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Aim and Scope

The Journal of Defence and Security is a publication of the Malaysian Institute of Defence and Security (MiDAS). The journal publishes original papers and reviews covering all aspects of defence and security. It is a platform to promote awareness on the capabilities and requirements of modern defence & security technologies and policies, covering topics in the areas of, but not limited to, Evolution of Military Information & Communication Systems, Smart Weapons, Military Engineering, Intelligence, Surveillance & Reconnaissance, Biological & Chemical Terrorism Countermeasures, Personnel Protection & Performance, Military Medicine, Emergent Naval Technology, Defence & Security and Strategic Management.

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MANAGING COMPLEX SECURITY CHALLENGES: HISTORICAL PERSPECTIVES, TRADITIONAL SOVEREIGNTY, NATION BUILDING AND COLLECTIVE APPROACHES

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ABSTRACT

Malaysia's geographic location in the centre of South East Asia is highly strategic. Her close proximity with her neighbours can be interpreted as having both strategic and economic significance in the region which in turn could leave her vulnerable to numerous security threats. It has been 56 years since Malaysia achieved her independence. Malaysia has progressed as a nation despite the turbulent period in her formative years, as well as the many incidents the past decades that threatened her national security. Malaysia's recent experiences have proven that a security threat will come from the most unlikely source and in a non-traditional manner now. It is therefore prudent that Malaysia nurture and maintain the various security engagements and cooperation in the region and beyond to overcome these threats.

Keywords: Security, Nation-Building, Cooperation, Security and Development, Regional Cooperation

INTRODUCTION

The topic of this article is about Managing Complex Security Challenges: Historical Perspectives, Traditional Sovereignty, Nation Building and Collectives Approaches in Malaysia [1]. In this globalised era it is an issue which we cannot ignore and must address. Today, we are no longer entering, but already in an age of uncertainty. As nation states, we are much less threatened by one another than by the growing risk posed by non-statist, and often international, entities, from religious extremists to cyber terrorists. We stand at a turning point in our history, where knowledge information and news, truths, half-truths and outright lies, now digitized, network automated pervasive and instantaneous; have become a very important component in shaping our political economic, cultural and security concerns. We now operate in a globalised environment in which local and international events are inevitably linked in complex and unpredictable ways. As we meet today, criticisms, cynicisms and attacks from the public continue to demonize the very pillars and institutions of nation-building including our military, police, the judiciary, our security and intelligence forces. In short, local and the international, domestic and foreign, gigantic transnational capital flows and human

migration, from a new global and national political debate to suicide bombings; we suddenly find ourselves caught up in a reality to an extent, that we have not begun to really appreciate.

Managing change has always been difficult but, not something that we have not all gone through before, as we remember the Cold War and the landscape change that came with it in the 1940s. All this calls for is a radical transformation in the way we think about national, regional and global security. We may well ask why we should? Well because our business, (the business of defence and security) between contracting parties wherever they are in the world forces us to look beyond the difference of language, race and religion. Our business, forces us to look deep into the eyes of our contracting parties. We need to know the men and women we are dealing with. We need to understand them and trust them; before we will commit our nations, the lives of our people, or precious funds and resources to achieving our common goal of sustainable peace. Malaysia is indeed in a unique position to offer its perspective on the contemporary security and military challenge.

THE GEOGRAPHICAL ASPECT

Malaysia's geographic location in the centre of Southeast Asia is highly strategic. It is located just above the equator and comprises the long peninsular land mass which separates the Indian Ocean from the South China Sea. With the Borneo states of Sabah and Sarawak, Malaysia covers some 329, 764 square km in size, surrounded by a vast maritime area. The Malacca Straits which Malaysia partly controls; hold a position of critical strategic, importance to the ships of many countries that ply her route.

Similarly, the South China Sea is another sea line of communication connecting the Indian and Pacific Oceans. The South China Sea and the Straits of Malacca are maritime areas where Malaysia's resources such as oil, gas and fisheries are found. These industries generate some 12% of Malaysia's GDP [2]. At the same time, the South China Sea separates the Borneo states of Sabah and Sarawak from the Peninsula. Malaysia also shares common land borders with four of our ASEAN neighbours namely Thailand, Singapore, Indonesia and Brunei [3]. Ed Royce – The Chairman of the House Committee on Foreign Affairs recently said – “Asia – It is America's Near West. It is hardly the “Far East”. It is not to our East, and in this day and age, it is not really very far” [4].

HISTORICAL FACTORS

One of the most severe internal threats to Malaysia was the communist insurgency between 1948 - 1989. Defeating communism became a principle strategy in Malaysia's security policies. Although Malaysia achieved her independence in 1957, the threat of Communism did not diminish until the Communist Party of Malaya finally laid down

its arms on 2nd December 1989. Malaysia was one of the few nations in the world to successfully defeat a communist insurgency. “How did we do it?” Here we must turn to the pages of history, recapping several measures which seemed unconventional at the time but have since become cornerstones of counter-insurgencies tactics which is firstly winning hearts and mind and secondly linking defence to development. To quote some leaders of that period:-Malaysia’s 2nd Prime Minister, Tun Abdul Razak who was also our first Defence Minister, said in 1970:

“The primary task of the Armed Forces is to fight the communists. But at the same time, they must also help implement the Government’s development plan-this is part of the fight against the communists. Defence and development go hand-in-hand [5].

This approach later became known as KESBAN, *Keselamatan dan Pembangunan* or **Security and Development**.

Then High Commissioner of Malaya, Sir Gerald Templer noted in 1951 that *“the answer lies not in pouring more troops into the jungle, but in the hearts and minds of the people”*[6]. The KESBAN concept was even acknowledged by the then American Ground Commander in Iraq, Gen David Petraeus in 2007 who noted that:

“only by combining military strength and sensitive interaction with locals can an insurgency be defeated [7].”

Gen Petraeus was influenced by a study of the British counter-insurgency campaign in Malaya during our Emergency, one that may still be relevant as we navigate the waters of Iraq and Afghanistan or more recently Syria, Egypt, Sudan and Mali.

This lesson in history was summed up quite well by the Governor General of Australia Sir Michael Jeffrey addressing the Chief of Army’s Conference in Canberra in 2005 when he said:-

“We got it right in Malaya to defeat the communist terrorist insurgency; wrong in Vietnam and, according to some, particularly wrong in Iraq [8].

RELIGION, CULTURE AND RACE

Malaysia is a peaceful multi-cultural and multi-religious country coping with diversity in a manner that is highly unusual and often criticized by outsiders. But, the fact that Malaysia has been resilient, in spite of its social makeup, is perhaps also testament to the success of our brand multiculturalism. In Malaysia, we have always embraced the notion of unity in diversity – where difference is celebrated not merely as a necessary condition of our times but as a source of national strength. The diversities that exist do

not necessarily have to lead to divergences in ultimate national goals.

The national culture is continuously constructed not as reflective of any single community alone, but as emphatic hybrid of all the ethnic and religious communities that inhabit the land. Consciously and continuously since independence; we engage, we guide, we persuade and we lead the majority of Malaysians towards Middle Malaysia. An often thankless job which requires a lot of courage, political will, winning hearts and minds and an unwavering belief in the basic good of the majority Malaysians.

Early this year we faced a troubling few weeks when the debate about the use of “Allah” by non-Muslims resulted in a number of places of worship – churches and mosques – being firebombed or desecrated. Today the matter is again debated and has still not run its full course. Matters accepted for years can very easily become “contested territory”. Things might have easily boiled over onto the street is not for the efforts made in containing the situation and also the strength of the larger Malaysian population who displayed immense solidarity in the face of extremist provocation.

We might not always agree with one another, but in the end Malaysians of all faiths rose above their quarrels to help preserve the peace during trying times. When countries in Europe are seriously questioning the viability of their experiment with multiculturalism, we immensely proud and thankful that in Malaysia our difference and diversities actually represent a line of defence against such dangers.

NON-TRADITIONAL THREATS TO SECURITY

In an increasingly borderless world, human trafficking, terrorism and money laundering are interlinked with drug and arms smuggling, cyber-crime as well as online share trading. These in turn are related to the movement of people – tourists, students, merchants and the like. Hence, globalization acts as the fulcrum holding these bonds and the international community needs to formulate a new perspective to appreciate these linkages and see all these various strands of phenomena as a single causal chain, and not as exclusively distinct.

For example, the crime of human trafficking:-broad estimates suggest that annual cross-border trafficking incidents are as high as 4 million, with half of them originating in South and South East Asia. UNICEF reports state that 1.2 million children are trafficked every year for prostitution, forced marriages, domestic services, exploitative labour, and begging. The International Organization for Migration (IOM) estimated that annual profits from human trafficking in 2005 amounted to more than USD 31 Billion. More than criminal acts, governments in the Southeast Asian region are viewing human trafficking as a direct attack on their citizens not in the name of some misguided ideological belief or emotional ethnocentric affinities, but for the frighteningly simple, heartless motive of making money.

ASEAN

Malaysia's primary platform for regional cooperation is ASEAN. Malaysia was also one of its founding members in 1967 and will take leadership of ASEAN from Myanmar next year. Malaysia has championed the idea that a strong and successful ASEAN is not only an economic necessity, but also a strategic imperative. Since its inception, Malaysia has never been involved in any conflict with any of the ASEAN members, and cooperation, remains strong with several value added subsidiary forums - the ASEAN Regional Forum (ARF), ASEAN Defence Ministers Meeting (ADMM and ADMM Plus) and ASEAN plus Three (to name a few) to address regional security issues.

Malaysia believes that a strong ASEAN is a stabilizing influence in the region. Indeed, many nations have now come to realize the importance of ASEAN and have moved to engage it. We are gratified to note that the US has acknowledged the role that ASEAN can play in the stability of the region. As mentioned by Secretary Hagel, during his visit to Malaysia,

“ASEAN remains an important organization to the US in its re-balancing of her overtures in the Asia-Pacific region” [9].

Beside its huge market of 620 million people and a combined GDP of USD2.1 trillion, ASEAN has helped shape Malaysia's national and regional security policies. ASEAN nations have always subscribed to what we now call the ‘ASEAN way’ which is the principles of consultation and consensus with confidence-building and preventive diplomacy to contain conflict in the region. At the same time, ASEAN members have always prided themselves with the principle of non-intervention in the domestic affairs of its members.

A quote from Malaysia's Prime Minister Najib when he said, *“I believe the biggest challenge facing us in the Asian region is domestic stability. International conflicts have often been caused by internal instability”*[10]. As such, these guiding principles have very often avoided unwarranted tensions and contributed to the continued peace and stability in the region. Through ASEAN, Malaysia has substantially reduced intra-regional threats which may affect her sovereignty.

THE FUTURE

Early last year, the country was confronted with its gravest security breach since the Confrontation and Emergencies when gunmen aligned to the so-called Sultanate of Sulu in the Philippines landed in Lahad Datu, Sabah, in the Island of Borneo. These men were attempting to enforce what they believed was a centuries-old claim to the state. In the subsequent Ops Daulat to repel the intruders, 71 Sulu Intruders were killed at the

expense of 10 Malaysian Security personnel killed in action. At the same time, Malaysia established the 1,400-kilometres Eastern Sabah Security Command (ESSCOM) in the state of Sabah to better ensure the security of the state.

There are many lessons that could be gained from this incident and certainly one that is most prominent is the threat from non-state actors and in a non-traditional manner. Another vital factor was the close cooperation with our ASEAN neighbours, in this case, Philippines was vital where information and certain security cooperation prevailed at the height of the crisis. The incident shows that the biggest threats to nations today are not always from each other, but from shadowy groups, often with historical grievances not easily addressed. These groups recognize no national boundaries, are often not easily categorized and whose motivations are often unclear or shifting.

THE MALAYSIA-US COOPERATION

The Malaysia-US relationship had begun as an ‘indirect’ relationship well before independence. Much has transpired since then. From the initial Foreign Military Sales (FMS) and International Military Education Training (IMET) programs in the 1970s, our bilateral relationship has transformed and progressed into a more significant regional and global partners in matters of trade, investment, education and security. The US and Malaysia’s Armed Forces are also cooperating more than ever before in areas such as counter-terrorism, maritime security and responding to humanitarian crises and natural disasters. The commitment of the two countries in addressing issues affecting the region is testimony of the progress we have made since our independence. As a moderate and progressive Muslim nation, we believe that both countries can also be the bridge between the Muslim World and West. For better cooperation between Malaysia-US the areas that need to focus are as follows:

- i. By fostering more joint bilateral operations, particularly in specific areas of common interests, such as strengthening our respective intelligence agencies and the area of technological innovation and advancement;
- ii. Strengthening collaborative research on transnational crime issues, to understand trends as well as to better formulate support strategies;
- iii. Enhancing infrastructure for training and capacity building in all respects not only bilaterally but also within ASEAN;
- iv. Articulating and shaping the relationship between the rights of individuals and the powers and obligations of the state, for example; to strike a balance between transparencies that accountability normally entails and the secrecy that security demands. Engagement with the public, NGOs and the private sector here is crucial.

CONCLUSION

Malaysia has been independent for 56 years now. While we have been blessed with relative peace and harmony; current and future threats will always remain, as they do, for every country in the world today. Let all nations ensure, that outdated paranoia's of each other, do not get in the way of fostering such transnational cooperation in meeting the new security challenges. The Cold War is long over, and now new dimensions of security threats have emerged, requiring new technologies, commodities and forms of understanding to meet those challenges. As mentioned earlier of the viability of business and trade within this logic and milieu; that unlike other business, the business of security is a zero sum game.

There will be a win-win scenario when we speak of innocent lives. As Edmund Burke the writer said, "All that is necessary for evil to triumph is for good men to do nothing". And when we in the defence and security community stand and do nothing, evil takes another small step towards triumph. Our business of security cannot operate in a world of black and white prejudices and unthinking conclusions – driven by exclusive certainties, blind passions, reductive perceptions and hasty conclusions. Global peace cooperation and understanding is about people-to-people relations. It is about bonding, building trust and finding common terms of agreement and comfort zones. It is about sincerity, honesty and integrity and that, is never black or white.

REFERENCES AND END NOTES

- [1] An address delivered by The Honourable Dato' Seri Hishammuddin Tun Hussein, Defence Minister of Malaysia at the Asia-Pacific Center for Security Studies (APCSS), Hawaii on 14 January 2014.
- [2] Watson, B & Andaya, L. *A History of Malaysia*, McMillan Press Ltd, p.1. 1982.
- [3] Hj Sutarji bin Hj Kasmin, 2009. Malaysia's Maritime Law Enforcement in Abdul Razak Baginda (ed) *Malaysia's Defence and Security since 1957*, Malaysian Strategic Research Centre, p.187.
- [4] Ed Royce, US Chairman of the House of Foreign Affairs -Address, "*The Enduring Legacy of America's Commitment to Asia*", 1 May 2013.
- [5] Nordin Yusof and Abdul Razak Baginda, *Honour and Sacrifice*, p.136, 1994.
- [6] Cloake, J., '*Templer-Tiger of Malaya*', Harrap Publishers, London, p 27. 1985.
- [7] Lt Gen David Petraeus, "New Army Chief Studied British Tactics in Malaya", *The New Sunday Times*, 14 Jan, p.38. 2007.
- [8] Bernama 'Malaysian Tactics Proposed in Iraq', *The Star*, 24 Sept, p.34. Maj Gen Michael Jeffrey the Governor General of Australia addressing the Chief of Army's

Conference in Canberra. , 2005.

- [9] Chuck Hagel, US Secretary of Defense, Address at the Malaysian Ministry of Defence, Kuala Lumpur, 25 August 2013.
- [10] Mohd Najib Abdul Razak, Address at the Global Leadership Forum, Harvard University, Massachusetts, *Defending Malaysia, Facing The 21st Century*. ASEAN Academic Press Ltd, London, p 10. 11 June 2000.

THE GLOBAL SHIFT OF POWER: CHALLENGES, OPPORTUNITIES AND SECURITY IMPLICATIONS FOR THE UNITED STATES OF AMERICA, EUROPE AND THE WORLD: A PERSPECTIVE FROM SOUTH EAST ASIA

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ABSTRACT

This paper highlights the actors which may challenge the global dominance of established powers and its impact on traditional patterns of Euro-Atlantic policies as well as reflecting the future of power in the 21st century including the impact of these countries on the regional and global international system, areas for cooperation and partnerships, security challenges and threats, and shifts in terrorism and violent extremism. This paper also provides an analysis of current and future international security issues which includes emerging economic powers like, China, India, and Russia that are increasing their political weight and have become major players in the international security system, their strategic interests and potentials, focusing on the rise of China in the Asia-Pacific Region. Their rise offers new opportunities for the creation of enhanced cooperation and partnerships and a threat to US. From the perspective and the main challenge for the ASEAN region arising from the current gradual “shift of power” is to continue to maintain the current state of relative regional peace and stability despite the presence of elements that could disrupt this environment.

Keywords: Global dominance, strategic interest, non-state actors, unipolarity, ASEAN, world economy

INTRODUCTION

The transfer of power from West to East is gathering pace and soon will dramatically change the context for dealing with international challenges, as well as the challenges themselves. Many in the West are already aware of Asia's growing strength. This awareness, however, has not yet been translated into preparedness. And therein lays a danger in that Western country will repeat their past mistakes. Major shifts of power between states, not to mention regions, occur infrequently and are rarely peaceful. In the early twentieth century, the imperial order and the aspiring states of Germany and Japan failed to adjust to each other [1]. The conflict that resulted devastated large parts of the globe. Today, the transformation of the international system will be even bigger and will require the assimilation of markedly different political and cultural traditions. This time, the populous states of Asia are the aspirants seeking to play a greater role. Like Japan and Germany back then, these rising powers are nationalistic, seek redress of past grievances,

and want to claim their place in the sun. Asia's growing economic power is translating into greater political and military power, thus increasing the potential damage of conflicts. Within the region, the flash points for hostilities for Taiwan, the Korean Peninsula, and divided Kashmir have defied peaceful resolution. Any of them could explode into large-scale warfare that would make the current Middle East confrontations seem like police operations. In short, the stakes in Asia are huge and will challenge the West's adaptability.

Besides this, China is the most obvious power on the rise today. But it is not alone as India and other Asian states now boast growth rates that could outstrip those of major Western countries for decades to come. China's economy is growing at more than nine percent annually, India's at eight percent, and the Southeast Asian "tigers" have recovered from the 1997 financial crisis and resumed their march forward. China's economy is expected to be double the size of Germany's by 2010 and to overtake Japan's, currently the world's second largest, by 2020. If India sustains a six percent growth rate for 50 years, as some financial analysts think possible, it will equal or overtake China in that time [2].

This paper [3] provides an analysis of current and future international security issues featuring emerging economic powers like China, Russia, India, EU, ASEAN and US that are increasing their political weight and have become major players in the international security system, their strategic interests and potentials, focusing on the rise of China in the Asia-Pacific Region and the role of ASEAN in the bi polar conflict between US and China. This paper will also highlight the actors which may challenge the global dominance of established powers and its impact on traditional patterns of Euro-Atlantic policies as well as reflecting the future of power in the 21st century including the impact of these countries on the regional and global international system, areas for cooperation and partnerships, security challenges and threats, and shifts in terrorism and violent extremism.

THE RISE OF CHINA AND THE RELATIVE DECLINE OF THE UNITED STATES

Chinese foreign policy has grown increasingly assertive since its accession to the WTO in 2001 gave it greater access to export markets and fuelled average growth rates of ten percent as exports to the United States alone rose more than threefold [4]. By the end of 2009, China looked to have overtaken Germany to become the world's biggest exporter and is expected to leapfrog Japan to become the world's second-largest economy in 2010. This growth, fuelled by China's huge stocks of cheap labour and aggressive currency controls to keep the value of the yuan low, created both massive cash surpluses and a hugely increased demand for raw materials, a combination that has allowed and mandated a more expansionary foreign policy on the part of the Chinese government [5].

It is generally acknowledged that China over the past decade has achieved a considerable level of success in terms of economic progress. Fuelled by this achievement,

China is able to exercise more significant presence in the areas of global politics, diplomacy and economy. Militarily, it is preparing to extend its global reach with the development of its aircraft carrier capability. China is seen as a rising power, brimming with confidence and positive of its future. The International Monetary Fund (IMF) recently made a bold prediction that China will exceed the United States and become the world's largest economy as early as 2016 in terms of purchasing power parity. This prediction seems to add new evidence to the popular statements made by some western analysts who believe China's rise is the main cause for the decline of the United States. The IMF's prediction from Figure 1 shows that according to the current growth rate, China's economic size will reach 19 trillion U.S. dollars in 2016 in terms of purchasing power parity while the U.S. economic size will reach 18.8 trillion U.S. dollars in 2016 [6]. Therefore, China will exceed the United States and become the world's largest economy.



Figure 1. Share of World GDP (Purchasing Power Party. Source: International Monetary Fund April 2011

The US, which has been the only super power since the end of the Cold War however is saddled with unprecedented level of debt incurred due in great part by its costly, protracted and unresolved wars in Iraq and Afghanistan. The recent literature on US political and military preeminence is characterized by a confusing variety of terms and concepts, including unipolarity, primacy, hegemony, and imperialism [7]. The wars have not only created a big dent on the US economy. They have also significantly cast doubt over the employment of the US military as an effective and efficient instrument of policy. Constrained by limited budget, diplomatic efforts suffer, creating gaps on the diplomatic front. China could sense this opportunity. With newly acquired economic might China is potentially ready to fill these gaps. It may not be appropriate to view the current rise of China and the relative decline of the US as a drastic shift of power. Unlike the breakup of the Soviet Union the development is not sudden and unexpected. The trend is relatively obvious and predictable. China is also modernizing its military forces, both to improve its ability to win a conflict over Taiwan and to deter U.S. aggression. Chinese military

doctrine now focuses on countering U.S. high-tech capabilities information networks, stealth aircraft, cruise missiles, and precision-guided bombs.

THE UNITED STATES IS STILL IN THE POLE POSITION AND THE SHIFT OF POWER IS NOT DRASTIC

US showed a significant economic growth over the past decade, moving ahead of other developed economies such as the European Union and Japan, while the faster development of emerging economies indeed has brought the phenomenon of the relative decline of the United States. But the relative decline of the United States is mainly embodied in the economic field. The downward trend in fields such as politics, military affairs and science and technology is not obvious, and its performance in some fields has even become more outstanding. Data shows that despite the severe economic downturns caused by the collapse of the Internet bubble in 2001 and by the international financial crisis from 2008 through 2009, the GDP of the United States, calculated at constant prices, was up 21 percent during a period from 2000 to 2010. From Figure 2, some economic indicators of the United States have dropped compared with other countries in the world. The US GDP was more than eight times that of China in 2000 and was less than three times that of China in 2010. The U.S. GDP share of the world's total was once more than 50 percent after the Second World War and stands at around 25 percent today [8]. The strength of the United States by GDP has indeed comparatively declined, causing the United States to give up “the dominance of global economic affairs” and seek “multilateral cooperation” to deal with international economic issues.

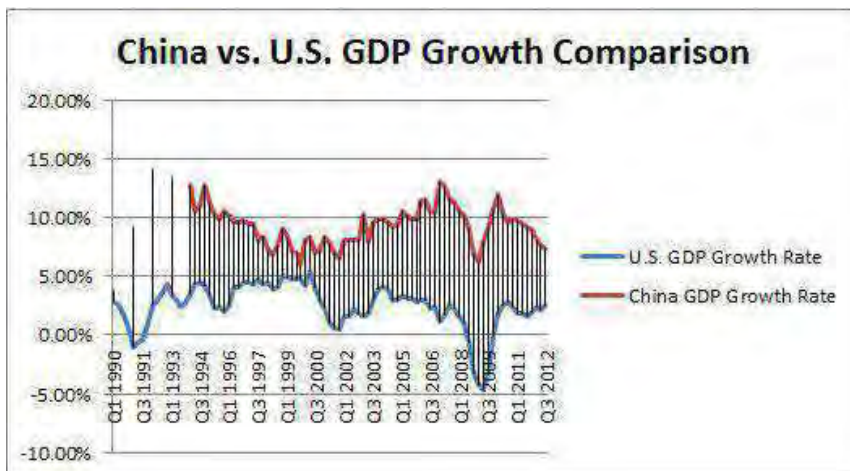


Figure 2. US and China GDP Growth Comparison.
Source Stockholm International Peace Research Institute, (2012)

US military spending has been almost as much as the combined spending of all other countries in the world for many years. According to the statistics recently published by the Stockholm International Peace Research Institute, U.S. military spending rose nearly

3 % to 698 billion U.S. dollars in 2010, more than that of any other country in the world. Worldwide military spending increased by 20.6 billion U.S. dollars last year, and the United States alone accounted for 19.6 billion U.S. dollars of the increase [9]. Thanks to its enormous economic size and largely lead in by business and technology, the United States topped world competitiveness rankings over the past many years. From Figure 3, US spending on its military exceeded that of the next ten largest military spenders in 2012. Russia and China together spent less than 38% as much as the U.S. If the U.S. cut its military spending in half, it would still outspend China, Russia and Britain together. If the U.S. did not increase its military spending at all, at the present rate of growth in China's military spending, it would take China 14 years to catch up to the U.S. level of military spending [10].

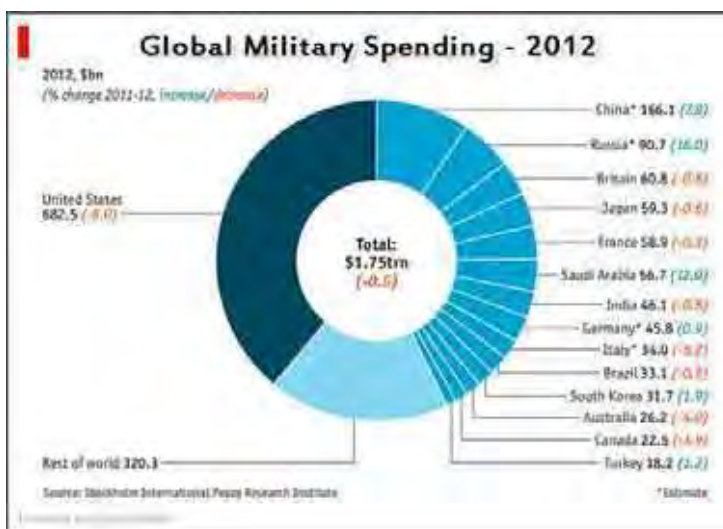


Figure 3. US and Global Military Spending.
Source Stockholm International Peace Research Institute, (2012)

THE RE-EMERGENCE OF RUSSIA AS AN ENERGY SUPER POWER

In Energy Strategy-2030 of Russia, enacted at the end of 2009, it was stated that Moscow would put emphasis on the Asia-Pacific region in its energy exports in the coming years. From Figure 4, the petrol and petroleum exports going to this region were targeted to be raised from 6% to 22-25% of total exports, and currently non-existing natural gas export to this region to 19-20% scale of total natural gas export [11]. This Asia-Pacific opening is part of Moscow's strategy to increase national revenues while promoting economic development in East Siberia and the Russia Far East, and, as well as to stem these regions' chronic emigration problem. Also, increasing negotiating margin in its economic cooperation with EU by operating new oil and gas pipelines to the East also constitutes an important column of this strategy. Russia has emerged from the rubble of Soviet Union to establish itself as a new form of global power. Its hydrocarbon reserves have made it into an energy super power to be reckoned with. Its power hungry European neighbours do not miss this point. Endowed with this new asset, Russia is now able to

have a more assertive foreign policy, which may not be in congruence with the rest of Europe or the US.

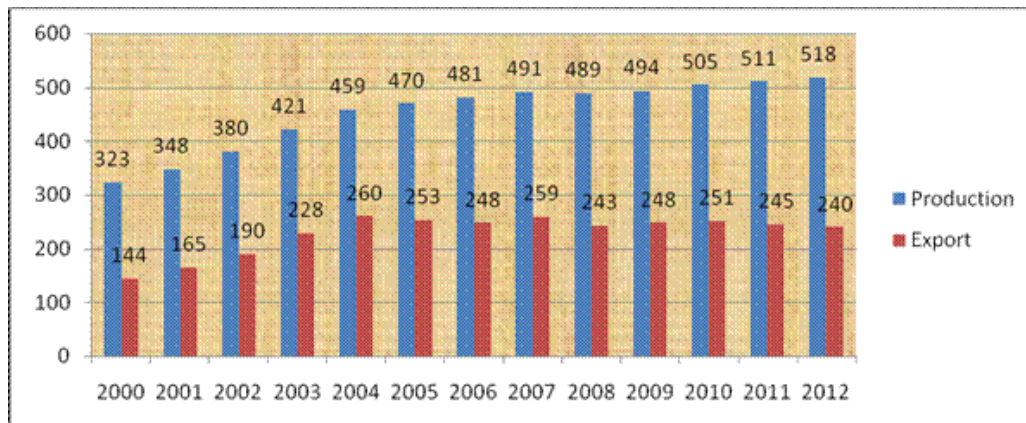


Figure 4. Russian oil export and production by year.

Source: This table is drawn by compiling the data from Russian Ministry of Energy and Central Bank Statistics (2012)

The recent stand taken by Russia on the Syrian chemical weapons issue is one obvious indicator of this development. Russia's resurgence as a strategic actor and a new cold war player is widely discussed in the United Kingdom and Asia. Russian Prime Minister Vladimir Putin during his presidency made unbelievable economic and military progress. In UK intellectual circle, the resurgence of Russia in the international arena is considered a big issue of the near future. Russia's new policy direction and particularly its emerging interest in alternative energy is important because Russia is such a large energy exporter.

The re-emergence of Russia on international arena and more importantly Putin's intellectual approach to developing a foreign policy, has presented an issue for the world to think about. Russia remains one of the world's leading military powers. It is second only to the United States in nuclear weapons, and Russia remains the strongest power in Europe and Asia in terms of its conventional ground, air, and naval forces [12]. For more than a decade, Russian leaders have struggled to formulate security and defense policies that protect Russia's borders and project Russia's influence.

There are still many financial crises in Russia but debates are under way on the growing Russian economic power. Today practically all socio-political groups and blocs in Russia are discussing the country's future along with opportunities of economic growth, but are suggesting very different ways of solving existing problems. On the Russian political and military influence, Moscow-based military expert Vladimir Mukhin says Russia has lost much of its position in Central Asia since then [13]. But Russia still has troops and bases in Central Asia in Tajikistan, Kyrgyzstan, and in Kazakhstan.

EUROPEAN ECONOMIC CRISIS

For decades, the EU was seen as a success story of how Europe has managed to integrate economically and make itself once again a leading economic superpower on par with the United States. The threat to Western global dominance is not only triggered by the decline of the US economy but also by the failure of European economies. The European monetary union appeared to have caused a contagious effect that afflicted the economies of Portugal, Italy, Greece, Spain and Ireland, which descended into bankruptcy one by one as seen in Figure 5 on their net debts. In terms of population, GDP, trade flows and financial size, the EU is a global economic power matching the United States. After its introduction, the euro has rapidly become the second most important international currency behind the US dollar, a major new pillar in the international monetary system and an important pole of stability for the world economy.

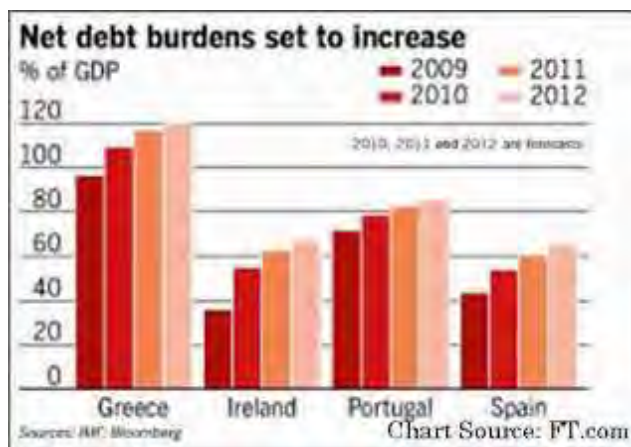


Figure 5. Net Debt Burden EU.
 Source IMF (Blomberg,2012)

Based on its economic strength, the EU, through its common policy on trade and development assistance and as a champion of multilateralism, became one of the formulators of international economic regulations. In addition, the EU's economic integration model and social economic model also act as examples for the world economy [14]. Other scholars also point out the disproportionally larger power the EU or its member countries enjoy in global economic institutions; for example, the EU countries have a combined share of 32 % of all the total quotas of the IMF and had 40% of the voting rights in the IMF Executive Board in 2008 [15]. With the US also struggling with its economy, and looking at the above scenario one can argue that the old well tested arrangement where the US and Europe could mutually support and complement each other economically could no longer be exercised. If there is to be a Marshall Plan for Europe, it can be argued that it will be China who would be the knight in the shining armour.

INDIA AS ANOTHER EMERGING POWER IN ASIA

While India is still a long way from becoming a true global power, it is a major player in the Asia-Pacific regional balance of power along with the US, China, and Japan. According to the United States National Intelligence Council Report titled “Mapping the Global Future,” by 2020, international community will have to confront the military, political and economic dimensions of the rise of China and India. This report likened the emergence of China and India in the early 21st century to the rise of Germany in the 19th and America in the 20th, with impacts potentially as dramatic. The CIA has labelled India the key “swing state” in international politics and predicts that by 2015 India will emerge as the fourth most important power in the international system. According to Figure 6, which describes the best scenario simulation of estimated time required to become high income countries for selected Asian middle income countries (years) states India as the future projection emerging economies in 2059.

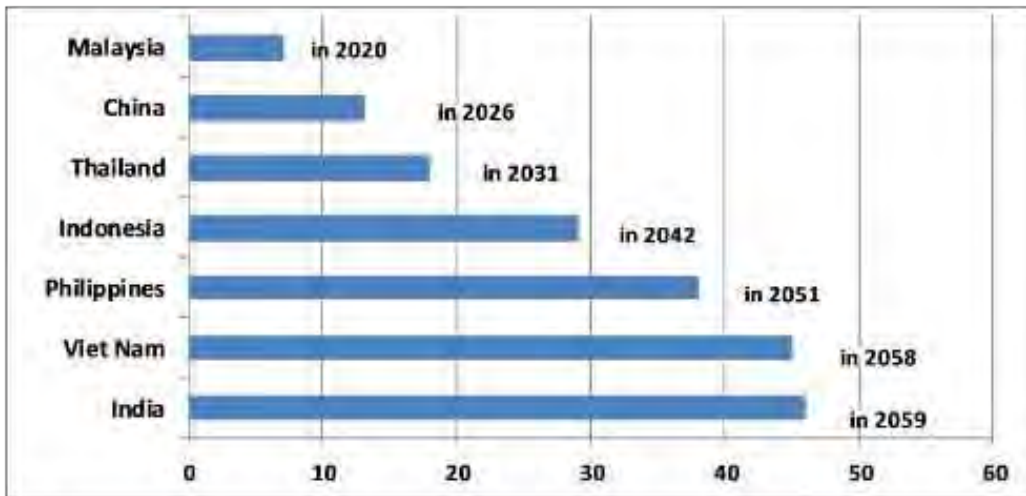


Figure 6. High Income Countries

Source: OECD Development Centre.

Note: Based on World Bank's criterion for classifying economies, high income countries are defined as having GNI per capita above USD 12 000 in 2013. Growth prospects in this simulation are in line with MPF-2014. Population projections are based on UN data.

According to the assessment of Goldman Sachs, by 2040, the four largest economies will be China, the US, India and Japan. India will overtake the G-6 economies faster than earlier expected and India's GDP, in all likelihood, will surpass that of the US before 2050, making it the second largest economy after China [16]. After decades of marginalization imposed by the structural realities of the Cold War, its pursuit of an economic paradigm that retarded its growth potential significantly, and its obsession with Pakistan that made sure that India was viewed primarily through the prism of Indo-Pak rivalry, India is finally coming into its own with a self-confidence that comes

with growing capabilities. Its global and regional ambitions are rising and it is showing aggressiveness in its foreign policy that had not been its forte before. As a consequence, its security policy towards the Pacific is also becoming more proactive. The fact that it is the largest democracy in the world, and with the baggage of the Cold War estrangement and alienation being effectively removed - it has now become an ideologically natural ally of the US. The long-standing India – Pakistan and India – China rivalries also create a mutual common ground for India and US to establish strategic relations. Both parties feel the need to counter-balance China both in the Indian Ocean region and South East Asia. Currently the state of bilateral relations between India and the US continues to strengthen while the US-Pakistan relation, former strong ally of the US during the Cold war continues to slide.

THE EMERGENCE OF NON-STATE ACTORS IN GLOBAL POLITICS

Although states retain a central role, the literature on global and security governance suggests that a growing number of international organizations and private actors, such as multinational corporations and non-governmental organizations, are taking on functions ranging from the making to the implementation of international policies [17]. One of the most prominent features of the global political system in the second half of the twentieth century is the significant surge in numbers and importance of non-state entities. With the growth of interdependence and communication between societies, a great variety of new organizational structures, operating on a regional and global basis, have been established. The rise of these transnationally organized non-state actors and their growing involvement in world politics challenge the assumptions of traditional approaches to international relations which assume that states are the only important units of the international system. While some authors recognize that these non-sovereign entities and their activities have led to fundamental changes in world politics, others maintain that the structure of the international system can still be treated on the basis of inter-state relations. Over the past twenty years one of the most glaring developments in the international political scenario was the emergence of non-state actors that significantly altered the global security, political and economic environments. Non-governmental organisations, multi-national corporations, terrorist and criminal organisations have emerged as new independent and powerful players in global affairs [18]. These new actors have strong enough clout to influence the outcome of some key global issues such environment, economy, politics, security and human rights. Terrorism, trans-boundary crimes, human trafficking, piracy and cyber crimes are among the new global security challenges that emerged as a result of this development. Any attempt at establishing a projection of future global trend will not be accurate if these new actors are not included into the equation.

ISSUES IN DEALING WITH EMERGING CHINA

The biggest challenge perceived by many especially in the West is, how to come to terms with emerging China - economically, politically, diplomatically and militarily:

- a. **Economy.** In terms of economy China's competitiveness is viewed with relative unease by most European countries and the US. Its artificially kept low Yuan has made China's export competitively cheap. Other issue is the manner China deals with intellectual property rights violations in the country, which is not at the level and standard that they would like see. These two factors are perceived as among key elements that keep China "unfairly" competitive.
- b. **Politics.** Politically, many believe that China still has a long way to go in the field of freedom of expression and respect for human rights. Although this is an essentially domestic political issue, it is seen as a shortcoming that creates a rather less convincing image of China as a responsible member of the global community. Seen together with the fact that China is fast emerging as a global super power that wields a lot of influence, the issue creates some skepticism on China's ability to deal with human rights issue at global level that is consistent with commonly accepted international standard.
- c. **Diplomacy.** Diplomatically China has made a lot of inroads especially in Africa. Coupled with its newly acquired economic strength the effort is made easier for China as it does not carry any colonial baggage as in the case of Europe, or ideological baggage as in the case of the US. China does not seek to impose its ideology on others or attaches conditions to its economic assistance. This factor creates a better sense of trust among the target states.
- d. **Military.** Militarily, in terms of absolute number China has the second the largest military in the world after Russia. It is also developing aircraft carrier capability inviting speculation that it harbours the intention projecting its military power beyond its immediate neighbourhood. It is also active in promoting defence diplomacy. China has opened up its military institutions to foreign armed forces and is intensifying its military visits and exchange programs.

THE WEST AND US STRATEGIC PARADIGM

It is almost a conventional wisdom now that the centre of gravity of global politics has shifted from Europe to the Asia-Pacific in recent years with the rise of China and India, gradual assertion by Japan of its military profile, and a significant shift in the US global force posture in favour of Asia-Pacific. Both the US and the West are acutely aware of the relative rise of China and the decline of the US as global powers. They are also unfortunately still stuck in the Cold War paradigm, which sees China as a potential hegemon, a potential military power that would not hesitate to use its military might to

subjugate others, driven by a dangerous ideology that shows little respect for human rights and democracy. With the current decline of the European and US economy the West is facing the potentially frightening reality that for the first time in the modern world history that an Eastern nation is emerging as unchallenged global power in economic, strategic and other aspects. The debate now is whether Asia-Pacific will witness rising tensions and conflicts in the coming years with various powers jockeying for influence in the region or whether the forces of economic globalization and multilateralism will lead to peace and stability. Some have asked the question more directly: Will Asia's future resemble Europe's past? According to, it is, of course, difficult to answer this question as of now when major powers in Asia-Pacific such as China, India and Japan are still rising and grappling with a plethora of issues that confront any rising power in the international system [19].

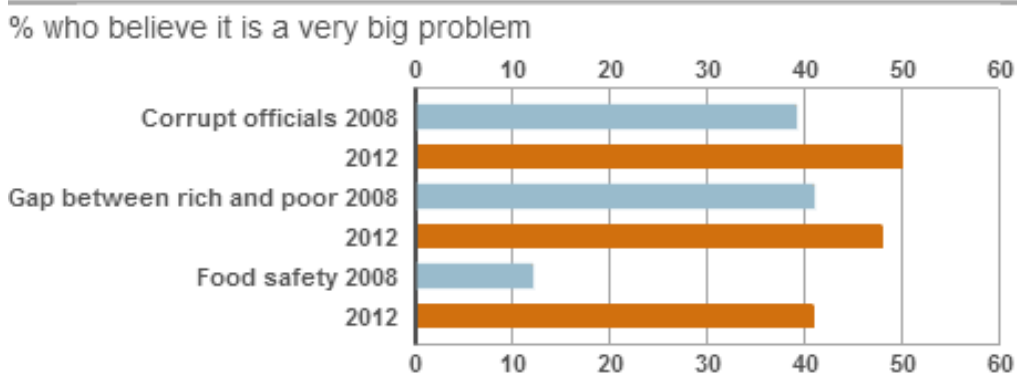
CHINA'S DOMESTIC CONCERNS AS A HINDRANCE TO ITS RISE AS A GLOBAL POWER

China however is a large nation with a vast population, diverse ethnic makeup and still struggling wide economic gap and disparity among its people. It also has to contend with separatist movements, democratic and human rights movements and a host other domestic problems. It also has to maintain a large standing army along its border with Russia and deal with constant threat of natural disasters such as earthquakes and floods. All these issues will significantly slow down or even inhibit China's rise as a global power. Any assessment of China's potential as a super power should take this factor into consideration. China's response to the global crisis did not emerge until in the late 2008; it was a reflection of long-held concerns about the sustainability of existing modes of global engagement and growth promotion. When viewed in the context of three decades of post-Mao economic restructuring, it seems that it is relatively easy to spur rapid growth in China, but much harder to control and slow it; it is an economy that has growth (rather than development) impulses written into its DNA [20].

Moreover, while the Chinese state remains a crucial actor, interests and dynamics have been created that restrict the central state's freedom of action and their ability to shape China's economic future as they would like. By slowing growth down to less than 8% a year and trying to "rebalance" the economy towards service industries and consumer spending they hope to create more jobs and encourage spending. They have called for minimum wages to rise by more than 10% a year until 2015 [21]. They say they have almost completed a national pension scheme covering all rural areas for the first time. But the problem of inequality runs deeper. Many on the lower rungs feel discriminated against in all sorts of ways, be they farmers whose land is appropriated for development or migrant workers who can't get social benefits in cities. For China's next generation of leaders, tackling inequality of incomes is a priority. But what may be even harder will be to create a more equal society for all, be it in access to services, to opportunities or to protection under the law from abuse by the state.

These domestic considerations have had a knock on effect on Chinese conceptions of China's place in the world. While there is clearly pleasure in China that it is considered to be a major global actor and that institutions like the IMF are restructuring their power structures accordingly, this does not equate to a desire to take on a concomitant global leadership role. The message is that China is still essentially a poor country, with myriad domestic problems to resolve, and dealing with these domestic vulnerabilities will be the main challenge for years to come. A slowdown is particularly troubling as China as seen from a Pew Global Attitudes survey conducted in 2012 which finds that its citizens are also increasingly worried about a variety of other domestic issues, especially corruption, inequality and consumer protection as seen in Figure 7 [22]. While this domestic focus is argued as having clear benefits for the rest of the world as it recovers from crisis, if this means putting domestic Chinese interests above those of external actors for example, over exchange rate policy. Looking at absolute number, China undoubtedly has one of the largest military in the world. It also has a growing number of middle class and its trade volume is growing rapidly. All these factors point to the fact that it will be a matter of time before China is poised to overtake the US as the most dominant power in the world.

Growing concerns



Source: Pew Research Center

Figure 7. Survey on China's People Attitude Issues 2012. Source. Pew Global Attitudes Survey

THE RETURN OF BI-POLAR WORLD THAT IS NOT IDEOLOGY DRIVEN

Superpower rivalry is at an end because the Soviet Union does not exist anymore. But it's a different Russia, and an insecure and prickly one at that. With the rise of China, and the new communist party leadership that will oversee China's development over the next decade, the world is drifting back toward a bipolar constellation. The reason is that there are once again two super powers underpinned by military strength: the United States

and China. This new bipolar world means several things. For some time, the focus has been on China developing ever-closer ties to countries in Africa, Latin America, and its own neighborhood. China's powerful economy, wealth, and deep pockets, have allowed it to extend its influence. But Beijing's expansionism is different from the former Soviet Union's. The Kremlin was motivated by ideology. It tried to agitate as it conquered. China, in contrast, is motivated by an insatiable appetite for commodities.

In many countries in Africa, for example, China has extended big easy credit loans and invested in roads and other big infrastructure projects in return for obtaining essential raw materials. Getting to buy those valuable goods is Beijing's only kind of conditionality, unlike the EU's attempts to link trade and investments with good governance. The United States has looked on, helpless against China's growing presence across the world. During her eleven-day tour to Africa in August 2012, Secretary of State Hillary Clinton implicitly criticized China for exploiting the continent's resources and warned countries about becoming too dependent on China. But while China's move has grabbed the headlines and is certainly worrying Washington, another issue is rapidly turning into a major headache. The United States is worried that China is developing the ability to deny U.S. warships "assured access" to the South China Sea.

The United States believes that to that purpose, Beijing is developing, for example, submarine-launched missiles. This has prompted the Obama administration to shift its strategic compass away from Europe to Asia. For the Pentagon, assured access to all the neighborhoods in the Pacific is a fundamental tenet of America's strategic culture. Were that to be blocked, Washington fears that its security, economic, and trade interests in the region would be seriously compromised. This emerging bipolar world is dangerous because it has set off a new arms race. This has negative implications for the non-proliferation regime and for arms control in general but also for long term stability in Asia. It can also be argued that the international community is returning to the era of global bi-polarity. However the Cold War ideology driven bi-polarity mind set which hinges on zero-sum game principle is no longer applicable in dealing with the current political environment [23]. The current emerging state of bi-polarity is no longer about ideological or military struggle but about the quest for leadership and influence driven by economic necessity. To achieve this, the competing powers will need to focus more on the areas of economic relations and diplomacy.

COMMON SECURITY CONCERNS

Energy security, cyber security and environmental security could be among the key security issues that might demand more attention in the future. They may present themselves as common global problems, which require global cooperation and good leadership. Undoubtedly in dealing with these there will be conflict and convergence of interests among the parties involved. The party that could effectively provide good leadership in dealing with these global problems will most like be looked upon as the de facto global leader.

IMPLICATIONS FOR SOUTH EAST ASIA

For countries of South East Asia the implications of this development revolve around the facts that:

- a. **US – ASEAN relations.** The US has had long standing relations with most ASEAN nations which dates back to the Cold War era covering almost every aspect of relations - politics, economy, culture and military. Trade-wise the US is one of the main and indispensable trading partners of ASEAN.
- b. **China – ASEAN relations.** China is ASEAN closest neighbour. It is also now an equally important and indispensable trading partner. ASEAN relations with China also extend to military, diplomacy, culture and other areas.
- c. **Both US and China are ASEAN's strategic partners.** The US and China are both indispensable strategic partners of ASEAN and it is to ASEAN interest that good relations with both parties be maintained. Both countries are actively involved in the various ASEAN regional security architectures. Through these involvements both have the opportunity to jointly chart with ASEAN and its other neighbours the security landscape of the region.

ASEAN'S SECURITY, OPPORTUNITIES AND CHALLENGES ON UNITED STATES AND CHINA RIVALRY

The main concern among the countries of ASEAN is the possibility of the escalation of rivalry between the US and China into a conflict. One potential area of possible conflict is the quest for domination of the South China Sea. The new geopolitics of Southeast Asia is dominated by the emerging regional rivalry between China and the United States. The contest has been highlighted by incidents in the South China Sea where the US has made clear its interest in ensuring freedom of navigation and in the peaceful settlement of China's disputes with smaller regional states. Some in the Pentagon project an 'AirSea Battle' in the region similar to the 'AirLand Battle' planned during the Cold War, a scenario given credence by US Secretary of Defence Leon Panetta's announcement at the Shangri-La Dialogue in June 2012 of an American naval force 'rebalancing' in the Pacific from the current 50 percent to 60 percent by 2020. More widely, historian Arne Westad describes Southeast Asia as 'The decisive territory, on the future of which hangs the outcome of a great contest for influence in Asia [24]. Indeed, the rivalry extends well beyond maritime issues, and Southeast Asian states have been drawn into this contest, whether or not they have disputes with China in the South China Sea. What led to this strategic turn, how the maritime disputes might develop, and the diplomacy required to negotiate the tensions and determine the future of regional institutions, are matters of some complexity. Close proximity to events and

issues can lead to premature conclusions. There has, therefore, to be a certain level of circumspection in any commentary on the new geopolitics of the region. Nevertheless, any analysis of this situation must project future trends and outcomes, even as contemporary events are weighed against their long-term strategic significance.

China and some littoral states of South China Sea still have not resolved their overlapping claims over some areas of the ocean. The US strongly asserts its right of navigation in the South China Sea and views that any incident of conflict arising from these claims as possible causes that would threaten this right. The South China Sea disputes were supposed to be and could have been an opportunity for China to diplomatically solve problems and build confidence with its neighbors, as well as a chance for ASEAN to demonstrate its ability to work together on security issues. The six nations including China's persistence to acknowledge as their territory have caused a serious concern for ASEAN as seen in Figure 8. Both opportunities were lost as was the hope for stabilization of the region. The outcome was also an indication that ASEAN navigation between China and the United States will be fraught with difficulties. Indeed, the "elephant in the room" was the China-U.S. rivalry. There is now little doubt that the two are engaged in a struggle for the "hearts and minds" of Southeast Asians. However, the U.S. and China did not clash at the ARF as feared at least in public. Rather, at the meeting, U.S. Secretary of State Hillary Clinton emphasized Sino-American cooperation in "everything from disaster relief to tiger protection."

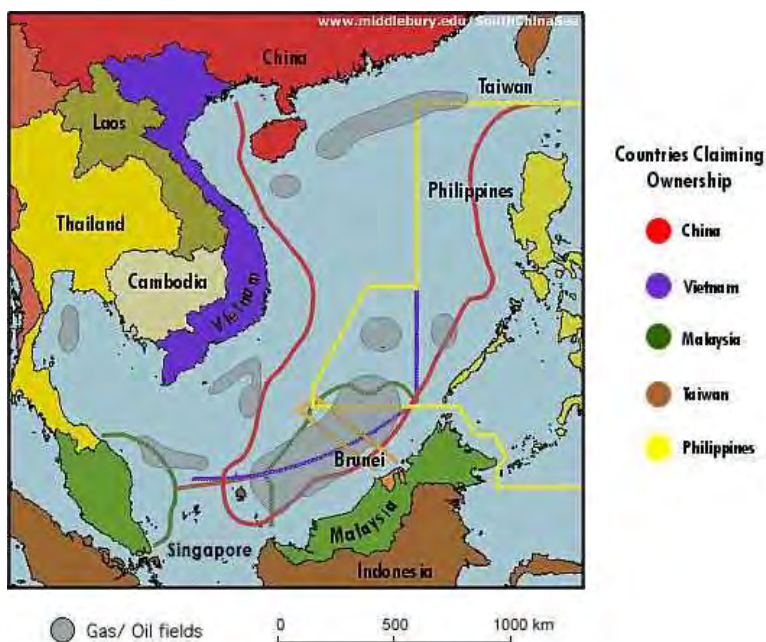


Figure 8: Competing Claims to Territory in the South China Sea

The opportunity for ASEAN arise from the fact that both the US and China value their relations with ASEAN. The US also views South East Asia as a region that is strategically important to the US as reflected by its current policy of “repositioning” itself in the region. China on the other hand is also making tremendous effort in enhancing its relations with the countries in the region. ASEAN could take advantage of this state of relations to engage these two important powers in the manner that could mutually benefit all parties. The main challenge for the ASEAN region arising from the current gradual “shift of power” is to continue to maintain the current state of relative regional peace and stability despite the presence of elements that could disrupt this environment. Both US and China are sympathetic towards this.

CONCLUSION

It is almost a conventional wisdom now that the centre of gravity of global politics has shifted from Europe to the Asia-Pacific in recent years with the rise of China and India, gradual assertion by Japan of its military profile, and a significant shift in the US global force posture in favour of Asia-Pacific. It may be summarised that China is emerging as a potential power that could eventually challenge the US uncontested global supremacy. Though the US is slowly losing its economic and political clout and influence that it has been enjoying since the end of Second World War, it is still holding the pole position and it will be a long time before China could catch up and dislodge the US from this position. The debate now is whether Asia-Pacific will witness rising tensions and conflicts in the coming years with various powers jockeying for influence in the region or whether the forces of economic globalization and multilateralism will lead to peace and stability. With the balance of international power shifting rapidly to the East and the accelerating peaceful transition of the international system, the participation of major powers such as the US, China, Russia, E.U. countries, Japan and India in the ASEAN Regional Forum has attracted worldwide attention.

Behind the political fall-out is the growing economic rivalry between the US the hegemonic imperialist power on the wane, and a rapidly growing China which is now the US main rival in Asia, Africa and Latin America. This rivalry has intensified with the onset of a global recession in 2007 which saw the US, EU and Japanese economies go into recession, while China continued to grow rapidly. The global capitalist crisis continues to deepen and threatens to slide into a double-dip recession or depression. It will widen the gap between the US and China and push the US into a more aggressive projection of its military power in Asia. The current development that involves the gradual shift of power should not be seen as a cause of concern. In dealing with other new and non-traditional security issues, it is quite clear that goodwill, and cooperation among nations will play important part in resolving the problems. Unlike the Cold War era where the global political environment were driven by confrontational strategies, the current development would call for more competitive strategies that would require more comprehensive and balanced employment of both hard and soft powers.

REFERENCES AND ENDNOTES

- [1] James F. Hoge, Jr. is Editor of Foreign Affairs. This article is adapted from a lecture given in April at Johns Hopkins University's Paul H. Nitze School of Advanced International Studies in Washington, D.C
- [2] Wang He 'Lun Oumeng de jingji liliang [On the Economic Power of the EU]', Ouzhou Yanjiu [Chinese Journal of European Studies], No. 4: 1–14. The report is available at http://www.cia.gov/nic/NIC_globaltrend2020.html, 2008.
- [3] Excerpt from a presentation delivered by General Tan Sri Dato' Seri Panglima Hj Zulkifli bin Hj Zainal Abidin, the Vice Chancellor of the National Defence University Malaysia on the occasion of the NDUM Executives Series Talk 2/2013 entitled "The Global Shift of Power: Challenges, Opportunities and Security Implications for the United States of America, Europe and the World" on 28 Septembers 2013 in NDUM.
- [4] Dr Nicholas Kitchen is a Fellow of the Transatlantic Programme at LSE IDEAS and Editor of IDEASReports.
- [5] Michael Cox is Professor of International Relations at the London School of Economics and Political Science and co-Director of LSE IDEAS.
- [6] Agnew, John, American Hegemony into American Empire? Lessons from the Invasion of Iraq. *Antipode* 35:871–885, 2003.
- [7] The report is available at <http://www2.goldmansachs.com/insight/research/reports/99.pdf> Roland Berger,. Overcapacity in China. Beijing: Roland Berger Strategy Consultants for the European Union Chamber of Commerce in China, 2010.
- [8] Shambaugh, D., Dealing with a conflicted China. *The Washington Quarterly*, 34 (1), 7–27. Snyder, N., 2010. China's monetary response to the Great Recession. In: J. Connolly and M. Grubb, eds. 2010.
- [9] Stockholm International Peace Research Institute Report, 2012.
- [10] China and the Great Recession of 2007–2009. Washington, DC: Jackson School of International Relations, 86–100. 2012.
- [11] JTW - the Journal of Turkish Weekly - is a respected Turkish news source in English language on international politics. Established in 2004, JTW is published by Ankara-based Turkish think tank International Strategic Research Organization (USAK), 2012.
- [12] Ferdinand, Peter, "Sunset, Sunrise: China and Russia Construct a new Relationship," *International Affairs* 83, no. 5, 841-867, 2007.
- [13] Sultan-Khan Zhussip is a correspondent in RFE/RL's Kazakh Service. Copyright (c) 2007, RFE/RL Inc. Reprinted with the permission of Radio Free Europe/Radio Liberty, 1201 Connecticut Ave NW, Washington DC 20036

- [14] Kappel, Robert ‘The Decline of Europe and the US: Shifts in the World Economy and in Global Politics’, GIGA Focus, Number 1: 7. 2011.
- [15] Chase, Michael S., Erickson, Andrew S., Yeaw, Christopher, “Chinese Theater and Strategic Missile Force Modernization and its Implications for the United States,” The Journal of Strategic Studies 32, no. 1, 71-73. Feb. 2009.
- [16] Goldman Sach, Research Economic Report , <http://www.goldmansachs.com/what-we-do/research/>. 2013.
- [17] Rosenau, James N. Turbulence in World Politics: A Theory of Change and Continuity. Princeton, N.J.: Princeton University Press. 1990.
- [18] This report was prepared under the auspices of the National Intelligence Officer for Economics and Global Issues. 23 August 2007.
- [19] Friedberg, Aaron L., “The Future of U.S.-Chinese Relations: Is Conflict Inevitable,” International Security 30, no. 2,: 7-45. Fall 2005.
- [20] Cheung, Tai Ming, “Dragon on the Horizon: China’s Defense Industrial Renaissance,” Journal of Strategic Studies 32, no. 1, 29-66. February 2009.
- [21] Chung, Chien-peng, “ The Shanghai Co-operation Organization: China’s Changing Influence in Central Asia,” The China Quarterly 180 989-1009. Dec., 2004.
- [22] Richard Wike **Pew Research Center, Global Attitudes Project 2012.**
- [23] Cozette, Murielle, “What Lies Ahead: Classical Realism on the Future of International Relations,” International Studies Review 10, no. 4, 667-679. 2008.
- [24] Foreword in Munir Majid, 9/11 and the Attack on Muslims, Kuala Lumpur, MPH Publishing, 2012. For a useful American perspective on the rivalry see Aaron L Friedberg, A Contest for Supremacy, New York, W.W. Norton, 2011. Arne Westad has recently published a magisterial work on the modern foundations of China’s view of the outside world: see Arne Westad, Restless Empire, China and the World since 1750, New York, Basic Books, 2012.

FUTURE AIR FORCE COOPERATION IN THE ASEAN REGION

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ABSTRACT

The desire to establish well structured joint operations for all the air forces of the ASEAN's nations is longer a question. Despite the uncertainty of economic climate as well as the nature of future threats, the air forces of the South East Asia region are taken forward for a new concept and possible methods of cooperation around their common interest. The necessity to form a permanent command center in the region would be able to provide solutions to the existing constraint and inadequacy of air operations. The jointly set up command organization is to be developed to able to monitor and manage the joint operations and responses, information sharing and partly to coordinate the need for joint training and education cooperation. This would allow the ASEAN to achieve its regional air power and at the same time as deterrence to conventional threat and prepared to face future intimation efficiently. The quest towards the desired outcome will be tested and limited by many factors. Among the many, the most essential factor is communication as it plays an important role in all sorts of teamwork. Other factors are the assets and capabilities that are possessed by each nation in the region. The manipulative factor is always the spending power that is highly dependent on economic climate which later determines the country's defence financial allocation.

Keywords: Coalition of nations, communicate effectively, training and education resources, communication protocol, joint regional response, joint operations, border, regional air power, disparate capabilities, pooling of resources, economic climate.

INTRODUCTION

With countries and regions becoming increasingly interconnected, the result is that by and large, no longer are the effects of emergencies, crisis and security challenges are largely confined to a particular area or country. More often or not, they often affect the entire region or even the world as a whole and thus in most cases, no longer can any response to such incidents be based upon or carried out by a single nation but rather a coalition of nations as often no one nation has the resources to carry out the response by

itself particularly in this time of shrinking budgets and slow economic growth. Because of this, it is imperative that regional cooperation should be enhanced, in this case between the ASEAN countries, though this does not mean that cooperation with countries outside the region should be neglected. However, it has to be borne in mind that countries outside a particular region may be constrained from offering timely assistance or support due to domestic political consideration, other commitments, distances or a combination of the previous factors that are stated. As such, the ASEAN countries must be prepared to handle a situation by themselves should no external assistance can be materialized or such assistance is to materialize later. Also as mentioned previously, we are in a time of shrinking budgets coupled together with slow economic growth, hence we must look into methods of cooperation and resource/capability sharing which would enable cost savings for those that are involved. The purpose of this article is thus to outline and suggest potential areas of cooperation that could be explored by the ASEAN air forces and the issues pertaining to them.

ASEAN AIR FORCE JOINT WORKING GROUP

Central to all cooperation efforts is the ability to communicate effectively. However, focus in this sphere has often been on the technical aspects of communication such as common frequencies, data sharing and information exchange, and taking for granted the use of English as a common language is not an issue. The problem is that not all countries maintain the same level of proficiency in the English language. Moreover, within some countries, the proficiency varies at different levels. For instance, senior military officers of one country may be fluent in English but at the field levels, the personnel there may have limited fluency in the English language. This issue was something that was taken into account with at the 9th ASEAN Air Chiefs Conference (AACC) that was held in Kuala Lumpur from 10 - 13 September 2012 [1]. At the 9th AACC, it was decided that an English language training center would be established in one of the ASEAN countries to assist the ASEAN air forces whose personnel were not familiar with the English language. While some might say that a private commercial civilian language training program would be a solution, it has to be borne in mind that the specialized military and aviation operational and technical terms are not covered in such courses. Thus, it is necessary that a specialized air force orientated English language course is to be used instead. By ensuring that all the ASEAN air forces are at a common language proficiency level in English, joint cooperation, training and operations efforts can thus be carried out smoothly in the future with little fear of mistakes or untoward incidents occurring as a result of a misunderstanding in communications.

At the 9th AACC, it was also decided that a joint working group from the ASEAN air forces would study how best the air forces could share training and education resources particularly through exchanges or conducting training programs in one country which has expertise or specialization in a particular subject matter. Malaysia for example, has a Peacekeeping Training Center and thus, the ASEAN air forces' personnel could be trained in peacekeeping at the Malaysian Peacekeeping Center instead of establishing their own

internal programs. The fact is that in this era of shrinking military budgets coupled with the increasing cost of military equipment, training, operations and maintenance, the potential for joint cooperation in training and expertise sharing as a cost saving method must be fully explored. While clearly some aspects of training and expertise must be carried out internally due to national security considerations, there remains plenty of areas that can be explored. For instance, sharing expertise and skills and joint training on C-130 maintenance, a common platform in use by many ASEAN air forces and also an aircraft whose capabilities and operations are mostly not national security sensitive, is one example of a possibility that could be pursued.

The technical aspects of communications and information sharing among the ASEAN air forces also need to be looked at, particularly in regard to future joint Humanitarian Assistance and Disaster Relief (HADR) operations and also in the sphere of terrorism. While the September 11 incident had resulted in greater aviation security, the threat of aviation hijacking cannot be permanently ruled out nor the possibilities of the use of small civilian aircraft in terrorism. As such incidents may take place at the start in one country with the intention to take the aircraft into another country to carry out the goal of the terrorists, there is a need for the ability for the ASEAN air forces to be able to communicate and share information in responding to such, particularly when the response includes fighter aircraft shadowing and intercepting the suspect aircraft since the fighter aircraft would be limited to its own national airspace and clear channels of communications and standing procedures need to be established for the handing over of responsibilities when a suspect aircraft crosses a border.

For the HADR operations also, there needs to be clear communication protocols and agreed upon channels and frequency usage, it has to be borne in mind that in an area of disaster, the existing communications infrastructure in such areas would be destroyed or degraded significantly and that relief units and organizations would thus bring with themselves significant integral communications capabilities and equipment. The challenge would be to ensure that such equipment and capabilities do not interfere with or impede each other and at the same time ensure that effective communications between all that are involved in the HADR effort can be carried out. The best way to ensure that is to have agreed upon standard operating protocols and procedures in place which are to be utilized in such incidents. For air operations, this is even more vital given that there may be a large number of aircraft operating in a limited area with the majority of the aircrew being unfamiliar with the area. Thus, it is vital that clear operating procedures, communications and information sharing exist in order to forestall any mishap or accident. At the 10th AACC which was held in Lao People's Democratic Republic (PDR) from 2-4 November 2013 [2], the Lao Air Force put forward a proposal of having standard operating procedures and protocols for the ASEAN Air Forces in the HADR operations and the matter is now under discussion. However, it is vital that this proposal is be fast tracked and expedited as soon as possible given the recent Tacloban relief operations in the Philippines which showed the need for better coordination and unity of efforts between the ASEAN members particularly in regard to the response to such a situation [3]. The ASEAN as a whole should conduct a post-mortem on the Tacloban

relief efforts so as to determine what lessons can be learnt for the ASEAN in responding to the HADR situations and how best such efforts can be carried out as ajoint regional response in the future.

PERMANENT JOINT COMMAND ORGANIZATION

The ASEAN air forces perhaps should also examine the possibility of a permanent joint command organization not only to oversee the joint training and cooperation but also to carry out the contingency planning for future joint operations in the HADR and to serve as a command and coordination structure for when such joint operations are carried out. Working with the local or national authorities in the area in question during a HADR operation, such a command organization would allow better management and coordination of air assets that are dispatched for the relief efforts and avoiding duplication of efforts and asset/manpower wastage through piecemeal individual nation commitments. The said command would be carrying out contingency planning along with visits and meetings to and with various organizations, both government and private, that would be responding to any HADR incident to better build cooperation and familiarization and also to exchange views and ideas on the use of air forces in such relief efforts and how best to cooperate and coordinate such efforts when they are required. A model for such would be the set-up of the Five Power Defence Arrangements (FPDA) Headquarters Integrated Air Defence System (HQ IADS).

While the HQ IADS is geared towards a more combat orientated mission, its working methods and efforts in carrying out planning, cooperation and coordination between the FPDA nations could be applicable in a joint ASEAN air forces command organization. By having a permanent standing command organization that is staffed with assigned personnel from all the ASEAN air forces, we are able to better foster cooperation and understanding via daily interaction between those that are assigned to the command organization. The way forward for this initiative is to build slowly with a focus on HADR as that is the least contentious subject matter among countries. In relation to this, gradually as the command organization grows into its role and beyond its initial stages, it may expand to cover other aspects such as education and joint training in other fields. A secondary aspect of this command organization would be to formulate, produce and disseminate approved and standardized publications, manuals and guidelines for joint cooperation efforts between the ASEAN air forces.

Another area which could be explored is perhaps the setting up of a regional airpower center that is permanently located in one country which would be staffed by both civilians and the ASEAN air forces' personnel to generate and stimulate ideas and discussions on the role and future of airpower in the region. In addition, various issues regarding airpower, air forces would also serve as an advocacy for airpower and air forces through public dissemination via both writings in the print and online media and appearances in the television media. We, as air forces, must acknowledge the fact that we are an expansive asset for a nation and many will question our need and relevance in view of our

costs. Thus, both the government and public of the nations in the region must be aware of the utility of air forces and airpower. Adopting a multi-national regional airpower center forestalls accusations of such center being a partisan tool of the government or air force it belongs to and enables a free and unfettered exchange of ideas and thoughts on the role and issues pertaining to the utilization of air power and air forces in the region. A lesser option would be for each air force to set up its own airpower center and holds an annual forum to discuss and exchange ideas and thoughts.

Given the disparate capabilities of the ASEAN air forces, there must be consideration towards assisting and supporting the ASEAN air forces which have very limited capability or cannot afford certain capabilities. Moreover with each nation having priorities towards its own national assets, it cannot be certain that in a situation which requires nation's contribution of assets to an effort such as a HADR operation, that such assets would be available for contribution. Therefore, perhaps now is the time for the ASEAN air forces to initiate studies into the possibility of having an initiative similar to the North Atlantic Treaty Organization (NATO) Strategic Airlift Capability and the NATO Strategic Airlift Interim Solution. In the case of the Strategic Airlift Capability, its concept consists of pooling resources in order to acquire an airlift capability for many nations in a time of restrictive budgetary environment and this has been achieved with the acquisition and operation of three C-17 Globemaster III under this concept. Meanwhile the Strategic Airlift Interim Solution consists of the NATO member countries pooling their resources to charter special aircraft that give the Alliance the capability to transport heavy equipment across the globe by air. This multinational airlift consortium charters six Antonov An-124-100 transport aircraft, which are capable of handling outsize cargo. However, as the name states, this program is only an interim solution as the Russian and Ukrainian Antonov aircraft are being able to meet shortfalls in the NATO's strategic airlift capabilities, pending deliveries of Airbus A400M aircraft [4].

In both situations usage in terms of flight hours is determined by individual contributions and possibly a similar mechanism can be worked out for the ASEAN air forces along with having an additional provision of having the aircraft available for any HADR operations in the region and such usage will be deducted by an equal division of the HADR flight hours from the member nations' pool offlight hours. The utility of such a mechanism must be something that has to be examined and studied as to whether a similar or modified program can be applied here as a cooperation mechanism between the ASEAN air forces [5]. Given that all countries in the region face the problem of funding limitations on procurement, alternative methods which can compensate for such procurement limitations must be explored and a pooling of resources will allow access to capabilities that may not be obtainable on an individual national level.

CONCLUSION

In conclusion, we as the air forces of the ASEAN must further develop our cooperative efforts as a regional entity. The current economic climate which is leading to

shrinking budgets means that we need to explore methods where cooperation efforts can be leveraged to offset such and bring about savings. At the same time, cooperation efforts are not just about saving costs but also to help us better integrate and work together to meet today's security challenges. Ironically as defence and security budgets decreased, the security challenges have increased owing to greater empowerment of individuals brought about by globalization and technological advances. For instance, at one time, sophisticated communications and monitoring devices were the province of military and security forces but today, individuals can acquire such equipments that are even more capable than the ones issued to military and security forces. Likewise an increased in arms trafficking and proliferation on a global basis means that in certain cases, insurgents and terrorists can match their firepower on an equal footing with established military forces.

On the other sphere, increasing urbanization and the tendency for high density population concentration makes any natural disaster or large scale accident certain to cause casualties and damage on a level which may swamp the nation affected. Because of these factors, cooperation is increasingly more vital as such challenges are increasing becoming beyond the capability of a single nation to address alone. The main focus point for the ASEAN air forces now is to identify and work towards a road map for cooperation in the future and then implement such efforts. As practitioners and specialists in the utilization of airpower, we must be able to direct the best airpower cooperative efforts that can be utilized in the region for the greater good of the region and the nations within.

REFERENCES AND ENDNOTES

- [1] 9th ASEAN Air Chiefs Conference – ‘Strengthening Security Cooperation of ASEAN Air Forces towards ASEAN Community 2015: Education & Training’, Kuala Lumpur, Malaysia 10 – 13 September 2012.
- [2] 10th ASEAN Air Chiefs Conference – ‘Partners for Peace and Development’, Vientiane, Lao PDR 2 – 4 November 2013.
- [3] See Graham, Euan. – ‘Super Typhoon Haiyan: ASEAN’s Katrina Moment?’ for some general criticism of ASEAN’s response. Available online at <http://www.rsis.edu.sg/publications/Perspective/RSIS2132013.pdf>. Accessed on 26 Dec 13.
- [4] Further details of the NATO Strategic Airlift Capability can be found at the NATO homepage for it at <http://www.nspa.nato.int/en/organization/NAMP/sac.htm> and on the Strategic Airlift Interim Solution at http://www.nato.int/cps/en/natolive/topics_50106.htm. Accessed on 26 Dec 13.
- [5] See Mcally, Brendan. – ‘Outsourcing Strategic Airlift: NATO’s Two Very Different Solutions’ for a description of the operations of both NATO airlift programs at <http://www.defensemedianetwork.com/stories/outsourcing-strategic-airlift-natos-two-very-different-solutions>. Accessed on 26 Dec 13.

ASEAN CENTRALITY IN A RISING ASIA

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ABSTRACT

Much has been made over the last decade on the rise of Asia and the continent's increasingly important role in global politics. As a ten-member political community, the Association of Southeast Asian Nations (ASEAN) represents a significant presence within Asia and is viewed by many as a successful experiment in regional conflict regulation and cooperation. Over the years, the region has featured in the policy-making discourse of the big powers, in particular from the United States and China with increasing regularity. Paralleling the prominence that ASEAN receives from the big powers is the growing emphasis among its own members on "ASEAN centrality" - the notion of an ASEAN-led regional architecture in which the region's relations with the wider world are conducted with the interest of the ASEAN community in mind. This article will thus explore the concept of "ASEAN centrality" and the extent to which this concept is being understood and appropriated in ASEAN's dealings with both Washington and Beijing.

Keywords: ASEAN, ASEAN Centrality, Multilateralism, ASEAN-US, ASEAN-China, Southeast Asia

INTRODUCTION

The ten-member Association of Southeast Asian Nations (ASEAN), comprising some 600 million people, represents a significant portion of Asia and is viewed by many as a successful experiment in regional conflict regulation and cooperation.[1] Sitting astride significant sea routes between the Indian and Pacific oceans, ASEAN is economically and strategically vital to the emerging economies of Asia; its regional waters, including the South China Sea, are also the passageways by which a substantial share of international trade passes through.[2] Over the years, the region has featured in the policy-making discourse of the big powers, in particular the United States and China, with increasing regularity.

Paralleling the prominence that ASEAN receives from the big powers is the growing emphasis among its own members on "ASEAN centrality" - the notion of its leading role in a regional architecture by which the region's relations with the wider world are conducted, and the interest of the ASEAN community is promoted. According to the ASEAN Political and Security Community blueprint, this centrality would act as "the driving force in charting the evolving regional architecture." [3] In the words of its

secretary-general, Surin Pitsuwan, “ASEAN has earned the place to play a central role in the evolving regional architecture by virtue of not only being the hub in economic integration initiatives in the region but also by being able to provide the platform for political and economic dialogue and engagement among major global players.” [4] ASEAN is engaged in a two-fold enterprise to bring about an ASEAN community in 2015 and steer the Asia-Pacific region towards an East Asian community through the nascent East Asia summit. In light of the increasingly complex and multifaceted nature of global challenges, the challenge for ASEAN is to build on ASEAN centrality without losing its focus and become divided over great power rivalries in the region. Anxieties over big power relations and the uncertainties of how these interactions would play out could lead ASEAN member states to possibly disengage from global challenges and instead develop parochial and isolationist tendencies. That could lead ASEAN states to adopt an inward-looking approach to regional engagement and become marginalized by the rise of Asia.

This article will explore the concept of “ASEAN centrality” and the extent to which this concept is being appropriated both regionally and internationally. This centrality, I argue, while it gives institutional expression and voice to the global aspirations of ASEAN member states, is less useful within the intramural dealings of ASEAN, which is still steeped in the realist tradition whereby principles of state independence, territorial integrity, and maintenance of the political status quo are being upheld. [5] Furthermore, this practice of ASEAN centrality, insofar as it is being collectively appropriated by member states, is mostly exercised within economic dealings and is less applicable when decisions involving security concerns are involved. Illustrative of this are the relations between Singapore, Malaysia and Indonesia as well as relations between the Burmese, the Thai, the Khmer and the Vietnamese. They have gone through “cycles of greatness, decline and rivalry”, all of which have influenced their security perceptions. [6] Such a “security complex” [7], as Barry Buzan terms it, imposes limits to the extent in which ASEAN – as a political community of nations – is able to develop its own institutional capacities in responding to global challenges; furthermore, with the increasing presence of big power influence within the region, it remains to be seen whether the “ASEAN way” of “soft” regionalism is sufficiently suitable as a *modus operandi* for ASEAN to negotiate the contours and interactions of big power plays.

ASEAN’S IDENTITY AND GLOBAL POSITIONING

During the 45th ASEAN Ministerial Meeting (AMM) held in Phnom Penh in July 2012, the ASEAN community found itself staring at an unprecedented diplomatic crisis over a regional issue involving a big power. For the first time in its history, members of the regional bloc were unable to issue a joint communiqué following heated political wrangling between the incumbent Cambodian chair and other ASEAN member states over their South China Sea disputes involving China. This outcome clearly shocked ASEAN, political leaders and diplomatic observers. Both the foreign ministers of Singapore and Indonesia also expressed great disappointment at the outcome, terming it

as “irresponsible” and having left a “severe dent” on ASEAN’s credibility [8]. A former Singapore diplomat, Tan Seng Chye, wrote that the outcome of the ASEAN Ministerial Meeting (AMM) was a “significant watershed in ASEAN’s history” and should be “taken seriously by ASEAN as a wake-up call.”[9] ASEAN Secretary-General Surin Pitsuwan, a persistent and strident advocate of ASEAN’s cohesive capability, admitted that the incident had left the ASEAN community with the need “to do some soul-searching...and be more cohesive among ourselves.”[10] This recognition that ASEAN is no longer a political bystander but an active participant in international affairs was emphasized at the 2011 East Asia Summit (EAS) in Bali as Indonesia’s President Susilo Bambang Yudhoyono noted that ASEAN - as a community -had to take proactive steps to engage and address the global challenges arising. “In this increasingly complex and interconnected world, ASEAN must truly be at the forefront to address the many challenges that arise. ASEAN cannot just be a passive audience, a vulnerable victim to problems from other parts of the world.”[11] His Singaporean counterpart, Prime Minister Lee Hsien Loong, concurred, while choosing to emphasize the importance of a “tightly knit ASEAN” to his country’s interests as it would link the Republic to a “bigger life raft” if it were hit by a crisis. Said Mr Lee, “If you have a storm coming in your direction, you have something to hang onto which is more cohesive and integrated.”[12]

It can be argued that implicit in the public statements made by both leaders are two distinct – though not entirely mutually exclusive – views of how ASEAN is being conceived. The first view, as epitomized by President Yudhoyono’s statements, views ASEAN as being a *leader and driver* within the EAS while the second view, as Prime Minister Lee puts it, conceives of ASEAN as a *lever and facilitator* on which smaller member states are able to count upon in order to frame, safeguard and promote their national interests within the larger auspices of a regional political community.

How these two views can square with one another is a subject for debate. Current mainstream literature on ASEAN suggests regionalism in East Asia has historically been process- rather than product-oriented [13]. This emphasis on the *how* and not just the *what* in policy-making has given rise to what scholars term as the “ASEAN Way”, which emphasizes dialogue, consultation, consensus-building, and non-binding commitments [14]. These practices were embodied in the Treaty of Amity and Cooperation (TAC) promulgated by the founding members of ASEAN in 1976. Its proponents asserted that the ASEAN way was unique in that “these norms were operationalized into a framework of regional interaction” that “contrasted with the adversarial posturing and legalistic decision-making procedures in Western multilateral negotiations.” [15] The annual ASEAN Regional Forum (ARF) - inaugurated in 1994 - which brings 27 Asia-Pacific countries together in a multilateral security setting, provided ASEAN with the opportunity to demonstrate its diplomatic adroitness by forging cooperation among disparate political communities. According to the ASEAN Concept Paper drawn up in 1995, the ARF would not have a secretariat and its decisions would be made by consensus; moreover, the forum would progress “at a pace comfortable to all participants”, an approach noted by former ASEAN Secretary-General Rodolfo Severino that gives the reassurance that “nobody would railroad or ram through measures that others might deem to be threatening to

them.”[16] Furthermore, the ARF’s concept of security was “comprehensive”, including not only military aspects but also political, economic, social and other issues”.

Nevertheless, the ARF process over the years has been criticized by scholars for being unable to aptly deal with matters of regional security.[17] Even before the latest Phnom Penh AMM fracas, conflicts in East Timor, Aceh, Myanmar and Southern Thailand have been flashpoints. Noting the ARF’s lack of a specific “road map” or blueprint for action, Amitav Acharya adds that the forum’s major selling point, “inclusiveness”, is also its “principal drawback, given the sheer diversity of security concerns within the Asia-Pacific region and the obvious difficulties in achieving agreement from the relatively large membership of the ARF”. [17] Others note the gap between ASEAN’s rhetorical aspiration and regional reality, which thwarts ASEAN’s objective of forging “regional resilience” and constrains its commitment to tackling emerging regional issues [17].

All these once again raise the question concerning ASEAN’s identity and the extent to which this is being shared by the ASEAN political community. According to Kraft, at ASEAN’s inception, the key priority among ASEAN member states was that of insulating intra-ASEAN relations from extra-regional dynamics. As such, the behavioral norms embodied in the ASEAN Way were intended to allow member states to pursue internally directed policies of development and political consolidation without having to be concerned about unstable external relations [18]. Acharya likewise argues that “the ASEAN Way of problem-solving...was developed when the threat of communist expansions served as a cementing factor for its otherwise divided membership. It is doubtful whether these norms and practices can be duplicated within a wider regional setting.” [1] In other words, one can argue that ASEAN’s goal – in its early years – was more about *avoiding* the pitfalls of being embroiled in great power rivalries than it was about *accommodating*, let alone being actively engaged with them.

This, however, is no longer the case today as the fortunes of ASEAN and those of the world become increasingly intertwined. Singapore’s Ambassador-at-large, Tommy Koh, speaking about the EAS, for instance, notes that “ASEAN’s aspirations is to embed [the big powers] in a cooperative mechanism, thereby reducing misunderstanding and suspicion among them and enhancing the prospects for peace in Asia.” [19] The desire to both at once engage the big powers while at the same time avoid being entangled in the web of these relations has resulted in the use of an “enmeshment” strategy whereby ASEAN institutional centrality would be maintained. [20] This centrality, it is observed, is traditionally premised upon ASEAN being a “neutral platform” for the major powers to meet so as to avoid the dominance of a single power within the East Asian region. [21] To what extent this neutrality can be sustained, in light of changing political dynamics – both the US and China have reiterated their long-term interests to the region – remains to be seen. The fact that ASEAN’s institutional priorities which traditionally prioritized mutuality, mutual respect and an ethic of self-restraint also lies in sharp contrast to the “functional cooperation” that is emphasized by other key actors, especially the United States, and raises the question concerning ASEAN’s global positioning and the extent to

which an exclusive ASEAN-centric approach is able to effectively mediate major power relations within the region [21].

ASEAN CENTRALITY: A “MUDDIED” MULTILATERALISM STRATEGY?

As noted earlier, the ARF has traditionally been the forum whereby the ASEAN community, together with other major powers, come together to discuss security issues in a multilateral setting. This multilateral character of the ARF, however, raises questions concerning its efficacy, and whether it is truly the “go-to” channel in times of real security needs. Indeed, some scholars have highlighted that ASEAN states have in fact, relied primarily on global institutions and national instruments, and secondarily on their own regional institutions, for their security [22]. Nevertheless, as noted by Acharya, ASEAN’s practice of not bringing sensitive issues to the multilateral “does not mean that multilateralism has been irrelevant to conflict resolution, [rather] it means that multilateralism was viewed by its members not as a legal or formal framework for interactions, but as *creating a conductive socio-psychological setting for intra-mural solving*” [23]. It is also pointed out that this avoidance of sensitive issues on the multilateral agenda by the ASEAN members was also partly due to recognition that such issues were better dealt with at the bilateral level [23]. Indeed, this difficulty then of reconciling individual states’ interests with those of a broader ASEAN community is aptly recognized by former Singapore’s foreign minister, S. Rajaratnam, following the ASEAN Bangkok Declaration of 1967: “It is necessary for us, if we are really to be successful in giving life to ASEAN, to marry national thinking with regional thinking and we must also accept the fact, if we are really serious about it, that regional existence means painful adjustments” [23].

The declaration of the Zone of Peace, Freedom and Neutrality (ZOPFAN) in 1971 has also been criticized as being “long on rhetoric and short on substance” as “internal contradictions [within] ZOPFAN meant that beyond diplomatic circles, it was never taken seriously”.[24] ASEAN’s subsequent signing of the TAC in 1976 also failed to improve ASEAN’s capacity to act in enforcing peace. For instance, there was little ASEAN could do when Vietnam invaded Cambodia in 1978; likewise, ASEAN has yet to weigh in with a collective voice on matters of regional security. As one scholar comments, ASEAN is a “mere bystander” in the Korean nuclear crisis and would rather pass the buck to the big powers (US & China) when it comes to addressing North Korea’s nuclear ambitions [24].

Reflecting on these, the author argue that the idea of ASEAN centrality, that is, an ASEAN community speaking with “*one voice*” is a concept that is, at best, a useful political slogan. The use of ASEAN centrality - as a multilateralism strategy - is severely limited. Indeed the literature on multilateralism suggests that for effective multilateralism, more than just the nominal presence (of three or more states) is required. What needs to be interrogated includes also the *kind of relations* that are being instituted among these states as well as the strength of these relations [25]. In the case of ASEAN, one

might conceivably argue that the “unfinished and urgent task of [ASEAN’s] internal consolidation acts as an important constraint to ASEAN’s ability to play its brokerage role vis-à-vis the great powers and regional order in East Asia” [26]. Furthermore, as Weatherbee notes, “Although states’ interest in ASEAN’s integrity may buffer the intensity of national interest competition, it has not eliminated it”[5]. Indeed the conflicts among ASEAN member states are often rooted in “historic and ethnic antagonisms” that show little signs of dissipating, and which, in fact, “take on new meanings in contemporary nationalism”[5].

According to Caporaso, the foundations of multilateralism are distinguished from other forms by three properties, namely, indivisibility, generalized principles of conduct, and diffuse reciprocity [27]. In brief, the author argue that all three characteristics are found to be wanting within the ASEAN community. Firstly, the interests of ASEAN states are not indivisible from each other; on the contrary, one might make the argument that ASEAN’s present fortunes (economic or political) came about as a result of ASEAN states’ willingness to align their fortunes with the rest of the world, and not just among themselves. Secondly, few, if any, generalized patterns of conduct can be found among these states; indeed the ASEAN Way of soft consensus has been criticized for fostering “habits of non-implementation” and the promotion of “negative social interactions” thus raising questions concerning whether any pattern of actionable conduct can be discerned [4]. Thirdly, the history of intramural conflicts in Southeast Asia also casts aspersions concerning the extent of ASEAN states’ reciprocity towards one another and whether they expect “to benefit in the long run and over many issues, rather than every time on every issue” [27]. As Weatherbee puts it, “ASEAN’s incapacity to move to a politically integrative level above noninterference and respect for domestic sovereignty suggests that notwithstanding claims of community, interstate relations in the ASEAN region are not really different from relations among states in the world, governed by calculations of national interest and relative power”[5].

Moreover, as Severino points out, what is lacking in ASEAN – as a community of nations – is “the feeling of belonging, the conviction that members matter to one another and to the group, and the faith that members’ needs will be met through their commitment to be together” [28]. This suggests that the ASEAN community – despite its much vaunted claims of centrality - remains divided in as far as states’ core interests are concerned; as such, the question concerning the robustness – and relevance - of ASEAN’s centrality needs to be posed, especially in its dealings with the two major superpowers, the United States and China. This will be the focus of my subsequent discussion.

ASEAN AND THE GREAT POWERS

As highlighted earlier, the design of the ASEAN community – in its formative years – was to allow member states to avoid being drawn into a protracted US-Soviet Cold War conflict. In a post-Cold War context, such a strategy of avoidance is clearly not tenable. Since the 1990s, the role of ASEAN has shifted from that of a reticent to

an active passenger. Indeed, the ASEAN Way was also said to be projected as a means of multilateral engagement that was acceptable to all participating states in the ASEAN Regional Forum (ARF) and the ASEAN-Plus mechanisms.[26] Not surprisingly, talk of ASEAN occupying the “driver seat” in key regional institutions has also gained increased momentum.[29] It is also observed that ASEAN’s model of “brokering” great power relations turns on the institution providing unique fora for greater power dialogue and confidence-building, and for acting as demonstration precincts from which greater powers can demonstrate their commitment to the region [26].

The announcement in November 2011 by U.S. Secretary of State Hilary Clinton on America’s “pivot towards Asia” was met with varied responses among ASEAN’s military establishment. Singapore’s Defense Minister, Dr Ng Eng Hen, mentioned the ongoing presence of the US in the Asia-Pacific region as a “critical force for peace and stability for the past half a century” and added that it was America’s “pre-eminence” and “forward presence” that provided the vital “strategic assurance” thus guaranteeing regional and financial growth.[30] Indonesian Foreign Minister Marty Natalegawa, however, criticized the move, adding that “ASEAN will not let the region become a competition arena for countries who consider themselves as big powers, whoever and whenever they may be” [31]. These differing views suggest that the strength of ASEAN centrality is less coherent than what is publicly projected, and that there exists substantial cleavages among ASEAN member states as to how they ought to respond to perceived big power incursions into the region.

Given the preponderance of influence the US has historically wielded in the region, one can argue that relations between Washington and the ASEAN community, if not always positively perceived by all, are at least substantially institutionalized so as to provide some degree of political predictability. The fact that US’ naval primacy within the region helped insulate ASEAN maritime waters from Cold War great power politics suggest that reliance on the US security umbrella is likely to persist, particularly given the rise of China.[32] As one American observer puts it, as relatively small powers “concerned about preserving their freedom to maneuver vis-à-vis China”, the nations of Southeast Asia are prepared to accept American involvement and leadership [33]. Indeed, some 20 years ago, when the US decided to close a major naval base in the Philippines, a new plan known as “places, not bases” was quietly put into effect in Indonesia, Singapore, and Malaysia, permitting American forces to procure local services to maintain fleet and aircraft mobility and training [33]. The events of September 11, 2001, and the subsequent “global war on terrorism” also inadvertently drew many ASEAN countries and the United States into a close security partnership. The late 2000s also witnessed an increased willingness by the US to expand its multilateral efforts within the region as opposed to a historical preference for bilateral security arrangements. [34] In 2011, President Obama announced the establishment of a U.S. Permanent Mission to the ASEAN Secretariat in Jakarta and the appointment of a resident representative. Together with the participation of Hillary Clinton and President Obama at the ASEAN Regional Forum and the East Asia Summit respectively in the same year, these actions would have certainly alleviated concerns among ASEAN leaders that the US, stretched by its wars

in the Middle East and economic problems at home, might chose to dilute its presence within the Asia-Pacific region.

Yet, there are concerns that the United States' soft brand of multilateral internationalism with ASEAN continues to retain a hard-edge realist core to it, that is, to ultimately promote its own interests abroad. According to Mastanduno, US policy-makers throughout the postwar era have treated multilateralism and international institutions in a pragmatic manner and believe that it would be difficult to sustain these as core foreign policy purposes.[35] Likewise, Ba contends that the United States already possesses a well-established system of bilateral alliances and partnerships, going back to the Cold War, which has historically served its interests quite well while rendering cooperation between different US partners less than necessary [20]. As such, these arrangements have had the effect of institutionalizing "US centrality" and as a result, challenge the ASEAN interest towards "multilateralizing and regionalizing US Asia policy" [20].

In this case, the description of ASEAN-centric institutions (ARF, EAS, ADMM) as being the driver of regional politics may prove to be less than accurate; a more plausible reason would be that the United States – in its pursuit of defined objectives – view the regional objectives of the ASEAN community as complementing those that it seeks to pursue within the Asia-Pacific region. As then-US Defense Secretary Robert Gates remarked during the inaugural ASEAN Defense Ministers Meeting with their eight dialogue partners (ADMM Plus) in 2010, "The United States has always exercised our rights and supported the rights of others to transit through, and operate in, international waters. This will not change, nor will our commitment to engage in activities and exercises together with our allies and partners"[36]. On the other hand, ASEAN countries are more likely to view relationship-building/maintaining among each other as fundamentally necessary to regional (and domestic) well-being and as such, perceive "functional cooperation" (with the US, in this case) to serve the achievement of such ends [36]. *In other words, while the US is more likely to define its political objectives in functional (or positional) terms, ASEAN countries are more likely to perceive their objectives as a result of relational outcomes.* Unfortunately, as Emmers and Tan point out (citing the ARF as a case in point), "the formalization of ASEAN's informal diplomacy" has resulted in "the politicization of the very process of decision-making"[37].

All these, note Emmers and Tan, have resulted in distraction from real problem solving, a rigidization of the decision-making process and denied states a commonly agreed process by which to resolve their differences [37]. If this is the case, might it be that the concept of ASEAN centrality suffers from a crisis of legitimization? On the one hand, ASEAN states hope that the informal mechanisms offered by the ASEAN Way would provide them with the political cohesion with which to demonstrate solidarity in matters of big power politics, yet the tendency to formalize these ASEAN-centric processes and institutions have severely hampered the extent and effectiveness of these mechanisms in dealing with increased regional and global challenges.

Unlike its relations with the United States, ASEAN relations with China are less clear-cut and consequently, less predictable. The geographical proximity of China, as well as Beijing's territorial and resource claims have also made the relationship much more testy and nervous at times, particularly over South China Sea claims. As noted by Acharya, China presents the greatest challenge to ASEAN due to its size, economic resources and military strength [38]. Long-term concerns over China's military build-up remain possibly ASEAN's greatest worry. [38] During the 17th ASEAN Regional Forum held in Hanoi, the Chinese Foreign Minister Yang Jiechi, in response to comments made by US Secretary of State Hillary Clinton's towards China's claim of the South China Sea, had reportedly disparaged host Vietnam's socialist credentials before directly telling then Singapore's Foreign Minister, George Yeo, that "China is a big country and other countries are small countries, and that is just a fact"[39]. According to accounts, ASEAN members were "taken aback by the ferocity of Beijing's counterattack"[40]; subsequently, a joint statement made at a U.S.-ASEAN leaders meeting saw a highly watered down version which took into account Chinese sensitivities over the South China Sea.

More than a year on, it would seem that such concerns with Beijing continue to fester. Singapore's Defence Minister, Ng Eng Hen, in a 2012 interview with *The Straits Times*, noted that Singapore's defence relations with China, despite having grown closer in recent years, nonetheless remained "qualitatively different" from its relations with the United States, one that is based on a "longer history and shared perspectives on a range of regional issues." [41] Notwithstanding China's economic influence, there are concerns over Beijing's end-game and whether its intentions are benign or otherwise. The common position often advocated by ASEAN member states is that the economic opportunities presented by China are too important to ignore; however, the fact that most ASEAN countries – with the exception of Myanmar – have no substantial military relationship with China strongly mitigates the extent to which a robust regional architecture can be created between the ASEAN community and China, particularly if issues of defence and national security are not included as part of the overall picture.

According to Acharya, three factors have played a major role in shaping ASEAN's concerns over Chinese power. They are: (I) China's involvement in the Spratly Islands disputes; (II) China's defence modernization programme moving from a people's defence to an offensive power projection capability; and (III) suspicion over an increased "overseas Chinese presence" and its implications for inter-ethnic relations among some ASEAN states [1]. Taken together, these three factors suggest that ASEAN governments continue to view China's foreign policy with some measure of mistrust and suspicion in regards to the stability of the wider region [42]. This is especially so in light of Beijing's territorial and maritime boundary claims in the South China Sea, which has, over the years, generated considerable tensions between China and certain ASEAN countries. This is further exacerbated by the fact that among ASEAN itself, there continues to be a lack of agreement over the issue. Moreover, as Storey notes, the expansion of ASEAN from six to ten members between 1995 and 1999 to include Vietnam, Myanmar, Laos and Cambodia has made it even more challenging for ASEAN to achieve consensus, especially since three of the four countries have close ties with China, and, "without a

direct stake in the dispute, seem unwilling to rock the boat with Beijing”[43]. This was seen vividly during the 45th AMM in Phnom Penh, when the Cambodian chair rejected the Philippines, Vietnam and other ASEAN member states’ attempts to insert specific references to developments in the South China Sea. Indeed, Cambodian Deputy Prime Minister and Foreign Minister Hor Namhong had also reportedly declared during an ASEAN meeting that if ASEAN member states could not go along its wishes, then it would have “no more recourse” to deal with the issue and that there would be “no text at all”.[44] The fact that Chinese Foreign Minister Yang Jiechi was also quoted to have thanked Cambodia for its “staunch support for China on issues relating to China’s core interests”[45] further raises the suspicion that Beijing, on present evidence, has somewhat “picked ASEAN apart”.[46]

On the other hand, a relatively benign view of Beijing holds that chief among the concerns of the Chinese leadership are economic reform and domestic stability, rather than external military expansion [1]. Such a view also maintains that China’s military control over the South China Sea is as yet “insignificant” and that Beijing faces “serious logistical and technological constraints in developing a power projection capability.” It adds that while China may succeed in “denying South China Sea resources to other disputants, it cannot secure “exclusive control over them.”[1]. This benign perception of China is also reinforced by the fact that ASEAN and China also share convergent views on human rights and democracy, and have similar beliefs over the need to resist Western political-cultural influences. Over the years, China’s increased participation in most if not all of Asia’s major multilateral groupings, as well as its enunciation of a ‘New Security Concept’ (embodying principles of peaceful coexistence) have also presented a “kinder, gentler and more nuanced approach to foreign affairs”[47]. As Ba observed with reference to China’s presence in Southeast Asia, “The 1990s ended on a different note than the one on which it began. In particular, ASEAN–China relations experienced a dramatic increase in exchanges involving new economic opportunities, new functional cooperation, a new Chinese foreign policy, new economic initiatives, and changing attitudes on both sides. Indeed, what has taken place is no less than a major sea change in relations”[48].

Seen from this vantage point, it would appear that the rise of China as a major regional power bodes well for ASEAN. Such a view, however, is not widely shared among ASEAN policy-making circles, with some analysts speaking of the likely emergence of a Chinese sphere of influence in Southeast Asia, such as a ‘center-periphery relationship’. [49] As Acharya points out, despite the desire by ASEAN to “cultivate Beijing [as an economic partner]...the core ASEAN countries are unlikely to bandwagon collectively *with* China...at present, ASEAN is not without bargaining power in its dealings with China [for] China needs ASEAN’s acquiescence and cooperation to realize its leadership ambitions in Asia and the world”[1]. More recently, Chinese Vice Foreign Minister Fu Ying professed that relations with ASEAN were of “unquestionable priority” for China and that China would continue to support ASEAN’s “centrality” in East Asian cooperation. Urging ASEAN not to be a bystander or “a tool of major powers”

to cope with the new challenges in the current global political and economic atmosphere, Fu added that “ASEAN should exercise its independent judgment to move this region forward. If ASEAN takes sides, it would lose its relevance”[50].

CONCLUSION

ASEAN CENTRALITY AND THE WAY FORWARD

As the above discussion highlights, ASEAN is not without its own bargaining chips as far as attempts to straddle the interests of both the United States and China are concerned. It is noted that while the ASEAN community would like to cultivate a strong U.S. stake in the region, they prefer not to take “precautionary steps that might inadvertently or prematurely signal hostile intent toward China”. [51] For this reason, the Philippines turned down the Clinton administration proposals to pre-position war materials for regional contingencies, yet continues to welcome joint military exercises and other defense cooperation with the United States.[51] Indeed, by emphasizing the centrality of ASEAN in the course of engaging with the US and China, individual ASEAN states are able to draw upon a wider community of ideational and material resources with which to engage and legitimize their interests and positions vis-à-vis those of the big powers. Indeed, as Acharya observes, even if ASEAN’s great-power suitors are motivated by a competitive economic logic, this is hardly an evil in itself as “free trade and investment...can have pacific consequences, intended and unintended.[52] Furthermore, it also reinforces the role that ASEAN plays in contributing to the regional peace and developmental order. For instance, top governments leaders and academics have cited the political reforms instituted by Myanmar as a result of sustained ASEAN political coercion and engagement.[53]

Nevertheless, it would be risky – even dangerous – to overstate the extent and role which ASEAN plays within the broader regional political community. This is particularly so if ASEAN states – in their proclivity to avoid being drawn into big power rivalries – end up adopting an inward-looking, it-is-all-about-ASEAN mentality” in their global interactions. Paradoxically speaking, ASEAN’s ascension to global prominence came about as a result of ASEAN nations’ willingness to open themselves up to the wider global community of nations. In other words, *ASEAN centrality was made possible because individual ASEAN countries chose to align their fortunes with the rest of the world, and in doing so, brought about the collective success of the ASEAN community.* In light of the increasingly complex and multifaceted nature of global challenges, the tendency and temptation for ASEAN to look inwards and close in on herself will grow. Anxieties over big power relations and the uncertainties of how these interactions will play out could lead ASEAN member states to possibly disengage from global challenges and instead, develop overly parochial and isolationist tendencies. Such an outcome, if it happens, will be unfortunate for ASEAN, and would paralyze the region whose very growth was founded upon its diverse and dynamic relationships its member states have

with the wider world. Likewise, it can be argued that any formulation of an ASEAN security-economic community without the involvement and commitment of the great powers would be an equally unrealistic expectation.[54]

A more circumspect assessment of the future of ASEAN centrality in its dealings with global powers would be to first recognize the limitations of ASEAN's efforts at major power institutionalization.. The fact that "major powers are not of one mind as to how a process should work or what purposes they should primarily serve" also raises the difficulty of recognizing what ASEAN's collective interests are and how to reconcile them with the political objectives of the major powers [20]. Furthermore, the fact that major powers are interacting with one another also "mitigates the effects of [ASEAN-led] institutional processes and practices [20]. In light of America's projected pivot to Asia and the perceived expansion of Chinese power, the author argue *that the interests of ASEAN states would be better served in expanding their relational capacities (whether formally or informally) vis-à-vis other regional and global partners instead of over-emphasizing the centrality of ASEAN*. Indeed, it is argued that current designs for effective multilateralism have not quite worked out as the major powers in the Asia-Pacific have thus far been unwilling to allow multilateral institutions to manage their core security interests [55]. For instance, it has been highlighted that the United States has shifted the EAS' agenda focus to discuss political and security issues in traditional security areas like the South China Sea disputes, de-nuclearization of North Korea and the Six-Party talks, instead of the original EAS agenda which focused on economic cooperation and integration, functional cooperation, and non-security issues [21].

Likewise, the fact that China prefers a bilateral approach to resolving the South China Sea disputes, which it has since identified as a core interest alongside Taiwan, Tibet, Taiwan and Xinjiang [56], also raises the difficulty of obtaining any multilateral consensus among the ASEAN community, let alone for ASEAN centrality to be preserved. As major powers are not likely to acquiesce to a diminution of their interests, a more realistic strategy would be for the ASEAN community to provide "contextualized framing" of the issues it chooses to engage instead of attempting to be the lead "driver" in all matters of regional concern. While the ASEAN community still represents the "best candidate for adjudicating and synthesizing the [great powers'] approaches to regional security order-building", much will ultimately still depend on the great powers' "willingness to cooperate more than compete and on their joint propensity to tolerate initial affronts to their own security policies"[57].

With many of the major powers undergoing leadership changes this year (2012), this is a good opportunity for the ASEAN community to rethink and reformulate its strategy vis-à-vis the rest of the world. This does not necessarily mean a common ASEAN position on every issue needs to be solicited; on the contrary, the greater the plurality and diversity of views, the greater the capacity for ASEAN to intercede and influence matters of regional concerns. This would also require ASEAN to seek the constructive involvement of outside actors and channel their resources for the benefit of the region. As Acharya rightly observes, "ASEAN works best by pooling sovereignty, rather

than diluting it”[58]. All these, however, must not come at the expense of an honest willingness to be “flexibly engaged” – as Surin Pitsuwan, the former ASEAN secretary-general, states.[59] Moving forward, this would mean the articulation of difficult – and politically sensitive – topics that may challenge the ASEAN Way of diplomatic wrangling. Likewise, given the changing global dynamics, what sort of community ASEAN member countries intend to construct for Southeast Asia will also have to be clarified [60]. To what extent a robust ASEAN community can be formed will be a critical test of ASEAN’s readiness – and relevance – as a regional stakeholder.

REFERENCES AND END NOTES

- [1] Acharya, Amitav, *Regionalism and Multilateralism: Essays on Cooperative Security in the Asia-Pacific*, Singapore: Times Academic Press, 2002.
- [2] Desker, Barry, “Foreword”, in Sam Bateman, Jane Chan and Euan Graham, eds., *ASEAN and the Indian Ocean: The Key Maritime Links* (RSIS Policy Paper, 2011) http://www.rsis.edu.sg/publications/policy_papers/RSIS_PolicyPaperASEAN_A4_211011.pdf (Accessed on 9 Mar 2012)
- [3] ASEAN Political and Security Community Blueprint. <http://www.ASEANsec.org/5187-18.pdf> (Accessed on 9 Mar 2012).
- [4] Surin Pitsuwan. Speech made at the 16th ASEAN Economic Ministers meeting. Putrajaya, Malaysia, 1 Mar 2010. <http://www.ASEAN.org/24339.htm> (Accessed on 12 Mar 2012)
- [5] Weatherbee. Donald. E, *International Relations in Southeast Asia: The Struggle for Autonomy*. p. 17, Oxford, UK: Rowman & Littlefield, 2005.
- [6] Edy Prasetyono. ‘Traditional Challenges to States: Intra-ASEAN Conflicts and ASEAN’s Relations with External Powers’ in Hiro Katsumata & See Seng Tan, eds., *People’s ASEAN and Governments’ ASEAN*. RSIS Monograph No. 11. pp. 109-117, Singapore: S. Rajaratnam School of International Studies, 2007.
- [7] Barry Buzan. ‘The Southeast Asia Security Complex’, *Contemporary Southeast Asia* 10, no. 1, June 1988.
- [8] Irwin Loy. ‘Asean Members Fail to Draft South China Sea Statement’. *Voice of America*, 12 July 2012; ‘Severe Dent on ASEAN’s credibility’. *Today*, 14 July 2012.
- [9] Tan Seng Chye. ‘After the Phnom Penh AMM Failure: ASEAN needs to regain cohesion and solidarity’. RSIS Commentaries No. 129/2012 dated 16 July 2012.
- [10] Pia Lee-Brago. ‘Asean should do some soul-searching’. *The Philippine Star*, 15 July 2012.
- [11] President Yudhoyono’s speech at the opening ceremony of the 19th ASEAN summit. <http://www.ASEANsummit.org/news192-speech-his-excellency-dr.-susilo-bambang-yudhoyono--president-of-the-republic-of-indonesia--at-opening->

ceremony-of-the-19th-ASEAN-summit-nusa-dua,-bali,-17-november-2011.html
(Accessed on 14 March 2012).

- [12] Hussain, Zakir. 'PM: East Asia Summit hit good balance'. The Sunday Times. 20 Nov 2011. http://www.pmo.gov.sg/content/pmosite/mediacentre/inthenews/primeminister/2011/November/pm_east_asia_summithitgoodbalance.html, (Accessed on 14 March 2012).
- [13] Emmers, Ralf. 'Introduction', in Ralf Emmers, ed., ASEAN and the Institutionalization of East Asia. p. 1, London: Routledge, 2012.
- [14] Takeshi Yuzawa, 'The Fallacy of Socialization', in Ralf Emmers, p. 75; London, 2012.
- [15] David Martin Jones & Michael L.R. Smith. 'ASEAN's Imitation Community', in See Seng Tan, ed., Regionalism in Asia, Vol 1 p. 312, London: Routledge, 2009.
- [16] Severino, Rodolfo, C. The ASEAN Regional Forum. pp. 16-17, Singapore: Institute of Southeast Asian Studies, 2009.
- [17] See Seng Tan, ed., Regionalism in Asia, Vol 1 pp. 283-328, London: Routledge, 2009.
- [18] Herman Joseph S. Kraft. 'Driving East Asian regionalism: The reconstruction of ASEAN's identity', in Ralf Emmers, ed., ASEAN and the Institutionalization of East Asia. p. 63, London: Routledge, 2012.
- [19] Koh, T. 'The United States and Southeast Asia', in American's Role in Asia: Asian and American views pp. 35-54, San Francisco, CA: The Asia Foundation, 2008.
- [20] Ba, Alice. 'ASEAN centrality imperiled?' in Ralf Emmers, ed., ASEAN and the Institutionalization of East Asia. pp. 122- 124, London: Routledge, 2012.
- [21] Tan Seng Chye. 'Changing Global Landscape and Enhanced US Engagement with Asia – Challenges and Emerging Trends, Asia-Pacific Review, 19:1, pp. 108-129, 2012.
- [22] Bates Gill, Michael Green, Kiyoto Tsuji and William Watts. Strategic Views on Asian Regionalism: Survey results and Analysis, p. vi, Washington, DC: CSIS, Feb 2009.
- [23] Acharya, Amitav. Constructing a Security Community in Southeast Asia: ASEAN and the problem of regional order, 2nd ed, pp. 84-85, NY: Routledge, 2009.
- [24] Tang Siew Mun. 'No Community Sans Concert?' in Tan See Seng, ed., Do Institutions Matter? Regional Institutions and Regionalism in East Asia. RSIS Monograph No. 13. pp. 64-65, Singapore: Institute of Defence and Strategic Studies, 2008.
- [25] Ruggie, John Gerard, ed., Multilateralism Matters: The Theory and Praxis of an Institutional Form p. 6, NY: Columbia University Press, 1993.

- [26] Evelyn Goh. 'Institutions and the great power bargain in East Asia: ASEAN's limited brokerage role', in Ralf Emmers, ed., *ASEAN and the Institutionalization of East Asia*. p. 113, London: Routledge, 2012.
- [27] James A. Caporaso, 'International Relations Theory and Multilateralism: The Search for Foundations', in John Gerard Ruggie, ed., *Multilateralism Matters: The Theory and Praxis of an Institutional Form* p. 53, NY: Columbia University Press, 1993.
- [28] Rodolfo Severino. 'A Sense of Community for Southeast Asia' in Hiro Katsumata & See Seng Tan, eds., *People's ASEAN and Governments' ASEAN*. RSIS Monograph No. 11. pp. 17-25, Singapore: S. Rajaratnam School of International Studies, 2007.
- [29] Abdul Khalik & Sita Winiawati Dewi, 'Looking beyond 2015, RI wants a common platform for ASEAN', *Jakarta Post*, 5 May 2011; 'Forty Years of ASEAN: Can the EU be a model for Asia?' Speech made by Ong Keng Yong, Konrad Adenauer Foundation, Berlin, 16 July 2007.
- [30] Remarks by Minister for Defence Dr Ng Eng Hen, at the Center for a New American Security. http://www.mindef.gov.sg/content/imindef/news_and_events/nr/2012/apr/05apr12_nr/05apr12_speech.print.html?Status=1 (Accessed on Apr 26, 2012).
- [31] New U.S. Base in RI's Backyard," *The Jakarta Post*, 17 November, 2011.
- [32] Juwono Sudarsono, 'Rebalancing East Asia Strategic Engagement,' *Strategic Review* 1:2 p.35, November-December 2011.
- [33] Douglas H. Paal. 'China and the East Asian Security Environment: Complementarity and Competition.' in Ezra F. Vogel. ed., *Living with China: U.S. – China Relations in the Twenty-first Century* p.111, NY: W.W. Norton & Co, 1997.
- [34] Jessica Brown. 'Southeast Asia's American Embrace'. *Foreign Policy Analysis*, 7:8, 29 Mar 2011.
- [35] Mastanduno, Michael. 'US regional strategies and global commitments.' in William Tow. ed., *Security Politics in the Asia-Pacific: A Regional-Global nexus?* p.83, Cambridge University Press, 2009.
- [36] 'U.S. Secretary of Defense Robert Gates remarks at ASEAN Defense Ministers Meeting Plus 9 in Hanoi', 12 October 2010.
- [37] Emmers, R. & Tan, S. 'The ASEAN Regional Forum and preventive diplomacy: a failure in practice', RSIS Working Paper no. 189, Singapore: RSIS, 2009.
- [38] Acharya, Amitav. *Constructing a Security Community in Southeast Asia: ASEAN and the problem of regional order*, 2nd ed. pp. 224-225, NY: Routledge, 2009.
- [39] John Pomfret, 'U.S. Takes a Tougher Line with China', *Washington Post*, 30 July 2010.
- [40] Barry Wain, 'Asean Caught in a Tight Spot', *The Straits Times*, 16 Sep 2010.
- [41] Chua Chin Hon. 'United States closest defence partner of Singapore'. *The Straits Times*. Apr 7, 2012.

- [42] Denny Roy. 'Southeast Asia and China: Balancing or Bandwagoning', *Contemporary of Southeast Asia* 27, no. 2 p. 308, 2005.
- [43] Ian Storey, 'ASEAN-China relations'. in Ralf Emmers, ed., *ASEAN and the Institutionalization of East Asia*. p. 148, London: Routledge, 2012.
- [44] Ho, Benjamin. 'Cambodia should repair Asean fissures and plan for credible summit'. *The Straits Times*. 14 August 2012.
- [45] 'Cambodian PM meets Chinese FM on bilateral ties'. *Xinhua News*, 10 July 2012.
- [46] Ho, Benjamin & Supriyanto, Ristian Atriandi. 'ASEAN buffeted by choppy China waters'. *The Global Times*. 3 August 2012.
- [47] Hugh White and Brendan Taylor. 'A rising China and American perturbations.' in William Tow. ed., *Security Politics in the Asia-Pacific: A Regional-Global nexus?* p.94, Cambridge University Press, 2009.
- [48] Alice Ba. 'Southeast Asia and China', in Evelyn Goh, ed., *Between and Between: Southeast Asian Strategic Relations with the US and China*, IDSS Monograph No. 7, pp. 93-108, Singapore: Institute of Defence and Strategic Studies, 2005.
- [49] S.D. Muni, *China's Strategic Engagement with the New ASEAN*. IDSS Monograph No. 2. pp. 21, 132, Singapore: Institute of Defence and Strategic Studies, 2002.
- [50] Suthichai Yoon. 'Chinese Minister: ASEAN can shape power play in E.Asia', *The Nation*, 26 Jun 2012.
- [51] Douglas H. Paal. 'China and the East Asian Security Environment: Complementarity and Competition.' in Ezra F. Vogel. ed., *Living with China: U.S. – China Relations in the Twenty-first Century* pp. 98-99, NY: W.W. Norton & Co, 1997.
- [52] Amitav Acharya. 'An opportunity not to be squandered', *The Straits Times*, November 12, 2002.
- [53] Najib Razak. 'The Asean Way won Burma Over', *Wall Street Journal*, Apr 3, 2012; Roger Mitton, 'Nargis was a Turning Point', *The Myanmar Times*, Vol 31, No. 614; Balbir B. Bhasin, 'ASEAN shows the way as Myanmar opens', *Asia Times Online*, May 18, 2012
- [54] Tang Siew Mun. 'No Community Sans Concert?' in Tan See Seng, ed., *Do Institutions Matter? Regional Institutions and Regionalism in East Asia*. p. 65, RSIS Monograph No. 13, 2008.
- [55] Cook, M., Heinrich, R., Medcalf, R. and Shearer, A. *Power and Choice: Asian security futures* p. 78, Sydney: Lowy Institute for International Policy, 2010.
- [56] Edward Wong, 'Chinese Military Seems to Extend Its Naval Power', *New York Times*, 23 Apr 2010.
- [57] William T. Tow. 'Great powers and multilateralism.' in Ralf Emmers, ed., *ASEAN and the Institutionalization of East Asia*. pp. 165-166, London: Routledge, 2012.

- [58] Amitav Acharya. 'Strengthening ASEAN as a Security Community', The Jakarta Post, June 14, 2003.
- [59] Surin Pitsuwan. 'The Return of Flexible Engagement'. In Amitav Acharya, *Asia Rising: Who is Leading?* pp. 131-134, Singapore: World Scientific Publishing, 2008.
- [60] See Seng Tan. 'Southeast Asian Perspectives on the Regional Security Order: Southeast Asia in Search of Security Community: Can ASEAN Go Beyond Crisis, Consequentiality and Conceptual Convenience. Paper presented by 26th Asia-Pacific Roundtable, Kuala Lumpur, Malaysia. 28-30 May 2012,

THE BALANCE OF LEADERSHIP CHANGE AND CHALLENGES BETWEEN CIVIL DEMOCRACIES AND MILITARY RULE IN PAKISTAN

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ABSTRACT

Pakistan's history has been characterized by periods of military rule and political instability. Seven different prime ministers and eight different cabinets took oaths of office during this disorderly period, resulting in the ascendancy of bureaucracy in the decision making, with the tacit support of the Army. The challenges of Pakistan's politics have been shaped by the dynamics of civilian-military relations. This study looked into the history of civil military relationship in Pakistan and dictates the challenges on the balance of leadership between the military leadership and the civilian rule. This study also aims to establish which faction out of the two has more public support and will ride into the consideration of Pakistan's political future in which the current newly elected civilian leadership will have to reckon with in order to ensure the future viability of Pakistan as an independent sovereign state. The study shows that although the civilian government enjoys considerable autonomy for political and economic management and exercise of state authority, it has to consider the military's sensibilities. The proven escalated economic performance and consistent high growth in GDP during the military rule has provided a major challenge for the current democratic civilian rule to further enhance the Pakistan economic development for the masses that are more interested in a stable and peaceful country and doesn't care which faction rules Pakistan. The challenges for the new democratic leadership after the successful 2013 election from an elected government to another elected government include political instability, widespread corruption and lack of law enforcement which hamper private investment and foreign aid.

Keywords: Leadership, civilian rule, military leadership, democracy, economic development

INTRODUCTION

Throughout history, numerous countries have experienced their military's involvement in the governmental system. Some have evolved into civilian governments whereas others have experienced a vicious cycle of regular military intrusion. Military organizations are shaped by both functional and societal imperatives. Functional imperatives are special characteristics of military organizations driven by their need to be capable of defending the state against external threats, and societal imperatives arise from "the social forces, ideologies, and institutions dominant within society" [1]. Pakistan is

one country that has witnessed a military presence in its governmental system since its birth. Pakistan's history has been characterized by periods of military rule and political instability. In its nearly sixty-two years since independence, the Pakistani military has had either direct or indirect control of the government. It has had a tremendous influence on the direction that Pakistan has taken. The military played a pivotal role in the independence of Pakistan and has continued its political role ever since. While the military's role permeates throughout the political system, there have been periods of challenges to this role over the years. The military-led government stated its intention to restructure the political, economic and electoral systems [2]. The current instability witnessed today in Pakistan is due to an unbalanced relationship between the civil system and the military establishment. Civilian democracy has been very short lived every single time and the military had to intervene and takeover the reigns due to historical, socio-political and economic reasons than any inherent dislike of democracy in general [3]. What is greatly lacking is a civil-military relationship that allows for the civil institutions to flourish and the military to stand in the background of this civil environment. This issue of military compliance is also central to Michael Desch's *Civilian Control of the Military* [4]. He argues that "the best indicator of the state of civilian control is who prevails when civilian and military preferences diverge. If the military does, there is a problem; if the civilians do, there is not" [5]. Governance in Pakistan is a delicate balancing act between the military chiefs and the elected civilian government [1]. It is a power-sharing arrangement whereby the military has important influence over foreign, security and key domestic issues, and mediates confrontations among feuding political leaders, parties or state institutions if such confrontations are deemed threatening to political order and stability [6].

This study will look into the military leadership and the civilian democracy in Pakistan and dictate the challenges on the balance of leadership between the military and the civilian rule whilst dictating the people's choice of leadership. This study also provides a comprehensive account of the power struggle between the military and civil political groups, and also aims to establish which faction out of the two has more public support. This will ride into the consideration of Pakistan's political future and the economic challenges which the current civilian leadership will have to reckon with in order to ensure the future viability of Pakistan as an independent sovereign state.

CIVIL MILITARY RELATIONSHIP CONCEPTS

Throughout history, numerous countries have experienced their military's involvement in the governmental system. Some have evolved into civilian governments whereas others have experienced a vicious cycle of regular military intrusion. Formulation of a structural theory of civil-military relations that makes predictions about the strength of civilian control based on the degree of internal and external threat faced by a given society [5]. It is important to start by acknowledging that the two classic works of American civil-military relations, Samuel Huntington's *The Soldier and the State*

and Morris Janowitz's *The Professional Soldier* address both military effectiveness and civilian control. Civil-military relations are an explanatory variable, and that their nature has an important impact on military effectiveness [1]. Janowitz also discusses military effectiveness but it is not clear in his discussion that civil-military relations serves as an explanatory variable for his assessment of what would constitute an effective military [7]. The basic methodological assumptions is that it is possible to define an equilibrium called "objective civilian control" that ensures civilian control and maximizes security at the same time [1]. He argues that "In practice, officer ship is strongest and most effective when it most closely approaches the professional ideal; it is weakest and most defective when it falls short of that ideal" [8]. An officer corps is professional to the extent it exhibits the qualities of expertise, responsibility, and corporateness. In addition to enhancing effectiveness, these traits also enhance civilian control because a professional military seeks to distance itself from politics [1].

Military organizations are shaped by both functional and societal imperatives. Functional imperatives are special characteristics of military organizations driven by their need to be capable of defending the state against external threats, and societal imperatives arise from "the social forces, ideologies, and institutions dominant within society" [9]. When attempting to understand the characteristics of a given country's military institutions, thinking about how they may be affected by these two imperatives is helpful. To the extent that a country's military does not share the attributes of the society as a whole, a useful starting proposition is that these differences are due to what the military believes to be required for success in war. However, it is not true that there is a set of universally valid functional imperatives and those societal imperatives merely weaken military organizations (or has a neutral impact). This is clearly what Huntington is implying when he argues that "the peculiar skill of the military officer is universal in the sense that its essence is not affected by changes in time or location" [1].

Both civilian control and the military's ability to fulfill its responsibilities in meeting the security needs of the state is much needed [10]. However in contrast to Huntington, Janowitz argues that relying on the creation of an apolitical military in order to ensure civilian control is an unrealistic approach. However even in a comparative context the danger of focusing on coups is that it may cause analysts to miss other important ways in which a military exercises influence over political leaders [11]. In other words, such a focus may cause analysts to understate problems with civilian control. Though a coup constitutes perhaps the strongest dysfunction possible, its likelihood is not the only significant issue or even a significant issue in some civil-military relationships. For Feaver, shirking occurs when the military either fails to diligently and skillfully do what the civilian asks, or does what the civilian asks in a manner which undercuts the civilian's position of greater authority. In other words, shirking occurs when military leaders fail to respect either the functional or the relational goals of their civilian leaders [12].

TRANSITION OF POLITICAL POWERS IN CIVILIAN DEMOCRACY AND MILITARY LEADERSHIP IN PAKISTAN

Many countries of the world have gone through monarchy, military rule and democracy; but the case of Pakistan is unique in that there is a constant power struggle between the military and political leaderships and the presidency has changed hands between the two factions many times. In terms of number of years, the military has dominated most of Pakistan's years since 1947, the year when the country was established. Pakistan has been the center of global political attention in the last decade due to its geo-strategic location and inevitable involvement in the war on terror. The reason why it is important to find what the people of Pakistan want; lies in the fact that in any given region, no democracy or any other type of leadership can survive in the long run if the people of the region are against it [13].

A politically and economically stable Pakistan would be beneficial for the law and order situation of the South Asian region, and would also help greatly in the global war on terror [14]. In order to bring stability, one of the two existing factions, military or political, has to have power and has to be accountable to its people and to the world regarding the responsibilities of leadership. To an observer the current democracy in Pakistan would appear to be in its initial stages after a long military regime, but to a student of history, it would appear as a rehash of what has happened many a times in Pakistan's history, the power changes hands between military and political factions and both blame each other for the country's increasing debt, weakening currency and worsening law and order situation [15].

Pakistan has experimented with half a dozen constitutions within the first 25 years of its existence. Frequent coups and military rules ensured that neither the constitution nor the other institutions of governance were allowed to evolve [16]. The ability of the civilian government to shape the policies and actions of the still-powerful Pakistani military remains very much in doubt. The first decade was crucial to shaping Pakistan's destiny and was marked by drift and chaos.

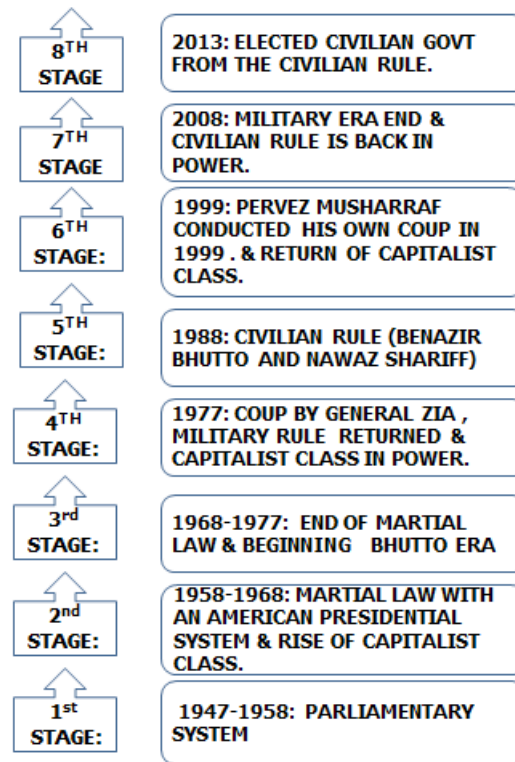


Figure 1: Stages of Military and Civilian Leadership Power In Pakistan

Seven different prime ministers and eight different cabinets took oaths of office during this disorderly period, resulting in the superiority of bureaucracy in the decision making, with the tacit support of the Army. Pakistan's political system can best be understood as a pendulum between civilian rule and military rule and broken into eight stages as mentioned by [17] as shown in Figure 1.

- The first stage was from 1947-1958 and was characterized by the Parliamentary system with the dominant class interest being the feudal land owners.
- The second stage was from 1958-1968. This was martial law with an American presidential system and saw the rise of the capitalist class.
- The third stage from 1968-1977 saw the end of Martial law (with a presidential and parliamentary system) and the beginning of the Bhutto era and the return of feudalism.
- With the coup by General Zia in 1977, military rule returned and the capitalist class was back in power. The fourth stage had begun and ended with his assassination in 1988.
- The fifth stage was characterized by civilian rule (Benazir Bhutto and Nawaz Shariff) until Pervez Musharraf conducted his own coup in 1999 and began the sixth stage. With the events of 9/11, globalization and the rise of the internet, this phase has seen the return of the capitalist class.

- In 2008 the seventh stage of Pakistan's politics appears to have begun. The military era is about to end and the civilians is back in power.
- In the 2013 election for the first time in Pakistan's volatile 66-year-old history there was a transition from an elected government that completed its term to another elected civilian government.

But why has Pakistan been dominated by the poles of military and civilian power and why the pendulum between these two poles? Noted political scientist and human rights advocate, Dr. C. Inayatullah in his classic book *State and Democracy in Pakistan* argues that one creates the conditions for the other [18]. Military became more independent and powerful controlling national politics, its top brass developed an ideology and a set of perceptions to justify their political role. As guardians of the nation, they believe they have the right to rule the nation. Once the civilians come into power, feeling threatened by the military, they attempt to control them. As well, with their feudal roots, a pattern of patronage and corruption sets in. The army has repeatedly shown that it will not bow to civilians on national security, refusing a government order, for instance, to play the top spy agency, the Inter-Services Intelligence, under government control [19]. Paul Collier also finds that the poorest, most under developed states with low incomes are the most susceptible to political instability and coups [20].

In his work with Anke Hoeffler, Collier argues that this is because "low income makes it more likely that plots turn into attempts and that attempts turn into successful coups" [21]. More importantly, Collier and Hoeffler argue that a coup *trap* exists for these poor states. According to this argument, low income and poor economic performance increase the risk of coups d'état, which keep income and grow that low (or negative) rates and therefore increase the chances of future coups d'état [22]. Pakistan is a developing country that faces problems with high levels of poverty and illiteracy. Since its independence, Pakistan has been a victim of an all too powerful military. The military has played a role in the political system since its inception in 1947. One of the main issues at play in Pakistan is the lack of civil supremacy. For most of its existence, Pakistan has been under direct and indirect rule of the military experiencing four series of coup d'état by the Army from Ayub Khan to General Pervez Musharaff.

The military has rule Pakistan for most of the country's existence and they have shaped and determined the internal politics, security and economic developments whilst at the same time negotiated its role in the region weakening the civilian leadership to be mere followers. The military has political influence over foreign, security and key domestic issues including mediating confrontations among the feuding political leaders, parties or state institutions which created political instability [23]. It displaced a lawfully elected civilian government which had come into power on the strength of an overwhelming vote by the Pakistani masses. The military has seldom had to face opposition in coming into power. In fact, it has been invited in by political parties and sections of the public at large. Coups have been walk-over's. With compromise rather than confrontation defining Pakistan's political culture and tradition, and with willing partners to be found by different dispensations of ideology packaged by military generals,

it is not surprising that the military has ruled Pakistan for 32 of its 60 years. Perhaps it is not the military which is to blame for Pakistan's repeated military governments, but those of us who have invited it in and let it come and stay in power. The problem with attempting to explain coups or coup pre conditions or any other political phenomenon in the developing world is that there are often an almost infinite number of causal factors and variables in play [24]. Some explanatory or necessary conditions with the list of the common factors and variables used to specifically explain the occurrence of coups in Pakistan is put forth by authors to explain Pakistan's coups are listed in Table 1 [25].

Table 1: Prominent Theories of Pakistani Coups d'Etat (Source from Amina Ibrahim, 2009)

Theory/Explanation	Source
Benevolent modernization	(Huntington 2006, 203)
Civil society penetration	(Hussain 2003a, 28)(Kukreja2003, 72)
Combat civilian corruption	(Arif2001, 342) (Ferguson1987, 44)
Communist ideology	(Zaheer1998, 29)(Jalal1990, 119)
Counter-revolution against proletariat	(Ali2000, 10)
Ethnicity	(Gregory1981, 65) (Cohen1986, 316)
External in security	(Wilcox 1972,35)
Foreign policy	(Zaheer1998, 28)
Ideology	(Cohen 1984, 105)(Burki1991b, 7)
Institutional interests	(Aziz2008, 59)
Islamic sub culture in military	(Cohen 1986, 319)
Loss of government legitimacy	(Arif2001, 342)(Kapur1991, 128)
Military was dishonoured	(BennetJones2002, 34)
Maintenance of power	(Kukreja2003, 33)
Path dependency	(Aziz2008, 59)
Personal power	(Kamal2001, 21)
Politicization of officers	(Hussain 2003b, 18)
Stabilize economic and political chaos	(Wilcox 1963,210)
Undermined autonomy	(Kukreja2003, 37)
Underperforming government	(Zaheer1998, 29)
Unviable political mechanisms	(Kukreja2003, viii)

Pakistan succession of military and civilian rule has emphasized on Pitirim Sorokin's theory which states that events and stages of society and history are generally repeating themselves in cycles [26]. Such a theory does not necessarily imply there cannot be any social progress. Following this theory of social change each system overreaches, becomes more corrupt, focuses on its own survival or makes long term decisions that may prove unpopular in domestic politics (peace in Kashmir, dismantling of extremist Islam), and then the other group comes in. Most commonly, the leader of the party or coalition with the most votes becomes the Prime Minister. This is related to the issue of military

compliance which is central to Michael Desch's book "*Civilian Control of the Military*" [5]. Desch Theory focuses on civilian control of the military. He says that civilian control is easiest when threats are high and mostly international, hardest when they are primarily domestic. When neither kind predominates, the story is mixed and other factors such as military doctrine may strongly influence civilian control of the military.

CIVILIAN DEMOCRACY AND MILITARY LEADERSHIP IN PAKISTAN

The position of president in Pakistan which is the head of state has traditionally been one of a figurehead, with actual powers lying with the Prime Minister. However, at various times in history, often related with military coups and the subsequent return of civilian governments, changes in the Constitution have altered the powers and privileges associated with the office of the president. In 1986 the power-hungry Zia ul Haq, the sixth President of Pakistan, brought in the eighth amendment to the constitution. It allows the president to hire or fire prime ministers, governors of provinces, Chiefs of the Armed Forces, judges of the Supreme Court. The current constitution gives the President reserved powers subject to Supreme Court approval or veto to dissolve the National Assembly, triggering new elections, and thereby to dismiss the Prime Minister. The President also chairs the National Security Council and appoints the heads of the Army, Navy and Air Force. Martial law has been declared three times in Pakistan.

The Pakistani military has played an influential role in mainstream politics throughout Pakistan's history, with military presidents ruling from 1958 to, 1977 to 1988 and from 1999 to 2008. Muhammad Ayub Khan was the first military ruler of Pakistan, serving as the President of Pakistan. As a result of his having control of the Pakistan Army, Ayub deposed his mentor President Iskander Mirza in a bloodless military coup triggering a succession of military takeover in Pakistan history. Ironically it has been the history of Pakistan that Pakistani Army Chiefs have never relinquished power voluntarily. They have been pushed out of power by another Pakistani General or assassination engineered from within the ranks of Pakistan's Armed Forces. The military-led government stated its intention to restructure the political, economic and electoral systems. General Musharraf is the fourth in a line of army chiefs who seized power on essentially the same pretext, getting rid of dishonest politicians, saving the economy from bankruptcy, and preserving the security and integrity of the country.

A weak economy has a major positive impact on the probability of a coup d'état with low income and poor economic performances increases the risk of further coup d'état, which keep income and growth at low rates and therefore increase the chances of future [24]. Pakistan is the typical example of this situation in which the military leadership hopes to change the situation as they felt the current civilian government is not pushing the economic growth and the rampant disturbances by external and internal threats. In other words, the risk of the military launching a coup in Pakistan is high if the military perceives a threat to its institutional interests, a threat to the nation's external security or domestic integrity or perceives the civilian government to be illegitimate, encroaching

on military prerogatives or governing poorly [25]. In the late 1990s, the government of Nawaz Sharif improved the provision of key services to the population by bringing in the Army to help run everything from education to the distribution of water and power. So even before the coup of 1999 in which General Pervez Musharraf overthrew Nawaz Sharif, the Army had taken over large parts of the state by invitation. The provocation for the Pakistan Army's military coup was that the dismissal of General Musharraf as Pakistan Army Chief, the second in a row by the Nawaz Sharif Government. Since Musharraf stepped down in August 2008, the high command of the Army under General Ashfaq Kayani (Chief of the Army Staff) has repeatedly stated its desire to keep out of politics and government. As developed by Peter Feaver [11], the civil-military "problematic" is the challenge of reconciling "a military strong enough to do anything the civilians ask them to do with a military subordinate enough to do only what civilians authorize them to do" [12]. The generals have also been well aware how a long period in government makes any ruler in Pakistan unpopular, because for the reasons set out above, no government, civilian or military, can ever give the population most of what it wants or needs. Pakistan gives a picture of a nation far more internally divided than it was under civilian rule [26].

The military governments which took power promising to sweep away the political elites and their corruption also found themselves governing through them, partly because no military regime has been strong enough to govern for long without parliament. Pakistan's only effective modern institution, because of the repeated failures of Pakistan's civilian governments, because of the security threats that Pakistan faces, and because of the ambitions of the generals, the Army is repeatedly drawn into the business of running other parts of the state. In what could be characterized as different civil-military dynamics, Kier [27] argues that the extent to which civilian policy makers agree about the domestic role of the military will shape whether or not international considerations will drive their military policy [27]. Even when the Army is not actually running the state as a whole, it is often involved in matters far beyond its constitutional mandate of defending the country. From the past military and civilian autonomy in Pakistan there is a strong possibility that military rule will prevail in the future as mentioned in Pitirim Sorokin's [28] theory about cycles of leadership in Pakistan. The masses of Pakistan need the military as the internal threats of terrorism particularly al Qaeda and Taliban fighters alongside the border conflict with India at Kashmir. The Pakistan Army has always been associated with the thrust force in keeping the mainstream security in close governance. The masses will look into the military if the current civilian rule moves into the shadows of their former leaders in corruption, tightening the feudal family clan and other related activities which will hamper future foreign investors to enhance the current economic situation [25]. The military's primary and official role is to serve as the protector of Pakistan's national and sovereignty. At present Pakistan Armed Forces are the final political authority and the guardian of its own economic interests. A governing civilian regime must work to establish an unquestioned dominance over the Armed Forces and therefore reduce the political and economic power [24]. The generals have also been well aware how a long period in government makes any ruler in Pakistan unpopular, because for the reasons set out above, no government, civilian or military, can ever give the

population most of what it wants or needs. The overall involvement of Pakistan's military in the ruling of this state is due to the masses requirement as the civilian rule has been infected with corruption, autocracy and mismanagement [29]. Unfortunately the military rule has also been plagued with the same disease and the end of Musharraf's era will hopefully see the civilian power under President Nawaz Shariff bring peace and harmony between both parties for the future of Pakistan's people [30].

ECONOMIC PERFORMANCE DURING THE DEMOCRATIC CIVILIAN RULE AND MILITARY LEADERSHIP

At the defense leadership level, Pakistani civil-military relations are shaped by several institutional and constitutional features, which have been highlighted by political practice through the years. The Chief of Army Staff, rather than the Defense Minister or the Chairman of the Joint Chiefs of Staff Committee (JCSC), is the most powerful position in the defense arena [31]. This is in large part a reflection of the disproportionate size, seniority and prestige of the Army among the three services [32]. The role of the military also changed in the Zia era compared to when it was first in power under General Ayub in the 1960s. Earlier, the military had played primarily an administrative role, but under Zia it became more and more visible in the economic sector as well [14]. Many lucrative positions in the huge public sector were made available to retired and serving military personnel and it became far easier for private companies to curry favour and make economic progress if they had close ties with members of the military establishment. From the Zia period right up to today, the personal wealth of a very large number of military personnel has grown in a way that could not have originated from their official salaries. For instance the National Logistics Cell is the country's biggest public sector transport organization based on a hybrid civil-military management but its main four divisions are headed by active-duty Brigadier Generals and its operations are Army managed [33]. Hundreds of army personnel have posts in civilian institutions whereby civilian officials have long complained about military officers taking up senior posts in the civil service, universities and ministries. Many critics have questioned about the commitment of the Pakistan Army which should be focus into their core business of national security rather than involving in business opportunities whereby the rate of corruption seems inevitable.

Pakistani economy grew at a fairly impressive rate of 6 percent per year through the first four decades of the nation's existence. In spite of rapid population growth during this period, per capita incomes doubled, inflation remained low and poverty declined from 46% down to 18% by late 1980s, according to eminent Pakistani economist [34]. This healthy economic performance was maintained through several wars and successive civilian and military governments in 1950s, 60s, 70s and 80s until the decade of 1990s, now appropriately remembered as the lost decade. Figure 2 [35] shows Pakistan's population socio economic status showing the lower middle class and desperately poor at the highest at 65 million people respectively.

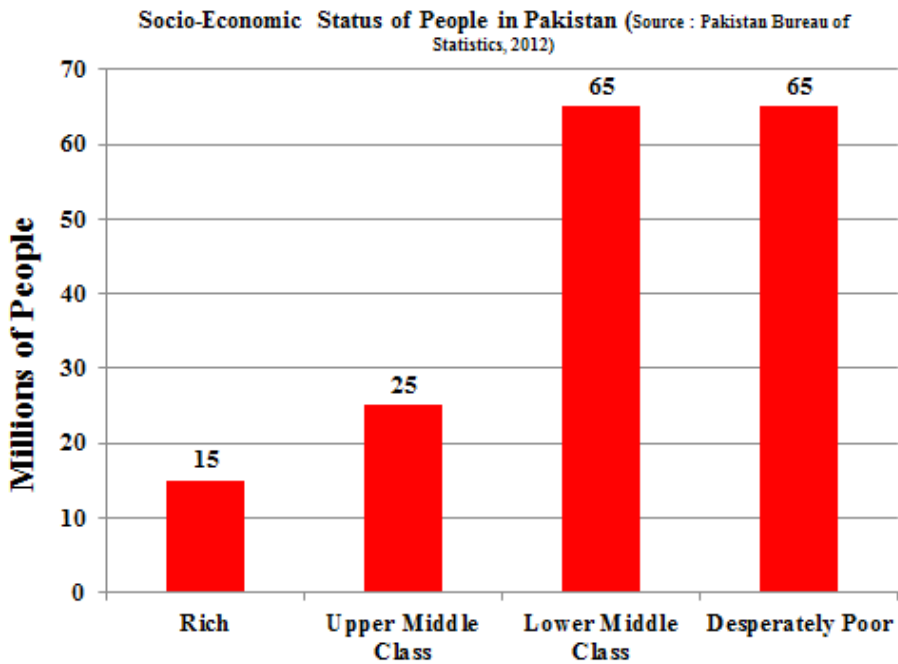


Figure 2: Socio Economic Status of Pakistan (Source: Pakistan Bureau of Statistics, 2012)

The Gross Domestic Product (GDP) in Pakistan expanded 3.59 % in the fiscal year 2012-13 from the previous year. GDP Annual Growth Rate in Pakistan is reported by the Pakistan Bureau of Statistics (2012). Pakistan GDP Growth Rate averaged 4.94 % from 1952 until 2013, reaching an all-time high of 10.22% in June of 1954 and a record low of -1.80 % in June of 1952 as shown in Figure 3 [36].



Figure 3: Pakistan GDP Growth Rate from 2004 and Expected GDP until 2014 (Source: Pakistan Federal Bureau of Statistics (2012))

Pakistan is one of the poorest and least developed countries in Asia. Pakistan has a growing semi-industrialized economy that relies on manufacturing, agriculture and remittances. Although since 2005 the GDP has been growing an average 5 % a year, it is not enough to keep up with fast population growth. To make things even worst, political instability, widespread corruption and lack of law enforcement hamper private investment and foreign aid. The question of the effectiveness of a democratic system or a military rule in Pakistan has raised its head once again. In terms of macroeconomic performance, the country has fared considerably better during military rule. Economic growth during military regimes averaged 6.1 per cent compared to four per cent during civilian regimes.

Just to comprehend the quantum of this seemingly small difference, the flood of 2010 that affected two-thirds of the country's districts, is estimated to have affected GDP growth by two percentage points. Although all three sectors of the economy agriculture, industry and services performed better during military regimes, the industrial sector has been the biggest beneficiary of the military muscle and has recorded twice as much growth compared to that achieved under civilian rule. Similarly, the current account balance has historically been healthier during military regimes [37]. The effect of the stronger macroeconomic performance during military regimes did, in fact, translate into something more meaningful for ordinary citizens. The average level of inflation during civilian rule has been almost double that under military rule. However, the percentage of population living below the poverty line did not differ significantly.

Pakistan's economy has experienced decades of boom and bust in a set pattern. If we divide Pakistan's political history into periods of military rule and democratic rule, we clearly see that the country invariably enjoyed economic boom during the so-called military regimes. A comparison of economic GDP for 60 years between the democratic rule and military leadership in Figure 4 [35] show the military periods of rule have a higher average GDP compared to their civilian counterparts. The bust pattern invariably pertains to the period when Pakistan was ruled by democratic forces. However, the economy, even during the military rule was run by civilian economists. The military rulers appointed the best and internationally acknowledged economic wizards to manage the economy.

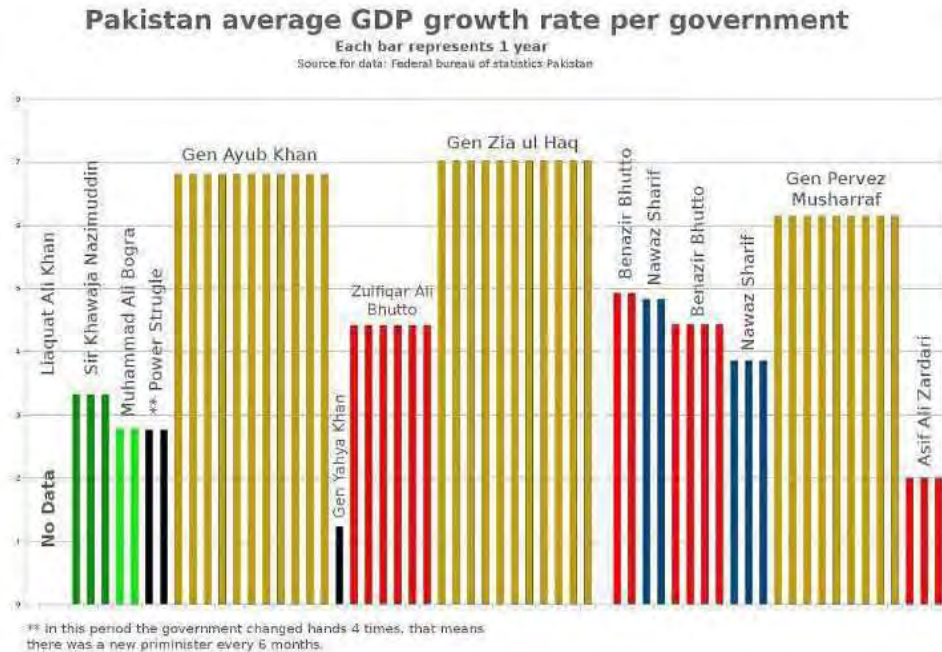


Figure 4: Average Pakistan GDP Growth During Military and Civilian Rule (Source: Pakistan Federal Bureau of Statistics (2012))

CURRENT CHALLENGES IN THE DEMOCRATIC LEADERSHIP

Since its creation in 1947, Pakistan has been ruled by the military for the majority of its existence. Civilian politics in Pakistan in the last few decades has been tarnished by corruption, inefficiency and confrontations between various institutions. Alternating periods of civilian and military rule have not helped to establish stability. Even now, with a civilian government, the military is a major player, retaining apparent veto power over the nation's foreign and defense policies as well as control of its nuclear weapons. The military is assisted by Pakistan's civilian bureaucracy, particularly its intelligence and security forces. For decades, the military had been indisputably the most powerful force in the country. It was far more than an institution that could defend the country. The armed forces interfered with politics and had installed the country's leader for half of Pakistan's history. They controlled large areas of the economy influenced most important decisions made in the country. In addition, the current government has decided that only it and the opposition have a say in the creation of any transition government that has to be created under the constitution if a government collapses prior to an election. The military, which until now has had a say on this issue, no longer does.

Pakistan has just concluded its general elections in 2013, a historic event because this marks the first transition from an elected government that completed its term to another elected government. This is the first time in Pakistan's volatile 66-year-old history a democratic dispensation will replace another. A two time Prime Minister has been voted

in for a third tenure with a considerable majority. The Peoples Party that led the last coalition government remains in the game but with a vastly reduced presence with most of its leaders voted out on the basis of their five year performance. The overall elections 2013 indicated a political maturity that augers well for sustainable democracy in Pakistan. The victory by Nawaz Sharif's Pakistan Muslim League-Nawaz Party (PML-N) is still a genuine win. The success of the media's role in bringing forth Pakistanis to vote was shown through the over-60 per cent reported turn out, rising from a measly 44 per cent in 2008. Pakistan's elections this time were held in the backdrop of a failing economy, debilitating power cuts, widespread corruption at the highest levels, militancy within, and the unpopular partnership with the United States over the 'war on terrorism' [30]. The election results show that voters were clearly fed up with the PPP's corruption and poor economic management. The country has suffered from serious electricity cuts and an anemic economy. It is burdened by a rapid population growth rate, fuelled by poor levels of general and especially female literacy. Pakistan's regional and security relationships are also challenging. Sharif campaigned on the basis of lessening Pakistani dependence on the United States. Sharif may well temper his supposed resentment to the United States. He will likely be encouraged to do so by the Pakistani military. He has no love for the military and was ousted in 1999 by then Chief of Staff Pervez Musharraf and sent in to exile [38]. But he will have little choice but to work with them given their importance. In foreign policy Sharif faces immediate challenges. Finding a balance in relations with India is an urgent task, where Sharif will need to increase the momentum set by the previous government. Amongst the challenges Sharif faces are his relations with the military whereby earlier in power these relations soured to a point of his ouster by Musharraf in 1999. This will be tested when the military's interests over vital elements of foreign and security policy are reconciled with civilian control.

CONCLUSION

Pakistan thus swings back and forth between military and civilian rule one side and feudal and capitalist economies on the other. This paper has been able to identify that although the civilian government enjoys considerable autonomy for political and economic management and exercise of state authority, it is expected to consider the military's sensibilities. The military has repeatedly demonstrated that it can and will influence the nature and direction of political change without necessarily assuming power. Civilian governments have come and gone with bewildering rapidity, whether overthrown by military coups or stranded by the constantly shifting loyalty of their political supporters. Yet the same people have gone on running these parties, and leading the same people or kinds of people at local level. The study shows that the people of Pakistan wants a stable country and with basic supportive requirements for them such as medical facilities, schools etc and this lies in the fact that in any given region, no democracy or any other type of leadership can survive in the long run if the people of the region are against it. From this study it is proven that the people of Pakistan it does matter who rules the state whether military or civilian rule although at one time military rule was more acceptable due to the weak civilian rule. Although democracy is the way forward

for the country, it needs an agreement on basic framework for economic and social management. The proven escalated economic performance and consistent high growth in GDP during the military rule has provided a major challenge for the current democratic civilian rule to further enhance the Pakistan economic development for the masses that are more interested in a stable and peaceful country and doesn't care which faction rules Pakistan. The 2013 elections show that the first transition from an elected government that completed its term to another elected government. The recommendations for and subsequent challenges for Pakistan for President Nawaz Sharif's is to reinstate include political stability, address widespread corruption and increase of law enforcement which will hamper private investment and foreign aid in the long run. These recommendations include Pakistan's regional and security relationships and internal relationship with the military which will be tested when the military's interests over vital elements of foreign and security policy are reconciled with civilian control. The onus is on the mainstream current civilian political forces to define the fundamentals of a sustainable and effective framework for Pakistan's economic management. This is a prerequisite to creating future dividends, both at macroeconomic front and for the people of Pakistan.

REFERENCES AND ENDNOTES

- [1] Huntington, S. *The Soldier and the State*. Cambridge: The Belknap Press of Harvard University Press, 1957.
- [2] Masood, Salman. "Pakistani Parliament Briefed By Military" New York Times. October 8. 2008b
- [3] Muhammad Hassan Causes of Military Intervention in Pakistan: A revisionist Discourse, Pakistan Vision Vol. 12, No 2, 2011.
- [4] Michael C. Desch. *Civilian Control of the Military: The Changing Security Environment* (Paperback), 1999.
- [5] Desch, Michael C. *Civilian Control of the Military: The Changing Security Environment*. Baltimore: (pp. 4-5). The Johns Hopkins University Press. 1999.
- [6] Zaheer Hassan *the Times and Trials of the Rawalpindi Conspiracy 1951: The First Coup Attempt in Pakistan*. Karachi: Oxford University Press. 1998.
- [7] Janowitz, Morris. *The Professional Soldier: A Social and Political Portrait*. The Free Press: New York, 1960.
- [8] Janowitz, Morris. "The Logic of Crisis and Civil-Military Relations Theory," *Armed Forces & Society* 24, 3 (Spring): 455-462. 1998
- [9] Peter Feaver. "The Civil-Military Problematique: Huntington, Janowitz and the Question of Civilian Control.": *Armed Forces and Society*, Volume 23, Issue 2, p.149-178, 1996.
- [10] Janowitz, Morris. *The Military in the Political Development of New Nations: An Essay* 1964.

- [11] Feaver, Peter D. Crisis as Shirking: An Agency Theory Explanation of the Souring of American Civil-Military Relations, *Armed Forces & Society*, Vol. 24, No. 3, 1998.
- [12] Feaver, Peter D.. *Armed Servants: Agency, Oversight, and Civil- Military Relations*. Cambridge: Harvard University Press 2003.
- [13] Rizvi. Hasan-Askari. *Military, State and Society in Pakistan*. MacMillan Press: London. "Pakistan on the Brink", IISS Strategic Comments, Vol. 14, Issue 9, November 2008.
- [14] Ravi, Thathiah. "Pakistan Army and Regional Peace in South Asia." *Journal of Third World Studies*, Vol 23, No. 1. 2006.
- [15] Aziz, Mazhar. *Military Control in Pakistan: The Parallel State*. London: Routledge. 2008
- [16] Ishrat Husain., "The Role of Politics in Pakistan's Economy. *Journal of International Affairs*, Vol. 63, No. 1, Fall/Winter 2009 Page 1-18 2009.
- [17] Syed Abidi, "Social Change and the Politics of Religion in Pakistan." Honolulu, Doctoral Dissertation, University of Hawaii, Department of Political Science, 1988.
- [18] *The Future Of Democracy In Pakistan (2008) : A Liberal Perspective*: Inayatullah, Sarah Inayatulla and Sohail Inayatullah
- [19] Guardian, 2009. The ISI, Pakistan's notorious and feared spy agency, comes in from the cold. *The Guardian (UK Edition)* 5 Aug 2009.
- [20] Collier, Paul and Anke Hoeffler.. "Military Spending and the Risks of Coups d'Etats. Unpublished, available online <<http://users.ox.ac.uk/~econpco/research/pdfs/Military>
- [21] Roberts, Russ ,January 28. "Collier on *The Bottom Billion*". *Econ Talk*. Library of Economics and Liberty. 2008.
- [22] Paul Collier *Wars, Guns, and Votes: Democracy in Dangerous Places*. p. 239. 2008.
- [23] Aziz, Mazhar. *Military Control in Pakistan :The Parallel State*. London: Routledge. 2008
- [24] Huntington, Samuel: *Political Order in Changing Societies*. New Haven: Yale University Press. 2006
- [25] Amina Ibrahim. *Guarding the State or Protecting the Economy? The economic Factors of Pakistan's Military Coups*, Development Studies Institute, London School of Economics and Political Science, London: LSE Press, 2009.
- [26] Kukreja, Veena. *Contemporary Pakistan: Political Processes, Conflicts and Crises*. London: Sage Publications. 2003.
- [27] Kier, Elizabeth. *Imagining War*. Ithaca: Cornell University Press. 1997.

- [28] Pitirim Alexandrovich Sorokin Russian . *Social and Cultural Dynamics: A Study of Change in Major Systems of Art, Truth, Ethics, Law and Social Relationships* (1957 (reprinted 1970) ed.). Boston: Extending Horizons Books, Porter Sargent Publishers. ISBN 0-87558-029-7. 1957.
- [29] Muhammad Hassan, Causes of Military Intervention in Pakistan: A revisionist Discourse, Pakistan Vision Vol. 12, No 2. 2011.
- [30] Sajjad Ashraf is currently an adjunct professor at the Lee Kuan Yew School of Public Policy, National University of Singapore, 2013.
- [31] Cloughley, Brian. A History of the Pakistan Army. Third Edition. Oxford University Press, 2006.
- [32] Cheema, Pervaiz Iqbal. The Armed Forces of Pakistan. New York University Press: New York, 2002.
- [33] Ayesha Siddiqi is a Pakistani civilian military scientist, geostrategist, author, former bureaucrat and political commentator. *Military Inc.: Inside Pakistan's Military Economy*, was released in April 2007.
- [34] Ishrat Husain, "Pakistan & Afghanistan: Domestic Pressures and Regional Threats: The Role of Pakistan's Economy. Journal of International Affairs.Vol.63.No1 2009.
- [35] Federal Bureau of Statistics.2012. *Pakistan: An Official Handbook on Statistics*.
- [36] Federal Bureau of Statistics.2012. "Gross National Product of Pakistan (Real Growth Rates1999-2000 BaseYear)." *National Accounts*. <http://www.statpak.gov.pk/depts/fbs/statistics/national_accounts/table12.pdf>.(Accessed on June 30,2008)
- [37] Tahir Akbar works for the Islamic Development Bank in Jeddah and has a master's degree in public policy from UC Berkeley. Masroor Hamid works for Alcatel-Lucent and has an MBA from LUMS. *Published in The Express Tribune, February 14th, 2012.*
- [38] Ali,Tariq. *On the Abyss: Pakistan After the Coup*. Delhi:Harper Collins. 2000.

REALISM, LIBERALISM AND “SABAH CLAIM”

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ABSTRACT

This paper discusses the claim by the defunct Sulu Sultanate towards Sabah. Discussion will be based by dissecting segment of international history and the recent violent terror acts in 2013 at Lahad Datu, Sabah Malaysia. The paper will compare Realism and Liberalism theory in relation to the incidences related to the recent “Sabah Claim” by Jamalul Kiram III and Nur Misuari as opposed to the “Sabah Claim” post World War II. This paper will discuss how Malaysia has continued its survival post World War II till now. This paper hopes to be of use as a complementary reference to assist the Malaysian policy maker on issue which relates to security and territory particularly about the “Sabah Claim”.

Keywords: Realism, liberalism, international relations, state, sabah claim, sovereignty, negotiations and diplomacy

INTRODUCTION

The “Sabah Claim” is not something new. It has its history between regional States in the past. It involved then Kingdom of Brunei and the Sultanate of Sulu with the West [1]. The historical background in this paper is to explain Malaysian history and its continuity. Regional history and recent Malaysian events will be described at three basic levels of focus - the individual level, the state level, and the international level. While Realists tend to focus on either the individual or international levels on the other hand Liberalism which focuses on state level thinking will be discussed as a comparison [2].

Malaysia as a modern and legitimate state had acted the necessary within international diplomacy in response to the Lahad Datu incident [3] of 12 February 2013. As Weber stated that - a State is, “that human community which (successfully) lays claim to the monopoly of legitimate physical violence within a certain territory” [4]. Meanwhile, the claim of the modern state to monopolize the use of force is as essential to it as its character of compulsory jurisdiction and continuous operation [5]. Therefore, it must be said that Malaysia as a State used its own security forces [6] in the Lahad Datu, Sabah incident in February 2013 as a necessary step for the continuous operation of Malaysia over its territorial jurisdiction that had been invaded by a violent non state actors [7, 8].

This paper will describe how Realism and Liberalism, international relations theories in general can be used to relate and understand the issue of “Sabah Claim” that is faced by Malaysia from its birth till today. This paper will also examine how Malaysia has battled to ensure her sovereignty and survivability internationally till 2013. This paper only seeks to relate and compare the general Realist assumptions against the Liberalist in the arena of Malaysian international relations. It also hopes to add to the understanding of the “Sabah Claim” in highlighting its historical and current context.

REALISM AND LIBERALISM THEORIES IN INTERNATIONAL RELATIONS CONTEXT

For Realist, the international system is defined by anarchy that is ‘the absence of central authority or ruler’ [9]. States are sovereign and thus autonomous of each other; no inherent structure or society can emerge or even exist to order relations between them. They are bound only by forcible – coercion or their own consent. In such an anarchic system, state power is the key because only through power can states defend themselves and hope to survive [9]. According to Slaughter [9], Realist vision of the world rest on four assumptions which are:

First, Realist claims that survival is the principle goal of every State. Foreign invasion and occupation are thus the most pressing threats that any State faces. Even if domestic interests, strategic culture, or commitment to set national ideals would dictate more benevolent or cooperative international goals, the anarchy of the international system requires that States constantly ensure that they have sufficient power to defend themselves and advance their material interests necessary for survival.

Second, Realists hold states to be rational actors. This means that, given the goal of survival, States will act as best as they can in order to maximize their likelihood of continuing to exist.

Third, Realist assume that all States possess some military capacity, and no State knows what its neighbours intend precisely. The world, in other words, is a dangerous and uncertain.

Fourth, in such a world it is the Great Powers – the states with most economic clout and, especially military might, that are decisive. In this view international relations is essentially a story of Great Power politics.

The four principles of Slaughter can be conceptualised as a whole to refer to the Malaysian State and the repetitive and pressing threat it faces from the “Sabah Claim”. It is argued that even though Realist tenets say one thing, cooperation between states does happen in real life international situations. “While the Realist predicts states will act in their own national interest in defiance to moral consideration, the Liberalist chief distinction is its assertion that peace is possible and can result from interdependence.

Liberalism asserts that the preferences of states, as manifest in their cultural, economic, and political entities, determine their actions on the international stage. Therefore presumably, if two or more states share preferences, their aligned interests may result in absolute gains from cooperation" [10].

THE CLAIM FOR SABAH

The main question that should be asked about the recent aggressive 12 February 2013, "Sabah Claim" is whether Sabah that was formerly known as North Borneo was ever part of the Sulu Sultanate as claimed by the Jamalul Kiram III. Brunei has challenged the Sulu traditional claim, by questioning Sulu traditional accounts that the then Sulu Sultanate in the 19th century was given possession of Sabah or parts of Sabah for help rendered to the Brunei Sultanate in Sulu's part in a civil war between the 13th Sultan of Brunei (Sultan Muhyidin) and 14th Sultan (Sultan Abdul Mubin), of which the latter became victorious [11].

The Sulu Accounts of History Before and After World War II.

The work by Sir Hugh Low [11], in the Journal of the Straits Branch of the Royal Asiatic Society (JSBRAS) published on 5 June 1880 entitled 'Selesilah (Book of Descent) of the Rajas of Bruni' told that the two Sultans referred before fought and it was during this period that the Sulu's helped secure victory for Sultan Muhyidin. On the other hand, the work of Brunei writer, Pehin Jamil Umar [11] in his book 'Tarsilah Brunei II' Period of Splendour and Fame', counters all the above claims and claimed that instead of helping, the Sulu's did not do so. The work by Pehin Jamil Umar [11] added that the territories claimed by Sulu was never ceded but was only 'claimed' by Sulu. Having recount the above, the Sulu claims of ownership is historically questioned by Brunei. Therefore and despite the "Sabah Claim" by the Sulu's or Brunei Darussalam on their historical question of prior ownership, Sabah after World War II was officially granted independence on 31 August 1963 by British rule and on 16 September of the same year joined Malaya, Sarawak and Singapore to form Malaysia [12].

SABAH CLAIM 2013 AND THE 'FRAMEWORK AGREEMENT ON BANGSAMORO 2012

Meanwhile, Gopinath [13] argued that the last true Sultan of Sulu died in 1936 [14]. Gopinath argued that this recent Sabah claimant Jamalul Kiram III and backer Nur Misuari have their self interest in attempting to ransom money [15,16] and politically capitalise on the "Sabah Claim" at a critical time close to the 13th Malaysian General Elections of 2013. It also coincided with the recent success of the 'Framework Agreement on Bangsamoro' on 15 October 2012 which involved MILF and the Philippines that included Malaysia as the Facilitator..

Gopinath [3] insists that Murad Ebrahim as leader of the Moro Islamic Liberation Front (MILF) should consolidate the two personalities that had mobilised the Royal Security Force (RSF), which are Jamalul Kiram III of the so called Sulu Sultanate and Nur Misuari ex-chairman and founder of the Moro National Liberation Front (MNLF). According to her, these two personalities may have been sidelined by Philippines and the MILF in their recent effort to finalise the 'Framework Agreement on the Bangsamoro' to which Malaysia also play a part. Gopinath states that Lahad Datu incident or more appropriately called "Sabah Claim" could be resolved swiftly and not pose as much of a security threat to the government of Malaysia if Jamalul Kiram III [17] and Nur Misuari [18,19] were included in the framework. This has not happened and Gopinath argued that the current leadership by Murad Ebrahim is needed to garner support over the 13 groups that stay in the area of Southern Philippines [20].

She also argues that there seem to be a great number of problems in Southern Philippines itself amongst it, is the question of leadership [20]. The poor people of Southern Philippines do not want to be autonomous. They see no value added if it were to happen. The last leadership by Nur Misuari as the Governor had done nothing much to the overall area [21]. Issues such as poverty, lack of infrastructure like schools and education is still wanting and such leadership did not benefit them. Thus, those that want to escape poverty and its trappings tend to chose 'violence' as a sure method in getting income and irking a living. Ransoms over other nationals such as Westerner, Malaysian or locals fetch a high price with each ransom rate differing from one nationality to the next with Western nationals topping the rates. Gopinath also opines that the Southern Philippines groups have enough money and arms to proceed with the threats that they make and it would not be surprising that other attacks will follow perhaps using the "Sabah Claim" as an excuse [13]. After the Lahad Datu incident, Murad Ibrahim must include Nur Misuari in the 'Framework Agreement on Bangsamoro' or she expects the trend of disturbance that involves the Philippines and Malaysia would just continue.

It could be argued based on Gopinath exposition that the Sulu's is using the "Sabah Claim" as an excuse on their attack to Lahad Datu, Sabah [13]. It highlights again the Realist nature of international politics that is anarchic in nature that a state requires a standing military power for its security.

Assumption No. 1: Survival is the Principle Goal of every State

Historically, Malaysia's birth was a diplomatic challenge [22, 23]. The Philippine government had lodged a formal claim to sovereignty over British North Borneo or now known as Sabah. However, back then and in 1962 Indonesia and the Philippines found a common cause to fiercely oppose the creation of Malaysia. Both their strident efforts to prevent Malaysia an international recognition and membership in the United Nations, nevertheless proved unsuccessful. Now in the recent case as before and in regards to the "Sabah Claim" the legal tangle centred on the translation of the rather ambivalent Malay-Arabic use of the term "pajak" that appeared in the native version of the 1878 agreement

that ceded North Borneo to the English. In common parlance, the term could be used to denote both to lease and to cede. The British and Malayan governments have pinpointed that the English language document entered into by the Sultan of Sulu categorically stated that the land was ceded "forever and until the end of time" and not leased [24].

A "Sabah Claim" in 1962 instigated just before Malaysia's inaugural creation as the Federation of Malaysia in 1963 was all at once advanced the issue of sovereign independence and territorial integrity of Malaysia into a full-blown international issue. Thus in response, then Prime Minister, Tunku Abdul Rahman Putra Al-Haj had to go beyond bilateral negotiations and mount high-level regional and international diplomatic engagements and appropriate responses. From the British and Malayan viewpoints, the territory was ceded by the Sultan of Sulu and his heirs in perpetuity to the predecessors of the North Borneo Company in 1878 [25] and as shown in Figure 1 below.



Figure 1: Map of North Borneo Ceded to North Borneo Company in 1878

Source:

Library of Congress,
Geography and Map
Division, Washington
DC, USA dcu, Available
from [http://www.loc.gov/
item/2007630401#](http://www.loc.gov/item/2007630401#)

The then Philippine government, however, contended that the Sultan had merely leased and not ceded the territory that eventually was passed on to the British Crown. It further argued that sovereignty was transferable between sovereign entities and since the Philippine government being the heir to the Sultan of Sulu, Sabah should rightfully be part of the Philippines [24].

The failure on the part of the Philippine government to garner support from the international community for its “Sabah Claim” gave way to a deterioration of bilateral relations. Malaysia severed its relations with the Philippines in September 1963 when it decided to reduce the status of its diplomatic mission in Kuala Lumpur to that of a consulate. Fortunately for Malaysia, the country was able to breathe a sigh of relief as collaboration between its two adversaries became restored as a result of internal political developments in Indonesia. The Philippine government re-appraised its relations with Indonesia in wake of the political ascendancy of the Parti Komunis Indonesia [24]. The Philippine foreign policy review pressed for caution and circumspection in bilateral relations with Indonesia and favoured a relaxation of tension with Malaysia and had put the “Sabah Claim” to the back burners until it was again highlighted by Jamalul Kiram III and Nur Misuari during the Lahad Datu incident that began in February 2013.

Assumption No.2: States are Rational Actors

Thus, the history and current usage of the “Sabah Claim” is usually used amorally by vested interests. More importantly for Malaysia however is that it was formed together with the consent of the Sabah people in 1962 and again in 1963. Historically speaking it was also formed through British, American and even not so obvious Philippines ‘strategic and amoral consent’ at a time when the region was faced by a greater threat to the free world which was ‘Communism’ in the region. Brunei for their part in the Malaysian history declined to be part of Malaysia for their own reasons or self interest and as such, what is formed as Malaysia is in part what it inherited from the local regional ‘strategic consent’ as much as what it inherited from the British and the victors for the World War II (Great powers of post World War II). Now, Sabah is part of Malaysia, the state and any part of it cannot be claimed by any party. The Cobbold Commission 1962 findings found that the majority of Sabahans agreed for the state to be part of Malaysia that was realised on 16 September 1963. And since then and 50 years on till 2013, with a dozen General Elections behind it, Sabah is a major living part of Malaysia, contributing greatly to its development in its vision to achieve a developed nation status by 2020 [1, 24].

It must be said that in the past, the then Federation of Malaya, Indonesia and the Philippines agreed in ‘The Manila Accord’ in 1960’s to entrust the United Nations (UN) with the task of ascertaining the wishes of the people of North Borneo. It was found that the majority of the peoples of North Borneo/Sabah had given serious and thoughtful consideration to their future and to the implications for them of participation in a Federation of Malaysia. Thus, it was the majority of the peoples of Sabah (North Borneo) and of Sarawak who have had concluded that they wished to bring their dependent status

to an end and to realise their independence through freely chosen association with other peoples in their region [1, 22, 26].

The fundamental agreement of the three participating governments in the Manila meetings were that Indonesia and Philippines would welcome the formation of Malaysia provided that the support of the people which was attained by the UN which concluded based on the findings of the mission in the early 1960's that there is no doubt that the wishes of a sizeable majority of the peoples of these territories to join Malaysia [27]. The declaration of Malaysia's formation was made on 16 September 1963 in the presence of the Yang di-Pertuan Agong, the Malay rulers and governors of Penang, Malacca, Sarawak and Sabah at Stadium Merdeka in Kuala Lumpur [26].

Assumption No.3: No State Knows What its Neighbours Intend Precisely – Non State Actors Included

Both Jamalul Kiram III and Nur Misuari may have been motivated as much for political and economical or monetary reasons. The result of disablement and attrition caused by them in Malaysia may well continue until either gets their way. At the very least, they have raised security and development costs on both sides of the government – Malaysia [28] and Philippines. In the months ahead of the February 2013 attack and despite the climate of uncertainty, the Malaysian 13th General Election had yielded results to proceed with a new legitimised government while the long negotiated Philippines Framework Agreement on Bangsamoro with the MILF moves on inconspicuously [29].

It is thought that such unexpected acts perpetrated by Jamalul Kiram III and Nur Misuari considered here as main individual's responsible for the Lahad Datu attack on February 2013 recently inflicted on Malaysia using the "Sabah Claim" may have been done to render both sides of the Malaysian and Philippine governments and peoples to be at odds with each other or was it arguably a cry to be included into the recent concluded Framework Agreement on Bangsamoro on October 2012 by MILF and the Government of Philippines witnessed by Malaysia. Nonetheless both leaders Prime Minister of Malaysia, Mohd Najib Razak [30] and President of Philippines, Benigno Aquino III [31, 32] had shown political restraint, level-headedness, resolve and the insight into looking farther than the trouble brought to them by the Jamalul Kiram III and Nur Misuari in the "Sabah Claim" episode of 2013 that could have claimed many more Malaysian [33] and Filipino [34] lives. It was through positive political will, determination of the government machineries and the professionalism of the defence and security forces on both sides of the divide resulting from interdependence that better outcomes were realised despite conflicting issues were incited in each other's territory.

Assumption No.4: The States with most economic clout, especially military might are decisive

In the Realist's line of thought, it could be said that the Lahad Datu incident or more appropriately called the "Sabah Claim" that began 12 February 2013 was as the current

Prime Minister of Malaysia, Mohd Najib Razak had coined it, “an eye opener” to both the country and its citizens [35, 36]. While after a long lapse of peace since the end of the Communist insurgency in Malaysia, the whole nation was taken aback when in Kampong Tanduo, a village near Lahad Datu, Sabah was attacked and taken siege by a group calling themselves RSF that used hard armed aggression. This violent group killed 9 Malaysian security forces and had flatly refused to negotiate and surrender unconditionally to the authority of Malaysia. As such, by 5 March 2013, Malaysia’s Prime Minister [37] with legitimate authority and military force had acted to reclaim both ‘territory’ and ‘law and order’ in Sabah [38] as well as control the situation in the affected areas. Subsequently by the end of March 2013, ‘Ops-Daulat’ that was initiated by the Malaysian government had managed to achieve a high degree of success in clearing the threat down in Eastern part of Sabah all at once securing Malaysia’s territorial integrity and survival [39, 40,].

Since the last “Sabah Claim” in 1962, Kuala Lumpur then and now Putrajaya and Manila pragmatically have since left the “Sabah Claim” at the back burners to look at higher bilateral outcomes that may heighten security, economic progress through mutual respect and maintenance of the territorial integrity in each other’s domain [41]. The decision by Malaysia to respond militarily against RSF was decisive and timely. Although an ‘overreaction’ by both the Malaysian and the Philippines states was probable but it did not. The results have shown that Malaysia and Philippines kept on its diplomatic tract for the promotion of long term diplomatic ties [31].

The issues generated by violent non state actors for Malaysia in the above mentioned actions will require time and much resource to resolve. For a short period of time after, Sabah may appear insecure and deficient before it bounces back up again. More disturbing is that such potential menace unhindered may be repeated elsewhere. Thus, for complete control over the areas of threat from the non state actors in Eastern Sabah and at the same time the weeding out of its proponents is a necessity. Meanwhile, the creation of the Eastern Sabah Security Command (ESSCOM) has tightened security in Sabah, Malaysia [26].

Although, the Malaysian 13th General Election has passed with minor hindrances and the long negotiated Philippines Framework Agreement on Bangsamoro with the MILF moves on. Support shown by Indonesia [42] a big neighbouring ASEAN country member and Britain [43] as a core member of the Five Power Defence Arrangement (FPDA) towards the Malaysian predicament is assuring to Malaysia. It could be argued that cooperation between state actors should also make those adamant non state actors that to take part in attacking Malaysia (Sabah) less confident and bold.

Meanwhile, Malaysia should accept that the possibility for chaos and instability grows also within and without its territory as violent non state actors grows or multiply in number, more conflict is likely to be waged by private actors. As yet, Malaysia is still within its capability and capacity to engage the threat and priority be given so that any external forces will not be allowed to come into Sabah, Malaysia [44]. It could be argued based on the actions portrayed by Malaysia that she does not require any unwarranted

interferences by great powers or others are necessary for the time being [45].

CONCLUSION

The "Sabah Claim" that catapulted the Lahad Datu violation into the international media has also highlighted the anarchic international situation where a modern state to survive must have 'self help' or its own effective standing military. As Realism had argued that law can only be enforced through state power, Malaysia had done so within its own boundaries. Thus, agreeing to the needs of the State, Malaysia has enforced what Realism prescribed on the non state actors as demonstrated in the recent retaliation to the "Sabah Claim" of February 2013. Although both theories are contested in international relations including that of the Realist, it does nevertheless help policy makers understand better the "Sabah Claim" and the right reaction to acts of aggression by Jamalul Kiram III and Nur Misuari albeit through Malaysia's own military power as opposed to strategic great power arrangements in the past. The action by the Jamalul Kiram III and Nur Misuari that attacked Lahad Datu on the grounds of the "Sabah Claim" on February 2013 could have sparked a spiral effect to drag in both states down, had it not been for the restraint (rational) adhered to by Malaysia and Philippines and others in the region.

This paper finds that the repetitive "Sabah Claim" made in the 2013 make Realism arguments to be closer to understanding Malaysia's regional context. Alternatively, the idea of nation building that Liberalism proposes has not got better results despite the Framework Agreement on Bangsamoro in October 2012 between the Philippines and insurgents or non state actors in Southern Philippines. The act of Nur Misuari as a repetitive aggressor in declaring an independent 'Bangsamoro Republik' in August 2013 while claiming all at once Sabah again may put the issue of peace and economic development in Sabah at risk as it has Southern Philippines. Some may now become disillusioned by the longevity of peace that is possible in Southern Philippines.

Hence, the aggressive acts coming from Jamalul Kiram III and Nur Misuari that claimed Sabah may or may not have been caused by non inclusion of them in the Framework Agreement on Bangsamoro Declaration on October 2012 in the Philippines or is it just the divisive nature and interests of those diverse groups in Southern Philippines. Nevertheless, as a lesson and as a matter of national security and territorial integrity, periodical reviews of policy should be done to lessen attrition and strengthen Malaysia security capability as a necessary form of resilience and "self help" to dissuade new attacks based on the "Sabah Claim" especially after the setting up of ESSCOM in Malaysia. The establishment of ESSCOM emphasises that although Communism had been stamped out in Malaysia by the 1989, the existence of like threats are not. Ideally, in the short term and later medium term period, Malaysia and the Philippines should continue to work together towards the establishment of better political and socioeconomic progress in Sabah and Southern Philippines as suggested by Liberalism. Perhaps in the wake of Lahad Datu incident in Sabah, both Malaysia and the Philippines may also promote 'better' bilateral diplomatic and defence cooperation which already in exist and

assist each other as and when requested in protecting each other's territorial sovereignty against any wanton acts by new or existing violent non state actors.

REFERENCES AND ENDNOTES

- [1] Oxford Business Group, 'The Report – Sabah 2011, pp.8 -10, Available from www.oxfordbusinessgroup.com/country/Sabah
- [2] Schouten, P (2008) 'Theory Talk #12 : Robert Jervis on Nuclear Weapons, Explaining the non-Realist Politics of the Bush Administration and the US Military Presence in Europe, *Theory Talks*, Available from [http://www.theory-talks.org/2008/07/theory-talk-12.html\(24-07-2008\)](http://www.theory-talks.org/2008/07/theory-talk-12.html(24-07-2008))
- [3] Interview with Prof Dr. Aruna Gopinath, Faculty of Strategic and Defence Management, National University of Malaysia on 4 April 2013.
- [4] Palmer, Tom G, 'The Origins of State and Government', Cato's Letter- Cato's Institute, Volume 10, No.4, 2012, pp.2, Available from ww.cato.org/sites/cato.org/files/pubs/pdf/catosletterv10n4.pdf
- [5] Pierson, Christopher, *The Modern State*, Second Edition, Routledge, Edition Published in the Taylor and Francis, e-library, 2004. Available from <http://psi424.cankaya.edu.tr/uploads/files/Pierson,%20The%20Modern%20State,%202nd%20ed.PDF>
- [6] 'Malaysia launches air, ground strikes', Philippine Daily Inquirer, 6 March 2013
- [7] 'Manila Disagrees With Malaysia's 'Terrorist Label on Sulu Intruders', Malaysian Insider, 6 March 2013
- [8] 'Sulu gunmen were violent, says Anifah', ABN News, 6 March 2013
- [9] Slaughter, Anne Marie, *International Relations, Principle Theories*, pp.1-2, 2007, Available from www.princeton.edu/.../722_IntlRelPrincipalTheories_Slaughter_201105
- [10] Hudson, Walter Scott, *Foreign Policy: Realism vs. Liberalism*, Available from 10 September 2013 <http://fightinwordsusa.wordpress.com/2010/02/10/foreign-policy-realism-sliberalism/>
- [11] 'Sabah and Sulu claims', Brunei Times, 20 March 2013
- [12] 'Historians agree Sabah rightly belongs to Malaysia', Bernama, 7 March 2013
- [13] Gopinath, Aruna, UPM (2013), 'The Mystery of Lahad Datu', Ministry of Defence Malaysia (MinDEF), 2 April 2013
- [14] 'Sulu Sultan seeks a sweet US deal', Asia Times, 22 March 2002, Available from www.atimes.com/se-asia/DC22Ae01.html

- [15] 'Peguam Ketua Penganas Sulu siapkan kertas tuntutan RM 77.8 billion: Jamalul Kiram mahu saman', *Kosmo*, 23 Mac 2013
- [16] 'Pengganas Sulu tidak ada hak saman Malaysia: Tan Sri Khoo Kay Kim', *Kosmo*, 23 Mac 2013
- [17] 'Jamalul Kiram guna Taktik Gerila!', *Siasah*, 29 Feb-4 Mac 2013
- [18] 'Misuari warns Aquino of Total Chaos', *Philippine Daily Inquirer*, 6 March 2013
- [19] 'Misuari warns KL: Don't Kill Raja Muda', *Philippine Inquirer*, 5 March 2013
- [20] Gopinath, Aruna, (1989), 'American- Muslim relations in the Philippines - The Policy of Attraction, 1899-1935', *Sarjana, Jurnal Fakulti Sastera dan Sains Sosial, Universiti Malaya*, Jil. 5 Dis. 1989
- [21] 'Nur Misuari pemimpin yang gagal', *Utusan Malaysia*, 1 April 2013, Available from http://www.utusan.com.my/utusan/Luar_Negara/20130401/lu_10/Nur-Misuari-pemimpin-yang-gagal
- [22] 'Malaysia Kita', *International Law Books Services – (ILBS)*, Pg 93- 94, 2004
- [23] Tae, Yul Nam, 'Malaysia and Singapore: The failure of a political experiment', pg 136-144, PhD, *The University of Iowa*, 1969
- [24] 'When Malaya had to fight Sabah Claim', *New Straits Times*, 11 January 2013
- [25] 'Borneo shewing the lands ceded by the Sultans of Brunei and Sulu to the British North Borneo Company': Brunei, Sabah, Sarawak, London, Edward Stanford, 1881, Library of Congress, Geography and Map Division, Washington DC, USA dcu, Available from <http://www.loc.gov/item/2007630401#>
- [26] '50th Malaysia Day ', *New Straits Times*, 16 September 2013.
- [27] 'Self Determination is the Standard', *New Straits Times*, 5 April 2013.
- [28] 'Cost of Conflict -Invasion could hurt Sabah economy', *The Star*, 8 March 2013.
- [29] 'PHL, MILF peace panel to resume talks 2nd week of April 2013, *GMA News*, 26 March 2013
- [30] 'PM to Sulu gunmen: Give up or be killed', *The Star/ANN*, 8 March 2013, Available from <http://my.news.yahoo.com/najib-sulu-gunmen-killed-062002825.html>
- [31] 'Aquino to Sulu Sultanate's Heirs: It's all your fault', *Philippine Inquirer*, 7 March 2013
- [32] 'Aquino: Let's Talk on Sabah', *Global Nation*, 18 March 2013, Available from <http://www.globalnation.inquirer.net>
- [33] '10,000 Militan Sulu Mahu Rampas, Sabah!', *Siasah*, 29 March 2013
- [34] 'Malaysia did not commit genocide', *YahooNews*, 11 March 2013, Available from <http://www.my.news.yahoo.com/bar-council>

- [35] 'Porous borders leave Sabah open invaders: Former armed fighter says smuggling routes allowed a small army to invade the Malaysian state from the Philippines, Al-Jazeera, March 2013, Available from www.aljazeera.com/news/asia
- [36] 'Wake Up Call: The Security problems in Sabah have been traditionally underestimated', New Straits Times, 16 March 2013
- [37] 'No compromise with terrorist', The Star, 8 March 2013, Available from, <http://www.thestar.com.my/News/Nation/2013/03/08/Lahad-Datu-No-compromise-with-terrorists-says-exgeneral.aspx>
- [38] 'Malaysian troops sent to Borneo after police slain', AP, 4 March 2013
- [39] 'Esszone jamin keselamatan penduduk Sabah', Siasah, 05-11 April, 2013
- [40] 'Panglima Pengganas Kiram ditangkap', Siasah, 29 Feb – 4 Mac 2013
- [41] 'Framework Agreement on Bangsamoro is a chance to enjoy peace, says Najib', New Straits Times, 15 October 2012
- [42] 'Indonesia President Susilo urges diplomatic solution to Lahad Datu', ABN News, 19 March 2013, Available from <http://abnxcass.com/.../indonesian-president-susilo-wants-diplomatic-solution>
- [43] 'Britain ready to offer Assistance', New Straits Times, 28 March 2013, Available from <http://www.nst.com.my/nation/.../britain-ready-to-offer-assistance>
- [44] 'MNLf returns to rebellion', Philippine Star, 16 August 2013, Available from www.philstar.com/headlines/2013/08/16/.../mnlf-returns-rebellion
- [45] 'ASEAN Defence and Diplomacy Magazine', Vol. 6, No. 9, September 1999
- [46] Patail, Abdul Ghani, 'Putting it to rest – the claim to Sabah by the self-proclaimed Sultanate of Sulu', Razak School of Government, ITBM, Kuala Lumpur 2013
- [47] Nik Mahmud, Nik Anuar, 'Tuntutan Filipina ke atas Borneo Utara', Universiti Kebangsaan Malaysia, Bangi, 2009
- [48] Yap, Emmanuel Q., 'The Facts – about Sabah and the Royal Sultanate of Sulu and North Borneo', Manila, Royal Sultanate of Sulu and North Borneo, 2013
- [49] Puteh, Shamsudin, 'Coretan Kenangan Tunku Abdul Rahman Putra Al- Haj', Jabatan Penerangan Malaysia, 2007
- [50] 'The Formation of Malaysia saved Sabah from Communism', The Borneo Post, 20 September 2013, Available from http://www.arkib.gov.my/en/keratan-akhbar_anm/-/asset_publisher/7RZn/content/formation-of-malaysia-saved-sabah-from-communism-the-borneo-post

EVALUATION OF VULNERABILITIES OF GLOBAL POSITIONING SYSTEM (GPS) SIGNALS: A REVIEW OF RESEARCH CONDUCTED IN STRIDE USING FIELDS EVALUATIONS AND GPS SIMULATION

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ABSTRACT

Global Navigation Satellite System (GNSS) vulnerabilities, such as ionospheric and tropospheric delays, satellite clock and ephemeris errors, satellite positioning and geometry, radio frequency interference (RFI) and spoofing, and obstructions and multipath, can severely affect the accuracy of GNSS readings, and in a number of cases, disrupt GNSS signals. To this end, the evaluation of GNSS receivers, for parameters such as time to first fix (TTFF), warm start time to first fix (WTFF), reacquisition time, positioning and timing accuracy, receiver sensitivity, and RFI operability, has received significant attention. This paper will provide a review of research activities that have been conducted in the Science & Technology Research Institute for Defence (STRIDE) in regards to the evaluation of the effect of various vulnerabilities on Global Positioning System (GPS) signals using a combination of field evaluations and GPS simulation, with the focus thus far being on RFI, simplistic spoofing and static multipath. The future research direction in regards to the evaluation of a larger group of vulnerabilities, in particular intermediate spoofing, dynamic multipath, and ionospheric and tropospheric delays, for GPS and other GNSS systems, in particular GLONASS, will also be assessed.

Keywords: *Global Positioning System (GPS) receiver evaluation; field evaluations and GPS simulation; position dilution of precision (PDOP); estimate probable error (EPE); carrier-to-noise density (C/N₀).*

INTRODUCTION

There is a steady growth in the entrenchment of Global Navigation Satellite Systems (GNSS) in current and upcoming markets, having penetrated various consumer products, such as cell phones, personal navigation devices (PNDs), cameras and assimilation with radio-frequency identification (RFID) tags, for various applications, including navigation, surveying, timing reference and location based services (LBS). While the Global Positioning System (GPS), operated by the US Air Force (USAF), is the primarily used GNSS system worldwide, the upcoming Galileo and Compass systems, and the imminent conversion of *Global'naya Navigatsionnaya Sputnikovaya Sistema* (GLONASS) signals from frequency division multiple access (FDMA) to code division multiple access

(CDMA) look set to make multi-satellite GNSS configurations the positioning, navigation & timing (PNT) standard for the future.

However, many GNSS users are still not fully aware of the vulnerabilities of GNSS systems to various error parameters, such as ionospheric and tropospheric delays, satellite clock and ephemeris errors, satellite positioning and geometry, radio frequency interference (RFI) and spoofing, and obstructions and multipath. These vulnerabilities can severely affect the accuracy of GNSS readings, and in a number of cases, disrupt GNSS signals [1-8].

To this end, many designers are working on improving characteristics of GNSS receivers, such as lower power consumption, the tracking of weak satellite signals, faster acquisition times and more accurate position fixes. At present, many developers and users still struggle to identify suitable standard tests to objectively verify and evaluate the functionality and performance of GNSS receivers. Commonly tested parameters in GNSS receiver evaluations include time to first fix (TTFF), warm start time to first fix (WTFF), reacquisition time, positioning and timing accuracy, receiver sensitivity, and radio frequency interference (RFI) operability [9-13]. There are two types of methods for conducting GNSS evaluations; field evaluations and GNSS simulation.

Field evaluations, which employ live GPS signals, are subject to various error parameters which are uncontrollable by users. Furthermore, field evaluations are not suitable for accurate measurements of GNSS receiver performance parameters as [10-14]: These parameters should be measured under conditions in which the various error parameters are user-controlled and repeatable. Field evaluations are also subject to unintended signal interferences from radio, radar, etc., and unwanted signal multipath and obstructions. Field evaluations cannot be employed to measure receiver sensitivity, as this requires precise measurements of GNSS signals.

The ideal GNSS receiver evaluation methodology would be using a GNSS simulator which can be used to generate multi-satellite GNSS configurations, transmit GNSS signals which simulate real world scenarios, and adjust the various error parameters. This would allow for the evaluations of GNSS receiver performance under various repeatable conditions, as defined by users. As the evaluations are conducted in controlled laboratory environments, they will be inhibited by unwanted signal interferences and obstructions [10-14].

Among the recent research focuses of the Science & Technology Research Institute for Defence (STRIDE) is on the evaluation of GPS vulnerabilities using field evaluations and GPS simulation. This paper is aimed at reviewing the research work that has been conducted in STRIDE in regards to the evaluation of the vulnerabilities of the GPS civilian signal, L1 coarse acquisition (C/A), to RFI [15-19], simplistic spoofing [20] and static multipath [21, 22]. The future research direction in regards to the evaluation of a larger group of vulnerabilities, in particular intermediate spoofing, dynamic multipath,

and ionospheric and tropospheric delays, for GPS and other GNSS systems, in particular GLONASS, will also be assessed.

RADIO FREQUENCY INTERFERENCE (RFI)

Jamming is defined as the broadcasting of a strong signal that overrides or obscures the signal being jammed [23-25]. Since GNSS satellites, powered by photocells, are approximately 20,200 km above the Earth surface, GNSS signals that reach the Earth have very low power levels (approximately -160 to -130 dBm), rendering them highly susceptible to jamming [5, 6, 26-31]. For example, a simple 1 W battery-powered jammer can block the reception of GNSS signals approximately within a radius of 35 km from the jammer [28].

Given the various incidents of intentional and unintentional jamming of GNSS signals, including military GNSS signals [26, 32-35], STRIDE conducted a series of tests to study the effect of RFI on GPS performance via field evaluations [15-17] and GPS simulation [18, 19]. In addition, STRIDE was also involved in a research collaboration with the Faculty of Architecture, Planning and Surveying (FSPU), Universiti Teknologi MARA (UiTM), on a study in regards to the effect of RFI on GPS static observations [36, 37]

The field evaluations were conducted at STRIDE's Block B car park Figure 1 using the setup shown in Figure 2. The apparatus used in the tests were an Advantest U3751 spectrum analyser [38], an IFR 2023B signal generator [39], a Hyperlog 60180 directional antenna [40], and a notebook running GPS Diagnostics v1.05 [41]. The interference signal used was a frequency modulated (FM) signal with carrier frequency of 1,575.42 MHz (the fundamental frequency of the GPS L1 C/A signal), peak deviation of 1 MHz and information frequency of 5 kHz.



Figure 1: The test area located at N 2° 58' 3.4" E 101° 48' 35.2".
(Source: Screen capture from Google Earth)

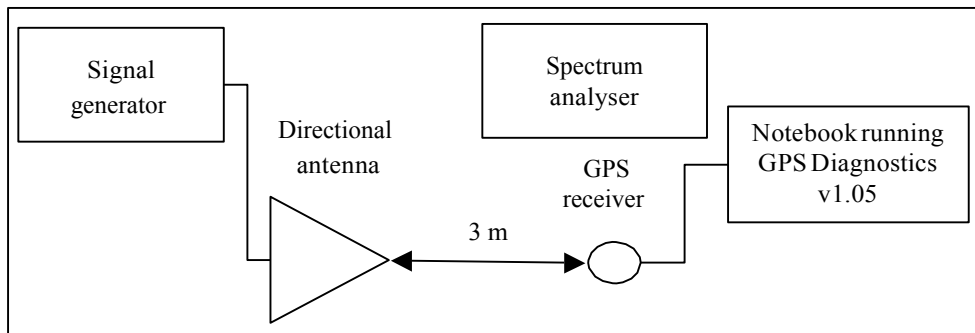


Figure 2: The test setup employed to study the effect of RFI on GPS signals via field evaluations.

As observed in Figure 3, with increasing interference signal power level, estimate probable error (EPE) values increased due to decreasing carrier-to-noise density (C/N_0) levels for GPS satellites tracked by the receiver, which is the ratio of received GPS signal power level to noise density. Lower C/N_0 levels result in increased data bit error rate when extracting navigation data from GPS signals, and hence, increased carrier and code tracking loop jitter. This, in turn, results in more noisy range measurements and thus, less precise positioning [2, 42-44]. For the readings taken, the amount of increase of EPE values varied significantly based on GPS coverage and various error parameters, including satellite clock and ephemeris errors, obstructions and multipath, and unintended interference signals.

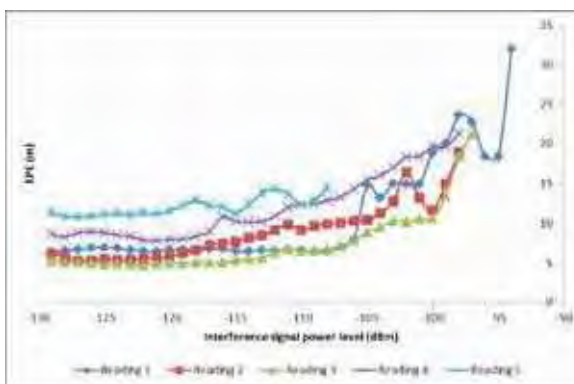


Figure 3: The effect of RFI on GPS EPE.

On the whole, the results of these tests demonstrated the disadvantages of field GNSS evaluations. Without the ability to control the various GNSS error parameters, it is difficult to effectively study the effect of any particular error parameter, in the case of this study, RFI, on GNSS performance. This highlights the importance of using a GNSS simulator for such tests, whereby the tests can be done under repeatable user-controlled conditions.

For the tests conducted via GPS simulation, the simulated GPS signals were generated using an Aeroflex GPSG-1000 GPS simulator [45]. The tests were conducted in STRIDE's semi-anechoic chamber [46] using the setup shown in Figure 4. The following assumptions were made for the tests:

- i) No ionospheric or tropospheric delays
- ii) Zero clock and ephemeris error
- iii) No unintended multipath or obstructions
- iv) No unintended interference signals.

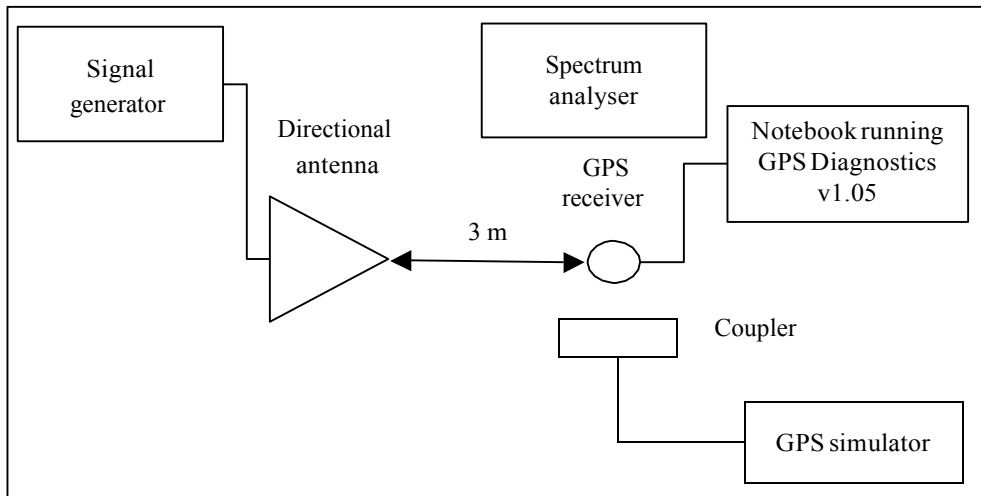


Figure 4: The test setup employed to study the effect of RFI on GPS signals via GPS simulation.

The date of simulation was set at 10 January 2012. The almanac data for the period was downloaded from the US Coast Guard's web site [47], and imported into the GPS simulator. For each GPS receiver, the test procedure was conducted for coordinated universal time (UTC) times of 0000, 0300, 0600 and 0900 for the following coordinates:

- i) N 2° 58' E 101° 48' (Kajang, Selangor, Malaysia)
- ii) N 39° 45' W 105° 00' (Denver, Colorado, USA)
- iii) S 16° 55' E 145° 46' (Cairns, Queensland, Australia)
- iv) S 51° 37' W 69° 12' (Rio Gallegos, Argentina).

As shown in Figure 5, varying EPE patterns were observed for the each of the readings. This is due to the GPS satellite constellation being dynamic, causing varying GPS satellite geometry over location and time, resulting in GPS accuracy being location / time dependent [2, 17, 42, 43, 48]. In general, the highest EPE values were observed for readings with the highest position dilution of precision (PDOP) values (Kajang at 0300, Denver at 0600, Cairns at 0000 and Rio Gallegos at 0300), while the lowest EPE values were observed for readings with the lowest PDOP values (Kajang at 0900, Denver at 0300, Cairns at 0300 and Rio Gallegos at 0600).

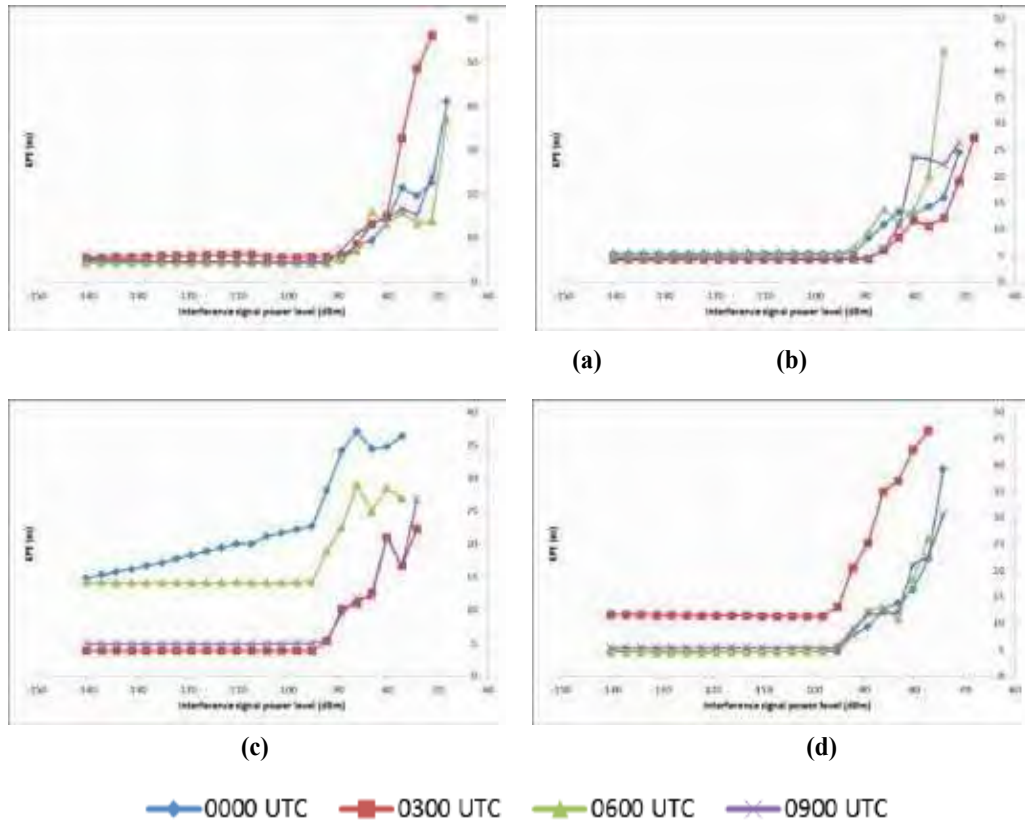


Figure 5: Comparison of recorded EPE values of varying times at: (a) Kajang (b) Denver (c) Cairns (d) Rio Gallegos.

It was observed that the interference signal power levels required to affect the location fixes of the GPS receivers were significantly high as compared to the GPS signal power level as the noise-like C/A code structure, which modulates the L1 signal over a 2 MHz bandwidth, allows for the signal to be received at low levels of interferences. The precision encrypted (P(Y)) code (restricted to the US military) has a more robust structure, modulating the L1 and L2 signals over 20 MHz bandwidths, and has better resistance to interference [2, 42, 43].

The tests conducted in this study employed GPS signal power level of -131 dBm. Usage of lower GPS signal power levels would result in reduced C/N_0 levels and hence, higher rates of increase of probable error values. In addition, the minimum interference signal power levels required to jam the GPS receivers would also be lower.

SIMPLISTIC SPOOFING

Spoofing refers to forging and transmission of false navigation messages in order to manipulate the navigation solutions of GNSS receivers. Spoofing signals can be generated by GNSS simulators, equipment which is available today. The received power

of the spoofing signal should exceed that of the legitimate signal, this being essentially a form of jamming. The receiver then operates with the forged signal as the input and computes the location induced by the spoofer. Spoofing is more sinister than intentional jamming because the targeted receiver cannot detect a spoofing attack and hence, cannot warn users that its navigation solution is untrustworthy. While spoofing is more difficult to achieve than jamming, in many cases, even if a spoofer is not fully successful, it can still create significant errors and jam GNSS signals over large areas [1-5, 29, 49-52].

A number of GNSS simulators have been designed for legal purposes such as user training, system maintenance, vehicle motion simulation and, ironically, as demonstrated in the previous section, RFI operability tests. However, in the wrong hands, these GNSS simulators can be used to conduct illegal spoofing. Furthermore, GNSS simulators can be built with relatively low cost equipment, as demonstrated by Rogers [53], Johnston & Warner [27], Humphreys *et al.* [54], Hanlon *et al.* [55], Nicola *et al.* [56] and Humphreys *et al.* [57]. Hanlon *et al.* [55] and Montgomery *et al.* [58] classified GNSS spoofers into three categories, simplistic, intermediate and sophisticated, depending on their complexity and level of robustness required to the associated counter-spoofing measures.

The study in Dinesh *et al.* [20] was aimed at evaluating GPS performance during simplistic GPS spoofing attacks, whereby spoofing is conducted using a standalone GPS simulator, which at present poses the greatest near-term threat. In this type of spoofing attack, the spoofing signal is not synchronised (in terms of power level, phase, Doppler shift and data content) with the genuine signals received by the target GPS receiver. This could cause the target GPS receiver to temporarily lose position fix lock first, before being taken over by the spoofing signal. Even if the unsynchronised attack could avoid causing loss of lock, it could still cause an abrupt change in the target GPS receiver's time estimate. Rudimentary counter-spoofing measures, such as amplitude and time-of-arrival discrimination, and loss of lock notification, could be used to detect simplistic spoofing attacks. However, many of present civilian GNSS receivers are not equipped with such measures, and hence, are vulnerable to simplistic spoofing attacks [29, 50, 54, 55, 58].

The study was conducted via field evaluations held at the STRIDE's Block B car park (Figure 1) in March - May 2012 using the setup shown in Figure 6. The spoofing signals generated by the GPS simulator were transmitted via a GPS Source A11XLV GPS amplifier [59] and a GPS Source L1P GPS passive antenna [60]. The almanac data for the period of the test was imported into the GPS simulator via its internal GPS receiver. The spoofing signal was set for position of N 2° 58' E 101° 48' 80 m (approximately 1 km from the test area), while the time was set at the simulator's GPS receiver's time. Once a position fix was obtained with the GPS receiver, transmission of the spoofing signal was started at power level of -150 dBm and increased by increments of 3 dBm. The power level at which loss of position fix occurs and the time required for spoofing to take place were noted.

As shown in Table 1, varying minimum spoofing signal power levels and times between position fix lost and spoofing were observed for different dates and times. No

clear correlation was observed between these two parameters and the corresponding PDOP values. The buildings and trees in the vicinity of the test area could have resulted in the actual PDOP values being significantly different from the estimated values. Furthermore, other GNSS error parameters could have affected GPS coverage during the periods of the tests.

The minimum spoofing signal power level required to cause position fix loss and, subsequently, spoofing was dependent on the received GPS signal power during the tests. During periods of poor coverage, when the received GPS signal power levels were lower, the required minimum spoofing signal powers level would be lower, and vice-versa. It was also observed that the minimum spoofing power levels to cause position fix loss were lower as compared to required minimum interference signal power levels observed during the RFI operability tests. This occurred as the difference in synchronisation between the genuine and spoofing GPS signals forced the target GPS receiver to recompute its position fix at relatively lower spoofing signal power levels.

At the minimum spoofing power level, the time between position fix loss and spoofing was dependent on the level of synchronisation, in terms of power level, phase, Doppler shift and data content, between the genuine and spoofing GPS signals. When the both signals were closely synchronised, spoofing occurs very quickly. However, when the signals were largely unsynchronised, position fix loss occurs for a longer period of time as the target GPS receiver has to recompute its position fix.

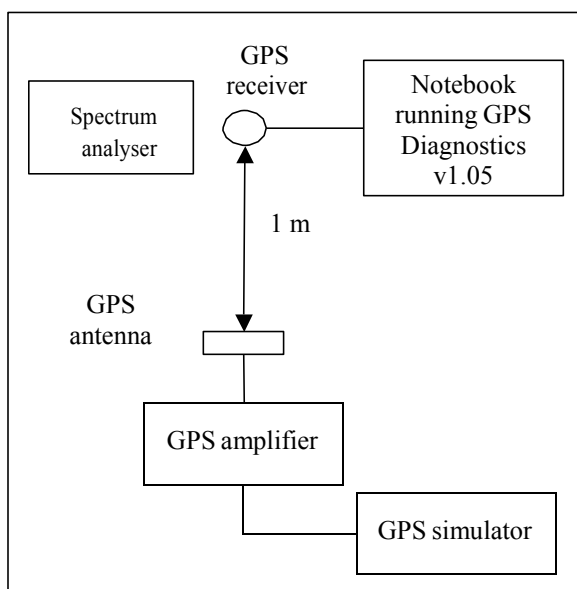


Figure 6: The test setup employed.

Reading	Date (2012)	UTC Time	PDOP	Minimum spoofing signal power level (dBm)	Time between position fix loss and spoofing (s)
1	29 March	0104	1.72	-108	11
2	29 March	0240	1.72	-123	3
3	3 April	0105	1.62	-114	91
4	3 April	0234	1.72	-120	59
5	2 May	0108	1.47	-111	156
6	2 May	0244	1.27	-111	52

Table 1: The effect of spoofing attacks on the evaluated GPS receiver.

As shown in Figure 7, it was observed that, similar with the RFI operability tests, as the spoofing signal power level was increased, EPE values increased due to decreasing C/N_0 levels. For all the readings, the highest EPE values occurred at the minimum spoofing power levels. After spoofing took place, the EPE values reduced to levels that were lower as compared to prior to transmission of the spoofing signal. This occurred as at this point, the spoofing signal power levels were relatively large, resulting in high C/N_0 levels and hence, improved accuracy.

Similar with the RFI operability test conducted via field evaluations, varying EPE patterns were observed for the each of the readings, due changes of GPS satellite constellation with time and variation in other GNSS error parameters. This highlights the importance of conducting such tests in a controlled environment, using a GNSS simulator the source of genuine GNSS signals as opposed to live GNSS signals.

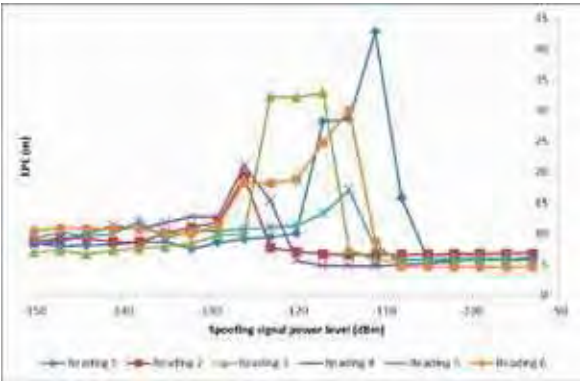


Figure 7: The effect of spoofing on GPS EPE.

STATIC MULTIPATH

Multipath refers to the distortion of direct line-of-sight (LOS) GNSS signals by localised reflected / diffracted signals, caused by objects such as trees, buildings, etc. As the multipath signals travel additional distances, they are delayed relative to the LOS

signals, resulting in range measurements to the GNSS satellites being severely degraded. The multipath signals' paths are dependent on the reflecting surfaces and satellites' positions. As the satellites move with time, the multipath effect is also a variable of time. Multipath error is dependent on the architecture of GNSS receiver, in terms of the different ways the receivers deal with the signals [61-66].

There are two categories of multipath; diffuse and specular. In diffuse multipath, GNSS signals are incident on a rough surface and the reflected signals are scattered in multiple directions. It is generally uncorrelated with time and noise-like in behaviour. In specular multipath, GNSS signals are reflected from a relatively smooth surface, resulting in systematic errors in range measurement [62, 64, 66, 67]. Multipath can also be categorised in terms of motion; static and dynamic. For a stationary GNSS receiver, the multipath geometry changes slowly, making multipath parameters essentially constant for up to several minutes. In mobile applications, the GNSS receiver can experience rapid fluctuations of multipath parameters which are hard to predict [62, 66, 69, 70].

The study in Dinesh *et al.* [21, 22] was aimed at evaluating the effect of static multipath on GPS performance via GPS simulation. The study was conducted based on important characteristics of GPS signal obstruction and multipath [61-66]:

- i) Physical obstructions prevent certain GPS signals from reaching the GPS receiver, causing a reduction in number of visible GPS satellites
- ii) Multipath signals that are reflected off physical obstructions have lower power levels as compared to unaffected GPS signals
- iii) The effects of GPS signal obstruction and multipath can be correlated with GPS satellite elevation, with the effects being at a maximum during low elevations and improving for higher elevations.

The tests were conducted in STRIDE's mini-anechoic chamber [71] using the setup shown in Figure 8. While the GPS simulator does not provide specific multipath simulation, it does allow for selection of GPS satellites and signal power levels. Based on this, the study was conducted by assuming various conditions of physical obstructions and multipath signals (Table 2). It was assumed that each multipath signal underwent a reduction in power level of 15 dBm.

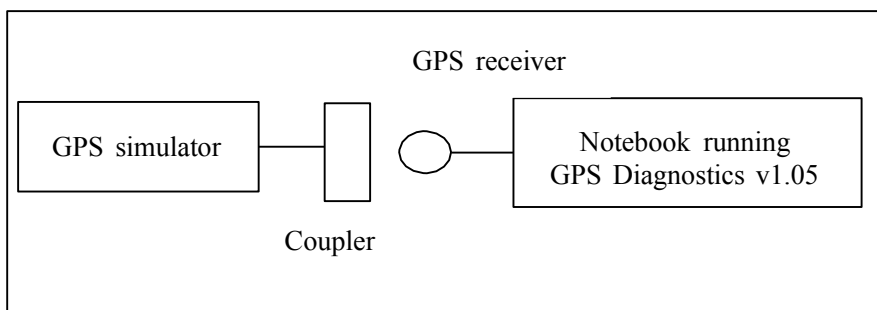


Figure 8: The test setup employed.

Reading	Scenario	Number of Visible Satellites	Number of Multipath Signals
1	No physical obstructions or multipath, and hence, the full range of visible satellites are available.	8-10	0
2	Physical obstructions result in only four GPS satellites, with the highest elevations, being visible, but multipath does not occur.	4	0
3	Physical obstructions result in only four GPS satellites, with the highest elevations, being visible. Of the four available GPS signals, the signal from the satellite with the lowest elevation undergoes multipath.	4	1
4	Physical obstructions result in only four GPS satellites, with the highest elevations, being visible. Of the four available GPS signals, two signals from the satellites with the lowest elevations undergo multipath.	4	2
5	Physical obstructions result in only four GPS satellites, with the highest elevations, being visible. Of the four available GPS signals, three signals from the satellites with the lowest elevations undergo multipath.	4	3
6	Physical obstructions result in only four GPS satellites, with the highest elevations, being visible, with all the signals undergoing multipath.	4	4

Table 2: Test scenarios used for the study.

GPS satellites return to the original position with respect to the earth at every two GPS satellite orbital passes of approximately 23 h, 56 min [2, 72], and hence, GPS performance is repeatable for that period. The repeatability of GPS performance with respect to GPS satellite orbital passes was demonstrated in Dinesh *et al.* [22], whereby GPS performance was evaluated for four consecutive days (18-21 June 2013) at UTC times of 0000, 0600, 1200 and 1800. As shown in Figure 9, the EPE profiles for all four days were similar, with the profile for each day shifted by approximately 4 min earlier from the previous day, corresponding to the difference between an earth day (24 h) and two GPS satellite orbital passes (23 h, 56 min).

As shown in Figure 10, the decrease in number of visible satellites due to physical obstructions and increase in number of multipath signals caused increase in EPE values due to decreasing C/N_0 levels. The repeatability of static multipath for every two GPS satellite orbital passes (approximately 23 h, 56 min) can be used to build a history of multipath occurrences over time, which can then be used to generate multipath corrections for stationary sites.

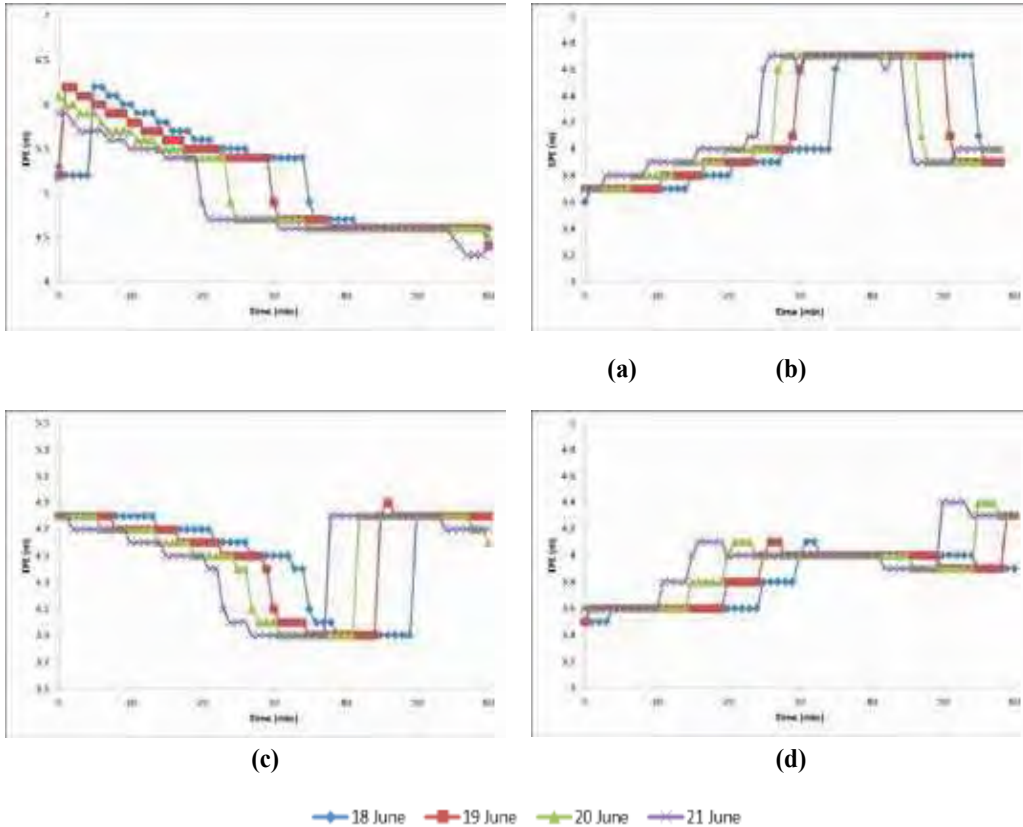
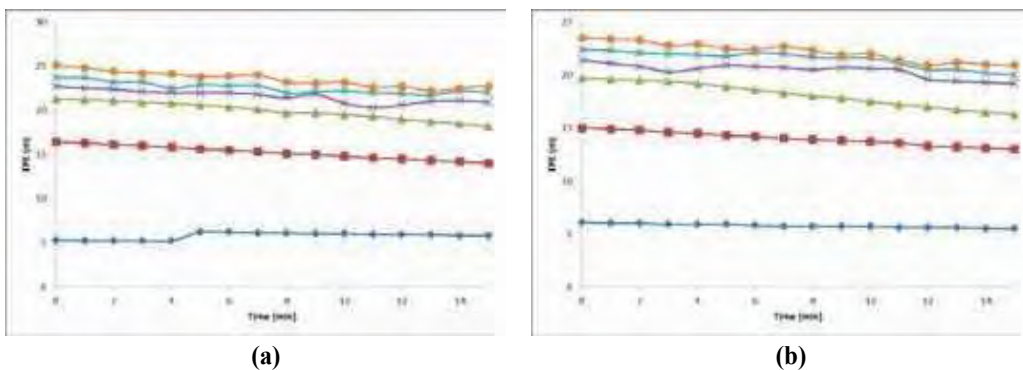


Figure 9: Recorded EPE values for UTC times of: (a) 0000 (b) 0600 (c) 1200 (d) 1800.



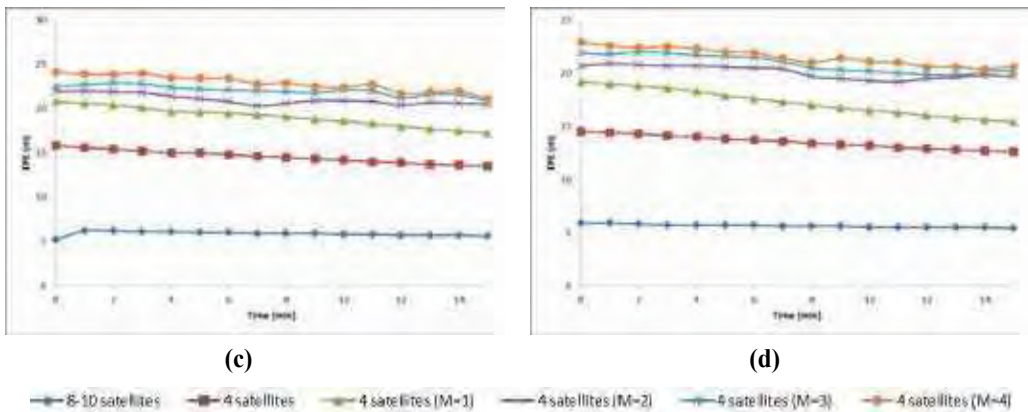


Figure 10: Recorded EPE values for multipath simulations at UTC 0000 on (a) 18, (b) 19, (c) 20 and (d) 21 June 2013. M is the number of multipath signals.

FUTURE RESEARCH DIRECTION

The findings presented thus far are based on the capabilities of STRIDE with the available resources. The work conducted has been limited to the GPS L1 C/A signal, field evaluations for simplistic spoofing, and GPS simulation for only static multipath. STRIDE's future research direction in this area is for the extension of the work for the evaluation of a larger group of vulnerabilities, in particular intermediate spoofing, dynamic multipath, and ionospheric and tropospheric delays, for GPS and other GNSS systems, in particular GLONASS. This research direction would require the procurement of a more advanced GNSS simulator than the one presently available in STRIDE.

Intermediate Spoofing

Intermediate spoofing attacks make use of portable receiver-spoofers, which can be made small enough for inconspicuous placement near the target receiver's antenna. The receiver component draws in genuine GNSS signals to estimate its own position, velocity and time. Based on these estimates, the receiver-spoofers then generates counterfeit signals and generally orchestrates the spoofing attack. The portable receiver-spoofers could even be placed somewhat distant from the target receiver if the target is static and its position relative to the receiver-spoofers has been pre-surveyed. While there are no commercially available portable receiver-spoofers devices, advances in radio frequency (RF) software-defined technologies could see a proliferation of such devices [51, 52, 55, 57, 58]. While intermediate spoofing has not yet emerged as a major threat, it represents a growing threat, with a number of successful spoofing experiments on GNSS receivers being conducted, whereby the respective receivers failed to detect the presence of such attacks [50, 54, 73-76]. In addition, recent studies have demonstrated the vulnerabilities of GNSS-based systems for unmanned aerial vehicle (UAV) [77] and ship [78] navigation, and power grid time synchronisation to spoofing [77].

Dynamic Multipath

Static multipath can either be avoided by choosing sites with a clear view of the sky, without any obstructions, or be modelled based on its repeatability for every two GPS satellite orbital passes (approximately 23 h, 56 min). On the other hand, dynamic multipath presents more of a challenge as it can cause the GNSS receiver to experience rapid fluctuations of multipath parameters which are hard to predict. The evaluation of the effects of dynamic multipath has received increasing attention from the automotive and defence industries in order to provide increased GNSS reliability and accuracy in areas of highly dynamic multipath, such as dense urban areas, canyons and jungles. The modelling of dynamic multipath via GNSS simulation would require the development of 3D environment models for predicted satellite visibilities and multipath situationx, which can then be used for prediction of multipath corrections [69, 70, 79-82].

Ionospheric Delay

The ionosphere is an ionised region of the upper atmosphere that extends from approximately 50 to 1,000 km in altitude, with the greatest concentration of free electrons being in the region between 250 to 400 km (known as the F-region). It is produced by ionising radiation from the sun in the form of extreme ultraviolet and soft X-ray portions, with additional contributions from electron precipitation in the auroral regions and ionisation by solar energetic particles in the polar cap regions. The solar photo-ionising radiation is attenuated by the atmosphere, with the more energetic radiation penetrating further into the atmosphere [7, 83-86].

The state of the ionosphere is described by the total electron content (TEC), which is the total number of electrons present in the signal path between the GNSS satellite and receiver. TEC is measured in units of electrons/m², where 10¹⁶ electrons/m² = 1 TEC unit (TECU). The pattern of TEC values is characterised by daily, seasonal and 11-year periodicities which are related to solar activity. The rotation of the Earth results in diurnal variations of TEC values. For example, in the night, free electrons have a tendency to recombine with ions, resulting in reduced TEC (Klobuchar, 1991; Nicola Crocetto *et al.*, 2008; RAE, 2013). The current 11-year solar cycle (Cycle 24) is expected to peak in 2013-2014, with expected strong storms and scintillations that can cause severe GNSS disruptions for several hours [7, 85, 87, 89].

The ionosphere can be conventionally divided into four latitudinal regions; equatorial, mid-latitude, auroral and polar cap. The equatorial region (under which Malaysia is) is the most variable, both spatially and temporally. The ionospheric plasma is conductive and, therefore, interacts with electromagnetic waves. Low-frequency signals (30 MHz and below) are reflected, while higher frequency signals pass through the ionosphere but are refracted and delayed. For GNSS signals, ionospheric delay, which results in range errors, is a function of TEC and frequency of the propagated signals. For dual-frequency GNSS receivers (e.g., L1 C/A and semi-codeless L2 P(Y) for GPS), as

ionospheric delay is frequency-dependent, an ionosphere-free combination can be formed to eliminate this delay. However, for single-frequency GNSS receivers, this form of correction is not applicable (7, 83-86].

Tropospheric Delay

The troposphere is the lowest layer of the atmosphere, extending to approximately 9 km over the poles and 16 km over the equator. Even though gradually decreasing quantities of dry gases can extend several hundred kilometres in altitude, all of the water vapour and the bulk of the dry gases are found in the troposphere. It is the neutral, non-ionised part of the atmosphere and is a non-dispersive medium with respect to radio waves of up to frequencies of 15 GHz, and hence, the propagation is frequency independent [89-93].

Due to the variability of refractive index within the troposphere, the propagation speeds of GNSS signals are equally reduced, resulting in tropospheric delay. It consists of hydrostatic (dry) and wet components, which contribute to 90% and 10% of the total effect respectively. The hydrostatic component has a smooth, slow time-varying characteristic due to its dependence on variations in surface air pressure, and hence, it can be modelled and removed using a surface model (including pressure, temperature and humidity). Although the wet component is much smaller, it is more difficult to model accurately due to the diversity of water vapour distribution [89-93].

CONCLUSION

This paper has provided a review of research work on the evaluation of GNSS vulnerabilities that has been conducted in STRIDE using available resources and capabilities, and the future research direction. On the whole, while any GNSS receiver evaluation should encompass field tests, such tests have limitations in terms on anticipating and controlling the various error parameters as well as inability to repeat the test scenarios. In contrast, GNSS simulation provides advantages of repeatability, allowing for specific test scenarios to be applied repeatedly with varying user-controlled parameters. In addition, these evaluations are conducted in tightly controlled environments to eliminate factors that could influence the repeatability of the tests. Hence, a complete evaluation of GNSS receivers should encompass both field tests and GNSS simulation.

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REFERENCES AND ENDNOTES

- [1] Volpe, Vulnerability Assessment of the Transport Infrastructure Relying on the Global Positioning System, John A. Volpe National Transportation Systems Center, Department of Transport, Washington DC, 2001.
- [2] Kaplan, E.D. and Hegarty, C.J., *Understanding GPS: Principles and Applications*, Artech House, Norwood, Massachusetts, 2006.
- [3] Dinesh, S., Vulnerabilities of civilian Global Navigation Satellite Systems (GNSS) signals: A review, *Defence S&T Tech. Bull.*, **2**: 100-114, 2009.
- [4] Dinesh, S., Vulnerabilities of Global Navigation Satellite Systems (GNSS) signals to jamming and spoofing, GIS Day 2011, 17 March 2011, Universiti Putra Malaysia (UPM), Serdang, Selangor, 2011.
- [5] Last, D., GNSS: The present imperfect, *Inside GNSS*, **5**: 60-64, 2010.
- [6] Schwartz, N., The United States as an aerospace nation: Challenges and opportunities. Tuft University Institute for Foreign Policy Analysis (IFPA) Fletcher Conference on National Security Strategy and Policy, 20-21 January 2010, The Ronald Reagan Building and International Trade Center, Washington DC, 2010.
- [7] Royal Academy of Engineering (RAE), *Global Navigation Space Systems: Reliance and Vulnerabilities*, Royal Academy of Engineering, London, 2011.
- [8] Schue, C., The challenges of realizing a global navigation capability, ION International Technical Meeting (ITM) 2012, 30 January - 1 February 2012, Newport Beach, California, 2012.
- [9] Institute of Navigation (ION), *Institute of Navigation Standard 101 (ION STD 101): Recommended Test Procedures for GPS Receivers*, Revision C. Institute of Navigation (ION), Manassas, Virginia, 1997.
- [10] Aloï, D.N., Alsliety, M., and Akos, D.M., A methodology for the evaluation of a GPS receiver performance in telematics applications, *IEEE T. Instrum. Meas.*, **56**: 11-24, 2011.

- [11] Dinesh, S., Wan Mustafa, W.H., Mohd Faudzi, M., Kamarulzaman, M., Nor Irza Shakhira, B., Siti Robiah, A., Norhayaty, Z., Aliah, I., Lim, B.T., Arumugam, P., Zainal Fitry, M.A., Mohd Rizal, A.K., Azlina, B. and Mohd Hasrol, H.M.Y., The advantages of Global Navigation Satellite Systems (GNSS) receiver evaluation using GNSS simulators', *BUDI*, **vol. 2009**: 6-10, 2009.
- [12] Petrovski, I., Townsend, B. and Ebinuma, T., Testing multi-GNSS equipment: Systems, simulators and the production pyramid, *Inside GNSS*, **5**: 52-61, 2010.
- [13] Dixon, C., Smith, S., Hart, A., Keast, R., Lithgow, S., Grant, A., Šafář, J., Shaw, C., Hill, S. and Beatty, C., Specification and testing of GNSS vulnerabilities, *European Navigation Conference 2013*, 23 -25 April 2013, Vienna.
- [14] Kou, Y. and Zhang, H., Verification testing of a multi-GNSS RF signal simulator. *Inside GNSS*, **5**: 52-61, 2011.
- [15] Dinesh, S., Wan Mustafa, W.H., Mohd Faudzi, M., Kamarulzaman, M., Nor Irza Shakhira, B., Siti Robiah, A., Norhayaty, Z., Aliah, I., Lim, B.T., Arumugam, P., Zainal Fitry, M.A., Mohd Rizal, A.K., Azlina, B. and Mohd Hasrol, H.M.Y., Evaluation of the effect of radio frequency interference (RFI) on Global Positioning System (GPS) receivers. *Defence S&T Tech. Bull.*, **2**: 115-129, 2009.
- [16] Dinesh, S., Wan Mustafa, W.H., Mohd Faudzi, M., Kamarulzaman, M., Hasniza, H., Nor Irza Shakhira, B., Siti Robiah, A., Shalini, S., Jamilah, J., Aliah, I., Lim, B.T., Zainal Fitry, M.A., Mohd Rizal, A.K., Azlina, B. and Mohd Hasrol, H.M.Y., Evaluation of power levels required by interference signals at various distances to jam the Global Positioning System (GPS) L1 coarse acquisition (C/A) signal, *Defence S&T Tech. Bull.*, **3**: 14-28, 2010.
- [17] Dinesh, S., Wan Mustafa, W.H., Mohd Faudzi, M., Kamarulzaman, M., Hasniza, H., Nor Irza Shakhira, B., Siti Robiah, A., Shalini, S., Jamilah, J., Aliah, I., Lim, B.T., Zainal Fitry, M.A., Mohd Rizal, A.K., Azlina, B., and Mohd Hasrol, H.M.Y., Evaluation of the effect of radio frequency interference (RFI) on Global Positioning System (GPS) accuracy, *Defence S&T Tech. Bull.*, **3**: 100-118, 2010.
- [18] Dinesh, S., Mohd Faudzi, M., Rafidah, M., Nor Irza Shakhira, B., Siti Robiah, A., Shalini, S., Aliah, I., Lim, B.T., Zainal Fitry, M.A., Mohd. Rizal, A.K. and Mohd Hasrol, H.M.Y., Evaluation of the effect of radio frequency interference (RFI) on the Global Positioning System (GPS) L1 coarse acquisition (C/A) signal via GPS simulation, *International Symposium & Exhibition on Geoinformation 2012 (ISG2012)*, 25-26 September 2012, Hotel Istana Kuala Lumpur City Centre, Kuala Lumpur, 2012
- [19] Dinesh, S., Mohd Faudzi, M. and Zainal Fitry, M.A., Evaluation of the effect of radio frequency interference (RFI) on Global Positioning System (GPS) accuracy via GPS simulation, *Defence Sci. J.*, **62**: 338-347, 2013.

- [20] Dinesh, S., Mohd Faudzi, M., Nor Irza Shakhira, B., Siti Robiah, A., Shalini, S., Aliah, I., Lim, B.T., Zainal Fitry, M.A., Mohd. Rizal, A.K. and Mohd Hasrol, H.M.Y., Evaluation of Global Positioning System (GPS) performance during simplistic GPS spoofing attacks, *Defence S&T Tech. Bull.*, **5**: 99-113.
- [21] Dinesh, S., Shalini, S., Zainal Fitry, M.A. and Siti Zainun, A., Evaluation of the effect of multipath on Global Positioning System (GPS) performance via GPS simulation, *Defence S&T Tech. Bull.*, **6**: 62-74, 2013.
- [22] Dinesh, S., Shalini, S., Zainal Fitry, M.A. and Siti Zainun, A., Evaluation of the repeatability of Global Positioning System (GPS) performance with respect to GPS satellite orbital passes, *Defence S&T Tech. Bull.*, In press.
- [23] Department of Army (DOA), Electronic Warfare in Operations, Army Field Manual 3-36, Department of Army, Washington D.C., 2009.
- [24] Joint Chief of Staffs (JCS), Geospatial Electronic Warfare, Joint Publication 3-13.1, Joint Chief of Staffs, USA, 2007.
- [27] Poisel, A.R., Introduction to Communication Electronic Warfare Systems, Artech House, Boston, 2002.
- [28] Adams, T.K., GPS vulnerabilities, *Mil. Rev.*, **1**: 10-16, 2001.
- [29] Johnston, R.G. and Warner, J.S., Think GPS offers high security? Think again!, Business Contingency Planning Conference, Nevada, 23-27 May 2004, Las Vegas, Nevada, 2004.
- [30] Papadimitratos, P. and Jovanovic, A., Protection and fundamental vulnerability of GNSS. International Workshop on Satellite and Space Communications 2008 (IWSSC'08), France, 1-3 October 2008, Institut Supérieur de l'Aéronautique et de l'Espace (ISAE), Toulouse, France, 2008.
- [31] Jones, M., The civilian battlefield: Protecting GNSS receivers from interference and jamming. *Inside GNSS*, **6**: 40-49.
- [32] Grant, A., Williams, P., Shaw, G., De Voy, M. and Ward, N., Availability and Safety: Many maritime users today believe that GPS will always be available. This is simply not the case, Available from: <http://www.gpsworld.com/transportation/marine/availability-and-safety-12038> (Accessed on 22 September 2011).
- [33] Pullen, S. and Gao, G.X., GNSS jamming in the name of privacy: Potential threat to GPS aviation, *Inside GNSS*, **7**: 34-43, 2012.
- [34] Williams, S.F., Radar'd Out: GPS Vulnerable to High-Power Microwaves., Available from: <http://mg.gpsworld.com/gpsmg/article/articleDetail.jsp?id=320030> (Accessed on 4 November 2009).
- [35] Jewell, J., GPS Insights. Available from: <http://www.gpsworld.com/defense/gps-insights-april-2007-8428> (Accessed 4 November 2009).

- [36] Last, D., Grant, A., & Ward, N., Demonstrating the effects of GPS jamming on marine navigation. 3rd GNSS Vulnerabilities and Solutions Conference, Croatia, 5-8 September 2010, Baska, Croatia, 2010.
- [37] Chosunilbo, N.Korea Jams GPS to Disrupt S.Korea-U.S. Drills, Available from: http://english.chosun.com/site/data/html_dir/2011/03/07/2011030700567.html (Accessed on 4 November 2011).
- [38] Ahmad Norhisyam, I., Dinesh, S. and Azman, M.S., Effect of radio frequency interference (RFI) on the performance of Global Positioning System (GPS) static observations, *9th IEEE Colloquium on Signal Processing and its Applications (CSPA 2013)*, 8-10 March 2013, Kuala Lumpur, 2013.
- [39] Ahmad Norhisyam, I., Dinesh, S. and Azman, M.S., Effect of radio frequency interference (RFI) on the precision of GPS relative positioning, *8th International Symposium on Digital Earth 2013 (ISDE 2013)*, 26-29 August 2013, Kuching, Sarawak, 2013.
- [40] Advantest, U3741/3751 Spectrum Analyzers, Advantest Corporation, Chiyoda-ku, Tokyo, 2009.
- [41] IFR, 2023A/B, 2025 Signal Generators. IFR Americas Inc., Wichita, Kansas, 1999.
- [42] Aaronia, Precompliance Test Antenna Series HyperLOG® 60xxx: Span 680 MHz to 18 GHz, Aaronia AG, Strickscheid, Germany, 2009.
- [43] CNET, GPSDiag 1.0, Available from: http://download.cnet.com/GPSDiag/3000-2130_4-4951103.html (Assessed on 6 March 2010).
- [44] Department of Defence (DOD), Global Positioning System Standard Positioning Service Performance Standard, Command, Control, Communications, and Intelligence, Department of Defence (DOD), Washington DC, 2001.
- [45] US Army Corps of Engineers (USACE), NAVSTAR Global Positioning System Surveying Engineer Manual. EM 1110-1-1003, US Army Corps of Engineers (USACE), Washington DC, 2003.
- [46] Petovello, M., Carrier-to-noise density and AI for INS / GPS integration, *Inside GNSS*, **4**, 20-29, 2009.
- [47] Aeroflex, Avionics GPSG-1000 GPS / Galileo Portable Positional Simulator, Aeroflex Inc., Plainview, New York, 2010.
- [48] A. Faridz, A.G., M. Razali, M.Y. and W. Salwa, W.H., STRIDE's 3 meters EMC semi-anechoic chamber: Design considerations and compliance to standards, *2010 IEEE Asia-Pacific Conference on Applied Electromagnetics (APACE 2010)*, 9-11 November 2010, Tiara Beach Resort, Port Dickson, Negeri Sembilan, 2010.
- [49] US Coast Guard (USCG). GPS NANUs, Almanacs, & Ops Advisories. Available from: <http://www.navcen.uscg.gov/?pageName=gpsAlmanacs> (Assessed on 6 January 2012).

- [50] Huihui, W., Xingqun, Z. and Yanhua, Z., Geometric dilution of precision for GPS single-point positioning based on four satellites, *J. Sys. Eng. Electr.*, **19**: 1058-1063, 2008.
- [51] Humphreys, T.E., Psiaki, M.L. and Kintner, P.M. , GPS Spoofing Threat, Available online at: http://www.telecomasia.net/article.php?id_article=12288&page=4 (Accessed on 4 November 2009).
- [52] Wesson, K., Shephard, D. & Humphreys, T.E.(2012). *Straight Talk on Anti-Spoofing*. Available online at: <http://www.gpsworld.com/GNSS%20System/Signal%20Processing/straight-talk-anti-spoofing-12471> (Accessed on 10 January 2012).
- [53] Scott, L.S., Spoofs, proofs & jamming: Towards a sound national policy for civil location and time assurance, *Inside GNSS*, **7**: 42-53, 2012.
- [54] Dinesh, S., Global Navigation Satellite System (GNSS) spoofing: A review of growing risks and mitigation steps, *Defence S&T Tech. Bull.*, **6**: 42-61.
- [55] Rogers, C., Development of a low cost PC controlled GPS satellite signal simulator, *Proceedings of the 15th Biennial Guidance Test Symposium*, Holloman AFB, New Mexico, 1991.
- [56] Humphreys, T.E., Ledvina, B.M., Psiaki, M.L. and Kintner, J., Assessing the spoofing threat: Development of a portable GPS civilian spoofer, *ION GNSS 2008*, 16-19 September 2008, *Savannah International Convention Center, Savannah, Georgia*, 2008.
- [57] Hanlon, B.O., Ledvina, B., Psiaki, M.L., Kintner. P.M. & Humphreys, T.E., Assessing the Spoofing Threat, Available online at: http://www.gpsworld.com/defence/security-surveillance/assessing-spoofing-threat-3171?page_id=1 (Accessed on: 4 November 2009).
- [58] Nicola, M., Musumeci, M., Pini, M., Fantino, M. and Mulassano, P., Design of a GNSS spoofing devicebased on a GPS/Galileo software receiver for the development of robust countermeasures. *European Navigation Conference 2010 (ENC 2010)*, 19-21 October 2010, Braunschweig, Germany, 2010.
- [59] Humphreys, T., The GPS dot and its discontents: Privacy vs GNSS integrity, *Inside GNSS*, **7**: 44-48, 2012.
- [60] Montgomery, P., Humphreys, T.E. and Ledvina, B.M., A multi-antenna defence receiver-autonomous GPS spoofing detection, *Inside GNSS*, **4**: 40-46, 2009.
- [61] GPS Source, L1P GPS Antenna. GPS Source, GPS Source Inc., Pueblo West, Colorado, 2006.
- [62] GPS Source, A11XLV Digital Variable Gain GPS Amplifier, GPS Source Inc., Pueblo West, Colorado, 2007.

- [63] Gerdan, G.P., Coombe, L.J. & Takac, F., *The Effects of RF Interference, Multipath and Signal Obstruction on the GPS Observables*, Department of Land Information, Royal Melbourne Institute of Technology (RMIT), Melbourne, Victoria, 1995.
- [64] Weill, L.R., Conquering multipath: The GPS accuracy battle, *GPS World*, **April 1997**: 59-66, 1997.
- [65] Hannah, B., Modelling and Simulation of GPS Multipath Propagation, PhD Dissertation, Queensland University of Technology, Brisbane, Queensland, 2001.
- [66] Kos, T., Markezic, I. and Pokrajcic, J., Effects of multipath reception on GPS positioning performance, *52nd International Symposium ELMAR-2010*, 15-17 September 2010, Zadar, Croatia, 2010.
- [67] Mekik, C. and Can. O., Multipath effects on RTK GPS and a case study, *2010 International Symposium on GPS / GNSS*, 26-28 October 2010, Taipei, Taiwan, 2010.
- [68] Matsushita, T. and Tanaka, T., Study on improving the accuracy of satellite measurement in urban areas. *T. Soc. Instrumen. Control Eng.*, **48**: 73-77, 2012.
- [69] Bilich, A. and Larson, K.M., Mapping the GPS multipath environment using the signal-to-noise ratio (SNR), *Radio Sci.*, **42**: RS6003, 2007.
- [70] Yi, T.H., Li, H.N. and Gu, M., Effect of different construction materials on propagation of GPS monitoring signals. *Measurement*, **45**: 1126-1139, 2012.
- [71] Nedic, S., On GPS signal multipath modelling in dynamic environments, *2009 IEEE Aerospace Conference*, 7-14 March 2009, Big Sky, Montana, 2009.
- [72] Obst, M., Bauer, S. and Wanielik, G., Urban multipath detection and mitigation with dynamic 3D maps for reliable land vehicle localization, *2012 IEEE/ION Position Location and Navigation Symposium (PLANS)*, 23-26 April 2012, Myrtle Beach, South Carolina, 2012.
- [73] Kamarulzaman, M., Technical Specification for STRIDE's Mini-Anechoic Chamber, Science & Technology Research Institute for Defence (STRIDE), Ministry of Defence, Malaysia, 2010.
- [74] Calais, E., Satellite Orbits, Purdue University, West Lafayette, Indiana, 2013.
- [75] Motella, B., Pini, M., Fantino, M., Mulassano, P., Nicola, M., Fortuny-Guasch, J., Wildemeersch, M. and Symeonidis, D., Performance assessment of low cost GPS receivers under civilian spoofing attacks, *2010 5th ESA Workshop on Satellite Navigation Technologies and European Workshop on GNSS Signals and Signal Processing (NAVITEC)*, 8-10 December 2010, Noordwijk, 2010.
- [76] Cavaleri, A., Motella, B., Pini, M. and Fantino, M., Detection of spoofed GPS signals at code and carrier tracking level, *2010 5th ESA Workshop on Satellite Navigation Technologies and European Workshop on GNSS Signals and Signal Processing (NAVITEC)*, 8-10 December 2010, Noordwijk, 2010.

- [77] Tippenhauer, N.O., Pöpper, C., Rasmussen, K.B. and Čapkun, S. (2011). On the requirements for successful GPS spoofing attacks, *ACM Conference on Computer and Communications Security (CCS)*, 17-21 October 2011, Chicago, Illinois.
- [78] Shepard, D.P. and Humphreys, T.E., Characterization of receiver response to spoofing attacks, *ION GNSS 2011*, 19-23 September 2011, Portland, 2011.
- [79] Shepard, D.P., Bhatti, J.A. & Humphreys, T.E., Evaluation of smart grid and civilian UAV vulnerability to GPS spoofing attacks. *ION GNSS 2012*, 17-21 September 2012, Nashville Convention Center, Nashville, Tennessee, 2012.
- [80] Divis, A.D., GPS Spoofing Experiment Knocks Ship Off Course: University of Texas at Austin Team Repeats Spoofing Demonstration with a Superyacht, Available online at: <http://www.insidegnss.com/node/3659> (Accessed on 1 September 2013).
- [81] Eissfeller, B. and Winkel, J.O., GPS dynamic multipath analysis in urban areas, *ION GPS 1996*, 17-20 September 1996, Kansas City, Missouri.
- [82] Bauer, S., Obst, M. and Wanielik, G., 3D environment modeling for GPS multipath detection in urban areas, *9th International Multi-Conference on Systems, Signals and Devices (SSD 2012)*, 20-23 March 2012, Chemnitz, 2012.
- [83] Peyraud, S., B'etaille, D., Renault, S., Ortiz, M., Mougél, F., Meizel, D. and Peyret, F., About non-line-of-sight satellite detection and exclusion in a 3D map-aided localization algorithm, *Sensors*, **13**: 829-847, 2013.
- [84] Costa, E., Simulation of the effects of different urban environments on GPS performance using digital elevation models and building databases, *IEEE Trans. Intell. Transport. Sys.*, **12**: 1-11, 2011.
- [85] Klobuchar, J.A. (1991). Ionospheric effects on GPS. *GPS World*, **April 1991**.
- [86] Nicola Crocetto, F., Pingue, S., Salvatore Ponte, G. and Sepe, V., Ionospheric error analysis in GPS measurements, *Annals of Geophysics*, **51**: 585-595, 2008.
- [87] Satellite-Based Augmentation Systems Ionospheric Working Group (SBAS IWG), Effect of Ionospheric Scintillations on GNSS: A White Paper, Satellite-Based Augmentation Systems Ionospheric Working Group (SBAS IWG), Stanford University, Stanford, California, 2010.
- [88] Hernández-Pajares, M., Juan, J. M., Sanz, J., Aragón-Àngel, A., García-Rigo, A. Salazar, D. and Escudero, M., The ionosphere effect: Effects, GPS modelling and the benefits for space geodetic techniques, *J. Geodesy*, **85**: 887-907, 2011.
- [89] Jensen, B.O. and Mitchell, J., GNSS and the Ionosphere: What's in Store for the Next Solar Maximum? Available online at: <http://www.gpsworld.com/gnss-system/signal-processing /innovation-gnss-and-ionosphere-11036> (Accessed on 18 February 2011).
- [90] Lockwood, M., Owens, M.J., Barnard, L., Davis, C.J. and Thomas, S., Solar cycle 24: What is the Sun up to? *Astron. Geophy.*, **53**: 9-15, 2012.

- [91] Dodson, A.H., Shardlow, P.J., Hubbard, L.C.M., Elgered, G. and Jarlemark, P.O.J., Wet tropospheric effects on precise relative GPS height determination, *J. Geodesy*, **70**: 188-202, 1996.
- [92] Kleijer, F., *Troposphere Modeling and Filtering for Precise GPS Leveling*, Netherlands Geodetic Commission, Delft, 2004.
- [93] Cove, K., Improvement in GPS Tropospheric Delay Estimation With Numerical Weather Prediction, Masters dissertation, University of New Brunswick, Fredericton, New Brunswick, 2005.
- [94] Dodo, J.D. and Idowu, T.O., Regional assessment of the GPS tropospheric delay models on the African GNSS network, *J. Emerg. Trends Eng. Appl. Sci.*, **1**: 113-121, 2010.
- [95] Sakidin, H. and Chuan, T.C., Transformation of Neill Mapping Function for GPS tropospheric delay, *J. Eng. Tech.*, **3**: 1-11, 2012.

A REVIEW ON MOTIVATIONAL FACTORS IN THE MILITARY

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ABSTRACT

Motivation has been a keen interest by most military forces as it is a crucial element in managing soldiers for success in military missions. This article examines motivational factors according to the complexity of war and conflicts, and the factors that surround the emphasis on motivation. Relevant literatures were reviewed to compare motivational factors among military personnel during World War II, Vietnam War and conflicts in the twentieth century. The comparison highlights that internal factors took a higher precedence during the World War II and Vietnam War as compared to the twentieth century where external factors played a higher role in motivation. The literature review includes cohesion from organizational culture and social behavior perspectives. The study concludes that the fundamental factors for motivation lie on individual, social and organization perspective that forms the basis for unity and cohesion among members to fulfill the obligation and to achieve the targeted mission at different levels of the military hierarchy. The review provides an overview of changes in motivational factors in a combat environment and suggest for further exploration in non-combat situations.

Keywords: *Motivation; motivational factors; internal factors; external factors; cohesion; military*

INTRODUCTION

Motivation has been always been an important factor in any organization as it is the essence of influencing people who are the prime assets of an organization to deliver their best output that relates to organizational performance. In corporate or military organization, people are important as Drucker advocates that “people determine the performance capacity of an organization” [1]. In the era of competitiveness, where globalization and borderless societies have become important for competitive advantage, motivating human resource effectively towards productivity must be adhered to achieve organizational excellence. Likewise, in the military organization, motivation is critical in enabling military forces to win battles or conflicts [2]. Pfeffer [3] also assert that it is essential to manage employees in the organization effectively as people are the key source for organizational long-term success to achieve organizational goals. As influencing employees towards organizational goals is the leading function, motivation becomes a pertinent element of that function [4]. The importance of motivation is also supported by Steward [5] as he cites John Harvey-Jones, the Chief Executive of ICI who said,

“the real purpose of management is motivation of a group to use its energy to achieve objectives”. Dessler [6] too portrays that in the era of business competitiveness, it is important to have committed employees as they are the source of competitive advantage. Dessler [6] further explains that employees will not remain committed if they are not motivated. In a similar fashion, motivation in the military has been proven to be a crucial factor since time memorial. Xenophan, a Greek historian once quoted, “ *not numbers or strength bring victory to war; but whichever army goes to battle stronger in soul, their enemies generally cannot withstand them*” [2]. The strong soul in modern times refers to motivation. Clausewitz, a Prussian strategist have also viewed motivation as an important factor when he wrote that it is the “will” which determines the outcome against an enemy, where in a modern term the “will” reflects motivation [7]. In addition, Picq [8] emphasize that the basic factor in the crux of a battle lies on the human heart, which again refers to motivation. These studies illustrate that it is pertinent to understand motivation as it relates to the basic need of a human element in any organization. Since the term motivation is often associated to people and influencing behavior to act in a certain way, it is necessary to understand the minds of the people on what will them to act and behave in that certain way and then establish means to influence them. To determine what is in the mind and to influence behavior of the people in an organization, it is essential to examine motivational factors in cognizance with managing people.

This article examines literature on motivational factors among military personnel during World War II, Vietnam War and conflicts in the twentieth century, and factors that influence the emphasis on motivation. It describes military cohesion from organizational structure and culture perspectives and provides a general view on the changes in motivational factors in a combat environment and suggest for further exploration in non-combat situations.

MOTIVATION

The term “Motivation” is a Latin word which means movement (*movere*) and based on this concept, Atkinson [9] defines motivation as an influence on “*direction, vigor and persistence*”, while Vroom [10] adds value to it by stating that motivation is a choice made among other alternatives by a person voluntarily. However, Campell and Pritchard [11] illustrate that motivation is not a single element but encompasses a set of independent and dependent variables that explains the direction, amplitude and persistence of an individual behavior, while aptitude, skill and knowledge of the task is constant and environment being the constraint. In addition, Bartol and Martin, [12] define motivation as “*a force that energizes behavior, gives direction to behavior and underlies the tendency to persist*”. These definitions illustrate that to achieve goals; individuals must be stimulated to be energetic and must be given a clear objective of achievement, and be committed to achieve that objective. Bass [13] also explains that motivation could be achieved by raising the level of awareness about the importance of outcomes and ways to achieve them. A closer examination of these definitions draws out the fact that there are

three common elements in motivation, which are; activities that energizes, channel and sustain human behavior over time.

The essence of motivation is to sustain employees' behavior to enable organizational growth and performance. According to Cole [14], motivation describes processes by which people seek to obtain their needs, goals and desires. In organization and human resource theories, motivation is considered a key element that harnesses human potential to maintain organization's competitive advantage [15]. Wright and McMahan [16] also advocate that motivated employees are regarded as a critical resource in an organization. Since management is the prime mover for motivation, it is important for organizational leaders to continuously review means and approaches to sustain motivation among their employees' [17]. In this perspective, Adeyemo and Aremu [1] assert that there are four basic assumptions that organizational leaders must address in motivation practices, namely; 1) that motivation is an essential factor to sustain the desire to work, 2) that there are several factors to sustain motivation including environment, ergonomics and conditions in which one performs, 3) that motivation is on-going process and 4) that motivation is a tool to establish what drives their employees' to sustain their performance and giving their best. Robben [18] agree that it is important to continue determining what drives motivation among employees' as it changes constantly. From this view, motivation intends to be a goal-oriented and indicate that goals for motivation must be within the context of the organization [19].

Likewise, in the military, motivation has been a keen interest by most military forces around the world. However, most studies relate motivation in the context of conflicts and war where the need for highly motivated force is pertinent to succeed in military missions [20, 21, 22, 2]. In various occasions, quantitatively inferior armies have been able to win battles and conflicts because of their fighting spirit, aggressiveness and high morale that were brought about by motivation [7]. The US, Canadian, Australian, Russian and other military forces have examined motivation as a critical factor in managing human resource in the military [20, 23, 24, 25]. This is because motivation relates to what people do in performing their task determines the productivity and commitment to a job and eventually brings about organizational success.

MOTIVATIONAL FACTORS IN THE MILITARY DURING WORLD WAR II AND VIETNAM WAR

In the military, the will to fight depends largely on the high esteem of motivation to achieve success in combat missions set by the military hierarchy. Since the emphasis of this study is on motivation, it is of interest to examine for any changes in motivational factors during past wars or conflicts. Previous studies on motivational factors in the military context include Moskos [26], Kellet [27] and Traversa [28] who examined prominent motivational factors among American and German soldiers during World War II. Vaughan and Schum [29] conducted a similar research to examine motivational factors

among American soldiers during the Vietnam War (1963-1973). The list of motivational factors established in their studies is shown in Table 1.

Moskos [19]	Kellet[14]	Traversa[32]	Vaughan & Schum[34]
World War II	World War II	World War II	Vietnam War
Primary Group	Primary Group	Primary Group	Primary Group
Ideology	Ideology	Ideology	Ideology
	Leadership	Leadership	Leadership
Attitude towards enemy		Vindictiveness	Vindictiveness
	Personal Values	Religion	Religion
	Preconceptions of combat	Propaganda	Expectations
Rotation	Manpower Allocation	Desire to end war	
Combat situation	Combat situation		Combat situation
	Duty, Honor and Unit Spirit	Duty, Honor and Country	Duty
		Coercion	Coercion
	Training		Training
Discipline	Discipline		
	Reward and Recognition	Personal Gratification	

Table 1: Motivational Factors in the Military during World War II and Vietnam War.

Source: Vaughan and Schum[34]

Based on Vaughan and Schum[29] study; 1) primary group reflects a unit (platoon or squad) in which a soldier is a member. The unit spirit within the unit shared during combat creates motivation through personal relationship to overcome fear, 2) religious belief through prayer instills the will to fight, while Kellet[27] categorizes as personal values, 3) leadership through the actions of military leaders inspires and influence subordinates to undertake difficult tasks, 4) meeting individual expectations or preconceptions of the war can elevate motivation or otherwise. If an outcome of a combat situation differs from what the individual expects, a decline in motivation could occur, but if the outcome meets the expectations, motivation can be high [27], 5) vindictiveness depicts a sense of revenge in response to enemy's action, especially with a death of a

group member. The urge to revenge itself becomes a motivating factor within the primary group, 6) coercion is the fear of military punishment that becomes a source of motivation to fight. However, in Traversa[28] study, to be killed by the enemy was a greater fear than the fear of military punishment, 7) ideology or personal values play an important role because individual believe in the cause for war; for example in the Vietnam War, the believe to obstruct the expansion of communist ideology and promote democratic political process became the personal conviction that motivated to fight [29]; 8) duty depicts an individual obligation to fulfill a combat task which as professional soldiers are expected to fight. The obligation to fulfill the task becomes the motivating factor, 9) training can also be a motivating factor as it build self-confidence and creates a mindset of being a professional soldier who is capable to fight. Training refers to the skills individual develop for combat performance and 10) combat survival as a motivating factor to fight for the success of his primary group and survival. The desire to live and protect his team members instills the will to fight and this itself becomes a motivating factor.

MOTIVATIONAL FACTORS IN THE MILITARY DURING TWENTIETH CENTURY

Since the end of cold war, the need for soldiers and units to be ready for military missions continued to be of importance in the military and for soldiers to perform effectively, they must be equipped, trained and motivated [30]. Studies on motivation in the military continued to examine factors that sustain individual motivation in war and conflicts in the twentieth century. Sergio [2] study on military motivation involved the Israeli Defence Forces during the Arab-Israeli war and his research concludes that; 1) unit cohesion relating to bonding of members in the organization, 2) regiment's achievements and success in battles, 3) the concept of *achavattlochameem* (combatant's brotherhood) and 4) mutual trust were found key elements for motivation among the Israeli soldiers during the war. In addition, Sergio [2] illustrated that communication among leaders and subordinates on battle information, leaders concern for their soldier's well-being and able to provide the best equipment also played an important role in motivation as soldiers perceive given the best chance for survival in combat situations. Other motivating factors include training and combat experience as soldiers build self-confidence through rigorous training and as they gain combat experience when undertaking military tasks.

Shalom et al [31] conducted their study on combat units that were grouped on a short-term and ad-hoc basis for military missions during the Arab-Israeli conflict (Al-Aqsa Intifada), where the focus was on cohesion during military operations. In this scenario, integration among the military units grouped for military operation played a critical role. The study established that cohesion was the key factor for motivation among troops in undertaking military missions. The nature of cohesion explored in this study depicts that cooperation and collaboration became the main factors as the mode of operation included a variety of military units combined to perform a task. In the context of cohesion, Shalom et al [31] illustrate that the following elements were pertinent in influencing a force in

battle; 1) sense of commitment to the unit's goal in cognizance with the ethos of the professional force, 2) esprit de corps as a stimulant to overcome fear and responding to combat situations and 3) mutual trust among the hierarchy in the unit and reliability among the combat support units were crucial in maintaining confidence. These elements played an important role in the integration of ad-hoc military units and subsequently build confidence for military mission, which in turn reflects motivation among troops.

Next, MacCoun et al [21] study on American soldiers in Iraq war argues that a strong interpersonal bond among unit members determines successful unit performance. MacCoun et al [21] argues on cohesion from two perspectives; social cohesion that refers to the bonding of friendship, caring and close-relationship among unit or organizational members and task cohesion which refers to the collective effort of a group in achieving a goal through shared commitment. However, the study concludes that military performance depends on the commitment of members towards a common goal and was not based on interpersonal bonding of social cohesion. In other words, task cohesion played a higher role as a motivating factor among combat troops to complete a military task.

Ben-Dor et al [32] examined motivational factors among military reservist during the Israeli-Palestinian peace process and the second Intifada in the year 2000. The objective of their study was to examine motivation during wartime and peacetime among military reservist of the Israeli Defence Force. Although the findings suggest that motivation in wartime was higher than in peacetime, the reservist tend to be more motivated by individual rather than collective incentives in both situations. Factors such as work condition, income, patriotism, individual commitment and well-being emerged as more prominent factors for motivation among the military reservist.

Robben [18] compared motivation among Argentinian troops from two perspectives; during the counter-insurgency warfare from 1975-1980 and against the British forces in the Falklands War in 1982. The comparison of study highlights four lessons on motivation during combat, 1) that motivation in combat does not necessarily depend on the state of mind but on a social process relating to contextual and combat related factors that are experienced differently over time by the troops and thus changes according to the social, political and military circumstances of the war, 2) the type of warfare also influences motivation as situations, responsibilities, battle engagement and objectives differ between counter insurgency and conventional warfare. While intelligence gathering was crucial in counter insurgency warfare, success and failures in battle engagements were pertinent in the Falklands war to boost motivation among the troops, 3) there was a difference in motivation before and when the war began. Troops were eager to fight for the sovereignty over the Falklands Islands but deteriorated rapidly when it began because the forces felt that there was no proper battle plan made by the military hierarchical command and with poor equipment, and 4) motivation takes a higher precedence when the heat of the battle dies down as individuals begin reassessing their willingness to continue fighting. It is in these circumstances the military leaders must play an important

role to sustain their troop's motivation but in this case, the Argentinian commanders were too absorbed by the tasks at hand that concern for their troops lacked.

However, an in-depth study of the article relates that patriotism in terms of pride, unity of purpose; discipline and obedience were the main factors prior to the Falklands war. These motivational factors decline as the war progressed due to poor planning and lack of equipment. Other motivational factors that were observed in the study include sense of belonging especially in the primary group level where both informal and formal interactions among group members and sharing of common goals played important roles [27]. According to Manning [33], the Falklands war was motivated by three factors; religion, a clear conscience for fighting the war and mental preparation for war. A summary of motivational factors derived from these studies in the modern era is shown in Table 2.

Sergio [27]	Shalom et al [28]	MacCoun et al [16]	Robben [25]	Ben-Dor et al [5]
Israeli Defence Force	Arab-Israeli War	IraqWar	Argentinian Counter insurgency and Falklands War	Israel – Palestinian Conflict
Unit cohesion	Cohesion	Task cohesion	Primary Group	Income
Regiment's achievements	Cooperation	Shared commitment	Patriotism	Individual commitment
Combatant's brotherhood	Collaboration	Strong interpersonal bond	Religion	Patriotism
Communication between leaders and subordinates	Sense of commitment		Clear conscience	Work conditions
Best combat equipment	Espirit de corps		Mental preparation through training	Well-being
	Mutual trust			Military leaders concern for unit members
	Integration			

Table 2: Motivational Factors in the Military in the Twentieth Century

In comparison, the motivational factors derived from the World War II and Vietnam War tends to be individualistic in nature. Individualistic is meant when motivational factors are implicit which is driven by personal perception, need or belief that would influence the behavior of an individual to execute a task or activity. Motivational factors such as ideology, religion and duty, honor and country are beliefs one carry in one's mind which encourages accomplishing a task or activity. Leadership, discipline and coercion are organizational factors, viewed as external forces that influence an individual towards the organizational goal. Basically, during the World War II and Vietnam War era, there are two fundamental motivational factors that played an important role in combat fighting, the internal motivational factors which derives from within the mind and belief, and the external motivational factor that derives from influenced by organizational requirement. In this manner, an individual acts to achieve a dual goal, first the individual goal based on what he believes and second the organizational goal based on what he is expected to achieve as shown in Figure 1.

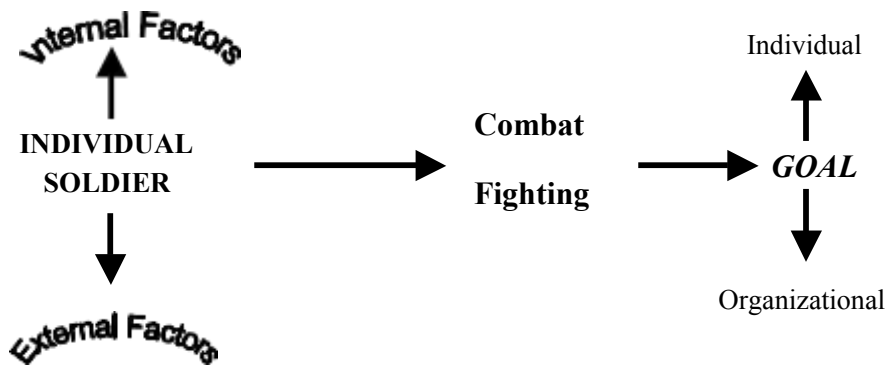


Figure 1: Dual Influence of Motivational Factors

On the other hand, motivational factors derived from the twentieth century tend to be a combination of individual and collective in nature. Collective is meant when motivational factors are explicit and driven by a collective interest, shared commitment or common goal that would influence an individual's behavior to work as a group in executing a task or activity. Motivational factors such as cooperation, collaboration, mutual trust and integration form the fundamental base for combining effort, experience and expertise in achieving success during military missions. In this perspective, battles are not viewed at tactical level which is defined as the level involving maneuver units of platoon size or equivalent but at the operational level defined as the level involving maneuver units of company size to army groups levels where military missions are fought involving various military units required for that specific task as a combined force [34]. Basically, motivational factors in the modern era also lie on two fundamental perspectives; internal and external, in which the study believes that external motivational factors takes a higher precedence. As the nature of the military mission requires a combine effort, the confidence level in achieving success lie on the question by the host military unit responsible in undertaking the military mission, "What can the other units do to bring success to my military mission?" It ultimately depends on the unit's capability,

achievements and experience that are viewed as external factors [18]. Therefore, motivation drawn from these external factors provides a stronger input in support as compared to the internal motivation factors towards the common goal.

PSYCHOLOGICAL APPROACH TO MILITARY COHESION

Siebold [35] took a psychological approach to examine military cohesion and established a standard model of military group cohesion consisting of four interacting components based on organizational structural relationship. Peer relationship involves bonding among members at the same organizational level (platoon, squad or group members). Subsequently is the leader relationship depicts bonding between organizational members and their leaders. Next is bonding at the organizational level between personnel and the next organization in the hierarchy and finally is institutional bonding which relates to relationship between personnel and their military branch. Peer and leader bonding are considered as primary cohesion, while the secondary group cohesion consists of organizational and institutional bonding. The interacting components are shown in Figure 2.

			<u>INSTITUTIONAL</u>
			Intra-organization
<u>PEER</u> <ul style="list-style-type: none">• Within the Platoon	<u>LEADER</u> <ul style="list-style-type: none">• Among the Platoon	<u>ORGANIZATIONAL</u> Inter-organization <ul style="list-style-type: none">• Company• Battalion	<ul style="list-style-type: none">• Brigade• Division
Primary Group Cohesion		Secondary Group Cohesion	
Level of Organization in the Infantry			

Figure 2: Standard Model for Military Group Cohesion

According to Salo and Siebold [36], performance is associated with primary group cohesion where trust among group members plays a critical motivating factor in accomplishing a task together. On the other hand, secondary cohesion is associated with behavior and attitudes where trustworthiness among organizations and institutions is essential for a military task.

MILITARY COHESION FROM ORGANIZATIONAL CULTURE PERSPECTIVE

Kirke [24] examined military cohesion from the organizational culture perspective using the British Army culture at the unit level as a basis for his study. In his study,

Kirke[24] established four social structures that could be used to view cohesion in the military. The social structures are illustrated in Figure 3.

Conventional Perspective

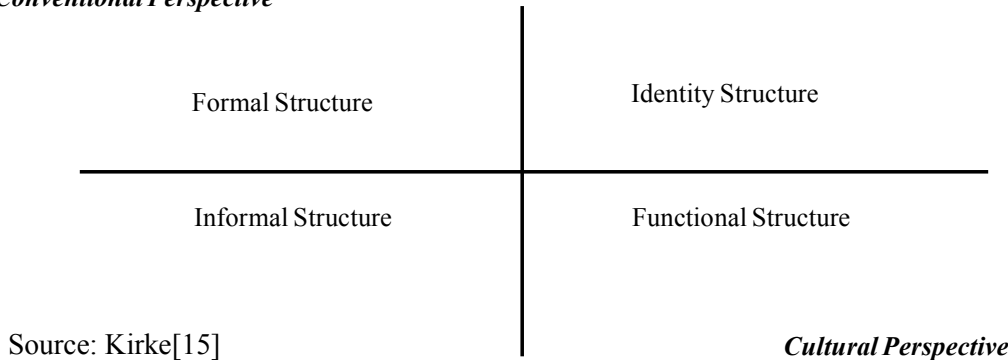


Figure 3: Social Structures Associating to Behavior in the Military

The formal structure constitutes of a command structure that represents the hierarchy of rank and organizational perspective. It involves systems for discipline enforcement, issuing of directives, submission of reports according to organizational system and command responsibility for each level of the organization. The informal structure refers to behavior in the absence of formal enforcements that involves behavior during off-duty, in a relaxed situations and informal relationship with peers and leaders. The formal and informal structures reflect the conventional perspective. The next two structures, identity and functional structures reflect the cultural perspective of the British Army. The identity structure refers to the sense of belonging within the members of a primary group; platoon, squad or regiment. The sense of belonging among members can be extended from a platoon to a regiment level depending on the level of organization in which they are involved for a task. The functional structure consists of attitudes, feelings and expectations linked of being a professional soldier in executing a task or activity. It is the moral obligation and sense of responsibility of being a soldier and to the duties one has to perform. Kirke [24] further explains that each social structure has its own set of behavior and only one social structure operates at any one time, which is called as the “operating structure”. Therefore, in the context of military cohesion, the factors to influence cohesion among members in the organization differ according to the nature of the social structure. However, regardless to the social structure, cohesion becomes an important factor to sustain motivation and that it varies among groups and within an organization.

CONCLUSION

Based on Siebold [35], psychological approach to military cohesion, most motivational factors derived from World War II and Vietnam War falls under primary group cohesion which involves individual mindset relating to personal bonding, belief,

serving for the country, fear of punishment and combat survival. The motivational factors in this era tend to be from personal thinking and influence one has on the war one is fighting in. Primary group cohesion was the primary motivating factor during the period of World War II and Vietnam War. As the studies progressed into the twentieth century, primary cohesion was still an important criterion as studies indicate esprit de corps, comradeship, commitment and bonding were essential factors in combat [21,2,31]. However, the nature of conflict does not confine to a single regiment or battalion but to a combined force involving other combat support elements that are required for military operations. In this perspective, secondary group cohesion became an additional motivating factor during combat. Integrating factors such as cooperation, collaboration, reliability and mutual trust among units involved too play an important role in motivating among the troops. In addition, [32]Ben-Dor (2008) study indicates that personal interest or individual motivation factors emerged during their study. This phenomenon can be related to the Kirke[24] behavior social structure under the functional structure where attitude, feeling and expectation of being a professional soldier takes precedence as the operating structure.

In addition, previous studies on motivation in the military also indicate that influencing factors which determines motivation can be categorized in three perspectives; 1) individual pertaining to beliefs, perception and attitudes that centers around on what is conscientiously right and self-satisfaction. Motivational factors such as ideology, religion and clear conscience are some that falls under the individual factor, 2) social that refers to social responsibility to the country, nation, organization and unit. Motivational factors such as patriotism. Commitment, duty, honor and country are some that fall under the social factor and 3) organizational which relates to those that provide guideline or sense of direction and the necessary support to achieve the organizational goal. Motivation factors such as leadership, cohesion, coercion, discipline, expectations, goals and vision are some that falls under the organizational factor. The three perspectives; individual, social and organizational could be related to the identity and functional behavior structures of Kirke [24].

As most of the studies discussed were conducted in a combat environment, it can be concluded that motivational factors in the military in combat emphasizes on primary cohesion and if the military operation expands to include non-combat military units, secondary cohesion becomes important too. It is also noted that motivation in the military tends to vary according to the complexity of war or conflict and the behavior structure surrounding an individual perception. Although the study by Ben-Dor [32] included peacetime, the threat in the region of study is perpetual and conclusion on motivation during peacetime cannot be drawn decisively. Hence, from peacetime perspective, motivational factors essential to the military where there is no form of imminent threat needs to be explored. If Faris [30] who asserts that motivation deteriorates when threat declines is true, then the question would be; what would be the motivating factors to sustain the military's urge for combat in peacetime? Would primary and secondary group cohesion still hold as important motivational factors or will it be based on behavior

functional structure [24] or factors such as environment, ergonomics and conditions in which an individual performs [1].

Although these questions are relevant to explore further on motivation in the military during peacetime, this study emphasize that the fundamental factors for motivation in the military lie on individual, social and organizational perspectives that forms the basis for unity and cohesion among members to fulfill the obligation and to achieve the targeted mission at the different levels of the military hierarchy.

REFERENCES AND ENDNOTES

- [1] Adeyemo, D.A. and Aremu, A.O. Career commitment among secondary school teachers in Oyo state, Nigeria. The Role of Biographical mediators. *Nigerian Journal of Applied Psychology*, 5 (2), 184-194. ISSN 1522-0222. 1999.
- [2] Sergio, C. Motivating Soldiers: The Example of the Israeli Defence Forces. *Parameters* <http://carlisle-www.army.mil/usawc/Parameters/04autumn/catignan.htm>, 2004.
- [3] Pfeffer, J. *The Human Equation: Building Profits by Putting People First*. Cambridge, MA: Harvard Business School Press. ISBN-10: 0875848419. 1998.
- [4] Rafikal, I and Ahmad, Z. Employee Motivation: A Malaysian Perspective. *International Journal of Commerce and Management*, 18 (4). DOI:10.1108/10569210810921960, 2008.
- [5] Stewart, R. *The Reality of Management*, Pam Books, Cox and Wyman, London. ISBN-10: 0330291777, 1986.
- [6] Dessler, G. *Winning Commitment: How to Build and Keep a Competitive Force*. New York: McGraw-Hill, New York. ISBN-10: 0070166307, 1993.
- [7] Maginnis, R.L, Combat Motivation, *Infantry*, May-June, 15 in, *PARAMETERS* US Army War College Quarterly, Autumn, 1985.
- [8] Picq, A.D. *Battle Studies: In Roots of Strategy: Book II* (ed). John N. Greely and Robert C. Cotton, Stackpole Books, 1989.
- [9] Atkinson, J.W. *Introduction to Motivation*, Princeton, NJ: Van Nostrand. ISBN-10: 0442203675, 1964.
- [10] Vroom, V. H. *Work and motivation*. New York: Jossey Bass Business and Management Series, ISBN-10: 0787900303, 1994.
- [11] Campbell, J.P. and Pritchard, R.D. Motivation Theory in Industrial and Organization psychology. In M.D. Dunnette (Ed). *Handbook of Industrial and Organizational psychology*, 63-130. ISBN-10: 0891060421, 1976.
- [12] Bartol, K, M and Martin, D, C. *Management*, 3rd ed. Boston: McGraw-Hill, ISBN-10: 0-07-115206-7. 1998.

- [13] Bass, B. M. *Leadership Performance Beyond Expectations*. New York: New York Press. ISBN-10: 0029018102.
- [14] Cole, G.A. (2004). *Management: Theory and Practice (6thed)*. Thomson Learning, Padstow, Cornwall. ISBN-10: 1844800881, 1985.
- [15] Srinivasan, M.S. Motivation and Human Growth: A Development Perspective, *Journal of Human Value*, 14 (1), 63-71. DOI: 10.1177/097168580701400107. 2008.
- [16] Wright, P.M. and McMahan, G.C. Theoretical Perspectives for Strategic Human Resource Management', *Journal of Management*, 18(2): 295–320. DOI: 10.1177/014920639201800205, 1992.
- [17] Dingley, J.C. Recent Developments in the Area of Motivation. *Journal of Industrial Management and Data System*, 86 (7/8), 21-24. DOI: 10.1108/eb057447, 1993.
- [18] Robben, A.C.G.M. Combat Motivation, Fear and Terror in the Twentieth-century Argentinian Warfare, *Journal of Contemporary History* 41. DOI: 10.1177/0022009406062073, 2006.
- [19] Olajide, A. Getting the best out of the employees in a developing economy. *A Personnel Psychology Guest Lecture Series*. Department of Guidance and Counseling, University of Ibadan, Nigeria, 2000.
- [20] Blocq, D. Western Soldiers and the Protection of Local Civilians in UN Peacekeeping Operations: Is Nationalist Orientation in the Armed Forces Hindering our Preparedness to Fight? *Armed Forces and Society*, 36 (2), 290- 309. DOI: 10.1177/0095327X08330816, 2010.
- [21] MacCoun, R, J, Kier, E and Belkin, A. Does Social Cohesion Determine Motivation in Combat? An Old Question with and Old Answer. *Armed Forces and Society*, 32 (1). DOI: 10.1177/0095327X05279181, 2005.
- [22] Primoratz and Igor, (ed). *Patriotism*.Amberst, New York: Humanity Books. ISBN-10: 1573929557, 2002.
- [23] Jans, N. and Jans, F.J. Still the Pragmatic Professional: Pre and Post 9/11 Professional Orientation in the Australian Army. *Armed Forces and Society*, 35 (2), 241- 265. DOI: 10.1177/0095327X07312489, 2009.
- [24] Kirke, C. Group Cohesion, Culture and Practice. *Armed Forces and Society*, 35 (4), 745-753. DOI: 10.1177/0095327X09332144, 2009.
- [25] Wong, L. Combat Motivation in Today's Soldiers. *Armed Forces and Society*, 32 (4), 659-663. DOI: 10.1177/0095327X06287884, 2006.
- [26] Moskos, C.C. *The American Enlisted Man*. New York: Russell Sage. ISBN-10:0871546078, 1970.
- [27] Kellet, A. *Combat Motivation: The Behavior of Soldiers in Battle*. Boston: Kluwer-Nijhoff Publishing. ISBN 0-89838-102-9, 1982.

- [28] Traversa, D.J. *Motivational Factors in Combat: A Comparison of German and American Soldiers in World War II Using Content Analysis*. Master Thesis, Air Force Institute of Technology, Wright-Patterson Air Force Base OH. Report Number: A424103. <http://www.stormingmedia.us/42/4241/A424103.html>, 1995.
- [29] Vaughan, D.K. and Schum, W.A. Motivation in U.S. Narrative Accounts of the Ground War in Vietnam, *Armed Forces and Society*, 28 (1), 7-31. DOI: 10.1177/0095327X0102800102, 2001.
- [30] Faris, J.H. The Looking-Glass Army: Patriotism in the Post-Cold War Era, *Armed Forces and Society*, 21 (3), 411-434. DOI: 10.1177/0095327X9502100306, 1995.
- [31] Shalom, B.U., Lehrer, Z., Ari, B.E. Cohesion during Military Operations: A Field Study on combat units in the Al-Aqsa Intifada. *Armed Forces*, 32 (1), 63-79. DOI: 10.1177/00995327X05277888, 2005.
- [32] Ben-Dor, G., Pedahzur, A., Canetti-Nisim, D., and Perliger, A. I versus We: Collective and Individual Factors of Reserve Service Motivation during War and Peace. *Armed Forces and Society*, 34 (4), 565-592. DOI: 10.1177/0095327X07303609, 2008.
- [33] Manning, F.J. Morale, Cohesion and esprit de Corps in Reuven Gal and Mangelsdorff, A.D. (eds), *Handbook of Military Psychology*. Published by U.S. Army Medical Research and Development Command. ISBN-10: 0-471-92045-2, 1991.
- [34] US Army, TRADOC Pamphlet: Concept for Tactical Maneuver. [www-tradoc.army.mil/tpubs/pams/p525-7-9.doc](http://www.tradoc.army.mil/tpubs/pams/p525-7-9.doc), 2006.
- [35] Siebold, G.L, The Essence of Military Group Cohesion, *Armed Forces and Society*, 33 (2), 286-295. DOI: 10.1177/0095327X06294173, 2007.
- [36] Salo, M. and Siebold. Cohesion Components as Predictors of Performance and Attitudinal Criteria (*paper presented at International Military Testing Association, Singapore*). <http://www.internationalmta.org/Documents/2006/2006046P.pdf>, 2005.

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Journals /Serials

Henderson, D.A., *The looming threat of bioterrorism*, Sci., 283 : 1279-1283, 1999.

Online sources

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