



# NAVAL POSTGRADUATE SCHOOL

MONTEREY, CALIFORNIA

## THESIS

### **THE PAK-U.S. ALLIANCE IN THE FIGHT AGAINST TERRORISM: A COST-BENEFIT ANALYSIS**

by

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December 2011

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A COST-BENEFIT ANALYSIS**

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## **ABSTRACT**

The cost-benefit equation of the Pak-U.S. alliance, in the fight against terrorism, reflects a direct correlation between the fluctuating patterns of U.S. assistance and their direct and indirect implications for Pakistan. While the U.S. strives to achieve a better return on its investment through military-oriented support, Pakistan seeks to adopt an approach that suits both the U.S. and its own domestic and regional interests. This research traces the trend of Pak-U.S. relations, highlights the impact of the fluctuating U.S. aid in shaping perceptions, and provides a game theoretical analysis on the issue. Besides highlighting measures to achieve cost effectiveness through micro alliances, decentralization, accountability, and transparency in fund management, the study supports development of entrepreneurial culture and micro-alliances in Pakistan. More importantly, it provides an in-depth analysis of the military and population-centric approaches and their associated costs and benefits for the two countries. The research concludes by suggesting a more population-centric U.S. approach towards Pakistan to achieve a better return on investment besides laying foundation for a long-term strategic alliance. It suggests future research on the prospects and methodology of achieving a long-term partnership between the two nations.

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## **LIST OF ACRONYMS AND ABBREVIATIONS**

CAR's: Central Asian Republic States  
CBA: Cost Benefit Analysis  
CENTO: Central Treaty Organization  
CIA: Central Intelligence Agency  
CN: Counter-narcotic Funds (Pentagon budget)  
COA: Course of Action  
COIN: Counter Insurgency  
CSF: Coalition Support Funds (Pentagon budget)  
CSH: Child Survival and Health (Global Health and Child Survival, or GHCS, from FY2010)  
CTBT: Comprehensive Test Ban Treaty  
CT: Counter Terrorism  
DA: Development Assistance  
DV's: Dependent Variables  
EPPA: Enhance Partnership with Pakistan Act  
ERE: Economy Related Expenditure  
ESF: Economic Support Funds  
FATA: Federally Administered Tribal Area  
FC: Frontier Corps  
FMCT: Fissile Material Cutoff Treaty  
FMF: Foreign Military Financing  
GDP: Gross Domestic Product  
GWOT: Global War on Terror  
HRDF: Human Rights and Democracy Funds  
IDA: International Disaster Assistance (Pakistani earthquake, flood, and internally displaced persons relief)  
IMET: International Military Education and Training  
IMF: International Monetary Fund  
INCLE: International Narcotics Control and Law Enforcement (includes border security)

IR: International Relations

IV's: Independent Variables

KLB: Kerry Lugar Bill

KPK: Khyber Pukhtunkhwa

MRA: Migration and Refugee Assistance (also includes Emergency Migration and Refugee Assistance or ERMA)

NATO: North Atlantic Treaty Organization

NADR: Nonproliferation, Anti-Terrorism, Demining, and Related

NGO's: Non-Government Organizations

NWFP: North West Frontier Province

OBL: Osama Bin Laden

PCF/PCCF: Pakistan Counterinsurgency Fund/Counterinsurgency Capability Fund (transferred to State Department Pakistan is for anti-terrorism assistance)

ROCs: Reconstruction Opportunity Zones

SEATO: South East Asia Treaty Organization

SRE: Security Related Expenditure

UNSC: United Nations Security Council

USAID: United States Agency for International Development



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## **I. INTRODUCTION**

A decade has elapsed since Pakistan and the U.S. joined hands in the fight against terrorism. During all this time, the focus of most media remained on trying to analyze the Pakistani role in the Pak-U.S. alliance. While most of the written work has treated Pakistan as a sanctuary to insurgents, others have aired a different viewpoint—that security cooperation with Pakistan is the key to the United States' meeting its objectives in the region. Not much has been written on the balance of foreign aid and the amount that goes into 'Defense Expenditure' in comparison to population-centric investment. Furthermore, there has not been an analysis of the conflict of priorities between the donors and the actual recipients of the aid.

Pakistan, due to her crucial geo-strategic location, was considered a critical node in the war on terror, providing much needed diplomatic, military and logistic support to the U.S. and its allies for operations in Afghanistan. The decision to join the U.S. in the war has not only created a socio-political split within Pakistan's population and state elements but has also cost Pakistan billions of dollars in economic activities besides weakening the socio-political infrastructure. While the government continues to support the U.S.-led war in Afghanistan, gaining favorable public opinion (from the U.S. or the alliance) remains elusive, primarily due to the U.S. operations (specifically the drone strikes) inside Pakistan and the declining socio-economic situation (with less of economic assistance from the U.S.).

The Pak-U.S. relationship is at a sensitive juncture today in the post-Bin Laden era. While Pakistan suffers from its worst ever economic, security, and political situation, the U.S. faces considerable domestic pressure in maintaining its support for Pakistan without any apparent benefit to the U.S.. Pakistan, without any doubt, needs U.S. support, both for tackling the insurgencies within/without and keeping the country from becoming dysfunctional. The U.S., on the other hand, also needs Pakistan for supporting its troops in Afghanistan and for keeping terrorism under check in the region. While there remains a need for both Pakistan and the U.S. to revisit their strategies and

priorities, enhancing economic support to Pakistan would not only lift the U.S. image within Pakistan but also curb extremism and bring stability in the region.

#### **A. SCOPE AND PURPOSE**

The scope of this longitudinal, single-case study research is three fold: critically analyzing the cost of Pak-U.S. cooperation in the last 10 years (finances, economy, number of casualties, destruction, infrastructure, and long-term effects), gauging the effectiveness of the alliance in terms of achieving desired objectives, and examining/proposing ways and means to achieve a long-term strategic partnership.

The purpose of the entire research is to understand the impact of the population-centric approach, vis-a-vis the military approach, in forecasting and achieving the desired short/long term goals. In other terms, the research would assist in finding ways and means to achieve a better return on the U.S. investment in Pakistan after evaluating Pakistan's true current capacity/capability and understanding its geo-political, socio-cultural, and socio-economic limitations. Research would highlight the importance/impact of public opinion on the pattern of extremism and courses of action, specific to the Af-Pak region within the years 2001–2011. Understanding the other variables, like better fund management, prioritization, micro alliances, accountability, and interest alignment, would help formulate a better strategy for the two key non-NATO allies to deal with such challenges in the future.

#### **B. THESIS QUESTION AND ITS IMPORTANCE**

A number of questions, with respect to the cost-benefit equation of the Pak-U.S. alliance in the war on terror, revolve around the pattern of U.S. investment in Pakistan. However, the main question for this research is how to achieve a better return on the U.S. investments in Pakistan and enhance cost effectiveness in the fight against terrorism? We explore the possibility that a more balanced investment, with a population-centric approach along with decentralized disbursement through micro alliances, funding priorities, and better accountability of funds, based on perceived objectives, is likely to play a significant role in achieving desired objectives and pave the way for a long-term Pak-U.S. strategic relationship. Analysis of this question will

provide context and focus to alliance efforts and enhance cost effectiveness in the global war on terror. Answers to Pakistan specific questions may have direct/indirect impact on the strategic implications toward the U.S. in Afghanistan, Iraq and other areas with similar conditions.

### **C. METHODOLOGY**

We plan to utilize a combination of methods to analyze the question of cost effectiveness. However, we would primarily use longitudinal research through a single-case study design to analyze total funds and their consumption vis-a-vis the success/failure to achieve objectives. This will be achieved by a systematic process tracing and examining fund expenditures incurred in the fight against terror during the last 10 years. It includes identification and justification of the areas where the funds were under/over-utilized with respect to their intended purpose. It also includes critical examination of military and nonmilitary expenditure and the contribution it made towards achieving the intended objectives. We will explore the population-centric investment and its influence on the outcome of the war by closely examining Pakistan's limitations, socio-political/economic conditions and security infrastructure.

### **D. THEORETICAL FRAMEWORK**

#### **1. Dependent Variable (DV): Cost-Effectiveness/Return on Investment**

The major components of the dependent variable include indices of different funds, their utilization, effects created, contribution toward achievement of primary/secondary objectives and net cost-benefit assessment. To measure the dependent variable, we will analyze various stability indexes from 2001 to 2010 to see if there has been an increase in these numbers. Furthermore, we will compare strategic-level objectives, from the United States and Pakistan's perspectives, to measure the degree of success in achieving these objectives. The relationship between the DV and the IVs is explained in Figure 1.

2. Independent Variables (IVs):
  - (a) Balanced Investment (Mil vs. Non-Mil)
  - (b) Effective Fund Management
  - (c) Interest Alignment
3. Units of Analysis: Terrorism Index

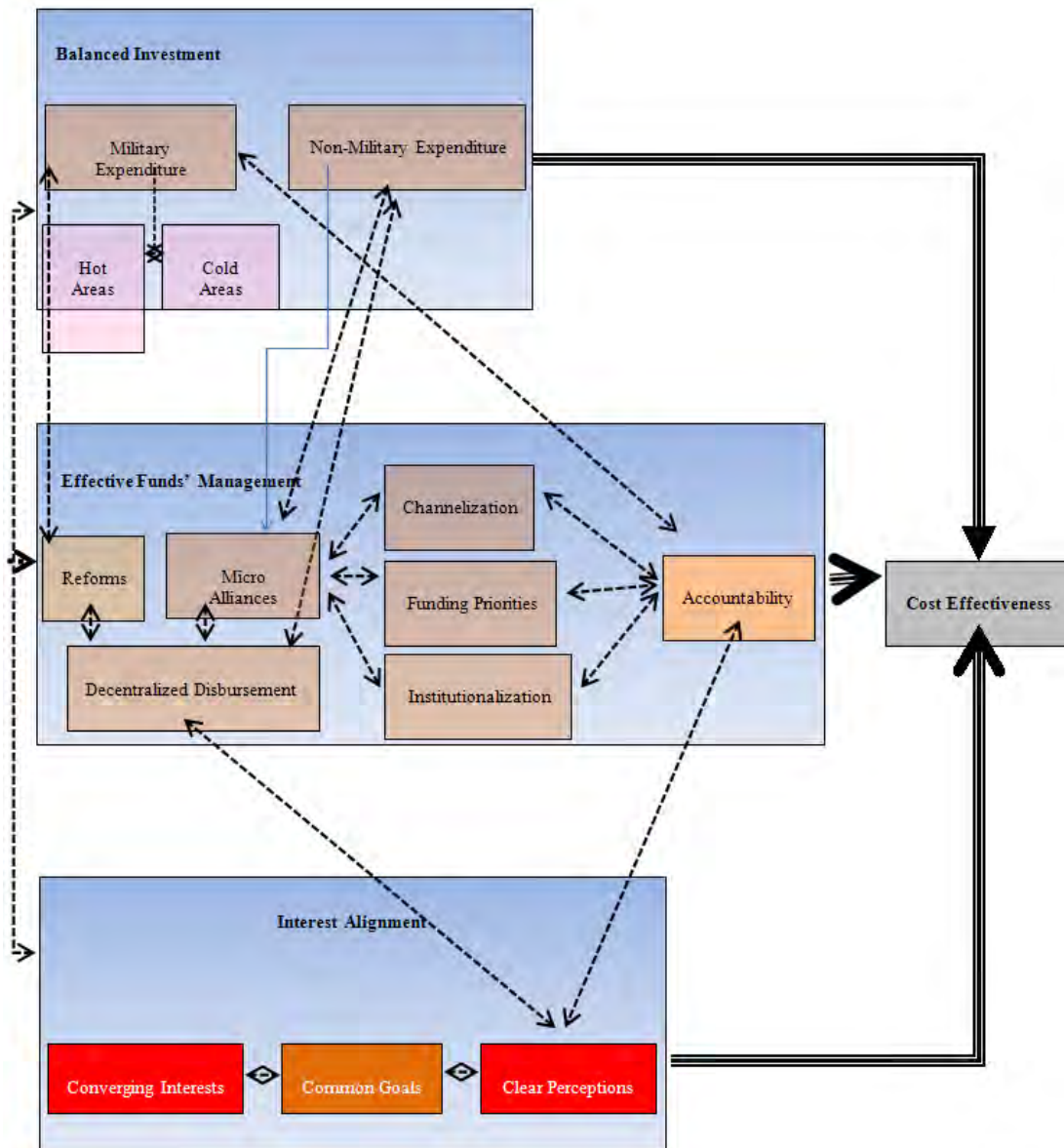


Figure 1. The relationship between dependent and independent variables

4. Hypothesis-1:

***A balanced Investment with a population-centric approach in Pakistan is likely to contribute significantly in achieving both the short-term and long-term goals of the Pak-U.S. alliance in the WOT.***

The pattern of U.S. investments in Pakistan has remained ‘military-heavy’ in the past. A more population-centric investment would not only assist in supporting the weak socio-economic infrastructure but would also improve the U.S. perception in Pakistan. This would help isolate the extremists from the general population and bring favorable results in achieving both short- and long-term objectives of the two key allies.

5. Hypothesis-2:

***Reforms in the existing fund management system along with decentralized disbursement, funding priorities, institutionalization, accountability of associated funds and formation of microalliances would not only help address the immediate issues but also assist in attaining long-term goals.***

The channelization of funds through reliable and credible institutions is the foundation stone to achieve cost effectiveness. A check and balance procedure through accountability is the second and foremost step towards success. The third step is to prioritize the spending of money in the sectors where it is most needed and where the U.S. will get the most out of her investments in terms of meeting strategic objectives. The areas that are most affected by terrorism take priority for rehabilitation over the others. Decentralized disbursement of funds at the provincial level, and further decentralizing into various subsectors, would be effective in bringing substantial changes. Each sector and sub-sector should have centralized accountability at the USAID level. Besides development, it is evident that unemployment and illiteracy also fuel insurgency. Therefore, the strategy should be to wedge, contain or smother the effects of terrorism through educational reforms, trade and employment (entrepreneurship).

6. Hypothesis-3:

***Promoting converging interests/common goals and removing misperceptions between the two allies would not only minimize the trust deficit but can also assist greatly in achieving desired alliance objectives.***

Pakistan has natural limitations due to its geographic and demographic location in the region; however, the priorities of the U.S. are directional and aligned to achieve its own objectives. The repercussions of the alliance are evident with the emergence of terrorist organizations that are gravely damaging the socio-economic condition of Pakistan. In order to balance the effects, U.S. economic aid was provided to skew the perceptions of the majority in favor of the common goals of the two allies. However, the opposite effect has been achieved, with a common perception that this aid is nourishing corruption in the country. The reason behind this notion is due to the fact that the funds are under-utilized or not accountable through any system or procedure. There might be success in terms of achieving “kill ratio” through more drone attacks, but the same is increasing sympathies in favor of the counter-state elements.

In order to achieve alignment of interests, reduce the trust deficit and promote common goals of the two allies for laying the foundation of an enduring strategic partnership, three mechanisms/courses of action must be considered:

- a) Identification of existing common goals
- b) Prioritization of common goals in policies
- c) Convincing both allies to generate more common goals

If the two allies are able to promote commonalities, understand each other's limitations, change their policies and approach the issues with converging interests, there is a likelihood of establishing a better relationship based on trust, needs, understanding and strategic importance.



## **E. RESEARCH OUTLINE**

1. Chapter I: Introduction
2. Chapter II: Historical Perspective

This chapter traces the historic relationship patterns of Pakistan and the U.S. and highlights the origins of alliances between the two partners. Later, it focuses on the Pak-U.S. Alliance made after 9/11 to fight against terrorism, providing an overview of the alliance, its major nodes of cooperation and their value.

3. Chapter III: Cost-Benefit Analysis

The cost-benefit analysis, besides explaining the dependent variable, facilitates an understanding and selection of the criteria for judging the policy choices. This chapter takes into account the expenditures of the Pak-U.S. alliance since 2001, weighs them against the success or failure in achieving the set objectives and critically analyzes the cost-benefit equation for both allies in the ‘fight against terrorism’. The chapter also suggests the likely pattern of costs and associated benefits for the U.S. and touches upon Pakistan’s perspective and limitations.

4. Chapter IV: Effective Fund Management

This chapter discusses the significance of a ‘balanced investment (military/non-military)’ and highlights the deficiencies of existing fund management. It suggests ways like decentralized disbursement, micro-alliances, prioritization, channelization, accountability and entrepreneurship to make fund management more effective. While several options for effective fund utilization will be discussed in this chapter, institutionalization of funds poses a challenge to the government in the absence of credible economic institutions.

5. Chapter V: Game Theoretical Model

This chapter deals with the game theoretical modeling, keeping CSF and ESF as the main parameters for establishing a relationship between security-related investments and economic-related investments. Modeling will be done, keeping in mind the effects produced by the U.S. investments from the year 2001 to 2011, to clarify the difference of

the two approaches, their applicability in specific regions and long-term benefits. Analysis drawn from the modeling will form the basis for further discussion of population-centric versus military investments in Pakistan.

## 6. Chapter VI: Perception and Realities

This chapter examines two of the most fundamental and conceptual elements of Pak-U.S. relations. First, conflicting interests will be highlighted with their implications for the relationship. Second, the perception of both countries about each other will be weighed against realities on the ground. This chapter also discusses improving public opinion through a developmental strategy and the population-centric approach.

## 7. Chapter VII: Conclusion and the Way Ahead

The youth of Pakistan is developing a favorable impression of terrorism and nurturing anti-U.S. sentiments. This may be termed as a “weak win” situation, one that favors the political success of the governments of both countries, but at the expense of the long-term strategic relationship. The understanding of each other’s limitations through dialogue and discussions could not bring solutions. Practical measures through education, health care, trade and employment would restore confidence and bring about changes in the general perception of local people in the country.

One side of the picture, the U.S. is carrying out negotiations with the Taliban with a perception that they have separated themselves from al Qaeda, and on the other side the U.S. is insisting and pressuring Pakistan to carry out military operations in North Waziristan to eliminate the sanctuaries of Taliban. Who is responsible for the consequences of this action? How would Pakistan justify its military strategies to the population? What impression would carry over to future generations about the U.S.? It is therefore imperative that the objectives of both countries be in alignment and consonant with measurable factors, because the mistakes of today should be corrected before they become blunders in history.

## II. HISTORICAL PERSPECTIVE

The early years of the Cold War witnessed the partition of the Indian subcontinent, creating Pakistan and India as separate states. The global strategic events that followed forced both India and Pakistan to forge alliances after 1947 with contending superpowers due to their inherent ideological differences. While India preferred to join the USSR camp, Pakistan chose to align with the west in general and the U.S. in particular. This alliance resulted in Pak-U.S. military cooperation and a broader Pak-U.S. understanding on other forms of cooperation. The historic Pak-U.S. alliance can be divided into three distinct phases: the Cold War from 1950–1960, the Soviet invasion of Afghanistan in the 1980s and, most recently, the Global War on Terrorism. There is also a phase of alliance with China and friction with the U.S. during the mid-60s. The wide gaps between the phases represent epochs of cold relations between the two states due to various geo-strategic and national interests, summarized in the following paragraphs.

### A. PHASE 1

In 1950, Liaquat Ali Khan turned down an invitation to visit Moscow, choosing to visit the United States instead. During this phase, the Government of the United States was promoting its national interest by maintaining peace in the South Asia region, especially by the preservation of the independence and integrity of Pakistan. Pakistan reaffirmed its dedication to the alliance when the United States promised that, in accordance with the Constitution, it would take appropriate action to promote peace and combat the spread of communism in the Middle East and South Asia (with special reference to Pakistan).<sup>1</sup> The United States reaffirmed its support of Pakistan against any attack, including from India.<sup>2</sup>

The Cold War Pakistan-United States alliance promoted world peace instead of communist aggression and upgraded the defense capabilities of Pakistan

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<sup>1</sup> Farhat Mahmud, *A History of U.S.-Pakistan Relations* (Lahore: Vanguard, 1991).

<sup>2</sup> The U.S. Department of State, Office of the Historian, “Foreign Relations of the United States, 1961–1963. Telegram from the Embassy in Iran to the Department of State,” Volume XIX, South Asia, Document 328 (Tehran, September 5, 1963), accessed on October 18, 2011.

against all aggression, including the potential threat from India.<sup>3</sup> The neighboring countries (India, USSR and China) felt threatened by this bilateral agreement. Both countries benefited from the arrangement; military assistance flowed to Pakistan and the U.S. gained access to the air bases in the then North West Frontier Province (NWFP) and now Khaibar Pakhtoonkhwa (KP) with which to monitor/spy on Russian military research centers. According to President Eisenhower, Pakistan became “America’s most allied ally in Asia.”<sup>4</sup> Eisenhower became the first U.S. President to visit Pakistan in 1959, where Ayub Khan shared his concerns regarding the United States’ military aid to India posing a serious threat to Pakistan.<sup>5</sup> It would be worthwhile to state that the policies of the military Government of president Ayub Khan during 1958–60 were out rightly pro-western/American.<sup>6</sup>

**Origin of Alliance with China and Friction with the U.S.** The U.S. policy toward the Asian region began to change when Kennedy supported India in its third five-year plan, despite the fact that Pakistan was the only Asian country that was a member of both the SEATO and CENTO pacts. Ayub Khan aired his concerns regarding U.S.-India cooperation (beyond the visible bilateral support) and its impact on Pakistan. He also said: “If India became too powerful, its smaller neighbors would have to seek China’s protection and China could not reject for providing protection.”<sup>7</sup> The U.S. viewed Pakistan as a new Cold War ally. This can be gauged from the fact that \$508 million of U.S. military aid flowed into Pakistan between 1953 and 1961.<sup>8</sup> On 13 October 1962, in a meeting between the foreign minister of Pakistan and the U.S. Secretary of State, Dean

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<sup>3</sup> Muhammad Iqbal and Samia Khalid, “Pakistan’s Relations with the United States during Ayub Khan’s Period,” 3, no. Number 1 (2011), 14–123, accessed September 12, 2011, <http://www.pakistaniaat.org/article/download/8277/5863>. 13.

<sup>4</sup>K. Alan Kronstadt, Library of Congress and Congressional Research Service, “Pakistan-U.S. Relations,” Congressional Research Service, accessed September 12, 2011, <http://www.fas.org/sgp/crs/row/RL33498.pdf>.

<sup>5</sup> Iqbal and Khalid, Pakistan’s Relations with the United States during Ayub Khan’s Period, 14.

<sup>6</sup> W. M. Dobell, “Ayub Khan as President of Pakistan,” *Pacific Affairs* 42, no. 3 (Autumn, 1969), pp. 294–310.

<sup>7</sup> S. M. Burke and Lawrence Ziring, *Pakistan’s Foreign Policy: An Historical Analysis*, 2nd ed. (Karachi: Oxford University Press, 1990), 498.

<sup>8</sup> Kronstadt, Library of Congress and Congressional Research Service, *Pakistan-U.S. Relations*, 102.

Rusk said that ~~the~~ Kashmir problem was irrational and one that had cost Pakistan and India a great deal of money and development. We cannot stake our entire policy in Asia on the settlement of Kashmir.”<sup>9</sup> On 27 October 1962 Kennedy informed Ayub Khan about his wish that Pakistan should help India in the Sino-Indian war of 1962. President Ayub Khan refrained attacking the Chinese border to help India.

Pakistan signed a border agreement with China on 29 March 1963, along with other agreements including security and mutual trade. After these agreements, the American response towards the Kashmir dispute became indifference, as the United States wanted to strengthen India as a regional ally against China. On 11 August 1963, Kennedy said, ~~We~~ “We are conditioned by our history. I can well understand your reaction to our extending military aid to India, but allowance must be made for the special circumstances which occasioned our assistance.”<sup>10</sup> After the Sino-Pak Agreement on 29 August 1963, the Kennedy Administration responded by imposing a restriction on Pakistan for the first time, postponing a \$4.3 million loan to build a new airport at Dacca<sup>11</sup> (East Pakistan), from which Pakistan International Airline was to launch a flight to China. This was a silent protest by America.<sup>12</sup> Then, a meeting was held from 3–6<sup>t</sup> September 1963, between American and Pakistani secretaries. President Ayub Khan delivered a speech in which he clarified that, ~~American~~ “American aid to India is a main cause for the increased Indian threat to Pakistan. We want to normalize our relations with neighboring countries India, China and also USSR.”<sup>13</sup> This was the beginning period of Pakistan’s multilateral policy with all the neighboring countries. Ayub Khan visited China in March 1965 and USSR in April 1965. Pakistan’s relationship with the United States reached its lowest ebb when President Johnson cancelled Ayub Khan’s visit to Washington in April 1965. A few weeks later, he also stopped Pakistan’s funds for the

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<sup>9</sup> Iqbal and Khalid, *Pakistan’s Relations with the United States during Ayub Khan’s Period*, 14–123.

<sup>10</sup> Abdul Sattar, *Pakistan’s Foreign Policy, 1947- 2005: A Concise History* (Karachi: Oxford University Press, 2007), 329.

<sup>11</sup> After Indo-Pak war of 1971 it became a new state, which is now Bangladesh.

<sup>12</sup> Dennis Kux, *The United States and Pakistan, 1947–2000: Disenchanted Allies* (Washington, D.C.: Woodrow Wilson Center Press, 2001), 470–470.

<sup>13</sup> Ibid.

third five-year plan. During the Indo-Pak war in 1965, the United States stopped the supply of weapons for both India and Pakistan.<sup>14</sup>

There were many advantages accrued to Pakistan because of its alliance with the United States. In terms of the badly needed military hardware, the total assistance extended to Pakistan from 1954 to 1965 amounted to between 650 million U.S. dollars.<sup>15</sup> The economic assistance in the form of Public Law, agricultural commodity programs, grants for economic developments, technical assistance development grants, and loans of various kinds were much higher. “Over the period from 1947 through June 30, 1965, economic assistance of this nature amounted to \$3 billion.”<sup>16</sup>

In 1971, the newly elected Prime Minister of Pakistan, Z. A. Bhutto, re-evaluated the nature of Pak-U.S. relations. He explained the re-evaluation of mutual relations in terms of change in factual conditions and geopolitical realities.<sup>17</sup> After the Indo-Pak war in 1971, Pakistan realized that the U.S. support for India was meant to contain China and there would be no support for Pakistan against any Indian aggression. Therefore, Pakistan withdrew from SEATO in 1972 and CENTO in 1979, and joined the Non-Aligned Movement.<sup>18</sup> In 1976, Pak-U.S. relations once again became strained over the acquisition of a nuclear processing plant. This was caused by India’s 1974 successful nuclear detonation, which invigorated Pakistan’s insecurity syndrome.<sup>19</sup> Pakistan signed an agreement with France for the acquisition of the nuclear processing plant in 1976.<sup>20</sup> The relations between the Bhutto regime and the U.S. administration worsened after Pakistan finalized the nuclear deal. “President Carter’s administration was publicly

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<sup>14</sup>Peter R. Blood, *Pakistan: a Country Study*, Edition: 6th ed. (Washington, D.C.: Federal Research Division, Library of Congress, 1995), 398.

<sup>15</sup> Mussarat Jabeen and Muhammad Saleem Mazhar, “Security Game: SEATO and CENTO as Instrument of Economic and Military Assistance to Encircle Pakistan,” *Pakistan Economic and Social Review* 49, no. 1 (Summer, 2011), 109–132. 119.

<sup>16</sup> Safdar Sial, “Pak-U.S. A Balance Sheet of Relations,” *Pakistan Institute for Peace Studies* (June 26, 2007), [http://san-pips.com/index.php?action=ra&id=irf\\_list\\_1](http://san-pips.com/index.php?action=ra&id=irf_list_1), accessed on August 11, 2011. 2.

<sup>17</sup> Ibid.

<sup>18</sup> Ibid.

<sup>19</sup> Ibid.

<sup>20</sup> Ibid.

hostile to the Bhutto regime's insistence on pursuing a nuclear option."<sup>21</sup> In July 1977, a military dictator, General Zia Ul Haq, overthrew the Bhutto regime. However, it is not very clear whether the U.S. was behind such a drastic change of regime.<sup>22</sup>

## **B. PHASE 2**

The second major phase of Pak-U.S. bilateral relations began after the Soviet invasion of Afghanistan in December 1979. Once again, this partnership highlighted the common interest of Pakistan and the United States for the establishment of peace and stability in South Asia. The Soviet invasion of Afghanistan adversely affected the interests of both Pakistan and the U.S. in two ways. First, the invasion could be seen as the initial step on a drive for warm water access through Pakistan. Second, it meant the expansion of communism in south Asia. Supporting Pakistan to pre-empt the threat was the only available solution to the problem. Therefore, the U.S. Congress in 1981 authorized a \$3.2 billion five-year aid package to Pakistan, including 40 F-16 aircraft, in order to strengthen Pakistan's security to counter this growing threat.<sup>23</sup> President Reagan guaranteed to provide additional financial support of \$4 billion for the next five years (1987–1993) and exempted Pakistan from the Symington and Glenn Amendments<sup>24</sup> for a period of 6 years ending in 1987.<sup>25</sup> In exchange, Pakistan served as a channel for covert U.S. military aid to Afghan rebel forces, the Mujahedeen, fighting the Soviet occupation army."<sup>26</sup>

A second multiyear economic development and security assistance program between both the countries commenced in March 1986. However, the security dynamics changed after Pakistan conducted nuclear tests in response to India in 1998. The United States suspended all military assistance and new economic aid under the Pressler

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<sup>21</sup> Sial, "Pak-U.S. A Balance Sheet of Relations."

<sup>22</sup> Lawrence Ziring, "Pakistan and India: Politics, Personalities, and Foreign Policy," *Asian Survey* 18, no. 7 (July 1978), 706–730.

<sup>23</sup> Sial, "Pak-U.S. A Balance Sheet of Relations."

<sup>24</sup> An act for the sanctions against countries that acquire or transfer nuclear reprocessing technology or explode or transfer a nuclear device.

<sup>25</sup> *Ibid.*, 4–5.

<sup>26</sup> *Ibid.*, 5.

Amendment in 1990.<sup>27</sup> The Pressler Amendment required the President to certify annually that Pakistan “does not possess a nuclear explosive device.”<sup>28</sup> Issues related to nuclear proliferation and regional security raised the concerns of the U.S. in that region. A number of dialogues were initiated, focusing on signing CTBT and ratification, FMCT negotiations, export controls, and a nuclear restraint regime.<sup>29</sup> An additional burden of sanctions was imposed when General Pervez Musharraf overthrew Nawaz Sharif’s government.

### **C. PHASE 3**

The Pak-U.S. relationship, in decline after the Soviet war, regained strength after the 9/11 fiasco. During the Musharraf regime, Pakistan moved decisively to ally itself with the United States in the Global War on Terror (GWOT). Pakistan provided the U.S. with access to a number of military air bases and corridors to attack al Qaeda and Taliban strongholds in Afghanistan and terrorist sanctuaries inside Pakistan. Being a vital non-NATO ally of the U.S. Pakistan accrued various monetary benefits. Following are the broad areas that instituted the beginning of bilateral affairs between the U.S. and Pakistan after 9/11:

1. Suppress and defeat religious Islamic extremism in the Af-Pak region through enhanced Interoperability in the global war on terrorism.
2. Supporting Pakistan to boost its economy, help social development and bring political stability in the country.
3. Foster mutual understanding and bridge ideological differences between the people of the U.S. and Pakistan.

Due to its strategic and geo-political location, Pakistan became one of the United States’ most valuable partners in its GWOT. The governments of the two countries worked closely to dismantle, defeat and neutralize the al Qaeda leadership and its strong networks in the Af-Pak region. Both countries collaborated in the fields of military/non-

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<sup>27</sup> Economic and military sanctions were imposed under the Pressler Amendment in October 1990.

<sup>28</sup> Ibid., 6.

<sup>29</sup> Ibid.



military intelligence, law enforcement, finance, and joint operational training. Many overt and covert operations against al Qaeda elements and its leadership were conducted inside Pakistan. The Pakistani military authorities successfully apprehended well over 600 al Qaeda suspects and Taliban operatives.<sup>30</sup> —Major battles with militants have concentrated on several fronts: the Swat valley, and the Bajaur, South Waziristan, and Mohmand tribal agencies.”<sup>31</sup> Pakistan is also bearing a major share of the human cost of fighting the war on terror. More than 3,500 of its military officers and soldiers have been killed in various operations against al Qaeda and the Taliban inside Pakistan. The Pakistan military has deployed up to 150,000 regular and paramilitary troops to its western borders in response to the upwelling violence there.<sup>32</sup>

In pursuit of the U.S. objectives in South Asia, the existing phase of Pak-U.S. bilateral relations has a strategic depth greater than in the past. —The new geo-strategic realities like nuclear South Asia, energy security, counter-terrorism regime and economic pursuits (especially trade liberalism)”<sup>33</sup> cannot abate the significance of Pakistan in the regional and global politics. Since 2001, the U.S. has provided Pakistan with more than \$11 billion in military aid, mainly intended to combat terrorism.<sup>34</sup> The Enhanced Partnership with Pakistan Act (EPPA), popularly known as the Kerry-Lugar-Berman bill (KLB) after its sponsors in the U.S. Senate, was signed into law by President Obama in October 2009. The EPPA was designed to triple the amount of U.S. aid to Pakistan to \$1.5 billion per year for five years. The purpose was to align that aid more closely with U.S. and Pakistani priorities, and impose new accountability mechanisms to reduce the chances that aid might be diverted from its intended use.<sup>35</sup>

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<sup>30</sup> Economic and military sanctions were imposed under the Pressler Amendment in October 1990.

<sup>31</sup> Susan B. Epstein et al., —Pakistan U.S. Foreign Assistance,” Congressional Research Service, Library of Congress, <http://www.cq.com/pdf/crsreports-3886786>; Note: Go to CQ.com and search for all releases of this CRS report.

<sup>32</sup> Ibid.

<sup>33</sup> Sial, —Pak-U.S. A Balance Sheet of Relations,” August 11, 2011–8.

<sup>34</sup> R. Banerji, —They all Fall Down,” *Hindustan Times* (March 17, 2011), August 12, 2011.

<sup>35</sup> Robert D. Lamb, —Governance and Militancy in Afghanistan and Pakistan,” *CSIS* (May 2011), [http://csis.org/files/publication/110616\\_Lamb\\_Exec\\_Sum.pdf](http://csis.org/files/publication/110616_Lamb_Exec_Sum.pdf), accessed on June 20, 2011–18. 11.

Nevertheless, the political turmoil inside Afghanistan has an active or passive connection to its geographical neighbor Pakistan, and vice-versa. It is pertinent to highlight that Pakistan also has its own geo-strategic, security and economic concerns. A more comprehensive, democratic and political strategic advancement of policy options is required in the region. Due to geo-political significance, the ongoing U.S.-India relationship on various issues needs to be viewed as a separate entity. Historically, the problems in Pak-U.S. relations arose after the U.S. foreign policy for India began to run in parallel to its political interests with Pakistan. The United States has favored reconciliation and wanted harmony in Indo-Pak relations, as it is vital for stability in the region. This is a time of great opportunity for India and Pakistan to reconcile and develop understandings over the petty disputes that are the major cause of instability in the region.<sup>36</sup>

The Pak-U.S. relationship has entered into an extremely complex stage after the operation ‘\_Neptune Spear’ (the killing of Osama bin Laden), the case of Raymond Davis, and other events of the same nature have deepened the apparent trust deficit between the two allies. Nevertheless, changes to U.S. policy, particularly on security cooperation and foreign aid, have aligned the U.S. activities and programs more closely with strategic imperatives and local realities than they had been before 2009. However, these new policies and programs are at their initial stages of implementation, and progress is expected to be subtle. It is unlikely, for example, that the United States can play anything more than a catalytic role in improving Pakistan’s capacity for stabilization. Progress may be difficult but not impossible or unlikely because a majority of the people in both countries desires progress in the relations. Similarly, EPPA programs have a chance of making small but effective contributions to both Pakistani governance capacity and the Pak-U.S. relationship. Regardless of the complexity and declining nature of the relations, the benefits of continuing the relationship (through renewed measures) definitely outweigh the consequences of disengagement at this juncture.<sup>37</sup>

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<sup>36</sup> Sial, Pak-U.S. A Balance Sheet of Relations, August 11, 2011–8.

<sup>37</sup> Lamb, *Governance and Militancy in Afghanistan and Pakistan*, June 20, 2011, 11–12.

The United States has a limited influence within the institutions of Pakistan. The bilateral engagement paves the way for the American access to Pakistani decision makers. There are ample examples where cooperation, including intelligence sharing and counterterrorism operations, produced fruitful results. The development projects and military training give Americans and Pakistanis an opportunity to work together in fostering trust. These measures build capacity and professionalism and expose some Pakistanis to American values—such as civilian control over the military.

Disengagement during the 1990s, for example, blocked an entire generation of Pakistani military officers from receiving the U.S. training that would have exposed them to a strong military institution with the restraint and confidence to submit to civilian rule; it would have exposed them as well to critical thinking, the laws of war, human rights, and the protection of civilians, in addition to basic and advanced war fighting. Within Pakistan's security institutions today, there is a growing need to reform, modernize, and professionalize. Maintaining or deepening military-to-military engagement would help the United States to assist that notion and help to change at least some of the more hardline views within the security establishment. Maintaining or deepening involvement in development and prudence would also support those professionals and moderates within the Pakistani government and civil service who want Pakistan to be—and to be viewed internationally as—a responsible state; to disengage now would be to abandon them, which obviously is not in the U.S. interest.<sup>38</sup>

No matter how far technology progresses, the importance of human intelligence could not be denied. It is the need of the hour for all the U.S. counterterrorism (CT) efforts in the region. Making gaps in the relations or disengagement would make all CT efforts futile and put further constraints on the potential for recruiting human intelligence. Historically, Pakistan's problems are reflected in a cultural significance of powerlessness or degradation, especially with regards to India.

Given the relative strength of India's military, size of its population, and strength of its economy, it should not come as a surprise that Pakistan would develop nuclear weapons, use irregular forces as a proxy army, and

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<sup>38</sup> Lamb, *Governance and Militancy in Afghanistan and Pakistan*, June 20, 2011, 11–12.

seek as much military hardware and training as possible. Publicly criticizing Pakistan for engaging in (strategically rational) asymmetric behaviors serves mainly to remind Pakistanis of their strategically vulnerable—and humiliating—position with respect to India, and thereby helps elevate the profile, resolve, and influence of Pakistani hardliners. A constructive relationship with the United States—one in which Pakistanis are conspicuously treated with respect, privately discouraged from the destructive policies of hardliners, and otherwise empowered to protect and serve their own citizens as well as possible—could serve to moderate this dynamic. An angry disengagement, as seems to be the direction the public conversation about U.S.-Pakistan relations is going, would only contribute to the vicious cycle of humiliation and hardliner response.<sup>39</sup>

#### **D. HISTORICAL PERSPECTIVE OF U.S. AID**

Ever since the creation of Pakistan on the global map and its alliance towards the west, the United States has provided aid to Pakistan in order to achieve its foreign policy objectives. There has been fluctuation in the relations for many reasons. ~~In~~ some years, U.S. aid would support balance in the region and contain Soviet expansionism; in other years, the U.S. government would withhold aid because of nuclear weapons proliferation and lack of democratization gains.”<sup>40</sup> The lowest ebb of the U.S. aid to Pakistan came after the withdrawal of Soviet Union from Afghanistan in 1989 on the premise of Pakistan’s nuclear activities that were made to surface after the U.S. had its objectives achieved. Figure 2 depicts the trend of Pak-U.S. relations, in terms of financial assistance, since 1947.

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<sup>39</sup> Lamb, *Governance and Militancy in Afghanistan and Pakistan*, June 20, 2011, 11–12.

<sup>40</sup> Epstein et al., *Pakistan U.S. Foreign Assistance*.

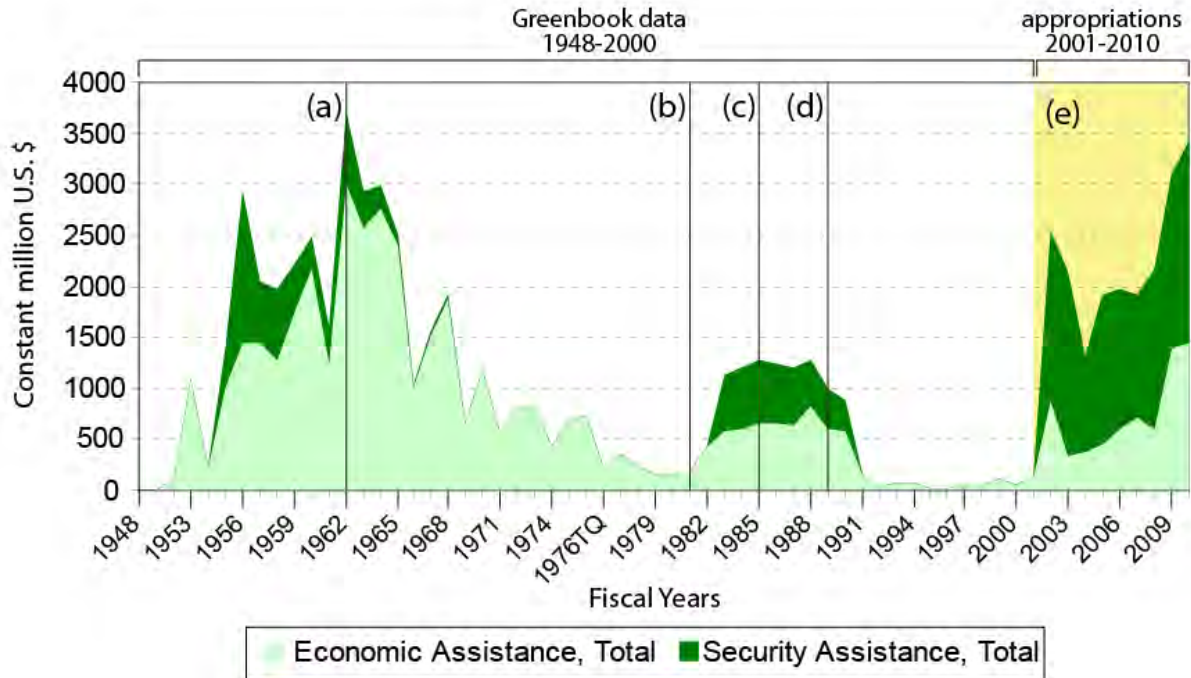


Figure 2. The U.S. financial assistance to Pakistan since 1947

The public perception of the Pakistani people of the U.S. as an unreliable ally initially arose after the U.S. imposed sanctions on Pakistan and India after the Indo-Pak wars of 1965 and 1971. When combined with ensuing restrictions on U.S. aid, this left many Pakistanis with the sense they had been ~~used~~ and ditched.”<sup>41</sup> After 2001, the lowest ebb of Pak-U.S. relations could be marked after the operation Neptune Spear. ~~Pakistani~~ Pakistani Prime Minister Yousef Raza Gillani’s May 2011 state visit to Beijing was viewed by many as an implicit response to a recent deterioration in U.S.-Pakistan ties.”<sup>42</sup> The next chapter takes into account the aid and its effects from 2001 to 2010.

<sup>41</sup> Pervez Musharraf, *ADDRESS: His Excellency Pervez Musharraf at Royal United Services Institute*, online, 2008, <http://www.rusi.org/events/past/ref:E4794DB1E93E7C/>, accessed on August 10, 2011.

<sup>42</sup> Christopher Bodeen, ~~Pakistan’s~~ Pakistan’s Gilani Visits Ally Beijing Amid U.S. Rift,” *Associated Press* (May 17, 2011), <http://www.washingtontimes.com/news/2011/may/17/pakistans-gilani-visits-ally-beijing-amid-us-rift/>, accessed on May 21, 2011.

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### **III. COST-BENEFIT ANALYSIS**

This chapter takes into account the expenditure incurred by the Pak-U.S. alliance from 2002 to 2011 and weighs it against the success or failure in achieving the set objectives by critically analyzing the cost-benefit equation for both the allies engaged in the ‘fight against terrorism’. The chapter also suggests the likely future patterns of costs and associated benefits for the U.S. and hints at Pakistan’s perspective and limitations.

#### **A. U.S. AID REVIEW 2002–2010**

The United States has provided more than \$10.58 billion to Pakistan since September 2001, under various headings including, but not limited to, Coalition Support, Security, and Economic Support. U.S. aid to Pakistan registered a sharp rise after the events of September 11, 2001. Thereafter, during the period from 2002 to 2011, the U.S. aid was raised many times under various heads including: Counter-Narcotics, Coalition Support, Child Survival and Health, Development Assistance, Economic Support, FC Train and Equipment, Foreign Military Financing, Human Rights and Democracy, International Disaster Assistance, International Military Education and Training, International Narcotics Control and Law Enforcement, Migration and Refugee Assistance, Nonproliferation, Anti-Terrorism, Demining and Related, Pakistan Counterinsurgency and Counterinsurgency Capability.

The 2010 U.S. aid to Pakistan of some \$4,462 million represents an increase of 121% when compared to the pre-9/11 level in FY2001, making Pakistan second among U.S. aid recipients, after Afghanistan and before Israel.<sup>43</sup> The direct overt U.S. aid and military reimbursements to Pakistan from 2002 to 2011 is depicted in Table 1.

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<sup>43</sup> Bodeen, “Pakistan’s Gilani Visits Ally Beijing Amid U.S. Rift,” accessed on May 21, 2011, 8–9.

Table 1. U.S. Aid from 2002–2011

Program or Account	FY 2002–FY2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010 (est.)	Program or Account Total	FY 2011 (req.)
1206	—	—	28	14	56	114	<sup>r</sup>	212	<sup>r</sup>
CN	—	8	24	49	54	47	43 <sup>f</sup>	225	<sup>r</sup>
CSF <sup>a</sup>	3,121 <sup>c</sup>	964	862	731	1,019	685 <sup>g</sup>	1,499 <sup>g</sup>	8,881 <sup>g</sup>	<sup>g</sup>
FC	—	—	—	—	75	25	—	100	—
FMF	375	299	297	297	298	300	288 <sup>i</sup>	2,154	296
IMET	3	2	2	2	2	2	5	18	4
INCLE	154	32	38	24	22	88	170 <sup>i</sup>	528	140
NADR	16	8	9	10	10	13	21	87	25
PCF/PCCF	—	—	—	—	—	400	700	1,100	1,200
Total Security-Related	3,669	1,313	1,260	1,127	1,536	1,674 <sup>h</sup>	2,726	13,305	1,665
CSH/GHCS	56	21	28	22	30	33	30	220	67
DA	94	29	38	95	30	—	—	286	—
ESF	1,003 <sup>d</sup>	298	337	394 <sup>e</sup>	347	1,114	1,292 <sup>i</sup>	4,785	1,322
Food Aid <sup>b</sup>	46	32	55	—	50	55	142	380	90
HRDF	3	2	1	11	—	—	—	17	—
IDA	—	—	70	50	50	103	115	388	86
MRA	22	6	10	4	—	60	42	144	—
Total Economic-Related	1,224	388	539	576	507	1,365 <sup>h</sup>	1,621	6,064	1,565
Grand Total	4,893	1,701	1,799	1,703	2,043	3,039 <sup>h</sup>	4,347 <sup>i</sup>	19,595	3,230

1206: Section 1206 of the National Defense Authorization Act (NDAA) for FY2006 (P.L. 109–163, global train and equip)

CN: Counternarcotics Funds (Pentagon budget)

CSF: Coalition Support Funds (Pentagon budget)

CSH: Child Survival and Health (Global Health and Child Survival, or GHCS, from FY2010)

DA: Development Assistance

ESF: Economic Support Funds

FC: Section 1206 of the NDAA for FY2008 (P.L. 110–181, Pakistan Frontier Corp train and equip)

FMF: Foreign Military Financing

HRDF: Human Rights and Democracy Funds

IDA: International Disaster Assistance (Pakistani earthquake and internally displaced persons relief)

IMET: International Military Education and Training

INCLE: International Narcotics Control and Law Enforcement (includes border security)

MRA: Migration and Refugee Assistance

NADR: Nonproliferation, Anti-Terrorism, Demining, and Related (the majority allocated for Pakistan is for anti-terrorism assistance)

PCF/PCCF: Pakistan Counterinsurgency Fund/Counterinsurgency Capability Fund (transferred to State Department oversight in FY2010)



## **1. Coalition Support Funds (CSF)**

The majority of funds allocated to Pakistan were placed under two major heads: the Coalition Support and Economic Support Funds. The Coalition Support Funds were designed to compensate Pakistan and other nations for their operational and logistical support of U.S.-led counterterrorism operations.<sup>44</sup> These funds alone have accounted for nearly half of U.S. financial transfers to Pakistan since 2001. Some \$8.9 billion had been disbursed as of May 2011, an amount equal to roughly one-fifth to one-quarter of Pakistan's total military expenditures during this period. CSF payments have been used to support many scores of Pakistani military operations and help to keep more than 100,000 Pakistani troops in the field in northwest Pakistan by paying for their food, clothing, and housing besides compensating Islamabad for coalition usage of Pakistani airfields and seaports.<sup>45</sup>

## **2. Economic Support Funds (ESF)**

The second major head under the U.S. assistance to Pakistan is the Economic Support Funds. The United States provides bilateral economic, development, and humanitarian assistance to Pakistan through a number of funding accounts, as depicted in Table 1. Often, funds within ESF are transferred to International Disaster Assistance (IDA) or Migration and Refugee Assistance (MRA) for emergency assistance, such as in response to the Pakistan flood crisis during 2010.<sup>46</sup> In FY2009 and FY2010, ESF funds reflected about 80% of U.S. economic assistance to Pakistan, with the above-noted accounts making up the remaining 20% (Table 1).

Some of the increase in ESF funding, from FY2009 - FY2010, were the supplemental appropriations passed by Congress. ESF is used to fund a wide array of activities. In Pakistan, the program is used to help establish political parties and bolster Pakistan's ability to conduct elections; help the government provide services to its citizens; promote the delivery of health-related technologies; provide basic education

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<sup>44</sup> Bodeen, "Pakistan's Gilani Visits Ally Beijing Amid U.S. Rift," accessed on May 21, 2011, 15.

<sup>45</sup> Statement before the Senate Armed Services Committee, February 6, 2008.

<sup>46</sup> Ibid., 9.

support and improve the quality of universities in Pakistan. ESF funds also provide help for the government of Pakistan to pursue economic reforms, such as improving tax collection, strengthening border management, and building infrastructure. ESF aims at promoting agriculture, which is a key component of job growth in rural districts, and supports linkages between farmers, markets, and business service providers to increase access to modern farm equipment. ESF also promotes private-sector competitiveness to strengthen the business community, create jobs, and expand the economy.<sup>47</sup> However, the small percentage of funds dedicated to carrying out all these activities is grossly insufficient and lacks both the additional funds and clarity of purpose, besides the true objectives, of both the donor and the receiver.

## **B. COST-BENEFIT ANALYSIS**

We have considered the two highest funded programs, Coalition Support Funds (CSF) and Economic Support Funds (ESF), for the cost-benefit analysis on the U.S. aid to Pakistan from the year 2001 to 2010. These programs are the major heads of the direct overt U.S. aid provided to Pakistan and constitute 70% of the total funds. After listing the tangible monetary costs for cooperation, a list of intangible and tangible benefits for both security and economic aid will follow.

Some Pakistanis and Americans saw the United States' killing of Osama bin Laden in Pakistan as treachery, which further fueled the feeling of distrust between both countries. Pakistanis considered the raid an infringement on their sovereignty and the U.S. saw Pakistan as a collaborator of Bin Laden. What will happen to the foreign aid flowing from the United States into Pakistan remains to be seen, but the question is: with the cost of \$3.1 billion for fiscal year 2011 is the United States reaping any benefits from this foreign aid?<sup>48</sup> Some experts might argue that the United States needs Pakistan in its fight against terrorism. Furthermore, it must support the country's development as a

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<sup>47</sup> Statement before the Senate Armed Services Committee, February 6, 2008, 9.

<sup>48</sup> Brian Wingfield, "Making Sense of U.S. Foreign Aid to Egypt and Elsewhere," *Forbes* (2:10PM January 29, 2011), <http://www.forbes.com/sites/brianwingfield/2011/01/29/making-sense-of-u-s-foreign-aid-to-egypt-and-elsewhere/>, accessed on July 21, 2011.

stable state. Pessimists say that if the United States does not intervene in Pakistan, the country could descend into certain turmoil and continue to grow as a terrorism safe place.

One of the cost-to-benefit success stories in the U.S. engagement with Pakistan is the successful drone strikes that have killed a large number of high value Al Qaeda targets. However, some may consider these tactical victories small in comparison with the high political costs of these drone strikes that might unite various militant groups against the U.S. and the Pakistani government.<sup>49</sup> Calling these drone strikes a success shows how there has been a “securitization” of aid instead of a people-centric approach to foreign aid. Even though the Kerry-Lugar-Berman was mostly a bipartisan U.S. commitment of foreign aid assistance to Pakistan, with a sharp increase in Economic Related Expenditures (ERF) in comparison with Security Related Expenditures (SRF), there is certain unease with the capacity of USAID and the DOS to efficiently administer and account for this substantial increase in assistance.<sup>50</sup> Only time will tell if this spike in people-centric investment will result in a higher benefit-to-cost ratio.

The exact definition of what constitutes “costs” and “benefits” will likely vary for all the different stakeholders involved in the foreign aid that is going into Pakistan. Furthermore, with the high levels of foreign aid given to Pakistan it is difficult to explain that the country ranks number 12 in the failed state index, even though last year it ranked number 10.<sup>51</sup> In the research for this thesis, most of the tangible benefits for the U.S. alliance with Pakistan have been seen in the security realm, for example in the use of bases and over-flight rights and also with the successful drone strikes in Pakistan.

In contrast, the CIA World Factbook shows that the Pakistani population has not been benefiting from the flow of foreign aid going into the country. In dealing with

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<sup>49</sup> Bobby Ghosh and Mark Thompson, “The CIA’s Silent War in Pakistan,” <http://www.time.com/time/printout/0,8816,1900248,00.html#> (accessed July 21, 2011).

<sup>50</sup> Fair C. Christine and United States. Congress. House. Committee on Oversight and Government Reform. Subcommittee on National Security and Foreign Affairs, *U.S. Aid to Pakistan: Planning and Accountability : Hearing before the Subcommittee on National Security and Foreign Affairs of the Committee on Oversight and Government Reform, House of Representatives, One Hundred Eleventh Congress, First Session, December 9, 2009* (Washington: U.S. G.P.O. : For sale by the Supt. of Docs., U.S. G.P.O., 2011), 77.

<sup>51</sup> “The Failed States Index 2011,” *Foreign Policy* (2011), August 26, 2011.

Pakistan, a country with the sixth largest population in the world, a literacy rate of less than 50 percent, and an annual per capita Gross Domestic Product (GDP) of \$2,500, it is critical that the U.S. finds more innovative ways of disbursing foreign aid to influence the population—which is the base of power and legitimacy for the Pakistani government.<sup>52</sup> Key facts on Pakistan are presented in Figure 3.

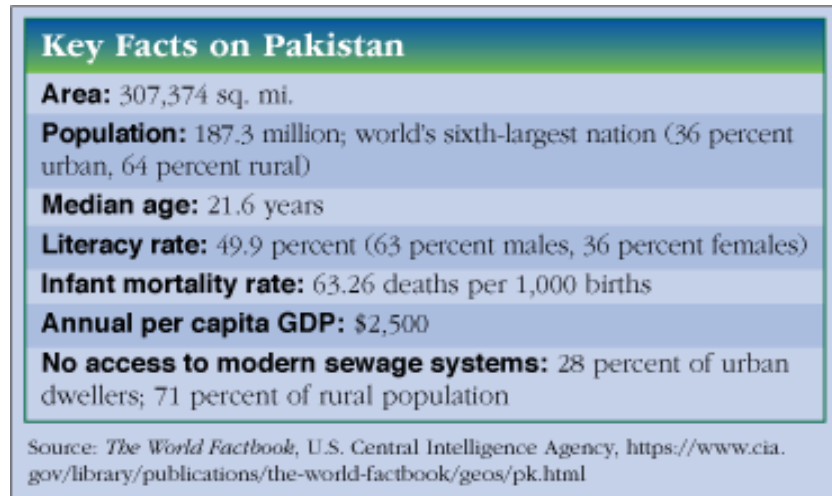


Figure 3. Pakistan Fact Sheet

Even though there is consensus within the U.S. government that the funds flowing into Pakistan have not been used effectively, there is no consensus as to what the root cause of the problem in Pakistan is and how to fix aid disbursement to make it more efficient. To find feasible solutions for the disbursement of foreign aid going into Pakistan, a systems thinking approach and a causal loop diagram will help understand the behavior of the current foreign aid structure and how to make it more effective. Aid to Pakistan since 2001 is summarized in Figure 4.

<sup>52</sup> –Central Intelligence Agency - the World Factbook / Pakistan,” CIA, <https://www.cia.gov/library/publications/the-world-factbook/geos/pk.html> (accessed August 16, 2011).

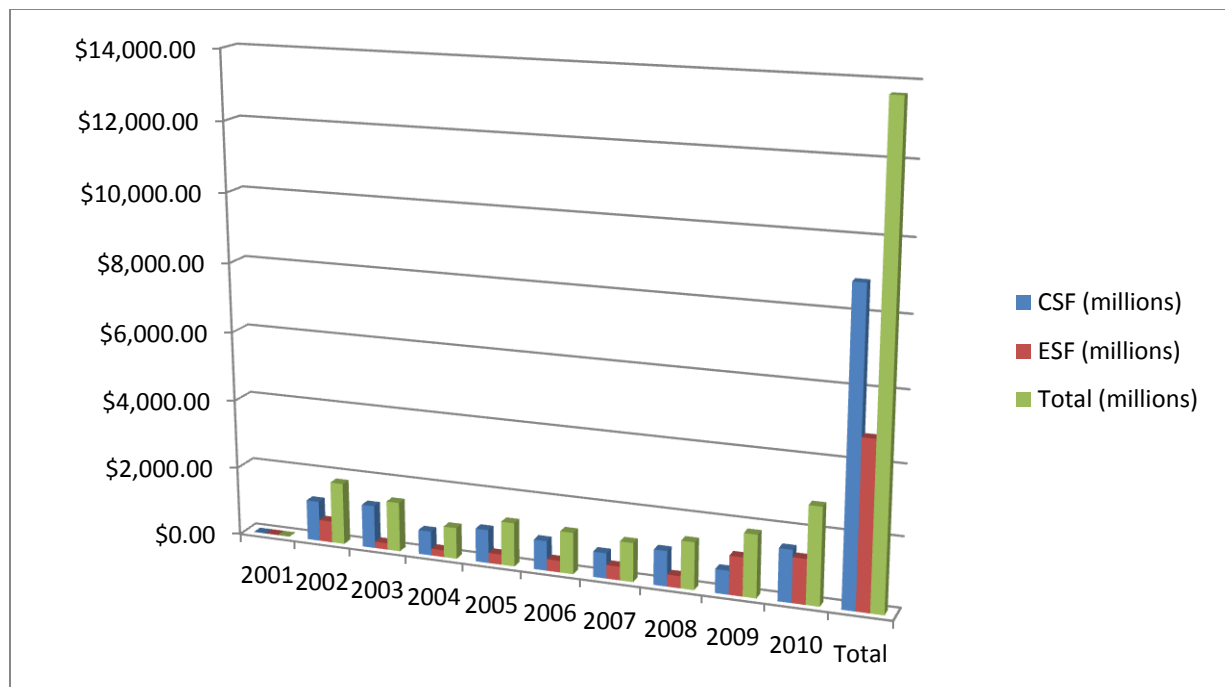


Figure 4. U.S. Aid to Pakistan

Social and security problems in Pakistan have correlation with United States security objectives; this is why Pakistan has received \$13,676 million combined between CSF and ESF from 2001–2010. The graph shows that there has been a steady increase since 2001 in ESF, which could be considered long-term assistance programs that should reap benefits if these funds are properly invested. To show the tipping of the scale from CSF to ESF, in 2002 CSF to Pakistan totaled \$1,169 million and ESF totaled \$625 million compared to 2010 in which CSF totaled \$1,499 million and ESF was \$1,292 million. This is a 28% increase in military-related spending compared to a 106% increase in economic development aid. Even though this has been a step in the right direction, the total CSF from 2001 to 2010 has been \$8,881 million compared to \$4,785 million for ESF, which is 85% more on the military/security spending when compared to the more population-centric approach.

A population-centric approach to aid will not eliminate poverty or extend health care and education to all of Pakistan. However, it can yield positive effects within the

populace by legitimizing the government, promoting pro-American objectives and, most importantly, isolating extremists from the population, thus denying safe haven to these destructive groups.

What have been the benefits in relation to the cost (foreign aid)? In terms of military benefits for the United States, these will be measured in terms of successful drone strikes, overt/covert military operations against Al Qaeda/Taliban strongholds, combined military operations within Pakistan, and special operations against key Al Qaeda operatives. The benefits in economic aid will be measured with key indicators like education, GDP, and public opinion.

## 1. Military Aid Benefits

- a. Successful U.S. led drone strikes in Pakistan as shown in Figure 5.

Estimated Militant Deaths from U.S. Drone Strikes in Pakistan 2004 - 2011		
	Deaths (low)	Deaths (high)
2011*	312	434
2010	581	939
2009	266	502
2008	134	165
2004-2007	81	103
Total	1,374	2,143

*\*Through October 2, 2011*

Estimated Militant Leader Deaths from US Drone Strikes in Pakistan, 2004-2011	
2011*	4
2010	12
2009	7
2008	11
2004-2007	3
Total	35

*\*Through October 2, 2011. Included in estimated militants and estimated totals, above.*

Figure 5. Drone strikes in Pakistan

- b. Pakistan cooperation with U.S. counterterrorism efforts.
- c. Killing of Osama bin Laden.
- d. Much needed funding for the Pakistan military in FATA region.

The U.S. has also benefited from the costs of CSF by using supply routes through Pakistan to support coalition troops in Afghanistan. Consequently, this gives the military an advantage by saving time and significant cost compared to using other avenues of logistics distribution. Similarly, Pakistanis have benefited from U.S. training to the frontier corps units deployed in the FATA and other trouble spots, but the country has paid a heavy price of cooperation in terms of loss of life and the rise of domestic terrorism. Even though there is no way of calculating the cost of human lives, the destruction of social capital can be compensated by adopting the population-centric approach of providing more economic aid than military aid.

## **2. Economic Aid Benefits**

The benefits of economic aid have not been tangible and are almost negligible. Pakistan's improvement challenge is significant and was worsened by the unprecedented floods in July 2010. Pakistan ranks 125 out of 169 countries in the UN Human Development Index.<sup>53</sup> About 33% of the population lives on less than \$1 a day and almost a quarter of the population is underfed.

Education in Pakistan is among the lowest in South Asia. Gender inequality in access to schools, limited access to education in remote and ungoverned areas, lack of sufficient infrastructure, and inferiority of teaching support are general challenges in education. Furthermore, almost half of the population is illiterate. The 2010 flooding was a blow to education, damaging over 8,000 of the already poorly financed schools across the country.<sup>54</sup>

It is difficult to quantify government performance in the case of Pakistan. However, governance has proved to be inefficient in law enforcement, urban development, and other socio-economic areas; this is complicated by high levels of corruption, to include mismanagement of funds. In order for the enabling conditions to be met Pakistan, must invest in infrastructure, and economically self-sustaining

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<sup>53</sup> The Human Development Report Team, "Pakistan. Country Profile: Human Development Indicators - Human Development Index," <http://hdrstats.undp.org/en/countries/profiles/PAK.html> (accessed August 15, 2011).

<sup>54</sup> Australian Government, "AusAID - Pakistan," <http://www.ausaid.gov>. (accessed August 20, 2011).

enterprises. Furthermore, a synchronized joint venture between the government, private sector, NGOs and the population should be achieved to enhance the effectiveness of foreign aid.

One of the tangible benefits of U.S. foreign aid on the economic front have been the emergency relief efforts after the natural disasters that have ravaged Pakistan in the last couple of years. However, these have been reactive and not proactive in nature. The following is a grouping of interrelated and interdependent components that form the complex system of foreign aid in Pakistan and a systems thinking approach to make economic-related support more effective.

### **C. SYSTEMS THINKING APPROACH**

The formulation of the problem is that foreign aid is not helping bring governance to the recipient government's country. Grievances of the population are not being met because the money is not getting to the people. ESF might not be enough but if the funds are managed correctly, these could have a positive impact on the population. These significant variables to explore all interact within the complex system as depicted in Figure 6:

- Foreign Aid - Defined as economic assistance provided by one nation to another
- Corruption - Corruption in Pakistan is a substantial obstacle and is still perceived to be pervasive and general<sup>55</sup>
- Grievances - A cause of distress (could be lack of basic needs) felt to afford reason for complaint or resistance<sup>56</sup>
- Security - Degree of protection against danger, damage, loss or criminal activity<sup>57</sup>

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<sup>55</sup> Marie Chêne, Craig Fagan and Sylwia Plaza, "Overview of Corruption in Pakistan," *Transparency International - Anti Corruption Resource Centre - U4 Expert Answer* (August 08, 2008), accessed on August 22, 2011–13.

<sup>56</sup> *Webster's Dictionary of English Usage*, (Springfield, Mass.: Merriam-Webster, 1989), 11, 978.

<sup>57</sup> *Ibid.*



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This causal loop diagram explains how the different variables interrelate with each other and the cause and effect relationships within the system. The **S** indicates a change in the same direction, for example –as corruption goes up, grievances also go up.” The **O** signifies that there is a change in opposite direction, for example –as grievances go

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up, security goes down.” The **R** indicates that the diagram is a reinforcing loop that compounds change in one direction with more change in the same direction. This is known as a vicious or virtuous cycle.<sup>59</sup>

As foreign aid goes up, corruption within the receiving government goes up with the availability of funds. As corruption goes up, with the dwindling availability of funds, the grievances within the population goes up. As the grievances go up, the security goes down. As security goes down, military spending goes up which leads to non-military spending going down. As non-military spending goes down, stakeholders must develop strategies to increase social entrepreneurship as a self-sustaining tactic to diminish the dependence on foreign investment. As entrepreneurship goes up, alternate sources like foreign investment go up, and as foreign investment goes up, foreign aid will go down—which is what the donor government eventually wants. The point of intervention would be investment in social entrepreneurship to take the cycle from vicious to virtuous. In other words, investment in social entrepreneurship would reverse the process and reduce dependence on foreign aid.

Rather than leaving the population needs to the government or private sector to address, these social entrepreneurs create innovative solutions, delivering higher than usual results while improving the lives of many people. Investing in innovative solutions by, with and through social entrepreneurs and other NGOs instead of the usual foreign aid disbursement through the receiving government could be the answer to increase the efficacy of this funding. Other variables that could be addressed are trust between the receiving and donor government, decentralization of foreign aid through micro-alliances at the local level, governance and interest alignment between both countries. These would be discussed in detail in Chapter IV.

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<sup>59</sup> Anderson, V., *Systems Thinking Basics From Concepts to Causal Loops*, (Waltham, MA: Pegasus Communications, Inc., 1997).

## **IV. EFFECTIVE FUNDS' MANAGEMENT**

### **A. INTRODUCTION**

The Pak-U.S. alliance in the War on Terror, besides resulting in the loss of more than 35,000 citizens and 3,500 security personnel, has put enormous pressure on Pakistan's economy. While the effects of destruction of infrastructure, internal migration of millions of people from parts of northwestern Pakistan, erosion of the investment climate, steep decline in production and growing unemployment are evident, the war has brought economic activity to a virtual standstill in major parts of the country. —Pakistan had never witnessed such devastating social and economic upheaval in its history, even after dismemberment of the country by direct war.”<sup>60</sup> On the other side, the U.S. objectives and aspirations have not been fully realized in the area and there is a rising concern of fund utilization and justification.

While the answers to the bigger concerns about future allocation of funds, disbursement, and accountability remain tied to the future U.S. policy on the issue, this chapter deals with the existing management of major military and non-military funds (i.e., Coalition Support Funds [CSF] and the Economic Support Funds [ESF], respectively). Since the CSF and ESF constitute the bulk of the total funds provided to Pakistan, insight into their existing management would provide a broader understanding of their utility and contributions towards achieving major objectives. Towards the end, ways to achieve better return on the U.S. investment in Pakistan would be discussed by exploring concepts like decentralization, micro-alliances, channelization, prioritization, reforms, accountability, and social entrepreneurship.

### **B. COALITION SUPPORT FUNDS (MILITARY)**

The existing system of Coalition Support Funds (CSF) management, as shown in Figure 7, involves the following procedure for reimbursement to the Pakistan Government:

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<sup>60</sup> Economic Survey of Pakistan 2010–11, —Cost of War on Terror for Pakistan Economy”: Special Section, 219.

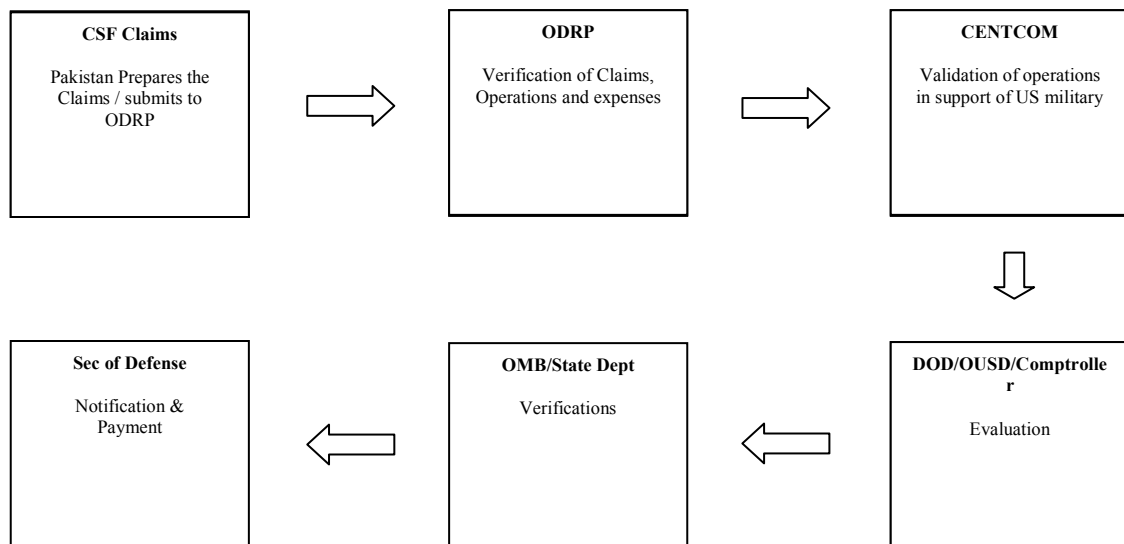


Figure 7. The Reimbursement Procedure

The procedure for the reimbursement of CSF funds is given in the above block diagram, explaining that Pakistani claims are prepared and forwarded to the office of ODRP for reimbursement.<sup>61</sup> Earlier, these claims were sent from ODRP to CENTCOM with little verification, however, in 2007, the Office of the Defense Representative to Pakistan (ODRP) was asked to play a bigger role in evaluating these claims before forwarding them to CENTCOM.<sup>62</sup> Additionally, in response to a Defense Inspector General review conducted in 2003, DoD implemented additional guidance to improve oversight of the CSF reimbursed to Pakistan including, but not limited to, the following measures, where submitted costs can be:

1. ~~Recommended~~ for approval”
2. ~~Deferred~~” and returned for additional documentation
3. ~~Disallowed~~” for not being consistent with the scope of CSF

<sup>61</sup> Economic Survey of Pakistan 2010–11, ~~Cost of War on Terror for Pakistan Economy~~”: Special Section, 220.

<sup>62</sup> Charles Johnson, *Preliminary Observations on the use and Oversight of U.S. Coalition Support Funds Provided to Pakistan*, (United States Government Accountability Office, 2008), 26, 3.

ODRP reviews the Pakistani claims and indicates that to the best of their knowledge military support was provided and expenses were actually incurred. These claims are then sent to CENTCOM, where they are validated for their authenticity and it is ensured that Pakistani operations were essential to support U.S. military operations in the theater.<sup>63</sup> The claims are then sent to the Office of the Under Secretary of Defense for (Comptroller), who:

1. Performs a macro-level review comparing the cost to similar operations, and
2. Assesses whether the cost categories are reasonable, selected subcategories are reasonable compared to U.S. costs, and costs are consistent with previous claims.<sup>64</sup>

In addition, both the Undersecretary of Defense for Policy and the State Department verify that the reimbursement is consistent with the U.S. government's National Security Strategy and that the CSF payment does not adversely impact the balance of power in the region. —The United States reimbursed Pakistan about \$5.56 billion in CSF for military operations in FATA and other support in the war on terror. CSF reimbursement funds are paid directly into the Pakistani government treasury and become sovereign funds. Once they become sovereign funds, the U.S. government has no oversight authority over these funds.”<sup>65</sup> It may be noted that the DoD has disallowed or deferred a significantly greater amount of CSF reimbursement claims from Pakistan after the year 2007 due to the increasing trust deficit in the fields of intelligence sharing and disagreements on other issues. It is also worth mentioning that the cost the U.S. is paying for Pakistan's services is not even one tenth of the cost it would incur if the U.S. and NATO forces get logistic support from different supply routes.

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<sup>63</sup> Johnson, *Preliminary Observations on the use and Oversight of U.S. Coalition Support Funds Provided to Pakistan*, 2.

<sup>64</sup> Ibid., 3.

<sup>65</sup> Ibid., 4.

### C. ECONOMIC SUPPORT FUNDS (NON-MILITARY)

All the direct overt U.S. Assistance to Pakistan totaled less than \$90 million in 2001, with food aid comprising \$86 million and \$4 million in limited security-related assistance. There was no assistance for economic development. In 2002, Pakistan received \$2.1 billion, including \$665 million in economic aid. Clearly Pakistan did not become needier; rather, Pakistan became important within the political context of the war on terror.<sup>66</sup> The flow of already limited economic assistance to Pakistan fluctuated between 1971 and 2007. This dramatic variation in assistance appears to have little to do with Pakistan's needs; rather, Washington's changing policy priorities towards the country at different points in history and efforts to achieve U.S. objectives drive the variation.<sup>67</sup>

A major portion (57%) of the U.S. \$10 billion aid (cost of cooperation) has gone into CSF; 18% was consumed in security assistance, and 16% was given to support the budget deficit, leaving only 10% as the ESF and humanitarian development, including for 2005 earthquake assistance and education. It comes out to be only \$64 million per year for over 55 million school-aged children (\$1.16 per child per year). The U.S. has provided Pakistan with funds amounting to \$6,536 million for the non-military activities including Child Survival and Health (CSH), development Assistance (DA), Food Aid, Human Rights and Democracy Funds (HRDF), International Disaster Assistance (IDA), Migration and Refuge Assistance (MRA), and Economic Support Funds (ESF).<sup>68</sup> While the ESF had the major share of non-military funding (\$4,797M), the ratio of military and non-military funds (3:1) clearly demonstrates the priority of the U.S. in favor of the direct military and security related assistance.

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<sup>66</sup> Christine Fair and United States. Congress. House. Committee on Oversight and Government Reform. Subcommittee on National Security and Foreign Affairs, *U.S. Aid to Pakistan: Planning and Accountability : Hearing before the Subcommittee on National Security and Foreign Affairs of the Committee on Oversight and Government Reform, House of Representatives, One Hundred Eleventh Congress, First Session, December 9, 2009*, 77, 3.

<sup>67</sup> Ibid.

<sup>68</sup> Haider Mullick, "U.S. Foreign Aid and Economic Growth: A Post-9/11 Case Study of Pakistan as a Key Ally in the War against Terrorism," Proceedings to the Pennsylvania Economic Association Conference, Summer 2009, 3.

The majority of ESF Funds are received by the government and managed through respective ministries for the purpose intended. However, owing to the limited amount of funds and the high number of problems, objectives remain far from achievement. Weak financial institutions, mismanagement, corruption, and lack of accountability further compound the problem. As a result, Pakistanis tend to believe that U.S. assistance to Pakistan is driven not out of humanitarian concern rather a cold requirement to sustain Pakistan's cooperation in the U.S. war on terrorism. This has led to various formulations such as the United States is buying Pakistan, leasing its military, creating a vassal state, and so forth. Other programs such as U.S.-promoted educational reform of the religious schools and public school curriculum reform are often viewed warily as Washington-led attempts to de-Islamize Pakistan's educational system.<sup>69</sup> The fact remains that ESF is neither enough nor aimed at supporting the weak economic infrastructure in Pakistan, raising the population grievances.

#### **D. BETTER RETURN ON THE U.S. INVESTMENT**

Measuring the effectiveness of any foreign assistance remains the most difficult task for any organization/state. In case of the Pak-U.S. alliance, conducting a critical examination of military and non-military spending and the contribution they have made in achieving the U.S. objectives, it can be assessed that these funds have either been underutilized and/or not reached the intended recipient besides being grossly inadequate. —Although the new Obama strategy recognizes the importance of investing in Pakistan's future, the resources it plans to marshal are modest in relation both to the challenges Pakistan confronts as well as the central importance the administration assigns the country in its regional policy.”<sup>70</sup>

Notwithstanding the future course of the U.S. policy on the issue, the existing funds can be managed, to some extent, to provide a better return on the U.S. investment in Pakistan. Improvements and innovations in the current processes of fund distribution,

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<sup>69</sup> Christine C. Fair, *The Madrassah Challenge: Militancy and Religious Education in Pakistan* (Lahore, Pakistan: Vanguard Books, 2009), 2.

<sup>70</sup> Maleeha Lodhi, National Defense University and Institute for National Strategic Studies, *The Future of Pakistan-U.S. Relations: Opportunities and Challenges* (Washington, D.C.: Institute for National Strategic Studies, National Defense University, 2009), 5.

infrastructure, and monitoring through decentralization, micro-alliances, channelization, prioritization, reforms, and accountability are likely to enhance cost-effectiveness, improve perception, reduce the trust deficit and create an environment for a better relationship between the two countries.

## **1. Decentralization and Institutionalization**

The existing structure of aid disbursement in Pakistan is generally centralized and offers less visibility to the donor, besides being inefficient. ~~It~~ is claimed that roughly half of all U.S. assistance pledged for Pakistan is spent on administrative costs, including highly paid foreign experts.”<sup>71</sup> While some of the funds are deposited directly in the government treasury, having centralized disbursement, control and management, most of the other funds are either insufficient, mingled with other funds, fall prey to the higher administrative costs, and do not reach the intended recipient. One such example is the disbursement of ~~development~~ assistance in FATA that runs the risk of falling prey to corruption by the inefficient and unaccountable institutions.”<sup>72</sup> The absence of credible institutions for the disbursement, monitoring and accountability of foreign assistance not only leaves these funds in the hands of incompetent/corrupt government officials but also gives rise to popular grievances.

Decentralized disbursement of funds at provincial levels or even further decentralizing into various subsectors would be effective in bringing significant progress. The U.S., besides balancing the CSF with the ESF, needs to consider conditioning of the assistance on measurable/visible milestones in the respective sectors; Pakistan requires institutionalizing the aid disbursement mechanisms involving a foreign/non-government body for enhanced visibility and effective utility of various funds. The decentralization may not affect the CSF disbursement setup; however, the ESF can be made effective

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<sup>71</sup> Susan B Epstein, Pakistan: U.S. Foreign Assistance, Congressional Research Service Report for Congress, July 28, 2011, 29. [~~U.S.~~ aid to Pakistan *“Depleted by Admin Costs”* *Financial Times* (London), August 27, 2009.]

<sup>72</sup> ~~Reforming Pakistan’s Civil Service,~~” International Crises Group Asia Report No 85, February 16, 2010, at <http://www.crisisgroup.org/home/index.cfm?id=6528>; GAO, “Combating Terrorism: Planning and Documentation of U.S. Development Assistance in Pakistan’s Federally Administered Tribal Areas Need to be Improved, April 2010, at <http://www.gao.gov/products/GAO-10-289> (accessed 15 September, 2011).



through decentralized disbursement, ensuring that the aid is reaching the intended recipient under coordinated, controlled and transparent conditions. Therefore, decentralized disbursement of foreign aid through credible institutions would not only improve cost effectiveness but also assist in improving U.S. perception by the masses.

## **2. Channelization and Accountability**

Corruption remains deep rooted in South Asia and Pakistan is no exception. The very fabric of society has largely been destroyed by this menace, which is not only affecting the socio-economic structure but also defacing the image of the country globally. “Corruption and lack of sufficient transparency is identified as a key obstacle to effective implementation of U.S. aid programs in Pakistan.”<sup>73</sup> Pakistan’s system of fund management lacks channelization and accountability, which is the foundation to achieve cost effectiveness and transparency, respectively. A check and balance procedure through visibility and accountability is the second and foremost step towards success.

While the Coalition Support Funds have a better system of disbursement with checks and balances, Economic Support Funds disbursement lacks the built-in mechanisms for the funds to be channeled systematically to the recipient, resulting in loss of capital. The foreign aid is required to be channelized through non-government or semi-government organizations under the representatives of the aid donors for effective implementation of the assistance program. The accountability mechanisms need to be incorporated within the system to ensure visibility/transparency of fund utilization. The areas that are most affected by lack of governance could take priority for rehabilitation over the others. Pakistan needs to build reliable and credible financial institutions and strengthen its disbursement/accountability mechanisms to be effective in gaining optimal benefits from the valuable financial assistance.

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<sup>73</sup> Epstein et al., *Pakistan U.S. Foreign Assistance*, 28.

### 3. Prioritization and Reforms

—The politics of reforming Pakistan’s governance process and tax structure may be among the most important obstacles to improving aid effectiveness.”<sup>74</sup> This may be true, but the fact that a major part of the current U.S. ‘pre-conditioned’ assistance to Pakistan remains tied to pre-conceived objectives with little or no flexibility also poses serious limitations to incorporating reforms in the existing mechanisms. However, Pakistan, in order to prioritize the funding in the sectors that deserve the most, would require a thorough inside-out approach to assess and revive the existing system, infrastructure, requirements and skills for handling the task effectively. The U.S., with a balanced and more population-centric approach towards Pakistan, can assist in establishing such a system without compromising on its short- and long-term objectives.

Pakistan would be required to scrutinize its critical deficiencies in the existing infrastructure (including, but not limited to, education institutions, energy sector, social security, and socio-economic conditions) and evaluate them against the available resources in terms of national and foreign funds. The reforms in the policies/structures would be the next step to streamline the spending in different sectors along with allocation of these resources, on a priority basis, to the sectors that require the most and are critical in addressing both the short-term and long-term issues. Provision of security to the population in general and employment opportunities to the heavy youth bulge would not only serve to bring stability but also reduce dependence on foreign aid. While it would be an uphill task for Pakistan under the current environment, the U.S. can assist by providing expertise, training, infrastructure and economic support that would not only enhance its perception but also lays foundation of a long-term strategic partnership. There is no denying the fact that while the U.S. revisits its strategy/policy towards Pakistan, prioritization of funds and system reforms would help pave way for a better return on the U.S. investment in Pakistan.

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<sup>74</sup> Epstein et al., *Pakistan U.S. Foreign Assistance*, 27.

#### 4. Entrepreneurship and Micro-Alliances

One of the major policy concerns of Washington regarding Af-Pak has been creating stable conditions for economic growth that has not materialized even after spending billions of dollars in last 10 years. —The answer centers on an often underestimated group, diluted into the vague mantra of ‘civil society’, overwhelmingly ignored as a force for change in fragile states and conflict zones: business entrepreneurs. Their experience demonstrates that, while stability is invaluable, it is not always a pre-condition for growth and development.”<sup>75</sup> The marble industry in FATA is a pertinent example of such business entrepreneurs that remains profitable and providing employment to thousands of workers despite poor security conditions. These workers, in the absence of such opportunity, remain vulnerable to join extremists who are abundant in the area. Rwanda, in the post-genocide era, exhibited the same structural innovation to enhance average farm income by 17% annually.<sup>76</sup>

Entrepreneurship and innovation are the engines of any economy.<sup>77</sup> ‘Ashoka’ presents another clear and pertinent example to highlight the importance of entrepreneurs within a society.<sup>78</sup> The economic growth is conditioned to availability of infrastructure for business/entrepreneurs and education to contribute to the society. Entrepreneurships start from small businesses that cultivate the culture and gradually grow in dimensions. While Pakistan ranks 83<sup>rd</sup> in the ease of doing business in the ‘World Bank’s Doing Business 2011’ report and the policies of the government of Pakistan have never been supportive of small businesses; the enormous human resource potential and upcoming talented young entrepreneurs, like BAP, MITEFP, OPEN etc, provide a ray of hope to the country to embark on way to prosperity.<sup>79</sup> While Pakistan

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<sup>75</sup> Michael Fairbanks, *In the River they Swim: Essays from Around the World on Enterprise Solutions to Poverty* (West Conshohocken, Pa: Templeton Foundation Press, 2009), 274.

<sup>76</sup> Ibid.

<sup>77</sup> Arabic Knowledge@Wharton, “Entrepreneur Azeem Ibrahim on Rewriting a Pakistan’s Economy Recovery from Scratch,” (October 19, 2010), (accessed on Sep 24, 2011), 3.

<sup>78</sup> Krauthammer: *Krauthammer and Ashoka Sign a Partnership Agreement to Support Social Entrepreneurship*. (United Kingdom, Coventry: Normans Media Ltd, 2009; 2009), n/a.

<sup>79</sup> Ortman, Jonathan —President, Public Forum Institute,” —Spring Indigenous Entrepreneurial Growth in Pakistan,” *Entrepreneurship* (20 December, 2010).

needs to introduce significant reforms to fully develop its entrepreneurial potential that provides all Pakistanis to benefit from opportunities for entrepreneurship, growth, employment and innovation; a strong support is required from the international community (U.S. in specific) to establish such infrastructure.

Social entrepreneurship is the catalyst to alleviate the reliance on foreign aid. Pakistan, besides having enormous potential for entrepreneurship and micro-alliances, has shown an increasing trend of the same with a reasonable degree of success in variety of fields including, but not limited to, telecommunication, small scale businesses, cottage industries, carpets/cotton markets, marble industries, and textile products. Therefore, Instead of providing financial assistance, promoting entrepreneurial principles to encourage social transformation could be more beneficial in the long term for the U.S. In the context of brining socio-economic development and easing economic hardships from the people of the areas freed from the extremists, the U.S. should assist in investment and rehabilitation in the ROCs (Reconstruction Opportunity Zones) for creating employment opportunities for the people.<sup>80</sup>

As mentioned earlier, as entrepreneurship goes up, alternate sources like foreign investment goes up, and as foreign investment goes up, foreign aid will go down which is what the U.S. would be desiring. The U.S. policy makers may consider support to local entrepreneurs in Pakistan as a major force for both change and stability. The financial and technical support including access to the U.S. markets, relaxation in tariffs/export requirements, entry into global trading system and similar facilitations would not only provide a positive way forward to the youth (65% of Pakistan's total population) but also reduce reliance on the foreign assistance. Once initiated, the entrepreneurial culture would have the strength not only to direct the country towards a progressive economy but also free it from dependence on foreign aid besides creating positive effects on the society that in turn would assist in isolating the extremists from the population. Therefore, the strategy should be to generate social entrepreneurship to create a self-sustaining mechanism, which will eventually erode the vicious cycle of foreign aid

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<sup>80</sup> Arabic Knowledge@Wharton, *Entrepreneur Azeem Ibrahim on Rewriting a Pakistan's Economy Recovery from Scratch*, 2.

dependence. A proposition that suits the U.S. as it not only reduces the burden on the U.S. economy but also contributes in achieving the long term strategic relationship with Pakistan besides a likely reduction in extremism and enhancement in pro-U.S. sentiments within Pakistan.

## **E. SUMMARY**

The evaluation of cost-benefit of foreign aid intervention poses challenging problems owing to the lack of measures of its effectiveness and contribution towards achieving the set objectives. What has been discussed in this chapter simply suggests ways and means to achieve better return on the current U.S. investment in Pakistan. While little could be altered in the military funds (CSF), a significant improvement can be made in non-military funds' expenditure through various reforms, restructuring, decentralization, micro-alliances, channelization, prioritization, accountability and facilitating entrepreneurship. The most important link in achieving this would be the U.S. approach to the problem, shift in aid policies and willingness to adopt a population-centric approach while keeping its strategic goals in sight. Pakistan needs to mobilize its resources in order to achieve entrepreneurial culture in the country and reduce dependence on foreign aid.

While the effective fund management may bring some improvement in cost-benefit equation for both the states, it would certainly not be the answer for bigger concerns like the growing trust deficit between the two allies and the future of their relationship. —While the leadership of the two countries place a high value on their ties, and acknowledge the dangers of a collapse of their relationship, their publics and legislatures do not share these perceptions and increasingly view the other with suspicion and depict one another as an unreliable ally.”<sup>81</sup> To evaluate such a unique situation in the relationship and calculate the pros and cons of each other's moves, let us utilize the game theoretical approach to analyze the situation under varying sets of conditions.

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<sup>81</sup> Maleeha Lodhi and National Defense Univ. Washington DC, Inst. for National Strategic Studies, —The Future of Pakistan-U.S. Relations: Opportunities and Challenges,” Defense Technical Information Center, <http://handle.dtic.mil/100.2/ADA497485>; 1.

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## V. COST-BENEFIT ANALYSIS: A GAME THEORETICAL APPROACH

### A. INTRODUCTION

This chapter is dedicated to provide a game theoretic approach to critically evaluate Pak-U.S. relations in different aspects. The suggested game theory model provides a heuristic tool that will help evaluate not only the existing puzzle but also other economic, social, and political relations. Additionally, this model can be modified to address other related situations in the context of cost benefit analysis.<sup>82</sup>

In international relations (IR), states and sovereign countries build their strategies and policies according to their national interests. They rationally engage each other in an attempt to advance their national interests, protect themselves, or maximize their returns/profits and reduce associated costs. Many international relation theories are dedicated to explaining and understanding the states' behavior in the global environment.<sup>83</sup> The base line is that all states make decisions to advance their perceived national interest according to the prevalent threat or profit perception in a rational manner. In doing so, they are basically carrying out a cost-benefit analysis (CBA) in order to determine their best options. Therefore, countries thoroughly analyze their available options to plan their future moves, in a way that will yield maximum profit with minimum cost.<sup>84</sup>

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<sup>82</sup> The game here mainly captures the essence of a game describes a situation between two major auto companies and their decision toward a lobbying effort to effect public policy (the 1990 clean air act). The game was designed by Evelyn Fink, Scott Gates, Brian Humes, and published in their book –Game theory Topics.” For more read Evelyn C. Fink, Scott Gates and Brian D. Humes, *Game Theory Topics: Incomplete Information, Repeated Games, and N-Player Games*, Vol. 122 (Thousand Oaks, Calif.: Sage Publications, 1998), 69, 7.

<sup>83</sup> Stephen M. Walt, “International Relations: One World, Many Theories,” *Foreign Policy*, no. 110, Special Edition: Frontiers of Knowledge (Spring, 1998), 29–46.

<sup>84</sup> Anthony E. Boardman, *Cost-Benefit Analysis: Concepts and Practice*, 3rd ed. (Upper Saddle River, N.J.: Pearson/Prentice Hall, 2006), 45–47.

The challenges faced in the use of cost-benefit calculations in international relation (IR) arose from the simple fact that most IR goods have non-tangible factors.<sup>85</sup> Therefore, they are hard to value and cannot be precisely calculated in monetary terms.<sup>86</sup> Hence, it is hard to assign quantitative measures, money or numbers, for instance, to different IR qualitative goods like peace, war, political influence, perception, terrorism, human lives, and environmental issues. Therefore, to simplify their analysis, players use cost benefit techniques that allow them to assign values to these goods.

Cost-benefit techniques are used to determine the best course of action (COA) or decision by assigning values (i.e., “payoffs”) to the different strategies. These techniques are used to simplify the cost-benefit analysis and provide a tool to differentiate between different strategies, policies, or options. However, in cost benefit calculation analysis, one should not only consider the profit and return on investment, but also the cost associated with these profits and relevant consequences.

CBA usually represents one-sided systematic analysis that highlights the most profitable choice among others in monetary terms. Game theory, in contrast, represents the rational approach to reach a decision when others are involved and/or when we have to choose between different strategies. The marriage between the two can produce a vital tool that can help predict best strategies that can produce maximum profit. In our game theory, both costs and benefits extend beyond the financial costs of the players’ strategies

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<sup>85</sup> In their book *Rethinking Cost Benefit Analysis*, the writers Mathew Adler and Erick Posner discussed the challenges facing the use of CBA in general and in political science in particular. The writers refuted all theoretical objections, additionally; they identified these problems to be categorized in two main groups –Practical and Ideological.” The writers state that –As a practical matter, researchers had a great deal of trouble obtaining relevant data, especially for the purpose of valuing environmental resources, human life, and other hard-to-measure goods. The claim that the benefits of a project exceed its costs is not persuasive when the benefits and: the costs appear to rely on arbitrary valuations. As an ideological matter, the technical and utilitarian flavor of CBA was unappealing to the political culture that prevailed during the 19’70s.” Then the writers provide the following explanation to the resent development of CBA in political culture, –It may be that progress in valuation techniques and changes in ideology, or perhaps a sense that regulation had gone too far, account for the reemergence of CBA in the 1980s and 1990s-it is too early to tell.” Matthew D. Adler and Eric A. Posner, —Rethinking Cost-Benefit Analysis,” *The Yale Law Journal* 109, no. 2 (November 1999), 165–247.

<sup>86</sup> Ibid.



to embrace social and political intangible values like domestic and global public perception, and political influence gained or exercised by the players in their domestic and international milieus.

Political Influence, for instance, is one of the vital and most important tools for international interactions, where the states seek to enhance their political status by engaging each other through alliances. Influence has a two-fold impact among the players having different status in the international community. First, it increases the strong player's influence in another environment by the use of soft and/or hard power. Secondly, it expands the national interest of both the players in their own prime interest.

Political Influence mainly can be obtained by the intensive use of hard and soft power. However, the hard power tools used in such interactions can be of two forms: coercive measures that force others for compliance, or methods of inducement where monetary assistance is used to advance one's interests. In simple terms it could be expressed as the "stick and carrot" policy. The soft power, on the other hand, deals with the power of attraction and your ability to obtain desired behavior by attracting people instead of coercing them.

In order to advance the argument on soft power,<sup>87</sup> Joseph Nye recognizes its importance to advance national interests. In his words, he explained how the loss of (U.S.) soft power in 2003 prevented Turkey from providing expected cooperation. The Turkish parliament refused to grant access to the American troops to use its land and enter Iraq from the north due to anti-American sentiments and U.S. unpopularity in Turkey at that time. Hence, the loss of soft power interfered with the U.S. ability to exercise its hard power. Nye identified the public opinion as a crucial element in soft power, where *the public opinion abroad creates either an enabling or disabling environment.*<sup>88</sup> Nye proceeds to explain that, *if being a pro-American is a kiss of death to foreign leaders...*<sup>89</sup> the foreign leaders will be less able to give the U.S. what they

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<sup>87</sup> Trudy Rubin, "Joseph Nye on Soft Power," *American Academy of Political and Social Science* (February 12, 2009). <http://www.youtube.com/watch?v=F8udhM8QKxg>, (accessed August 18, 2011).

<sup>88</sup> Ibid.

<sup>89</sup> Ibid.

want or provide the expected/desired cooperation. Hence, the public perception is another important element that needs to be considered for favorable outcomes in the form of expected cooperation in the cost-benefit analysis.

Another example of the impact of public opinion and perception is the consensus building during the invasion of Iraq in the year 2003. The establishment of coalition forces in the 2<sup>nd</sup> Gulf War demonstrates how the absence of soft power reduced the U.S. ability to achieve the same consensus from all the countries as compared to the coalition established during the 1<sup>st</sup> Gulf War. Such factors are considered important and included as the enabling factors to carry out the cost-benefit analysis through game theory.

The relationship between political influence and public perception is somehow intertwined and has a strong connection. Nye describes how positive public perception facilitates political influence to a degree that reduces the costs and increases mutual benefits. On the other hand, negative public perception can interfere with the players' ability to obtain desired outcomes in terms of political influence by increasing the costs to the limits that outweighs the benefits. In this context, it could be said that benefits are directly proportional to both the public perception, and political influence.

Based on cost-benefit analysis, the game generally describes the strategies adopted by the U.S. and Pakistan. Both the players are pursuing their national interests as well as other regional and international interests. In its advanced stages, the game explains the different political rationale of the two players in the historical context and how that works as a fundamental game changer. Moreover, it also shows how different political approaches have exacerbated Pakistan's fears and firmed the U.S. strategies that eventually distanced bilateral relations. Despite the fact that both players have vital importance to each other, the game demonstrates the impact of historical interactions on the players' rationale as well as the element of mistrust and the perception of betrayal effects. The game will attempt to evaluate such relation to provide bases for the prediction/evaluation of the players' future moves. Consequently, the game will try to identify suitable tools that can be used to enhance mutual cooperation. Moreover, it would lay the foundations for a roadmap that can help to bridge bilateral relations and give possibilities of a way ahead.

In the light of historical examples of bilateral relations between the U.S. and Pakistan, the game is structured in four different stages. In the first stage of the game, it is assumed that both players lack any previous engagement. The second stage represents the one-side game, where one of the players decides to have one strategy that yields better payoffs, regardless of his counterpart's strategy. The third stage is played in light of the lessons learned from the previous two stages, where the U.S. and Pakistan are able to develop their intricate rationale and build a game perception that will affirm their choices in any future interaction. Hence, the final stage of the game will examine the recent developments in U.S.-Pakistan relations, as well as clarifying how both the U.S. and Pakistan have developed their rationale, and how this rationale has fundamentally changed the players' approach to the game.

## **B. GENERALIZED MODEL**

The model recognizes four main elements, which usually have high correlation in the context of international interaction: The perceived costs (C), Received Benefits (B), Public Perception (P), and the gained Political Influence (I). The costs and benefits are recognized to be the basic elements that motivate interactions. However, the other two elements are important supporting elements in the IR. Perception stands for the local public opinion and their perception about the cooperation and motives behind it. On the other hand, the influence element measures the degree of influence a country receives based on its cooperation or the incentives so provided.

The two players have two different strategies, either to cooperate or defect. Mutual cooperation can provide fruitful results. It may presumably enhance one players' influence in a new political environment if the other player's interest is considered in return. This may also help in building up favorable public perception. The mutual defection is assumed to have trivial value or none at all, as both the players will be unable to interact for any gain or loss. Another option is the free ride option, where any one player has a strong incentive to defect and enjoy free ride on behalf of the other players' constraints/limitations. This would secure him the benefit and influence; however, as a result the public perception of both players will be lost.

The simple representation of the CBA is to calculate the net profit (NP), which is the benefit (B) after subtracting the associated cost (C). Mathematically, NP can be defined as follows:

$$NP = B - C$$

According to the game, two more vital elements are included: Influence (I) and Perception (P). Therefore, NP for this game will be calculated as follows:

$$NP = B - C + I + P$$

From the equation above, it could also be said that  $B \propto P \propto I$ , therefore:

$$B - C + I + P > B - C > B - C - I > B - C - I - P \geq 0$$

## 1. Assumptions and Rules

### a. Assumptions:

- 1) Both players are rational actors.
- 2) The game is conducted with imperfect information,<sup>90</sup> (i.e. neither player knows the other player's move in advance).
- 3) Both players seek to maximize their payoffs.

### b. Rules:

- 1) The two main strategies for both the U.S. and Pakistan are either to cooperate or defect.
- 2) The game uses cardinal scaling from zero to 4.
- 3) Scoring:
  - i. Value of the best option is four (4) on the scale.
  - ii. The second best option is three (3).
  - iii. The second worst option is one (1).
  - iv. The worst option is zero (0).

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<sup>90</sup>A game of imperfect information –is one in which neither player knows the actions of the other player before playing her own strategy.” Fink, Gates and Humes, *Game Theory Topics: Incomplete Information, Repeated Games, and N-Player Games*, 11.

The basic game strategies are presented in Table 2. They manifest the players' available options and strategies. The assigned values are presented thereafter.

Table 2. The Game Strategies

		<b>Pakistan</b>	
<b>U.S.</b>		<b>Coop.</b> <b>C</b>	<b>Defect</b> <b>D</b>
	<b>Coop.</b> <b>A</b>	AC	AD
	<b>Defect</b> <b>B</b>	BC	BD

The game is built on cost-benefit analysis, where both players consider the benefits, associated cost, perception and influence. The game in this manner will be symmetric and the players' options will look alike. The expected payoffs of each player are described in Table 3.

Table 3. Description of the Strategies

	Description	Remarks
AC	Both countries cooperate to attain their respective national interests and provide adequate help to each other.  In this case both players receive their full net profit after bearing the expected costs.  The assumption here is that the players will enjoy the desired influence along with positive public perception.	The game payoffs for each player is  $NP = [B-C+P+I]$
AD	The U.S. extends cooperation, while Pakistan defects. The assumption is that Pakistan wishes to enjoy a free ride.	Pakistan  $NP = B + I$
BC	The U.S. defects and Pakistan extends cooperation. The assumption is that the U.S. wishes to enjoy a free ride.	U.S.  $NP = B + I$
BD	Both players defect and cease cooperation.	No interaction is assumed. Hence no profit. (0)

The rationale of the game is that the net profit increases only through mutual cooperation. The players will successfully gain political influence and improve their respective public perception ( $B-C+P+I$ ). Mutual defection, on the contrary, gives no benefits at all (0, 0). On the other hand, if one of the players cooperates and the other defects, this will yield profit to the defector and maintain his influence over the other player ( $B+I$ ). In this case, the cooperating player bears heavy costs and loses considerable influential value over the defector. This would add more to the costs of the cooperating player and strain the mutual relationship. In this situation, we assume that the defector will not suffer loss in terms of public perception, since he is not affecting its public expectations. Whereas the player who remains committed will not be able to meet his public expectations and will eventually lose his public perception ( $B-C-P+I$ ). Table 4 represents the players' payoffs in the generalized form.

Table 4. The Generalized Form of the Players' Payoffs

		Pakistan	
U.S.		Coop C	Defect D
	Coop A	(B-C+P+I, B-C+P+I)	(B-C-P+I, B+I)
	Defect B	(B+I, B-C-P+I)	(0,0)

The generalized payoff model provides a tool to precisely determine the best available options as well as avoid limiting the analysis to a small set of payoffs.<sup>91</sup> The challenges associated with the data collection are prominent, moreover; the challenge of precisely finding the utility method suitable to determine the precise value of influence and perception is evident. However, the game in this form only represents the initial stages of the interaction, where none of the players has pre-knowledge of the other's move (i.e., "imperfect information"); after playing the game more often, the players begin to develop their own perspective about the game and their partners.

### C. STAGE ONE: INITIAL PHASE – SETTING THE STAGE

This stage describes the U.S.-Pakistan relation according to the generalized model and how the players approach the game. To simplify the game, cardinal values will be assigned to the payoffs to represent their weight. Since the game is symmetric, we will only analyze the preferences of one player in terms of his payoffs and then apply the results to the other player. From the game setup:

Since,

$$B-C+I+P > B-C > B-C-I > B-C-I-P \geq 0. \text{ If } NP \geq 0, \text{ and } B, C, I, P \geq 0$$

<sup>91</sup> Fink, Gates and Humes, *Game Theory Topics*, 27.

Therefore,

$$B+I > B-C+P+I > B-C-P-I \geq 0$$

It is assumed that the U.S. would like to get more political influence over Pakistan in order to achieve its regional goals and advance its national security objectives. Therefore, it will be looking to maximize both their benefits and political control. At the same time, it would seek means to reduce its costs to ensure cost-effective and successful strategy. For the U.S., the most valuable option is to enjoy a free rider option in the game. This would allow it to maximize benefits, gain influence and minimize its associated costs. This option will be assigned a value of 4. This value could only be achieved by applying the defection strategy (U.S.) while the other player (Pakistan) continues to cooperate. However, the U.S. understands that it cannot maintain such a situation for long. Instead, it needs to obtain the same benefits and influence by providing an incentive to Pakistan to attain her cooperation strategy. This will put the U.S. in its second position where it needs to extend cooperation and bear more costs, which will reduce its benefits. Only the U.S. can determine whether these benefits are valuable enough to justify their costs. This option will be given a value of 3. If Pakistan defects and the U.S. continues its cooperation, that will put it in its next worst option with a value of 1, since there will be some benefits to both players that can be extracted. However, the mutual defection will provide no benefits to the U.S. and would be given the value of zero (0). Pakistan will also analyze the situation using the same rational and use the same approach to the game. The players' options can be translated into the cardinal values as follow:

### 1. Player's Options

- a. **Best Choice:** To enjoy a free ride while the other player seek cooperation and provides adequate benefits with a value of 4.
- b. **Next Best Choice:** Both players cooperate with each other to advance their respective national interests. In this case, both players provide adequate cost to gain mutual benefit with a corresponding value of 3.



- c. **Next Choice:** To be the game sucker, where one player harvests all the benefits while the other pays/delivers the associated costs. This option has a value of **1**.
- d. **Worst Option:** The mutual defect, where both players stop their interaction. We assume here that no costs or benefits are associated with this option with a value of **0**. However, in reality there are significant losses associated with such defection. Therefore, when the states stop their interactions, they usually seek other engagements that will keep them from losing perceived benefits. Table 5 shows the assigned cardinal values for both players.

Table 5. Cardinal Values of the Game

		<b>Pakistan</b>	
<b>U.S.</b>		<b>Coop. C</b>	<b>Defect D</b>
	<b>Coop. A</b>	(3, 3)	(1, 4)
	<b>Defect B</b>	(4, 1)	(0, 0)

The game presented above captures the essence of the basic chicken game,<sup>92</sup> where there are perceived benefits involved. The greatest benefit from the players' perspective can be obtained by being the free rider. The next beneficial outcome appears with the mutual cooperation. The next worst when one of the player defects and the other remains cooperating. The worst outcome arises when both player defect. Table 6 illustrates the movement diagram of the two players.

<sup>92</sup> Fink, Gates and Humes, *Game Theory Topics*, 9

Table 6. The Players' Movement Diagram (Stage 1)

		Pakistan				
		Coop		Defect		
U.S.	Coop	(3, 3)	→	(1, 4)		
		↓		↑		
	Defect	(4, 1)	←	(0, 0)		

The movement diagram suggests that without communication, none of the players has a dominant strategy. Both players have an incentive to defect and enjoy a free ride on the other's cost. The game has three equilibrium points. Two are pure strategy Pareto optimal equilibrium points,<sup>93</sup> and the third is mixed strategy equilibrium. Nash equilibrium<sup>94</sup> is (3, 3), where both players pursue cooperation. Additionally, the strategic moves analysis suggests that none of the players can increase his payoffs by moving first or forcing the other player to do so. Additionally none of the players has a threat or a promise that can be used to alter the game. The solution of the game is enclosed in the Appendix.

The security levels for both players are their third option. The value of the game is (1, 1). Both players have a pure prudential strategy to Defect 100% of the time, if the other player holds his payoffs down. Pakistan has to play a mixed strategy with 50%

<sup>93</sup> An outcome of a game is Pareto Optimal if no other outcome that makes every player at least as well off and at least one player strictly better off. That is, a Pareto optimal outcome cannot be improved upon without hurting at least one player. Often a Nash equilibrium is not Pareto Equilibrium implying that that the players payoffs can all be increased. For more read Philip D. Straffin, *Game Theory and Strategy* by Philip D. Straffin, Vol. 36 (Washington: Mathematical Association of America, 1993), 244. and Fink, Gates and Humes, *Game Theory Topics: Incomplete Information, Repeated Games, and N-Player Games*, 69.

<sup>94</sup> Nash equilibrium calculations will be discussed thereafter. This can be reached if both players play the game with 50% Coop. and 50% defect.

Coop and 50% Defect to equalize the U.S. Pakistan's value of the game becomes 2. The U.S. has to adopt the same strategy to equalize Pakistan with a game value of 2. Nash Arbitration is (3, 3), which can be achieved when both players play 50% of the time cooperation and 50% defect or simply cooperate.

## **2. Observation**

The game suggests that, usually, both players will attempt to improve their respective payoffs. The status quo implies that none of the players can be forced to go below his security level if they accept to proceed with the game. On the other hand, both players will maintain a strong incentive to defect from the equilibrium point to improve their payoffs. However, none of them can improve his payoffs by moving first or forcing the other to do so. Moreover, none of them have a credible threat or a promise to offer in order to force or persuade the other player. The best outcome of both players comes from mixed strategy or mutual cooperation that, over a course of time, can enhance their payoffs. The cardinal values introduced in the game only illustrate preferable payoffs, but do not give a precise value of the payoffs. Further examination would reveal that the defection incentive can be reduced.

From the above observations, both the U.S. and Pakistan cannot improve their status in the initial engagement without the other player's cooperation. While neither has the initiative to change the game to their benefit, they cannot dictate any preconditions that help improve their status in the advanced stages. On the other hand, both players can overcome any attempt to reduce their payoffs if they use their equalizing strategy with a greater value than their security levels. The game suggests that the players cannot get more benefits by using their mixed strategies, where they will always seek defection to pursue their interests. Therefore, to advance their interests the players need to concentrate on their cooperation strategies. In this stage, public perception has minimal impact on the players' strategies while political influence is directly proportional to their benefits. The model captures the trend of the two countries' paradoxical relations, where in their attempts to unilaterally improve their payoffs or alter the game to their advantage, they always return to their likely outcome.

In reality, Pakistan's sense of insecurity against India and her economic challenges after the partition pushed her to seek external support. The U.S., in contrast, did not perceive any benefit from providing the needed security guarantee to Pakistan against India, or economic aid.<sup>95</sup> However, the growing communist threat in the region provided an incentive to the U.S. to maintain a balanced policy toward Pakistan, which eventually enabled both countries to maintain cooperation ties. Notably, their cooperation suffered whenever their divergent interests came under the spotlight or when they tried to advance unilateral interests. Therefore, ~~their~~ national interests have often diverged, as have their policies, even when their interests have substantially overlapped."<sup>96</sup>

The fluctuating trend in their relationship pushed both countries to take advantage of any arrangement of cooperation to advance their interests, especially if it served vital national interest. Therefore, ~~both~~ have been tempted to clinch short-term objectives at the expense of broader strategic purpose."<sup>97</sup> One of these arrangements was the military aid program. Pakistan provided her air basis to the U.S. to keep a close eye over their communist enemy. In return, Pakistan expected more military and security support that would enable her to overcome any Indian threat. This arrangement kept the U.S.-Pakistan ties alive and sustainable. Benefits, from the U.S. perspective, outweighed costs, but fundamentally changed the relation to become more transactional in nature.

#### **D. STAGE TWO: LONG-TERM VS. SHORT-TERM RELATIONS**

The Pak-U.S. relationship, as projected in the first stage of this model, was interrupted in 1965 during the Pakistan-India war. Although the signs of this interruption came as early as 1962, when the U.S. released a rapid military aid package to India that aggravated Pakistan's fears,<sup>98</sup> the real damage was done in 1965. The U.S. had its suspicion about growing Pak-China ties. In 1965, the U.S. did not perceive any benefits from supporting Pakistan against India. At the same time, the U.S. realized that

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<sup>95</sup> Hafeez Malik, *Pakistan: Founder's Aspirations and Today's Realities* (Karachi: Oxford University Press, 2001), 306.

<sup>96</sup> Touqir Hussain, "U.S.-Pakistan Relations: What Trust Deficit?" *The Middle East Institute - Policy Brief* 21 (November, 2010), 6. <http://www.mei.edu/>.

<sup>97</sup> Ibid.

<sup>98</sup> Malik, *Pakistan: Founder's Aspirations and Today's Realities*, 294.

Pakistan's regional policies, driven by her security paranoia, could jeopardize U.S. regional interests and increase its costs. During this time, the U.S. was totally preoccupied with Vietnam and its bitter consequences, which exacerbated fears of any further military involvement in South Asia. Therefore, the U.S. decided to stay out of Pakistan and South Asia. Stage 2 of the game will examine both the events after 1965, and the U.S. approach to the game and its impact on the outcome.

The change in U.S. policies after 1965 had altered the game to become a one-side game. We assume that, in the course of its interactions, the U.S. decided not to connect its regional interests to those of Pakistan, which would limit its ability to conduct a comprehensive regional strategy. However, Pakistan's geopolitical position necessitated the U.S. to keep lines of communication open.<sup>99</sup> This stage is meant to demonstrate the changing trends in the game after 1965.

### **1. One-Side Chicken Game<sup>100</sup>**

The one-side game is defined as the game where one player has a dominant strategy that secures him the best payoffs.<sup>101</sup> We do not intend to change the game to a perfect information game, so as to avoid its becoming a sequential game.

A sequential game is one in which players make decisions (or select a strategy) following a certain predefined order, and in which at least some players can observe the moves of players who preceded them. If no players observe the moves of previous players, then the game is simultaneous. If every player observes the moves of every other player, the game is one of perfect information. If some (but not all) players observe prior moves, while others move simultaneously, the game is one of imperfect information. Sequential games are represented by game trees (the extensive form) and solved using the concept of rollback, or sub-game perfect equilibrium.

Neither the game assumptions nor its rules have changed from the previous stage; however, the scores were adjusted to accommodate the change in both the U.S. and

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<sup>99</sup> Malik, *Pakistan: Founder's Aspirations and Today's Realities*, 287–309.

<sup>100</sup> Mikhael Shor, “*Sequential Game Dictionary of Game Theory Terms*,” <http://www.gametheory.net/dictionary/SequentialGame.html> (accessed September 13, 2011).

<sup>101</sup> Fink, Gates and Humes, *Game Theory Topics*, 69.

Pakistan's perceptions. The second best option for both players becomes two (2) instead of three (3). Additionally, the mutual defect option in this case is to the U.S.' benefit and against Pakistan, which will be explained later.

The game strategies are presented in Table 7. While the game is constructed based on cost-benefit analysis, it excludes the public perception value (where both players consider only the costs, benefits, and their political influence, and assign insignificant value to the public perception or none at all) from its calculations. The game in this manner will be asymmetric and the players' options will not be similar. Subsequently, the players' strategies are represented in Table 8.

Table 7. One-Side Game Strategies

		<b>Pakistan</b>	
<b>U.S.</b>		<b>Coop. C</b>	<b>Defect D</b>
	<b>Coop. A</b>	AC	AD
	<b>Defect B</b>	BC	BD

Table 8. One-Side Game Strategies' Description

	Description	Remarks
AC	Both countries cooperate to attain their respective national interests and provide adequate help –cost” to each other.	The game represents the rulers' perception of Pakistan's national interests.
AD	U.S. extends the hand of cooperation while Pakistan defects and stops Coop with the assumption that she will enjoy a free ride.	
BC	U.S. withheld cooperation and defect to enjoy a free ride while Pakistan Cooperates.	
BD	Both players defect and stop cooperation.	This will hurt Pakistan

## 2. The Players' Options

According to the strategies description, the players' payoffs are demonstrated below. The payoffs are represented by cardinal values:

### a. Pakistan's Options

- 1) **Best Choice:** To enjoy a free ride. This will ultimately advance Pakistan's national interests and enhance her prestige. This option will assume a cardinal value of 4.
- 2) **Next Best Choice:** Both players cooperate with each other in order to advance their respective national interests. The next best option will assume a cardinal value of 2.
- 3) **Next Choice:** To comply and cooperate, while the U.S. defects. This should be the worst option for Pakistan in these circumstances. Pakistan's rulers perceived this situation as a precondition for any future cooperation. It is assumed here that, due to the security paranoia of Pakistan,

its rulers prefer to keep lines of cooperation opened to advance their interests. This option will assume a cardinal value of 1.

- 4) **Worst Option:** The mutual defect, where both players stop their interaction. From Pakistan's perspective, this option may jeopardize their gains and endanger the country. This option entails a negative value to them, which they cannot afford. In this game, we intend only to explain the U.S. approach to the game. Therefore, the value assigned is 0. Hypothetically, we assume that no costs or benefits are associated with this option, since Pakistan had the option to realign herself with China or make new alliances. The worst option will assume a cardinal value of 0.

#### **b. U.S. Options**

- 1) **Best Choice:** Pakistan complies without U.S. commitment. For the U.S., this option provides the best payoffs without any costs. Additionally, this option helps the U.S. to reduce any future costs and secure better payoffs in any future arrangements. This option will assume a cardinal value of **4**.
- 2) **Next Best Choice:** The mutual defect. This option relieves the U.S. from any security and financial commitment to Pakistan; meanwhile, it enhances U.S. political options in the region and increases its strategic options. This option will assume a cardinal value of **2**.
- 3) **Next Choice:** Both players cooperate with each other to advance their respective national interests. The U.S., at that time, recognizes that any commitment in the region would



limit their foreign policy and complicate their calculations.  
This option will assume a cardinal value of **1**.

- 4) **Worst Option:** To cooperate while Pakistan defects. From the American perspective, the cost of this option outweighs any benefit. Table 9 shows the cardinal values assigned according to these options for both players. Subsequently, Table 10 illustrates the movement diagram of this game. This option will assume a cardinal value of **0**.

Table 9. One-Side Game Cardinal Values

		Pakistan	
U.S.		Coop. C	Defect D
	Coop. A	(1, 2)	(0, 4)
	Defect B	(4, 1)	(2, 0)

Table 10. The One-Side Game Movement Diagram

		Pakistan				
		Coop.		Defect		
U.S.	Coop.	(1, 2)	→	(0, 4)		
		↓		↓		
	Defect	(4, 1)	←	(2, 0)		

The movement diagram demonstrates the U.S. dominant strategy to defect. On the other hand, Pakistan does not have a dominant strategy. The game now has one equilibrium point. The likely outcome is (4, 1), where the U.S. defects and Pakistan cooperates. The solution of the game is enclosed in the Appendix.

Form the strategic move analysis, Pakistan has a combination of threat and promise that does not work. Therefore, Pakistan cannot force the U.S. to go below the likely outcome without communication. Whereas, the U.S. has only a promise that works alone, but it is not better than the likely outcome. This suggests that the U.S. has the initiative that controls the engagement in the game. Whenever the U.S. wants to obtain Pakistan's cooperation, it will use the promise. Thereafter, it may disengage and maximize its benefit. The game provides an explanation of the "Roller Coaster"<sup>102</sup> character of Pak-U.S. relations. The disengagement strategy suited the U.S. regional foreign policy at that time, where the U.S. managed to get Pakistan's cooperation anytime without any security or financial commitment.

<sup>102</sup>Malik, *Pakistan: Founder's Aspirations and Today's Realities*, 287.

While the U.S. has a prudential dominant strategy to defect 100% of the time, Pakistan is always restricted to use only its cooperation strategy, if Pakistan wanted keep the U.S. payoffs down at any point of the game. Pakistan's security level is (1), which is the third option with the game value of 1. In contrast, the U.S. security level is (2) with its dominant strategy, which holds Pakistan's payoffs down through the game. Additionally, the game value for the U.S. is 2, which is its second best option.

In this situation, Pakistan does not have any equalizing strategy against the U.S. While there is no incentive to the U.S. to equalize Pakistan, they can easily achieve that through the use of a mixed strategy, cooperating 1/3 of the time and defecting 2/3 of the time.. The U.S. can then equalize Pakistan with a value of 1.333, which is less than its security level. The players' status quo is (2, 1) and Nash arbitration point is (3, 1.75). To get this value, Pakistan has to play 75% Cooperation and 25% Defect, while the U.S. has to play 25% Cooperation and 75% Defect.

### **3. Observation**

The strategic moves analysis and the security levels suggest that the U.S. is in a better position than that of Pakistan. The U.S. in this game firmly controls Pakistan. Additionally, the U.S. has the initiative and the ability to obtain Pakistan's cooperation whenever the U.S. wants, using its promise. However, Pakistan has a threat and promise that does not work alone. The combination of the two does not leave Pakistan in a better situation and restricts its maneuverability. Although the U.S. security level is relatively higher in such context, the game also reveals a greater weakness, where the U.S. has to accept a lower status whenever they need Pakistan's cooperation. Therefore, despite the U.S. promise advantage and their ability to obtain Pakistan's cooperation any time under any conditions, the costs associated with such compliance seems to be high, especially if Pakistan chooses not to cooperate fully. This would undermine the U.S. strategy and leave it with its worst option. One of the vital weaknesses of the U.S. strategy is that it also neglects the public perception, which can be interpreted as a weakness in their public diplomacy and soft power.

From the player's perspective, they can improve their Net Profit either by reducing the associated cost and/or increasing their profits and political influence. This, from the U.S. perspective, can be achieved by accommodating Pakistan's rulers. Historically, the U.S. pursued a self-interest strategy during the Cold War that enabled it to achieve its regional interests against both the Soviet Union and China.<sup>103</sup> This strategy enabled the U.S. to reduce both commitment and costs. At the same time, the U.S. increased its benefits, especially those related to military and political influence. From a cost-benefit perspective, this strategy represents the best option. While supporting inclined leadership inside Pakistan, the U.S. has improved its political and strategic influence as well as reduced the associated costs. However, it neglected the public perception to the level that it started to accumulate negative values.

The perception of the Pakistani public is well described by Touqer Hussain, who asserts:

the people of Pakistan, for their part, feel that they have borne the brunt of the cost of this untrustworthy relationship. It is they who have been saddled with poor civilian and military leadership, allied with the United States. In return for advancing the U.S. strategic interests, Pakistan's governing elites were handsomely compensated and managed to maintain a stranglehold over the system and disregard reforms. This ~~bad~~ bargain" is precisely what has been driving a wedge between the Pakistani people and the U.S.-supported governing elites and, by extension, between the U.S. and the Pakistani people.<sup>104</sup>

The short-term military-centric engagements that suited the U.S. foreign policy towards Pakistan have adversely affected Pakistan's public perception and enhanced their military and civil elite status, reducing the people's confidence in their government.

At this stage, the game adequately represents the U.S.-Pakistan relations from 1965 to September 2001, where the U.S. was able to obtain Pakistan's cooperation only through their promise and their economic aid packages. In the aftermath of the tragic terrorist attacks of 9/11, the U.S. declared war on those responsible in Afghanistan. As a

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<sup>103</sup> Malik, *Pakistan: Founder's Aspirations and Today's Realities*, 287–309.

<sup>104</sup> Hussain, *U.S.-Pakistan Relations: What Trust Deficit?*, 6.

result, the U.S. turned back again to their “crucial ally”<sup>105</sup> Pakistan, sensing both a threat and an economic incentive to get its cooperation.<sup>106</sup> Musharraf, the then president of Pakistan, accepted the U.S. conditions for providing support. Washington desperately needed that move, although they could not predict the price.<sup>107</sup> However, Musharraf and the U.S. again disregarded the public perception and proceeded with their plan.

The U.S.-Pakistan cooperation under these coercive measures had fundamentally altered the game. The two players, from their previous interactions, had developed an intricate rationale that influences their decision. Additionally, the growing public influence through media and information technology accumulated a momentum that started to play a pivotal role in Pakistan’s domestic politics. The next stage will examine the game from 2001 onwards, assessing the impact of the players’ rationale and the public perception on the game.

#### **E. STAGE THREE: FALLEN VEILS**

In this stage, we assume that not only is the player’s rationale sufficient to play the moves in the game, but also that the public perception, laden with negative values, comes into play. Additionally, we assume that the same negative perception began to interfere with the players’ strategies and their ability to obtain favorable outcomes. Recently, President Zardari clarified that, “Pakistan has paid an enormous price for its stand against terrorism.”<sup>108</sup> The anti-American sentiments have raised the costs associated with any pro-American strategy in Pakistan. On the other hand, the U.S. is in no better situation, where the anti-Pakistan sentiments in the Congress, powerful lobbies and special-interest groups started to put pressure on the U.S. strategies. The benchmarks

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<sup>105</sup> K. Alan Kronstadt, Library of Congress and Congressional Research Service, “Pakistan-U.S. Anti-Terrorism Cooperation,” Washington, D.C.: Congressional Research Service, Library of Congress ; Derwood, MD : Distributed by Penny Hill Press, <http://www.pennyhill.com/>.

<sup>106</sup> Ali Ahmed Rind, “Unholy Ends,” *LA Weekly* (Wednesday, November 7, 2001), accessed October 2, 2011.

<sup>107</sup> Liam Collins, “United States Diplomacy with Pakistan Following 9/11: A Case Study in Coercive Diplomacy,” *Woodrow Wilson School of Public and International Affairs - Princeton University* (May 16, 2008), 5.

<sup>108</sup> Asif Ali Zardari, “Pakistan did Its Part,” *Washington Post*, May 2, 2011, [http://www.washingtonpost.com/opinions/pakistan-did-its-part/2011/05/02/AFHxmybF\\_story.html](http://www.washingtonpost.com/opinions/pakistan-did-its-part/2011/05/02/AFHxmybF_story.html).

and the preconditions on the U.S. aid is a good evidence of these negative perceptions. These perceptions and associated high costs reduced the political influence of both the players significantly.

The U.S. policies in Afghanistan, coupled with ~~the~~ lack of strategic context of the war, incoherent war aims, insufficient resources, and poor execution, soon undermined the war effort<sup>109</sup> and aggravated both the Afghan and Pakistan public. Thereafter, Pakistan suffered the worst spillover effect on her internal and external security as a result of the fight against terror. The Pakistani government's actions did not meet the public expectations. By the end of 2008, the public became pro-active when Musharraf transferred power to the newly elected civil government.

### **1. Game Setup**

In this stage, the game will also be conducted as an incomplete information game.<sup>110</sup> The goal of such a game is to capture the trends of the relation after the events of 9/11 and examine the weight of each element. The game will start with a description of the players' rationale of the game to facilitate evaluating their options. The assumptions and the rules will not be changed, while the cardinal values represent the higher stakes of the players. Additionally, to represent the negative perception effect, the perception value will be subtracted from both the players.

The change in the cardinal values reflects the widened gap between the two allies and their divergent approaches, especially after the recent developments in their relations. The repeated calls in the U.S. Congress to restrict the U.S. aid to Pakistan and add more restraints are one example. On the other hand, the escalating anti-American sentiments inside Pakistan and calls to cut cooperation clarify the declining level of tolerance on both sides. Negative cardinal values were assigned to the options to show the negative Net Profit of such options from the players' perspectives.

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<sup>109</sup> Hussain, *U.S.-Pakistan Relations: What Trust Deficit?*, 6.

<sup>110</sup> Mainly we assume that the game is conducted simultaneously each time the players conduct a meeting to discuss any of their issues. Neither of the players will have an information about the other player's strategy at the meeting. Therefore, it is conducted with imperfect information.

## 2. The Players Rationale

a. **U.S. Rationale of Mistrust.** The U.S. assumptions are as follows:

- 1) Pakistan is an untrusted ally who misused the money provided through AID and diverted it to advance her own regional interests.<sup>111</sup>
- 2) ~~Pakistan's~~ hostile relationship with India impinges on short and long-term American interests."<sup>112</sup> To the U.S., Pakistan is an untrusted tactical ally vs. India, which is a growing regional hegemon.<sup>113</sup>
- 3) Pakistan-China military cooperation is not acceptable and will jeopardize regional stability.<sup>114</sup>
- 4) The U.S. view that ~~Pakistan's~~ role as a moderate Islamic or Muslim state has been transformed."<sup>115</sup> The ideological clash is

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<sup>111</sup> The Congressional Research Service Report (R41856) on 2011 asserts. "Foremost among these [critiques] are assertions that the Pakistani military maintains an institutional focus on conventional war-fighting capabilities oriented toward India and that it has used U.S. security assistance to bolster these capabilities while paying insufficient attention to the kinds of counterinsurgency capacity that U.S. policy makers might prefer to see strengthened." Epstein et al., *Pakistan U.S. Foreign Assistance*, 15. For more see Jane Perlez, David E. Sanger and Eric Schmitt, ~~Nuclear Fuel~~ Memos Expose Wary Dance with Pakistan," *The New York Times* (November 30, 2010), accessed September 12, 2011. Also see Ben Dear, ~~Where did the Money Go?~~ Oversight Lacking in Aid to Pakistan," *The Center for American Progress* (June 27, 2008), accessed on September 12, 2011. <http://www.americanprogress.org>.

<sup>112</sup> Stephen Philip Cohen, ~~The United States and South Asia: Core Interests and Policies and Their Impact on Regional Countries. Presented to the Conference on Major Powers and South Asia 11–13 August 2003 the Institute for Regional Studies, Islamabad, Pakistan~~" (Islamabad, Pakistan, The Brookings Institution, August 11–13, 2003). <http://www.brookings.edu/views/speeches/cohens20030811.pdf>, 9.

<sup>113</sup> Noor ul Haq, ~~Kerry-Lugar Bill~~, "The Islamabad Policy Research Institute (October 26, 2009), 115, 14–16, <http://ipripak.org/factfiles/ffl14.pdf>. Also see Ninan Koshy, ~~the Natural Ally and the Tactical Ally~~, "Foreign Policy in Focus (November 1, 2001). [http://www.fpif.org/articles/the\\_natural\\_ally\\_and\\_the\\_tactical\\_ally](http://www.fpif.org/articles/the_natural_ally_and_the_tactical_ally).

<sup>114</sup> James Martin Center for Nonproliferation Studies, ~~China's Missile Exports and Assistance to Pakistan~~, [http://cns.miis.edu/archive/country\\_india/china/mpakpos.htm](http://cns.miis.edu/archive/country_india/china/mpakpos.htm), (accessed Sep. 15, 2011).

<sup>115</sup> Cohen, *The United States and South Asia: Core Interests and Policies and Their Impact on Regional Countries. Presented to the Conference on Major Powers and South Asia 11–13 August 2003 the Institute for Regional Studies, Islamabad, Pakistan*, 22.

dominant between liberal democratic Pakistan vs. the Islamic Republic of Pakistan.<sup>116</sup>

- 5) ~~Pakistan~~ poses a greater threat in regard to transnational terrorism than does Afghanistan.”<sup>117</sup>
- 6) Pakistan is an unpredictable partner to the U.S., where ~~Pakistan’s~~ difficult political transition and serious economic crisis will make it an erratic ally.”<sup>118</sup>
- 7) The covert relations between Pakistan and the radical groups is counter-productive and jeopardizes its ability to maintain stability in Afghanistan. This is considered to be a vital element for U.S. national security and regional strategy. This rationale augments the U.S. believe that Pakistan will not eliminate Taliban/al Qaeda sanctuaries or develop a rapid political solution for the governance problems in the tribal regions.
- 8) The Pakistani government is incompetent and incapable of handling its critical security situation. ~~The~~ Pakistani government is not likely to develop a workable political-military strategy and doctrine to deal with counterinsurgency in the near term, or to build the necessary public support.”
- 9) The spillover effects inside Pakistan of the counter-terrorism efforts in Afghanistan are extremely dangerous and a warning sign for the U.S., coming as they do from a nuclear-capable ally. The ~~Increased~~ U.S. and NATO military efforts in southern Afghanistan may generate a spillover into adjacent areas of

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<sup>116</sup> K. Alan Kronstadt, Library of Congress and Congressional Research Service, ~~Pakistan-U.S. Relations~~,” Congressional Research Service, Library of Congress, <http://www.fas.org/sgp/crs/row/RL33498.pdf> <http://openers.com/document/RL33498/>, 71–76.

<sup>117</sup> Frederick D. Barton et al., *Afghanistan and Pakistan on the Brink: Framing U.S. Policy Options*, Center for Strategic and International Studies, 2009), 11.

<sup>118</sup> Ibid., 11



Pakistan.”<sup>119</sup> Furthermore, “[e]xtremism could well spread into other parts of Pakistan as provincial issues are not addressed and economic pressures increase.”<sup>120</sup>

b. **Pakistan’s Rationale of Betrayal.** Pakistan’s assumptions are as follows:<sup>121</sup>

- 1) U.S. always backed dictators and military regimes. Many historians believe that the U.S. military and arms aid had devastating setbacks on democracy in Pakistan.
- 2) The U.S. imposed sanctions during war with India in 1965. That was an eye opener and a reminder for the Pakistani ruling elite to sort out their domestic issues.
- 3) Pakistan became the springboard for American sponsored Jihad against the Soviet Union after 1979. Afghanistan was converted into a graveyard of the Soviet empire<sup>122</sup> by the combined strategy of Pakistani military, American weapons and Saudi investment.
- 4) The Americans left the area after the demise of Soviet Union and the end of the Cold War. Pakistan was left alone to suffer the consequences of the void in Afghanistan through import of weapons, drugs, refugees and instability on its Western Border.

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<sup>119</sup> Barton et al., *Afghanistan and Pakistan on the Brink: Framing U.S. Policy Options*.

<sup>120</sup> Ibid.

<sup>121</sup> These assumptions were mainly derived from the following documents and many other articles: Maleeha Lodhi, “Pakistan: Maleeha-Talk Pak-U.S. Talks Meant to Overcome Mistrust,” *Financial Post* 2010; Hussain, “U.S.-Pakistan Relations: What Trust Deficit?,” 6; Lodhi and National Defense Univ. Washington Institute for National Strategic studies, “The Future of Pakistan-U.S. Relations: Opportunities and Challenges,” 7; K. Alan Kronstadt, Library of Congress and Congressional Research Service, “Pakistan-U.S. Relations a Summary,” <http://www.cq.com/pdf/crsreports-3876564>; Daniel Markey, “Oversight of U.S.-Pakistan Relations: From Ad Hoc and Transactional to Strategic and Enduring,” Council on Foreign Relations, Inc., 2008.; Jitendra Nath Misra, “Paradoxical Pakistan,” *World Policy Journal* 22, no. 2 (Summer, 2005), 95–101; Malik, “Pakistan: Founder’s Aspirations and Today’s Realities,” 469.

<sup>122</sup> Seth G. Jones, *In the Graveyard of Empires: America’s War in Afghanistan*, 1st ed. (New York: W.W. Norton & Co., 2009), 414.

- 5) The whole atmosphere was further complicated after the U.S. imposed the worst military and economic sanctions against Pakistan's nuclear program. This was the third betrayal and a key factor in creating distrust between the two allies.
- 6) Pakistan sees the same historical relationship trend starting again after 9/11. The U.S. is advancing its interests in Afghanistan by expanding the India-specific strategy.
- 7) Pakistan looks at the U.S. as an unreliable ally who repeatedly [ab]used Pakistan to advance its interests in the region.
- 8) Pakistanis remember the marginal relationship from the "most allied ally" to the most sanctioned ally of the United States.<sup>123</sup>
- 9) Pakistan believes that it is time for the U.S. to start compensating her for all those lost years of abandonment and neglect.
- 10) Despite the U.S. aid to Pakistan, she is more inclined toward its geopolitical existential threats, which is worth more than the aid provided by the U.S.
- 11) Pakistan feels abandoned and neglected again; she has lost her geopolitical weight in the region to her traditional adversary. The repeated association with the U.S. has undermined Pakistan's legitimacy in her own people's eyes and within the Muslim world.
- 12) The image of the Pakistan military to its population reached its lowest ebb when the U.S. violated its sovereignty by conducting a military operation inside Pakistan to kill Osama Bin Laden.
- 13) The spillover effects of the U.S. war in Afghanistan are devastating for Pakistan and the U.S. should realize and compensate for her cooperation.

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<sup>123</sup> Barton et al., *Afghanistan and Pakistan on the Brink: Framing U.S. Policy Options* Also See Kronstadt, Library of Congress and Congressional Research Service, *Pakistan-U.S. Relations a Summary* And Iqbal and Khalid, *Pakistan's Relations with the United States during Ayub Khan's Period*, 14–123

- 14) The growing Indian influence in Afghanistan not only raises Pakistan's security concerns but also undermines broader U.S. efforts in the Af-Pak region for achieving stability. The trend also signals the threat of a new Kashmir on Pakistan's western borders.
- 15) The supply route provided to the U.S. and coalition forces are vital in a way that can put her in a better bargaining situation.
- 16) Years of sanctions, under the Pressler Amendment, are still alive in the hearts and minds of the Pakistani people and leadership. Pakistan saw years of democracy and progress during those years, but Pressler created a feeling of strong distrust and betrayal against the United States.
- 17) The factor of mistrust keeps increasing due to events like continuous drone attacks and other operations inside Pakistan.

### **3. The Players' Options**

#### **a. Pakistan's Options**

- 1) **Best Choice:** To enjoy a free ride as compensation of her devotion. This option will assume a cardinal value of **3**.
- 2) **Next Best Choice:** Both the players cooperate with each other to advance their respective national interests. Pakistan feels that the U.S. should recognize her strategic interests as an equal ally and work with her to advance them. In this case, both players provide adequate cost to gain mutual benefit. This option will assume a cardinal value of **1**.
- 3) **Next Choice:** To be the loser of this game, where she has to provide all the benefits to the U.S. At the same time, she receives inadequate benefit or none at all. The costs associated with this option entails confronting the spillover effect of the U.S. strategy

in Afghanistan, which has a serious destabilizing effect on Pakistan. This option will be credited a cardinal value of **-2**.

- 4) **Worst Option:** The mutual defect, where both players stop their interaction. For Pakistan, this option carries more challenges, where Pakistan will suffer vital consequences, both economically and politically. This option will assume a cardinal value of **-3**.

#### **b. U.S. Options**

- 1) **Best Choice:** Pakistan complies with the U.S. wishes and follows its will without any exchange from the U.S. The U.S. views Pakistan as an untrustworthy tactical ally who is eager to take advantage of America's political and economic status to advance her own regional interests. The U.S. blames Pakistan for what has happened in Afghanistan, and for all those threats posed by regional terrorists and Islamic radicals. The U.S. looks at Pakistan as an ungrateful ally who historically cheated the U.S. Pakistan took advantage of its relation with the U.S. to support an Islamist ideology. Above all, Pakistan took advantage of the U.S. to develop nuclear weapons, which the U.S. will not tolerate within a religiously motivated state. So Pakistan has to comply with the U.S. and pay back its debt to the U.S.. This option will assume a cardinal value of **3**.
- 2) **Next Best Choice:** Both players cooperate with each other to advance their respective national interests. From the American perspective, Pakistan should cooperate without asking for any sort of payback from the U.S. Additionally, the U.S. is not willing to tailor its foreign policy objectives in the region with respect to the threat perception of Pakistan. In this case, both players provide adequate cost to gain mutual benefit. This option will assume a cardinal value of **2**.

- 3) **Next Choice:** To extend hands of cooperation, while Pakistan defects and become the game sucker. From the American perspective, this is out of the question and unacceptable. Pakistan has to comply with the U.S. designs. However, the U.S.' high stakes in Pakistan and Afghanistan make it more open to unwillingly cooperate with Pakistan to achieve its goals and advance its own interests. The U.S. understands the vital importance of Pakistan's military and the public to eliminate both the terrorist sanctuaries and religious extremism. Such cooperation will be impermanent. This option will assume a cardinal value of **1**.
- 4) **Worst Option:** The mutual defect; will relieve the U.S. of any financial commitment to Pakistan. Additionally, it will enable the U.S. to pursue different regional strategies that satisfy its objectives. The U.S. can change this outcome and obtain Pakistan's compliance through the international community and the United Nations Security Council without any direct involvement or commitment. This will allow the U.S. to push India deep into Afghanistan and avoid mediation between the two countries. However, this will also undermine the U.S. efforts in its fight against terror by granting the radicals a pause that will enable them to rebuild their capabilities, besides offsetting the gains achieved by the U.S. in Afghanistan. It will also cut the coalition forces' supply routes through Pakistan. This option will assume a cardinal value of **-1**. Table 11 demonstrates the players' payoffs in its general form. Subsequently, Table 12 reveals the cardinal values assigned to the players' payoffs. Finally, Table 13 illustrates the game movement diagram.

Table 11. Stage 3 General Form

		Pakistan	
U.S.		Coop C	Defect D
	Coop A	(B-C-P+I, B-C-P+I)	(B-C-P-I, B-I)
	Defect B	(B-I, B-C-P-I)	(C-P-I, C-P-I)

Table 12. Stage 3 Cardinal Values

		Pakistan				
		Coop.		Defect		
U.S.	Coop.	(2, 1)		(1, 3)		
	Defect	(3, -2)		(-1, -3)		

Table 13. Stage 3 Movement Diagram

		Pakistan				
		Coop.		Defect		
U.S.	Coop.	(2, 1)	→	(1, 3)		
		↓		↑		
	Defect	(3, -2)	←	(-1, -3)		

The movement diagram suggests that none of the players has a dominant strategy. The game has three Nash equilibrium points. Two are pure strategy equilibrium points (1, 3) and (3, -2), while the third (2, 1) is a mixed strategy equilibrium. The likely outcome is (2, 1). Both players have the incentives to defect from the likely outcome point to improve their payoffs. Nash arbitration point is (2, 1), which will be calculated thereafter. Game calculations are shown in the Appendix.

#### 4. Observation

The game without communication revealed that both players do not have a dominant strategy that would eventually lead to the equilibrium point. In this game, the strategic move analysis reveals that Pakistan can secure a better payoff by starting with a defect strategy. She can secure better outcomes by communicating her intentions to the U.S. and end up in a better negotiation stand with a potential payoff of (1, 3). Pakistan does not have a threat or a promise that can be used against the U.S., nor a combination. On the other hand, the U.S. also has a first move advantage where she can secure better payoffs by using the defect strategy. Neither the threat nor the promise options are available to the U.S. Although both players have a first move advantage, they neither have the threat nor the promise option available to support their move. This suggests that

the players cannot improve their payoffs by using the strategic moves. The likely outcome will remain the best payoffs the players can secure.

The security level analysis shows that Pakistan's security level is  $Y=-2$  and her game value is  $-2$ . Pakistan's prudential strategy is cooperation, where she should play a pure cooperation strategy to maintain her security level. The U.S. has a pure prudential strategy to cooperate whenever Pakistan defects. Their value of the game is  $1$  and their security level is  $X=1$ .

Pakistan does not have a pure equalizing strategy. She has to play a mixed strategy with  $2/3$  of the time cooperation and  $1/3$  defection to equalize the U.S. Her game value will be  $1.66667$ . For Pakistan, the equalizing strategy provides better payoffs than likely outcome or Nash arbitration. On the other hand, the U.S. also has to play a mixed strategy, with  $1/3$  of the time cooperation and  $2/3$  defection to equalize Pakistan. The U.S. game value will be  $-1$ . The U.S. is in a better situation and need not use such strategy to equalize Pakistan. Therefore, the players' status quo is  $(1, -2)$  and Nash arbitration is  $(2, 1)$ . Nash arbitration can be reached by playing pure cooperation strategy by both players.

#### **F. STAGE FOUR**

The fourth stage is the description of the recent development of a bilateral relationship between the U.S. and Pakistan after the friction over the issues of Operation Neptune Spear, Dallas Airport and the Raymond Davis incident. The U.S. intention to drawdown their troops from Afghanistan by 2014 refreshes the rationale of betrayal by Pakistan amid radicalization and rising Indian influence in the region. An indication of such intentions was demonstrated after the recent inflation in the U.S. aid program during the current phase of their relationship.

The game at this stage is in succession to the previous stage. It will be conducted with perfect information, where we assume that the players' rationales and their previous engagements play a critical role in their decisions. The previous knowledge provides an information set that transforms the game. We assume that both players start to realize the



importance of the public perception in the game. Additionally, at least one of the players has the ability to observe the other player's move and strategy. Hence, his choice will be conditional on the other player's move.

### **1. The Game of Perfect Information**

Since the game is conducted with information about the strategies, it is considered to be a game with perfect information.<sup>124</sup> In such a game, the players conduct their moves according to their historical analysis as sets of moves or separate games. Each move is considered to be conducted according to one player, and conditional to the other player's move. Each set is called a sub-game.<sup>125</sup> Therefore, to solve the game, it is required to find the sub-games that satisfy Nash equilibrium refinement rules.<sup>126</sup> Thereafter, we find the perfect sub-game equilibrium that is the likely outcome of the game. This is conducted according to the tree diagram, backward reasoning and from the perspective of both the players.

### **2. The U.S. Game**

U.S. moves first. To solve the game, the concept of the imperfect game will be used to find Nash equilibrium points by transforming the game from perfect information game to simultaneous game. The tree diagram as shown in Figure 8 represents the game when the U.S. moves first with the players' payoffs. The information set expanded the player's strategic options from two strategies to four strategies.

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<sup>124</sup> Fink, Gates and Humes, *Game Theory Topics: Incomplete Information, Repeated Games, and N-Player Games*, 69

<sup>125</sup> Shor, *Sequential Game, Dictionary of Game Theory Terms*

<sup>126</sup> Ibid.

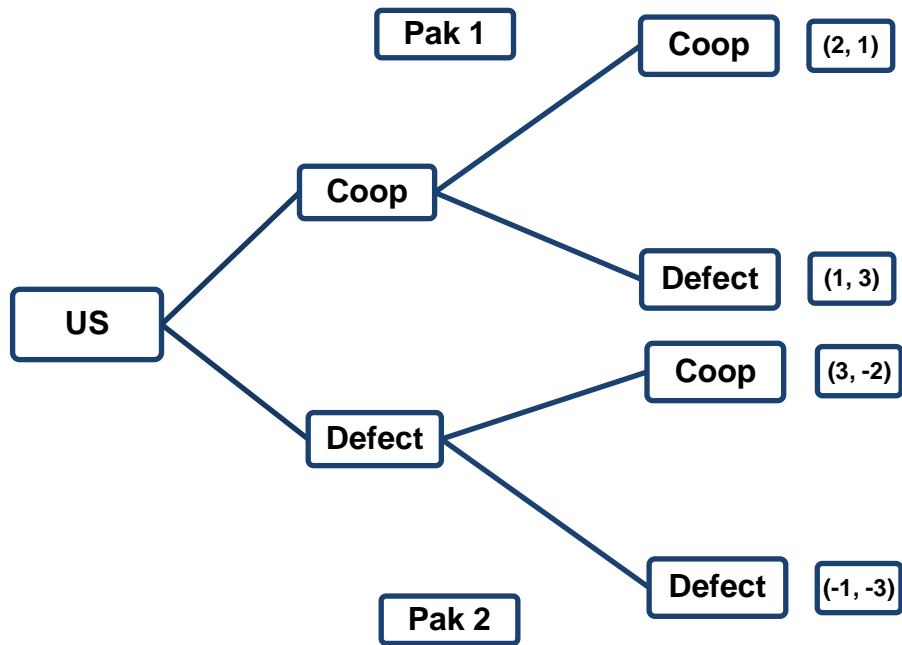


Figure 8. The Tree Diagram of Pak-U.S. Final Game and Players' Payoffs

The strategic form shown in Table 14 represents the payoffs of the players after transforming the game to a simultaneous game. To analyze the players' options, a movement analysis will identify the best strategies from each player's perspective.

Table 14. The U.S. Game Strategic Form and the Players' Payoffs (stage 4)

		Pakistan			
		Coop, Coop	Coop, Defect	Defect, Coop	Defect, Defect
U.S.	Coop.	(2, 1)	(2, 1)	(1, 3)	(1, 3)
	Defect	(3, -2)	(-1, -3)	(3, -2)	(-1, -3)

The movement diagram shows that we have three Nash equilibrium sub-games, corresponding with the following strategies. First, [Defect<sub>U.S.</sub>, (Coop<sub>Pak</sub>, Coop<sub>Pak</sub>)], Second, [Coop<sub>U.S.</sub>, (Defect<sub>Pak</sub>, Defect<sub>Pak</sub>)], Third, [Defect<sub>U.S.</sub>, (Defect<sub>Pak</sub>, Coop<sub>Pak</sub>)]. From this, we can see that we have only two Nash sub-games, and only one of them is Nash sub-game perfect.

The first and the third are Nash sub-game perfect. Although the second sub-game contains an embedded threat, it is a non-credible threat, which goes against Pakistan's best interest if it was used. Therefore, the U.S. has a dominant strategy to defect.

### 3. Pakistan Game.

Pakistan moves first. The tree diagram shown in Figure 9 represents the game when Pakistan moves first with the players' payoffs. The players' strategies and their payoffs are represented in Table 15.

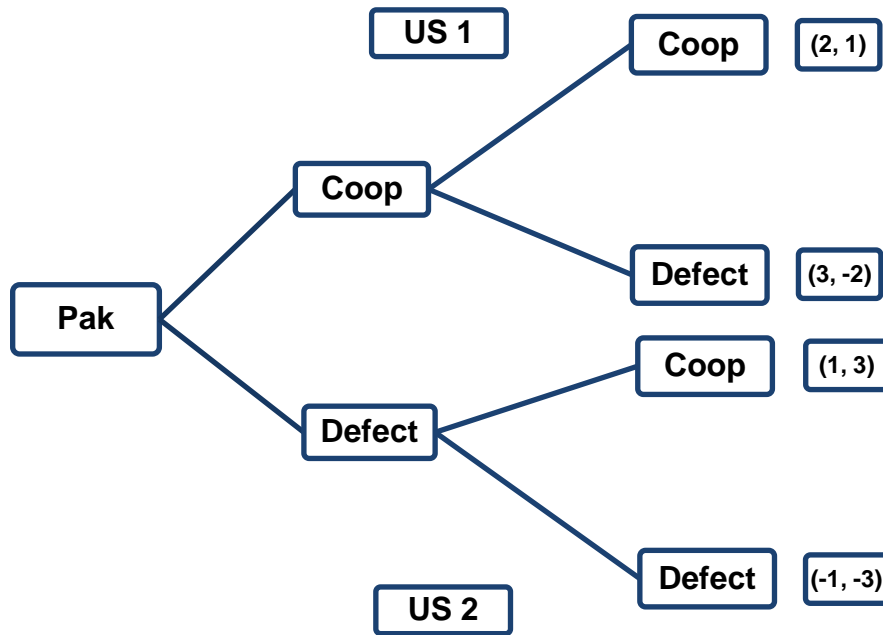


Figure 9. The Tree Diagram of Pak-U.S. Final Game and Players' Payoffs

Table 15. Pakistan's Game Strategic Form (stage 4)

		Pakistan	
		Coop.	Defect
U.S.	Coop., Coop.	(2, 1)	(1, 3)
	Coop., Defect	(2, 1)	(-1, -3)
	Defect, Coop.	(3, -2)	(1, 3)
	Defect, Defect	(3, -2)	(-1, -3)

The movement analysis shows that the game has three Nash Equilibria Sub-Games. First, [Coop<sub>U.S.</sub>, Coop<sub>U.S.</sub>, (Defect<sub>Pak</sub>)]. Second, [Defect<sub>U.S.</sub>, Coop<sub>U.S.</sub>, (Defect<sub>Pak</sub>)]. Third, [Defect<sub>U.S.</sub>, Defect<sub>U.S.</sub>, (Coop<sub>Pak</sub>)].

The former two games are Nash Sub-Game perfect games while the final/last game is not Nash Sub-Game perfect, the U.S. threat embedded on the last Sub-Game is not credible, since it is against the U.S.' best interests, unless the U.S. accepts reducing its payoffs to hurt Pakistan, which is considered to be an irrational move in this respect.

#### 4. Observations

The final game clarifies the clash/conflict of interests between the U.S. and Pakistan. This clash of interests was exacerbated over the years. The public perception element in the game has increased the cost borne by both the players and created a disabling environment affecting the implementation of their strategies. The two players have decided to adopt a 'Defect Strategy' to maximize their payoffs, or reduce their costs. This situation causes a severe deterioration in the U.S.-Pakistan relation. The U.S. failure to create a basis of long-term relations built on mutual interest with Pakistan has severely affected their relations. On the other hand, Pakistan's failure to address her critical issues both internally and regionally has put her in an interests' collision course with the U.S.

## **G. CONCLUSION**

The game theory represents the Pak-U.S. relations in four different stages. In the first three stages, the game of imperfect information was played. This helped to capture and analyze the behavior of the U.S.-Pakistan relation and their strategic interactions over a period of time. The strategic form that was used previously helped to explain the available strategies for each player and expected payoffs. Additionally, the game theoretical explanatory tool provided an important evaluation methodology. It reveals that the trends in the U.S.-Pakistan relations, ever since they started, have completed a loop. The game also clearly depicts the relation between its elements (C, B, I, P, NP). The net profit is measured in terms of economic and political influence and the state's ability to advance its interests. The benefits, however, are directly proportional to the public's perception. The public's perception in the game creates an enabling environment to increase the political influence and benefits. Therefore, public perception is also directly proportional to the political influence.

The first stage describes the initial engagement of bilateral relations between the U.S. and Pakistan. None of the players had a credible threat or promise. The game reached the Nash equilibrium through mutual cooperation strategies. The second stage describes a one-side game where the U.S. played a Defect strategy and chose to disconnect its interests from those of Pakistan. However, during the game, the U.S. maintained firm control and managed to obtain Pakistani cooperation through a promise. The third stage reveals that the game after 9/11 went to the 1<sup>st</sup> stage once again. The relation trend in 2001 was similar to that of the period after 1947. However, the stakes were much higher this time and the players were more cautious in their approach. Although the U.S. strategy dominates the game, that does not give her an advantage to dictate new game rules. Pakistan could have secured better outcomes if she chose to defect and play with another player who could provide her better payoffs. The fourth stage only demonstrates the recent development in the game and discusses available options for both the players.

Further examination of the U.S. threat during 2001 reveals that U.S.-Pakistan relations ~~had~~ become marked by discord and distance.” The Bush Administration sought

to reduce the costs of any cooperation by initiating a credible threat<sup>127</sup> to reduce their costs and obtain unconditional cooperation from Pakistan. This attitude of the U.S. increased the Pakistani suspicion that brought the element of distrust into play.

The U.S. strategy to stabilize Afghanistan through Indian influence has increased Pakistan's fears. The introduction of India deep into Afghan affairs surfaced diverging goals between the U.S. and Pakistan. Additionally, applications of the U.S. strategies in Afghanistan had a negative impact on Pakistan's security and social structure. The spillover effects of the COIN efforts by the U.S. in Afghanistan aggravated the negative public perception and brought back the memories of betrayal. Pakistan views the U.S. as forcibly trying to secure its interests that are overshadowing Pakistan's own political precedence in the region. This is interpreted as a defection of all cooperation strategies implemented after 2001.

The state of denial by the U.S. towards Pakistan's regional political issues magnifies the gap between the two countries. The U.S. double-standard policies are another issue. The U.S. keeps stressing the vital importance of Pakistan to their regional interests, while on the other hand it keeps increasing her rivals' capabilities. This attitude exacerbates the Pakistani fears that they will be next on the American dinner table.

The game substantiates an urgent need to apply trust building measures to maintain mutual cooperation. If the U.S. is considering a stable and democratic Pakistan favorable to its foreign policy, then sincere efforts are required to address the public perception of Pakistan. The U.S. still has the ability to win the hearts and minds of the people of Pakistan, by the virtue of having a dominant strategy. A very remarkable study conducted by Andrabi argues that the 2005 earthquake could be regarded as a "quasi-experiment."<sup>128</sup> This would help the masses to interpret the effect of the earthquake on the Pakistani population's attitude towards the foreign elements. The attitude difference

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<sup>127</sup> Some look at the U.S. 2001 threat as a credible threat, however, the game shows that in rational thinking it is a non-credible threat.

<sup>128</sup> Tahir Andrabi and Jishnu Das, "In Aid we trust: Hearts and minds and the Pakistan Earthquake of 2005," *The World Bank, Washington DC and Centre for Policy Research*, New Delhi, (September 2010), <http://belfercenter.ksg.harvard.edu/files/uploads/mei/conference/andrabi-inaidwetrust.pdf>, (accessed June 10, 2011).

between the people who received the aid versus and those who were unable to receive the aid is a clear demonstration of the fact that the aid is a contributing factor to alter negative perceptions, provided it reaches the right people. Additionally, many polls provided credible evidence that the direct U.S. aid provided after the 2010 floods in Pakistan have remarkably improved the public perception in the affected regions of Pakistan.

Pakistan needs military aid to overcome the terrorist threat imposed on the country these days. This aid should not be conditional on her ability to defeat the terrorists. It took the U.S. almost a decade to achieve some improvement in Afghanistan. The aid should be used to advance confidence not to stir fears. Additionally, the Pakistan security issue needs to be addressed. Any improvement in her security will improve the relations and will have a positive impact on the game.

However, the U.S. needs primarily to consider the economic aid programs as a crucial tool to improve the Pakistani perception. The aid should reach its targets to accumulate inverse momentum that can defeat the anti-American sentiments. To achieve this end, the U.S. should not be hesitant to use all necessary measures. These measures should be directed into the delivery mechanisms rather than being restrictive measures that stir both suspicious and hatred.

**In the light of historical examples it could be analyzed that the U.S.-Pak** relation had been caught in a frustration cycle. In order to promote international peace and stability, it is pertinent to understand the consequences of proceeding in the same circle. Therefore, the element of ~~hope~~ is the only catalyst that could offset the effects of frustration and balance the bilateral relationship between the two countries for the next round of mutual interactions.

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## **VI. PERCEPTIONS AND REALITIES**

The game theoretical approach to the cost-benefit analysis of the ‘Pak-U.S. alliance in the fight against terrorism’ suggests a cooperation strategy by both the players. It also highlights the benefits associated with the population-centric approach and leads towards enhanced cooperation. While the game theoretical solutions were based on strong assumptions, this chapter assesses the Pak-U.S. relationship from different perspectives including national interests, government/population perceptions about each other, and realities on the ground. U.S. aid is the base of all the discussion since it has played a major role in shaping perceptions and the relations between the two countries. Besides suggesting appropriate actions to bring favorable changes in existing perceptions, this chapter ends by proposing some measures to reduce irritants in interest alignment and promote more common goals and interests that assist in achieving a common platform to further the relationship.

### **A. ROLE OF REGIONAL PLAYERS AND BALANCE OF POWER**

China, India, Iran, Russia, and Saudi Arabia are the key regional players that can exert an influential role in stabilizing Afghanistan and Pakistan. Since every nation has a right to formulate and achieve its foreign policy goals and national interests, these players have also pursued their own interests and their contribution in stabilizing the region is not clearly visible. While China seeks to promote its narrowly defined interests in Afghanistan and maintains strong support for Pakistan, Iran is engaged in Afghanistan assisting stability and providing economic and democratic support. Saudi Arabia, being a long-time ally to Pakistan, has shown consistent involvement in Afghanistan, renewing its commitment to promote stability and keeping its interests alive in the region. Russian perception in the region is shaped by many factors like U.S. dominance, the Central Asian Republics’ (CAR) concerns, the viability of the Northern Distribution Network,

and import of extremism from Afghanistan<sup>129</sup>; Increasing Indian influence in Afghanistan poses a security dilemma for Pakistan.

Pakistan, owing to its critical geo-strategic location and as a power-balancing actor in the region, needs to maintain cordial relations with all its neighbors without compromising on its own security. With a historically unreliable and powerful enemy to the East, Pakistan cannot afford a hostile West. While Indo-Pak relations hinge on the Kashmir issue, Afghans share common cultural ties with Pakistan besides providing it with much-needed strategic depth. Indian influence in Afghanistan is multi-faceted; India is not only increasing its physical presence and striving for access to CARs' energy/trade routes, but also fueling insurgency in Baluchistan to further destabilize Pakistan. Therefore, Pakistan's security concerns are based on real facts where Afghanistan may become another Kashmir<sup>130</sup> for the two rivals, besides affecting the stabilization process in Afghanistan adversely.

## **B. CONVERGING INTERESTS AND DIVERGING GOALS**

The U.S. approach towards India is not only in contradiction to its approach towards Pakistan but also undermines Pakistan's status in the region. On one side, the U.S. has refrained from becoming a party in settling the Kashmir issue and on the other it has kept silence on Indian influence in Afghanistan. While India may serve as a bloc against China in the region and other U.S. interests, it should not be allowed to intervene in the interests of Pakistan or other entities in the region. Since 2001, during the periods of most deep cooperation between the U.S. and Pakistan, both have overlooked any major discrepancy in strategic objectives. One of the biggest points of contention is the U.S. unwillingness to take sides with Pakistan and its rivalry with India.<sup>131</sup> In addition, both

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<sup>129</sup> Shiza Shahid, "Engaging Regional Players in Afghanistan Threats and Opportunities A Summary Paper from an Experts Roundtable Hosted by the CSIS Post-Conflict Reconstruction Project," *Center For Strategic & International Studies* (November 2009), [http://csis.org/files/publication/091124\\_afghan\\_players\\_0.pdf](http://csis.org/files/publication/091124_afghan_players_0.pdf), accessed September 11, 2011, 6.

<sup>130</sup> Ibid.

<sup>131</sup> Margaret Talev and Dion Nissenbaum, "Obama Takes India's Side with U.N. Endorsement," *McClatchy Newspapers* (Monday, November 8, 2010), October 19, 2011.

countries have different security priorities, with Pakistan concentrating efforts on her rivalry with India—an action that runs counter to U.S. interests on the Afghanistan border.

These conflicts in interest alignment between Pakistan and the U.S. make it harder to reconcile an already frail alliance between the two countries. Is there a way that these interests can converge? How can the U.S. capitalize on those common objectives? If the strategic objectives are different perhaps something could be done at the tactical level (what is happening on the ground) that will reduce the negative impact that these differences have on the population and the further repercussions that could be translated into pockets of safe haven to terrorist groups. To offset these diverging interests at the strategic level, both countries have pinpointed and targeted tactical agreements like the permission to conduct U.S. drone strikes in some regions of the country. The difference in strategic objectives for both countries is not going to fade away in the near future but these differences could be overlooked to find a common ground of cooperation. However, for attaining a strategic relationship, the larger objectives and greater interests should be given priority over short-term goals and limited tactical gains.

### **C. PLANNING FOREIGN AID: A WICKED PROBLEM**

If the perceptions do not match the realities or the needs of the population, any formulation of a strategy for foreign aid disbursement could fail. Social perception is the key to constructing the social reality of the populations. The perception of the different stakeholders involved in the assignment and distribution of foreign aid in Pakistan shapes the social reality. Before statistically discussing the perceptions, let us analyze the different dilemmas faced in planning foreign aid by utilizing a model created by Horst W. J. Rittel and Melvin W. Webber, who term these problems “Wicked Problems.” These are problems that cannot be definitely described, there is no objective definition of what is fair and there is not a definitive optimal solution.<sup>132</sup> The authors provide the following distinguishing characteristics for aid planning problems, which would enhance understanding of the prevailing perceptions and realities of the two nations.

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<sup>132</sup> Horst W. J. Rittel and Melvin M. Webber, *Dilemmas in a General Theory of Planning* (Berkeley: Institute of Urban and Regional Development, University of California, 1973).

1. **There is no definitive formulation of a wicked problem.** The issue with foreign aid and its disbursement is that the different stakeholders have different ideas of what the problem is and the solution should be. Is the problem that basic human services are not reaching the population? Is the problem that the U.S. aid is being channeled systematically? For didactic purposes, the problem statement on foreign aid as a wicked problem is: What is the future of U.S. foreign aid?
2. **Wicked problems have no stopping rule.** The problem solving process ends when resources are depleted. The problem with this statement and foreign aid is that the recipients of this aid will continue trying to solve the problem. With the U.S. tradition of fluctuating patterns on foreign aid policy and availability of funds, what is a solution that will mitigate resource depletion?
3. **Solutions to wicked problems are not true-or-false but good-or-bad.** With the variety of stakeholders, from donors and recipients of foreign aid, the United Nations, Non-Governmental Organizations, and the IMF what is good for one could be bad for the other. Are these stakeholders taking into account the needs of the population and treating them as one of the main stakeholders or are they planning in a vacuum or mirror imaging?
4. **No immediate and ultimate test of a solution to a wicked problem.** Even though there is no ultimate test of a solution to a wicked problem, the United States should focus on what works, what needs improvement and what needs to be examined. Instead of measuring outputs (e.g., wells and schools being built), there should be a focus on the outcome, is there governance and is the country stable?
5. **Every solution to a wicked problem has consequences.** The interconnection within issues and the population makes any

implementation of a solution have intended or unintended consequences that must be dealt with accordingly. Once you disburse aid you cannot take it back to readjust it.

6. **Wicked problems do not have a set of potential solutions.** Every stakeholder has a different solution set depending on what is their purpose and their mission. Synchronizing these different approaches to maximize the efficiency of the disbursement of aid may prove to be extremely difficult. Furthermore, these solutions must be tailored to affect the population and not to enrich key players within the recipient's government.
7. **Every wicked problem is essentially unique.** With foreign aid there is not a solution template that could be applied to the receiving country. Every country is different and what is good for Pakistan might not be good for Columbia. In addition, even within Pakistan, a good solution for Waziristan might not be a good solution for FATA.
8. **Every wicked problem can be a symptom of another problem.** A misdiagnosed symptom might attribute an effect to the wrong cause. Furthermore, a correlation does not automatically mean causality.
9. **The causes of a wicked problem can be explained in numerous ways.** There are economic, social and political complexities that contribute to wicked problems. What makes it harder to deal with is that this maze of bureaucratic, legal and community intricacies will have a different interpretation depending on the stakeholder's prism through which they observe the issue.
10. **The planner (designer) has no right to be wrong.** Since there is no ultimate test for a solution set when dealing with wicked problems, a planner is not in the business of formulating hypotheses. Stakeholders expect designers to get things right. In addition, there is not a perfect

solution package; therefore, making a mistake, admitting it and correcting it is not a sign of weakness, it should be considered a sign of strength.

#### **D. PERCEPTIONS AND REALITIES**

The fluctuating aid flows, and the divergence in the interests, objectives and goals of the two allies has given rise to conflicting perceptions and realities between Pakistan and the United States about each other and in the fight against terrorism. These perceptions could be categorized into more specific groups like the U.S. perception of Pakistan and the country's efforts towards defeating terrorism, Pakistan's perception of the U.S. and its true intentions, the Pakistani population's perception of their own government and of the U.S., and the global perception regarding the PAK-U.S. relations in general and their current alliance specifically.

##### **1. U.S. Perception of Pakistan.**

The U.S. population's favorability ratings of Pakistan have hit an all-time low in 2011, with only 18% of Americans looking favorably upon the country as revealed in Figure 10. These views are probably from Pakistan's association in the media with international terrorism. Furthermore, to put things in perspective, only Iran, North Korea and Afghanistan have less favorable ratings than Pakistan.<sup>133</sup> This poll was conducted before Osama bin Laden's killing in Pakistan; therefore, it would be safe to say that this rating is probably lower today.

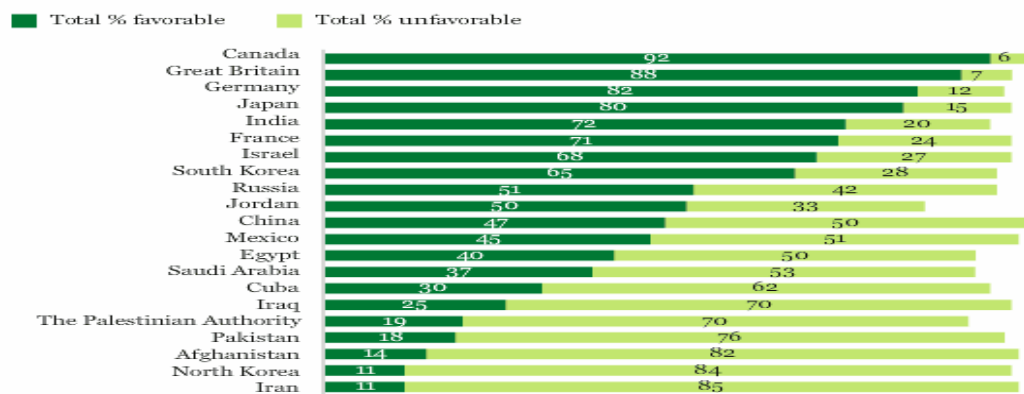
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<sup>133</sup> Julie Ray and Rajesh Srinivasan, "Pakistanis More Sour on U.S. After Bin Laden Raid," *GALLUP* (May 20, 2011), <http://www.gallup.com/poll/146090/iran-north-korea-americans-least-favorite-countries.aspx>, accessed October 21, 2011.



#### *2011 Country Favorability Ratings*

Next, I'd like your overall opinion of some foreign countries. What is your overall opinion of \_\_\_\_\_?  
Is it very favorable, mostly favorable, mostly unfavorable, or very unfavorable?



Gallup, Feb. 2-5, 2011

Figure 10. Pakistan's Favorability Ratings

The trend depicted in the first graph shows that Americans' views on Pakistan are closely linked to their views on Afghanistan. An assessment from a former senior U.S. government official, speaking of the U.S. government's perception of Pakistan says, "Pakistan is the most dangerous country in the world today. All of the nightmares of the twenty-first century come together in Pakistan: nuclear proliferation, drug smuggling, military dictatorship, and above all, international terrorism."<sup>134</sup> While the face value of this statement suggests grave concerns for the audience, it does not portray the reality since none of these factors qualify to label Pakistan as 'most dangerous' in the presence of North Korea, Mexico, Burma and Afghanistan for nuclear proliferation, drug smuggling, military dictatorship, and international terrorism, respectively.

<sup>134</sup> Kronstadt, Library of Congress and Congressional Research Service, *Pakistan-U.S. Relations*, 102.

## 1. Pakistan's Perception of the U.S.

The Pakistani population's disapproval of the U.S. leadership is also extremely low. In a poll conducted in 2011 as shown in Figure 11, the Pakistani approval rating for the American leadership was at an all-time (since Gallup has been conducting these polls) low of 10%. Furthermore, after the raid on Bin Laden, 64% of Pakistanis who were aware of this operation had a more negative view of the U.S..<sup>135</sup> This is partly because of their belief that neither Pakistani intelligence nor the government was aware of OBL's presence in Pakistan.

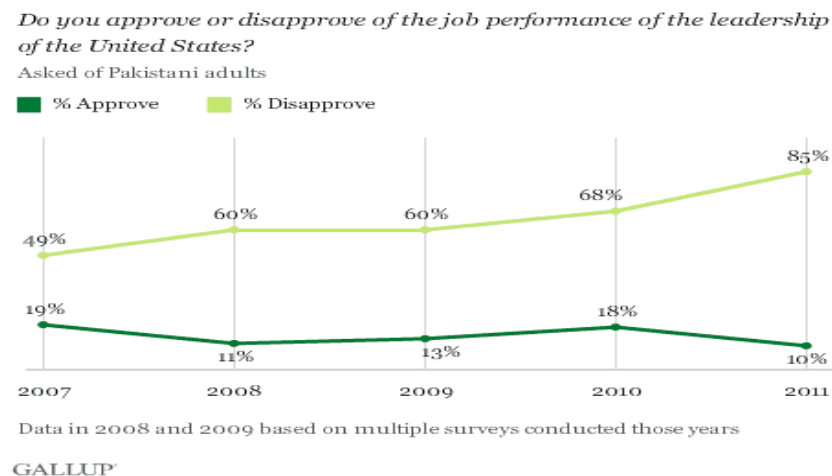


Figure 11. U.S. Favorability Ratings

The Pakistani government perception of U.S. intentions has been worsening with events like the execution of two Pakistanis in the city of Lahore by a CIA contractor this year, the increasing number of drone attacks in Pakistan's tribal regions, and the U.S. raid inside Pakistan to kill bin Laden in May.<sup>136</sup> Foreign aid has been used to manage perceptions at the government level but these changes in perception are not being seen in the Pakistani population.

<sup>135</sup> Ray and Srinivasan, *Pakistanis More Sour on U.S. After Bin Laden Raid*, October 21, 2011.

<sup>136</sup> Peter Bergen and Michael Mazarr, "U.S.-Pakistan: Divorce is Not an Option," *Cable News Network* (September 1, 2011), accessed October 21, 2011.



## 2. Pakistani Population's Perception of Their Own and that of the U.S. Government

In 2008, 62% of Pakistanis did not have confidence in their own government and the same number of people suspected that their leadership was leading Pakistan down the wrong path as depicted in Figure 12.137. In 2011, the percentage of optimists increased to 26%; however, the Bin Laden episode has brought it down considerably. On the other hand, the U.S. leadership enjoyed a similar approval rating among Pakistanis in 2008, which rose to 28% in 2011. However, the percentage has declined sharply after Bin Laden's killing for obvious reasons.

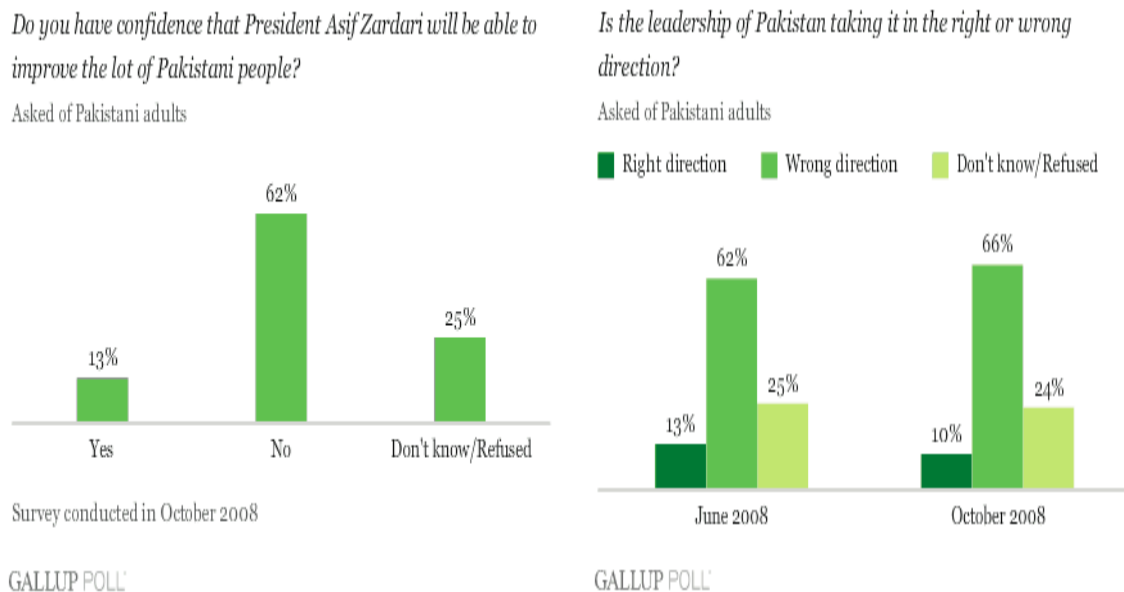


Figure 12. Population Perception

## E. CONCEPTUAL BLOCKS BLURRING PERCEPTIONS

One of the issues with international assistance is that, with so many constraints, it becomes a wicked problem trying to prioritize how to disburse foreign aid. Furthermore, with the troubles that affect many regions in the world, it is extremely hard to pinpoint

<sup>137</sup> Retrieved from the Gallup World View database <http://www.gallup.com/poll/113737/pakistanis-give-new-civilian-leadership-low-marks-far.aspx> accessed on October 27, 2011.

what the problems are and how to affect a positive change. This becomes wicked problem territory when United States foreign aid can be one of the resources that could save a fragile state. How can the United States, from policymakers to USAID officers in the field, disengage from the conceptual blocks that are affecting its perception of what the true dilemma is and develop strategies that enable it to develop better solutions to wicked problems?

As a tool to cope with creativity in understanding and developing solutions to wicked problems, James L. Adams book, *Conceptual Blockbusting, A Guide to Better Ideas*, will be utilized for this discussion.<sup>138</sup> The different conceptual blocks that might pose a challenge to pinpointing what the true wicked problem could be are perceptual blocks, emotional blocks and cultural and environmental blocks. These different blocks have a detrimental effect on the perception ultimately affecting the reality on the ground. Even though the author also mentions intellectual and expressive blocks, and alternate thinking languages, these will not be addressed in this thesis.

### **1. Perceptual Blocks**

According to Adams, a perceptual block is a barrier that prevents problem solvers from recognizing what the real problem is or the information necessary to resolve the problem. The first perceptual block for the people dealing with foreign aid is difficulty isolating the problem. Is the problem the security apparatus of the recipient of the foreign aid, is it unattended grievances in the country's population, or is it the presence of terrorist groups in a specific province? Spending more time in isolating the problem might shed light on possible simple solutions. The second block is drawing the boundaries of a problem too narrowly; in other words, the framing of a wicked problem has influence over possible solution sets. When the constraints on defining a dilemma are eased, it allows for multidisciplinary considerations in the diplomatic, information, military or economic realms instead of only applying a foreign aid solution to a wicked problem. In addition, this is a cultural block that says ~~throwing~~ money at the problem

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<sup>138</sup> James L. Adams, *Conceptual Blockbusting: A Guide to Better Ideas*, 4th ed. (Cambridge, Mass.: Perseus Pub., 2001), 220.

will solve it.” Finally, the tendency to mirror image or assume that all parties involved are going to think and act like you will obstructs the ability to have sensitivity for the perspective of others. In other words, it is important to take into consideration what are the needs of the population and put yourself in other people’s shoes, see what they see, hear what they hear, and feel what they feel.

## **2. Emotional Blocks**

Some examples of emotional blocks are risk averseness, inability to embrace uncertainty and judging instead of innovating. Security concerns with threats like terrorism make U.S. government foreign aid a risky business. What this does is put the focus of what the problem is in the national or foreign security realm instead of realizing that other problems could have more devastating effects within a country’s population. The foreign aid stakeholders are not willing to make a “mistake” and invest in a problem that fails to engage the interest of the donor country.

Accepting uncertainty could make it easier for stakeholders to develop their goals in synchronicity to create more reliable problem identification and solutions. When stakeholders work together, the negative impact of uncertainty is mitigated because an atmosphere of trust is created. Furthermore, another example of an emotional block is judging instead of innovating. Stakeholders need to be more sympathetic with the ideas of other organizations and their take on what the dilemma is and what innovative solutions could address the wicked problem.

## **3. Cultural and Environmental Blocks**

The United States government has trouble understanding other cultures and this inattentiveness to cultural factors hampers creativity, not only in identifying problems but also in finding solutions. Our culture of having an “everybody should be like me” mentality and authoritative attitudes could alienate some stakeholders that bring a fresh and innovative perspective into the problem identification and solving process. The idea is to have as many stakeholders as possible, with the authority dispersed to create a shared strategy that will give everybody involved a sense of ownership and commitment.

Cultural and environmental blocks could hamper the ability of considering outside options and make the so-called experts have a one-dimensional view of the world. Stakeholders need to have empathy for others to be able to have the imagination and creativity to work in wicked problem territory. Finally, liberating organizations from these conceptual blocks will help them see the uniqueness in every problem. This will lead to the development of innovative solutions instead of applying a “cookie cutter” solution template to every situation.

#### **F. CHANGING PERCEPTIONS THROUGH MICRO-ALLIANCES**

To change negative perceptions to positive ones, the United States could channelize those foreign aid funds via micro-alliances at the population level using entrepreneurship and innovation. One example of a successful world systems changing solutions organization is Ashoka. Moreover, with significant budget constraints, Ashoka has been able to stimulate a global community that makes all citizens powerful change-makers helping manage the perceptions with a more positive reality. One of the hardest parts of foreign aid is measuring the effectiveness and the impact that this money is having on the population that is supposed to benefit from the aid (to include their perceptions). Conducting a critical examination of non-military spending and the contribution it has made in achieving U.S. strategic objectives and managing Pakistani-U.S. perceptions, we could say that these funds have been either wrongly utilized or are not reaching the intended citizens.

Decentralized disbursement of funds at provincial levels or even further decentralizing into various subsectors would be effective in bringing substantial changes. The current method of disbursing foreign aid leaves these resources in the hands of corrupt government officials, which means that the population’s grievances are not being met. Therefore, the strategy should be to generate social entrepreneurship to create a self-sustaining mechanism that will eventually erode the vicious cycle of foreign aid dependence. However, to be good stewards of foreign aid, each sector and sub-sector should have centralized accountability at the USAID level.

## **G. MANAGING PERCEPTIONS BY KNOWING AND INFLUENCING REALITIES**

Collaboration could be an effective strategy in dealing with the unproductive system currently in place to disburse foreign aid. When we, as consumers, pay for a product or a service, we want to see results. The same concept should be applied to the granting of foreign aid, so the government can be a good steward of the U.S. taxpayers' money, which in turn can have positive effects on managing perception in the U.S. Social entrepreneurship demonstrated how people can help themselves instead of creating a dependency on foreign aid, which will turn into a vicious cycle. However, how can collaboration streamline and mobilize the resources so that they can reach the intended population? The different stakeholders must have a say on how aid is spent. With the current system, the money falls into the hands of corrupt governments that do not fulfill the needs of their population.

One of the issues with collaboration is the problem of coordinating and synchronizing efforts with so many stakeholders that have a say on where the aid goes. However, Web 2.0 platforms to include mobile phones, text messaging, and other social networks could bring together a large network of volunteers, stakeholders and apprehensive institutions to include foreign and domestic donors. Ushahidi is an example of how these technologies have proven to be effective in tying the geospatial element and information collection to the actual disaster assistance resources on the ground in the Haiti Earthquake relief effort. Figure 13 is an example depicting how collaboration and foreign aid might work together.

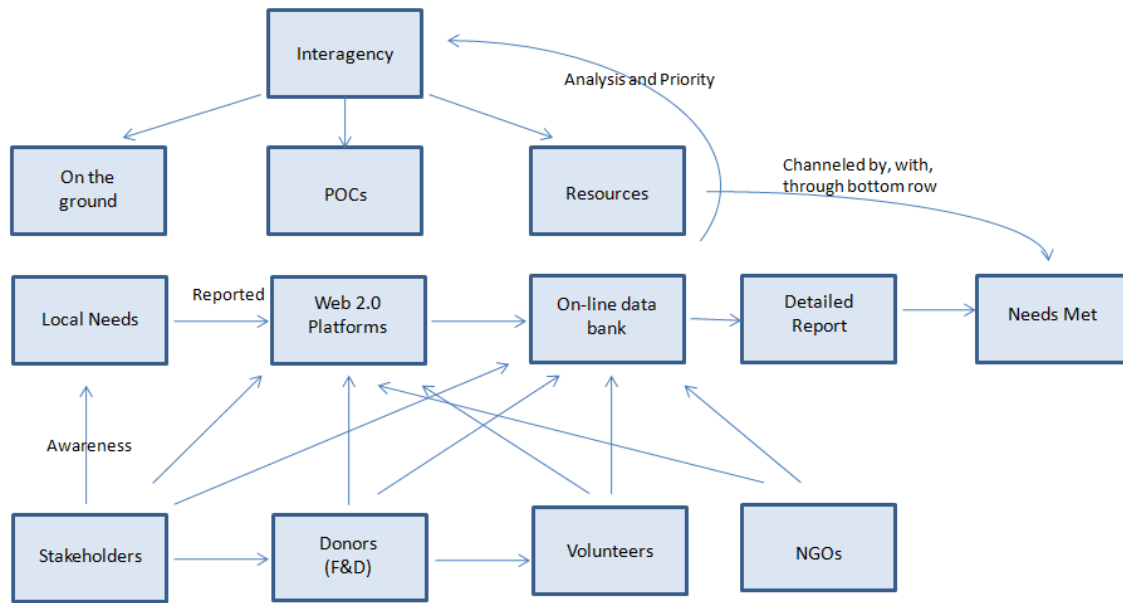


Figure 13. Collaboration and Foreign Aid Mechanism

This flow charts starts with real-time reporting from the people at the local level. The stakeholders at the grassroots level, the people that are aware of the actual realities of the population, provide awareness of these platforms to report any grievances. These reports go into an online data bank where in which the United States agency and other donors in charge of providing the aid have access to this data. These reports are prioritized geospatially and resources are mobilized by, with and through volunteers and NGOs that have been vetted by the U.S. interagency channels. Donors like to see their money in action, so some of the projects funded by “crowd sourcing” could be filmed and aired on a platform like You Tube for better transparency in the process.

The U.S. could develop strategies to cope with managing perceptions and changing realities with creativity, systems thinking, entrepreneurship and innovation, and collaborative problem solving and innovation. First, in using creativity it is important to devise strategies that will help in getting rid of conceptual blocks that might pose a challenge to pinpoint what the true problem could be. Some of these are perceptual blocks, emotional blocks and cultural and environmental blocks. Second, in systems thinking developing a causal loop diagram is an excellent aid in visualizing how the

different variables or separate problems relate and affect each other (Chapter IV). Furthermore, doing this will facilitate pinpointing intervention points to influence the system in a positive manner. Third, entrepreneurship and innovation creates a self-sustaining mechanism that will eventually erode the vicious cycle of foreign aid dependence.

In conclusion, with so many stakeholders involved with foreign aid, it is safe to say that it will fall in wicked problem territory. There is no consensus on which problems or grievances need to be addressed or how to prioritize meeting those needs. Finally, with so many constraints, limited resources could cause competition for these resources and conflict within the different stakeholders. Collaboration is an excellent strategy for making foreign aid effective, viable and transparent. This is what will change the realities on the ground, which will in turn influence perception.

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## VII. CONCLUSION

The Pakistan-United States relationship has witnessed several ups and downs in the last six decades. One of the most important factor affecting Pak-U.S. ties has been U.S. aid. The aid has been used to achieve the U.S.‘ varying foreign policy objectives including, but not limited to, containing the spread of communism, Soviet expansion, China, and terrorism/extremism in the region. However, withdrawal of aid on more than one occasion (e.g., alliance with China, wars with India, Soviet withdrawal from Afghanistan, and nuclear issues) forced Pakistan to explore alternate venues to serve her national interests. While the flow of U.S. aid provided Pakistan with tools to serve both her own and the U.S. interests in the region, abrupt withdrawal of the same and imposition of sanctions, at various times and for various reasons, created a negative perception about the U.S. within Pakistan.

It would not be incorrect to say that the import and spread of extremism, drugs, and weapons in Pakistan through Afghanistan, in the post-Soviet withdrawal period, is the result of the U.S. disappearance from the scene. This is also true that this mega event has contributed significantly towards the current state of Pakistan. The sourest point remains that the U.S. recycled its relations with Pakistan at regular intervals to suit its own national interests without paying much attention to its implications for Pakistan’s geo-political, socio-economic, and domestic situation. Pakistan has been graded, at various times, from as high as the ‘most allied ally’ to as low as ‘most dangerous’ state, besides spending more time facing military/economic sanctions than actually receiving assistance. The U.S. government has never been focused on Pakistan’s long-term stability and prosperity.<sup>139</sup> Instead, the emphasis has mostly remained on achieving short-term goals.

The U.S. strategy towards Pakistan, even in the post-9/11 period, remained far from focusing on long-term relations. The same pro-military U.S. approach is reflected in most of the financial assistance that the U.S. has provided to Pakistan since its inception.

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<sup>139</sup> Craig Cohen, *A Perilous Course: U.S. Strategy and Assistance to Pakistan* Center for Strategic and International Studies, 2007), 128, viii (preface).

—The vast majority of U.S. assistance to Pakistan since September 11, 2001, however, has not been directed to Pakistan's underlying fault lines, but to specific, short-term counterterrorism objectives that focus particularly on the western border and on Afghanistan.”<sup>140</sup> Thereby, United States has undermined its broader strategic goals in Pakistan while addressing immediate issues like al Qaeda and the Taliban, implying that the U.S. thinking revolves around dealing with the symptoms and not the root causes of extremism and terrorism.<sup>141</sup> The cost-benefit analysis of the Pak-U.S. alliance, in the fight against terrorism from 2001–2011, suggests a pattern of pro-military approach from the U.S. towards Pakistan that has not only failed in achieving U.S. objectives but has also strengthened already existing anti-U.S. sentiments in Pakistan and expanded the extremists' base. The diminishing U.S. influence in Pakistan is another proof of faulty U.S. policies towards the country.

The U.S. claims of providing considerable financial assistance to Pakistan is only partially valid since most of this assistance is either severely conditioned or provided in lieu of services offered by Pakistan. While the major portion of the assistance is security/military related, less assistance is directed to addressing the huge population base. Pakistan is also not methodical in fund management. An insight into the current U.S. military/economic assistance to Pakistan reveals several drawbacks in fund appropriations and management including, but not limited to, underutilization, mismanagement, invisibility, unaccountability, corruption, wastage and lack of transparency. However, even if the available funds are expanded in consonance with desired intentions under improved control, they are not likely to bring a significant change in the outcome of war or in improving Pak-U.S. relations, owing to the clear imbalance in their allocations. While Pakistan lacks the infrastructure and credibility to consume allocated funds in accordance with their purpose, the U.S. fails to recognize the inherently faulty design of fund allocation that favors the short-term military objectives rather than the long-term strategic aspirations.

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<sup>140</sup> Cohen, *A Perilous Course*, x (Executive Summary).

<sup>141</sup> Mark S. Hamm, Two Years After 9/11: Assessing the War on Terrorism. In Mark Hamm and Paul Leighton (eds), *Teaching and Understanding Sept 11, 2003*, <http://stopviolence.com>, (accessed September 12, 2011).

The game theoretical approach, to analyze the options for the two players in the future relationship, suggests a ‘cooperation strategy’ solution where success depends on a number of variables and future U.S. policies. The game setting clearly manifests the relationship between its elements, Pakistan and the U.S. The benefits are measured in terms of political influence and the state’s ability to advance its interests. While the benefits are directly proportional to the people’s perception, this perception creates an enabling environment to increase both political influence and the benefits. Therefore, public perception is also directly proportional to the political influence. As per the game theory analysis, Pak-U.S. relations have now reached the same stage as at the onset six decades ago; however, now the stakes are much higher for both the players, particularly for Pakistan. The U.S. may have better control over the situation but is not in a position to dictate its terms to Pakistan. The game clearly suggests that Pakistan can secure a better outcome if it chooses to exercise alternative strategic options in reaction to the U.S. defection and vice versa. Finally, the game hints at the conflict in interests of both the players, where associated cost creates a disabling environment that in turn affects strategy implementation. In order to secure better payoffs, both the players have the option to defect, worsening the relationship and creating conflict of interests.

Pakistan’s geo-strategic location, historical enmity with India (over Kashmir), instability/hostilities in/from Afghanistan, declining socio-political conditions, dismal state of economy, and rising extremism are the realities and need to be perceived as such. Barring the geography and Kashmir issues, the remaining problems are the by-products and implications of Pakistan’s weak governance and its engagement with the U.S., respectively. While the U.S. kept switching the relationship ON and OFF to suit its interests, Pakistan failed to foresee the grave implications of U.S. abandonment and continued its journey downward without exploring the available alternate strategic options.

One of the major flaws in the Pak-U.S. relationship is the interest divergence of both countries. While the U.S.’ larger objectives in the region tend to promote Indian influence, Pakistan’s security imperatives conflict with the U.S. intentions in Afghanistan. While the U.S. aid is predominantly military in nature, the population’s

grievances continue to shape negative perceptions about the U.S. The result is obvious: both countries have negative perceptions about each other at all levels. While perceptual blocks may hamper the ability to build correct perceptions, collaboration and mature understanding of each other helps change realities on the ground, which in turn influences perception and perception shapes relationships.

All nations strive to achieve their foreign policy goals and national interests and Pakistan is no exception. While the Pak-U.S. alliance in the fight against terrorism and the future of their relationship hangs in a delicate balance, there is no escaping the fact that both countries need each other for safeguarding their interests in the region. Introducing a population-centric approach, understanding each other's limitations, and promoting common goals is likely to reduce the trust deficit and contribute to achieving a favorable cost-benefit equation besides laying the foundation for a long-term strategic relationship. In the Pak-U.S. relationship, the ground realities differ significantly from the perceptions of both Americans and Pakistanis. However, perceptions can be changed by influence and the U.S. can exert this influence by shifting its focus from military to population. In the panel's opinion, there cannot be a better opportunity than now for the U.S. to engage Pakistan in a long-term strategic relationship based on trust, mutual interests and deep understanding, an omission that has kept the U.S. from winning hearts and minds in Pakistan.

#### **A. THE WAY AHEAD**

The panel, after having considered major factors affecting the Pak-U.S. relationship and applying the game theoretical approach, recommends the following options and associated measures as the way ahead in improving the current state of Pak-U.S. relations and laying the foundation for a long-term strategic partnership between the two nations.

The U.S. can exercise two options: either to continue a renewed cooperation with Pakistan by using soft power, or to coerce Pakistan to cooperate while withdrawing all its current assistance. If the U.S. opts to defect at this stage, it has to reduce its dependency on Pakistan, a proposition highly unsuitable to its national interests. This option would

not only deprive the U.S. of all the physical/material support through Pakistan and increase the cost of war significantly but would also deteriorate its ability to effectively continue its war on terror in the AfPak region. The U.S. would also lose the very grounds that initiated the fight against terrorism besides losing credibility in the Muslim world in general and Pakistan in particular. Pakistan's sufferings would increase; however, exercising alternate strategic options of allying with Russia, China or Iran would not only open ways for Pakistan but also isolate the U.S. in the region.

However, if the U.S. chooses to continue its cooperation with Pakistan, it needs to concentrate on the following measures in order to reap better returns on its investment in Pakistan. These measures are listed in order of priority and as such are required to be adopted forthwith since time remains a crucial factor in their application:-

**1. Short-Term Measures –Breaking the Frustration Cycle”**

- a. Initiate Confidence Building Measures to bridge the trust deficit.
- b. Enhance communication, coordination, and constructive engagements at multiple levels to eliminate misconceptions against each other.
- c. Launch favorable media campaign that mimics the Voice of America to publicize the positive aspects of the relationship in both countries.
- d. Provide a ‘population-specific’ economic assistance aimed at helping people to create positive public opinion.
- e. Address immediate military cooperation/coordination issues.

**2. Long-Term Measures –Reinforcing Hope”**

- a. Renovate Relationship: Pakistan and the United States should renovate their relationship based on long-term objectives, common goals, mutual interests, regional stability/security, and better understanding.
  - 1) Understand Limitations: While the U.S. should comprehend Pakistan's limitations and strategic vulnerabilities, Pakistan should

concentrate more on setting the house in order to better serve the common interests.

- 2) Regional Approach: Promoting a regional approach for collective security, involving key players, is likely to advance the stabilization process in the region.
- 3) Address Key Issues: Understanding and resolving Pakistan's concerns regarding the Kashmir issue and Indian influence in Afghanistan would not only reduce the divergence in the interests of the two allies but also promote stability in the region.

b. Population-centric Approach: In order to lay the foundation for a long-term strategic relationship and a better return on its investment in Pakistan, the U.S. needs to adopt a more population-centric approach and enhance economic support to the country that has served vital U.S. interests and is critical to achieving regional U.S. foreign policy goals in the future. Pakistan is transitioning through one of the worst periods in its history and needs a reliable partner to support its stabilization. A more population-centric approach aimed at improving social well-being, justice, security, economics and governance from the U.S. is likely to prove beneficial for both countries. This approach should be adopted to accomplish the following measures:

- 1) Providing education through schools would reduce indoctrination in Madrassahs besides bringing moderation to the society at a fractional cost of what is being spent in “firefighting” against the graduates of those Madrassahs.
- 2) Creating employment opportunities and promoting entrepreneurial culture engages the youth in constructive activities and prevent them from falling prey to extremism. The U.S. assistance in establishing entrepreneurship and micro-alliances would help reduce unemployment and dependence on foreign aid.

- 3) Assistance in energy sector/production would serve both in stability and addressing the grievances of population.
- 4) Building communication and development infrastructure like roads, bridges, and dams helps in addressing public frustrations.
- 5) Supporting the private sector, providing technical expertise in infrastructure development, and facilitating mutual trade and export would prove beneficial for both the countries in the long run.
- 6) Reshaping economic aid and enhancing long-term bilateral assistance to promote small projects involving people and publicizing the same through media would enhance both the perceptions and relations.
- 7) Creating measures to overcome corruption through accountability and a checks-and-balance system would help achieve better return on the U.S. investment besides favorably influencing the culture.

The population-centric approach/investment, involving the above-mentioned measures, besides laying the foundation for a long-term partnership, would also isolate extremists from the moderate populace and help in achieving the U.S. objectives in the region. The U.S. would be able to exert larger influence in the region, have positive perceptions, and enhanced credibility in Pakistan and the Muslim world. On the other side, it would enable Pakistan to address its security concerns, control extremism, and improve its domestic situation besides enhancing its image globally. While population-centric investment may take a decade or two to prove its effects, its benefits would certainly outweigh the costs and set the bricks in place for a long-term strategic Pak-U.S. relationship.

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## APPENDIX

### Stage One Solution

The players' movement starts without communication. Table 16 shows the players' movement diagram. *Nash Arbitration* demonstrates the likely outcome for the players.

Table 16. The Movement Diagram (Stage 1)

		Pakistan				
		Coop		Defect		
U.S.	Coop	(3, 3)	→	(1, 4)		
		↓		↑		
	Defect	(4, 1)	←	(0, 0)		

The movement diagram suggests that none of the players has a dominant strategy. Both players have an incentive to defect and enjoy a free ride at the other's expense. The game has three equilibrium points. Two are pure strategy Pareto optimal equilibrium points (4, 1) and (1, 4), while the third is a mixed strategy equilibrium. Nash equilibrium<sup>142</sup> is (3, 3), where both players pursue cooperation. Nash equilibrium is defined as a set of strategies, one for each player, such that no player has incentive to unilaterally change her action. Players are in equilibrium if a change in strategies by any

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<sup>142</sup> Nash equilibrium calculations will be discussed thereafter. This point can be reached if both players play the game with 50% Coop. and 50% defect.

one of them would lead that player to earn less than if she remained with her current strategy.”<sup>143</sup>

## **Strategic Moves**

The game without communications revealed that both players do not have a dominant strategy that would eventually lead to the equilibrium point. It is instructive to examine what would happen if lines of communications were opened and the players have the ability to communicate. A strategic move analysis is demonstrated below to determine if any of the players has a threat or a promise or a combination of both, which, if communicated, would alter the game payoffs.

### **1. Pakistan**

#### **a. First Move: Pakistan**

- 1) If Pakistan pursues her Cooperate strategy, then the U.S. will choose Defect with payoffs (4, 1).
- 2) If Pakistan does not choose Cooperate and Defect, then U.S. will pursue Cooperate with payoffs (1, 4).
- 3) Pakistan, in this case, can secure a better payoff by pursuing her Defect strategy and get her best option of the likely outcomes (1, 4).

#### **b. Threat: Pakistan**

- 1) Pakistan does not want the U.S. to pursue its likely strategy of Cooperate; therefore, Pakistan places her threat on the U.S.’ Defect strategy.
- 2) Normally: If the U.S. plays Cooperate, Pakistan plays Defect with payoffs (1,4)
- 3) Threat: If the U.S. plays Cooperate, then Pakistan will Cooperate, which will credit the U.S. a higher payoff of 3, while Pakistan’s payoff will be reduced to become 3. The final payoffs will be (3,3).

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<sup>143</sup> Straffin, *Game Theory and Strategy*



- 4) The threat hurts Pakistan, but it does not hurt the U.S., which means it is not a threat. Therefore, Pakistan does not have a threat.

**c. Promise: Pakistan**

- 1) Pakistan wants the U.S. to play its unlikely strategy Defect; therefore, Pakistan's promise will be on U.S.' Defect strategy.
- 2) Normally: If the U.S. plays Defect, then Pakistan plays Cooperate, with payoffs of (4, 1).
- 3) Promise: If the U.S. plays Defect, then Pakistan will play Defect with payoffs (0, 0).
- 4) The promise hurts Pakistan, and does not benefit the U.S.; therefore, Pakistan does not have a promise.

**d. The threat and promise Combination is not available for Pakistan.**

**2. The United States**

**a. First Move: U.S.**

- 1) If the U.S. pursues Cooperate strategy, Pakistan will choose Defect with payoffs (1, 4).
- 2) If the U.S. chooses to Defect, then Pakistan will pursue Cooperate with payoffs (4, 1).
- 3) In this case, the U.S. can secure a better payoff by pursuing its Defect strategy and get its best option (4, 1).

**b. Threat:**

- 1) The U.S. does not want Pakistan to pursue its likely strategy Defect; therefore, the U.S. places its threat on Pakistan's Cooperate strategy.
- 2) Normally: If Pakistan plays Cooperate, the U.S. plays Defect with payoffs (4, 1)
- 3) Threat: If Pakistan plays Cooperate, the U.S. will pursue its Cooperate strategy that would increase Pakistan's payoff and reduce the U.S. payoffs to (3, 3).

- 4) If the threat hurts the U.S. and does not hurt Pakistan, it is not a threat. Therefore, the U.S. does not have a threat.

**c. Promise:**

- 1) The U.S. wants Pakistan's Cooperate strategy; therefore, the promise will be on Pakistan's Defect strategy.
- 2) Normally: If Pakistan plays Defect, then the U.S. will play Cooperate with payoffs (1, 4).
- 3) Promise: If Pakistan plays Defect then the U.S. will play Defect with payoffs (0, 0).
- 4) Promise hurts the U.S., but does not benefit Pakistan; therefore, U.S. does not have a promise.

**d. The threat and promise Combination is not available for U.S. either.**

Neither the threat nor promise option works for both the players (i.e., even with communication, both players cannot secure better payoffs). In this situation, it is strongly recommended to look at the players' security levels and their prudential strategies.<sup>144</sup> The security level technique is a method to determine the minimal payoff that a player can secure by playing his "prudential strategy." It gives a fair indication of the player's game value. By playing the prudential strategy, a player can assure that the least he gets is his security level, if his opponents choose to hold his payoffs down.<sup>145</sup>

## **Security level Solution**

We extract both Pakistan's and the U.S.' games to find the security levels from the prudential strategy.

### **1. Pakistan - Prudential Strategy – Solution**

- a. Pakistan's game: Pakistan is maximizing "Mini-max," while the U.S. is minimizing "maxi-min," the opponent's payoff.

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<sup>144</sup> Philip Straffin defines the prudential strategy in a non-zero-sum game by the player's optimal strategy. In this game, he defines the player's security level by the value of the player's game. For more read, Philip Straffin, Game Theory and Strategy.

<sup>145</sup> Philip D. Straffin, P.69.

- b. It is a game with Pakistan's payoffs, and has a pure strategy solution.
- c. Table 17 shows Pakistan's payoffs and the game movement diagram:

Table 17. Pakistan Prudential Strategy Movement Diagram (Stage 1)

		Pakistan				
		Coop.		Defect		
U.S.	Coop.	3	→	4	4	
		↓		↓		
	Defect	1	←	0	①	Dominant
		①		0		

- d. There is a solution in the pure strategy, where the U.S. has a dominant strategy –pure prudential strategy” to play Defect 100% of the time whenever Pakistan plays Cooperate or Defect as depicted in Figure 14 and 15.
- e. Pakistan should play her Cooperate strategy to face the U.S. defect strategy.
- f. The security level is  $Y=1$ ; the value of the game is 1.

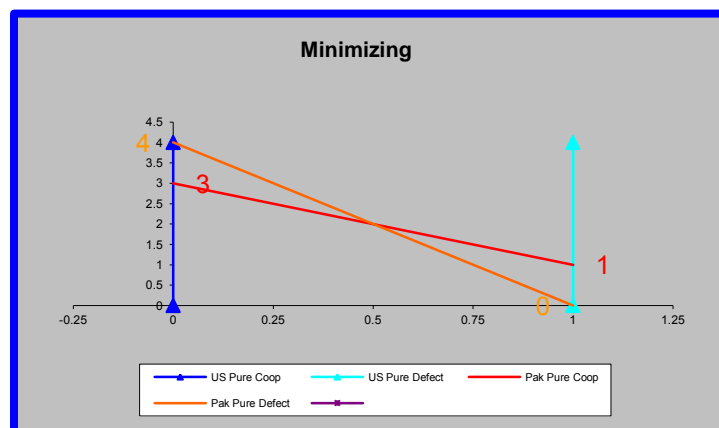


Figure 14. Shows U.S. Minimizing Strategy (Stage 1)

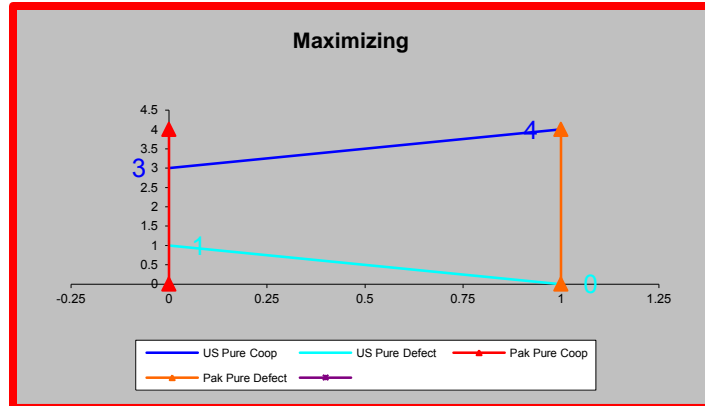


Figure 15. Shows Pakistan Maximizing Strategy (Stage 1)

## 2. U.S. - Prudential Strategy – Solution

- U.S. game: The U.S. is maximizing “mini-max,” while Pakistan is minimizing “maxi-min” the opponent’s payoff.
- It has become a Zero-Sum Game with the U.S.’ payoffs.
- Table 18 shows the U.S. payoffs and the game movement diagram:

Table 18. U.S. Prudential Strategy Movement Diagram (Stage 1)

		Pakistan				
		Coop.		Defect		
U.S.	Coop.	3	→	1	①	
		↓		↑		
	Defect	4	→	0	0	
		4		①		
			Dominant			

- The U.S. has a pure prudential strategy to play Defect whenever Pakistan plays Cooperate as shown in Figures 16 and 17.

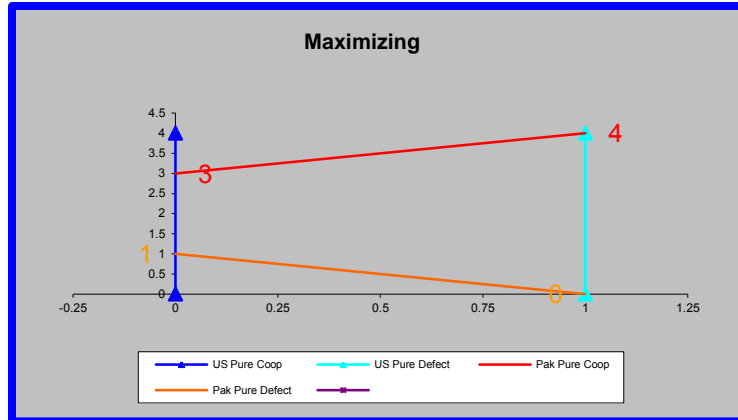


Figure 16. Shows U.S. Maximizing Strategy (Stage 1)

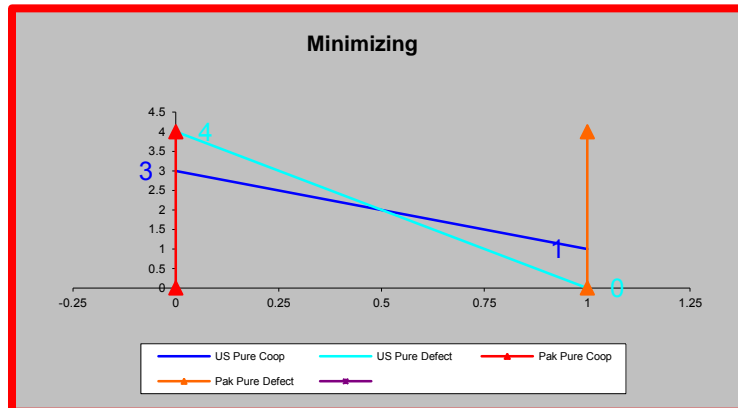


Figure 17. Shows Pakistan Minimizing Strategy (Stage 1)

- e. The security level is  $X=1$ ; the value of the game is 1. Figure 18 shows the game security levels.

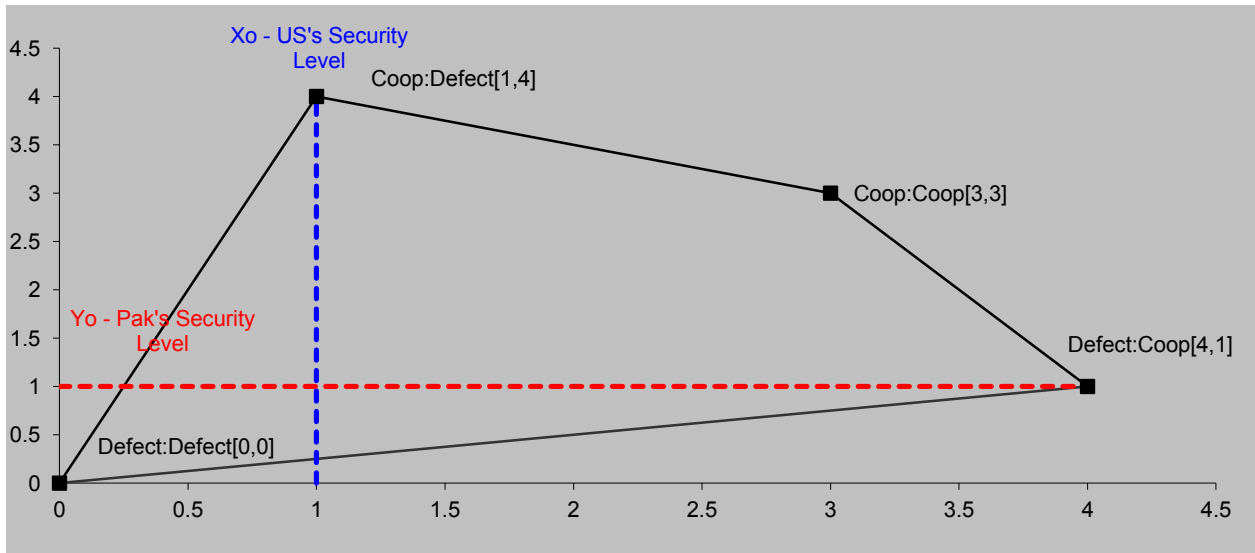


Figure 18. The Players' Security Levels. (Stage 1)

### The Equalizing Strategy

#### 3. Pakistan - Equalizing Strategy – Solution

- U.S. game: Pakistan is equalizing, while U.S. is maximizing.
- It is a Zero-sum game with U.S. payoffs.
- The movement diagram is depicted in Table 19:

Table 19. Pakistan Equalizing Strategy Movement Diagram (Stage 1)

		Pakistan				
		Coop.		Defect		
U.S.	Coop.	3	→	1	1	
		↓		↑		
	Defect	4	→	0	0	
		4		1		

- d. The U.S. does not have a pure dominant strategy; therefore, Pakistan has to play a mixed strategy with 50% Cooperate and 50% Defect to equalize the U.S. The value of the game will become 2. Figure 19 represents Pakistan's equalizing strategy.

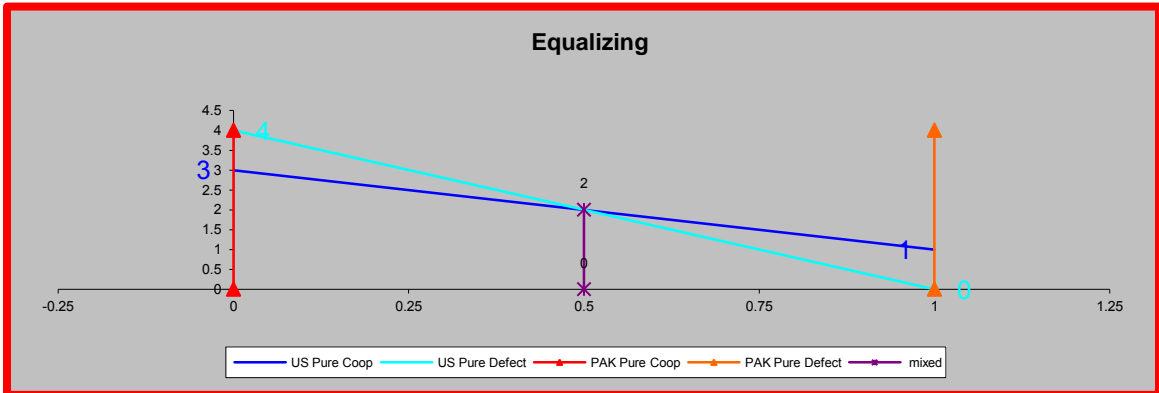


Figure 19. Pakistan Equalizing Strategy (Stage 1)

#### 4. U.S. - Equalizing Strategy – Solution

- Pakistan's game, Pakistan is maximizing, while the U.S. is equalizing.
- It has become a Zero-Sum Game with Pakistan's payoffs.
- Table 20 shows the U.S. equalizing game movement diagram:

Table 20. U.S. equalizing game movement diagram (Stage 1)

		Pakistan				
		Coop.		Defect		
U.S.	Coop.	3	→	4	3	
		↓		↓		
	Defect	1	←	0	4	
		3		1		

- d. There is no pure strategy solution; Pakistan does not have pure dominant strategy. Therefore, the U.S. has to play a mixed strategy to equalize Pakistan with 50% Cooperate and 50% Defect. The value of the game is 2. Figure 20 shows the U.S. equalizing strategy. Consequently, Figure 21 illustrates the first stage Nash equalizing point and the players' strategies.

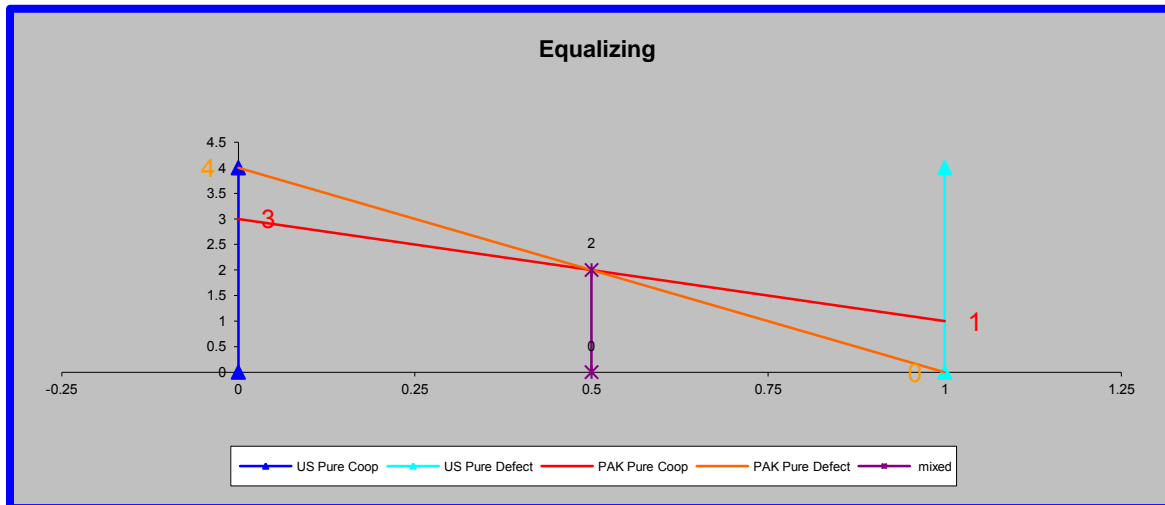


Figure 20. U.S. Equalizing Strategy (Stage 1)

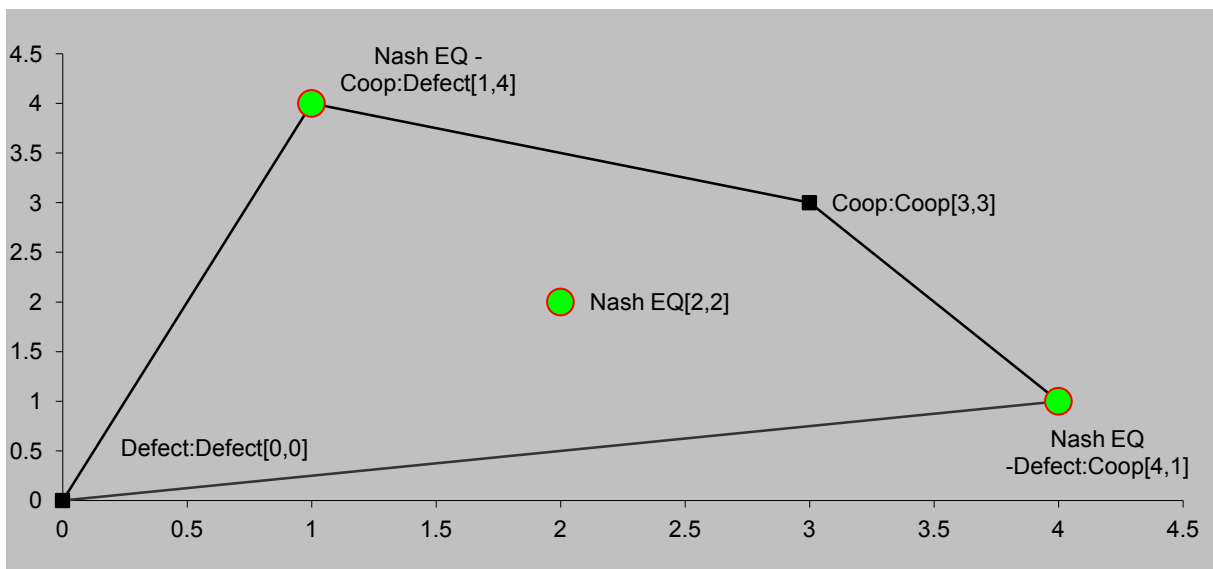


Figure 21. Nash equalizing Point and the Players' strategies (Stage 1)



### Nash Arbitration (Stage 1)

From the above solution of security level, prudential strategy and the equalizing strategy, the players' status quo is (1, 1) and the Nash equilibrium point is (3, 3). Nash Arbitration Point is also (3, 3). Figure 22 reveals geometrically the first stage status quo and Nash point.

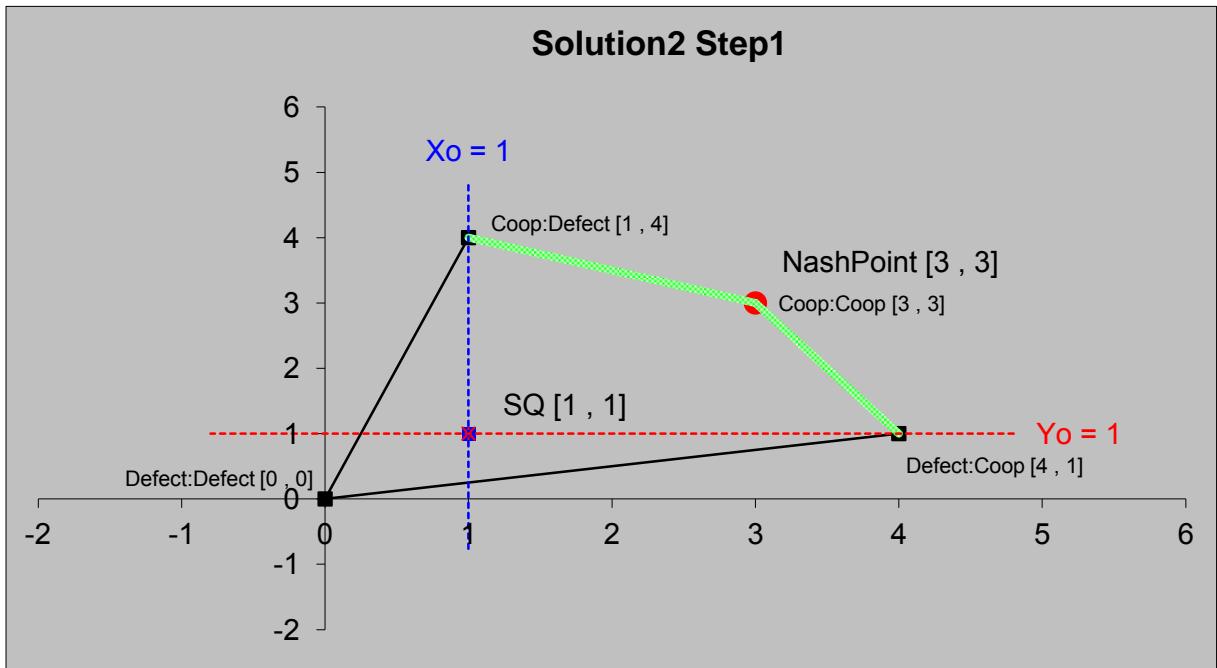


Figure 22. The 1<sup>st</sup> Stage Status Quo and Nash Point.

## Stage two Solution: One-Side Game

The players' movement starts without communication. The game has only one equilibrium point instead of the three equilibrium points in the previous game. Table 21 demonstrates the players' movement diagram.

Table 21. One-Side Game Movement Diagram (Stage 2)

		Pakistan				
		Coop.		Defect		
U.S.	Coop.	(1, 2)	→	(0, 4)		
		↓		↓		
	Defect	(4, 1)	←	(2, 0)		

The movement diagram demonstrates the U.S. dominant strategy to defect, on the other hand Pakistan does not have a dominant strategy. The game now has one equilibrium point. Nash equilibrium is (4, 1), where U.S. defects and Pakistan cooperates.

### Strategic Moves

The game without communications has demonstrated that if the game were played the likely outcome would be (4, 1), where the U.S. has a Defect dominant strategy. The strategic move analysis will examine if any of the players can alter the game.

#### 1. Pakistan

##### a. First Move: Pakistan

- 1) If Pakistan pursues her Cooperate strategy, then the U.S. will choose Defect with payoffs (4, 1).

- 2) If Pakistan does not choose Cooperate and Defects, then the U.S. will pursue defect too with payoffs (2, 0), which will harm Pakistan.
- 3) Pakistan in this case can secure a better payoff by pursuing her Cooperate strategy and get her third best option of the likely outcome (4, 1).

**b. Threat: Pakistan**

- 1) Pakistan does not want the U.S. to pursue its likely strategy Defect; therefore, Pakistan places her threat on the U.S.' Defect strategy.
- 2) Normally: If the U.S. defects, Pakistan plays Cooperate with payoffs (4, 1)
- 3) Threat: If the U.S. plays Defect, then, Pakistan Defects with a payoff (2, 0), which will reduce both Pakistan's and the U.S.' payoffs.
- 4) The threat hurts both Pakistan and the U.S., which means it is a threat. Therefore, Pakistan has a threat that does not work alone. Since if the U.S. Cooperates, Pakistan may Defect with payoffs (0, 4).

**c. Promise: Pakistan**

- 1) Pakistan wants the U.S. to play its unlikely strategy; therefore, Pakistan promise will be on the U.S.' Cooperate strategy.
- 2) Normally: If the U.S. plays Cooperate, then, Pakistan plays Defect with payoffs of (0, 4).
- 3) Promise: If the U.S. plays Cooperate, then Pakistan will play Cooperate with payoffs (1, 2).
- 4) The promise hurts Pakistan, and it is beneficial to the U.S. However, Pakistan's promise does not work alone. If the U.S. Defects and Pakistan Cooperates, that will leave the U.S. with

payoffs of (4, 1), which is better than the promise. So Pakistan has a promise that does not work alone.

d. **The threat and promise Combination is not available for Pakistan.**

The threat leaves the players with (2, 0) and the promise leaves them with (1, 2), which is not better than the likely outcome without communications.

**2. U.S.**

a. **First Move:**

- 1) If the U.S. pursues its Cooperate strategy, Pakistan will choose Defect with payoffs (0, 4).
- 2) If the U.S. chooses Defect, then Pakistan will pursue Cooperate with payoffs (4, 1).
- 3) The U.S., in this case, can secure a better payoff by pursuing its Defect strategy and get its best option (4, 1).

b. **Threat:**

- 1) The U.S. does not want Pakistan to pursue its Defect strategy; therefore, the U.S. places its threat on Pakistan's Defect strategy.
- 2) Normally: If Pakistan plays Cooperate, the U.S. plays Defect with payoffs (4, 1)
- 3) Threat: If Pakistan plays Cooperate, the U.S. will pursue its Cooperate strategy, which will increase Pakistan's payoff and reduce the U.S.' payoffs to (1, 2).
- 4) The threat hurts the U.S. and does not hurt Pakistan; it is not a threat. Therefore, the U.S. does not have any threat.

c. **Promise:**

- 1) The U.S. wants Pakistan's Cooperate strategy; therefore, the promise will be on Pakistan's Cooperate strategy.
- 2) Normally: If Pakistan plays Defect, then the U.S. plays Defect with payoffs of (2, 0).

- 3) Promise: If Pakistan plays Defect then the U.S. will play Cooperate with payoffs (0, 4).
- 4) The promise hurts the U.S. and benefits Pakistan; it is a promise that works alone, where if Pakistan Cooperates, then the U.S. Defects with payoffs of (4, 1). Therefore, the U.S. has a promise that works alone but it leaves the U.S. with its worst option; where it is not better than the likely outcome without communications.

**d. The threat and promise Combination is not available for U.S.**

While Pakistan has a combination of threat and promise that does not work, it cannot force the U.S. to go below the likely outcome without communication. Meanwhile, the U.S. has only a promise that works alone but it is not better than what the U.S. can get without communication. This suggests that the U.S. has the initiative that controls the engagement in the game, so whenever the U.S. wants to obtain Pakistan's cooperation, it will use its promise, thereafter, disengage and maximize its benefit. The game provides an explanation to the "Roller Coaster"<sup>146</sup> character of the U.S.-Pakistan relation. This strategy suits the U.S. regional engagements, where the U.S. can get Pakistan's cooperation without any commitment.

## **Security level Solution**

### **1. Pakistan – Prudential Strategy – Solution**

- a. Pakistan's game: Pakistan is maximizing "Mini-max," while the U.S. is minimizing "maxi-min" the opponent's payoff.
- b. It is a game with Pakistan's payoffs, and has a pure strategy solution.
- c. Table 22 shows Pakistan's prudential strategy movement diagram:

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<sup>146</sup> Pakistan founders' aspirations and today's realities. 287.

Table 22. Pakistan's prudential strategy movement diagram (Stage 2)

		Pakistan				
		Coop.		Defect		
U.S.	Coop.	2	→	4	4	
		↓		↓		
	Defect	①	←	0	①	Dominant
		1		4		

- d. There is a solution in the pure strategy, where the U.S. has a dominant strategy –pure prudential strategy” to play Defect 100% of the time whenever Pakistan plays Cooperate or Defect as depicted in Figures 23 and 24 respectively.
- e. Pakistan plays her Cooperate strategy to face the U.S. Defect strategy all the time.
- f. The security level is  $Y=1$ ; the value of the game is 1.

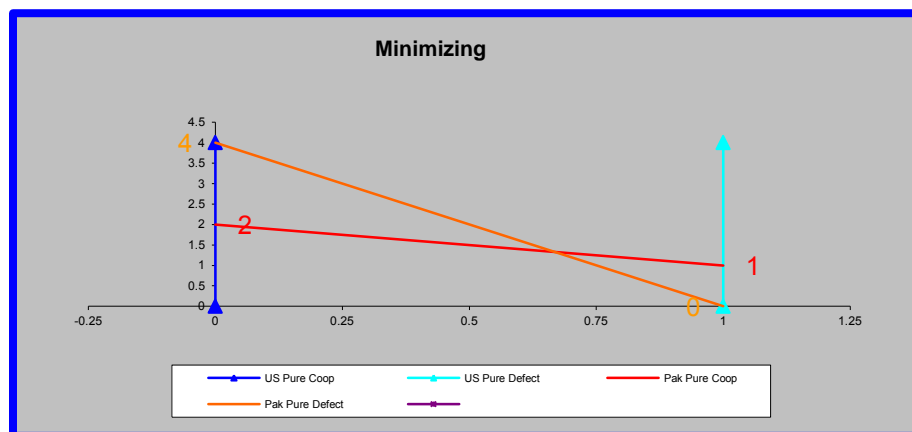


Figure 23. U.S. minimizing strategy (Stage 2)

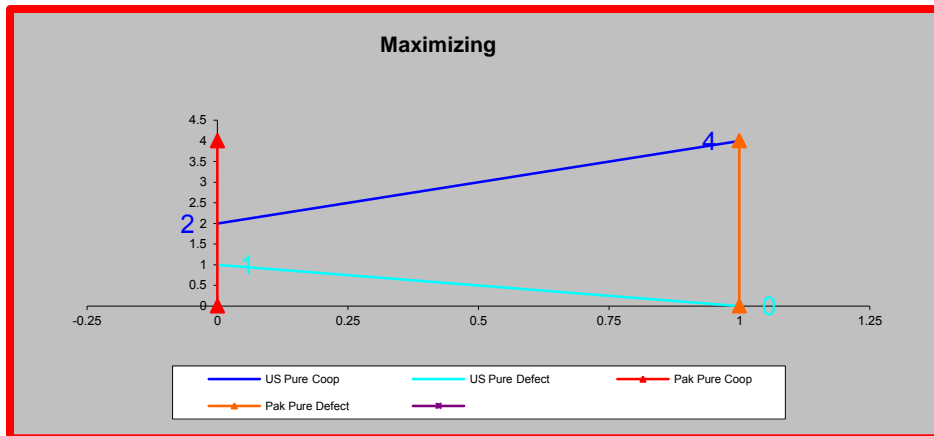


Figure 24. Pakistan maximizing strategy (Stage 2)

## 2. U.S. - Prudential Strategy – Solution

- The U.S. game, the U.S. is maximizing ~~Mini-max~~,” while Pakistan is minimizing ~~maxi-min~~” the opponent’s payoff.
- It has become a Zero-Sum Game with U.S. payoffs.
- Table 23 shows U.S. prudential strategy movement diagram (Stage 2)

Table 23. U.S. Prudential Strategy Movement Diagram (Stage 2)

		Pakistan				
		Coop.		Defect		
U.S.	Coop.	1	→	0	0	Dominant
		↓		↓		
	Defect	4	→	2	2	
		4		2	Dominant	
			Dominant			

- U.S. has a pure prudential strategy to play Defect whenever Pakistan plays Coop as depicted in figures 25 and 26.

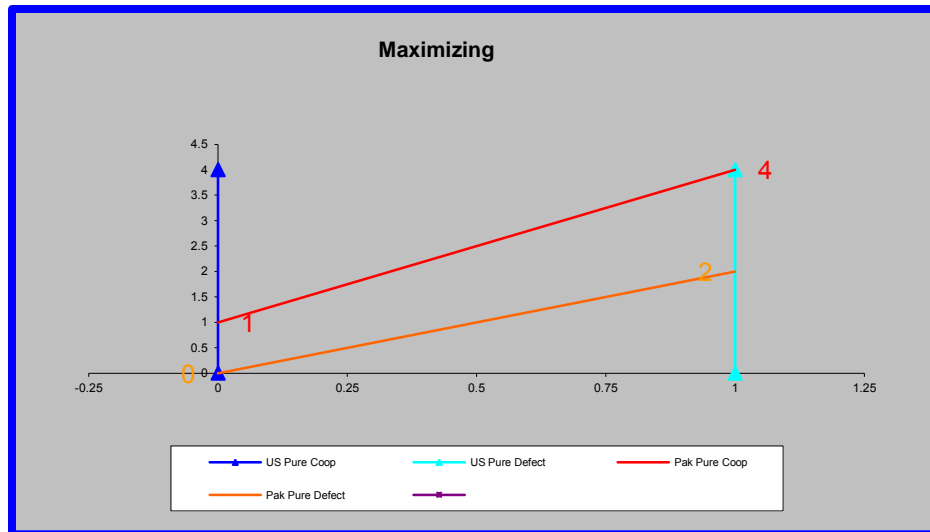


Figure 25. Pakistan minimizing strategy (Stage 2)

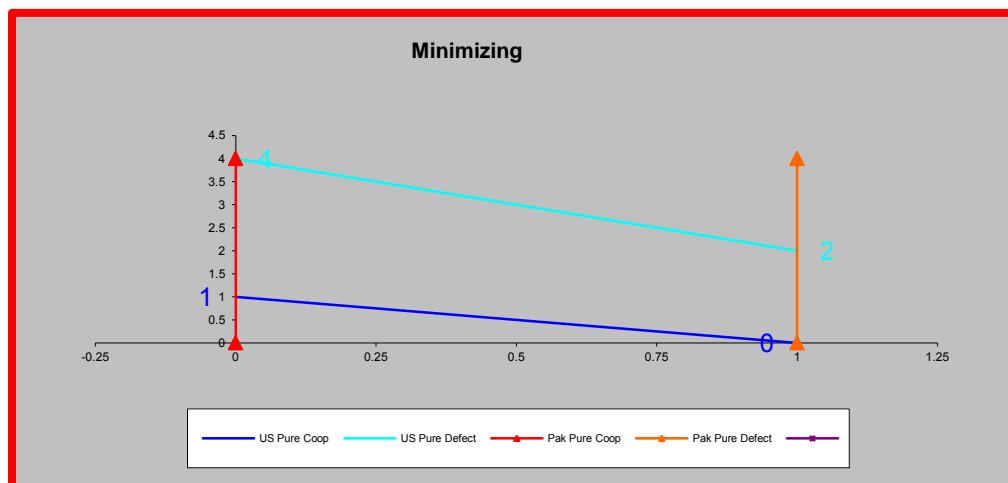


Figure 26. U.S. maximizing strategy (Stage 2)

- e. The security level is  $X=2$ ; the value of the game is 2. Figure 27 reveals the game security levels.



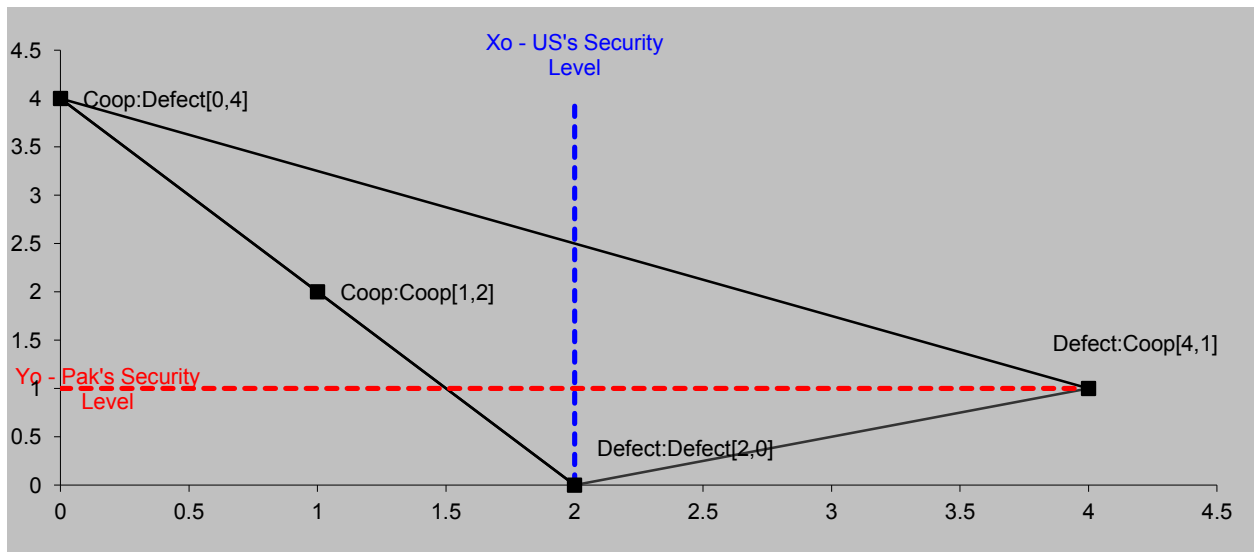


Figure 27. Game Security Level (Stage 2)

The U.S. prudential strategy increased their security level to their 2<sup>nd</sup> best option and leverage its ability to control the engagement, however, the U.S. strategy also neglected the public perception and shifted the relation to become short-term. The model also captures the trend of the U.S.-Relation during that time. The U.S. has a prudential dominate strategy to defect 100% of the time. Pakistan is restricted to only use her cooperation strategy always, especially, if Pakistan sought to hold U.S. payoffs down at any point of the game. The security level for Pakistan is (1) which is her third option and her game value is one too. In contrast, the U.S.'s security level is (2) with their dominant strategy which holds Pakistan's payoffs down throughout the game, additionally the game value for U.S. in this case is two, their second best option. The short-term strategies in this era deteriorated the Pakistani public perception and strengthened her military.

### The equilizing Strategy

#### 1. Pakistan's Equalizing Strategy

- a. U.S. game: Pakistan is equalizing, while U.S. is maximizing.
- b. It is a Zero-sum game with U.S. payoffs.
- c. Table 24 shows Pakistan's equalizing strategy movement diagram:

Table 24. Pakistan's Equalizing Strategy Movement Diagram (Stage 2)

		Pakistan				
		Coop.		Defect		
U.S.	Coop.	1	→	0	0	
		↓		↓		
	Defect	4	→	2	2	
		4		2		

- d. Both players have a dominant strategy to defect. However, Pakistan does not have an equalizing strategy against U.S.. As a result nothing can be done from the Pakistani side to equalize U.S.. Figure 28 shows Pakistan equalizing strategy.

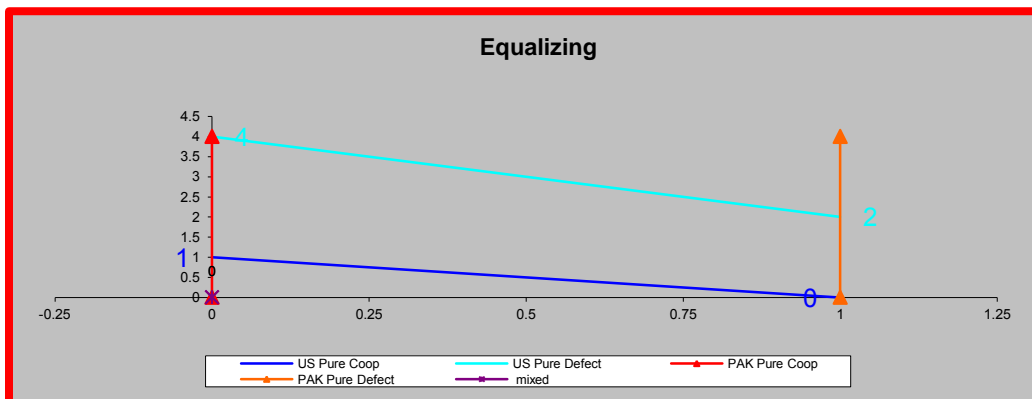


Figure 28. Pakistan Equalizing Strategy (Stage 2)

## 2. U.S. - Equalizing Strategy

- Pakistan's game, Pakistan is maximizing, while U.S. is equalizing.
- It has become a Zero-Sum Game with Pakistan's payoffs.

c. Table 25 shows the U.S. equalizing strategy movement diagram:

Table 25. U.S. Equalizing Strategy Movement Diagram (Stage 2)

		Pakistan				
		Coop.		Defect		
U.S.	Coop.	2	→	4	4	
		↓		↓		
	Defect	1	←	0	1	
		1		0		

d. There is no pure strategy solution; Pakistan does not have pure dominant strategy. Therefore, U.S. have to play a mixed strategy to equalize Pakistan with  $\frac{1}{3}$  of the times Coop. and  $\frac{2}{3}$  Defect. The value of the game is 1.33333. The value of the game is less than U.S. security level; there will be no incentive for the U.S. to use such strategy since they can otherwise get more. Figure 29 shows the U.S. equalizing strategy.

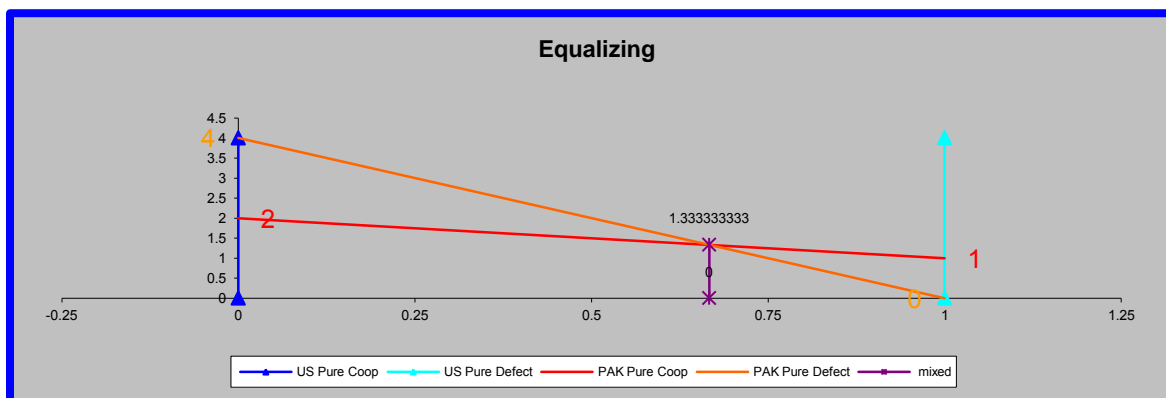


Figure 29. U.S. Equalizing Strategy (Stage 2)

### Nash Arbitration (Stage Two)

From the above solution of the security level, prudential strategy and the equalizing strategy the players' status quo is (2, 1) and the Nash arbitration point is (3, 1.75) as shown in Figure 30. To get this value, Pakistan has to play 75% Cooperation and 25% Defect, while the U.S. has to play 25% Coop. and 75% Defect. Figure 31 demonstrates Nash point geometrical solution.

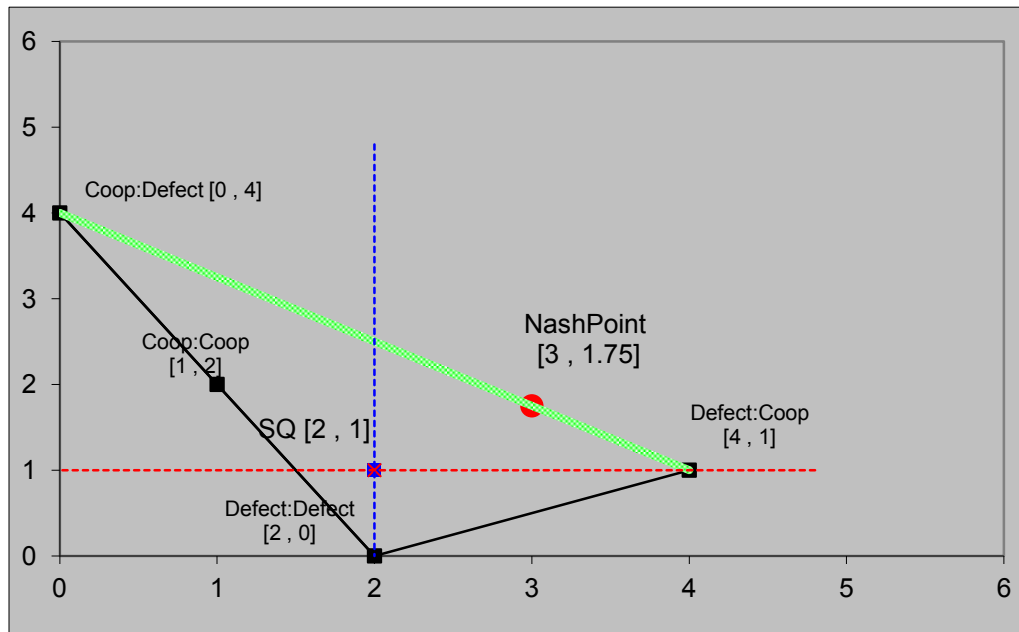


Figure 30. Status Quo and Nash Point (Stage 2)

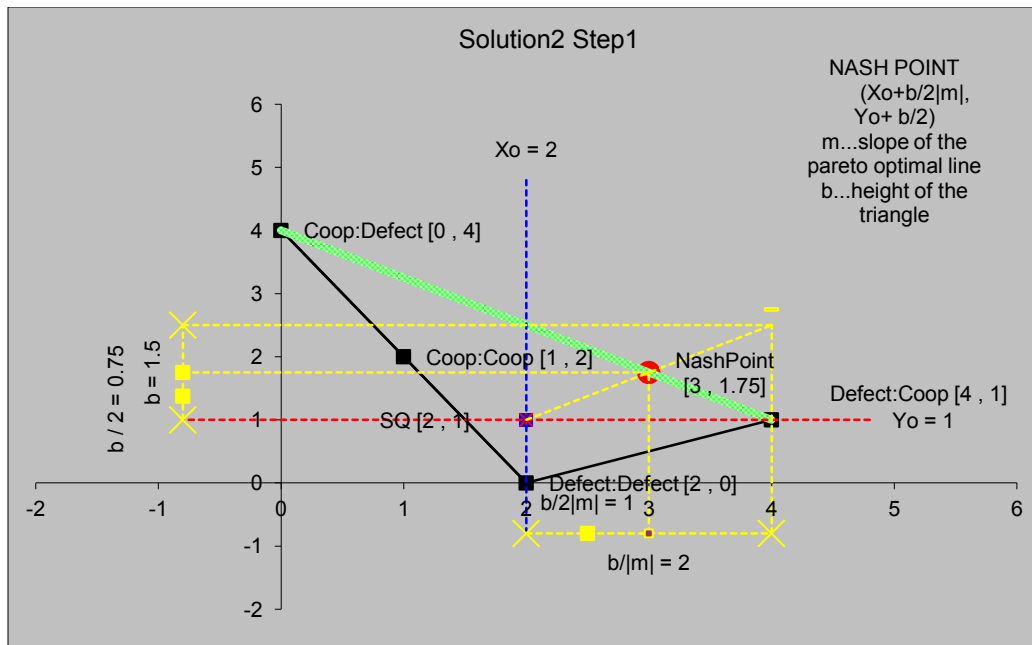


Figure 31. Nash Point Geometrical Solution (Stage 2)

### Stage Three Solution

The movement diagram in Table 26 suggests that none of the players has a dominant strategy; however, the game in this stage has three Nash equilibrium points. Two equilibrium points are pure strategy equilibrium points, while the third is a mixed strategy.

Table 26. Movement Diagram (Stage 3)

		Pakistan				
		Coop.		Defect		
U.S.	Coop.	(2, 1)	→	(1, 3)		
		↓		↑		
	Defect	(3, -2)	←	(-1, -3)		

### Strategic Moves

The game without communications revealed that both players do not have a dominant strategy that would eventually lead to the equilibrium point. In this section, we will analyze the players' strategic moves and their threats and promises.

#### 1. Pakistan

##### a. First Move: Pakistan

- 1) If Pakistan pursues her Coop. strategy, then U.S. will choose Defect with payoffs (3,-2).
- 2) If Pakistan does not choose Coop. and Defect, then U.S. will pursue Coop. with payoffs (1, 3).

- 3) Pakistan in this case can secure a better payoff by starting the game with a defect strategy where she can secure better outcome by communicating its intentions to the U.S. and end up in a better negotiation stand with a potential payoff of (1, 3).

**b. Threat: Pakistan**

- 1) Pakistan does not want U.S. to pursue its likely strategy Coop.; therefore, Pakistan places her threat on the U.S.'s Coop. strategy.
- 2) Normally: If the U.S. plays Coop, Pakistan plays Defect with payoffs (1, 3)
- 3) Threat: If the U.S. plays Coop, then Pakistan will Coop, this will increase the U.S. payoff to become 2, while it hurts Pakistan and leave her with a payoff of 1. The final payoffs will be (2, 1).
- 4) The threat hurts Pakistan, but it does not hurt the U.S., which means it is not a threat. Therefore, Pakistan does not have a threat.

**c. Promise: Pakistan**

- 1) Pakistan wants the U.S. to play its unlikely strategy Defect; therefore, Pakistan promise will be on U.S.'s Defect strategy.
- 2) Normally: If U.S. play Defect, then, Pakistan plays Coop. with payoffs of (3, -2).
- 3) Promise: If U.S. play Defect then Pakistan will play Defect with payoffs (-1, -3).
- 4) The promise hurts Pakistan, and does not benefit U.S.; therefore, Pakistan does not have a promise.

**d. The threat and promise Combination is not available for Pakistan.**

**2. U.S.**

**a. First Move: U.S.**

- 1) If the U.S. pursues Coop. strategy, Pakistan will choose Defect with payoffs (1, 3).

- 2) If the U.S. chooses to Defect, then Pakistan will pursue Coop with payoffs (3, -2).
- 3) In this case, the U.S. can secure a better payoff by pursuing its Defect strategy and get its best option (3, -2). U.S. have an advantage of moving first and communicating their strategy to Pakistan.

**b. Threat:**

- 1) The U.S. does not want Pakistan to pursue its likely strategy –Coop.,” therefore, the U.S. place its threat on Pakistan’s Coop. strategy.
- 2) Normally: If Pakistan plays Coop, the U.S. plays Defect with payoffs (3, -2)
- 3) Threat: If Pakistan plays Coop, the U.S. will pursue its Coop strategy that would increase Pakistan’s payoff and reduce the U.S. payoffs to (2, 1).
- 4) If the threat hurts the U.S. and does not hurt Pakistan, it is not a threat. Therefore, U.S. do not have a threat.

**c. Promise:**

- 1) The U.S. wants Pakistan’s Coop strategy; therefore, the promise will be on Pakistan’s Defect strategy.
- 2) Normally: If Pakistan plays Defect, then the U.S. will play Coop. with payoffs (1, 3).
- 3) Promise: If Pakistan plays Defect then the U.S. will play Defect with payoffs (-1, -3).
- 4) Promise hurts the U.S., but does not benefit Pakistan; therefore, U.S. does not have a promise.

**d. The threat and promise Combination is not available for U.S. either.**

Although both players have an advantage by moving first, they have neither the threat nor the promise option available to support their move, which suggest that the



players cannot improve their payoffs by using the strategic moves. The likely outcome will remain the best payoffs the players can secure.

### Security level Solution

We extract both Pakistan's and the U.S.'s games to find the security levels from the prudential strategy.

#### 1. Pakistan - Prudential Strategy – Solution

- Pakistan's game: Pakistan is maximizing ~~Mini-max~~, while the U.S. is minimizing ~~maxi-min~~ the opponent's payoff.
- It is a game with Pakistan's payoffs, and has a pure strategy solution.
- Table 27 shows Pakistan's payoffs and the game movement diagram:

Table 27. Pakistan's Payoffs and the Game Movement Diagram (Stage 3)

		Pakistan				
		Coop.		Defect		
U.S.	Coop.	1	→	3	3	
		↓		↓		
	Defect	-2	←	-3	(-2)	Dominant
		(-2)		-3		

- There is a pure strategy solution in the game, where Pakistan has to play her Coop. strategy 100% of the time, whenever the U.S. plays their Defect strategy as shown in Figure 32 and 33.
- Pakistan should play her Coop strategy to face the U.S. defect strategy.
- The security level is  $Y=-2$ ; the value of the game for Pakistan is -2.

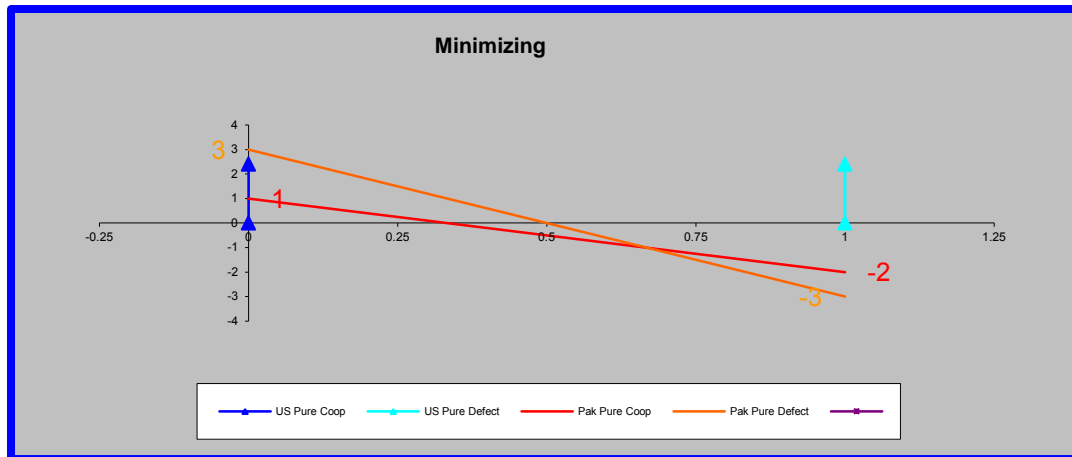


Figure 32. U.S. Minimizing Strategy (Stage 3)

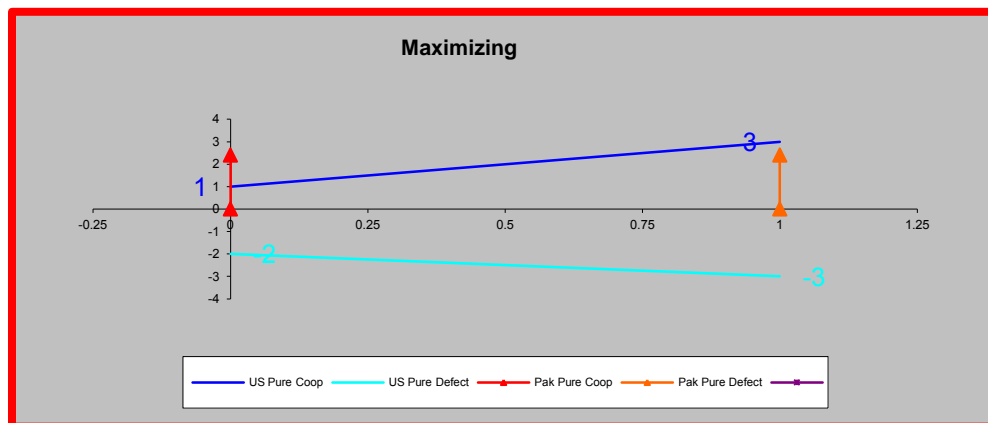


Figure 33. Pakistan Maximizing Strategy (stage 3)

## 2. U.S. - Prudential Strategy – Solution

- U.S. game: The U.S. is maximizing "mini-max," while Pakistan is minimizing "maxi-min" the opponent's payoff.
- It has become a Zero-Sum Game with the U.S.'s payoffs.
- Table 28 shows the U.S. payoffs and the game movement diagram:

Table 28. U.S. Prudential Strategy Movement Diagram (Stage 3)

		Pakistan				
		Coop.		Defect		
U.S.	Coop.	2	→	1	①	
		↓		↑		
	Defect	3	→	-1	-1	
		3		①		
		Dominant				

- d. The U.S. has a pure prudential strategy to play Coop. whenever Pakistan plays Defect as depicted in Figure 34 and 35.

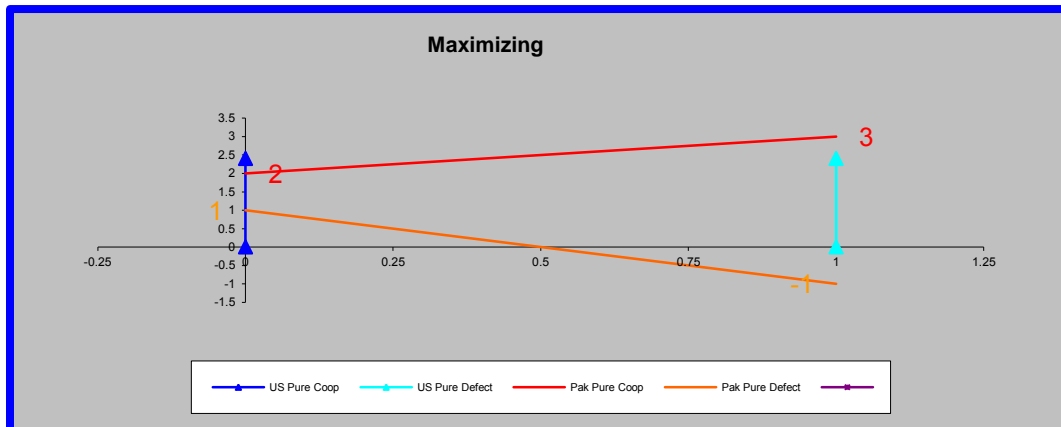


Figure 34. Shows U.S. maximizing strategy (Stage 3)

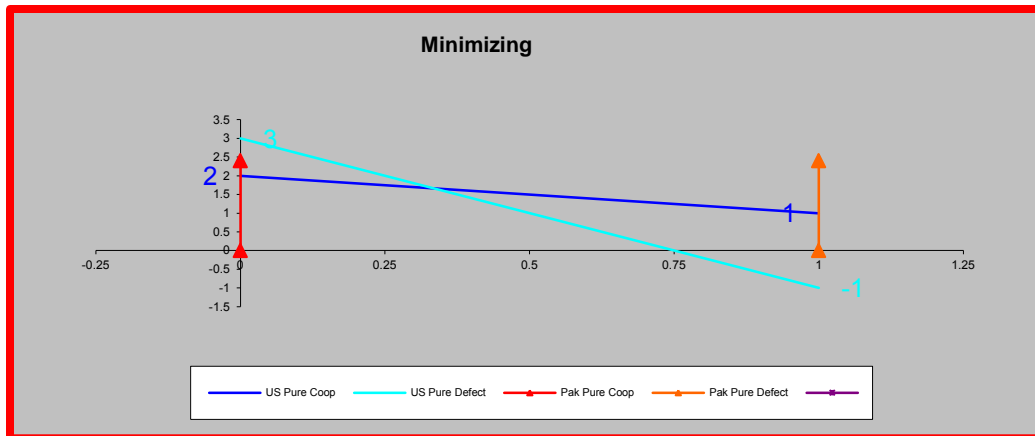


Figure 35. Pakistan minimizing strategy (Stage 3)

- e. The security level is  $X=1$ ; the value of the game is 1. Figure 36 shows the game security levels.

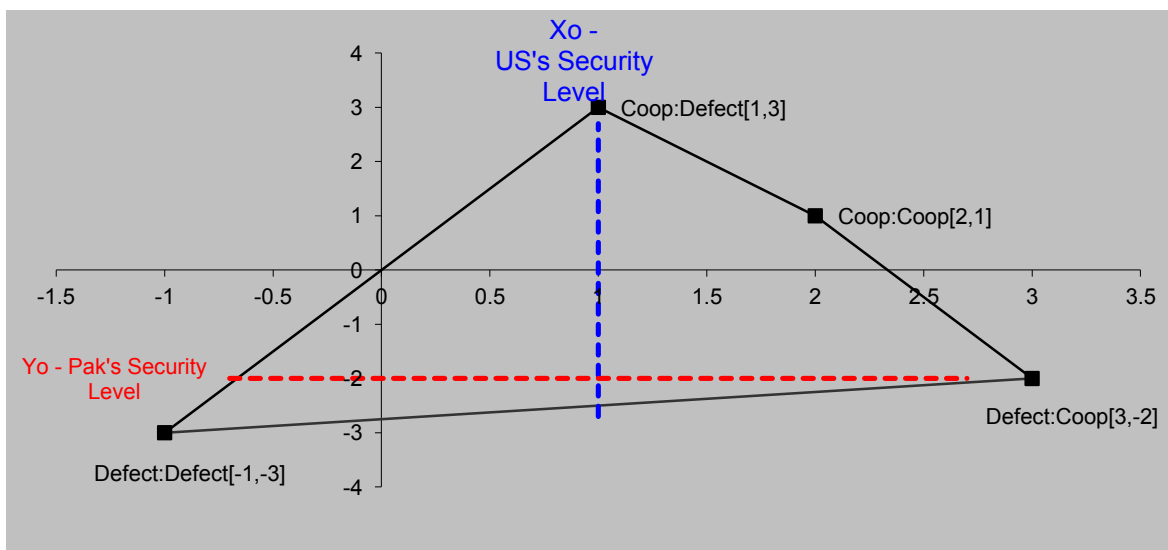


Figure 36. The Players Security Levels

### The equilizing Strategy (Stage Three)

#### 1. Pakistan - Equalizing Strategy – Solution

- U.S. game: Pakistan is equalizing, while U.S. is maximizing.
- It is a Zero-sum game with U.S. payoffs.
- The movement diagram is depicted in Table 29.

Table 29. Pakistan's Equalizing Strategy Movement Diagram

		Pakistan				
		Coop.		Defect		
U.S.	Coop.	2	→	1		
		↓		↑		
	Defect	3	→	-1		

- d. U.S. do not have a pure dominant strategy; therefore, Pakistan has to play a mixed strategy with  $\frac{2}{3}$  Coop and  $\frac{1}{3}$  Defect to equalize U.S. The U.S. value of the game will become 1.6667. Figure 37 represents the equalizing strategy.

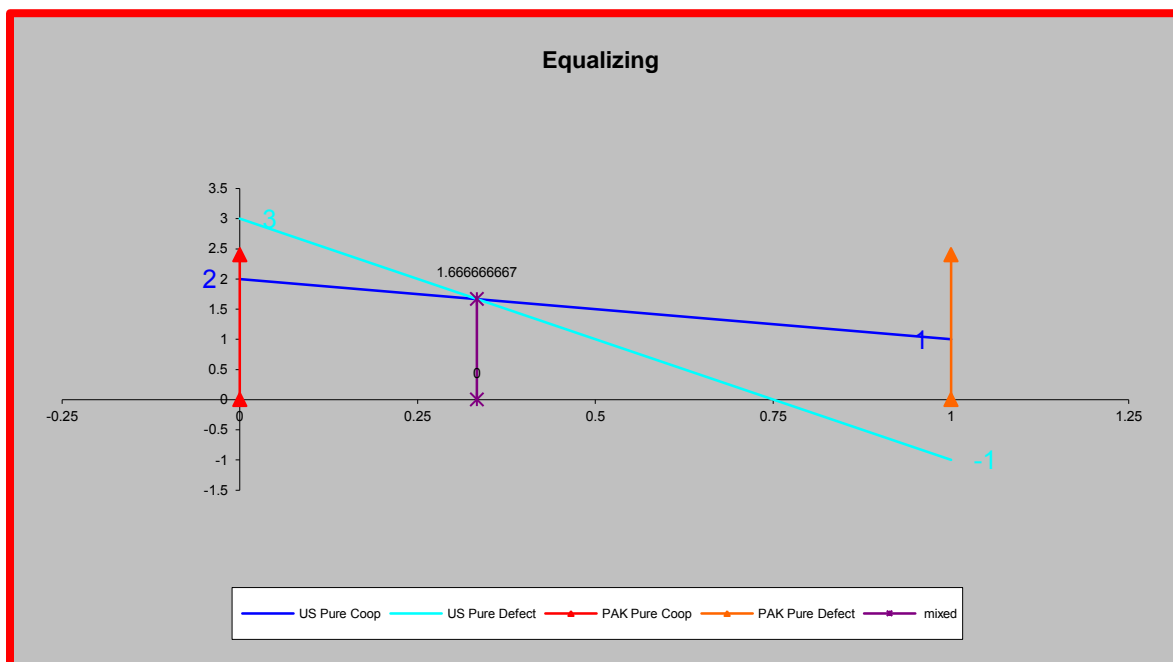


Figure 37. Pakistan's Equalizing Strategy (Stage 3)

## 2. U.S. - Equalizing Strategy – Solution

- Pakistan's game, Pakistan is maximizing, while the U.S. is equalizing.
- It has become a Zero-Sum Game with Pakistan's payoffs.
- Table 30 shows the U.S. equalizing game:

Table 30. U.S. Equalizing Strategy Movement Diagram (Stage 3)

		Pakistan				
		Coop.		Defect		
U.S.	Coop.	1	→	3	3	
		↓		↓		
	Defect	-2	←	-3	-2	
		-2		-3		

- There is no pure strategy solution; Pakistan does not have pure dominant strategy. Therefore, the U.S. has to play a mixed strategy to equalize Pakistan with  $\frac{1}{3}$  Coop and  $\frac{2}{3}$  Defect. Pakistan's value of the game is -1. Figure 38 shows the U.S. equalizing strategy.

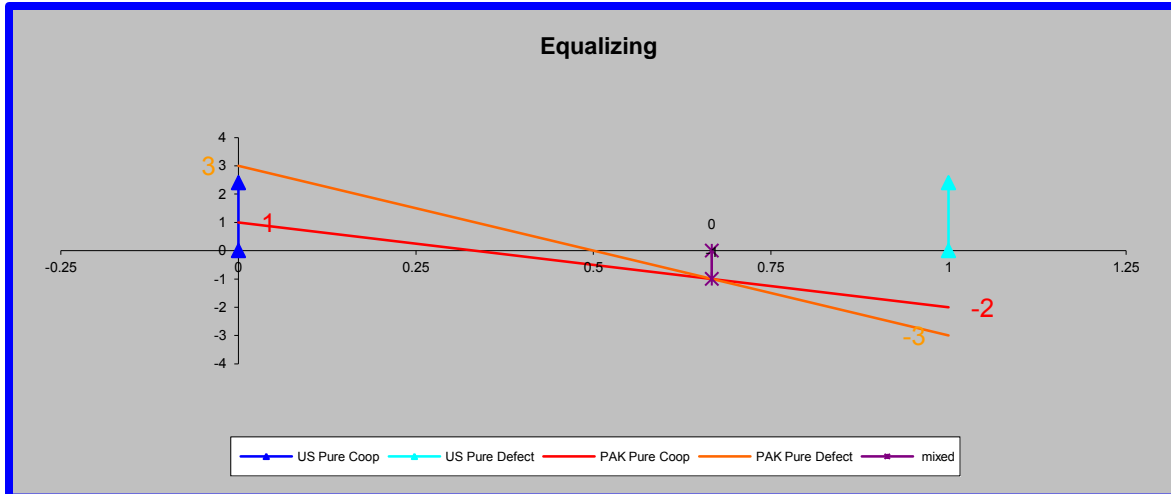


Figure 38. U.S. Equalizing Strategy (Stage 3)

Pakistan does not have a pure equalizing strategy; she has to play a mixed strategy with  $\frac{2}{3}$  of the time cooperation and  $\frac{1}{3}$  defect to equalize the U.S. Her game value will be 1.66667. For Pakistan the equalizing strategy provide better payoffs than likely outcome or Nash arbitration. On the other hand the U.S. also have to play a mixed strategy with  $\frac{1}{3}$  of the time cooperation and  $\frac{2}{3}$  defect to equalize Pakistan. The U.S. game value will be -1. The U.S. is in better situation and does not need to use such strategy to equalize Pakistan.

From the above, the players' status quo is (1, -2) and Nash arbitration is (2, 1). Nash arbitration can be either reached by playing mixed strategies, or pure cooperation strategy by both players. Figure 39 demonstrates stage three status quo and Nash point. Subsequently, Figure 40 represents the game geometrical solution.

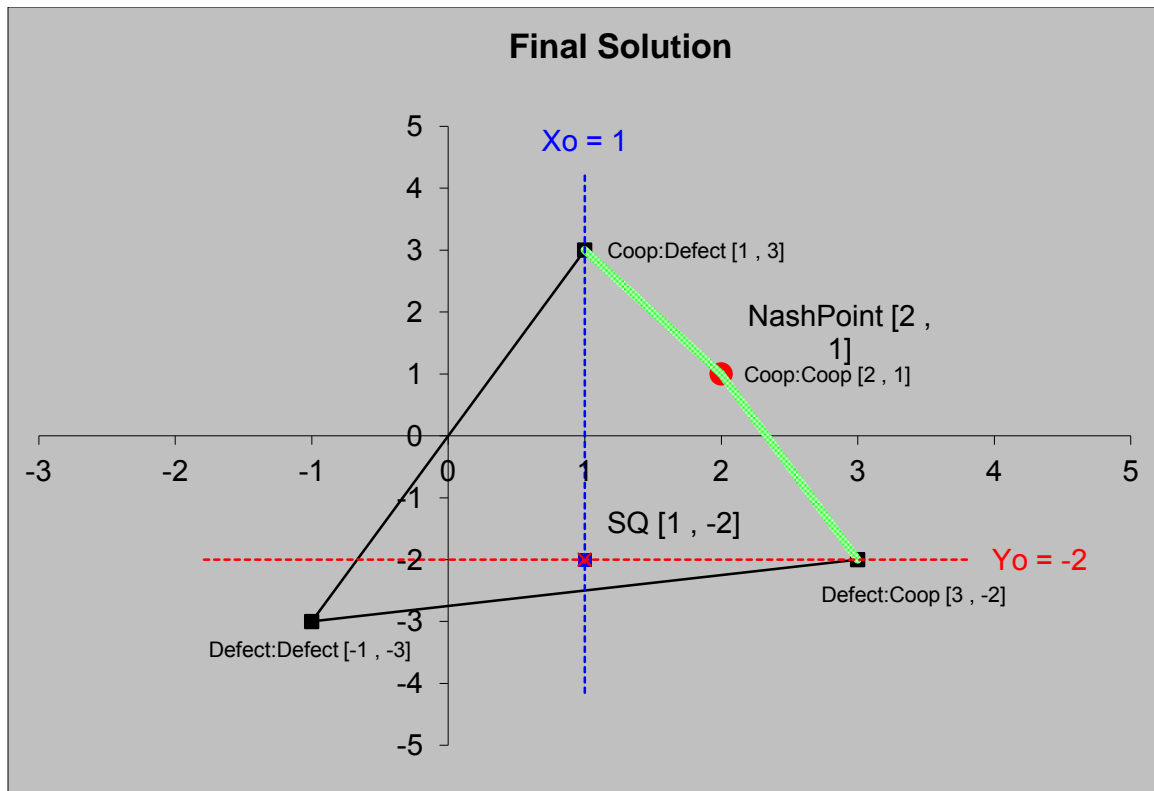


Figure 39. The Game Status Quo and Nash Point (Stage 3)



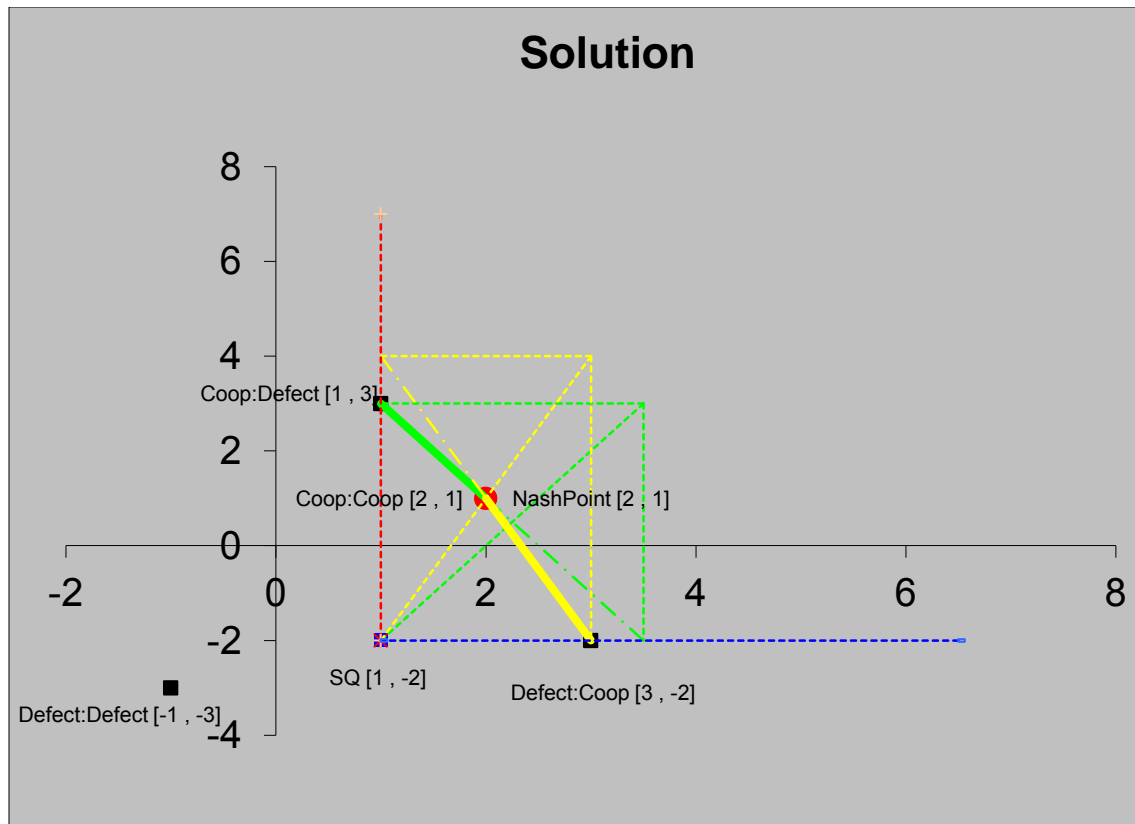


Figure 40. The Game Geometrical Solution (Stage 3)

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