squared	=	0.0012
					Adj R-squared	=	0.0011
					Root MSE	=	30.265

Preferences	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
Mean_Avg_Vision	.0684722	.0207193	3.30	0.001	.0278579	.1090865
_cons	47.13835	.9190165	51.29	0.000	45.33688	48.93983

```
. reg Preferences Final_Steps
```

Source		SS	df	MS	Number of obs	=	9388
<hr/>							
Model		1900448.5	1	1900448.5	F(1, 9386)	=	2659.63
Residual		6706801.24	9386	714.553722	Prob > F	=	0.0000
<hr/>							
Total		8607249.73	9387	916.932964	R-squared	=	0.2208
					Adj R-squared	=	0.2207
					Root MSE	=	26.731

Preferences	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
Final_Steps	-.0976262	.001893	-51.57	0.000	-.101337	-.0939155
_cons	61.83721	.3589496	172.27	0.000	61.13359	62.54083

```
. scatter Preferences Final_Steps
```

```
. sum Preferences if Final_Steps==500
```

Variable		Obs	Mean	Std. Dev.	Min	Max
<hr/>						
Preferences		1059	18.57885	18.99125	0	100

```
. sum Philanthropy if Final_Steps==500
```

Variable		Obs	Mean	Std. Dev.	Min	Max
<hr/>						
Philanthropy		1059	48.64967	33.18361	0	100

```
. sum Charity if Final_Steps==500
```

Variable		Obs	Mean	Std. Dev.	Min	Max
<hr/>						
Charity		1059	29.13598	25.34608	0	100

```
. ttest Philanthropy == Charity if Final_Steps==500, level(80)
```

Paired t test

```

-----+-----
Variable |      Obs      Mean   Std. Err.   Std. Dev.   [80% Conf. Interval]
-----+-----
Philan~y |    1059    48.64967   1.019708   33.18361    47.34205    49.95729
Charity   |    1059    29.13598   .7788662   25.34608    28.1372    30.13476
-----+-----
diff      |    1059    19.51369   1.322787   43.04649    17.81741    21.20997
-----+-----
      mean(diff) = mean(Philanthropy - Charity)          t = 14.7520
Ho: mean(diff) = 0                      degrees of freedom = 1058

Ha: mean(diff) < 0          Ha: mean(diff) != 0          Ha: mean(diff) > 0
Pr(T < t) = 1.0000          Pr(|T| > |t|) = 0.0000          Pr(T > t) = 0.0000

. ttest Philanthropy == Charity if Final_Steps==500, level(90)

Paired t test
-----+-----
Variable |      Obs      Mean   Std. Err.   Std. Dev.   [90% Conf. Interval]
-----+-----
Philan~y |    1059    48.64967   1.019708   33.18361    46.97093    50.32841
Charity   |    1059    29.13598   .7788662   25.34608    27.85373    30.41822
-----+-----
diff      |    1059    19.51369   1.322787   43.04649    17.336    21.69139
-----+-----
      mean(diff) = mean(Philanthropy - Charity)          t = 14.7520
Ho: mean(diff) = 0                      degrees of freedom = 1058

Ha: mean(diff) < 0          Ha: mean(diff) != 0          Ha: mean(diff) > 0
Pr(T < t) = 1.0000          Pr(|T| > |t|) = 0.0000          Pr(T > t) = 0.0000

. ttest Philanthropy == Charity if Final_Steps==500, level(95)

Paired t test
-----+-----
Variable |      Obs      Mean   Std. Err.   Std. Dev.   [95% Conf. Interval]
-----+-----
Philan~y |    1059    48.64967   1.019708   33.18361    46.64879    50.65055
Charity   |    1059    29.13598   .7788662   25.34608    27.60768    30.66428
-----+-----
diff      |    1059    19.51369   1.322787   43.04649    16.91811    22.10928
-----+-----
      mean(diff) = mean(Philanthropy - Charity)          t = 14.7520
Ho: mean(diff) = 0                      degrees of freedom = 1058

Ha: mean(diff) < 0          Ha: mean(diff) != 0          Ha: mean(diff) > 0
Pr(T < t) = 1.0000          Pr(|T| > |t|) = 0.0000          Pr(T > t) = 0.0000

. reg Preferences Mean_Gini

      Source |      SS      df      MS              Number of obs = 9388
-----+-----+-----+-----+-----+-----
      Model | 1110001.54      1 1110001.54          F( 1, 9386) = 1389.64
      Residual | 7497248.19   9386  798.769251          Prob > F      = 0.0000
-----+-----+-----+-----+-----+-----
      Total | 8607249.73   9387  916.932964          R-squared     = 0.1290
                                          Adj R-squared = 0.1289
                                          Root MSE    = 28.263

-----+-----
Preferences |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----
Mean_Gini   |  -.0418089   .0011215   -37.28   0.000   -.0440073   -.0396104
      _cons   |  59.08235   .3801497   155.42   0.000   58.33718   59.82753
-----+-----

. reg Preferences Mean_Avg_Wealth

      Source |      SS      df      MS              Number of obs = 9388

```

```

-----+-----
      Model | 1037677.61      1 1037677.61
      Residual | 7569572.12  9386 806.474763
-----+-----
      Total | 8607249.73  9387 916.932964

F( 1, 9386) = 1286.68
Prob > F      = 0.0000
R-squared     = 0.1206
Adj R-squared = 0.1205
Root MSE     = 28.398

-----+-----
      Preferences |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----
Mean_Avg_Wealth |   .1252248   .003491    35.87   0.000   .1183816   .1320679
      _cons |   5.959435   1.262125    4.72   0.000   3.485396   8.433474
-----+-----

. reg Preferences Mean_Avg_Vision

      Source |      SS      df      MS                Number of obs =      9388
-----+-----
      Model | 10003.6441      1 10003.6441                F( 1, 9386) =     10.92
      Residual | 8597246.09  9386  915.964851                Prob > F      =     0.0010
-----+-----
      Total | 8607249.73  9387  916.932964                R-squared     =     0.0012
                                           Adj R-squared =     0.0011
                                           Root MSE     =     30.265

-----+-----
      Preferences |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----
Mean_Avg_Vision |   .0684722   .0207193    3.30   0.001   .0278579   .1090865
      _cons |   47.13835   .9190165   51.29   0.000   45.33688   48.93983
-----+-----

. reg Preferences Final_Steps

      Source |      SS      df      MS                Number of obs =      9388
-----+-----
      Model | 1900448.5      1 1900448.5                F( 1, 9386) =    2659.63
      Residual | 6706801.24  9386  714.553722                Prob > F      =     0.0000
-----+-----
      Total | 8607249.73  9387  916.932964                R-squared     =     0.2208
                                           Adj R-squared =     0.2207
                                           Root MSE     =     26.731

-----+-----
      Preferences |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----
Final_Steps |  -.0976262   .001893   -51.57   0.000   -.101337   -.0939155
      _cons |   61.83721   .3589496   172.27   0.000   61.13359   62.54083
-----+-----

. reg Preferences Philanthropy Charity Final_Steps

      Source |      SS      df      MS                Number of obs =      9388
-----+-----
      Model | 2039720.83      3  679906.944                F( 3, 9384) =     971.48
      Residual | 6567528.9  9384  699.864546                Prob > F      =     0.0000
-----+-----
      Total | 8607249.73  9387  916.932964                R-squared     =     0.2370
                                           Adj R-squared =     0.2367
                                           Root MSE     =     26.455

-----+-----
      Preferences |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----
Philanthropy |  -.0000143   .0090781    -0.00   0.999   -.0178093   .0177807
Charity      |  -.1312854   .0093066   -14.11   0.000   -.1495284   -.1130424
Final_Steps  |  -.1047872   .001941   -53.99   0.000   -.1085921   -.1009824
      _cons |   69.2045    .7767212    89.10   0.000   67.68196   70.72705
-----+-----

. sum Preferences if Final_Steps==500

      Variable |      Obs      Mean   Std. Dev.      Min      Max
-----+-----

```

```

Preferences |      1059      18.57885      18.99125           0           100

. sum Mean_Pop if Final_Steps==500

  Variable |      Obs      Mean      Std. Dev.      Min      Max
-----+-----
  Mean_Pop |      1059     1521.602     818.1707     273.0379     2772.228

. sum Mean_Gini if Final_Steps==500

  Variable |      Obs      Mean      Std. Dev.      Min      Max
-----+-----
  Mean_Gini |      1059     705.3744     460.2276     47.2014     1802.068

. sum Mean_Avg_Wealth if Final_Steps==500

  Variable |      Obs      Mean      Std. Dev.      Min      Max
-----+-----
Mean_Avg_W~h |      1059     312.2332     92.06485     146.041     564.0855

. sum Mean_Avg_Vision if Final_Steps==500

  Variable |      Obs      Mean      Std. Dev.      Min      Max
-----+-----
Mean_Avg_V~n |      1059     30.34284     14.78291     3.410708     53.30424

. sum Final_Pop if Final_Steps==500

  Variable |      Obs      Mean      Std. Dev.      Min      Max
-----+-----
  Final_Pop |      1059     1660.227     1258.67           1     3408

. sum Final_Gini if Final_Steps==500

  Variable |      Obs      Mean      Std. Dev.      Min      Max
-----+-----
  Final_Gini |      1059     724.1481     652.509           0     1983.246

. sum Final_Avg_Wealth if Final_Steps==500

  Variable |      Obs      Mean      Std. Dev.      Min      Max
-----+-----
Final_Avg_~h |      1059     251.3309     184.121           0     1115.382

. sum Final_Avg_Vision if Final_Steps==500

  Variable |      Obs      Mean      Std. Dev.      Min      Max
-----+-----
Final_Avg_~n |      1059     25.2724     18.3606           0     101

. sum Final_Pop if Philanthropy>= Charity

  Variable |      Obs      Mean      Std. Dev.      Min      Max
-----+-----
  Final_Pop |      4978     270.3274     796.9945           0     3406

. sum Final_Pop if Philanthropy<= Charity

  Variable |      Obs      Mean      Std. Dev.      Min      Max
-----+-----
  Final_Pop |      4851     120.7627     528.9454           0     3408

. sum Mean_Pop if Philanthropy>= Charity

  Variable |      Obs      Mean      Std. Dev.      Min      Max
-----+-----
  Mean_Pop |      4978     729.5882     512.5871     180.1154     2744.423

```

```
. sum Mean_Pop if Philanthropy<= Charity
```

Variable	Obs	Mean	Std. Dev.	Min	Max
Mean_Pop	4851	572.6532	362.3238	178.4808	2772.228

```
sum Mean_Pop if Philanthropy>= Charity
```

Variable	Obs	Mean	Std. Dev.	Min	Max
Mean_Pop	4978	729.5882	512.5871	180.1154	2744.423

```
. ttest Mean_Pop == 729.5882 if Philanthropy<=Charity, level(80)
```

One-sample t test

Variable	Obs	Mean	Std. Err.	Std. Dev.	[80% Conf. Interval]
Mean_Pop	4851	572.6532	5.20213	362.3238	565.9855 579.3209

```
mean = mean(Mean_Pop)
Ho: mean = 729.5882
Ha: mean < 729.5882
Pr(T < t) = 0.0000
Ha: mean != 729.5882
Pr(|T| > |t|) = 0.0000
Ha: mean > 729.5882
Pr(T > t) = 1.0000
t = -30.1674
degrees of freedom = 4850
```

```
. ttest Mean_Pop == 729.5882 if Philanthropy<=Charity, level(95)
```

One-sample t test

Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]
Mean_Pop	4851	572.6532	5.20213	362.3238	562.4547 582.8518

```
mean = mean(Mean_Pop)
Ho: mean = 729.5882
Ha: mean < 729.5882
Pr(T < t) = 0.0000
Ha: mean != 729.5882
Pr(|T| > |t|) = 0.0000
Ha: mean > 729.5882
Pr(T > t) = 1.0000
t = -30.1674
degrees of freedom = 4850
```

```
. sum Mean_Pop if Philanthropy> Charity
```

Variable	Obs	Mean	Std. Dev.	Min	Max
Mean_Pop	4537	734.6155	514.1829	241.2843	2744.423

```
. ttest Mean_Pop == 734.6155 if Philanthropy<=Charity, level(95)
```

One-sample t test

Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]
Mean_Pop	4851	572.6532	5.20213	362.3238	562.4547 582.8518

```
mean = mean(Mean_Pop)
Ho: mean = 734.6155
Ha: mean < 734.6155
Pr(T < t) = 0.0000
Ha: mean != 734.6155
Pr(|T| > |t|) = 0.0000
Ha: mean > 734.6155
Pr(T > t) = 1.0000
t = -31.1338
degrees of freedom = 4850
```

```
. sum Mean_Gini if Philanthropy> Charity
```

Variable	Obs	Mean	Std. Dev.	Min	Max
Mean_Gini	4537	256.2391	298.809	20.78887	1747.326

```
. ttest Mean_Gini == 256.2391 if Philanthropy<=Charity, level(95)
```

One-sample t test

Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Mean_G~i	4851	181.0023	3.035195	211.3987	175.0519	186.9526

mean = mean(Mean_Gini) t = -24.7881
 Ho: mean = 256.2391 degrees of freedom = 4850

Ha: mean < 256.2391 Ha: mean != 256.2391 Ha: mean > 256.2391
 Pr(T < t) = 0.0000 Pr(|T| > |t|) = 0.0000 Pr(T > t) = 1.0000

. sum Mean_Avg_Wealth if Philanthropy> Charity

Variable	Obs	Mean	Std. Dev.	Min	Max
Mean_Avg_W~h	4537	377.4162	80.80029	14.928	725.6285

. ttest Mean_Gini == 377.4162 if Philanthropy<=Charity, level(95)

One-sample t test

Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Mean_G~i	4851	181.0023	3.035195	211.3987	175.0519	186.9526

mean = mean(Mean_Gini) t = -64.7121
 Ho: mean = 377.4162 degrees of freedom = 4850

Ha: mean < 377.4162 Ha: mean != 377.4162 Ha: mean > 377.4162
 Pr(T < t) = 0.0000 Pr(|T| > |t|) = 0.0000 Pr(T > t) = 1.0000

. sum Mean_Avg_Vision if Philanthropy> Charity

Variable	Obs	Mean	Std. Dev.	Min	Max
Mean_Avg_V~n	4537	46.38376	12.59234	3.46	653.4212

. ttest Mean_Avg_Wealth == 377.4162 if Philanthropy<=Charity, level(95)

One-sample t test

Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Mean_A~h	4851	327.551	1.142859	79.59911	325.3104	329.7915

mean = mean(Mean_Avg_Wealth) t = -43.6320
 Ho: mean = 377.4162 degrees of freedom = 4850

Ha: mean < 377.4162 Ha: mean != 377.4162 Ha: mean > 377.4162
 Pr(T < t) = 0.0000 Pr(|T| > |t|) = 0.0000 Pr(T > t) = 1.0000

. ttest Mean_Avg_Vision == 46.38376 if Philanthropy<=Charity, level(95)

One-sample t test

Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Mean_A~n	4851	37.34846	.2279987	15.87991	36.90148	37.79544

mean = mean(Mean_Avg_Vision) t = -39.6288
 Ho: mean = 46.38376 degrees of freedom = 4850

Ha: mean < 46.38376 Ha: mean != 46.38376 Ha: mean > 46.38376
 Pr(T < t) = 0.0000 Pr(|T| > |t|) = 0.0000 Pr(T > t) = 1.0000


```
. sum Final_Steps if Philanthropy> Charity
```

Variable	Obs	Mean	Std. Dev.	Min	Max
Final_Steps	4537	140.814	159.9507	0	500

```
. ttest Final_Steps == 140.814 if Philanthropy<=Charity, level(95)
```

One-sample t test

Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]
Final_~s	4851	103.0585	1.844071	128.4379	99.44333 106.6738

mean = mean(Final_Steps) t = -20.4740
 Ho: mean = 140.814 degrees of freedom = 4850

Ha: mean < 140.814	Ha: mean != 140.814	Ha: mean > 140.814
Pr(T < t) = 0.0000	Pr(T > t) = 0.0000	Pr(T > t) = 1.0000

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