

**MINING IN AFGHANISTAN: A PATHWAY FOR DEVELOPMENT AND
MODERNIZATION**

by

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ABSTRACT

Afghanistan, a nation battered after three decades of war and conflict, has a new opportunity to reset the calculus on its internal and regional insecurities through the establishment of a mineral mining economy. Following the invasion of Afghanistan by coalition forces in the fall of 2001, billions of dollars of foreign aid have been funneled into the country. Critics argue that this assistance has not achieved significant, sustainable steps towards the Afghan society despite the good intentions of its donors. The Afghanistan National Development Strategy was created in 2008 as the nation's premier roadmap for initiatives that propel growth and development as a result of establishing a thriving mining sector. To what extent will mining play a role in securing Afghanistan's future? Does Afghanistan have a role to play in regional geopolitics through its vast mineral resources? This study aims to discuss the potential of non-fuel mineral mining in the Afghan state and will assess the extent to which modernization theory can be applied to ensure that further advancements are realized in political stability, human capital, and infrastructure development. These advancements would be achieved specifically through revenues, foreign direct investment in the mining sector, and enhanced security. The study concludes that in order for mineral mining in Afghanistan to take hold, a level of security must be attained in the development of institutions, engagement with the global market economy, expanding its regional ties, infrastructure development, and further developing its mineral economy.

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Chapter 1 Introduction

Underlying one of the world's most pervasive geopolitical conflicts over the past decade is a land of untapped mineral affluence and developmental potential. Though sociopolitical turmoil and militaristic conflicts have defined Afghanistan over the past thirty years, the country holds strong potential for significant mineral extraction and resource development. The extraction of natural resources in Afghanistan, dates back to the empire of Alexander the Great. The abundance of the country's valuable non-fuel minerals presents Afghanistan with the opportunity of economic development and modernization.

Still, only a small amount of Afghanistan's potential resources have been utilized as a result of their geographical remoteness, as well as the sociopolitical strife that has persisted for years in the country. Geological studies of Afghanistan have been conducted over the last half-century, but as a result of unstable political, social, and economic conditions, 90 percent of Afghanistan's land had not been studied until after the coalition invasion in 2001.¹ Following the removal of the Taliban in 2001, the United States Geological Survey (USGS) conducted a series of extensive geological studies, locating approximately \$1 trillion of untapped mineral deposits, presenting Afghanistan as a thoroughly abundant resource location.² This paper will review the current state of mineral wealth using modernization theory to support outcomes of economic development, stability, and advancement of infrastructure. It will also consider the Afghanistan National Development Strategy (ANDS) and analyze the current state of the Aynak Copper mine site as well as contribute findings on modernization theory and natural resource extraction.

¹ Islamic Republic of Afghanistan, "Afghanistan National Development Strategy" (IRoA, 2008), 8.

² Risen James, "U.S. Identifies Vast Mineral Riches in Afghanistan," *The New York Times*, June 13, 2010, <http://www.nytimes.com/2010/06/14/world/asia/14minerals.html?pagewanted=all>.

Beyond accepting that Afghanistan's mineral portfolio is world class and that it represents the potential for significant mineral extraction, the larger question remains whether or not Afghanistan's minerals will assist in the country's own economic development. More specifically, how will the Afghanistan National Development Strategy (ANDS) assist the Afghan state in making the mining industry a main driver in modernization? This thesis explores the role mining could play in modernizing the economy of Afghanistan, and how stability, infrastructure, and human capital contribute to this national objective. The objectives outlined in the ANDS, show that a burgeoning mineral economy will serve as an avenue to encourage the private investment, boost government revenues—and therefore government funding for stabilization efforts, to develop a skilled workforce lay the grounds for stronger occupational education programs and infrastructure development, create more employment opportunities, and to empower the people of Afghanistan. Given the country's well-defined abundance of minerals and the global demand for those minerals, the opportunities for economic development are tremendous if international companies continue to invest the time, capital, and corporate resources in Afghanistan—something that ultimately will assist the nation's modernization and development throughout the twenty-first century.

Of the extensive geological studies conducted by the USGS in 2001, the Aynak copper site is a large scale mineral deposit located in the central Logar province (see map below) that benefited from the USGS's studies.³ The location has become a flagship project for Afghanistan's mining industry, bringing the opportunity to further promote the mining sector in Afghanistan. After a series of extensive mineral tender evaluations undertaken by several major international mining companies following the coalition invasion of Afghanistan, this resource

³ *The Aynak Copper Deposit* (British Geological Survey), accessed October 2, 2012, http://www.bgs.ac.uk/afghanminerals/docs/aynak_a4.pdf.

became the first major international mining investment in Afghanistan with completion of the tender to the Chinese Metallurgical Corporation (MCC) in 2008.⁴ The Aynak tendering should be a pivotal inflection point for the establishment of the Afghan minerals industry because of its significance for setting a precedent for future mining developments to take place. According to a document published jointly by the British Geological Survey and Ministry of Mines and Industries, Aynak’s ore deposit is estimated at 240 MT at 2.3% Cu.⁵ The site at Aynak has not yet produced any copper, and development of the mine has been delayed due to continued instability within the country and the discovery of ancient Buddhist temples at the site, which



Figure 1.1 Map of Afghanistan

called forth a series of preservation efforts that have delayed further mining developments.⁶

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⁴ Yeager James R., “The Aynak Copper Tender: Implications for Afghanistan and the West,” n.d., 5, accessed July 31, 2012.

⁵ *The Aynak Copper Deposit*, 6.

⁶ Kelley Michael, “This 2,600-Year-Old Buddhist Site Will Soon Be Turned Into A Chinese Copper Mine,” September 26, 2012, <http://www.businessinsider.com/mes-aynak-turned-into-copper-mine-2012-9?op=1>.

Nevertheless, the prospects for continued progress in the future with the Aynak site remain optimistic. In 2012, Aynak and the Chinese Metallurgical Corporation, which owns the land, paid 5,714,504 Afghani according the Afghanistan's first Extractive Industries Transparency Initiative (EITI) report.⁸ In the coming years, with further development of the Aynak project, revenue generated by Aynak will see increased distribution to the Afghan government and to surrounding communities. The development and relative successes of the Aynak copper deposit serve as a hallmark for the potential of future mineral development in Afghanistan. Aynak's establishment stands as an unmistakable example that international mining investments in Afghanistan are indeed possible, and that if future international companies are willing to invest the human, physical, and financial capital, Afghanistan is likely to experience further mineral tenders across the country.

Currently, Afghanistan's presence and interaction with the global economy is dramatically limited, with total national exports estimated to be \$547 million according the CIA World Factbook.⁹ Projects like Aynak will have a significant impact upon a country that currently has little national expenditure and limited international efficacy; the potential for beneficially impacting the economic and infrastructural development of Afghanistan is inherent with mining projects such as Aynak. The development of mineral resources by international companies in the country will increase Afghan exports. Also, these projects would require very little expenditure from the Afghan government, as the companies themselves will be largely responsible for the development of the infrastructure necessary for mining.

⁷ "Google Maps," accessed December 22, 2012, google.com/maps.

⁸ *AFGHANISTAN FIRST EITI RECONCILIATION REPORT 1387 AND 1388*, July 2012, 29, <http://www.aeiti.af/reports/e69b933a1df13892c67f8c049ef4eeec-aeiti-1st-reconciliation-report-signed-26-7-2012-1-.pdf>.

⁹ CIA, "Afghanistan," accessed September 18, 2012, <https://www.cia.gov/library/publications/the-world-factbook/geos/af.html>.

At Aynak, for example, the project financed through MCC provides significant revenue flow to Afghanistan in a way that differently and more effectively stimulates the domestic economy than through development aid. The fact that the Aynak tender occurred and has been developed during a state of dramatic transition—during a period of sociopolitical conflict and upheaval, and a time between government regimes—was an admirable accomplishment for Afghanistan’s prospective mineral economy.¹⁰ Furthermore, if the political and cultural disorder that has torn Afghanistan for years diminishes and progresses towards a more stable state, the conditions will encourage future international mineral development. According to the former American envoy to Afghanistan, the progress of the country has been extraordinary.¹¹ If Aynak was able to lay its foundation during such tumultuous times, the potential for developing a mineral economy seems logically conceivable with a calmer climate—and perhaps such development. Another excellent example of foreign investment’s potential to inspire domestic development is the Hajigak iron ore project in central Afghanistan, which is a large mining project with expected investment figures of \$14.6 billion over the next thirty years.¹² Aynak, Hajigak, and several other mining sites that are currently in developmental stages showcase the remarkable potential for mineral extraction in Afghanistan to lay the base for the very economic development that has been largely absent since the arrival of Soviet forces in December 1979 at the onset of the Soviet-Afghan War.

While the establishment of large-scale projects such as Aynak - as well as the continued blossoming of a number of new tenders since 2007 are in development, extensive international interest and investment in Afghanistan’s minerals has begun. But this current activity merely

¹⁰ Yeager James R., “The Aynak Copper Tender: Implications for Afghanistan and the West,” 8.

¹¹ O’Hanlon Michael, “Ex-Afghanistan Envoy: The Progress Is Extraordinary,” 2012, <http://www.brookings.edu/research/opinions/2012/10/03-ex-afghanistan-envoy-ohanlon>.

¹² Najafizada Etlaf, “Afghanistan Awards Indian Group Hajigak Iron-Ore Mining Rights,” 28 2011, <http://www.bloomberg.com/news/2011-11-28/afghanistan-awards-most-hajigak-iron-ore-mining-rights-to-indian-group.html>.

represents the preliminary stages of the country's collective development. Should Afghanistan follow a path of increasing social stability, infrastructure, and development of its human capital through mining activities, the nation stands at the forefront of transitioning into a member of the functioning global economy.

Chapter 2 Afghanistan's Current State and Mineral Wealth

The current state of mining in Afghanistan shows a landscape of arriving companies and project developments. Many mineral tenders are occurring on a regular basis for development including the Badakhshan Gold, Zarashan Copper/Gold, Balkhab Copper, and Shaida Copper tenders, which are in the process of being leased as of August-September 2012.¹³ According to a recent World Bank report, mining will account for 3-4 percent of Afghanistan's economic growth in the coming decade.¹⁴ Given the multiplicity of the mining industry, the field has the opportunity to become a larger percentage of the nation's economy. Historically, mineral production has accounted for nearly 1 percent of Afghanistan's GDP, but with heightened demand within the domestic economy for minerals and for the government to capture benefits from authorized mining, considerable progress can be made in improving the prospects of the mineral sector and stimulating further investment.¹⁵ It is apparent that activity has been set in motion regarding mineral development in Afghanistan with the presence of and investment from international companies, and now it is important to consider the long-term implications that this development will have on the economy, government, and population of Afghanistan. Factors within Afghanistan, including national governance, coalition involvement, multilateral assistance, and renewed global demand for non-fuel minerals, all coincide with the emergence of mining development – and modernization as a result of mining technology and economic stimulation – to rewrite the status quo of Afghanistan's sociopolitical state in the 21st century.

¹³ “Afghanistan Mineral Tenders,” accessed September 17, 2012, <http://www.afghanmineraltenders.com/current-tenders/badakhshan-gold/>.

¹⁴ *Afghanistan: From Transition To Transformation* (The World Bank, July 2012), <http://siteresources.worldbank.org/SOUTHASIAEXT/Resources/223546-1328913542665/8436738-1341156360475/Afghanistan-Transition-Transformation-2012-English.pdf>.

¹⁵ Praful Patel et al., *Mining as a Source of Wealth* (Washington D.C.: The World Bank, March 2004), 1.

2.1 Potential of the Afghanistan Mineral Portfolio: An Assessment

As mentioned previously, Afghanistan's mineral portfolio is ripe with potential. Afghanistan's geology is estimated to have a monetary value of anywhere between \$1-3 trillion of extractable resources.¹⁶ As a result of Afghanistan's complex geological formation, the country is furnished with a vast mineral portfolio containing over 1,400 minerals that have been recorded to date including copper, gold, iron ore, and rare earth elements. The diversity of this portfolio is particularly significant because of the many different potential applications of these minerals if they are extracted and utilized. There is nothing new about the utilization of this profound assortment of resources, and their uses have spanned an equally wide variety of applications. The utilization of Afghanistan's mineral wealth, for example, dates as far back to the production of lapis lazuli for the creation of scarabs and other ornaments for Egyptian Pharaohs.¹⁷ Lapis Lazuli is the gem variety of lazurite with the mineral composition of sodium and aluminum.¹⁸ The stone occurs in only a few major deposits around the world, and therefore is a valued commodity that is exported. Afghanistan's gemstones in particular have a major traceable history to all parts of the globe. The impacts of a large distribution of Afghan minerals and gems highlights the difficulty the country has had throughout its history to profit from mining and mineral development.

Precious gemstone deposits still exist in Afghanistan today and are mined illicitly at an artisanal level.¹⁹ In any case, given the country's long history of mineral extraction, it is apparent that illicit mining has a well-established precedent in Afghanistan. Prior to establishment of a central government in Kabul, the evolution of natural resource exploitation by

¹⁶ Saleem H. Ali and Shroder John F. Jr., "Afghanistan's Mineral Fortune: Multinational Influence and Development in a Post-war Economy," *IEDS* (n.d.): 10.

¹⁷ "Afghanistan," *Mining Journal*, 2006, 4.

¹⁸ Bancroft Peter, "Lapis Lazuli from Afghanistan," n.d., http://www.palagems.com/lapis_lazuli_bancroft.htm.

¹⁹ *Gemstones of Afghanistan* (British Geological Survey), 1, accessed October 1, 2012, http://www.bgs.ac.uk/afghanminerals/docs/gemstones_a4.pdf.

violent entrepreneurs from both Afghanistan and Pakistan are profiting from illegal excavations. With little assistance from Kabul prior to the 2001 invasion, the trafficking of precious stones and other mining commodities such as chromite, marble, and coal has long played a role in criminal activities and fundraising strategies for militant groups throughout decades of conflict in Afghanistan. Afghan Minister of Mines Wahidullah Shahrani has called for further crackdown on illicit miners who choose to mine in non-mining zones and for increased security at established mine sites. Exploitation by smuggling networks was the main driver for mineral development in the country, and is still a threat to centralized rule in Afghanistan. Addressing illegal mining with new institutions and regulations is a way for Afghanistan to ensure that its mineral wealth is utilized in a manner that benefits its economic development and modernization. A crackdown could spur social unrest by the people who are currently mining at an artisanal level. Similarly, the precariousness of ongoing military conflict throughout the country following the coalition invasion also discouraged mineral exploration – a challenge that will continue to factor into whether or not international businesses choose to invest in mineral ventures in Afghanistan in the future.

Considering the dramatic advancements in modern engineering methods, and factoring in the increased possibilities for the application of minerals in the 21st century, the potential for Afghanistan's rise as a leader in global mining has ascended to new levels in recent years. Exploration activity dating to the 1960's has resulted in the location of an abundance of metallic minerals including copper, iron, gold, and non-metallic minerals including halite, talc, and mica.²⁰ The international demand for such minerals is high, and the possibility of locating future deposits in Afghanistan only enhances future marketability. Global demand for copper, for

²⁰ "Afghanistan," 4.

example, is projected to continue its positive trajectory²¹. Such demand for copper will drive the competitive nature of continued mining prospects in Afghanistan. Since the inception of the new Afghan government, the possibility for Afghanistan to utilize its mineral wealth and apply the financial and infrastructural resources generated from that mineral wealth, has increased.

2.2 Afghanistan National Governance- Promising for mineral development?

The movement towards a more stable social and political environment would be greatly benefitted by progressive economic development and opportunity. The prospective development of a strong mining economy could help foster such political stability through improved institutional capacity, increased revenue sources, and improved opportunities for the people of Afghanistan.

Given the persistence of geopolitical turmoil in the country, especially that which has transpired over the past decade, Afghanistan's government, social, and political affairs are very much in flux. Today's Afghanistan is officially constituted as an Islamic Republic, a resultant of negotiations at the United Nations Talks on Afghanistan, which began in 2001.²² The agreement and provisional arrangements for Afghanistan are known as the Bonn Agreement, which provided Afghanistan with the basic foundation to move forward in gaining political and civil institutions through a constitutional commission. It also established other commissions including a human rights commission, a counter-narcotics commission, and a judicial commission. These commissions provided the framework for establishing a legal system in Afghanistan.²³ They

²¹ Glenys Sim, "Morgan Stanley Backs Gold, Silver, Copper on Demand Outlook," October 4, 2012, <http://www.bloomberg.com/news/2012-10-04/morgan-stanley-backs-gold-silver-copper-on-demand-outlook-2-.html>.

²² *AGREEMENT ON PROVISIONAL ARRANGEMENTS IN AFGHANISTAN PENDING THE RE-ESTABLISHMENT OF PERMANENT GOVERNMENT INSTITUTIONS* (Bonn, Germany: United Nations, December 5, 2001), <http://www.washingtonpost.com/wp-srv/world/texts/bonnagreement.html>.

²³ Embassy of the Islamic Republic of Afghanistan, Oslo, "Bonn Agreement," accessed September 30, 2012, <http://www.afghanistanembassy.no/afghanistan/government/core-state-documents/bonn-agreement>.

ultimately attempted to establish a roadmap for national governance in Afghanistan—and its provisions have played a part in the country’s ongoing political transformation.

While Afghanistan is classified as an Islamic Republic today, over the last century, Afghanistan has had six forms of government institutions, ranging from the Emirate of Afghanistan, Kingdom of Afghanistan, Republic of Afghanistan, Democratic Republic of Afghanistan, and Islamic State of Afghanistan.²⁴ The wide varieties of governmental forms that have been instituted, as well as the regularity of governmental changes, are indications that the sociopolitical climate in Afghanistan has been largely insecure during the past century. Throughout Afghanistan’s history, a recurring state of geographic and territorial conflict has been woven with disputes between native Afghans, and outsiders. Historically, landmark figures Alexander the Great and Genghis Khan were both engaged in military conflicts within Afghanistan.²⁵ In more recent history, Afghanistan has withstood three wars involving outside forces—with the British Empire in the Anglo-Afghan Wars between the 19th and early 20th centuries, a large-scale Soviet invasion during the Soviet-Afghan War in the 1980s, and in 2001, the beginning of the American led coalition invasion against the Taliban. In the book *In Afghanistan*, former BBC journalist David Lyon highlights the complications foreign commanders and military fleets have had in overtaking and maintaining a position in Afghanistan.²⁶

Domestically, cultural and tribal conflicts have existed for decades. For example, violent clashes over water and land resources between the Hazara people—a Shiite Muslim ethnic minority—and Pashtun nomads known as the Kuchi, have occurred for over a century. Scores

²⁴ Dewing Michael, “Afghanistan: History and System of Government” (Library of Parliament, October 9, 2007), 1, <http://www.parl.gc.ca/Content/LOP/researchpublications/prb0716-e.pdf>.

²⁵ Barfield Thomas, *Afghanistan A Cultural and Political History* (Princeton, New Jersey: Princeton, 2010), 66.

²⁶ Loyn David, *In Afghanistan* (175 5th Ave. New York, NY 10010: Palgrave Macmillan, 2009), 8.

of villages have been burned and many people have been killed in this unresolved tribal conflict.²⁷ The Hazara-Kuchi conflict is just one example of internal discord within Afghanistan posing a stern challenge towards establishing national government stability in the future; the diversity of tribal ethnicities and cultural ideologies throughout the country, in addition to competing tribal claims over natural resources, present some of the major complications in ensuring government stability and representation.

Present-day Afghanistan, as an Islamic Republic, uniquely harmonizes aspects of Afghanistan's past with new institutions created in the twenty-first century. Afghanistan's current constitution separates the government into three branches through powers of executive, legislative, and judicial branches.²⁸ Afghanistan's government structure today appears to be well aligned with many of the world's institutions and is in a better position to explore private sector development. Compared with much of Afghanistan's recent economic growth since 2001—which has been based primarily upon imports and financial aid received from organizations like the World Bank—private sector growth within the country based upon export driven demand has been largely sluggish, and it is the precise area of economic growth that the Afghanistan national government is attempting to cultivate and establish for the future of the country's domestic economy. According to the Ministry of Economy, "The state encourages and protects private capital investment and enterprises based on the market economy and guarantee their protection in accordance within the provision of the law."²⁹ President Karzai is also committed to private sector development, as evidenced by his statements the private sector's integral role as a catalyst for spurring Afghanistan's development; Karzai also noted the importance of a socially

²⁷ Anonymous, "Tribal Conflict in Afghanistan: Fighting for Land and Water: Modern Politics Meets Ancient Grievances," *The Economist*, July 26, 2007, <http://www.economist.com/node/9558303>.

²⁸ CIA, "Afghanistan."

²⁹ "Economic Governance and Private Sector Development," *Ministry of Economy*, accessed October 3, 2012, <http://moec.gov.af/en/page/3372>.

responsible private sector as the means by which the Afghan government can achieve the enhancement of Afghanistan's economic, social, and cultural vitality.³⁰ The country's commitment to establishing a more vigorous private sector capable of producing desirable exports is evident, and the nation's mineral reserve provides at least one avenue for private sector expansion.

Given the country's recent history of continued instability and internal turmoil, it can be argued that the current form of government will work in facilitating the future development of Afghanistan from an economic and societal standpoint. According to the Center for International Legal Cooperation in The Netherlands, although a new government and legal system have been installed, there are still many key challenges remaining concerning the existence of extensive corruption throughout the country, and a lack of competence in government.³¹ From the view point of a multinational mining company, however, the main complication with the government of Afghanistan concerns the same issue regarding government stability and longevity that has persisted over the past century: is this Islamic Republic suitable to govern Afghanistan in the foreseeable future, and the long term? The nation has a history of inconsistent governments—rapidly overturned and causing disconnected policies and practices. Other considerations include tax and royalty structures that are absent; mining companies seek to see renewed policy frameworks which will allow for progress. Given the turbulence and brevity of past governmental regimes in Afghanistan that transpired in the wake of the Soviet-Afghan War and lasted up until the 2001 Coalition Invasion, a precedent has been set throughout Afghanistan's modern history for national government instability.

This precedent is further complicated by the existence of violent factions. The resurgence

³⁰ Ibid.

³¹ CILC, "Current Projects in Fragile States," accessed September 30, 2012, <http://www.cilc.nl/index.php?page=fragile-states>.

of insurgent attacks and reorganization of terrorist organizations within the country's southern and eastern provinces is another serious problem facing Afghanistan's current government.³² A variety of groups comprise this violent insurgency, including the Taliban, Hezb-i-Islami, the Haqqani network, foreign fighters, local tribes, and criminal organizations.³³ The agendas, objectives, and ideologies of these groups—some which also operate from neighboring Pakistan—are varied and pose their own respective challenges to national security within Afghanistan. For example, a December 2011 suicide bombing in Kabul that killed 56 Shiite worshippers marked a harrowing return of sectarian violence to the country.³⁴ Therefore, while the current government administration has been open and willing to support international tenders of non-fuel minerals since the coalition invasion, another shift in governmental ideology or structure would increase the likelihood that multinational companies will not be welcome to operate in Afghanistan. For international mining firms to feel secure in their investments, a level of stability must be attained in the current political climate, and for any future governments of Afghanistan. International mining firms looking to enter the Afghan market will be cognizant of the vulnerability of the governing system, and therefore an increased need to develop and implement national governmental policies.

2.3 Multilateral Assistance

The World Bank Group is the world's largest source of development assistance with a mission of eradicating poverty and empowering people.³⁵ Afghanistan became a member of the World Bank in 1955, and has remained a member of the multilateral institution with the

³² Boot Max and Kirkpatrick Jeane J, "To Have and To Hold," *Weekly Standard*, accessed October 21, 2012, <http://www.cfr.org/afghanistan/have-hold/p19911>.

³³ Jones Seth G., "Counterinsurgency in Afghanistan," *RAND Counterinsurgency Study 4* (2008): xi.

³⁴ Abawi Atia, "'Grim New Precedent': Dozens Die as Sectarian Violence Erupts in Kabul," December 6, 2011, http://worldnews.nbcnews.com/_news/2011/12/06/9240718-grim-new-precedent-dozens-die-as-sectarian-violence-erupts-in-kabul?lite.

³⁵ *A Guide to The World Bank* (Washington D.C.: The International Bank for Reconstruction and Development/ The World Bank, 2007), I.

exception of during the Soviet-Afghan war. Before the Soviet led invasion, Afghanistan received twenty-one non-interest bearing loans for infrastructure development. Since the coalition invasion, the World Bank Group has pledged \$2.35 billion for development, emergency reconstruction, and government support.³⁶ In addition to the World Bank, the United States Agency for International Development (USAID) has provided more than \$7.9 billion dollars in development assistance. Of that total amount, \$1.6 billion has been strategically aligned with the ANDS. Investments aligned with the ANDS, through agencies such as the World Bank and USAID, lead the international community in looking to bring Afghanistan into the 21st century with developed institutions, developed mineral prospects, and improved levels of infrastructure further the prospects of mining to occur.

These ANDS-aligned investments will bring unique opportunities for mining development given the ANDS's specific backing from the government of Afghanistan. Former World Bank President Robert Zoellick, in an op-ed piece in the Washington Post, stated the importance of Afghanistan's continued development of its market economy to further protect and secure its future as a politically stable nation and participant in the global economy. Developing Afghanistan's market economy will require investment from and cooperation between donor nations in the present, in order to plan for and enable Afghanistan's economic future tomorrow.³⁷ It is apparent, therefore, that Afghanistan's road to a sustainable and productive domestic economy will need to be lined with the investment of time and capital by foreign nations. Through the management of the Afghanistan Reconstruction Trust Fund (ARTF), the World

³⁶ "Afghanistan Country Overview 2012," *The World Bank*, accessed September 19, 2012, <http://www.worldbank.org.af/WBSITE/EXTERNAL/COUNTRIES/SOUTHASIAEXT/AFGHANISTANEXTN/0,,contentMDK:20154015~menuPK:305992~pagePK:141137~piPK:141127~theSitePK:305985,00.html>.

³⁷ Zoellick Robert B. "Op-ed: Afghanistan's Biggest Need: a Flourishing Economy," *The World Bank*, July 24, 2011, <http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/0,,contentMDK:22968753~pagePK:64257043~piPK:437376~theSitePK:4607,00.html>.

Bank supports the financing of many programs that are beneficial to the local development of Afghanistan. Projects financed from the ARTF are aligned with the Afghan government's objectives.³⁸ President Karzai and the government have pledged their commitment to increasing the exports of Afghanistan, which they consider a "critical element" in the government's poverty reduction.³⁹ Therefore, as multilateral financial support and commitment by the Afghan government is present, infrastructure development is likely to continue.

The World Bank's strategy and engagement with Afghanistan is aligned closely with the Afghanistan National Development Strategy (ANDS).⁴⁰ The ANDS is a document created by the Afghan government in 2008 to outline the Government of Afghanistan's strategies for security, governance, economic growth, and poverty reduction. According to the Embassy of Afghanistan in Washington D.C., the ANDS was started in 2005 as a product with heavy consultations between the Afghan government, tribal, and religious leaders, the private sector, Non-Governmental Organizations, and the international community. President Karzai considers the ANDS an "Afghan-owned blueprint for the development of Afghanistan in all spheres of human endeavor". The ANDS lays the framework for development of Afghanistan to occur through security, governance, rule of law, human rights, and economic development, which this thesis will further analyze.

With the ANDS as a framework and with increased private sector-development assistance from the World Bank, Afghanistan will ideally take dramatic strides in economic development through the investment dollars generated by expanded exploration, improved capacity building, and mining.⁴¹ The World Bank's current engagement in Afghanistan is

³⁸ "Afghanistan Country Overview 2012."

³⁹ "Economic Governance and Private Sector Development."

⁴⁰ "Afghanistan Country Overview 2012."

⁴¹ Zoellick Robert B., "Op-ed: Afghanistan's Biggest Need: a Flourishing Economy."

determined by the Interim Strategy Note, which is closely aligned with the ANDS positioned to deliver economic development to the state. The Bank's objective to improve development in Afghanistan highlights the importance of mining's role in spurring development; the current law regarding mining development is still evolving and is limited to resource allocation. For example the World Bank has assisted in drafting the nation's minerals law, and it has encouraged the development of the Aynak copper deposit.⁴² The World Bank, with the ANDS, will look to implement policies and funding initiatives to address the nation's highest priorities. The World Bank Group has worked steadfastly to deliver a better Afghanistan for future generations, and seeks to improve its financial and directional assistance, as well as increase the assistance contributed by other multilateral groups, which is critical to Afghanistan's continued development.

The assistance from the international community, particularly the World Bank Group, has the intentions to support Afghanistan's modern development. But such contributions from donors abroad do not come without unforeseen circumstances; an increase of corruption and implicit conditions with aid money are among some of critics' concerns regarding aid money in Afghanistan.

2.4 Global Demand for Non-Fuel Minerals

While it is difficult to deny the potential of its prolific mineral reserve, Afghanistan's outlook for a mineral economy is largely dependent upon global demand and the nation's capacity to export minerals to prospective buyers. Without global demand for non-fuel minerals in the global economy, Afghanistan would have marginal prospects for developing its resource base and it would be therefore unable to utilize that base as a catalyst for modernizing and

⁴² Praful Patel et al., *Mining as a Source of Wealth*, 5.

developing its economy. Afghanistan's mineral portfolio is well suited for providing several of the most highly sought-after minerals on the planet. The top three most important metals in the world are iron ore, copper, and gold.⁴³ These top three minerals are also primary in the mineral portfolio of Afghanistan. All three minerals are already actively being mined at sites in Afghanistan, with tenders that have been processed or are already in play at the Hajigak iron ore deposit, the Aynak copper deposit, and the Zarahan copper deposit.⁴⁴ Other mineralized sites exist throughout the country, though current mining operations have not commenced, and all sites with the exception of the Aynak deposit are in various stages of feasibility.

The very notion that Afghanistan possesses mineralized deposits with some of the world's most widely used minerals is a positive sign for Afghanistan's opportunities to enter into the global economy. The country could have the capacity to offer its mineral base to supply the extended demand for products that utilize iron ore, copper, and gold; the potential for introducing interested multinational companies into Afghanistan's domestic economy—companies which would demand a product that Afghanistan is capable of supplying—is certainly high. Again, one critical variable for sustaining a mineral economy is that global demand for these three minerals remains high in the future.

The outlook for global mining prospects is predicated on happenings in the global economic environment. Much of gold's demand in recent times has stemmed from heightened fear concerning inflationary periods in the United States and other leading nations in the global economy. In the wake of the 2008 global financial crisis, the value of gold has increased six-fold.⁴⁵ Gold serves as a hedge against fluctuations in the foreign exchange value of the dollar and

⁴³ Olle Ostensson, "Mineral and Metals Production: An Overview" (PowerPoint, Caromd Consulting, 2005), 6.

⁴⁴ "Afghanistan Mineral Tenders."

⁴⁵ Grammy Abbas P., *It's Gold You're Talking About!* (Bakersfield, California: California State University, Bakersfield, April 16, 2012), 1, http://www.csub.edu/kej/documents/economic_rschr/2012-04-16.pdf.

is dependent on unpredictable political climates and events.⁴⁶ Looking at today's political atmosphere from the United States, Europe, and Asia, gold's use as a medium for hedging activities looks promising due to the continued volatility that reaches throughout the global political economy. Many academic and professional experts advocate for the use of gold in portfolio diversification in times of market stress or turmoil. Therefore, prospects for gold mining have been rejuvenated with promise.⁴⁷

Global demand for iron ore, on the other hand, is grounded in demand from economies that require iron ore as a staple material in infrastructure building. If continued growth and infrastructural development is seen within countries such as China and India—which are relatively geographically proximate to Afghanistan - the prospects for iron ore mining and mine development are defined and real, as the demand for resources will remain high. The majority of the mining rights to the Hajigak iron ore deposit in central Afghanistan, for example, were awarded to seven state-run and private Indian companies in November 2011, led by the state-run mining firm Steel Authority of India Ltd.⁴⁸ The awarding of the mineral rights to these Indian companies is only part of the call for economic optimism, however. Not only will natural resource development in the region commence, but the Indian groups also pledged approximately \$1 billion to construct a railroad to export the ore, as well as a power plant that will be built in the area⁴⁹. The infrastructural investment attached to this project parallels a trend of Indian investment in Afghanistan's development; since 2002, India has pledged over \$1 billion in aid, and much of that money has been applied to construction work and development

⁴⁶ Forrest Capie, Mills Terence C., and Wood Geoffrey, "Gold as a Hedge Against the Dollar," *Journal of International Financial Markets, Institutions, & Money*, no. 15 (2005): 343.

⁴⁷ Dirk Baur and Lucey Brian, "Is Gold a Hedge or a Safe Haven? An Analysis of Stocks, Bonds and Gold," *Institute for International Integration Studies* 198 (December 2006): 24.

⁴⁸ Najafizada Etlaf, "Afghanistan Awards Indian Group Hajigak Iron-Ore Mining Rights."

⁴⁹ *Ibid.*

projects in Afghanistan.⁵⁰ Mineral development in Afghanistan involving international companies carries the potential for added domestic development—backed by funding pledged by those companies—and ultimately the type of economic stimulation necessary to empower and diversify Afghanistan’s domestic economy.

Consequentially, Afghanistan’s government seems eager to encourage international interest and investment in mining; Sandeep Jajodia, the managing director of Monnet Ispat—one of the private-sector Indian companies included in the Indian group—proclaimed, “By taking such a quick decision, the Afghan government has given a strong message that it wants to welcome development and investment.”⁵¹ Given the demonstrated interest and hasty investment by India and China, it is obvious that these resources are highly coveted, and that interest doesn’t stop with the Asian continent. While three of the four blocks at Hajigak were allocated to the Indian group, the final block was given to Canada’s Kilo Goldmines Ltd.⁵² In any case, the abundance of iron ore in Afghanistan has already caught the attention of several well-established international economies, and if further developed presents a tremendous opportunity to capture further global attention and investment.

The long-term outlook for copper also remains at a heightened level of potential due to the high application of copper throughout international industry, and high demand for products that utilize copper as the main element. Copper is used for electrical equipment (60%), construction (20%), in industrial applications such as machinery (15%), and alloys (5%).⁵³ The preceding percentages represent the breakdown of copper’s applications in the global economy.

⁵⁰ Ibid.

⁵¹ Ibid.

⁵² Ibid.

⁵³ Emsley John, *Nature’s Building Blocks: An A-Z Guide to the Elements* (Oxford University Press, 2003), 123.

Although the current outlook for iron ore shows that its demand has possibly reached a pinnacle for today's global economy, in the long-term, continued demand drivers in the world economy such as China to India will ensure that iron ore will remain a pivotal mineral for future infrastructure development around the globe. There is no ignoring China's vested interest in importing iron ore from foreign nations; the Norwegian port of Narvik, and its forthcoming iron ore terminal is forecasted to export much of Norway and Sweden's iron ore to China.⁵⁴ As a Nordic country, Norway requires mass shipping expenditures and is notably distant from China. For Afghanistan to produce ore, which neighbors parts of China, the opportunity is for regional commerce and allows for expedited use within the Chinese economy. As a much more proximate neighbor of China, prospects for the exporting of iron ore to China is an attainable goal in the coming years, especially because the product will be more easily shipped from Afghanistan to China.

Afghanistan is estimated to have over three hundred copper deposits and occurrences available for mineral development.⁵⁵ The application of copper, and its good uses—from personal electronics to renewable energy products such as solar panels and wind turbines—again places Afghanistan in a position where deposits such as the Aynak site will allow Afghanistan to utilize its resource base to modernize and develop, given the global demand for these products and Afghanistan's ability to fulfill that demand.

2.5 A State's Opportunity with Minerals: A Comparative Analysis

The size of a mineral portfolio within a given state is determined by the irregularity of the geology of the region. The determining factor of whether a state consists of valuable

⁵⁴ Holter Mikael and Niklas Magnusson, "Norway Port Set to Boom on Iron Ore to China: Freight," *Bloomberg Businessweek*, October 3, 2012, <http://www.businessweek.com/news/2012-10-02/norway-port-set-to-boom-with-iron-ore-shipped-to-china-freight>.

⁵⁵ *Minerals in Afghanistan: The Potential for Copper* (London, United Kingdom: British Geological Survey), accessed October 4, 2012, http://www.bgs.ac.uk/afghanminerals/docs/copper_A4.pdf.

resources is then dictated by geology. If the state is rich in minerals, the opportunity to mine and develop such resources is present. The ability to spur and maintain development within a state that possesses a large mineral portfolio is based on many factors beyond the geologic occurrence of mineral deposits. The specific application of the funding generated by a state's mineral wealth largely determines the opportunities for achieving successful development; simply possessing minerals and the prospect of mining will not lead to higher rates of development within a state. According to a June 2012 research analysis conducted by the World Bank's Poverty Reduction and Economic Management Unit, insulating a country's economy from mineral commodity price volatility, mitigating the impact of an exchange rate appreciation on production costs, competitiveness, and productivity, and investing rents in human, infrastructural, and social capital are all critical approaches to achieving successful development.⁵⁶ These remedies are attributes to modernization theory by enhancing stability, infrastructure, and human capital in Afghanistan. It is apparent, therefore, that policy-based decisions regarding the investment and apportionment of mineral revenues will play a large role in determining whether Afghanistan's potential mineral wealth can be harnessed to achieve societal development and create economic opportunities for its people.

Regarding Afghanistan's mineral industry, modernization theory is exemplified through the issuance of the mining law that was drafted in coordination with the World Bank Group to better assist in Afghanistan in courting western mining firms. The initial mining law, known as the Minerals Law of Afghanistan, was adopted by the Afghan cabinet in 2005. Basic provisions and goals of the law concern defining mineral rights, taxing structures, and the role of the

⁵⁶ Boaky Daniel et al., *Investing Mineral Wealth in Development Assets* Policy Research (Washington D.C.: The World Bank, June 2012), 8, http://www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2012/06/14/000158349_20120614165615/Rendered/PDF/WPS6089.pdf.

Ministry of Mines as a regulatory agency growth through private sector development. The formation of mining sites such as Aynak and Hajigak, among others, in the time since the initial adoption of the mining law is evidence that Afghanistan is on this path of modernizing its mineral reserves for economic and infrastructural development. For Afghanistan, the realization of an established mining economy capable of generating the revenue and technological advancements necessary to stimulate other domestic development could take significant time. To relate the time frame of modernization and development, Afghanistan's mineral law which was proposed in 2005, had bi-agency support between the Ministry of Mines and Ministry of Justice to update and better clarify certain provision in Afghanistan's mineral law. The initiation of a mineral law and policy for Afghanistan was revolutionary considering the presence of coalition forces in the country.

The minerals law will place parameters on mineral rights, looking to spur private market driven investment, and create a legal environment around resource extraction. A primary advantage of the mineral law is it provides comprehensive security over a foreign legal right to mine that resource. The type of security that this law would provide delivers the type of incentive structure needed within the country to create a cohesive push for private investment of minerals lands in Afghanistan to take hold. Activities in mining stemming from this law will be the further stability of the nation. The current status of the law is under review by Afghanistan's cabinet. Continued rifts between the Ministry of Mines in Afghanistan and President Karzai's cabinet show a disputed claim where discourse and disagreement between institutions is taking place. Afghanistan is well on its way towards reaching higher and new levels of development and in the coming decades, the possibility of a self-sufficient Afghanistan standing on its own economy through various industries will be the true test to see it can attain higher levels of

modernization. In October 2012, Afghanistan's government published more than two hundred mining contracts as part of an effort to enhance the position of the industry. Efforts of this nature could be received positively by the international mining community and further raise interest in the country's mineral base.

Comparative analyses of states offer anecdotal reasoning into how their societies and their governments efficiently and effectively utilize a particular state's mineral portfolio for economic growth and development, or how that state's resources are mismanaged and ineffectively utilized in failing to establish a stable mineral economy. Relative to this thesis, the nations of Norway and Venezuela both advanced in the progress of modernization theory can be examined to assess how two different countries—both with sizeable mineral portfolios—have applied their mineral wealth to varying degrees of success in cultivating a sustainable, prolific mineral economy. While the sociopolitical and geographic circumstances of both countries are different than those in Afghanistan, these nations nevertheless make for an interesting and relevant case study in demonstrating that the possession of mineable resources does not imply guaranteed development and modernization of a state's economy.

Norway located hydrocarbon reserves in 1969 at a time when the Norwegian state was geographically isolated and underdeveloped compared to its European neighbors—much like Afghanistan is in comparison to some of the surrounding nations in Asia. From the beginning of its negotiations with interested international companies, the dilemma facing Norway concerned sustaining levels of technology transfer to ensure one day that the people of Norway could operate, develop, and participate in the sale and use of Norway's hydrocarbon reserves. Prior to the location of oil and gas reserves, Norway's main technology driver was the age-old industry

of shipbuilding—a far cry from the technology needed to spur on the development of a domestically managed oil and gas industry.

However, as a result of Norway’s commitment to invest in training for the Norwegian population in specific applied engineering methods pertaining to the extractive industries, Norway made the commitment to utilize its natural resource wealth in order to enable its society. This commitment to training helped develop a skilled-labor workforce within Norway that allowed the Norwegian people the agency and skill-set to directly participate in and benefit from the mineral economy. Norway claims that by investing in their resource wealth in a multitude of ways, it is able to carry out duties of the government and avoid domestic inflation.⁵⁷ In a larger context, the policies that Norway utilized and embraced in analyzing its mineral portfolio and the potential for spurring domestic economic growth ultimately became known as the “Norwegian school of thought” in the field of petroleum engineering. This is an important factor considering how well-regarded Norway’s reputation is within the global resource economy. In addition to having increased metrics stem from mineral development, Norway has also established its reputation and its brand as a successful and respected entity in the world’s petroleum industry—all because the rest of the world has taken notice of the methods that Norway implemented in cultivating its mineral economy.

In contrast to Norway’s meteoric rise as responsible steward of natural resources for economic development, Venezuela is one of the most tremendous development failures.⁵⁸ The Venezuelan state has a sizeable mineral portfolio containing a variety of minerals such as iron

⁵⁷ Hudson Michael, “What Does Norway Get Out Of Its Oil Fund, If Not More Strategic Infrastructure Investment?” (Levy Economics Institute of Bard College, March 2011), 1, http://www.levyinstitute.org/pubs/wp_657.pdf.

⁵⁸ Rodriquez Francisco and Sachs Jeffrey D., “Why Do Resource-Abundant Economies Grow More Slowly?,” *JOURNAL OF ECONOMIC GROWTH* 4, no. 3 (1999): 277.

coal, aluminum and crude oil.⁵⁹ However, Venezuela has seen irregularities with growth rates. From 1920-1975, rates of growth and business metrics achieved the successes as a result of the continued extraction of petroleum products. The downfall of Venezuela's growth can be tied to excessive reliance on the single commodity of crude oil and expenditure commitments through debt financing in times of heightened mineral prices.⁶⁰ Sachs and Rodriguez, two prominent development economists, argue that Venezuela overshot the realities of what the country could achieve through simply exporting crude oil.⁶¹ A general policy failure associated with resource-based growth in Venezuela should be included for much of the state's fading growth in the past twenty-five years.

The Venezuelan GDP per capita has maintained slow growth for nearly twenty years beginning in the 1970's with GDP per capita now in decline.⁶² Other studies cite the decline in democratic governance as a mechanism that further promulgated economic hardships for Venezuela. In light of policies becoming more volatile, less coherent, and politically unstable, dependence on oil exports increased—a critical blow that shattered the backbone of the Venezuelan economy.⁶³ In the case of having an ideally poor minerals policy, Venezuela and its society have been at the whim of revenue pitfalls and not achieving what its state, as a whole, is capable of achieving considering the abundance of available minerals in the country. These two countries highlight the juncture Afghanistan is faced with in terms of using its mineral wealth: the opportunity to utilize it for the benefit of domestic development by investing in global

⁵⁹ "Encyclopedia of the Nations," accessed October 4, 2012, <http://www.nationsencyclopedia.com/economies/Americas/Venezuela.html>.

⁶⁰ Wright Gavint and Czelusta Jesse, "Mineral Resources and Economic Development" (Stanford Center For International Development, February 2004), 14, <http://www.stanford.edu/group/siepr/cgi-bin/siepr/?q=system/files/shared/pubs/papers/pdf/SCID209.pdf>.

⁶¹ Francisco Rodriguez and Sachs Jeffrey D., "Why Do Resource-Abundant Economies Grow More Slowly?," 279.

⁶² *Ibid.*, 281.

⁶³ Francisco Monaldi and Penfold Michael, "THE COLLAPSE OF DEMOCRATIC GOVERNANCE: POLITICAL INSTITUTIONS AND ECONOMIC DECLINE IN VENEZUELA," April 2006, 1, http://www.cid.harvard.edu/events/papers/0604caf/Monaldi_Penfold.pdf.

markets and in the education of its people to participate in the workforce, or the potential for mismanaging a sizeable mineral portfolio due to an overreliance on one commodity, as was the case of Venezuela.

Afghanistan as low income country is more closely situated to the prospects of Venezuela than that of Norway. The area remains volatile to turn towards a system like that of Norway or Venezuela with the types of social and sector support. The prospect of mineral development in Afghanistan has the ability to deliver quality services and development to the Afghan economy, like Norway has utilized its natural resources base.

Afghanistan's potential for mineral mining is vast and with recent assessments from the United States Geological Survey and British Geological Survey, the locations and qualities of minerals is now known. The diversity of the types of minerals they possess are large enough to create economic inroads for the nation. Since the coalition invasion on 2001, the setup of a central government from many aspects makes the idea of mining in Afghanistan more probable for mineral development. Further assistance from the international community is also a beneficial input into allowing for the prospects of mining to take place. Afghanistan's portfolio of diverse minerals also positions their ability for mining to be well equipped for the 21st century as many of their ores are considered strategic for the global economy to operate the emergence of mineral development in Afghanistan has the opportunity to set Afghanistan off a better road ahead into the coming years. This is resultant of the new government in Afghanistan allowing for the nation to capitalize on its mineral wealth and develop its capacity in political stability, infrastructure, and human capital. Additional safeguards for international mining companies will likely come in the form of solid policies from the Afghan government regarding mining and mineral development. Multilateral agencies such as the World Bank have provided large

amounts of capital to the Afghan state and the opportunities for Afghanistan to diversify itself from the multilateral assistance through mining and seek that additional gains are had in the development of political stability, infrastructure, and human capital. The global demand for non-fuel minerals and Afghanistan's opportunity to utilize the demand for minerals within the country constitutes a potential for improvement that not all nations are able to possess.

Chapter 3 Literature Review

In order to understand and frame the policy and development-related implications of mining in Afghanistan, this chapter will evaluate the area of literature concerning modernization theory within the field of international political economy and the role that mining plays in spurring domestic development. Literature suggests several possible implications for the influence of mining in a developing country, such as stability, infrastructure, and human capital. There will be significant challenges involved in extracting Afghanistan's natural resource reserve and accomplishing the framework necessary to support a sustainable mineral economy—missing roads and rail links, shortages of water and electricity, limited fuel supplies, an absence of trained manpower, security risks, endemic corruption, and dependence on shipping through neighboring countries all pose serious issues in terms of infrastructure, security, and human capital concerns must be addressed by Afghanistan in order to move forward.⁶⁴ The literature selected for this work will apply modernization theory fusing concepts of stability, infrastructure, and human capital—and their role in modernization theory—as it relates to Afghanistan's potential rise to a modern state.

3.1 Modernization Theory

Afghanistan, as a state coping with decades of war and conflict, has the opportunity to utilize its natural resource wealth and begin what many have longed to see occur in the rugged nation by way of economic development and modernization. For the state to begin its process, numerous obstacles must be overcome. The main proposal of this thesis postulates that mining offers the ability to act as the catalyst for development. Modernization theory provides a useful framework for the current developmental status of Afghanistan.

⁶⁴ Lipow Jonathan and Melese Francois, "Economic and Security Implications of Afghanistan's Newly Discovered Mineral Wealth," *Defense & Security Analysis* 27, no. 3 (2011): 279.

The progression of the theory is broken down into five total stages, starting with traditional society, where technology is limited and society is static. Traditional society develops to the ‘preconditions for take-off’ stage, which is triggered by external influences. The ‘preconditions of take-off stage’ is characterized by exploitation of agricultural and extractive industries. Transitioning from the ‘preconditions’ stage to the full ‘take-off’ stage requires the installation of infrastructure. The take-off stage initiates development of the manufacturing sector. Followed by development of social, economic, and political institutions and investment in manufacturing, the take-off stage can transition into the ‘drive to maturity’ stage. In this stage, development of a wider commercial and industrial base leads to a fully developed stage, the ‘high mass consumption’ stage. Before high mass consumption can occur, modernization theory requires that a comparative advantage be established in the international trade market. Once established, the country is theoretically modernized.

There are two critical variables within the modernization theory—one considers that a single change within a society can serve as a catalyst for modernization to occur, and the other considers that traditional societies instead install modernity through various mediums.⁶⁵ A consideration of these two variables is critical to the larger debate on development and the modernization theory.

According to the CIA World Factbook, Afghanistan’s living standards are among the lowest in the world and job creation is anemic.⁶⁶ Gross Domestic Product (GDP) figures in 2011 were \$30.11 billion, ranking one-hundredth tenth in the world out of one hundred ninety

⁶⁵ Tipps Dean C., “Modernization Theory and the Comparative Study of Societies: A Critical Perspective,” *Comparative Studies in Society and History* 15, no. 2 (1973): 203.

⁶⁶ CIA, “The World Factbook,” accessed September 30, 2012, <https://www.cia.gov/library/publications/the-world-factbook/geos/af.html>.

two.⁶⁷ These figures show the low level of economic activity in the nation and provide reasoning for classification as a traditional society. In modernization theory, it is economic growth that determines whether a society will remain traditional or become modern.⁶⁸ The prospect for Afghanistan to move from its traditional structure may come through the utilization of its mineral wealth and bring about opportunity for the people from its assets compared to solely relying on developmental aid as the influx of capital needed to assist its economy.

In Afghanistan, this is naturally difficult due to the fighting within the country, which severely impedes on state modernization. Regarding Afghanistan, it is possible that both of the aforementioned variables of modernization theory could be necessary to drive development; could the existence of minerals serve as the catalyst to spur change? The Afghan people are an important part of the modernization of the nation and society; their active engagement in development is essential for the nation's success. It is critical that Afghans are involved in developments that occur in the country because of potential gains available through further occupational training programs and other activities benefiting the skill set of the populous.

In his work, "The Process of Economic Growth," Rostow claims that a society must focus on two related components of modernization: the formation of an effective, modern, central government capable of exercising fiscal power over regionally based interests be it clans or local factions who operate illicit business activities, and the emergence of a group with vested interest in the development of the country, and the technical talents and motivation to operate the modern sectors of the economy.⁶⁹ This applies directly to Afghanistan and the divide between the central government in Kabul and the Haqqani network which operate against the government of Afghanistan. The Haqqani network has strongholds throughout Afghanistan's districts where

⁶⁷ Ibid.

⁶⁸ Hood J. Steven, *Political Development and Democratic Theory* (New York, NY: M.E. Sharpe, Inc., 2004), 34.

⁶⁹ Rostow W.W., *The Process of Economic Growth*, 2nd ed. (New York, NY: The Norton Library, 1960), 346–347.

their presence is formidably anti US and NATO involvement.⁷⁰ These pockets of instability and strife between factions are an inhibiting factor into progress in economics or development.

Given current security and financial assistance Afghanistan has received from the international community, the outlook is promising for a gradual and incremental shift towards modernization. This assistance has allowed the country to transition from its traditional rule and move towards modern institutions and a new outlook for future generations. This particular transitional climate is fitting for modernization theory to be considered as the basis for Afghanistan's development of a mining economy, and the widespread economic and societal advancements that could occur with the establishment of a more-diverse private sector. Modernization theory emphasizes achieving economic development in a particular country by departing from traditional society, and instead shifting to the implementation of alternative, newer practices of development that have worked in other comparable countries in order to reach the desired levels of development.⁷¹ A large portion of this change relates to what Huntington termed as the control modern civilizations have over their natural and social environment in comparison with a traditional society where such control may not exist.⁷² With outside assistance and monies, the opportunity for Afghanistan to further modernize has increased with assistance to cultivate the control mechanisms to govern the country and for the people to control where their country is headed in the future. The mining economy and its development in Afghanistan can further assist in the autonomy by which Afghanistan is able to control its future. This type of assistance fits into the second category of modernization theory by gaining modernization through various mediums. With aid monies, the implied nature of taking donor money is the

⁷⁰ Siddiq Ayesha, "Pakistan's Counterterrorism Strategy: Separating Friends from Enemies," *The Washington Quarterly* 34, no. 1 (2011): 152.

⁷¹ Cohn H. Theodore, *Global Political Economy* (Pearson, 2010), 93.

⁷² Huntington P. Samuel, "The Change to Change: Modernization, Development, and Politics," *Comparative Politics* 3, no. 3 (April 1971): 286.

need to have decision makes from abroad help assist in the decisions on the recipient country.

The classic interpretation of modernization theory is presented in political and economic theorist Walt Whitman Rostow's work, "The Stages of Economic Growth: A Non-Communist Manifesto". Rostow's work will be assessed in considering the modernization theory as a framework for Afghanistan's development. In his approach, Rostow proposes that economic growth is laddered over five stages, where a society progressively moves into new stages of advancement until a new, cumulative level is reached that is defined and accepted as 'modern'. The five stages of growth in modernization theory are the traditional society, preconditions for take-off, the drive to maturity, and the age of high-mass-consumption.⁷³

The traditional society level is structured with limited production functions and if new economic innovations are introduced it will ultimately result in boosting economic productivity.⁷⁴ Afghanistan can be classified as a "traditional society" through the position that Afghanistan has very limited production functions throughout their economy.

The "preconditions for takeoff" stage concerns the establishment of a degree of acceptance within the traditional society that a move towards economic development will be beneficial to the people of that society.⁷⁵ The arrival of external associates into Afghanistan must be presented to society for the mutual benefit of the parties involved. Such integration of foreign ideas is pivotal for the success and advancement of Afghan society. Establishing that economic progress is a necessary condition for positive developments in society—be it national dignity, private profit, the general welfare, or a better life for their children is also pivotal.⁷⁶ A strong central government is a large factor in assisting a country to develop and creating an

⁷³ Rostow W.W, *The Stages of Economic Growth: A Non-Communist Manifesto* (Cambridge University Press, 1960), 4.

⁷⁴ Ibid.

⁷⁵ Ibid., 6.

⁷⁶ Ibid.

environment where prosperity and personal economic gain can occur.

At the “take-off” stage, obstructions of resistance to outside development and growth have been overcome, and the prospects of growth become a normal condition.⁷⁷ In Afghanistan, this relates to the parties within the nation that are either scaled for further development or against it. If obstructions to modernization can be overcome, large gains are possible to be sustained, furthering the possibility of Afghanistan’s ability to move into the next stage of economic development. Such obstructions include continued unmanageable terrorists organizations and a lack of central government to encourage economic growth.

The “drive to maturity” is a stage in modernization theory where the country’s economy becomes thoroughly engaged with the international economy, goods are produced, exported, and new industries are created.⁷⁸ With the prospect of Afghanistan’s minerals, the ability for the Afghan nation to plug into the global economy through the metal and commodity markets is greatly heightened. In 2012, much of Afghanistan’s mineral economy is not established and any development in the sector will translate into goods and services being produced; Afghanistan’s commerce and industry will largely benefit. Establishment of such enterprises in the future fit specifically within the framework of modernization theory under the “drive to maturity” stage.

The “period of high mass consumption” is identifiable when leading sectors shift towards durable goods and services, where people attain a commanded over consumption which transcends basic food, shelter, and clothing; the structure of the working force is altered, as people attain higher levels of skill capacity and education and begin to work in offices or skilled jobs.⁷⁹ This stage interrelates with human capital and the need Afghanistan has in developing this sector of its economy and society. The period of high mass consumption is where the majority of

⁷⁷ Ibid., 7.

⁷⁸ Ibid., 9.

⁷⁹ Ibid. 10.

families enjoy the benefits of increased productivity and constantly expand their range of consumer goods.⁸⁰ Mining and the mineral industries are able to provide a substantive drive for higher skilled job opportunities with a shift to office work or skilled jobs as proclaimed in this stage of modernization theory. The figure below showcases modernization theory in a graphical manner.

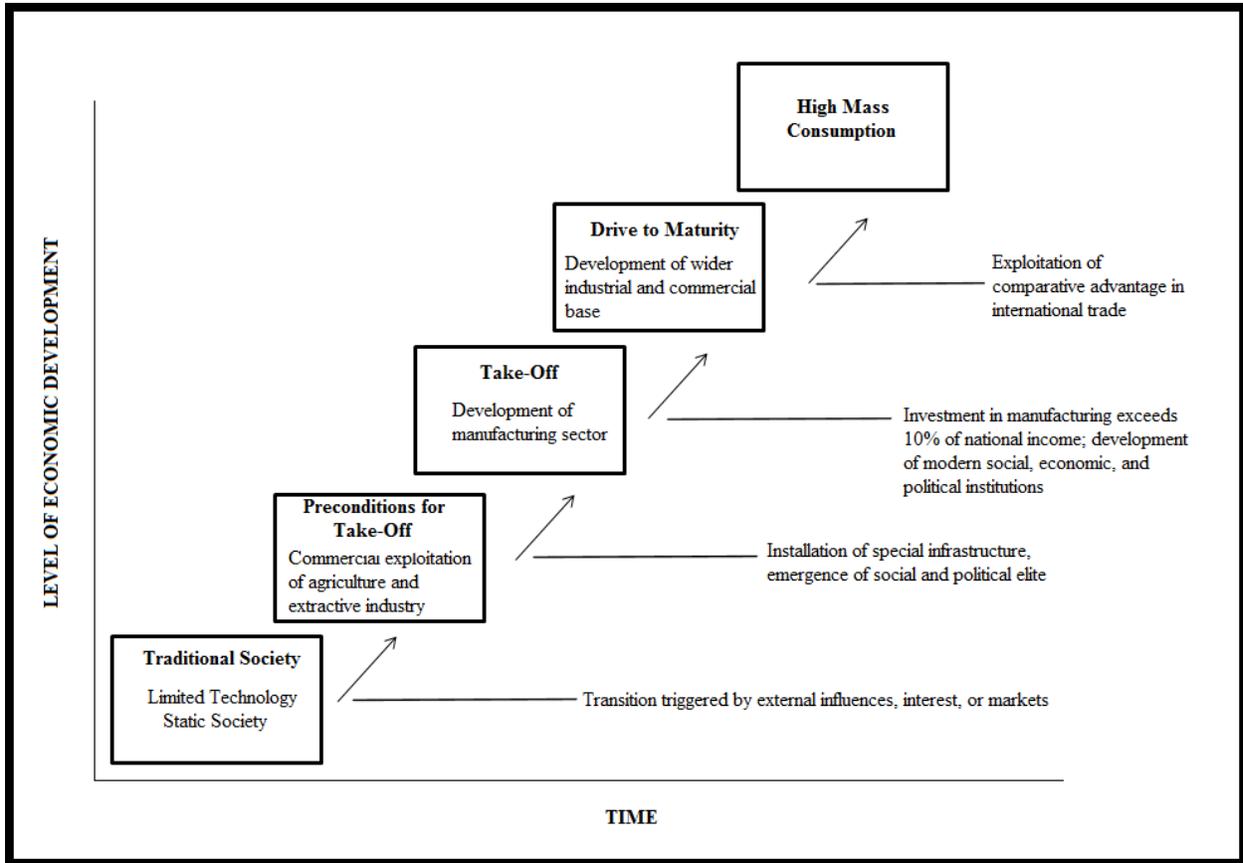


Figure 3.1 Modernization Theory Chart

The stages of economic growth apply to Afghanistan due to its weak performing economy for generations and underperforming industrial sector. For Afghanistan, modernizing will give the people and country the opportunity to showcase their heritage, culture, and land to the world. The term modernization is not used here to imply the requirement to modernize like

⁸⁰ Matsuyama Kiminori, *The Rise of Mass Consumption Societies* (London, United Kingdom: London School of Economics, November 2000), 3, http://eprints.lse.ac.uk/6656/1/The_Rise_of_Mass_Consumption_Societies.pdf.

the western world or specific to any other nation that has recently modernized, but lays the foundation that the modernization theory framework can be applied to Afghanistan's current state and the progression from traditional society to high consumption society can be delivered through the extraction of that state's mineral wealth. Modernization is a complex process that embodies changes in many areas of society, with those primarily surrounding industrialization, urbanization, increasing literacy, education, and often a process of revolution towards a new society.⁸¹ Modernization, therefore, could result not just in the movement towards a more efficient economic system and a dramatically increased investment in human capital, but it also could help reduce international reputation that Afghanistan is a place of instability and underdevelopment – thus encouraging future international political and economic exchange with Afghanistan. Modernization also requires no political ideology, or set of institutions: elections, national boundaries, civic associations, and the other hallmarks of Western life are not necessary to economic growth.⁸² Western values are conducive to modernization, though countries are able to modernize without accepting western culture. This modern state of economic growth and transaction is contrasted with more traditional states where subsistence activities are the primary drivers of society, where most people possess little or no quantity of capital to utilize. It is imperative to reinforce that this modernization process does not imply any sort of cultural superiority of western thought or western systems.

Renowned political thinker Samuel Huntington states that modernization does not by any means carry the synonymous term of westernization.⁸³ Huntington further argues on behalf of modernization by stating it strengthens cultures and reduces relative power of the West.⁸⁴ In the

⁸¹ Huntington P. Samuel, "The Change to Change: Modernization, Development, and Politics," 288.

⁸² Huntington P. Samuel, *The Clash of Civilizations* (New York, NY: Simon & Schuster, 1996), 83.

twenty first century, nations looking to develop have options for which types of economies and societies they can emulate in their rise in relative growth. There is the method in which the western world came to further development through much of the twentieth century and more recently in the twenty-first century, the Asian Development Model became a formidable model as many East Asian countries have developed rapidly and had large development gains for both the state and society. Modernization of the country allows the people to seek opportunities that best meet and addresses their local and national needs. Modernization is not a set of required rules for Afghanistan, but rather a focal point for what the country would look like at each progressive stage.

Modernization theory and its benefits is countered by the ideas associated with the critique of modernization theory and the affects it has on other facets of society. Samuel Huntington pointed to conflict in developed and developing nations and argues that modernization involves social mobilizations; social mobilization generates communal identity and communal interaction; communal conflict and violence are the inevitable result.⁸⁵ For Afghanistan, the future of modernization in Huntington's eyes could result in continued 'communal conflict and violence'. But what Huntington fails to consider is that there are multiple parts to modernization; though social mobility can arise in increased or sustained conflict. Other factors of modernization—such as improved infrastructure or increasing education among the general population—can instead decrease conflict. Other critiques of modernization theory regard that the model of modernization that Afghanistan could experience is not like those of Western Europe and therefore cannot be successful. These critiques cannot stand, in the sense that the Western way is not the only way. Afghanistan—a country which holds very different cultural and traditional roots in society than Western countries—should

⁸⁵ Sanasarian Eliz, *Religious Minorities in Iran* (New York, NY: Cambridge University Press, 2000), 3.

develop its own path to modernization, one that follows the template of Rostow's modernization theory while fulfilling the nation's needs. While the country seeks to modernize, its unique difficulties lie in being a landlocked nation with unstable political parties and low levels of infrastructure. But using Rostow's model, Afghanistan can find its way to overcome these difficulties and modernize.

Further utilization of Afghanistan's natural resources has the potential to spur development and shift Afghanistan to the next stage in economic growth under the modernization theory. Modernization theory and its notion is sought not in its precision, but its ability to evoke images that serve to summarize various transformations in nation states that undertake industrialization and modernization.⁸⁶ If Afghanistan modernizes, the influence that donor countries and other outside influences have would be significantly reduced because Afghanistan could stand on its own with a vibrant economy, no longer requiring direct assistance from the greater global community.

Afghanistan does not need to sacrifice its cultural heritage in order to modernize, but should rather embrace economic opportunities as a manner to achieve economic growth and the strengthening of quality of life within the country. Much of Afghanistan's economic development can be developed locally and within the country through various improvements focused on creating ministry level strategies targeted at economic development for all of Afghanistan.⁸⁷ Institutional revival within the country can lead to better mitigating cultural and political differences through further strategies developed to assist the people of Afghanistan. In Afghanistan, therefore, this process of modernization especially concerns instituting new economic and developmental outlooks with respect to the complex social and cultural structures

⁸⁶ Tipps Dean C., "Modernization Theory and the Comparative Study of Societies: A Critical Perspective," 199.

⁸⁷ Islamic Republic of Afghanistan, "Afghanistan National Development Strategy," 6.

that serve as the fabric of the country's society.

Given the modernization theories that have been considered throughout this thesis, from a theoretical perspective, the establishment of a stronger and more diverse production-based economy in Afghanistan could facilitate the establishment of democracy within the country, ultimately ensuring more freedoms and raising the quality of life for its people. This heightening of the quality of life as measured relative to a broad spectrum of populations is perhaps the most critical end-objective of the modernization theory, and it is an objective that is ultimately reached through a series of steps forward in technology and infrastructure, education, and the business economy as a whole.

In Afghanistan's mining sector, the mode of modernization is evident through the implementation of a national mining law and with the development of the Ministry of Mines institution as the agency to govern Afghanistan's minerals. For mining to take place and play an active role in the future of an Afghan economy, modernization is imperative for the success of Afghanistan.

3.1.1 Stability

A level of sustained political and social stability must be achieved in Afghanistan for modernization and economic development to occur. Huntington cites that modernity goes hand in hand with stability.⁸⁸ Stability is an important factor for any nation, especially for one looking to modernize and develop. Literature on economic growth outlines the stability of economic policies.⁸⁹ Studies suggest that political instability often leads to slower economic growth. In Afghanistan, political stability has not been easily achieved or continuously sustained for

⁸⁸ Huntington P. Samuel, *Political Order in Changing Societies* (Yale University Press, 2006), 41.

⁸⁹ Abdiweli M. Ali, "Political Instability, Policy Uncertainty, and Economic Growth: An Empirical Investigation," *Atlantic Economic Journal* 29, no. 1 (2001): 88.

decades. While the 2001 coalition invasion—and the subsequent violence that has unfolded through clashes with and attacks by insurgency groups such as the Taliban—represents the state of instability that has persisted over the past decade, it is arguable that Afghanistan experienced just as much political upheaval in the decade prior to the 2001 invasion.

Following the establishment of a central government in Kabul, the prospects for stability are greater given that the central government efficiently implements its laws and remains free of corruption. The inclusion and participation of Afghanistan's people in the political process is also critical. The stability of any given polity depends upon the relationship between the levels of political participation.⁹⁰ When stability in economic policies are created and adhered to, companies are more often willing to invest in the country further assisting in economic development. The stability of Afghanistan interrelates with investment and the overall ability of the economy to assist in stabilizing the country. Volatile economic policies or a lack of policy for growth have detrimental effects on an economy.⁹¹ A fine line exists between stability and the role of investments. The question lies in whether stability is established before investments are made, or rather investments are made before stability can occur. Investment is tied directly to internal and external conflict in a country; government stability is highly relevant for investment decisions on behalf of multinational corporations.⁹² In Afghanistan, this relates to the mining industry and the country's current juncture, with the need for both stability and investment to occur.

For extractive industries in Afghanistan, a large question is whether mining drives stability or if stability drives mining. In the last decade, coalition and Afghan forces have worked

⁹⁰ Huntington P. Samuel, *Political Order in Changing Societies*, 79.

⁹¹ Ali, "Political Instability, Policy Uncertainty, and Economic Growth: An Empirical Investigation," 96.

⁹² Matthias Busse and Carsten Hefeker, "Political Risk, Institutions and Foreign Direct Investment," *European Journal of Political Economy* 23, no. 2 (June 2007): 405.

to stabilize the nation to bring further development to Afghanistan and its economy. Mining can bring to Afghanistan new income opportunities to the Afghan people, allowing for increased quality of life and greater economic prosperity—suggesting that mining will arise before stabilization will occur. The case of whether it is stability that will develop the mining industry or that the mining industry will create stability is largely influenced by the particular nation. For some areas, the need is to have stability first, then attract mineral investment. In the case of Afghanistan however, the need for mineral development is present today due to the nation having no other main forms of national income to assist in securing and stabilizing the country. Measures to create further stabilization with increased revenues from mining projects could greatly assist Afghanistan. Investing in the country will bring new success to a state otherwise left with underutilized resource potential.

A plethora of political theory supports the premise that levels of economic development increase the capacity of a society to satisfy the aspirations of modernization and reduce social frustrations. According to Henry Bernstein, economic development revolves around the need for an ‘economic man’ to assume development will occur once effective incentives are perceived and the necessary motivation has been instilled.⁹³ Given the theoretical and historical basis supporting economic growth as a means for attaining political stability, there is reason to believe that economic growth stimulated by the development of industries such as mining could help Afghanistan attain the political stability it has lacked for decades. It is certainly apparent that its government is making strong efforts to set the wheel of economic development in motion by enabling its mining industry.

⁹³ Bernstein Henry, “Modernization Theory and the Sociological Study of Development,” *Journal of Development Studies* 7, no. 2 (1971): 141–160.

In October 2012, the Afghan government published more than two hundred mining contracts as part of an effort to enhance the position of the industry; efforts of this nature could be received positively by the international mining community and further raise interest in the country's mineral base.⁹⁴ Therefore, the achievement of a robust mineral economy—utilizing the valuable resources that Afghanistan possesses for economic stimulation—ultimately could serve as the basis for achieving a more stable and politically active Afghan populous, as well as a higher quality of existence for its people.

The demand for the nation's natural resources is evident in the diverse international composition of the companies that bid for the acquisition of the Aynak Copper Mine. As shown in figure 3.2, investment in the mine site received bids of up to \$2.9 Billion. The investments allow for increased capital to enter into Afghanistan's economy. With such capital comes a change in additional chances to stabilize the nation through more government services.

Modernization theory is based in socioeconomic principles that highlight the supportive role played by developed countries in facilitating sustainable development in the under-developed world.⁹⁵ To exemplify this point, in Afghanistan for instance, USAID has provided nearly \$7.9 billion in development assistance.⁹⁶ In addition, an international donors' conference took place in Tokyo, Japan in July 2012, where a further pledge of \$16 billion for economic development to Afghanistan in the next four years was established, under the condition of the central government's ability to curb corruption.⁹⁷ Developmental aid, such as the aforementioned examples from international donors, is imperative for making critical advancements in societal

⁹⁴ Bowley Graham and Rosenberg Matthew, "Mining Contract Details Disclosed in Afghanistan," *The New York Times* (Kabul, Afghanistan, October 15, 2012), sec. International, A11.

⁹⁵ Khun Alex, "Critical Review of Modernization Theory," *Our Development*, August 6, 2008, <http://ourdevelopment.blogspot.com/2008/08/critical-review-of-modernisation-theory.html>.

⁹⁶ USAID, "Afghanistan," accessed October 17, 2012, http://afghanistan.usaid.gov/en/about/frequently_asked_questions.

⁹⁷ Perlez Jane, "\$16 Billion in Civilian Aid Pledged to Afghanistan, With Conditions," July 8, 2012, http://www.nytimes.com/2012/07/09/world/asia/afghanistan-is-pledged-16-billion-for-civilian-needs.html?_r=1&.

Company	MCC	Hunter Dickinson Inc.	Kazakhmys Corporation, LLC	Phelps Dodge Corporation, LLC	Strikeforce Limited Cyprus
Total Investment	2.9 Billion USD	1.7 Billion USD	2.2 Billion USD	0.9 Billion USD	2.4 Billion USD
Production Process (Phases)	All Production Concentration, Smelting, and Cathode Copper to be Processed In Afghanistan	Initial Production of Concentration and Cathode Cu via SX/EW in Afghanistan, Potential for Propriety Concentration Leach	All Production- Smelting, and Cathode Copper to be Processed in Afghanistan	Initial Production of Concentration and Cathode Cu Via SX/EW in Afghanistan, Potential for Proprietary Concentration Leach	Production of Concentration in Afghanistan
Start of Production	Initial Heap Leach, SX/EW, Year Five, Based on REF Year Six	Year Seven	2 Year Heap Leach 4 Years Concentration	Year Six	Year Four
Maximum Royalty Percentage	19.50%	15%	18%	12.55% Capped at 100 M USD/year	7.50%
Energy Production	400 Mw	100 Mw	350 Mw	15 Mw	Import Power
Environment	World Bank Equator Standards	World Bank Equator Standards	No Commitment	World Bank Equator Standards	World Bank Equator Standards
Bonus to Government of Afghanistan in Millions	\$808 -3 Installments	\$100 - Multiple Installment	\$2 - 1 Installment	\$243 - Multiple Installment	\$238 - Multiple Installment
Infrastructure (Railway Investment)	Yes	No	Yes	No	No

Table 3.1 Comparative Bidding For The Aynak Copper M

capacities that Afghanistan currently is not wealthy enough to fund. Dramatic strides have been made in Afghanistan's education system – with one million more students enrolled in classes than in 2001, and three million girls now enrolled just a decade after they were banned from attending by the Taliban; the country's health facilities and healthcare have also undergone significant upgrades in their effectiveness and accessibility, providing basic services to 60 percent of the country compared to just 10 percent in 2001.⁹⁸

The influx of developmental aid that Afghanistan has received is a significant driver of these societal advancements. Financial sources such as developmental aid and international investment are critical for establishing the societal, political, and economic basis for achieving a sustainable, stable state. In theory, through the application of foreign investment and aid, Afghanistan therefore will make strides towards becoming an autonomous country and an active participant in the global economy. It is unreasonable, however, to assume that developmental aid will continue to pour in for Afghanistan in the future. This is why establishing a more prolific domestic economy—and generating government revenue from the investments of international companies in industries such as mining that could be applied to societal advancements—is pivotal for the modernization of the Afghan state. Attracting foreign direct investment to Afghanistan requires breaking the cycle of low saving and minimal investment, and ultimately demonstrating signs of reversing its low growth.⁹⁹ By itself, FDI will not be enough to single-handedly pull Afghanistan out of its low growth economy, but it will continue to assist in plugging the Afghan economy into the global political economy.

Long-term success for global mining companies is largely dependent upon their ability to align their interests with the values of society, and in particular within the communities in which

⁹⁸ “Afghanistan Promised \$16bn in Development Aid,” July 8, 2012, <http://www.guardian.co.uk/world/2012/jul/08/afghanistan-donors-16bn-development-aid>.

⁹⁹ Hubbard Glenn R. and O'Brien Anthony Patrick, *Macroeconomics*, Second (Pearson, 2008), 332.

they wish to operate.¹⁰⁰ Some scholars even postulate that mining companies should seek to undertake strategic social investments that focus on adding value to the business unit, and in contributing to local sustainability.¹⁰¹ An analysis by A.M. Esteves, for example, argues the necessity for mining companies to achieve ways for enabling social investment projects that create value for the company and communities in which they operate.¹⁰² This can pose a significant challenge, however, because of the socioeconomic, political/tribal, and cultural complexities that make up the societal landscape of a particular country.

In the case of Afghanistan, this challenge is even greater given the militaristic conflict that has transpired over the past decade, the presence of occupying coalition forces, developing government institutions, and the variance of sources of developmental aid. Following the coalition invasion in 2001, the persistence of militias from fragmented groups who expected to have a future in a new government further complicated the process of state building.¹⁰³ In the wake of the provisions reached by the Bonn Agreement, insurgent involvement in Afghanistan from the Taliban resurfaced in the summer of 2002, as insurgent groups conducted attacks in Kandahar, Khowst, Nangarhar, Kabul and other provinces.¹⁰⁴

In 2012, recurring issues surrounding Afghan security have concerned defection within the Afghan national forces by Afghan nationals, with members of the Afghan army violently turning on coalition forces, as well as on the Afghan people. According to the United Nations, in the first six months of 2012, 1,145 civilians were killed in war-related conflicts, with 80 percent of those deaths attributed to insurgent attacks; this brutality is on the heels of a 2011 where a

¹⁰⁰ A.M. Esteves, "Mining and Social Development: Refocusing Community Investment Using Multi-criteria Decision Analysis," *Resources Policy* 33, no. 1 (2008): 39.

¹⁰¹ *Ibid.*

¹⁰² *Ibid.*

¹⁰³ Barfield Thomas, *Afghanistan A Cultural and Political History*, 283.

¹⁰⁴ Jones Seth G., "Counterinsurgency in Afghanistan," 31.

record 3,021 civilians were killed in conflicts.¹⁰⁵ These statistics demonstrate the level of peril faced on a daily basis by the people of Afghanistan, and the difficulties that surround achieving progressive development within the country; it is profoundly difficult to achieve systemic changes or advancements if parties with opposing ideologies meet those changes with violence and ruthlessness. Such violent opposition also poses a threat to the establishment of mining sites and other domestic industries. The pivotal question remains whether or not Afghan national security forces will be able to play a critical role in subduing insurgencies in Afghanistan.¹⁰⁶ An increase in government revenue from mining supported activities in the country can further assist Afghan national forces to combat insurgent groups that are detrimental to the Afghan state.

Modernization theory has two distinct interpretations; one holds that traditional society is not beneficial for the global community and the other claims that modernized societies are not superior to traditional societies. Modernization, built by the people for their needs in today's world is better than remaining stagnant. In his work, Tipps highlights the issue of conceptualizing modernization into a working theoretical phenomenon.¹⁰⁷ The popularity of the notion of modernization must be sought not its clarity and precision as a vehicle of scholarly communication, but rather in its ability to evoke vague and generalized images which serve to summarize all the various transformations of social life attendant upon the rise of industrialization and the nation-state.

There are inherent challenges to achieving a large-scale mineral economy where there is a consistent and prolific exchange of business concerning the extraction and exportation of minerals. The development of a nation's mineral wealth largely hinges on overcoming the

¹⁰⁵ "Afghan Roadside Bombing Kills Eight Civilians," October 19, 2012, <http://pakobserver.net/detailnews.asp?id=180390>.

¹⁰⁶ Jones Seth G., "Counterinsurgency in Afghanistan," 35.

¹⁰⁷ Tipps Dean C., "Modernization Theory and the Comparative Study of Societies: A Critical Perspective."

difficulty of engaging and appeasing the expectations of many key stakeholders. The stakeholders in mineral development scenarios involving global mining companies include the local population, shareholders, governments, and Non-Governmental Organizations (NGOs). Considering that Afghanistan's central government is very much still in a developmental stage, and is not yet a strong institution, Afghan security forces could face similar issues in the coming years. This relevant example exemplifies the societal nuances Afghanistan faces in its attempts to soundly implement its central government, and in attempting to preserve a secure state of living for its people—and for the development of economy and infrastructure. It is apparent, therefore, that the expansive cache of Afghan mineral resources will not be enough to guarantee developmental advancements in the country; a variety of other political, economic, and societal factors will have to be thoroughly considered for their potential impacts upon the establishment of a mineral economy.

3.1.2 Infrastructure

Adequate infrastructure has long been viewed by both academics and policy makers as a key ingredient for economic development.¹⁰⁸ Within modernization theory, infrastructure plays an integral role in assisting the overall economy to reach a stage of takeoff. Rostow and other modernization theorists believe public capital invested in roads, utility systems, communications, education, health, and other government facilities as the foundation for economic development.¹⁰⁹ The development of infrastructure networks in a developing country is consistent with modernization theory under the idea that such investment will lead to the overall development of the nation. Afghanistan has the large need to renovate its infrastructure thereby

¹⁰⁸ Calderon Casar and Servén Luis, *Infrastructure and Economic Development in Sub-Saharan Africa* (Washington D.C.: The World Bank, September 2008), 2, <https://openknowledge.worldbank.org/bitstream/handle/10986/6988/WPS4712.pdf?sequence=1>.

¹⁰⁹ Judd Dennis R., *The Infrastructure of Play: Building the Tourist City (Cities and Contemporary Society)* (New York, NY: M.E. Sharpe, Inc., 2002), 22.

allowing for the economy to modernize and be a part of the global economy. Modernization theory and infrastructure go hand in hand in light of what infrastructure can do for a country and economy. Rostow's theory assumes that the government is responsible for developing various types of infrastructure in roads, ports, hospitals, and schools for takeoff of the country's economy to occur.¹¹⁰ There is a relationship between infrastructure investment and overall advancements in productivity and economic growth.¹¹¹ For Afghanistan, infrastructure is a key part for stability and the overall modernization of the country as so much of the country is lacking in physical infrastructure. USAID's Infrastructure and Rehabilitation Program's overall goal is to spur Afghanistan's economic recovery and political stability through the reconstruction, rehabilitation, and development of important physical infrastructure throughout the country. The objective of the USAID to rehabilitate infrastructure in the country is due to the critical role such activity plays in a country's economic development. John Kenneth Galbraith painted a compelling portrait of social modernism where government would provide capital for investment in large infrastructure projects where other firms in the market economy would provide consumer goods.¹¹² This requires government funds to increase infrastructure and other sources of capital and commerce to supply market driven development. In relation to mining in Afghanistan, this can be realized through increasing government revenues from taxes acquired from mining and investing these revenues in infrastructure. Once such an investment is made, Afghanistan should see an increase in national modernization.

For Afghanistan, since the invasion by coalition forces, the rate at which infrastructure was able to develop is a critical input into the development of an economy in order for the

¹¹⁰ "Theoretical Perspectives on Global Stratification," May 14, 2012, <http://cnx.org/content/m42971/latest/?collection=coll1407/latest>.

¹¹¹ Gilman Nils, *Mandarins of the Future: Modernization Theory in Cold War America* (The Johns Hopkins University Press, 2003), 32.

¹¹² *Ibid.*, 242.

country to move forward. Infrastructure for Afghanistan should include further development of road, rail, telecommunication networks, and energy. Transportation infrastructure is often mentioned as key to promoting growth and development. The argument relies on the simple logic that one first needs to have access to markets and ideas before one can benefit from them¹¹³. Their belief is supported by the observation that the historical construction of infrastructure such as railroads coincided with periods of rapid economic growth in Western Europe, Japan, and the United States. Roads are an integral part to the overall development of an economy and getting people's goods and services.

According to the Afghan Ministry of Communication and Information Technology, telecom statistics for the country in June 2012 indicate a large increase in the accessibility of telecommunications in the nation. The ministry plans to provide the means for the Afghan people to enhance their knowledge, experience, and better manage and utilize their resources. Increases in the quality of telecommunications present in Afghanistan could further allow the Afghan economy to develop and connect with economic hubs within and outside of Afghanistan. At current, 88% of Afghanistan is reachable through updated telecom infrastructure.

In addition to telecom, roads are a needed element for infrastructure development in Afghanistan. According to USAID, who has installed 1,522 KM of roads, the development of a road authority should be created in Afghanistan to maintain current infrastructure and deliver into the future more opportunities for Afghans to commute on safe roads yielding an increasingly productive nation. With the assistance of USAID, Afghanistan has set up long-term objectives which support the creation of an Afghan Road Authority as Road Fund to finance and implement road maintenance. If revenues are not provided through multilateral donors such as USAID or

¹¹³ Abhijit Banerjee, Esther Duflo, and Nancy Qian, "On the Road: Access to Transportation Infrastructure and Economic Growth in China" (MIT, February 2012), <http://economics.mit.edu/files/7653>.

the World Bank, Afghanistan will likely have to utilize debt financing through the International Monetary Fund to continue to fund and build road projects. The other opportunity, which this thesis presents, is the possibility that through mining activities in the country, revenues can be allocated to further enhance the prospect of road development.

For a landlocked country, seaports are not an option. Therefore, railroads become a critical factor for further development of Afghanistan's infrastructure base. Further development of rail lines will better connect Afghanistan to other markets in the Central Asian region and beyond. For example, railroads will further facilitate mining projects in the country. An example of the use of rail to the Afghan mining industry, MCC—the company tasked with developing the Aynak mine—stated they were going to develop two rail lines in the country for development of the mining economy in the country.

Infrastructural developments can allow for increased opportunities for the people of Afghanistan. Rostow claims that government investments in schools, roads, and hospitals will create the 'take off' needed for a nation to develop. In Afghanistan, rail, roads, and energy developments offer new opportunities for the nation.

Railroads can propel the mining industry as it offers expedited and simplified shipping of ore. It is needed in Afghanistan as an additional avenue for connecting all areas of the country, creating a more interconnected country as well as speeding up the production, transportation, and exportation processes.

Roads are integral for the development process as mining and other industries in Afghanistan will rely on easy transportation of goods. A more expansive road network will bring the country easier transportation of both people and goods, as well as make access to all regions—including mine sites—easier

Power generation is another valuable component in Afghanistan's infrastructure development plan. Mine sites expend large amounts of energy and Afghanistan's current energy grid offers limited support. Increased power generation would allow modern mines to be established.

Galbraith believes that such infrastructure projects should be funded by the government, whereas other sectors of society and industry should be taken on by non-government agents. Improving roads, establishing railroads, extending telecommunication, and power generation throughout the country are essential for Afghanistan's economic development. This infrastructure would assist the central government in providing educational services and in collecting tax revenues. All these factors will contribute to the political integration and stability of the country. Mining can assist in this need to develop more infrastructure in the nation through producing additional revenues and ensuring this developmental goal can be reached.

In Afghanistan's mining sector, the mode of modernization has been evident in the adoption of a national mining law and with the development of a ministry that is dedicated to the mining sector. For example, in a statement issued in July 2012, Wahidullah Shahrani, minister of mining, described major road and rail development, legal and fiscal regime improvements, and stable mineral laws as significant advancements in Afghanistan as the country makes progress towards reaching a level of coherent institutional governance that guides the development of its natural its resources.¹¹⁴

Rostow highlights the key role played of natural resources and social capital to move a country into modernization.¹¹⁵ Natural resources are a key area that can be developed in an economy to reach new output levels. Exporting otherwise underused resources could benefit the

¹¹⁴ Pellerin Cheryl, "DOD, U.S. Agencies Help Afghanistan Exploit Mineral Wealth," 30 2012, <http://www.defense.gov/news/newsarticle.aspx?id=117330>.

¹¹⁵ Rostow W.W, *The Stages of Economic Growth: A Non-Communist Manifesto*, 24–26.

Afghan economy. Rostow leverages the use of natural resources as a way for an economy to continue its upward movement towards greater quality of life. This upward movement can lead to gains in infrastructure development in the nation. Startup industries, although very difficult to initiate and implement, they offer nations the opportunity to develop expertise in a certain sector..

Loveman and Sengengerger stress the influence of two trends of industrial restructuring and the overall benefit small businesses and new industries provide to overall economic growth.¹¹⁶ Entrepreneurial activity is an important aspect of economic development. Start-up industries have a positive role in the economic development of a country.¹¹⁷ In Afghanistan, the mining sector could play a role in propelling the economy along the modernization road.. The start-up of large scale legal mining will deliver huge benefits to the Afghan economy, allowing it to be self-sufficient and begin its unique process of modernizing and developing.

3.1.3 Human Capital

Human capital plays a large role in the development of an economy and is defined as the accumulated knowledge and skills acquired from education and training, or from life experiences.¹¹⁸ With an increase in human capital, the greater their human capital is to increase productivity and assist the economy they operate in to increase in efficiency. Adopting a position based on the assumptions of the human capital and modernization theorists, Fagerlind and Saha (1997) argue that in developing countries, education demand must be tempered in order to bring costs and benefits to more realistic levels. For human capital to play a part in the modernization of a country, some suggestions that have been made are to have linkage is to:

¹¹⁶ Sander Wenekers and Roy Thurik, "Linking Entrepreneurship and Economic Growth," *Small Business Economics* 13 (1999): 27.

¹¹⁷ Andre van Stel, Martin Carree, and Roy Thurik, "The Effect of Entrepreneurial Activity on National Economic Growth," *The Papers on Entrepreneurship, Growth, and Public Policy* (2005): 2.

¹¹⁸ Hubbard Glenn R. and O'Brien Anthony Patrick, *Macroeconomics*, 315.

- Have the cost of education be borne by the beneficiary or recipient by means of family assistance or self-help schemes rather than solely the state
- The income differential between traditional and modern sectors should be reduced, which lowers the benefits according to the educational attainments
- The educational requirements for particular jobs should be exaggerated; and
- The wage structure should be tied to occupational performance and requires educational attainments had before people join the labor market

Investment in human capital is a highly instrumental and necessary component to improve the production capacity of a nation.¹¹⁹ For Afghanistan, low literacy rates are problematic as evidenced in being the nation with the highest illiterate population according to the CIA World Fact Book.¹²⁰ Without such skills, the country will see slow growth and development. The need for human capital development is evidenced with this simple metric.

East Asia's pattern of economic growth was characterized by the early development of human capital through a focus on basic education.¹²¹ This allowed for skills and human capital development which attributed to overall modernization of the East Asian region. This emphasizes opportunities that Afghanistan has to develop its population through education which will assist in developing the country. The largest poverty-reduction benefits through increasing human capital come in the form of targeting the expansions of primary, non-formal, and literacy education, especially in rural and poor urban areas.¹²² The further advance of a mineral economy will assist in having Afghanistan deliver quality education program throughout the country with revenues from mining playing a critical role in investing in education initiatives. Resource

¹¹⁹ D.A Olaniyan and T. Okemakinde, "Human Capital Theory: Implications for Educational Development," *European Journal of Scientific Research* 24, no. 2 (2008): 157.

¹²⁰ "Literacy," accessed December 17, 2012, https://www.cia.gov/library/publications/the-world-factbook/fields/print_2103.html.

¹²¹ Adams Don, "Education in Developing Asia" (Asian Development Bank, 2002), 8.

¹²² *Ibid.*, 21.

revenues being invested in human capital is exemplified in Wyoming through the state's Hathaway scholarship program which provides highly subsidized higher education to residents of the Wyoming. A scholarship of this type is feasible due to the large proportion mining and mineral taxes play in Wyoming's revenue stream. Such benefits can also come to Afghanistan's society through education programs, infrastructure building, and other social improvement programs.

While there are advantageous opportunities tied to minerals and mining activity, a country's aspirations for fully utilizing and benefitting from its mineral wealth by inviting outside investments could have shortcomings, like corruption and ill-equipped frameworks for business development. Forced business ventures involving international mining corporations expose a country to the inherent risk of economic nationalism. A series of recent violent protests against international mining companies involving local people from the Cajamarca region of Peru highlight some of the societal and environmental issues a nation faces in inviting foreign-based mining firms to explore and develop the resources on its land. In Peru, there have been 19 people killed since July 2011 in protests over allegations that international mining companies have polluted local ecosystems and have depleted crucial resources such as water supplies that are utilized by local communities; for example, one person was killed by police forces in a September 2012 clash where protestors had demanded that Canadian mining firm Barrick Gold provide local communities with usable, clean water as compensation for contaminating local water supplies.¹²³ Projects such as the Barrick Gold mine and the Conga mining project—which is led by U.S.—based Newmont Mining—were encouraged by the Peruvian government in its attempt to address poverty within the country by developing a mining economy, and thus

¹²³ Anonymous, "Deadly Clash at Peru Protest over Barrick Gold Mine," September 20, 2012, <http://www.bbc.co.uk/news/world-latin-america-19669760>.

providing more work opportunities, mineral revenue, and an augmentation of the country's economic growth.¹²⁴ It is apparent, however, that economic initiatives with well-intentioned theoretical outcomes can ultimately produce damaging results if a respectful and constructive relationship between local communities and arriving international mining companies is not achieved.

In Afghanistan, this means that the challenges surrounding the establishment of a mining economy involving international corporations not only encompass ensuring that the corporations can securely achieve mining operations without the threat of violence, but also that the cultural and resource-based interests of the local communities are not infringed upon or antagonized by the mining corporations. For example, despite MCC's \$3 billion bid and significant investment in propping up Afghanistan's mineral economy, the firm's destruction of a 2,600 Buddhist artifact site is an example of how financially based initiatives could collide with local cultural values and result in similar turbulence to the situation in Peru.¹²⁵ Although projects such as Aynak and Hajigak could also potentially generate tens-of-thousands of jobs for local people, they also could have significant impacts upon the resources of those people – such as the nine villages that have already been displaced by the Aynak site—which could stir up significant tensions and conflict from the native peoples of the area. As already established, tribal tensions over land and water resources already in Afghanistan, and introducing international companies to the mix could introduce new disputes to the country. This unrest would also put a counterproductive drain on the economy that a mining economy ideally would prop up; in Peru, the violent protests are costing the country approximately \$1.2 million a day and are delaying

¹²⁴ Anonymous, "Peru Mine Disputes Mar President Humala's First Year," July 27, 2012, <http://www.bbc.co.uk/news/world-latin-america-18980109>.

¹²⁵ Huffman Brent, "Ancient Site Needs Saving Not Destroying," September 24, 2012, <http://www.cnn.com/2012/09/22/opinion/afghanistan-buddha-site-mine/index.html>.

potentially billions of dollars of investment.¹²⁶ Therefore, cautious governmental policies and regulations that mitigate a symbiotic relationship between international corporations and local communities will be critical to the successful achievement of an Afghan mineral economy, and the avoidance of violent and detrimental conflicts.

Infrastructure and economic development are not the only benefits to mineral extraction, however. Producing a mineral base provides the capacity for a local culture to further its outreach and showcase its heritage; mining exists not only as a technical function of economics, but also as a driver for cultural outreach – perhaps even to the extent where mining becomes engrained as its own unique part of the local culture. In Western Australia for example, efforts made by the government to include the Aboriginal people were provided the Aboriginal Training and Liaison Unit (ATAL) as a means of increasing aboriginal participation within the mining industry, thus supporting their traditions and culture while also opening work and training opportunities for developing skilled laborers.¹²⁷ The ATAL developed and managed a range of programs designed to assist Aboriginal people achieve self-sufficiency and financial stability while maintaining their traditional links with the land. Through the ATAL, a land use agreement was achieved in 1997 between Hamersley Iron and the Gumla Aboriginal Corporation, ultimately providing approximately \$60 million of benefits to the Aboriginal people.¹²⁸ Government efforts and policies such as these serve as a direct support system to further enable underdeveloped individuals within a state. Governments can support these initiatives while simultaneously maintaining relationships with mining companies by encouraging financial support of a people’s cultural heritage including sports, arts, history, gender, and local business

¹²⁶ Anonymous, “Peru Mine Disputes Mar President Humala’s First Year.”

¹²⁷ J. Taylor and B. Scambary, “ATAL,” 2005, http://epress.anu.edu.au/caepr_series/no_25/pdf/prelims.pdf.

development.¹²⁹

Various examples of how culture could be both preserved and showcased—and perhaps even utilized—to stimulate the local economy and open increased economic and employment opportunities for the local citizens promotes the establishment of museums, heritage sites, and natural preserves. Ultimately, if utilized responsibly and invested soundly in human and societal capacities, a mining economy can create key support systems for preserving and promoting local cultures, and ultimately raising the overall quality of life.

3.2 Avoiding the Resource Curse

While much of this examination of Afghanistan’s mineral abundance has focused on a mineral economy’s potential for driving widespread economic development throughout the country, there is also much scholarly discourse suggesting that possessing innumerable natural resources does not always result in the desired economic prosperity. Many recent economic writings relating to natural resources and economic development consider the literature by Sachs and Warner (1995, 1997), whose writings correlate the relationship between natural resource exports and slow economic growth rates. This argument is more widely known as the “resource curse”. This view has been widely presented in literature across a number of mediums and is part of a larger debate on natural resources and development. The visibility of Africa’s performance as rich in resources and behind on economic development exemplifies where a country can be well-endowed with mineral wealth, but less well-off politically and economically.¹³⁰ This work will not go into great detail evaluating the resource curse theory. However, given the precedence set by the cases of several developmental countries supporting

¹³⁰ Humphreys Macartan, Sachs D. Jeffrey, and Stiglitz E. Joseph, eds., *Escaping the Resource Curse* (New York, NY: Columbia University Press, 2007), XI.

the existence of a resource curse, its influence as a variable impacting a mineral economy will be accounted for this in work through ways Afghanistan can avoid not benefiting from its mineral wealth.

Some of the overlooked outputs of mining's contribution towards economic development include the direct investment linkages to other parts of the economy.¹³¹ Investments in mining were followed by investments in urban development, banking, improved wine-making and the production of guano and nitrate.¹³² Early gold mining in Australia encouraged the influx of skilled immigrants increased investments by overseas entities leading to higher rates of diversification in the macro economy.¹³³ Mining has become entrenched with domestic economies within the mineral economies having an affirmative effect on multiplier rates in domestic economics and employment multipliers between 1.5 and 2.5.¹³⁴ Revenues from natural resources are an enormous opportunity for a low-income state like Afghanistan. Under conditions of hostile environments, especially for landlocked countries, to utilize natural resources is a means to reduce poverty.¹³⁵ Afghanistan as a landlocked state precisely backs into Collier's rationale of natural resources providing a last resort for a landlocked state to provide economic development. The nuance surrounding Afghanistan's landlocked position is exemplified through its dependence on Pakistan's port of Karachi therein lending considerable leverage to Pakistan over Afghanistan.¹³⁶ If proper regional cooperation were to be established, then such dependence could benefit both nations in the long term.

¹³¹ Davis Graham A., "Learning to Love the Dutch Disease: Evidence from the Mineral Economies," *World Development* 23, no. 10 (1995): 1767.

¹³² Juan O'Brien, "Undoing the Myth: Chile's Debt to Copper and Mining," *The International Council on Mining and the Environment* (1994).

¹³³ Graham A. Davis, "Learning to Love the Dutch Disease: Evidence from the Mineral Economies," 1767.

¹³⁴ *Ibid.*

¹³⁵ Collier Paul, "Natural Resources and Conflict in Africa," *Crimes of War Project*, 2004.

¹³⁶ Barfield Thomas, *Afghanistan A Cultural and Political History*, 344.

Analysis of the Afghan state as a post conflict zone and nation in transition to modernization will rely heavily on the usage of non-fuel mineral extraction as the means to which much of Afghanistan's success could emanate. Mineral development utilized in a fashion to increase the overall output of Afghanistan's economy for modernization and an effort towards higher standards of living is constituted in the need to move away from the traditional norms of governance and business practices. The opportunity for mining to play a part of Afghanistan's development in the 21st century is immense. Undone from the opportunities, risks are also present. As seen in many other nations, an apparent resource curse or inefficient output of activities surrounding minerals is seen in certain global locales. The resource curse discussion creates topical economic problems which will weigh on the minds of policymakers, donors, mineral developers, and the people of Afghanistan. Bestowed with a large amount of mineral wealth, difficult geography, and the impetus to develop, the opportunity for Afghanistan to use its ground assets to help propel it into the twenty first century are great. Afghanistan can learn from other countries who have failed to utilize their potential with resources and avoid falling into the same condition. As for infrastructure and human capital investments, Afghanistan is in the earliest stages of development.¹³⁷ Should the government follow through with the conditions established in the ANDS, Afghanistan can capitalize on its resources.

¹³⁷ Lipow Jonathan and Melese Francois, "Economic and Security Implications of Afghanistan's Newly Discovered Mineral Wealth," 278.

Chapter 4 Data: The Afghanistan National Development Strategy and Aynak Copper

The Afghanistan National Development Strategy provides a development framework for the country to work with to assist in developing and modernizing the nation.

4.1 Afghanistan National Development Strategy (ANDS)

The catalyst for economic development and modernization in the Afghanistan are through the resources placed in the ground. With a further development of the central government in Kabul, mining in Afghanistan will be able to play a large role in modernizing the country through placement of stable resource funds to the government. Increasing stability, infrastructure, and human capital within the country could benefit from the increase in mining activity throughout the Afghan nation. The minerals of Afghanistan are awaiting the further development of institutions and willing parties to assist in making mining in Afghanistan a reality. One document that particularly conveys the importance of mining and the role such an industry will play throughout the country is the Afghanistan National Development Strategy.

The Afghanistan National Development Strategy (ANDS) was authored in 2008 (1387) and is a development strategy for the State of Afghanistan to be implemented up until 2013 (1391). The ANDS is a document that outlines the Government of Afghanistan's strategies for security, governance, economic growth, and poverty reduction. The ANDS began in 2005 as an interim report and was presented at the Paris Donor's Conference on June 12, 2008 according to the Embassy of Afghanistan. The national strategy sets a vision for Afghanistan to reach a stable Islamic constitutional democracy at peace with itself and its neighbors, standing with full dignity in the international family, tolerant and pluralistic nation that honors its Islamic heritage and the deep seated aspiration towards participation, justice, equal rights for all, and a society of hope and prosperity based on a strong, private-sector led market economy, social equality, and

environmental sustainability.¹³⁸ The ANDS goal is to serve Afghanistan through means of security, governance, and development of the economic and social ways of life in Afghanistan. In the forward section of the ANDS, President Hamid Karzai states that the document will serve as the nation's Afghan-owned blueprint for the development of Afghanistan and will serve as Afghanistan's poverty reduction strategy paper.¹³⁹ The ANDS is a comprehensive plan that touches on all of Afghanistan's opportunities, however a larger question remains for this work as to whether or not this strategy does in fact do enough to place a legitimate emphasis on mining in Afghanistan?

The ANDS illustrates the role of mining as a benefit to Afghanistan through means of creating a stable environment for stability, investments in infrastructure, and gains in human capital. These processes are to further encourage legitimate private investment in the sector to substantially increase government revenues, improve employment opportunities, and foster additional development.¹⁴⁰ Private investment in the country's mineral industries are expected to come, but if the state of Afghanistan can continue to modernize its nation through the means of stability, infrastructure, and advancements in human capital, added developments for the Afghan people can occur. In the ANDS, such items are clarified and instituted as necessary for Afghanistan's development.

The ANDS classifies low productivity and a large number of unemployed as a growth potential for poverty reduction. Through the improved security and business environment, strong private sector growth will be the main source of employment and main instrument for

¹³⁸ Islamic Republic of Afghanistan, "Afghanistan National Development Strategy," i.

¹³⁹ "Afghanistan National Development Strategy, 2008-2013," *Council of Foreign Relations*, April 21, 2008, <http://www.cfr.org/afghanistan/afghanistan-national-development-strategy-2008-2013/p16450>.

¹⁴⁰ Islamic Republic of Afghanistan, "Afghanistan National Development Strategy," 8.

poverty reduction.¹⁴¹ The ANDS is an impressive and well thought out document with many opportunities for Afghanistan to grow and prosper as a nation. With analyzing such a document, does the ANDS place a high enough priority on the role of mining and mineral development to effectively move Afghanistan in the direction needed with development and economic prosperity? Two hypotheses are generated below with a case study in the forthcoming chapter to analyze the ANDS and its role in any recent developments surrounding the current state of mining in Afghanistan.

Hypothesis I:

If the ANDS effectively places mining as the main driver for Afghanistan's development, then the nation will be well situated on the path to develop into a modern country because the ANDS emphasizes the importance of mining revenues in infrastructure development, stabilization, and human capital

The ANDS effectively places mining as a main driver for Afghanistan's development and modernization into the twenty first century. Whereas there are other inhibiting factors to Afghanistan's' economic development, the ANDS will rectify the role mining will play in a new Afghan economy and play a useful role in infrastructure development, stabilization, and human capital.

Hypothesis II:

If the ANDS is ineffective in placing mining as the main driver for Afghanistan's development, then the nation will be poorly suited to develop into a modern country because the nation will not obtain additional revenues from the mining sector, preventing infrastructure, stabilization, and human capital to develop due to exogenous factors such as terrorism, political

¹⁴¹ Ibid., 34.

instability, and traditional society structures that will inhibit the ANDS initiatives and the nation's development

The ANDS will be ineffective of placing mining as a main driver for Afghanistan's development and modernization due to exogenous variables that are unable to be captured by the ANDS's objective. Inhibiting factors of terrorism, political instability, and traditional societal structures will inhibit the ANDS from assisting infrastructure, stabilization, and human capital development.

4.2 ANDS and Mining

Within the ANDS, a matrix is provided to summarize and identify what the ANDS strategic objectives and principle output targets are for mining.

4.2.1 Anti-Corruption

Mining according to the ANDS will ideally see improved sector governance aimed and directly improving the investment market to increase legitimate private investment. The government will work to make this objective a reality through reforms of an improved tendering and contracting process, drafting fundamental legal and regulatory documents, and establishing regulatory agencies including but not limited to financial and legal monitoring institutions. With the ANDS highlighting anti-corruption as an opportunity that responsible mining can assist in curbing, Afghanistan's member of the Extractive Industries Technologies Initiative are probable activities that will contribute to stable institution development and economic growth. Measures to document legally commercial activities occurring in the nation could assist in curbing corruptive practices. The ANDS highlights mining as a means to curbing corruptions with the use of EITI practices to assist in developing the nation. The National Anti-Corruption Strategy and Roadmap developed as part of ANDS will be implemented in support of the following

strategic aims: (i) enhancing Government anti-corruption commitment and leadership; (ii) raising awareness of corruption and evaluating the effectiveness of anti-corruption measures; (iii) mainstreaming anti-corruption into Government reforms and national development; (iv) strengthening the enforcement of anti-corruption and build a coherent and fully capacitated system of enforcement institutions required to support the effective implementation of the UNCAC (United Nations Convention Against Corruption).¹⁴² This clearly enumerates the holistic approach that the ANDS has considered the issue of corruption, and what will be required of the country to combat it. This level of preparedness will be beneficial to future Afghan governance, equipping leaders to stifle corruptive practices. Should the government take control of corruption, firms will be more willing to invest in the nation's economy.

4.2.2 Gender

Through the mining industry, developing financial and economic opportunities for everyone of Afghanistan is an initiative of the ANDS. In Government, the roles and responsibilities of female professionals will be implemented. Throughout Afghanistan's history of mining, women have had little to no involvement in the industry. The ANDS has located an initiative to improve the number of "Women in Mining" to enhance the number of females in the industry and ensure their place in mining is supported. The ANDS, by highlighting mining as a medium for the development for all Afghans, directly relates to the section on human capital and modernization. With opportunities in any given industry, the need for human capital to be raised is increased and further assists in developing the nation. The ANDS directly sights human capital as an activity needed to further develop Afghanistan as a modern country. The inclusion of gender and human capital variables in the ANDS are clear linkages to the importance these

¹⁴² Ibid., 146.

factors are to play in a modern and future Afghanistan.

4.2.3 Countering Narcotics

According to the ANDS, the mining and mineral industry will pose numerous opportunities in regional areas of the country to reduce the reliability on narcotics. Poppy growing in Afghanistan's southern region is a target area where mining and mineral production could replace economic dependence on the narcotics industries. These programs are designed to (i) disrupt the drug trade; (ii) strengthen and diversify legal rural livelihoods; (iii) reduce the demand for illicit drugs and improve treatment for drug users; and (iv) strengthen state institutions combating the drug scourge within central and provincial governments.¹⁴³ Allowing for choice and opportunity, an economy then offers other economic opportunities for the citizens of a nation. Mining in Afghanistan could offer such an opportunity with countering the effect of opportunities possibly had in the production and sale of poppy crops.

4.2.4 Environment

To ensure the environment of Afghanistan is upheld for future generations, the Ministry of Mines is to establish an environmental inspector and cadaster to include environmental inspection and regulation of mineral lands. The regulations which are drafted are to address the environmental requirements explicitly stated regarding regulations pertaining to public and private investment. A strong environmental record will assist Afghanistan in attaining higher levels of human capital therein allowing people to safely access the possible benefits of the mining industry. The ANDS strategic vision is to improve the quality of life of the people of Afghanistan through conservation of the nation's resources and protection of the environment. Goals include: (i) secure a clean and healthy environment; (ii) attain sustainable economic and

¹⁴³ Ibid., 14.

social development while protecting the natural resource base and the environment of the country; and (iii) ensure effective management of the country's environment through participants of all stakeholders.¹⁴⁴ These environmental safeguards will enable the Afghans to have an improved and sustained future. These safeguards not only protect the environment, but also ensure for an improvement in quality of life for the Afghans. As a result, the country is benefitted in an innumerable way.

4.2.5 Regional Cooperation

The ANDS currently claims regional cooperation in the mining sector consists of considerable cross border trade. The strategy suggests there are continued possible arrangements for regional cooperation exist in turn enhancing government revenues from regional agreements. The ANDS states that Afghanistan will consider opportunities to partner and work with cross-border countries to enhance infrastructure between both countries. Neighboring countries with Afghanistan present both opportunities and setbacks for a modernized Afghanistan. India and China, both well-developed in the chain of the modernization theory, allow for a conducive environment for Afghanistan to develop. These countries have started from traditional cultures, and albeit over many years, have developed into modern, productive countries. Countries like Pakistan and Uzbekistan have remained underdeveloped, and serve as a potential imposition for Afghan progress. As the ANDS claims regional cooperation for business development, it is essential that its neighbors both support and partner with Afghanistan in order for the country to grow. India and China could be instrumental in Afghanistan's success, should they choose to legitimize the industry and serve as primary consumers of Afghanistan's resources.

China in particular can become a large-scale consumer of Afghan resources. Afghanistan

¹⁴⁴ Ibid., 151.

can also look to China as an example of the modernization theory's path from traditional culture to a world influencing producer of goods and knowledge. Though China has an enormous population and sheer size in land mass in its favor, Afghanistan too can become a developed, modern country.

4.2.6 Capacity Development

The Ministry of Mines through the development of Afghanistan's resources proposes for members of its agency to participate in capacity building, which will assist in implementing mineral legislation, bidding, tendering, and evaluation of project sites around the world. Mining can offer the ability for Afghanistan to strengthen its capacity building through enhanced revenues to the central government, further actives with foreign direct investment, and the opportunity to develop modern systems to further enhance stability, infrastructure, and human capital. Modernization theory and capacity development are aided together through the process of urbanization, value changes, and education to lead to development of the central government.¹⁴⁵ For these actions to occur, economic development must occur.

4.2.7 ANDS Results

The ANDS provides a strong background in policy statements and policy objectives to carry out the objective of mining in Afghanistan and having the mining industry assist in developing Afghanistan. With the large scale copper deposit at Aynak moving into phases of new development with four other tenders occurring in 2012, the ANDS having the ability to interface with the World Bank Group, and USAID providing evidence for the positive relation ANDS has had in playing a vital role within mining in Afghanistan. Mining is to play a

¹⁴⁵ Katharina Noussi, "How to Build Institutional Capacity in Developing Countries:the Case of Supreme Audit Institutions," September 2010, http://www.academia.edu/810827/How_to_build_institutional_capacity_in_developing_countries_the_case_of_supreme_audit_institutions.

substantial role if Afghanistan wants to develop its domestic economy and the ANDS delivers that objective as the nation’s stand-alone policy which highlights mining as one of the mediums that will deliver such results for Afghanistan’s economy in the coming years.

The ANDS sector strategies are to be implemented through national programs which are to develop the results of the preceding development factors. The ANDS highlights the main instrument for implementation of these variables as the national budget and the private sector. Figure 4.1, seen below, shows sequencing priorities for an integrated approach for Afghanistan to achieve better results through these variables there by further enhancing development.¹⁴⁶ From achieving sufficient stability (Phase I) to basic service delivery (Phase II) to economic

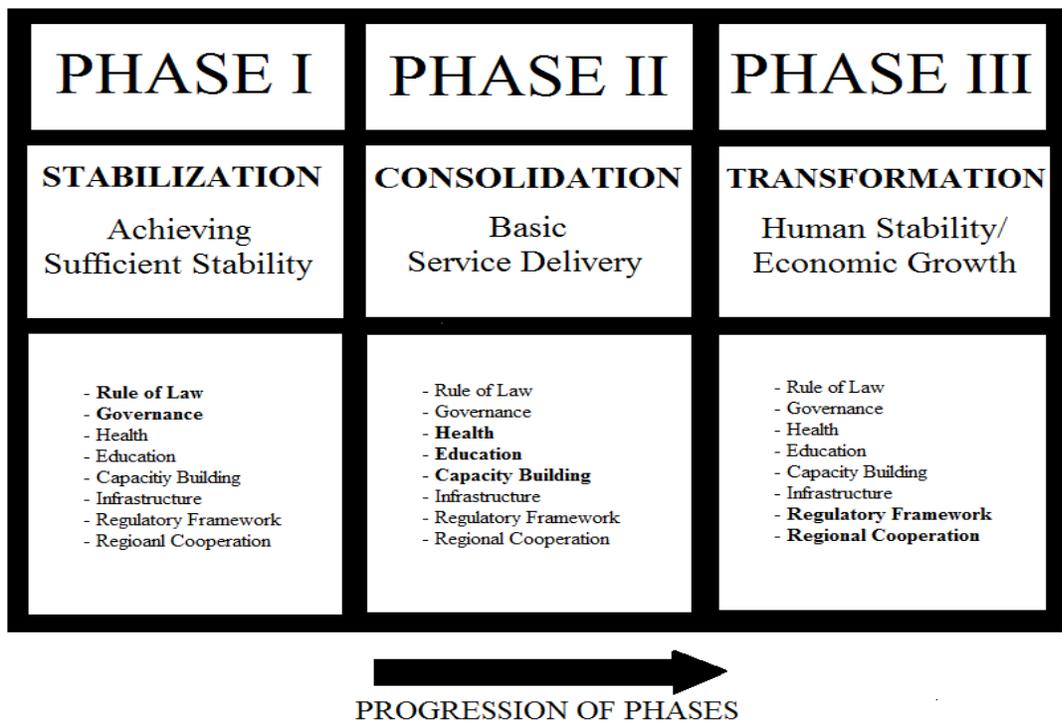


Figure 4.1 ANDS Progression Chart

growth and human security (Phase III), the primary elements that are developed through each

¹⁴⁶ Islamic Republic of Afghanistan, “Afghanistan National Development Strategy,” 381.

respective phase is emboldened. In Phase I, rule of law and governance are pivotal for stabilization of Afghanistan. Phase II notes that increasing health, education, and capacity building will allow for infrastructure building and improvement of service throughout Afghanistan's economy. Phase III highlights that regulatory framework, such as industry regulations and laws, and regional cooperation, such as interstate commerce and trade, will provide for economic growth and increase human security. As the phases progress, so too does Afghanistan's stage in modernization. The ANDS has enumerated the keys to opening the door of a successful, prosperous, and modern Afghanistan.

4.3 Site Background

The Aynak copper deposit is located in Afghanistan's Logar Province, roughly 35 km south of Kabul. Beginning in 2003, professionals from the World Bank gauged opportunities of developing Aynak. This site can be classified as one of the world's largest unexploited copper deposits.¹⁴⁷ Aynak is a world class ore body containing upwards of 240 million tons of materials with copper grades averaging 2.4%.¹⁴⁸ In 2006, nine companies from Australia, Canada, United States, India, Kazakhstan, Russia, and China submitted tender offers to develop the Aynak mine.¹⁴⁹ In November 2007, the state-owned China Metallurgical Group was awarded the contract with Afghanistan's government receiving \$808 million in a signing bonus.¹⁵⁰ Professionals suggest initial investments of \$1 billion over five years are required to enable the development of the ore to take place. International experts estimate that royalties from the Aynak copper project could generate \$200 million annually for Afghanistan's budget over the

¹⁴⁷ Yeager James R., "The Aynak Copper Tender: Implications for Afghanistan and the West," v.

¹⁴⁸ Ibid., 7.

¹⁴⁹ Simpson Adam, *Legal and Regulatory Constructs of Resource Management in Afghanistan and Mongolia* Policy Update (Royal Roads University, March 1, 2012), 2, www.cdfai.org.

¹⁵⁰ Ibid.

course of the next thirty years.¹⁵¹ The Aynak copper project allows for Afghanistan to modernize and have the state begin its process of moving from a static society with limited technology towards a base of wider industry and commerce. Future revenues from Aynak will be able to develop Afghanistan by investing in improved infrastructure, increased human capital, and further stability in the country.

4.4 The Mine Plan and Plan to Assist Development in Afghanistan with Aynak

Projects such as Aynak are valuable tools for Afghanistan to receive an influx of royalty payments and development assistance of its natural assets. The economic development implication of the Aynak mine is a large indicator for the proportional role mining can play in the country. Associated revenues from the Aynak project is equal to 35% of all international development money spent on Afghanistan since 202, the annual royalties of four hundred million dollars to the central government could pose vast opportunities for national investment.¹⁵² This revenue stream could facilitate the growth of other Afghan start-up industries as well as investments of infrastructure and human development programs to counter the economic presence of poppy production in the country. The revenue generated from projects of this scale has the capability of shifting provincial economies in Afghanistan.

Increased revenues from mining actives will be invested to further enhance stability, infrastructure, and human capital development programs. According to the ANDS, such monies are to be allocated to Phase I activities including the rule of law in the nation and governance framework for internal business activities. Phase II will encapsulate variables to augment basic service delivery throughout the country by means of infrastructure investment, capacity building for further projects to begin, and education facilities that will tie into the following phase. Phase

¹⁵¹ Yeager James R., "The Aynak Copper Tender: Implications for Afghanistan and the West," 7.

¹⁵² Simpson Adam, *Legal and Regulatory Constructs of Resource Management in Afghanistan and Mongolia*, 3.

III will isolate the development indicators relating to human capital and means by which the people of Afghanistan can utilize regional cooperation, set regulatory frameworks, and built infrastructure to capitalize on new acquired human capital metrics.

Similar to the American state of Wyoming is another interesting example where the successful implementation of the state's fiscal structure and economic policy has led to increased economic growth with a burgeoning mineral economy. One of Wyoming's apparent economic disadvantages concerns its reliance upon one industry commodity as an economic base.

Wyoming's economy is quite undiversified, and although there is production within manufacturing and agriculture sectors within the state, coal and natural gas production is the dominant force behind the state's economy; Wyoming ranks first among U.S. states in coal production, fifth in natural gas production, and sixth in oil production.¹⁵³ As a consequence, the economy of the state is tied more closely to trends in the international energy market, rather than the national economy as a whole.¹⁵⁴ Although these risks and challenges exist for the state of Wyoming, a steady level of growth for its economy, and its state infrastructure and job/educational opportunities for its people, has been sustained by means of the continued exportation of its natural resources. Nearly half of all taxable sales in the state in 2011 occurred within the mining industry, amounting to \$2.2 billion.¹⁵⁵ Wyoming's experiences with commodity reliance tied to international markets are strikingly similar to Afghanistan's position as a forthcoming mineral producer and net exporter of its minerals.

Stemming from the tendering of Aynak, supplementary concerns arise from Afghanistan's ability to overcome industrial governance in the country which could inhibit

¹⁵³ Shelby Gerking and William Morgan, "State Fiscal Structure and Economic Development Policy," *Growth and Change* 29 (Spring 1998): 134.

¹⁵⁴ Ibid.

¹⁵⁵ Liu Wenling, *Economic Summery: 1Q 2012* (Wyoming Economic Analysis Division, June 2012), 2, http://eadiv.state.wy.us/wef/Economic_Summary1Q12.pdf.

growth multipliers from the Aynak site. If Afghanistan is weak in its governance and implementation of the mineral law, foreseeable challenges will exist in Afghanistan receiving a fair share of the profits from the Aynak project. The purpose of the tendering the Aynak copper deposit was to follow the guidelines set out in the ANDP to further the development of the Afghan state through means of mineral development.

4.5 Development Implications to Date

The development of the Aynak copper deposit relates to the modernization through a multitude of ways. The site tendered in 2007, possess the opportunity to bring renewed hopes of prosperity to the state of Afghanistan. Aynak represents Afghanistan's modernization abilities through the ANDS and what is plausible for a mineral site of this size and nature to provide Afghanistan. The site tendering while faced with formidable challenges and the prospects of graft, creates a large selling point for Afghanistan and its up-and-coming mineral and mining sector. By tendering the site while coalition forces are still securing much of the country from the Taliban and other insurgent groups was in it of itself a large accomplishment. The tendering of the Aynak site in conjunction with the ANDS document created by the government of Afghanistan highlights where Afghanistan is headed and how the modernization theory is being applied in Afghanistan. Backing into Collier's argument, when the Aynak site is fully developed and operational, the Aynak site will provide the landlocked country of Afghanistan the ability to further increase its net export business which at current is one of the lowest globally. According to the World Trade Organization, the European Union (EU) imports no mineral, mineral fuels, lubricants, or related materials from the state of Afghanistan.¹⁵⁶ The opportunity for Afghanistan to modernize through the copper deposit and Aynak is real and valid. A further development for

¹⁵⁶ *Afghanistan Main Economic Indicators* (World Trade Organization, 03 2012), 6, http://trade.ec.europa.eu/doclib/docs/2006/september/tradoc_114134.pdf.

Afghanistan in light of the Aynak copper deposit and other mineral sites is for the country to locate ways and means to create value-added products from mined minerals in Afghanistan. One of the opportunities is to locate means to increase smelter production in the state of Afghanistan. Whilst bringing a smelter operation on line in Afghanistan would be a highly difficult operation, the prospect for Afghanistan in having an on-site smelter to create value added products would yield further opportunities for the state to modernize and develop.

Unfortunately, though site development of the Aynak project has occurred since the tendering, full development of the mine has been slow notably due to the discovery of massive ancient Buddhist archeological site and MCC associates fearing from 2012 insurgent attacks in the Logar province. The finding of large scale Buddhist remains has also complicated the development of Aynak. The Buddhist remains consist of twenty ruin locations as well as numerous fifth and sixth century monasteries, a fortress, and settlements. Many regard these findings to be of large cultural importance to the global archeological community and Afghanistan. Because of the significance to local cultures and communities, NGOs, multilateral agencies, and local Afghan officials are working to resolve the issue.

With the oncoming of new methods, business opportunities, and foreign investment, the unique aspects of Afghan culture must be protected, while measures are taken to modernize and develop the country for the benefit of the nation. Human capital by itself is not conducive to developing a nation, but rather must include other critical variables that can allow for the human capital of a country to operate. With sound stability and infrastructure, then added with human capital, the opportunity to utilize these variables is created.

While difficult to complete and nuances results to date from the Aynak copper site, the impact of Afghanistan's newly discovered mineral wealth and tendering of the Aynak copper

site, the opportunity to two main economic implications which Afghanistan might enjoy is first infrastructure investment and the increase in human capital.¹⁵⁷ Major infrastructure investments into the Logar province are required for mining to occur. Such additions include roads, rail transportation, electric power, generation, electric transmission, telecommunication systems, fuel distribution, and water infrastructure.¹⁵⁸ The development of these systems is not an overnight prescription, but surely opens Afghanistan up to a new opportunity never speculated upon in recent history. These infrastructure additions can be considered as positive externalities and the multiplier effect that can benefit the greater part of Afghanistan outside of the mining industry.¹⁵⁹

¹⁵⁷ Lipow Jonathan and Melese Francois, "Economic and Security Implications of Afghanistan's Newly Discovered Mineral Wealth," 280.

¹⁵⁸ Ibid.

¹⁵⁹ Ibid.

Chapter 5 Conclusion

Mining has the ability to transform a nation from underdeveloped potential to modernized success. Afghanistan stands today as a nation of abundant potential as its vast mineral deposits remain untapped. The demand for minerals like copper, gold, and iron ore are projected to continue their important role in the global economy. Afghanistan, with a large portfolio of such resources presents the nation with the opportunity to utilize their position. While the nation has a limited presence in the global economy, with the increase of revenue that is associated with mineral extraction, investments will allow for increased national stability, improvement of schools, roads, and other forms of infrastructure, Afghans will benefit and the country could see great progress.

The Aynak mine site in the Logar Province is the nation's first major international corporate investment. It sets the precedent for future mining activity, allowing for new capital to enter into Afghanistan's economy. Modern technology and economic stimulation allow for factors within Afghanistan—including national governance, multilateral assistance, and renewed global demand for nonfuel minerals—to progress the nation. The recently implemented Afghan government has made it possible to utilize mineral wealth increases by proposing regulations on industries, like mining, to decrease illicit practices and in turn promote sustainable commerce.

As more sustainable industries arise in Afghanistan, it is not without multilateral assistance from the international community, particularly the World Bank Group, that Afghanistan's potential success will develop. Though such contributions from the World Bank do not come without hidden attachments, it is in the best interests of both Afghanistan and foreign investors that Afghanistan succeeds; should Afghanistan modernize and see prosperity, the international community and key stakeholders will benefit from its success.

This success cannot come without the demand for the non-fuel minerals that Afghanistan possesses. This demand ensures the prospects for developing the country's resource base and serves as an impetus for modernization and economic development. Gold, shown abundant in Afghanistan's mineral portfolio, has been regarded by academics and professionals as a useful diversifier for portfolios in times of market stress and often associate the mineral with hedging activities, allowing for Afghanistan to supply this demand. This is only one example of the demand of the nation's diverse portfolio of minerals; its other minerals, like iron ore and copper, share the continued global demand, thus ensuring a need for Afghanistans's resources.

Afghanistan can learn a developmental lesson from countries like Norway and Venezuela. Both countries export their natural resources on a large scale, but stand at very different levels of overall development. Today, Norway is one of the largest exporters of iron to China, and has utilized the income from natural resources as a lucrative endeavor. Venezuela, however, without infrastructure, reliable governance, and underdeveloped human capital, has seen its capital from the extractive industries be averted from development. Afghanistan remains at the stage where development can take the path similar to either Norway or Venezuela. Should the necessary factors of development—increasing stability, infrastructure, and human capital—be implemented into society, Afghanistan can further develop into a model like Norway.

Modernization theory and its structured method in explaining development constitutes a progression from a traditional society to a fully developed society of high mass consumption. Composed of five different stages, the theory enumerates the need for agriculture and extractive industries to be supplemented by infrastructure to develop into the manufacturing industries, which associate the implementation of social, economic, and political institutions that will eventually contribute to a 'modernized' nation. Afghanistan stands at the first stage as a

traditional society. It has been established by the USGS and other organizations that the state possesses large-scale mineral deposits. As modernization theory suggests, advancing from a traditional society into the next stage, extraction of mineral resources is required. This highlights the importance of the minerals Afghanistan possesses to further the country in the process of development.

As Afghanistan could grow into a large industry of mineral extraction, infrastructural advancements should follow. Improvements in education programs, better road systems, and industry regulations will allow for increased stability within the nation. When stability is increased, multilateral corporations will be more willing to invest in the country. Investment is directly related to a country's conflict—both internal and external. Government stability and ethnic tensions influence multinational corporations' decisions to invest. If Afghanistan increases stability and organizations like the World Bank Group continue to support reconstruction projects, the outcome for the nation should be progressive. As the following chart indicates, Afghanistan is nearing the 'preconditions for take-off' stage. Should development continue according to theory, installation of infrastructure should follow.

Once infrastructure has been installed and stability begins to immerge, development of human resources becomes the focus. Afghanistan will need to develop institutional approaches, economic strategies, and expect transparent government actions to progress. As the Ministry of Mines has founded a set of road and rail development plans, legal and fiscal regime improvements, and stable minerals laws, the country seeks to take advantage of its numerous resources. Should the nation be successful, interstate commerce and prosperity should ensue. In order to strengthen the nation's human capital, Afghanistan must invest in its people. By

increasing access to education, production capacity of the country should increase and ultimately lead to a wealthier, more modern Afghanistan.

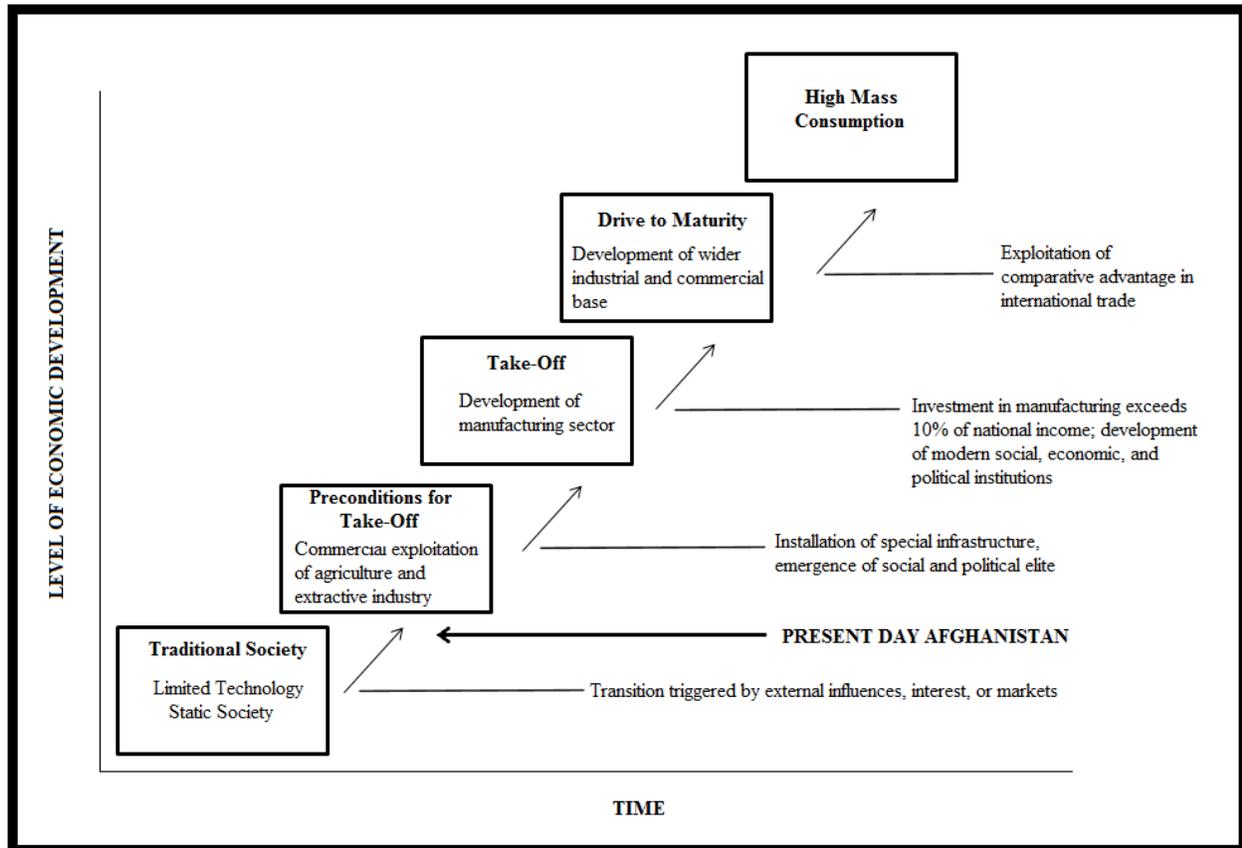


Figure 5.1 Present-Day Afghanistan

The revenues that would be generated from extractive industries can be, in part, invested into education rather than have the education system be fully funded by the Afghan government. As a result, the children of Afghanistan should have new opportunities to succeed and lead Afghanistan into a modern future. These revenues can also be invested into creating support systems for the preservation and promotion of local cultures, increasing quality of life while coveting the nation’s unique culture.

With the influx of new methods, business opportunities, and foreign investments, Afghanistan should see modernization. Some fear the culture will change, but officials seek to

preserve and protect that which makes Afghanistan unique. Modernization does not require the assumption of Western culture, and although Western values may accompany modernization in some cases, Afghanistan may still hold their traditions and culture as the country grows into the 21st century.

While much of Afghanistan's mineral abundance has the potential for widespread economic growth, there is the unfortunate reality that such resources will not be utilized to their full potential. Such an impasse could leave Afghanistan plagued with further issues of instability, lack of infrastructure, and undeveloped human capital. To avoid the resource curse, mining's contribution to the macro economy can assist the Afghan state to curb possible inefficiencies in establishing a mineral economy. Like many countries in Africa, there is the possibility that Afghanistan, although possessing a sizeable mineral portfolio, will not gain in terms of economic growth. Afghanistan will fall into this loop should the nation choose to be inactive about proper management of its natural resource abundance. Should the nation invest in stabilization efforts, infrastructure, and human capital, the prospect of avoiding the resource curse is greatly enhanced.

The Afghanistan National Defense Strategy (ANDS) has outlined the government's strategies for reducing poverty, and increasing security, governance, and economic growth. There are two hypotheses that are established in this thesis. The first hypothesis questions that the ANDS effectively places mining as a main driver for Afghanistan's development and modernization in the twenty first century. If the ANDS effectively places mining as the main driver for Afghanistan's development, then the nation will be well situated on the path to develop into a modern country because the ANDS emphasizes the importance of mining revenues in infrastructure development, stabilization, and human capital. The second hypothesis questions if

the ANDS will be ineffective in placing mining as a main driver for Afghanistan's development due to unexpected variables. If the ANDS is ineffective in placing mining as the main driver for Afghanistan's development, then the nation will be poorly suited to develop into a modern country because the nation will not obtain additional revenues from the mining sector, preventing infrastructure, stabilization, and human capital to develop due to exogenous factors such as terrorism, political instability, and traditional society structures that will inhibit the ANDS initiatives and the nation's development.

Mining, according to the ANDS, will ideally see improved sector governance by seeking to improve the investment market, increasing legitimate private investment. By reforming the tendering and contracting processes, drafting fundamental legal and regulatory documents, and establishing regulatory agencies, the government will be able to create an environment conducive to investments that will lead to national development. Mining is pivotal in the political success of the country, as the ANDS suggests that the extractive industries can fuel anti-corruption that the strategy seeks to ensure.

The ANDS also consists of initiatives to counter narcotic trafficking practices, increase the number of female workers in industry, and increase regional cooperation. A legitimate mining industry, among other industries, is a way that Afghans will be able to generate income in a respectable industry, as opposed to illicit and black markets. The ANDS has created an initiative to increase the number of women in mining, ensuring their place in the industry is supported. The ANDS also strives to increase regional cooperation, promoting interstate trade and commerce, and countries like Pakistan and Uzbekistan can serve as useful partners in the modernization of Afghanistan. Pakistan, for example, can benefit Afghanistan by creating a symbiotic partnership in which Afghanistan has access to Pakistan's ports, allowing for

Afghanistan to ship goods to other countries while Pakistan benefits from increased revenues from shipping revenues. China can also be helpful to Afghanistan as a large-scale consumer of Afghanistan's minerals. This brings wealth to Afghanistan while lessening the cost of minerals like iron ore, which China imports from Norway. This decreases shipping costs for China while increasing revenues in Afghanistan. This economic scenario fulfills the mutual interests of both nations and presents Afghanistan with an opportunity it has not seen in recent history. This could create a new partnership for Afghanistan to integrate with regional and global powers through trade.

Modernization theory acts as a framework to place Afghanistan in a new realm of its history. Mining directly affects the ways the Afghan government can enhance measures of stability, better allowing Afghanistan to operate as a sovereign nation, and become more prominent in regional politics and commerce. Mining, as an industry highly dependent upon roads, railroads, and power generation, needs such infrastructure advancements to occur in Afghanistan in order to progress. The development of mining activities in Afghanistan, with additional infrastructure, will provide what is needed for the nation to modernize. It will allow for the infrastructure of Afghanistan to be improved and expanded, including transcontinental railroads, highways, and energy generation. This will connect Afghans across the nation, better allowing for rapid exchange of ideas, new markets and products, and overall enabling the society to grow into the 21st century.

Afghanistan lies in the stage of Rostow's modernization theory that is between traditional society and 'preconditions for take-off'. If Afghanistan can utilize the two critical variables of assistance from abroad and internal shifts for the aspirations of connecting to the global economy, the country will be able to progress to the next stage in development. At its current

stage, Afghanistan will be able to progress if instillation of special infrastructure and political systems are implemented. This is not an unattainable goal, as Rostow's 'preconditions for take-off' is marked by using natural resources, namely through the extractive industries, as a means for development. Should these industries flourish in the nation, the further stages of development should become attainable.

Afghanistan is in a viable position to market its mining potential due to its mineral portfolio that rivals top producers. Global demand for nonfuel minerals enables the possibilities for Afghanistan to supply markets with critical minerals which are integral for the global economy. Should they capitalize upon their resources, Afghanistan could foreseeably attain status as a competing global producer. Afghanistan has the potential to create a competitive advantage in the mining and sale of nonfuel minerals.

The stage for Afghanistan is set for their opportunity to utilize their mineral wealth as a successful turning point for the nation, or continue down the current path of anemic economic growth. The time for Afghanistan to build its own sovereign aid-free economy is now, with its unique opportunity as a land previously unknown for much of its mineral wealth, its newly developing institutions, and global support for the restricting and realignment of Afghanistan as a regional partner for security. Afghanistan has many opportunities to support its people and nation through various industries. The main part of this work was not to claim that tourism, agriculture, or industrial manufacturing are not important aspects in the development and modernization of Afghanistan. But without the extraction of Afghanistan's assets below the ground, no other industry will be able to deliver Afghanistan the needed support for its domestic economy to flourish or keep pace with its own population. A recent news article noted the sale of nearly two million dollars' worth of Afghan carpets at a trade show in Dubai, UAE. While

this is favorable for the merchants and Afghans dealing within the carpet business, awards of millions of dollars will not be the type of business that will catapult Afghanistan to the next level. Mining and the tendering of mineral sites through tax revenues, rents, and large movements of capital throughout the country in development of infrastructure will lay the ground work for where Afghanistan may proceed. Because of the consistent market demand for minerals, the mining industry is more sustainable for the Afghan people than carpets, where a two million dollar sale happens infrequently. Mining can supply a constant flow of business operations for the people of Afghanistan, securing their future and propelling the nation into a higher level of production.

Looking to the future and taking an assessment of what development aid has provided Afghanistan since 2001, the use of Afghan mined minerals has the opportunity to change the trajectory of the country mired with conflict and turmoil and has the ability to set forth a new chapter for the country. The removal of development aid and services from the United States and other coalition partners in 2014 requires that the Afghan nation find new sources of revenue and allow the economy to stand on its own. In an ideal situation, Afghanistan's economy could develop politically then tap into its mineral wealth, however with the state of Afghanistan at its current juncture, such a scenario does not allow for wealth acquisition to take place. The Afghan economy is in dire need of additional funds from within the economy to assist the central government to further stabilize the country, provide further investment in infrastructure, and make strides in human capital from revenues stemming from non-fuel mineral wealth.

The decade of foreign aid and donor assistance has been spattered with continued corruption, security nuances, and slow economic development. Not once in its history has Afghanistan had the opportunity to develop a national product to facilitate economic growth

domestically, albeit the role of illicit opium production and the minute effect carpet manufacturing has had in Afghanistan. Positioned as a post-conflict zone with decades of war, what else does Afghanistan have to develop to assist and heal its economy? Mining offers a feasible and realistic opportunity for Afghanistan.

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