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OIL AND HUMAN SECURITY IN EQUATORIAL GUINEA

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Abstract

Beginning with the question as to whether natural resources are a blessing or a curse, this paper analyzes the political economy of oil in Equatorial Guinea. It explores the country’s recent history and experience with oil-led development, arguing that the responsibility for its development lies in the hands of its leaders. The paper further places the Equato-Guinean experience within the framework of the resource curse. This framework shows that there is a link between natural resource abundance and poor development performance, dictatorship, and insecurity or civil conflict. However, it also explores the possible role that regional mechanisms, international organizations, and foreign governments (especially that of the United States) can play in improving the situation. If these entities outside Equatorial Guinea cannot influence the situation in the country, then the paper concludes that the status quo will only be exacerbated. This will mean further enrichment of the leadership while underdevelopment continues along with authoritarian rule and instability.

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Introduction

Equatorial Guinea, like some other Sub-Saharan Africa countries including Angola, Cameroon, Gabon, and Nigeria, has since the 1990s being experiencing strong revenue growth from the petroleum industry. Contrary to what one might expect, this revenue has not wiped off the scourge of poverty that has bedeviled the masses in these resource-rich nations. Oil reserves were discovered in Equatorial Guinea in 1996, and today the country has an offshore production of over 400,000 barrels a day. The country is, therefore, the third largest Sub-Saharan producer of oil, just behind Nigeria and Angola.

Once considered one of the world’s poorest nations, Equatorial Guinea saw its GDP go up by 76% just a year after oil exploration began in the country. This remarkable increase in the country’s revenue has been matched by an equally remarkable lack of any systemic redistribution of the wealth in the way that it would benefit the population, either directly or indirectly through improved health, education, and other social services. This situation once more confirms the observation that in Sub-Saharan Africa, oil resources are becoming more of a curse, as opposed to a blessing to the peoples endowed with them (McSherry 2006).

The resource curse phenomenon is evident in Equatorial Guinea where the oil revenue is almost exclusively used for the enrichment of the country’s leaders rather than for economic development and improvement of living standards for the citizens. The oil wealth in this small and sparsely populated country of about 465,000 inhabitants is enough to turn every citizen into a fairly
rich individual. Unfortunately, this is not the case as the leadership has tightened its grasp to power, stifled human rights, and promoted an atmosphere of insecurity.

It is, therefore, not surprising that there have been forces trying to oust the current government under the leadership of President Obiang Nguema. The most outstanding case surfaced in March 2004 when the government of Equatorial Guinea arrested 19 soldiers accusing them of plotting a coup against the president. This was followed by the arrest of 70 other soldiers by the Zimbabwean government. The latter were said to be from South Africa and were on their way to support the coup. South African mercenary Mark du Toit was accused on being at the center of the plot, which was designed to replace Nguema with the long-exiled opposition leader Severo Moto. Also implicated in the coup was Sir Mark Thatcher, who was accused of financing the operation.

The global network of interested parties in this alleged coup points to the new found interest in this former Spanish colony in the Gulf of Guinea. This interest is not unconnected with the discovery of large oil reserves just off the country’s Atlantic shores. Prior to the discovery of oil in the country in 1996, Equatorial Guinea was listed amongst the poorest countries on earth by virtually everyone, but since then the economy has grown substantially. Foreign investment is pouring into the country from around the globe, with the major trading partners being the U.S., China, Spain, Canada, Taiwan, Portugal, Netherlands, Brazil, and France, in that order.

Equatorial Guinea has one of the fastest economic growth rates in the
world. It was estimated that the growth rate in 2005 was 45.1%, meanwhile the
government itself stated that in 2007 the Gross Domestic Product (GDP) was
$25.69 billion, while the GDP Growth Rate was 20.9%. Given that the country
has a population of less than half a million, the GDP per capita (PPP) is
estimated to be about $50,240. This is an outstanding figure considering that this
makes Equatorial Guinea the second highest PPP in the world, coming only after
Luxembourg. Such enormous wealth could completely eradicate poverty in
Equatorial Guinea and transform the country into an economic giant. The
government claims it is on the path to this utopia, while international NGOs
operating in the country say only few benefits have accrued to the masses. The
general population is still mainly poor, disease ridden, and suffers from
inequality and injustice (Karl & Gary 2003). Life expectancy also remains low,
stagnating at a dismal 49 years, while unemployment exceeds 30%. At the same
time, President Nguema has been accused of using the oil wealth to consolidate
its brutal, authoritarian regime, and helping to further criminalize one of the
world’s most criminal states (Wood 2004). But in spite of the firm grips on
power, ethnic and regional tensions abound, as well as political instability
evident in the 2004 attempted coup.

While oil production has increased since 1996, the production of
agricultural products has dropped, and most people in the country make a living
through agriculture. With poor development performance, entrenched
authoritarianism, and political instability, Equatorial Guinea is basically
replicating the experiences of other countries with an abundance of natural
resources. In effect, the oil boom might not be much of a blessing to the ordinary Equato-Guinean. In spite attempts by the country to highlight its achievements since the discovery of oil, others have noted that the country remains hugely underdeveloped. Furthermore, the attempted democratization process in the country has been stifled by the current rulers with the resultant effect being increased political instability and violence (McSherry 2006).

Beginning with the question as to whether natural resources are a blessing or a curse, this paper analyzes the political economy of oil in Equatorial Guinea. It explores the country’s recent history and experience with oil-led development, arguing that the responsibility for its development lies in the hands of its leaders. The paper further places the Equato-Guinean experience within the framework of the resource curse. This framework shows that there is a link between natural resource abundance and poor development performance, dictatorship, and insecurity or civil conflict. However, it also explores the possible role that regional mechanisms, international organizations, and foreign governments (especially that of the United States) can play in improving the situation. If these entities outside Equatorial Guinea cannot influence the situation in the country, then the paper concludes that the status quo will only be exacerbated. This will mean further enrichment of the leadership while underdevelopment continues along with authoritarian rule and instability.

Natural Resources: A Blessing or Curse?

The idea that natural resource abundance is not necessarily a blessing can be summed up in the resource curse thesis, also referred to as the paradox of
plenty. This refers to the paradox whereby countries with an abundance of natural resources have had the tendency of experiencing less economic growth than countries without these natural resources. Various reasons have been postulated in explanation of the resource curse. One of them is a decline in the competitiveness of other economic sectors, which is usually caused by appreciation of the real exchange rate due increase revenue in the economy being generated by the natural resource(s). Another explanation points to the volatility of revenues from the natural resource sector. But beyond these purely economic factors, others have argued that government mismanagement or political corruption is the major reason for the resource curse (Humphreys, Sachs & Stiglitz, 2007; Kaldor, Karl & Said, 2007; & Shaxson, 2007). This mismanagement on the part of government bureaucrats and politicians is provoked by the inflows of easy windfalls from the resource sector as well as weak and unaccountable institutions.

The resource curse thesis describes how countries rich in natural resources were unable to use their resource wealth to boost their economies and how, paradoxically, these countries had lower economic growth than countries that lacked such natural resources (Auty 1993). However, before Auty, scholars had began discussing the idea that natural resources might be more an economic curse than a blessing a decade earlier. Sachs and Warner (1995) have shown that there is a link between natural resource abundance and poor economic growth. The disconnect between natural resource wealth and economic growth is most evident in the oil-producing countries. Gylfason (2000) has shown that from
1965-1998, the GNP per capita growth decreased among the OPEC countries by an average of 1.3%, while the rest of the developing world experienced a GNP per capita growth of about 2.2%.

The experience of resource curse has thwarted the hopes of many poor, primary commodity exporting countries. At the same time it has spawned an extensive academic debate aimed at explaining this seemingly paradoxical situation. This academic discourse provides insight into Equatorial Guinea’s current plight and at the same time points to alternative paths to avoiding the curse or what others have called the Dutch Disease. If the country’s leaders continue on the current path, what lies ahead will be further underdevelopment, fewer opportunities for democratization, increased political instability, and violence. McSherry (2006) believes that the political economy of oil in Equatorial Guinea will follow its own idiosyncratic path, but will bear many of the typical marks of the resource curse. This argument is supported by facts on the ground ranging from the extraordinary pervasiveness of criminality at high levels of government (Wood 2004), regional and ethnic cleavages, the history of extreme personal rule (Decalo 1985), the strategic importance of Equato-Guinean oil to the United States vis-à-vis the current war on terror (Asongu 2008; Mentan 2007), and the offshore nature of the oil reserves. McSherry argues that Equatorial Guinea’s predicament not only justifies the resource curse arguments, but also offers an extreme example of the dangers associated with resource-led development in states with weak political structure or institutions.

Having natural resources is not a blessing for African nations as Oyefusi
(2007) points out. He states that in the 1940s and 50s some development economists believed that natural resource abundance would help poor states to overcome their capital shortfalls. These economists thought that these natural resources will provide their owners with the much needed foreign exchange, attract foreign investment, provide raw materials that could be used for industrial development, and revenues for governments to provide basic public goods and services. This optimism has evaporated in many academic and policy circles after over four decades of betrayed hopes. Instead of seeing natural resource abundance as a blessing, some scholars now consider it very risky and a potential source of conflict.

The resource curse is not an insurmountable problem as countries with the right set of institutions or those that adopt the right set of policies at the time of resource discovery or when the resources assume a significant role in their political-economies, are more likely to attain rapid economic growth and development (Oyefusi 2007). These countries, he believes, will do better than other countries with equal endowments but without such institutions and policies. There is need for a case-by-case examination of economic and political institutional endowments and other factors, such as the structure of extractive industry and the management of resource wealth. This is necessary if one has to gain greater insight of the role of natural resources in civil conflict and development, and how to assist resource-abundant post-conflict countries to get back to (or enter) the peaceful developmental path.

The concept of resource curse has been accepted by many African
scholars who point out that despite Africa’s wealth, the continent remains the poorest (Houngnikpo, 2006). The resource curse phenomenon is similar to “the curse of aid” and as Djankov, Montalvo and Reynal-Querol (2005) have pointed out both have similar effects on Africa. Decades of economic assistance mainly from the West, as well the enormous wealth coming from the exploration of natural resources has not done much to alleviate poverty. Poverty is in turn promoting inhuman conflicts and insecurity in the continent. For there to be peace and economic growth or development in Equatorial Guinea and other resource-rich African countries, there is need for serious consideration on how to prevent future conflicts. Ayodele (2008) argues that all conflicts are resource-based. Ayangafac (2008) further confirms the natural resource-conflict nexus, arguing that politicians must address resource wealth remittances or redistribution if they want to build a secured and prosperous society. If politicians were to properly manage the wealth from their natural resources, it would no longer be possible to say as Houngnikpo would have it that that democracy has failed Africans. Democracy can change the living conditions of most Africans by decreasing poverty and crimes, and providing opportunities for personal growth.

A Brief History and Geography of Equatorial Guinea

Until recently, Equatorial Guinea was just one of the smallest and insignificant African countries. But before exploring the countries new-found oil resources and wealth, it is important to understand the country’s history and geography. This should help contextualize the importance of oil in the economy
and explain some of the peculiarities of the country.

Geographically, Equatorial Guinea is comprised of a continental region between Cameroon and Gabon and several volcanic islands including the Island of Bioko where the capital of Malabo is situated, Corisco, Elobey Chico, Elobey Grande, Annobon, and Mbani. The people of Equatorial Guinea descend from a variety of ethnic backgrounds and are comprised of the Fang, Bubi, Ndowe, Anabonese, Bujeba, and Fernandino tribes. They have a rich culture and art, and most of the people depend on their immediate environment for subsistence. With a very rich tropical environment, the country is sometimes referred to as the Amazon of Africa with lush rainforests and incredible biodiversity. The country rises from the Atlantic Ocean in the Gulf of Guinea and climbs to over 3,000 meters at Pico Basile, and it is home to 11 endemic species including primates, butterflies, and frogs.

Historically, the islands and territory now known as Equatorial Guinea were first discovered by European explorers in 1471 during the age of discovery that eventually led to Christopher Columbus’ discovery of the New World. The area was first inhabited by Pygmies and later by people of various Bantu speaking tribes. The Portuguese explorer, Fernao do Poo was credited for discovering what is now known as the island of Bioko, and initially named after him, the island remained in Portuguese control through 1778 when it was ceded to Spain through the Treaty of Pardo in exchange for territory in South America. As African nationalism began after World War II, Spain offered the territory representation within the Spanish Parliament in 1959, but eventually the country
gained independence in 1968.

Macias Nguema was elected the country’s first president, but soon after he abandoned democratic principles and declared himself president-for-life in 1972. For 11 years, Macias Nguema established himself as a ruthless dictator presiding over a regime that outlawed all other political parties, and killed and tortured thousands of its own citizens. He also repressed religion by seizing church-run schools, closing churches, and even throwing priests in jail; declared journalism a crime punishable by death, and virtually ignored all governmental functions except internal security. The little infrastructure that the country had – electrical, water, road, transportation, and healthcare – fell into disrepair. With the complete devastation of the private and public sectors, the economy collapsed. Worst still, Equatorial Guinea was closed from outside contact and two-thirds of the country’s entire population was either killed or forced to flee. This was a classic purge of the opposition, which also included traditional leaders and intellectuals (Decalo 1985), while at the same time he built a menacing cult of personality (Wood 2004).

The overthrow of Macias Nguema in 1979 was supposed to have saved the country from further ruin and bloodshed. Teodoro Obiang Nguema Mbasogo who took over was able to establish a new constitution in 1982 that was drafted with help from the United Nations. He also organized and won the presidential election of 1982, and thereafter disbanded the military council and dedicated himself to the long, hard work of rebuilding the nation. Under President Obiang’s leadership, some Equato-Guineans who had fled the country returned,
churches and schools reopened, the country’s infrastructure was slowly being rebuilt, but progress was hampered by lack of funds due the economy’s collapse during the previous regime, as well as because of corruption within the Obiang regime itself. Obiang again organized and won the 1989 election, but little had improved in the lives of ordinary Equato-Guineans. Since then a number of sham elections have taken place, but many observers believe that the Obiang regime is only a little better than Macias regime as it is still characterized by lack of democracy, corruption, personality cult, disregard for the welfare of the masses, and entrenched dictatorship (McSherry 2006).

Equatorial Guinea’s Economy and Oil Resources

Known as Spanish Guinea during the colonial period, Spain never developed a comprehensive economic infrastructure for the country. In spite of this criticism, it should be noted that the Spanish developed large cacao plantations that employed thousands of people, mostly natives and Nigerians. This gave the area one of the highest per capita incomes in all of Africa. In addition, Spanish colonialism was credited with a high rate of literacy and health care. However, it has been argued that Spanish colonialism failed in creating a unified national market, and effective state institutions, thereby leaving the masses egregiously impoverished (Liniger-Goumaz 1989).

Whatever institutions the Spanish left for the county in 1968, were subsequently ravished and completely destroyed during the 11 years of the Macias Nguema dictatorship that only rivaled that of Idi Amin of Uganda. The regime’s reign of terror killed or forced into exile about two-thirds of the
country’s population. The purge, which included the expulsion of Nigerian and Spanish expatriates, helped in driving the country into an economic free-fall and triggered a 90% drop in GDP as the cocoa industry virtually disintegrated (Wood 2004).

In the midst of the catastrophe that had become the Macias Nguema’s regime, Teodoro Obiang Nguema was able to execute a violent, but successful, coup in 1979 and came to power claiming to be the title “liberator.” Although his regime ended the reign of terror, it continued the police state and dictatorial tactics that were characteristic of the Macias Nguema years. Obiang Nguema’s promise to liberate the masses from economic misery was also to become a pipedream when it became clear that the country and its leadership were ill-prepared to bring about any meaningful change. The country, therefore, was continuously listed amongst the poorest nations on earth by virtually all such listings.

Malaria was rampant, and child morbidity and mortality rates did not experience any significant change under Obiang Nguema. Over 70% of the population continued to live below the poverty line, and the majority of those living in the largest cities lacked access to safe drinking water and sanitation services. At the same time almost one-fifth of all Equato-Guinean children under five years were malnourished, and about 5% were severely so. Most of the country’s primary and secondary schools were ill-equipped, lacking basic conditions for children’s education. In addition to the high student drop out rates, 60% of the country’s schools did not have potable water, and 50% had no toilette
facilities, especially for girls. With these statistics, there was little that Obiang
Nguema could show as success, in spite its claims that it had the people’s
interest at heart. This problems were due to the fact that the government had
inherited a completed devastated economy and that fact that it continued to be
corrupt and irresponsible to the interest of the masses.

The country’s fortunes were to dramatically change with the discovery of
oil in Zafiro fields in the Gulf of Guinea in 1995. This discovery quickly and
permanently transformed the country; making it the “Kuwait of Africa.” The
new found oil wealth held the key to transforming the country’s economy,
removing it from the list of poorest countries, and at the same time improving its
status in international affairs. While these vast energy deposits have presented a
tremendous opportunity, the government itself acknowledges that the effective
management of such a valuable and highly sought commodity has also brought
considerable challenges. This is especially true considering that the country was
just beginning to rebuild from the rubble of utter devastation.

The fact that Equatorial Guinea is today one of the fastest growing
economies in the world is thanks to the oil wealth. In 2006 the country’s
economy grew by 20% and a GDP of over $25 billion dollars. The government
has also insisted that it has improved the health system and equally claims to
have the best hospitals in Sub-Saharan Africa. In addition, the country’s
population is steadily growing at approximately 2% per year, and many schools
have been opened, including a first local university. In spite of these advances,
most of people are still subsistence farmers and there is little or no integration of
this sector into the market economy. The government has also been criticized for limiting the health and education services the main cities, with almost no infrastructural development in the rural areas.

It is clear from this picture that Equatorial Guinea has since its independence from Spain in 1968 not delivered much of what the fathers of the nation had promised the people. The desire to develop the country suffered significant setbacks due to the dictatorial regimes that have ruled the country since independence. The oil wealth that the country currently has should provide the financial resources to rebuild the country, but there have been serious concerns about the effective management of these resources in a way that could effectively serve as a base to secure the economic future of the country forever. It is clear that although the oil wealth has made this daunting task on building the country’s economy somewhat easier, there is still much work and progress to be made before the masses can truly see the wealth as a blessing for them.

Human Security in Equatorial Guinea

In order to better analyze the political economy of oil in Equatorial Guinea, and how it affects human security in the country, a number of issues have to be examined. To begin with, there will be an examination of extent to which economic development that has been achieved as a result of the oil wealth. This will be followed by an examination of the various theories of natural resource wealth and poor economic development. It will also be important to explore the possible role that regional mechanisms as well as other important actors can play in improving the situation in Equatorial Guinea. Then focusing
on the Constitution of Equatorial Guinea, a critique of the country’s political institutions will be undertaken to see if they are capable of promoting the redistribution of wealth and economic development as a whole. Finally, an attempt will be made to answer the question as to why in spite of the country’s wealth, Equatorial Guinea remains underdeveloped, a situation that has given rise to increased human security concerns.

Oil Resources and Economic Development

Oil has become one of the most important elements of life in Equatorial Guinea, permeating virtually every aspect of the nation’s life, including security. This is not surprising given that oil dominates the country’s economy, and most governments are often judged by their economic performances. Indeed, the overthrow of Macias Nguema by the current president was instigated not just by the fact that the former leader had become such a ruthless dictator, but also because of the fact that the economy had collapsed under his watch (Decalo 1985; Bayart et al. 1999; Wood 2004).

The failure by Obiang Nguema to address and social and economic needs of the masses, as well as corruption and dictatorship was responsible for the failed coup of 2004. The poverty that faces most Equato-Guineans should simply not exist at the moment, given that the discovery of massive oil reserves just off the country’s Atlantic shores has already made Equatorial Guinea Africa’s third largest producer of oil, with an estimated production of 400,000 barrels each day. As a result of this, foreign investment (especially from the U.S.) has flown into the country. McSherry (2006) points out that with an estimated growth of
45.1% in 2005; Equatorial Guinea was the world’s fastest growing economy. Given the country’s population of less than 500,000, Equatorial Guinea has a GDP per capita estimate (PPP) of an astounding $50,240, the second highest in the world after Luxembourg. Such wealth ought to have transformed the country from an impoverished backwater into an economic powerhouse, yet few benefits have accrued to the masses.

The country’s oil wealth has provided the financial resources for Obiang Nguema to start his rebuilding plans in earnest. The government claims that it is concerned about managing this resource effectively so that it could truly serve as a base to secure the economic future of the country forever. To do this, the government has ensured that all foreign contracts, regardless of whether they dealt with the oil industry or not, included strict hiring and training clauses for native Equato-Guineans. The government has also decided to cap the oil-flarings to produce a secondary multi-million dollar market for liquid natural gas and provide for a cleaner environment. In a bid to eliminate malaria, the number one killer of the people of Equatorial Guinea, the government has persuaded and partnered with oil corporations to invest in malaria eradication programs.

The Equato-Guinean government claims that since 1996 it has responsibly invested oil revenues in the development of government, social, and infrastructural systems. It has highlighted the fact that infrastructure and housing is now being rebuilt more quickly. At the same time new water, sewage, and drainage systems are being installed. Hundreds of miles of new roadways are also being constructed to connect all of Equatorial Guinea’s cities and towns.
The healthcare and education domains have also been the focus of this government as it has built a couple of modern state-of-art hospitals and clinics, as well as schools. In addition, staff and teachers are being trained to work in the hospital and to better educate the students.

The Malabo regime has also joined the Extractive Industries Transparency Initiative (EITI), which supports improved governance in resource-rich countries through the verification and full publication of company payments and government revenues from oil, gas, and mining. EITI works to build multi-stakeholder partnerships in developing countries in order to increase the accountability of governments (Government of Equatorial Guinea 2007). Good governance is essential in improving human security in resource-rich countries because it is a precondition for converting large revenues from extractive industries into economic growth and poverty reduction. It has been shown that when transparency and accountability are weak, the extractive industries may instead contribute to poverty, corruption, and conflict – thus the resource curse theory. The country believes that its involvement in EITI is an important step in preventing this curse.

While oil reserves abound in the country, the government has started looking beyond oil by trying to diversifying the economy. Equatorial Guinea has experienced 11 years of growth by capitalizing on the discovery of oil to spur some degree of development and industrial diversification, but this growth is fragile as oil production is projected to be maximized within five years (Equatorial Guinea 2020 2007). The government has realized the inherent
weakness of depending solely on an oil-based economy and is determined not to commit the same mistakes of other countries in similar situations. To do this, the Equato-Guinean government has developed a comprehensive plan to completely diversify their economy by the year 2020. If well implemented, this plan might hold the key to providing stable and lasting growth. The plan identifies a number of challenges that must be addressed in order to successfully diversify the economy including security, regional integration, and the environment.

Meanwhile, after an initial analysis of the economy, the Equato-Guinean government is seeking to expand potential growth of various sectors including the energy sector, the fishing industry, the agriculture sector, the timber industry, and finally, the eco-tourism industry. Should this be implemented, the country might be on the road to sustainable economic growth as well as peace and security.

Natural Resource Wealth and Poor Economic Development

Academic literature has explained the paradox of natural resource wealth and poor economic development through various approaches including the economic approaches, political science approaches, and by highlighting the link between natural resource wealth and authoritarianism as well as violent conflict. A closer look at each of these approaches will throw more light on this analyzes.

The resource curse argument focuses on the tendency of natural resource abundant countries to suffer from low economic growth and disappointing development outcomes. The pioneering works of Singer (1950) and Prebisch
(1950) argued that primary commodity exporters suffer declining terms of trade over the long run. However, McSherry (2006) has pointed out that evidence of this is mixed, with some studies showing declines and others showing steadier terms of trade. However, since the 1980s the terms of trade have declined worldwide for primary commodities and although this has not yet affected Equatorial Guinea’s oil industry, such a decline in the future would be devastating to the Equato-Guinean economy because it is centered on oil production. Within this background, the recent attempt by the government to diversify the economy (Equatorial Guinean 2020 2007) is of strategic importance.

Economists also argue that rapid fluctuations in the oil sector can affect Equatorial Guinea in a meaningful way because over 90% of all exports come from oil (Frynas 2004). Another problem that the Equato-Guinean economy faces is the failure to link the booming oil sector with the rest of the economy. Most of the inputs needed for the Equato-Guinean oil industry come from abroad and this extends even to the service industry. One way the country could free itself from the pangs of this enclave is by investing their resource rents in other parts of the economy as well as in infrastructure and human development. Such a strategy might create growth in other sectors and/or improve the quality of health and education services. With Equatorial Guinea’s enormous oil wealth they country can do this, but like most oil producers it has so far failed to act in this direction. The lack of linkages between the oil and non-oil sectors as a fundamental economic problem for Equatorial Guinean and the country’s
leadership has just recently realized the fact. This explains why it is important to
incorporate both political and economic analysis in studies of natural resource-
driven development (Ross 1999).

Equatorial Guinean needs to be conscious of the effect of the Dutch Disease. Numerous studies have confirmed the influence of Dutch Disease on various economies. For instance, Sachs and Warner examined 97 countries over a 19-year period and found that states with a high ratio of natural resource exports to GDP in 1971 had unusually slow growth rates between 1971 and 1989. Some of the countries that have suffered from the Dutch Disease include Algeria, Ecuador, Gabon, Indonesia, Nigeria, Trinidad and Tobago, and Venezuela. Gelb (1988) has highlighted the case of Nigeria which suffered from an extreme instance of the Dutch Disease in the 1980s. The high prices of oil in 1973-74 and 1979-80 provided large oil income to the government, but this did not help the economy as the windfall, coupled with spending increases led to inflation and a 90% decline in the non-mining sector. But as Ross (1999) has noted, thoughtful policies can counteract most effects of the Dutch Disease. For instance, Botswana is an outstanding example of how sound economic policy can prevent Dutch Disease, even in a poor and highly resource-dependent economy.

McSherry (2006) argues that the Equato-Guinean experience has close semblance to that of Nigeria. Evidence of this is found in the rapidly growing inflation that is not only hurting the purchasing power of the impoverished masses, but has also prompted a 15% exchange rate appreciation between 2001
and 2003 alone. Furthermore, Cocoa production has declined by 30% between 1996 and 2001 after investments shifted rapidly to the oil sector and higher exchange rates made Equato-Guinean cocoa products less competitive. The government Equatorial Guinean is aware of the possibility of being affected by the Dutch Disease and claims it is doing everything to avoid it.

Fig. 2: Overcoming the Dutch Disease

(Source: 2nd National Economic Development Conference, Bata, Equatorial Guinea.)

Finding out why most resource-rich countries tend to implement failed policies as is the case of Nigeria might need some political analysis. Political scientists are agreed that this failure has a lot to do with poor policy-making, bad
institutions, or some combination of the two. Many of the countries that have suffered from resource curse tend to be “rentier” states. A “rentier” state is defined as one whose revenue is from external rents, rather than domestic manufacturing or productive enterprises (Beblawi 1990). The terms “allocation” and “production” have been used by Luciani (1990) to distinguish between states that are merely involved in the allocation of resources and those that are involved in production and reallocation.

While Equatorial Guinea qualifies as a rentier state because oil rents constitute the vast majority of its economy, it has significant differences with Middle East states like Iran that have also been labeled as such. The former has very weak government institutions, and offers a dearth of social welfare programs. These weaknesses make it difficult for President Obiang Nguema to get the acquiescence of the masses in the same way as leaders of Kuwait or Saudi Arabia (McSherry 2006). What makes the situation in Equatorial Guinea worse is the fact that the criminality of the state has fostered more corrupt management of rents than in the Middle East, and this has made the masses more opposed to the current economic situation. Faced with this reality, the dictatorial regime of Obiang Nguema has depended on clientelism and patronage, in stead of providing widespread benefits to the masses. Regimes such as these are more likely to be authoritarian and this could lead to violence – thus insecurity.

The Role of Regional Mechanisms

Equatorial Guinea is very active in regional organizations especially the Central African Economic and Monetary Community (CEMAC) and Economic
Community of Central African States (ECCAS). CEMAC, which is a French acronym for *Communauté Économique et Monétaire de l’Afrique Centrale* was established to promote economic integration among countries that share a common currency, the CFA franc. It came into being in June 1999, replacing the Customs and Economic Union of Central Africa (UDEAC). Its member states are Cameroon, the Central African Republic, Chad, the Republic of the Congo, Equatorial Guinea and Gabon. The objectives of CEMAC are the promotion of trade, the institution of a genuine common market, and greater solidarity among peoples and towards under-privileged countries and regions. At the moment, members of CEMAC share a common financial, regulatory, and legal structure. In theory they have eliminated tariffs on trade within CEMAC, but this has not gone into practical effect. Meanwhile, they have a common external tariff on imports from non-CEMAC countries. CEMAC is not one of the pillars of the African Economic Community, but its members are associated with it through ECCAS, and the European Union has been putting pressure on CEMAC to merge with ECCAS. On its part, ECCAS aims to achieve collective autonomy, raise the standard of living of its populations and maintain economic stability through harmonious cooperation. The establishment of a Central African Common Market is one of the goals of the organization. It has four priorities: the development of capacities to maintain peace, security and stability, which are essential prerequisites for economic and social development; the development of physical, economic and monetary integration; the development of a culture of human integration; and the establishment of an autonomous financing
mechanism for member countries (African Union 2008).

These regional mechanisms can play a very important role towards improving the situation in Equatorial Guinea. Unfortunately, the history of these organizations shows that each of them has been slow in implementing decisions, irrespective of how good and urgent these decisions have been. Furthermore, if one where to consider that these regional economic bodies are under the control of the very political players, it will not be difficult to see why they are incapable of bringing radical change especially in the areas of democracy, accountability, human rights, the welfare of the masses, and the general security of the peoples of these nations. It is for these reasons that it is also important other actors to influence the situation. These actors will include foreign oil companies, the World Bank, the International Monetary Fund, and foreign governments (especially that of the United States). These organizations and governments could more forcefully demand increased transparency from the Equato-Guinean and other African governments.

Meanwhile, Bejar (2007) points out that Equatorial Guinea is opening up to international influence. In November 2007, the country organized the second National Economic Conference to devise a consensus strategy to diversify the economy and promote long standing internal stability across the country through the year 2020. The goal of the conference was to provide a blueprint for the achievement of sustainable development and to improve the standard of living for all Equatorial Guineans. The economic conference reviewed the current situation in Equatorial Guinea to determine how oil and natural gas revenues
should be spent over the next ten years. It also performed a diagnostic of the competitiveness of the economy, and conducted a breakdown analysis of which sectors of the economy should be diversified. In addition to local experts, they invited representatives from various international organizations such as the IMF, the World Bank, and USAID, as well as delegates from the United States, Spain, and France.

Furthermore, the country has made commitments with the Extractive Industries Transparency Initiative (EITI). This organization supports improved governance in resource-rich countries through the verification and full publication of company payments and government revenues from oil, gas, and mining. EITI also assists in building multi-stakeholder partnerships in developing countries in order to increase the accountability of governments (Government of Equatorial Guinea 2007). Good governance is a precondition for converting large revenues from extractive industries into economic growth and poverty reduction. When transparency and accountability are weak, the extractive industries may instead contribute to poverty, corruption, and conflict – a situation referred to as resource curse.

Conclusion

Equatorial Guinea has moved from being one of the poorest countries on earth to becoming one of the richest based on per-capita income. This wealth comes exclusively from the massive oil fields that the country controls. Unfortunately, the majority of Equato-Guineans still live in abject poverty under one of Africa’s worst dictators. As in many other Sub-Saharan countries, the oil
revenue is almost exclusively used for the enrichment of the country’s leaders rather than for economic development and improvement of living standards for the citizens.

What is most remarkable, however, is not the size of the increase in revenues, but how little of it has been shared by the population, either directly or in improved health and social services. At the same time, while oil production has continually increased, production of traditional exports such as coffee and cacao has declined dramatically. Malaria is still rampant and is the main cause of death among children under five years of age, and child morbidity and mortality rates have not experienced any significant change in the last several years. Over 70% of the population lives below the poverty line, and the majority of those living in the largest cities lack access to safe drinking water and sanitation services. The immunization rate for the most prevalent diseases is relatively low, making children prone to diseases that could be easily preventable by vaccination. Almost one in five children under-5 are malnourished, and just shy of one in 20 are severely so. At the same time, maternal mortality rates, which are a good measure of health coverage and the quality of health services, remain very high. Most of the country’s primary and secondary schools don’t support basic conditions for children’s education. Over 60% of schools in the country don’t have potable water, and 50% don’t have toilette facilities, especially for girls. As a result, there is a high rate of school drop outs and of class repetition. In some schools, there are up to 96 students per room.

The country’s oil wealth has the potential of transforming for the better
the lives of its citizens otherwise condemned to live in poverty. That the oil wealth is not used to improve people’s lives is a severe indictment of the leaders of Equatorial Guinea themselves. It is mainly up to them to make of the oil boom in this country a blessing or a curse. And if it fails to be the blessing that it really is, this could fuel internal instability, given that the struggle over resources is often the main cause of insecurity and wars, not only in Africa, but globally.

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Economics & Global Warming

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Abstract

This article explores the idea that mainstream economic theory is inadequate to deal with the future impacts of climate change. Neoclassical economic theory lacks a meaningful analysis of the long run, as well as an insufficient notion of the trade off between economic growth and environmental damage. Critical attention is given to the cost/benefit approach employed by Bjorn Lomborg in *Cool It: A Skeptical Environmentalist’s Guide to Global Warming* to illustrate the theoretical, methodological, and philosophical weaknesses inherent in mainstream economics. It is suggested that to be relevant in the age of global warming, economic theory must de-emphasize the ‘value neutrality’ or ‘objectivity’ of the efficiency standard and adopt an explicit ethic such as the precautionary principle. This will better enable economists to adequately and responsibly theorize the complexity and uncertainty inherent in global climate change.

Introduction

The economic impact of global warming is framed as a long run problem. Based on the 2007 report issued by the United Nations Intergovernmental Panel on Climate Change (IPCC), significant economic and social impacts identified in worst case scenarios of average temperature rise won’t kick in until the middle of this century. Significant costs in middle-of-the-road scenarios start further in the future. Still, global warming poses an immediate policy dilemma. Just as balancing birth and death rates does not stabilize population growth for two generations, capping greenhouse gas emissions at today’s level would not stabilize temperature rise for several decades. The slow decay of greenhouse gas concentrations in the atmosphere guarantees temperature rise well after emissions plateau or even decrease. This complex and lagged dynamic creates intractable problems for traditional economic analysis of climate change. Cost-
benefit analysis lacks credibility when deployed to compare a penny spent today to pennies saved from avoiding uncertain and unknowable environmental damage numerous decades in the future. Compounding that difficulty, economists must account for monetary damage to naturally produced, non-priced services provided by ecological systems. Also, economists must estimate the monetary value of expected categories of environmental impacts resulting from non-linear change in climate phenomena and novel categories of impacts as ecological systems become increasingly stressed. While economic reasoning may contribute to the global warming discussion, these issues call into question whether mainstream economic theory is appropriate and equipped for the task.

**The Emptiness of the Long Run**

The complex dynamics of natural systems call into question cost/benefit analysis, an approach founded on small and linear perturbations around some appropriately defined market equilibrium and reliant on quantifiable costs/benefits. However, inappropriate theoretical constructs and methodological limitations seldom give pause to practitioners of mainstream economics. Economic theory has an illustrious history of serving the interests of business by squarely aligning against government intervention in markets. In the aftermath of the Great Crash of 1929 and in the early years of the Great Depression, the proponents of neoclassical economic theory promised that eventually prices and wages would adjust to restore effective demand and full employment. Such tendencies for inaction were illuminated and satirized by what John Kenneth Galbraith (1953) called the “no new business meetings” of the Hoover administration. In the hands of neoclassical ideologues, the ‘long run’ is a construct that promotes laissez faire policy conclusions. It buys time while the business community makes marginal modifications and self-regulating forces restore favorable market conditions. Indeed,
from the Great Depression to the Financial Collapse of 2008, neoclassical economists have argued that government policy is ineffective, and promoted inaction by appealing to the long run, self-regulating tendency of the market.

When it comes to long run time horizons, economic theory is not solely inadequate in the hands of pro-market, neoclassical economists. Liberal economists operate well within the boundaries of neoclassical ideology when it comes to the primacy of markets and the requisite of uninterrupted growth. Focusing almost exclusively on the short run business cycle, activists trumpet the retort of Lord Maynard Keynes that “in the long run we’re all dead.” Keynesians advocate market intervention to stabilize business fluctuations and maintain a growth trajectory. Growth is paramount even if it requires a Faustian bargain to persevere. Commenting on the Great Depression and the need for economic growth, Keynes wrote: “For at least another hundred years we must pretend to ourselves and to everyone that fair is foul and foul is fair; for foul is useful and fair is not. Avarice and usury and precaution [against virtuous motives] must be our gods for a little while longer still. For only they can lead us out of the tunnel of economic necessity and into daylight” (Quoted in Schumacher, 1973:24). Neoclassical economics has an established record of shallow treatment of the long run, whether it’s deployed to sustain *laissez faire* doctrine or to counteract flagging national income. Absent a meaningful long run concept, one should be skeptical that mainstream economic theory is suited to address the connection between economic growth and global warming.
Ecological Economics: Striking at the Growth Mantra

The tenacity and prowess with which the discipline’s gatekeepers retain control over a laissez-faire, pro-growth orientation is impressive. In Western universities, there has been no serious challenge to the dominance of neoclassical thinking over the past 150 years. Given that the most successful heterodox school of thought, Marxian economics, also focuses on growth and control over nature, the discipline has historically lacked a serious criticism against economic growth. However, in the age of global warming and wide scale ecosystem destruction, ecological economics offers a critical appraisal and coherent alternative vision to neoclassical economics. Building on the image of ‘Spaceship Earth’ (Boulding, 1966) and a ‘full-world vision,’ ecological economics treats the trade offs associated with economic growth seriously (Daly and Farley, 2003:17-18). Diametrically opposed when it comes to underlying worldview, theory, and policy, there is little chance the discipline of economics can construct a single tent to house both schools. In fact, ecological economics sets its sight on the outcome buttressing the neoclassical claim to superiority: unlimited, undifferentiated economic growth.

Having zeroed in on this target, the ecological economic perspective can create uncomfortable conversations in public settings. An awkward difficulty arises when it comes to the issue of long run economic growth. Consider the current historical moment that juxtaposes two primary forces. On the one hand, there’s a strong scientific consensus that governments must act immediately to avoid the worst impacts of global warming. This implies rewarding differentiated growth, commonly viewed as economic activity not based on fossil fuels. On the other, an immediate problem confronts leaders of the world’s largest economy: the need to avert a major recession relating to a host of factors including irrational exuberance in home finance markets, relentless increases in crude oil prices, and internal and external structural imbalances.
that tend to make the dollar lose international appeal. While the Federal Reserve and politicians feverishly attempt to ward off recession, stimulating economic growth with a mixture of monetary and fiscal measures, ecological economists engage in conversations about the costs and benefits of economic growth. Are there diminishing marginal benefits to growth? Do we need to theorize explicitly about a macroeconomic marginal cost/benefit rule that leads to the idea of ‘enough’? Whereas traditional pro-growth economists lack a notion of what is enough, social and natural scientists engaged in ecological economics are not timid about discussing the structural forces of recession. Global recession contracts economic activity in the material throughput of industrial economies. Therefore, recession slows or reduces global demand for fossil fuels and, as a result, the contracts the supply of carbon into the atmosphere. The world experiences the benefits of slower growth.

In an intellectual climate that uncritically assumes a one-for-one trade off between jobs and environment, elevating the natural world and its biotic community over undifferentiated economic growth is roundly dismissed as uneconomic. In discussing the meaning produced by the method of economics, Schumacher (1973) confronts resistance to such ‘uneconomic’ attitudes directly:

…the answer to the question cannot be in doubt: something is uneconomic when it fails to earn an adequate profit in terms of money… Numerous attempts have been made to obscure this fact, and they have caused a very great deal of social confusion; but the fact remains. Society, or a group or an individual within society, may decide to hang on to an activity or asset for non-economic reasons – social, aesthetic, moral or political – but this does in no way alter its uneconomic character. The judgment of economics, in other words, is an extremely fragmentary judgment: out of the large number of aspects which
in real life have to be seen and judged together before a decision can be taken, economics supplies only one - whether a thing yields money profit to those who undertake it or not (1973:42).

It’s unfortunate that few economists and politicians know how to frame the so-called trade off between jobs and the environment. Framed properly, it’s not an issue of economic growth versus the environment. It’s an issue of ‘good growth’ versus ‘bad growth’.

**Bjorn Lomborg: The Neoclassical Flag Bearer**

The limitations of economic theory go beyond inadequate treatment of the long run and growth. And the broader scientific community is aware that economic theory often strays precariously far from relevancy and reality. Shackled by methodological individualism and a general tendency for reductionist techniques, preoccupied with mathematical formalism and physics envy, blinded by emphasis on quantification and void of institutional content, it is not surprising that mainstream economic theory struggles to be relevant in public policy discussions. Scientist and philosopher Fritjof Capra (1982) commented:

> The fragmentary approach of contemporary economists, their preference for abstract quantitative models, and their neglect of the economy’s structural evolution, have resulted in a tremendous gap between theory and economic reality…Economics today is in a profound conceptual crisis. The social and economic anomalies it can no longer address – global inflation and unemployment, maldistribution of wealth, and energy shortages, among others – are painfully obvious to everyone. The failure of the economic profession to come to terms with these problems is recognized by an increasingly
skeptical public, by scientists from other disciplines, and by economists themselves (1982:192).

Concern about the relevancy of economics crystallizes in the debate over the economics of global warming. Consider the book Cool It: The Skeptical Environmentalist’s Guide to Global Warming (2007), written by economist and statistician Bjorn Lomborg. This research is arguably the orthodoxies’ most well-known and revealing contribution. Acknowledged by Time Magazine as one of the world’s most influential people and described in 2008 by the UK Guardian as “one of the fifty people who could save the planet” (www.lomborg.org).

Lomborg deploys conventional cost/benefit analysis, and a masterful command of rhetoric and statistics to argue a few common sense points:

1) Global warming is real and man-made and will have a serious impact on humans and the environment toward the end of this century;

2) Good policy will not come from statements about the strong, ominous, immediate and often exaggerated threats of global warming;

3) We should avoid large and expensive cuts today because they will have a rather small and insignificant impact far into the future; and,

4) Our dollars should be spent on more pressing and important problems such as hunger, poverty and disease with a much higher chance of success than pursuing drastic climate policies at a cost of trillions of dollars (2007:8).

To defend this argument, Lomborg analyzes a range of social and environmental impacts attributed to global warming. These include the threat to the polar bear, the impact on
agricultural productivity, deaths related to temperature, the impact of extreme flooding occurrences and sea level rise, the transmission of disease, and more. He argues that tax dollars and policy should focus directly on these problems and not attempt to deal with them indirectly by reducing greenhouse gas emissions. In so doing, society will get more 'bang for our buck’ in efforts to improve quality of life and environment. For example, instead of spending to protect polar bears by capping greenhouse gas emissions, Lomborg recommends spending money to enforce hunting laws. Enforcement could save more polar bears per dollar and is therefore more efficient. He claims that global warming provides real benefits on the margin if we account for lives saved due to fewer and less severe cold snaps. He recommends revising zoning laws for dwellings and building barriers to prepare for anticipated river flooding and sea level rise. He points to the benefits of spending additional dollars on research and development to address disease and malnutrition. In sum, he argues for directly pursuing a variety of opportunities, which are identified in the Copenhagen Consensus and ranked in terms of their cost/benefit ratio. Direct policy addressing specific improvements will improve the lot of humanity and avoid a dollar cost of these is consistently higher when obtained indirectly by capping greenhouse gas emissions (2007:45).

The thesis of Cool It: The Skeptical Environmentalist’s Guide to Global Warming is good to a point: global warming is a given, so let’s spend scarce dollars today to directly improve well being and make threatened communities better prepared to deal with the impacts of climate change. Lomborg claims this will avoid slowing down wealth creation resulting from inefficient investment in cutting greenhouse gas emissions. Clearly, direct investment in physical and social systems vulnerable to the impacts of global warming is sound idea. In fact, fighting poverty, disease, malnutrition and updating nonexistent or aging
infrastructure were important goals long before global warming became a serious consideration. These priorities will continue to be essential to improve the lot of humanity with or without the added imbalances and impacts created by global warming. Lomborg’s basic message deserves credit. Resilient environmental and social systems adapt better to the impacts related to climate change.

**Criticisms of the Neoclassical Approach**

Despite his contribution, Lomborg’s analysis invites criticism on two general and interconnected fronts. First, he speaks with a weak voice when ‘going at it alone’ in the interdisciplinary task of characterizing social, ecological, hydrological, and geophysical systems. He exhibits a simplistic understanding of the role that global warming plays in altering ecosystems. This makes his statistical inferences shallow and disingenuous. Second, an over-extended application of cost/benefit analysis, itself a simplistic analytical technique, converges with an inadequate portrayal of natural phenomena, obscuring his constructive message and trivializing the research project. Regarding the first line of attack, the broad scientific community dismisses Lomborg’s work because it is ill informed, inaccurate, or highly misleading in addressing the nuts and bolts of climate change. For example, an analysis of the entire habitat that supports the polar bear is absent, leading to a portrayal of the problem that is grossly oversimplified. Lomborg’s statistical analysis of the trade off between ‘heat deaths’ and ‘cold deaths’ is predicated on a contrived concept of an ‘optimal’ local temperature, around which mortality comparisons can be constructed in response to incremental temperature change. He concludes that as the earth warms people should move to urban area to get access to air conditioning. This social adaptation to advanced technology is touted as proof of human resiliency and ingenuity. Just as polar bears confront more than
ice melt in a complex habitat, temperature rise is one of many factors needed to explain the impact of climate change on urban living. Urban areas depend on water and food imports and systems of natural capital, which will likely be impacted by climate change. One need not spend time refuting such simplistic ideas, which are primarily the contorted result of reductionist methodology. If interdependent biophysical connections in ecological systems and a credible accounting of associated costs require a rigorous analysis, these examples do not inspire confidence in Lomborg’s research.

Lomborg’s overextended use of cost/benefit analysis serves to compound the more general criticisms of the wider scientific community. However, much criticism of Lomborg is primarily criticism of neoclassical economics. When Lomborg addresses global warming from an economic perspective, he offers a plausible conclusion: additional dollars today should be spent on research and development of technologies that will be applied by companies and countries to reduce greenhouse gas emissions (2007:120-123). Clearly, the market will play a crucial role in transitioning to a carbon-limited system of production. Unfortunately, Lomborg’s rhetoric and agenda prevent him from exploring specific market developments that would come from investing 0.5% of global product into research and development. Instead, he is preoccupied with using cost/benefit analysis to develop murky monetary comparisons between the costs of improving well being indirectly by reducing global carbon emissions and directly investing in the specific humanitarian projects.

Lomborg’s positive message gets lost in his rhetoric and inappropriate application of benefit-cost analysis.

Within economics, criticism proceeds on theoretical, methodological and philosophical grounds. In terms of basic economic theory, Lomborg consistently treats the costs of a setting up
and administering binding international emission caps in an all or nothing regime. Institutional learning is not considered. An emissions cap may indeed be expensive to implement at first. However, the unexplored and tacit assumption is that no learning-by-doing and buy-in occurs. International agreements are treated as a one shot deal. Yet, as with other process or technological innovation, dramatic cost savings can occur though economies of scale and institutional learning after setting up the program. Trust and buy-in can occur in a multi-period setting. Moreover, no consideration is given to the benefit to the market and investors of eliminating uncertainty surrounding the regulatory intensions of countries.

Methodologically speaking, applying discount rates to avoid costs that stretch beyond fifty years is all but meaningless. Significant costs from environmental damage due to global warming are currently predicted to begin in 40 to 50 years. At an environmentally favorable 1% discount rate, a rate far lower than a market-based analysis applies to future costs/benefits, approximately 60% of monetary value 50 years out gets pulled into the present value analysis. At a more normal market-based discount rate of 5%, only 15% of costs retain a present value. (Harris, p. 215) Cost/benefit methodology is absurd if costs are associated with impacts that begin 50 years out and extend to the end of the century. Even if cost/benefit analysis incorporates very large costs at the end of the century, the present value is miniscule at a discount rate that reflects the opportunity cost of money in the 30-year bond market. While the cost/benefit approach is useful in comparing two projects such as flood control or disease reduction with similar, short-term time frames, it amounts to sophisticated deception to compare a short-term project to a project with costs/benefits starting at 50 years and continuing into the indefinite future. Furthermore, prediction of human induced global climate change and related economic and environmental impacts is fraught with uncertainty.
Known categories of costs cannot be accurately measured or meaningfully incorporated into a present value analysis. Other costs categories are unknowable due to impacts that will emerge as global ecosystems adapt to the stress of warming temperatures.

Philosophically speaking, Lomborg conflates the basic categories of risk, uncertainty, and ignorance. Ironically, the most transparent example of inadequate and over-extended analysis is what Lomborg presents as a clear example of economic logic: he compares spending valuable pennies to reduce automobile accidents to spending valuable pennies to reduce the anticipated future costs of global warming (2007:150). Recall that risk is a known event that has an attached probability; uncertainty is a known event that does not have an accessed probability; and ignorance is an unknown event with an unknown probability (Daly & Farley, 2003:95). The cost/benefit method fundamentally works in the case of automobile accidents and injuries because the outcomes and their probabilities can be determined and the costs and benefits placed into a short-term time frame. Accordingly, it is possible to estimate the costs and benefits of lowering the speed limit one mile per hour. With the high volume of accidents, the comparison can be developed using statistical data over a few years.

Automobile insurance companies have a handle on this, which is in stark contrast to comparing spending dollars today to prevent costs related to global warming 50 to 100 years in the future. In comparing automobile accidents to global warming, Lomborg reveals the shallowness and over extension of his cost/benefit analysis by failing to account for the difference between risk, uncertainty and ignorance. Brazenly, he claims that the ‘precautionary principle’ applied to global warming offers nothing beyond a cost/benefit analysis (Lomborg, p. 158). He is categorically mistaken. The precautionary principle, which
is fundamentally an environmental ethic, is an autonomous concept devised to deal with human and social situations characterized by uncertainty and pervasive ignorance.

**Economics and Ethics**

Lomborg’s book garnered some praise and much criticism from the scientific community. To his credit, the research is one of the strongest cases that neoclassical economics has brought to the table. The research is rhetorically powerful, statistically clever, and a masterful application of cost/benefit analysis, which of course is the workhorse of mainstream economics in the realm public policy. However, the question remains: Why is the best economics has to offer so inadequate? Neoclassical economists often claim that cost/benefit analysis contains no ‘ethical’ content. On one level, economists choose to view efficiency as an ‘end’ instead of a ‘means to an end.’ On another level, it is viewed as a value-free, objective method that merely balances benefits and costs to generate a maximum of ‘social welfare’. Deeper reflection might lead some practitioners to acknowledge that it is an ethical choice to prioritize efficiency and growth over other aspects of human well being. Also, the application of cost/benefit analysis involves choosing a discount rate, which is unavoidably subjective even when it is the default rate of interest in the market place. Lowering the discount rate emphasizes monetized environmental impacts in the future; conversely, raising the rate discounts environmental costs in the future at the expense of the next generation. Thus, technically economists can act ‘ethically’ within the theoretical and methodological framework of cost/benefit analysis.

Viewed this way ‘ethics’ remains limited because the impact of global warming affects ecological services (such as global climate control) that maintain natural capital for free. These services are not marketed commodities and cannot have an objective market value
since assigning such a value involves choosing a discount rate. Therefore, it is essential to admit a separate ethical category into economic thinking. In his seminal article “The Land Ethic,” Aldo Leopold (1949) was onto this when he wrote:

[the] extension of ethics, so far studied by philosophers, is actually a process in ecological evolution. Its sequence may be described in ecological as well as in philosophic terms. An ethic, ecologically, is a limitation on freedom of action in the struggle for existence. An ethic, philosophically, is a differentiation of social from anti-social conduct. These are two definitions of the same thing. The thing has its origin in the tendency of interdependent individuals or groups to evolve modes of co-operation. The ecologist calls these symbioses. Politics and economics are advanced symbioses in which the original free-for-all competition has been replaced, in part, by co-operative mechanisms with an ethical content (Leopold, 237).

Lacking an environmental ethic, economics cannot deal adequately with issues such as global warming, which present the specter of adversely and irreversibly altering live-supporting, ecological systems. Currently, economics treats natural capital like property as humans are treated like property when exchanged as slaves. They are artifacts for market exchange.

Leopold argues that cultural evolution proceeds as part of a sequence. The first step in this process established an ethic between individuals. Humans ascribed a code of conduct to behavior between individuals. This ethic upholds the value that human slavery is wrong and, therefore, humans shouldn’t be treated as property and exchanged for a price in the market. The next step in the cultural sequence addressed the relationship between individuals and society. The Golden Rule tries to “integrate the individual to society, and democracy tries to integrate social organization to the individual (Leopold, 238). The final step in this ethical sequence co-operatively links individuals and society not to one another but to the natural world, and critically to the biotic systems – the land and the animals and the plants - that support all life on Earth. Leopold continues:
The extension of ethics to this third element in human environment is, if I read the evidence correctly, an evolutionary possibility and an ecological necessity. It is the third step in a sequence. This first two have already been taken. Individual thinkers since the days of Ezekiel and Isaiah have asserted that the despoliation of land is not only inexpedient but wrong. Society, however, has not yet affirmed their belief. I regard the present conservation movement the embryo of such an affirmation…. A land ethic of course cannot prevent the alteration, management, and use of these ‘resources’, but it does affirm their right to continued existence, and at least in spots, their continued existence in a natural state (Leopold, 239-240).

Conclusion

Bjorn Lomborg’s work illustrates that ignoring the limits of economic analysis easily corrupts sound judgment. Does Lomborg’s rhetorical focus on extreme versions of environmental consciousness reflect a desire to support a political agenda of his own? And, if so, does Lomborg even consider that his message of allocating pennies wisely in the face of scarcity could resonate without ever mentioning global warming? Again, I think Lomborg’s primary thesis carries merit. However, the failure in Lomborg’s work is his insistence that acting on with global warming though today will cause lost opportunities and less wealth in the future. Like so many others, he assumes a short term and false trade off between jobs and the environment. He makes no effort to distinguish between bad growth and good growth, and the macroeconomic trade offs between economic growth and the environment. Also, he makes this case with an economically shallow, methodologically flawed, and philosophically bankrupt analysis. In failing to distinguish between risk, uncertainty and ignorance, he wrongly claims that cost/benefit analysis can substitute for a ‘precautionary principle’.

Kenneth Boulding possesses a ‘land ethic’ and likens the earth’s biosphere to a spaceship. Boulding (1966) maintains that undifferentiated economic growth – the fossil fuel economy – compromises the containing vessel. Moreover, he warned that over the past four or five
centuries, the human psyche had become obsessed with the notion of an unending frontier, and reconciling economics with the basic fact that the material frontier is bounded by the carrying capacity of the Earth’s biosphere is certain to conflict with man’s ‘cowboy’ image of himself on the planet. This is a serious obstacle to the evolution of a land ethic supported by society. Otherwise good economic thinkers stumble when they fail to understand the limits of the weapon they wield. They stretch common sense limits of economic analysis because the theory does not possess adequate ethical content. Interdisciplinary critics and detractors from within the economics profession are dead on to argue that when it comes to the living systems that support life on this planet, economic analysis is fundamentally insufficient. The emerging nature of the problem at hand demands that society and science develop what Leopold calls a ‘land ethic.’ Until such time when the cultural sequence takes us to this level, economists must be vigilant not to confuse a car crash with a global train wreck. Economic science should not let marginal thinking cause us to be penny wise and pound foolish.
Citations


Government Bailouts, Financial Sector Turnaround and Wicked Problems

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Government Bailouts, Financial Sector Turnaround and Wicked Problems

Section 1. Abstract
Given the current financial crisis in world financial markets, and especially on the Wall Street, this paper studies this situation as a “wicked problem” where the problem statement is not independent of its solution and vice versa. Using Rittel and Webber’s (1973) ten criteria for wicked problems, we establish that the current financial crisis is a wicked problem that needs to be clearly formulated as far as is possible and whose solution space should be carefully explored so that quick solutions (e.g., government bailouts) do not have long-standing unintended consequences on the publics. (All references will be cited in text in a final version)

Section 2. Introduction
The 2008 financial crisis in the U.S was mainly triggered by the millions of subprime home mortgages that were granted to borrowers whose credit history was not sufficient to get a conventional mortgage. Often these borrowers had impaired or even no credit history. In the recent past with high liquidity in the housing market, mortgage companies extended 95% loans on appraiser-inflated home prices only to see the prices come crashing down. There were other factors besides falling home prices that eventually led to the downfall of many financial giants. They include widespread corporate layoffs at other firms that created difficulties for homeowners in making their mortgage payments, increasing mortgage rates (because of ARMs- Adjustable Rate Mortgages), and increases in the number of personal bankruptcies.

During the past several months, financial firms have announced more than $400 billion in write-downs on mortgage-related assets. The recent problems in the U.S housing market, especially with the increasing defaults on subprime mortgages, sent shock waves in financial markets. Table 1 presents a bleak picture of the U.S financial services industry. In this paper, using the theory of wicked problems (Rittel and Webber 1973), we will present arguments why this issue should not be handled in a simplistic fashion.

Various violations of good practices by mortgage brokers/bankers were reported in the following areas: Avoiding conflict of interest between parties in their transactions; causing irreparable damage to the reputation of their employers; sustaining high degree of loyalty towards respective stakeholders; not upholding the integrity and honor of their chosen profession; protecting the confidentiality of client information; fraudulent conversion of mortgage papers; failure to comply with SEC regulations (such as required timely reporting, etc); getting appropriate training in processes of gathering sufficient evidence
to make decisions; forced buyer-seller information asymmetry that disadvantages the buyers; structured
injustice in the appraiser-inflated housing prices and teaser prices; exorbitant interest payments that are
inherent with the ARMs; over 9 million more “people without their own homes” in the U.S owing to
forced foreclosures; the 85% drop in Countrywide’s stock value and the loss of innocent shareholders
(The firm was in good standing before this “indulgence”). Deregulations in the financial sector (under
Reagan administration) have clearly done more damage than ever imagined. In the next section, we
review some fallouts that resulted from the recent financial meltdown.

Section 3. The 2008 U.S Financial Meltdown: Case Studies

The financial services industry has posted losses close to $800 billion since July 2007. Giant
financial companies are experiencing deep trouble. Table 1 presents market-capitalization performance
statistics of 17 mega U. S. financial firms. Together, they had a market-capitalization total of over $1.6
trillion on October 9, 2007. It quickly eroded within a year, however, to a total of $865.6 billion by
September 12, 2008, a total loss of $791.72 billion (47.8%), or an average of $46.6 billion per company.

Despite being the beacon for unfettered free markets and capitalism, the American government has
had a consistent history of stepping in when most needed, especially after the Great Depression. In order
to appreciate the problem more deeply, we describe the plights of some major players that lost in the
financial turmoil of the mid-week of September 2008.


Although less glamorous and more distant geographically than any of the individual bank breakdowns of
the 21st century, the Japanese economic bubble and ensuing recession may be the most similar modern
day parallel to the current U.S economic turmoil. Despite markedly different in culture and scale,
American policymakers must closely examine the successes and failures of such broad economic
intervention as it may be some of the only comparable data available in the modern world.

Despite its long cultural history, the economy and modern government of Japan was virtually reinvented
in the years following World War II. However, due to a strong culture of saving and investing, the cash
supply as a percentage of GDP was astonishingly high by the late 1970s. This excess supply of money in
the bank, combined with Japan’s trade surpluses and escalating yen value resulted in what’s now known
the Japanese Asset Price Bubble from 1986-1990. Prices of real estate skyrocketed, and a popular quote
which brought pride to the Japanese was that the land beneath the Imperial Palace in Tokyo was actually
worth more than the entire State of California. However, as with all bubbles, the Japanese Asset Price
Bubble came to a rapid burst at the turn of the decade sending the economy into a downward spiral causing deflation, significant drops in corporate investment, and a thirteen year long drop in the Nikkei 225 Index.

The Japanese governmental reaction to the financial turmoil has long been scrutinized and cited since. Much like the American economy following the 1929 crash, the Japanese economy and stock market took many years to stabilize and have yet to return to pre-burst levels. Japanese housing prices have climbed back to only half of their 1990 values. In Japan, it is the delayed governmental intervention that caused illiquidity, a lasting lack of confidence, and enough depressed investment to lengthen the decade long recession. There is a lesson here for U.S. policymakers.

B. Long Term Capital Management (1998) LTCM

The launch of the storied hedge fund Long Term Capital Management is similar to a fairy tale in which all the characters fit perfectly into the story puzzle and almost prophetic of a happy ending. In 1994, a renowned Salomon bond trader John Meriwether teamed up with Nobel prize winning economists Myron Scholes and Robert Merton to form LTCM. Using a proprietary model featuring complicated convergence trades and high leverage, the fund all but guaranteed its investors high double digit returns in a rising or falling marketplace.

In its first couple years in existence, LTCM delivered just as promised with upwards of 40% returns initially. By 1998, having returned at least 25% in every year, the fund managers had increased their leverage and controlled over $100 Billion in assets even though the deposits to the fund were only $4 billion.

One of the important lessons from the LTCM debacle is the lesson of liquidity. Even with a sound long term investment platform, a business can be wiped out by margin call (for LTCM and other hedge funds) or the inability to post required collateral (as in the case of AIG)

The leverage, greed, and dismissal of any ability to be wrong concomitant with this fairy tale team was the perfect storm that led to the largest hedge fund downfall in history and the ensuing Fed backed bailout.

C. Fannie Mae and Freddie Mac (2008)
Fannie Mae and Freddie Mac hold or guarantee $5.4 trillion in mortgages and hold or guarantee 42% of all home loans. Between the two companies, they lost over $105 billion in market capitalization, a combined loss of 98.7 percent in less than a year (see Table 1). Both companies borrowed much too much, almost 50 to 100 times their net worth, and just a drop of 1 percent in the value of their assets landed them in big trouble. The Treasury Department rescued each by $100 billion on September 15, 2008. Both CEOs were fired. The federal rescue of these companies, however, puts the U. S. government at least temporarily in charge of providing financing to America’s troubled housing market (Gunther 2008).

The problem of Fannie Mae and Freddie Mac can partly be due to the Federal Reserve Board’s cutting short-term rates to ridiculously low levels over the years. The Fed can cut only short-term rates. When the Fed cuts short-term rates to help troubled financial companies, it can cause several unintended consequences such as, borrowers bingeing on cheap money. People not only bought houses much bigger than they could afford to pay, they even bought multiple houses on speculation, hoping to flip them at a profit. But the Fed started raising short-term rates and banks discontinued teaser rates. Meanwhile, the overpriced housing market began tumbling down. As house prices fell, more loans went into foreclosure thus threatening the very survival of mortgage banks.

D. AIG (2008) - American International Group

AIG, the giant insurance company, has an assortment of businesses ranging from aircraft leasing to life insurance for Indians to retirement plans for elementary schoolteachers. The company provided $440 billion of insurance to investors who bought securities backed by mortgages.

AIG is a global empire operating in complementary businesses. Mr. Greenberg (CEO) focused on making giant commercial deals, increasing its share of the life insurance business, auto insurance, environmental liability insurance, insurance against kidnapping, and protection from suits against a company’s officers and directors. AIG is the largest underwriter of commercial and industrial insurance in the U.S.

The multi-transactional business that led AIG to the brink of bankruptcy is as follows (Andrews 2008):

a) Banks write mortgages to home owners and sell them to investment banks.
b) The investment banks package the mortgages into securities and sell them to investors.
c) To protect investors against defaults, AIG sells insurance on those securities.
d) AIG put up collateral to guarantee it could repay investors, if needed.
e) The contracts said that if AIG’s credit ratings were cut, it would have to provide additional collateral.

f) Concerned about the declining value of AIG’s own investment portfolio, the credit rating agencies cut AIG’s ratings on Monday, September 15, 2008, forcing the company to put up more collateral.

g) If AIG had failed to put up collateral, investors’ holdings would have been at risk, perhaps leading to losses around the world.

This decision came just two weeks after the Treasury took over the quasigovernment mortgage finance companies Fannie May and Freddie Mac. The government bailout of AIG effectively puts taxpayer money at risk while protecting bad investments made by AIG (Andrews 2008) and this is the most radical intervention in private business.
Lehman Brothers borrowed too much money and invested it into deals of dubious quality. In October 2007, with the real-estate collapse well underway, Lehman in partnership with the Tishman Speyer real estate firm paid $22.2 billion for a leveraged buyout of a big apartment developer, Archstone. Losses on this deal surfaced almost immediately.

Fed had bailed out Bear Stearns, and also announced that it would make huge loans available to eligible investment banks. Lehman failed the test of eligibility – it never could regain the confidence and support of the market, the Fed or the Treasury.

Lehman Brothers, staggered by losses on its toxic commercial and residential real estate assets, and failing to get federal guarantees to support the company’s troubled real estate portfolio, filed for Chapter 11 bankruptcy protection which essentially brought the value of the common stock to nil (which was selling for $85 just a year earlier).

**Section 4. The 2008 U.S. Government Bailout**

The U.S. government has taken the following actions in response to the 2008 financial crisis which has led to shortage of both business capital and consumer credit: (a) $168 billion economic stimulus package that was meant to put cash in everyone’s pocket; (b) rescued Bear Stearns (a major investment bank on Wall Street) in March 2008; (c) in September 2008, supported Fannie Mae and Freddie Mac by advancing $200 billion in equity money; (d) supported $200 billion to sustain AIG through its cash flow crisis, and (e) advanced $700 billion to other major banks in trouble.

In the following section, we will establish that the 2008 crisis in the U.S. financial services industry is indeed a wicked problem.

**Section 5. The Current Financial Turmoil – A Wicked Problem**

The financial markets have grown very complicated of late. Very speculative instruments like credit default swaps, cash options, and derivatives of all imaginable varieties have been created. Very few people fully understand them. These instruments, and the hedge funds who have used them, have made financial markets and financial institutions very unstable. In the midst of this financial market turmoil, our contention is that the problem of saving the financial markets is a wicked problem, and its resolution must be crafted very carefully, and if possible, without any government intervention.
statement and resolution-search should both be within the framework of free market systems, where the free enterprise should be able to design its own correcting mechanisms without governmental control or dependence.

What makes a problem wicked? Characterizing Wicked Problems

Rittel and Webber (1973) believe that wicked problems have the following characteristics:

1. **Wicked problems are not easily definable.** One cannot easily formulate wicked problems with a well-defined statement. You do not understand the problem until you have developed a solution. Every solution investigated exposes new aspects of the problem, requiring further adjustments.

A single root cause of the current financial meltdown is impossible to identify.

2. **Wicked problems have no stopping rules.** The search for problem formulation and resolution never stops. This is also because the wicked problem is continually evolving and mutating. There are no optimal solutions for wicked problems. There are only “satisficing” solutions – you stop when you have a solution that is “good enough” (Herb Simon 1969).

Experts could not agree on a finished stage to the formulation and solution of this giant 2008 financial crisis facing U.S – it is an on-going process.

3. **Solutions to wicked problems are not objectively true or false,** right or wrong, but only judgmentally better or worse, good enough or not. Different stakeholders judge different solutions as simply better or worse from their viewpoints. Their judgments often vary and so also their goals and objectives for the problem-resolution.

Formulating and resolving wicked problems in stabilizing turbulent financial markets is a complex socio-political planning process where the personal interests, value-sets and ideological predilections of participants play a major role.

4. **There is no immediate and no ultimate test of a solution to a wicked problem.** Solutions to wicked problems generate unexpected consequences over time, making it difficult to measure their effectiveness.
This is very true of the current financial services market crisis. The domino effect of one financial giant falling continues for months, if not years. It is too risky not to treat symptoms since the real problem (being “wicked”) may never be totally established.

5. Every solution to a wicked problem is a “one shot operation” as it is not possible to discover a solution to a wicked problem by trial and error. Every solution you try is expensive and has lasting unintended consequences that may spawn new wicked problems.

Solutions to the 2008 crisis have consequences that affect the lives of millions of people who are irreversibly influenced by them. Any solution tried has untold ramifications. One shot federal solutions have unending unintended consequences. Only way to know the effects is to try something but the results will not be known for sometime and there is clearly opportunity cost of other unimplemented solutions.

6. Wicked problems do not have an exhaustively describable set of potential solutions. It is difficult to know whether all possible resolutions to wicked problems have been identified and assessed.

Clearly in theory solutions to the 2008 crisis cannot be bounded since every suggested solutions in turn poses significant challenges that in turn must be overcome. This makes the potential list of solutions unbounded.

7. Every wicked problem is essentially unique and novel. Often, some particulars of the problem override their commonalities. Every wicked problem is essentially unique, while ordinary problems belong to a class of problems that one can solve in the same way. A wicked problem may not have a precedent, and experience may not help you to address it. Wicked problems are unique in their occurrence, context, causes, resolutions and consequences.

Given the multiplicity of causes the 2008 U.S. financial crisis is not identical to anything in the past.

8. Every wicked problem is a symptom of another wicked problem with which it is entwined. They involve a good deal of mutual and circular causality, and the problem must be considered at many causal levels.

The 2008 financial crisis may be a symptom of high speculation, high risk, competitive pressure, corporate greed, information asymmetry intrinsic to complicated financial instruments such as default credit swaps, derivatives, and hedge funds. There is nothing like a natural level of a wicked problem. The higher the level of the problem formulation in terms of its symptoms, the more complicated and demanding is the resolution.
9. The cause of a wicked problem can be explained in numerous ways. The choice of explanation determines the nature of the problem’s solution. A wicked problem involves many stakeholders, who all will have different ideas about defining the problems and tracing its causes. That is, there is a wide discrepancy in defining a wicked problem. For instance, each failing financial giant has its own set of stakeholders who perceive the severity of the financial crisis differently, and accordingly, champion different solutions to the wicked problem.

10. Executives confronted with a wicked problem have no right to be wrong; they are liable to the consequences of the actions they take to resolve the wicked problems. The aim in wicked problem resolution is not to find the truth, but to improve the conditions.

Depending upon how you state the problem and symptom of the 2008 financial crisis, so is your possible resolution, but you must take responsibility for that resolution. You are not free or immune in formulating and resolving wicked social and financial problems – the socio-economic consequences are too serious and irreversible in most cases.

The above framework of categorizing the wickedness of problems developed by Rittel and Webber (RW) is both comprehensive and broad. While nearly all of the factors apply to today’s financial turmoil and bailout scenario, a few of the characteristics fit especially well:

**Section 6. A Postmortem Analysis of the U.S. Government’s Turnaround Strategy**

Note that even if a problem does not meet all the criteria of a wicked problem, we can still classify it as an “ill-structured” problem (Simon 1973) that is often characterized by a lack of agreement on problem statement, solution paths, and solutions that are plagued with high degree of uncertainty. If it verifies too few of the listed criteria, then it can be categorized differently (e.g., simple or complex). The key characteristic of all wicked problems is that they involve people, multiple stakeholders, personal goals and objectives that may be mutually conflicting (Becker 2007).

By definition, wicked problems cannot be solved, but can be “managed” or “resolved” to a certain extent. The whole process of managing wicked problems is dynamic. This iterative or non-linear process of problem formulation is often opportunity driven (Conklin 2006). Wicked problems are stubborn and obstinate, subtle and mysterious, complex and non-consensual. Often they deal with complex emerging
financial market issues such as uncertainty, credit squeeze and turbulence, information asymmetry, financial instability, high financial speculation, and corporate greed. They are also often triggered by structures of social injustice, inequity and violence. They are “wicked.”

Table 2 applies the ten criteria of Rittel and Webber (1973) to the financial institutions we described above in order to establish the degree of their wickedness. As clear from Table 2, each financial firm displays its own intensity of wickedness and hence, the corresponding complexity of an effective solution. Thus, the wicked problem in each failing financial institution is unique, and calls for unique analysis and careful resolutions. A universal bailout solution by the U.S government may fail and also produce other unintended social consequences.

There is a tendency in most of us to see financial crisis problems as tame and a tendency to avoid wicked problems. Instinctively, we resist or deny that these problems are wicked and unsolvable. Managers easily collude in systematic denial of the complex and ill-structured dynamics of wicked problems, a phenomenon that Chris Argyris (1996) called “skilled incompetence.” The first step, therefore, in coping with a wicked problem is to recognize its nature, its complexity, and its degree of wickedness (Conklin 2006). Secondly, we must realize that the wicked financial problem is real and that “solutions” are necessary. Knowing that the problem is wicked is of no use if that does not help us to address it. Thirdly, we must free ourselves from being bound to any one financial model, or class of financial problems or solutions in resolving it. Flexibility is the key in the solution of a wicked financial problem, a flexibility that is needed to cope with the capricious nature of wicked problems (Becker 2007).

A. Solutions are not objectively true or false

Any strategists, especially politicians, are eager to see the results of major decisions to judge the short term success of the movement. However, with any of the recently proposed bailouts, neither the politicians nor the taxpayers will likely ever be able to objectively measure whether the plan was a success or failure. Even if the approved bailout was the best solution as Paulson, Bernanke, and Bush espouse, how will we ever measure its success? To this day economists are in strong disagreement on the effectiveness of the intervention during the Great Depression. Clearly, the only certain truth is that the taxpayers will see a $700 billion bill when all this complete.

Out of the 125 million homes in the U.S, only 3 million have been involved in foreclosures (in 2 years). At an average home value of $210000, about $630 billion would have settled the issue of foreclosures. The government could take its time to sell all these homes while lobbying for the waiver of property taxes on these homes till a buyer is found. Net revenues from the sale of these homes should reduce the actual
cost of this mortgage crisis to the taxpayer. This is yet another solutions (among multitude of many others) that never got publicly scrutinized.

**B. Dramatic and Immeasurable downside to action or inaction**

During the Great Depression, the US Government had little choice but to intervene in the financial sector to prevent a run on the banks and complete financial sector shutdown. However, many economists argue that the extent of government interaction resulted in stunting economic growth to the point where full recovery didn’t happen for nearly a quarter century. Similarly, today’s financial turmoil has significant consequences to both action and inaction, though neither can be effectively measured. If the government does not intervene, Paulson and Bernanke have proposed a doomsday scenario in which liquidity will disappear, credit markets will be desiccated, house prices will continue to fall, and the economy will see a lengthy and strong recession.

**C. Any “simple solution” creates yet another Wicked Problem**

Perhaps the most dynamically applicable aspects of classical definition of wicked problems is that every problem is a symptom of yet another such wicked problem and any solution to such problem leads to yet another wicked problem. The current turmoil is a result of numerous wicked problems, ranging from the broad issue of the role of government in the private sector down to inherent personality details of the greed within the soul of each man. Clearly, though today’s turmoil may be a greater problem than the individual seeds that created it, it is the culmination of many such precursors. After Congress approved the proposed $700 Billion dollar bailout, many economists believe that the bailout essentially opened up a new “can of worms.”
**D. The problem involves many stakeholders**

The sheer number of stakeholders involved may be the single factor most applicable to the current financial turmoil. Every single employee of financial firms (more than 1 million employees) on Wall Street and beyond is directly affected in their everyday lives, and many of these folks will lose their jobs or see a large cut in compensation. However, bank employees are just the tip of the iceberg representing just a small portion of the titanic population affected.

Nearly every business owner, both small and large, has seen an immediate decrease or elimination in available credit. This potentially brings their business to a standstill leaving their employees unpaid or out of work. Further, many pensioners will see a cut in benefits and the millions) of 401(K) holders have already seen a dramatic reduction in the value and security of their retirement accounts. Finally, homeowners across U.S. have seen a significant drop in their home values. Unlike the Long Term Capital dilemma or Enron debacle, today’s financial turmoil affects all of us. The unprecedented spectrum of stakeholders will undoubtedly make the effectiveness of any selective bailouts even harder to predict.

**E. Additional Factors that make the Financial Sector bailouts even more Wicked**

The current dilemma of bailing out the financial sector very nearly meets the preceding ten guidelines for Wicked Problems outlined by Rittel and Webber. But these bailouts do encompass a number of additional characteristics that must be analyzed before a resolution can be attempted.

In Table 3, we list those added characteristics.

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<tr>
<th>Table 3: Summary of Ten Central Wicked Aspects unique to Current Financial Turmoil</th>
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<td>Moral Hazard – Creating the “Heads I Win, Tails You Lose” Dilemma</td>
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<td>The Folly of Rewarding “A” While Expecting “B”</td>
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<td>Chasing Tails – When every proposed solution changes the ensuing problem</td>
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**i) Moral Hazard – The “Heads I Win, Tails YOU lose” Dilemma**
The most common application of moral hazard can be found in the insurance industry and the insurance industry estimates that it cost them billions of dollars a year. However, as most actuaries will argue, the majority of insured persons will not crash their car or purposely fall sick in order to collect on their policy.

When the US government first bailed out the Continental Illinois bank and Trust Company in 1984, the greatest concern was the concept of moral hazard – the concept that banks and other large corporations may take undue operational and strategic risks due to the implied safety net provided by the government. Many experts argue that this “safety net” did in fact encourage undue risks (as well as record growth) in the banking sector over the past 25 years which may have led up to the imminent sector breakdown. *The risk may not be in failing to protect AIG today but containing the moral hazard problem in the future. What is the guarantee this bailout does not set a precedent of unimagined magnitude?* Most simple problems don’t have to consider their solution’s affect on the psychology of thousands of leaders outside the scope of the immediate problem. Since the government must anticipate the consequences of every decision and how others will change their actions depending on those decisions, the problem of moral hazard is impossible to measure and makes bailouts an especially wicked dilemma. The end result of any myopic broad-based sartorial bailouts could be the ultimate Public-Private-Partnership – one where the private sector takes all the gains, and the public sector bears all the costs.

**ii) The Folly of Rewarding “A” While Expecting “B”**

In addition to moral hazard, the great mistake of rewarding the wrong behavior is a key psychological consideration that must be considered in the face of any turnaround strategy. A successful organization must provide compensation based on metrics which are in line with the success of the overall organization. This folly is evident on three different levels within the financial system. The first and most commonly debated level is the relationship between the government and the major banks in the system. The expected role of the major banks is to provide credit liquidity to the broad system by matching available capital with projects that need such capital. The most common example of this is the mortgage business. However, while doing this, the banks are also expected to mitigate risk, which is potentially more important than providing liquidity in the first place. In other words, no loan provided may actually be better for the economy than a bad loan provided.

The second level is evident in the relationship between banks and their employees. Most investment banking employees are compensated on an annual basis as a percentage of the revenue they bring in for the company. However, the additional long-term risks inherent to the company are rarely considered.
For example, Trader A who brings in $20 million of revenue while assuming “50 units” of risk will most likely get paid more than Trader B who brings in $10 million in revenue while assuming “25 units” of risk regardless of the expected value of risk units. Thus, as time passes, Trader B will long to act more like Trader A and take on trades with an even increasing risk profile. While this is good for the traders’ incomes, it may not be good for the long term profitability of the bank, and certainly not beneficial to the long term health of the economy.

Even more important than encouraging banks and their employees to act in a manner which is consistent with the fundamental needs of our economy, a successful system must reward ethical and sound personal financial decisions made by ordinary public. This is one of the fundamental weaknesses of symptomatic governmental intervention. In many past civilizations, someone who did not pay their debts was subject to public ridicule, debtor’s prison, indentured servitude, or even death. While such draconian measures may not sound feasible or recommended in modern times, turning a completely blind eye to moral turpitude in the financial markets has its long term costs. If the Government wants to encourage sound personal financial practices, any bailout plan must emphasize and reward fiscal responsibility as well as punish the squanderers.

**iii) Short Term Solution, Long Term Consequences**

Though this specific problem may be common to a wide array of wicked dilemmas in the public arena, it is especially problematic due to the sky-high cost and utter unpredictability associated with any feasible short term solution. The fact is that no one is able to assure that the government intervention in the financial sector is guaranteed to be a winner for the taxpayers.

**iv) Chasing Tails**

The financial sector and overall economy are immediately reactive to the any proposals of the government bailout, whether or not such a proposal is even passed. However, the government bailout scheme must be based on the state of the economy. The result is a potential scenario where both sides are “chasing tails” and no predictable or satisfactory scenario can result in the short or long term.

**v) The complexity of the underlying businesses**

How can a problem be approached in a traditional manner when nobody at either side of the table completely understands the products that caused the problem in the first place? The government certainly cannot understand the intricacies of the complex derivatives and the credit default swaps on the books, and the bank leaders either don’t understand or find it easier (and probably advised by their attorneys) to
plead ignorance either way. To complicate matters more, the professional accountants whose job it is to maintain the balance sheets to FASB regulations have little idea on how to provide a “marked to market” value for the liabilities. Thus, in the short run (and these decisions have a limited time frame), there is no way to know whether the “write-downs” taken by the banks are accurate. In fueling the fire of financial industry deregulation, the big investment banks were given an exemption by the SEC in 2004 that allowed them to ignore the rules that limited the maximum allowable “debt to net capital ratios”.

vi) Financing the financiers
Historically, when governments get involved in making loans are regulatory guarantees to the private sector, they enlist the help of financial specialists. After all, the finance sector does specialize in refinancing, distressed credit, and accessing the capital markets so this strategy makes plenty of sense under normal conditions in the financial sector. For instance, in 1998 the Treasury arranged a meeting between many of the top Wall St. banks to orchestrate an organized bailout of Long Term Capital Management (see case study on LTCM). With the proper organization, the banks were able to come up with enough money to shore up the liabilities of LTCM and at the end leave with a small profit on the investment.

More recently, the Treasury contracted Morgan Stanley to advice on the bailout of Fannie Mae and Freddie Mac. This exemplifies what makes the current situation especially unique and wicked: Who does the government turn to when those that are the experts in refinancing as well the ones with access to all the money are themselves in need of a financial bail out?

vii) Small Time Frames for Large Decisions
The inherent short time to make bailout decisions especially makes them wicked. Can the complex and long term effects of such a “wicked” problem really be solved in one weekend? If the government continues to act with such a short time frame, does it actually encourage the companies to wait until the last minute before considering alternate options? The government was clearly pushed into a corner by the private sector failure, posing potentially a lose-lose scenario.

viii) Anticipating Intervention: Preempting Private Sector Solutions
It is quite possible that some of the problems could have worked themselves out within the private sector, but the 2008 government bailout of the U.S financial sector is encouraging many others expect the same (G.M, Ford and Chrysler). Should the government be the lender of the last resort”? This is an important question that will be debated by private and public policy officials alike.
ix) An Unintended Global Effects
Another related concept, which adds to the wickedness of recent bailouts are the effects overseas. Recent policies severely contradict the free market tenets America has so vociferously pushed abroad. For example, during the Asian market crisis, as a condition imposed for a $20 Billion loan to keep South Korea afloat, the US required that the country not bail out any banks but to let them fail. The Japanese bailout of their banks during the 1990s was heavily criticized in the U.S. but now U.S government is doing exactly the same thing. This bailout is expected to have a long-term negative impact on the growth of U.S GDP. U.S has set a new precedence to democratic governments across the world.

x) Redefining Free Markets/Capitalism
The Paradox – America is the model for free markets and capitalism, though the country more or less nationalized the largest insurance company overnight. If the US continues on this pace, will the country cease to be the international face of pure capitalism? If so, what does that mean for the future of free markets? In this context, the problem could be much greater than just the failure of a few large banks. Is this “the death of pure capitalism?” Requiring more transparency and vigorous enforcement of existing regulations should help to preserve the credibility of the financial system. After the financial debacle of 2008, it is increasingly difficult to make a case for free-market without effective regulations. While the financial executives may overplay the importance of “trust” (giving freedom for the decision maker), they are slow to embrace the value of “mandatory verification” (demanding accountability).

Section 7. Concluding Remarks
The current bail-out of the U.S. financial institutions can be characterized as a symptomatic rather than a systemic approach. But the subprime mortgage issue is the central thread in this financial crisis and the irresponsible lenders (and borrowers) are probably smiling all the way to their banks without feeling any remorse. After all, many of us do not change our behavior because we can see the light, but we certainly feel the heat underneath.

There is much fear about the destructive potential of the complex financial instruments, like credit default swaps, that brought AIG to its knees. The market for such dubious instruments has exploded in recent years, and it is almost entirely unregulated. While bailing out firms such as AIG would continue to be controversial, the government should crack down regulation on the use of credit default swaps. The swaps are not securities and are not regulated by the SEC. While they perform the same function as an insurance policy they are not insurance in the conventional sense, and so insurance regulators do not monitor them either. AIG’s crisis grew primarily out of its financial products unit, which dealt in
complex debt securities and credit default swaps. AIG’s complex debt securities had already lost billions of dollars in value in the months before the AIG crisis began, primarily because their value depends upon home values. But in a short period of “48 hours” (September 11-12, 2008), the swaps issued by AIG’s financial products unit consumed billions of dollars of AIG’s cash and liquid assets. This ultimately paralyzed AIG as it could not find a way to keep up with increasing cash requirements under the terms of its swap contracts (Andrews 2008).

It is probably wise to remind ourselves that these bailout funds could have gone to solve the hunger problem of fellow human beings, if only we could have been proactive in enacting appropriate legislation to stop greed (mortgage bankers) and irresponsibility (of borrowing public).

In summary, a housing market bubble fueled by reckless mortgage-financing, helped by “innovative” derivatives, deregulatory environment and the need to “preempt” a mild economic depression, apparently led to the (2008) government bailout of massive proportions (of the U.S. financial services industry). Since this is clearly a wicked problem, there is no way to know whether the bailout is indeed the best solution. A basic tenet of solving a wicked problem – involving all stakeholders extensively in the process- was ignored, and the consequences of this neglect will be revealed in the years to come.

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### Table 1: Shrinking U. S. Financial Giants

[Columns 2 and 5 are compiled from *New York Times*, September 17, 2008, C8]

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Citigroup</td>
<td>236.7</td>
<td>97.76</td>
<td>139.10</td>
<td>-58.7</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>2. Bank of America</td>
<td>236.5</td>
<td>150.18</td>
<td>86.32</td>
<td>-36.5</td>
<td>13</td>
<td>3</td>
</tr>
<tr>
<td>3. A. I. G.²</td>
<td>179.8</td>
<td>32.36</td>
<td>147.44</td>
<td>-82.0</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>4. JP Morgan Chase</td>
<td>161.0</td>
<td>142.16</td>
<td>18.84</td>
<td>-11.7</td>
<td>15</td>
<td>13</td>
</tr>
<tr>
<td>5. Wells Fargo</td>
<td>124.1</td>
<td>113.18</td>
<td>10.92</td>
<td>-8.8</td>
<td>16</td>
<td>15</td>
</tr>
<tr>
<td>6. Wachovia</td>
<td>98.3</td>
<td>30.87</td>
<td>67.43</td>
<td>-68.6</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>7. Goldman Sachs</td>
<td>97.7</td>
<td>61.36</td>
<td>36.34</td>
<td>-37.2</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>8. American Express</td>
<td>74.8</td>
<td>45.03</td>
<td>29.77</td>
<td>-39.8</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>9. Morgan Stanley</td>
<td>73.1</td>
<td>41.08</td>
<td>32.02</td>
<td>-43.8</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>10. Fannie Mae³</td>
<td>64.8</td>
<td>0.713</td>
<td>64.09</td>
<td>-98.9</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>11. Merrill Lynch⁴</td>
<td>63.9</td>
<td>24.22</td>
<td>39.68</td>
<td>-62.1</td>
<td>7</td>
<td>7</td>
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<tr>
<td>12. U. S. Bancorp</td>
<td>57.8</td>
<td>58.44</td>
<td>+0.64</td>
<td>+1.1</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>13. Bank of NY Melon</td>
<td>51.8</td>
<td>45.43</td>
<td>6.37</td>
<td>-12.3</td>
<td>14</td>
<td>16</td>
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<tr>
<td>14. Freddie Mac</td>
<td>41.5</td>
<td>0.291</td>
<td>41.21</td>
<td>-99.3</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>15. Lehman Brothers</td>
<td>34.4</td>
<td>2.546</td>
<td>31.85</td>
<td>-92.6</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>16. Washington Mutual⁵</td>
<td>31.1</td>
<td>2.892</td>
<td>28.21</td>
<td>-90.7</td>
<td>4</td>
<td>12</td>
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<tr>
<td>17. Capital One</td>
<td>29.9</td>
<td>17.13</td>
<td>12.77</td>
<td>-42.7</td>
<td>10</td>
<td>14</td>
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<tr>
<td>Total</td>
<td>1,657.20</td>
<td>865.64</td>
<td>791.72</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>97.48</td>
<td>50.92</td>
<td>46.57</td>
<td>-52.04</td>
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<td></td>
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<tr>
<td>Std. Deviation</td>
<td>65.66</td>
<td>46.59</td>
<td>41.53</td>
<td>32.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>206.60</td>
<td>149.89</td>
<td>148.08</td>
<td>100.4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

18. Bear Stearns⁶

|               | 14.8 | - | - | - | Bought by JP Morgan Chase under Federal Insurance |

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2 Tuesday, September 16, 2008, the Federal Reserve agreed to lend to AIG $85 billion in return for a 79.9 percent stake in the company.

3 On September 8, 2008, the Treasury commits to provide Fannie Mae and Freddie Mac, each as much as $100 billion to backstop any shortfalls in capital.

4 Merrill Lynch is forced to find a buyer in Bank of America for $50 billion on Monday, September 15, 2008; the day after, stocks of Merrill Lynch rose by 30% and that of Bank of America by 11.3%.

5 Washington Mutual is put up for sale, Wednesday, September 17, 2008; TPG Capital refuses to help; meanwhile, Morgan Stanley and Wachovia engage in merger talks.

6 On March 16, 2008, under much government pressure, JP Morgan Chase agrees to buy Bear Stearns for $29 billion with a federal guarantee.
Table 2: Establishing Wickedness of Current Financial Market Problems

<table>
<thead>
<tr>
<th>Characteristic of Wicked Problems</th>
<th>Fannie Mae</th>
<th>Freddie Mac</th>
<th>Lehman Brothers</th>
<th>AIG</th>
<th>Washington Mutual</th>
<th>Financial Markets in General</th>
</tr>
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<tbody>
<tr>
<td>Not easily definable</td>
<td>x</td>
<td>x</td>
<td>?</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>No stopping rule</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Solutions are not objectively true or false</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Solutions have unexpected consequences over time</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Solutions are not learnt by trial and error</td>
<td>?</td>
<td>?</td>
<td>?</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Solution set could be inexhaustible</td>
<td>?</td>
<td>?</td>
<td>?</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Problem is essentially unique and non-classifiable</td>
<td>x</td>
<td>x</td>
<td>?</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Symptom of other wicked problems</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Involve many stakeholders</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Executives resolving wicked problems have no right to be wrong</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>X–totals</td>
<td>8</td>
<td>8</td>
<td>6</td>
<td>10</td>
<td>10</td>
<td>10</td>
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</tbody>
</table>
“History has demonstrated that breakthroughs in science and technology can have an extremely rapid and disruptive uptake. There is a growing demand for zero-emission transportation alternative to internal combustion and with the right solutions... the change could happen very, very quickly.” Ian Clifford, C.E.O. Zenn Motors

A car symbolizes the not only the values and lifestyle of its owner but also the economic might of the country in which the vehicle was designed. It is thought that the most splendid American cars were those from the 1950s and 1960’s, as these represented the youthful optimism of a middle class energized by a sense of spatial and economic abundance. Nowadays, frugality seems to be the statement sought by segments of the Canadian middle class that are interested in Zenn, a micro-car that reaches a maximum speed of 30 miles per hour. This paper focuses on Quebec, the only Canadian province in which Zenn cars have been authorized to run, and where they are manufactured. The ZENN brand is the acronym of Zero Emissions No Noise. I will compare the electric car markets of Canada and the United States and will comment on how this type of vehicles is expected to impact the automobile industry.

The concept of a domestic car is foreign to Canada. American brand cars manufactured in Canada are to Canadians the closest equivalent to domestic brands; that is, until now. A revolution may have begun on Saturday October 4, 2008 in Saint Jérome, Quebec. ZENN invited several hundred people to the inauguration of its commercial operations in Canada, and

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they tried out the little electric car assembled there. The purpose of the invitation was not to sell cars, according to Giles Allard, vice-president of operations, but rather to familiarize costumers with these.8

Low-speed vehicles (LSV) like the ZENN have limitations that must be known before committing to purchase. In Quebec, which is the first province to authorize its use on public, road, the ZENN can only travel on roads with a 50km/h speed limit. Furthermore, the lead batteries are sensitive to low temperatures, for which the company officials recommend the car only to those who can keep it in heated parking areas. On June 17, 2008 the Quebec Minister of Transport, Julie Boulet, had announced the launch of a three-year pilot project authorizing the use of LSVs in Quebec. The only approved LSVs are the ZENN and Nemo, a small pick up truck built in Saint Thérèse.

A British Columbia municipality took steps to introduce LSV’s five days before Minister Boulet made the announcement for Quebec. Vancouver’s municipal council approved a bylaw to authorize them on arteries with a 50km/h speed limit on September 30. Furthermore, over a year before the prime minister of Ontario, Dalton McGuinty, declared that his administration was considering modifying provincial legislation to allow the use of LSVs, for which the government created a study group on the topic in July. For now, only Ontario’s provincial parks employees are authorized to drive these vehicles inside the parks.

Ironically, Americans were the early adopters of the Canadian LSVs. Red tape had until now kept the market closed in Canada. Toronto-based ZENN Motor Company (ZMC) has

assembled more than 500 cars over the past year, all of which it sold to a group of 40 dealers located in 20 states. Half of all these dealers are located in Florida and California and are responsible for 65% of the sales. In Canada, only in Quebec ZMC obtained a retail license to sell these vehicles for about $16,000 directly from its plant in Saint Jérôme. ZMC will thus increase production. As of the day of its retail inauguration the manufacturer had 20 solid orders, many for municipal use, according to its Vice President of Operations.9

The ZENN, like the German gas-powered micro-car, the Smart, is a two-seater, but is 37 cm longer, for which it has 67% more cargo space than the Smart, which adds versatility to the vehicle. The ZENN is based on the Microcar (brand) MC2, in production in France since the early 2000’s under license from its parent company, the Beneteau group.10 The Microcar MC2 and the short wheelbase MCI are sold in Europe with diesel engines, for which some may regard the ZENN as an electric MC2. It takes eight hours to recharge the ZENN’s battery when empty. It has an operating range of 50 to 80 km. After four hours of use the battery is at 80% of charge.

Canada’s provincial governments were not quick to authorize the ZENN’s presence on the roads due to safety concerns. The traffic authorities deemed it risky to allow LSV cars to share roads with faster and bigger vehicles. It is quite possible that by the time that the red tape is dealt with in Canada, and that may be very soon, most electric cars will not be LSVs, at least not those of ZMC. If this happens, it would likely be thanks to EEStor, a Texas-based capacity developer whose batteries would allow electric cars to run in high speed for a considerable amount of time with relatively little charge. The highway speed vehicle, to be called the citiZENN, will have a top speed of 80 miles per hour and a range of 250 miles, according to ZENN. The company said that the EEStor-powered car will be rechargeable in less than five

9 Ibid.
minutes. This breakthrough would be likely to transform the energy sector and the automobile industry in particular. ZMC owns approximately 3.8% of the equity of EEStor, after a 2007 investment of $2.5M US.11

The well-known documentary 2006 Who Killed the Electric Car?12 depicted how Americans, at least in California saw numerous highway speed electric ten years ago. The manufactures crushed them after taking them away from their users. These vehicles had been made available through leases for a period of eight years (1997-2005). The users were not allowed to buy them and the end of the lease, for which many organized protests when they learned that the manufacturers would crush them all. Electric cars have actually being around since 1835,13 but fuel-based vehicles were deemed more practical and profitable, for which eventually much of the economy turned around them. The documentary offers an example of what media historian Brian Winston calls The law of the suppression of radical potential. Winston first describe this idea in his book Media Technology and Society: A History: From the Telegraph to the Internet.14 According to the law new technologies growth is suppressed through the constraining influence of already prevailing institutions and other mechanisms.

Who Killed the Electric Car? issued a list of seven accused constituencies, organizations and elements in which the government, the manufacturers, the consumers, the California Air Resources Board, the oil companies and the hydrogen fuel cells were judged guilty. In this list, only the batteries are found not guilty, as these had been developed to run longer distances with shorter charging time by the time these fast and silent cars were taken away by force from their

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12 Chris Paine, Director. Who Killed the Electric Car? (Sony Pictures Classics , 2006).
14 Brian Winston, Media Technology and Society: A History: From the Telegraph to the Internet (New York: Routledge, 2008)
satisfied drivers. A few of these cars survived the crushing in museums. Some electric Toyota RAV4 small SUV’s from that time are still in service. It could be argued that, additionally, the electric car was killed by the managerial incompetence for which the American automobile brands lost their position at the top of the global industries after a comeback in the mid 1990’s and continued to rise and fall.

David Gartman’s (1994) popular book *Auto Opium: A Social History of American Automobile Design* focuses not on the functional aspect of vehicles but on their symbolic function, that is, on how these have responded to the changing notion of the American Dream. The book covers up to the late 1980’s. The middle chapters focus on the 50’s and 60’s whose cars symbolize the quintessential Americana and were devised when inventors and designers, rather than marketers, where at the cultural core of Detroit. Those were the times when customers looked forward to see the originality of the sleek, new models.

In *Comeback: The Fall and Rise of the American Automobile Industry*, Paul Ingrassia and Joseph B. White describe how in the early 1990’s unwise management plagued the industry, particularly in General Motors. Lee Iacoca outstood as the sensible, yet problematic and tyrannical leader who, after a 1979 government bailout, was able to save Chrysler with his $1. a year salary and visionary projects that he was not allowed to carry out at Ford, such as the Dodge/Chrysler minivans launched in 1984. David Halberstam (1986) *The Reckoning: a Study of the American And Japanese Automobile Industries* also discusses unbecoming managerial practices that benefited the Japanese brands. A lack of touch with the consumer and the automobile industry workforce seems to place American brands in a disadvantage despite the

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significant improvement of its products since the mid 1990’s. After the big three lobbied against the Clinton administration’s efforts to produce cars that could run 80 miles per gallon by 2004, thousands of unsold gas-guzzling SUV’s populate the lots of bankrupt dealers. By the end of 2008 one could buy General Motors for $2 billion as the Big Three try to merge into two as they reached rock bottom.\textsuperscript{18} Bankruptcy seems inevitable.

Paul Ingrassia, the Former Detroit bureau chief for the Wall Street Journal is writing a new book about American car culture. In an essay related to this book, Ingrassia indicated that Japanese, Korean and German manufacturers had been able to remain in touch with the American workforce in their plants and with the U.S. domestic market, and had grown stronger and more flexible to survive the impact of the current economic downslide.\textsuperscript{19} Remains to be seen if the batteries for electric and hybrid cars evolve sufficiently within the Big Three, along with the Obama administration’s green plans for Detroit, to bring back the American brands to the top of the international automobile industry. At the end of 2008 there seems to be little hope for this, as battery and pollution control technology have not caught up with the needs.

According to the Green Car University, an environmentalist organization, due to emission control regulation, pollution has been reduced to 60 to 90% of the 1970’s levels. But the massive increase of in car use has made pollution, overall, worse than in the 1970’s. Driving a car is a typical citizen’s most air polluting activity. Americans spend, on average, an hour per day in the car, and collectively over 8 billion hours per year stuck in traffic. Each single-family household generates approximately ten vehicle trips per day. The 2000 census revealed that 3


out of 4 workers drive to work alone. Less than 5 percent of the population uses public transportation, and health care due to transportation pollution totals over $60 billion per year.  

In Lee Iacoca and Catherine Whitney’s *Where Have all the Leaders Gone?* (2007) Iacoca writes:

“Am I the only guy in this country who is fed up with what’s happening? Where the hell is our outrage? We should be screaming bloody murder. We got a gang of clueless bozos steering our ship of state right over a cliff, we’ve got corporate gangsters stealing us blind, and we can’t even clean up after a hurricane much less build a hybrid car. But instead of getting mad, everyone sits around and nods their heads when the politicians say, “Stay the course.” This is America, not the dammed Titanic. I’ll give you a sound bite: Throw the bums out!”

This sounds to me as an indictment of the Republican administration. However, it is telling that Iacoca himself laments America’s inability to make a hybrid car, in the middle of this tirade, suggesting that the decline of the country is represented by its inability to produce a sensible vehicle. On December of 2007 Iacocca launched a website intended to encourage open dialogue about the challenges of our time, such as what soaring health costs are doing to America and why the U.S. lags so far behind in developing alternative energy sources and hybrid vehicles. The site also promoted Iacocca’s book *Where Have all The Leaders Gone?* It allowed the users to rate presidential candidates by the qualities Iacocca felt that every true leader should posses: curiosity, creativity, communication, character, courage, conviction, charisma, competence and common sense. As the title of the book suggested, the key is coordinated leadership in government and industry. In times of crises things change fast, and probably too fast for many of the private and public sector operations to catch up. The welcoming of the ZENN in Canada and the US seems a case in point.

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http://www.greencaruniversity.com/driving_trends  
21 Lee Iacoca and Catherine Whitney, *Where Have All the Leaders Gone?* (New York: Simon and Shuster, 2007)
Anti-money Laundering Initiatives: A Briefing for Business Educators

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Abstract

Business educators, like business professionals, no longer work in a closed system. The economy is becoming global, and business educators need to retool to better understand the shared problems of global business, especially as they relate to control of illegal activity. This paper informs business educators about current efforts to create strategies and directives for controlling a particular type of corruption – money laundering. It provides information on initiatives both in the United States and Europe to craft anti-money laundering strategies through implementation of the 2007 National Money Laundering Strategy (U. S.) and the European Union Third Directive on Money Laundering. Information will be provided on 1) the initiatives, including FINCEN and FATF, that have been organized to create guidelines and a structure for the sharing of information on illegal money laundering; 2) the strategies, laws, and directives that have been passed to create a platform for countries to follow in the development of rules and regulations covering money laundering; and 3) the lessons learned about the terminology and the current situation that can be of value to business educators. We believe that it is important to bring this information to educators who work with students that may be current or future employees in entities (banks, money business services, stored value cards, casinos, and insurance companies) that are covered by these initiatives.
Anti-money Laundering Initiatives: A Briefing for Business Educators

Introduction

Business educators, like business professionals, no longer work in a closed system. The economy is becoming global, and business educators need to retool to better understand the shared problems of global business, especially as they relate to control of illegal activity. This change in needed skills and competencies is a result of many factors, one of which is the policy positions of national and international organizations that support development of standards for controlling both desirable and undesirable behaviors. For example, the United Nations Global Compact is a “strategic policy initiative for businesses that are committed to aligning their operations and strategies with ten universally accepted principles” concerning human rights, labour practices, the environment, and corruption. The UN’s rationale behind asking for business commitment is that “business, as a primary agent driving globalization, can help ensure that markets, commerce, technology and finance advance in ways that benefit economies and societies everywhere.”

As noted, the Ten Principles associated with the UN Global Compact are broken into four categories, the last of which concerns corruption. Principle 10 states that “(b)usinesses should work against corruption in all its form, including extortion and bribery.” While money laundering (ML) is not specifically noted in the principle itself, it is one form of corruption that is increasing in impact and that is global in scope. There is a new urgency among enforcement agencies both in the United States and abroad to identify strategies for addressing the impact of ML activities. The purpose of this paper is twofold: 1) to inform business educators about current efforts to create strategies and directives for controlling this particular type of corruption and 2) to introduce business educators to the evolving language surrounding efforts to control money laundering. We believe that it is important to bring this information to educators who work with students that may be current or future employees in entities covered by strategies and directives developed to control money laundering activities. Information will be provided on 1) initiatives, including FINCEN and FATF, that have been organized to create guidelines and a
structure for the sharing of information on illegal money laundering; 2) strategies, laws, and
directives that have been passed to create a platform for countries to follow in the development
d of rules and regulations covering money laundering; and 3) lessons learned about the current
situation that can be of value to business educators.

Background Information

The terms money laundering and anti-money laundering are widely used in single
documents discussing this form of fraud. Put simply, the opposite of money laundering (ML) is
generally referred to as anti-money laundering or AML. The latter term is defined as “a set of
procedures, laws or regulations designed to stop the practice of generating income through illegal
actions” (Financial-dictionary, 2008). These illegal actions refer to behaviors of businesses or
individuals that use tactics to create an illusion that their money is coming from legitimate
sources when in reality, it comes from illegal or unethical sources. The practice of money
laundering is not new; it dates back prior to the year 0 BC. However, in the United States,
attention to money laundering activities increased significantly following the events of
September 11, 2001, when the catch-phrase “follow the money trail” accompanied pursuit of the
persons involved in the first major terrorist act on American soil. Similar responses are evident
in other countries that have experienced terrorist attacks.

These events and the emergence of the internet capabilities are redefining what is needed
to curtail money laundering activities. In turn, they are creating a need for business educators
across disciplines to inform themselves about efforts to combat corruption. For example,
accounting educators are expected -- due to professional auditing standards -- to incorporate
information concerning many types of fraud; money laundering is one form of fraud.
Furthermore, the International Accounting and Assurance Stands Board (IAASB) approved ISA
240 effective December 15, 2004, to adopt the basic principles and essentials procedures
contained in US SAS 99 [Consideration of Fraud in a Financial Statement Audit] (IAASB
(2004). The evidence of current trends with the International Accounting Standards Board
(IASB) collectively suggests that there is the potential for future harmonization of auditing
standards for fraud detection across international borders. Similarly, potential managers or
employees in the banking industry, insurance industry, and other industries that handle transfer
of money must understand the vulnerabilities of their industries to charges of money laundering. Unfortunately, standards and educational materials for this group are not developed as they are for accounting students and professionals. This is problematic since changes in AML policy and strategy are changing the environment of business. As such, the implications are huge for how students should be educated.

Drivers of Increased Concerns about Money Laundering

There are three primary drivers behind enhanced concerns about money-laundering as a form of corruption. They are (1) the globalization of markets, (2) the rise in terrorism and (3) the establishment of initiatives leading to formation of the Financial Action Task Force (FATF). As the globalization of markets has enabled businesses to expand more easily and quickly into foreign markets, it has created new problems that complicate anti-money laundering initiatives. For example, the two parts of a transaction can be performed in two different countries with each part of the transactions falling under a different set of laws, thus making illegal activities harder to prevent or detect. This threatens markets in a number of ways including establishing underground economies that stifle legitimate business, creating downward pressure on integrity of financial sectors and institutions, promoting public corruption, and increasing crime.

The second driver – the rise in terrorism – has led to cries worldwide for re-framing international anti-money laundering activities as counter-terrorist-financing activities. (Clunan, 2006, Winter). As shown in Table 1, worldwide terrorism incidents, both international and domestic, are on the rise. This need for re-framing activities is primarily an outcome of the increasing availability of formal and informal mechanisms used by the terrorists who raise money through money laundering activities. As noted in a recent US Department of State report “The difficulties inherent in tracking terrorist finance in the formal financial system are multiplied many times over as terrorists move to informal financial systems, using money remitters and hawaladars, who, in turn, may engage in trade-based money laundering” (U.S. Department of State, 2004-2005; Clunan, 2006).
EXHIBIT 1: Incidents of Terrorism

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Incidents</th>
<th>Percentage Increase (Base year 1995)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>268</td>
<td>--</td>
</tr>
<tr>
<td>1996</td>
<td>237</td>
<td>-0.116</td>
</tr>
<tr>
<td>1997</td>
<td>182</td>
<td>-0.321</td>
</tr>
<tr>
<td>1998</td>
<td>1,285</td>
<td>3.795</td>
</tr>
<tr>
<td>1999</td>
<td>1,172</td>
<td>3.373</td>
</tr>
<tr>
<td>2000</td>
<td>1,150</td>
<td>3.291</td>
</tr>
<tr>
<td>2001</td>
<td>1,732</td>
<td>5.463</td>
</tr>
<tr>
<td>2002</td>
<td>2,648</td>
<td>8.881</td>
</tr>
<tr>
<td>2003</td>
<td>1,897</td>
<td>6.078</td>
</tr>
<tr>
<td>2004</td>
<td>2,647</td>
<td>8.877</td>
</tr>
<tr>
<td>2005</td>
<td>4,961</td>
<td>17.511</td>
</tr>
<tr>
<td>2006</td>
<td>4,981</td>
<td>17.586</td>
</tr>
</tbody>
</table>

Source: www.johnstonsarchive.net/terrorism

The third driver is the establishment of groups such as the Financial Action Task Force (FATF). This initiative is important, in part because the national or regional anti-money laundering standards have been changed to make them consistent with the 2003 revision of the FATF recommendations on money laundering and terrorist financing (See, for example, The European Union Third Directive, 2005, and the U. S. 2007 National Money Laundering Strategy). Recognition by world leaders of the problem of money laundering led to the establishment of the Financial Action Task Force (FATF) during the 1989 Paris G-7 Summit. The Summit, was convened by the G-7 Heads of State or Government and President of the European Commission. Founding members were made up of “G-7 member States, the European Commission, and other countries” (About the FATF, n.d.). Today, the FATF describes itself as a policy-making body whose charge is as “an inter-governmental body whose purpose is the development and promotion of national and international policies to combat money laundering and terrorist financing” (FATF Home, n.d.). Consistent with this charge, the FATF examines money laundering techniques and trends, reviews national and international actions, and identifies measures that need to be taken to address this problem. The task force had expanded to more than 30 members by 2007 (Table 2).
Table 2: FATF Membership Countries

<table>
<thead>
<tr>
<th>FATF Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
</tr>
<tr>
<td>Australia</td>
</tr>
<tr>
<td>Austria</td>
</tr>
<tr>
<td>Belgium</td>
</tr>
<tr>
<td>Canada</td>
</tr>
<tr>
<td>China</td>
</tr>
<tr>
<td>Denmark</td>
</tr>
<tr>
<td>European Commission</td>
</tr>
<tr>
<td>Finland</td>
</tr>
<tr>
<td>France</td>
</tr>
<tr>
<td>Germany</td>
</tr>
</tbody>
</table>

| Norway                                | Portugal                          |
| Russian Federation                    | Singapore                         |
| South Africa                          | Spain                             |
| Sweden                                | Switzerland                       |
| Switzerland                           | United Kingdom                    |
| United States                         |                                   |

Source: www.fatf-gafi.org/

In recognition of the need for continued action, the FATF created a mandate for needed actions for the period of September 2004-December 2005. This mandate included 12 Strategic Issues and 40 Recommendations. The 12 strategic issues include 1) establishing international standards for combating money laundering and terrorist financing, 2) ensuring global action to combat money laundering and terrorist financing, and 3) ensuring that FATF members have implemented recommendations 1-40 and 8 (www.fatf-gafi.org).

The 40 Recommendations associated with the FATF Strategic Issues were originally adopted in 1990 to cover counter-measures against money laundering by international bodies. They were reviewed and updated in 2003. The recommendations fell under three broad categories: (1) Legal Systems, (2) Measures to be Taken by Financial Institutions and Non-financial Businesses and Professions to Prevent Money Laundering and Terrorist Financing, and (3) Institutional and Other Measures Necessary in Systems for Combating Money Laundering and Terrorist Financing. To combat the financing of terrorism, nine additional recommendations were adopted, eight in 2001 and one in 2004.

Powers representing the major developed sectors of the global market place have relied on the recommendations of the FATF in their development of policy and enforcement policies for addressing the problem of money laundering. The next section of the paper will focus on major initiatives of two of these powers -- the U.S. and Europe Union.
The 2007 National Money Laundering Strategy was developed by an interagency working group in direct response to a money laundering threat assessment released by the U. S. Government in 2005 (Paulson, Gonzales, & Chertoff, 2007). Participation came from individuals in the Departments of the Treasury, Justice, State, and Homeland Security. Also participating were the Federal Reserve System, the Office of the Comptroller of the Currency, and the Federal Deposit Insurance Cooperation. The working group separated money launderers and terrorist financiers due to the identified differences in operations the types of strategies used by enforcement agencies to combat them. Seven key findings came out of the U.S. Money Laundering Threat Assessment:

1. “Banks and other depository institutions remain the primary gateway to the U. S. financial system.
2. Money Services Businesses (MSBs) offer an alternative to banks for both financial services and money laundering.
3. Smuggling cash out of the United States for deposit elsewhere is a well-established money laundering method and appears to be on the rise due to the barriers criminals face attempting to launder cash domestically.
4. Often the most complex money laundering methods involve the use of international trade to disguise funds transfers.
5. Legal entities, including corporations, limited liability companies and trusts, serve many legitimate purposes but also can be used for money laundering.
6. Casinos are cash-intensive businesses that often provide financial services and money laundering opportunities.
7. The insurance industry has undergone a transformation, and may become increasingly attractive to money launderers. (Introduction, 2007, pp. V-VI).

The 2007 National Money Laundering Strategy identified seven goals directly linked to each of the key findings of the 2005 threat assessment and added two additional goals, one associated with global anti-money laundering (AML) efforts and one with determining how to measure performance outcomes (See Exhibit 1: National Money Laundering Strategy Goals.)
With respect to global AML, Goal 8 is intended to “work to detect, disrupt, dismangle, and defeat money laundering networks globally by promoting transparency in the international financial system and encouraging cooperation and coordination among diplomatic, financial and law enforcement authorities.” The goal goes one step further by pledging to “provide education, training, and support for countries seeking to protect themselves from money laundering…” (p. 11). This activity is consistent with Section 311 of the USA Patriot Act which concerns safeguarding our financial system from foreign money laundering threats.

<table>
<thead>
<tr>
<th>Exhibit 1: 2007 National Money Laundering Strategy Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Continue to Safeguard the Banking System</td>
</tr>
<tr>
<td>2. Enhance Financial Transparency in Money Services Businesses</td>
</tr>
<tr>
<td>3. Stem the Flow of Illicit bulk Cash Out of the United States</td>
</tr>
<tr>
<td>4. Attack Trade-based Money Laundering at Home and Abroad</td>
</tr>
<tr>
<td>5. Promote Transparency in the Ownership of Legal Entities</td>
</tr>
<tr>
<td>6. Examine Anti-money Laundering Regulatory Oversight and enforcement at Casinos</td>
</tr>
<tr>
<td>7. Implement and Enforce anti-money Laundering Regulations for the Insurance Industry</td>
</tr>
<tr>
<td>8. Support Global Anti-money Laundering Capacity Building and Enforcement Efforts</td>
</tr>
<tr>
<td>9. Improve How We Measure Our Progress</td>
</tr>
</tbody>
</table>

A number of entities whose names and acronyms are not widely recognized by business educators outside the field of accounting are important to the success of the U. S. 2007 strategy. These include the Financial Crimes Enforcement Network (FinCEN), the Bank Secrecy Act Advisory Group (BSAAG), the Automated Clearing House (ACH), the ICE-led Identity and Benefit Fraud Task Force, the Office of Foreign Assets Control, Trade Transparency Units (TTU), and the U. S. Postal Inspection Service (USPIS), to name only a few. The network charged with addressing AML is vast, extremely complex, and spread over many agencies of government. Likewise, enforcement draws on a complex system of laws and regulations, including Sections 311-312 and 314 of the USA Patriot Act, the Bank Secrecy Act, and those laws and regulations administered by the various government agencies from the Internal Revenue Service to banking regulators to the U.S. Postal Service. Finally, it is important to recognize the important role played by the Federal Bureau of Investigation (FBI). The agency’s
activities have ranged from developing technologies to analyze data from Suspicious Activity Reports (SARs) and the Bank Secrecy Act data from FinCEN to identify financial patterns that can link criminal activities (The 2005 Money Laundering Threat Assessment, 2005).

Also confusing for some business educators may be the terminology associated with anti-money laundering strategy and policy. (See Exhibit 2.) For example, distinctions must be made between banking services and money services businesses. Second, variations within classes of money transactions create confusion. For example, stored value cards, also referred to as prepaid cards, may take one of several forms. They may operate within an “open” system where they have the capability to connect to global debit and automated teller machine networks or they may operate within a “closed” system where they are limited to purchase of goods or services from the card issuer or within some other constraint. In either case, most business educators are familiar with the stored value card but may not have information on the small distinctions that are used to categorize the different stored value cards. By contrast, business educators are less likely to be aware of the Informal Value Transfer Systems (IVTS). These systems are “efficient remittance systems based on trust that operates primarily within ethnic communities.” They can be operated from any location that has a communication network such as e-mail or fax (The 2005 Money Laundering Threat Assessment, 2005).
## Exhibit 2: Glossary of Terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banking</td>
<td>Depository financial institutions which include commercial banks, savings and loan associations (thrifts) and credit unions</td>
</tr>
<tr>
<td>Money Services Businesses</td>
<td>Currency dealers or exchangers, check cashers, issuers of traveler’s checks, money orders or stored value cards, sellers or redeemers of traveler’s checks, money orders or stored value, money transmitters (also known as wire remitters or wire transmitters e.g., Western Union).</td>
</tr>
<tr>
<td>Money Transmitters</td>
<td>Money remitters, wire remitters, and wire transmitters (Western Union)</td>
</tr>
<tr>
<td>Stored Value Cards</td>
<td>Prepaid cards</td>
</tr>
<tr>
<td>Informal Value Transfer Systems</td>
<td>Remittance systems based on trust that operate primarily within ethnic communities (e.g., Hawala/Hundi – South Asia)</td>
</tr>
<tr>
<td>Bulk Cash Smuggling</td>
<td>Movement of illicit funds out of the country to jurisdictions with lax or complicit financial institutions or to fund criminal enterprises.</td>
</tr>
</tbody>
</table>

**The European Union Strategy for Controlling Money Laundering**

The European Union strategy for controlling money laundering takes the form of a “directive”. The most current directive, the Third Anti-Money Laundering Directive, was passed in 2005 to provide direction for managing risks associated with money laundering activities. Proponents of the Directive believed that “flows of dirty money can damage the stability and reputation of the financial sector and threaten the single market, and terrorism shakes the very foundations of our society.” They advocated for supplementing the criminal law approach with a

There were two initiatives that preceded the final form of this Directive. The First Anti-Money Laundering Directive, passed by the European Union in 2001, focused on money laundering prevention that applied to banks, other credit institutions, investment firms, insurance undertakings and bureau de change. The Second Anti-Money Laundering Directive expanded the range of crimes covered and the professions on whom compliance obligations were imposed to include—lawyers, auditors, accountants, notaries and estate agents.

The Third Directive on Anti-Money Laundering contains seven chapters. The contents of these chapters include the following requirements of member states:

Chapter 1—The definitions and clarification of those groups to whom the directive applies to ensure that all Member States will have uniformity in the implementation of the Third Directive.

Chapter 2—Each Member State will establish guidelines for establishing know your customer policies.

Chapter 3—Each Member State will establish a Financial Intelligence Unit, a centralized national group who are responsible for receiving, analyzing, and distribute information on money laundering and terrorist activities.

Chapter 4—Member States are to keep documentation and records necessary for investigations by their FIU or other law enforcement agency.

Chapter 5—Institutions in Member States are to establish policies and procedures to ensure customer due diligence, reporting and record keeping, internal control, risk assessment and management, compliance management and communication that are sufficient to detect and prevent potential money laundering and terrorist financing.

Chapter 6—The Commission has the responsibility to consider emerging technical developments and establish criteria and related implementation measures.

Concerns immediately surfaced following passage of the Directive about its potential impact on individual countries following implementation. Several accounting firms responded to these concerns by conducting important surveys prior to the December 2007 implementation deadline. For example, Ernst & Young Global Limited (EYGL) conducted an online questionnaire survey titled “Anti-Money Laundering Survey” during the period December 2006 through February 2007 to ascertain the impact the Third Directive was expected to have on the domestic economies and the financial institutions in the Czech Republic, Hungary, Slovakia, and Slovenia. A second survey was conducted by KPMG and covered worldwide some 55 countries, including countries that will be impacted directly or indirectly by the Third Directive.

The EYGL Anti-Money Laundering Survey based the study on total banking assets of the five countries. Individually, the response rates based on each country’s total banking assets was as follows: the Czech Republic—28%, Hungary—43%, Slovakia—30%, and Slovenia—43%. The population of respondents only included financial institutions categorized as banks in these five countries; whereas, in addition to banks, the Third Directive also applies to credit institutions, auditors, tax advisors, notaries, trust service providers, real estate agents, casinos, and other persons trading in goods if payments are in excess of 15,000 Euros cash. Additionally financial institutions --as amended by the Directive -- include insurance companies and investment firms.

The survey considers the impact the Third directive will have on customers, the market, the” know your customer policy” and the regulators. As shown in Table 3, selected results reveal a wide discrepancy in agreement with the sample statements listed. The Czech Republic and Slovakia appear to be less confident or optimistic about the potential outcomes of implementation of the Third Directive while Slovenia tends to be much more optimistic. The market impact considered the effect that implementation of the Third Directive will have on the occurrence of money laundering and terrorist financing activities in the different countries. Fifty percent of all respondents to the survey expect that there will be a reduction in the occurrence of money laundering and terrorist financing activities. While the respondents representing 78% of total banking assets in Hungary were extremely positive in their expectations of a reduction in these activities, respondents representing 86% of banking assets in the Czech Republic and respondents representing 67% of banking assets in Slovakia responded that they were neutral in
their expectations. These responses may reflect the volatility that is present in the economies of Czech Republic and Slovakia.

Table 3: Example Findings from the EYGL Survey

<table>
<thead>
<tr>
<th>Statements</th>
<th>Czech Republic</th>
<th>Hungary</th>
<th>Slovenia</th>
<th>Slovakia</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Our customers will see a significant difference in the way we handle our relationship with them.”</td>
<td>25%</td>
<td>55%</td>
<td>75%</td>
<td>0%</td>
<td>42%</td>
</tr>
<tr>
<td>“The new EU Directive will achieve its objective of reducing the incidence of money laundering in the local economy.”</td>
<td>14%</td>
<td>78%</td>
<td>66%</td>
<td>33%</td>
<td>50%</td>
</tr>
<tr>
<td>“Those Banks first implementing the new regulations will face a loss of business and revenues to the others.”</td>
<td>13%</td>
<td>22%</td>
<td>25%</td>
<td>0%</td>
<td>16%</td>
</tr>
<tr>
<td>“Implementation of the new regulation will produce some output that will put some of our competitors at a reputation hazard.”</td>
<td>38%</td>
<td>67%</td>
<td>50%</td>
<td>0%</td>
<td>46%</td>
</tr>
<tr>
<td>“The regulator’s consultation with the industry has been fruitful in terms of response and explanations to the industry’s AML—specific concerns and questions.”</td>
<td>38%</td>
<td>44%</td>
<td>75%</td>
<td>33%</td>
<td>40%</td>
</tr>
<tr>
<td>“Implementation of the new regulation will represent a significant challenge for the local Regulator in terms of monitoring its effectiveness.”</td>
<td>63%</td>
<td>89%</td>
<td>75%</td>
<td>67%</td>
<td>75%</td>
</tr>
</tbody>
</table>

% = Response of Agree or Strongly Agree with Statement (Respondents were asked to indicate whether they strongly agree, agree, disagree, or strongly disagree (or don’t know) with a series of statements.)

One area of inquiry that would be of special interest to business educators might be the beliefs of respondents concerning the “know your customer” policies and procedures. Though “know your customer” policies and procedures have been integrated and expected in U. S. business processes, they are less prevalent in some European Union countries. “Know your customer” policies generally refer to a set of questions designed to determine the customer’s true identity, business activity, source of funds, and identification of ultimate beneficiary of the activity, and whether the customer is a politically exposed person. In other words, it is “the due
diligence and bank regulation that financial institutions must perform to identify clients and ascertain relevant information pertinent to doing financial business with them” (Wikipedia). The terminology surrounding these policies is not widely known among business educators outside specific disciplines. For example, in the survey respondents were asked to rank five characteristics, commonly found in know your customer policies, on their difficulty in performing. Those five characteristics are: client identification requirements, politically exposed persons, identification of sources of funds, identification of clients’ economic activity, and identification of ultimate beneficiary. As shown in Table 4, respondents from financial institutions in Hungary and Slovakia felt that the client identification requirements would be the most difficult to perform, while the respondents from the Czech Republic and Slovenia felt that the identification of politically exposed persons would be the most difficult to perform. Aside from these findings, however, the terms themselves must be defined. The terms and acronyms are defined in Table 4.

Table 4: Know Your Customer Policy Challenges

<table>
<thead>
<tr>
<th>Ranking</th>
<th>Czech Republic</th>
<th>Hungary</th>
<th>Slovakia</th>
<th>Slovenia</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PEPs</td>
<td>CIR</td>
<td>CIR</td>
<td>PEPs</td>
<td>CIR</td>
</tr>
<tr>
<td>2</td>
<td>CIR</td>
<td>ISF</td>
<td>PEPs</td>
<td>ICEA</td>
<td>ICEA</td>
</tr>
<tr>
<td>3</td>
<td>ICEA</td>
<td>ICEA</td>
<td>ISF</td>
<td>CIR</td>
<td>PEPs</td>
</tr>
<tr>
<td>4</td>
<td>ISF</td>
<td>PEPs</td>
<td>ICEA</td>
<td>IUB</td>
<td>ISF</td>
</tr>
<tr>
<td>5</td>
<td>IUB</td>
<td>IUB</td>
<td>IUB</td>
<td>ISF</td>
<td>IUB</td>
</tr>
</tbody>
</table>

Definitions:

PEPs = Politically Exposed Persons
(PEPs) are individuals who are or have been entrusted with prominent public functions in a foreign country, for example Heads of State or of government, senior politicians, senior government, judicial or military officials, senior executives of state owned corporations, important political party officials. Business relationships with family members or close associates of PEPs involve reputational risks similar to those with PEPs themselves. (http://www.fatf-gafi.org/dataoecd/42/43/33628117.PDF)

CIR = Client Identification Requirements
These requirements refer to information that may be required and to the reporting entities that should decide whether this is necessary based on the customer’s risk classification. Such additional KYC information would include information on matters such as:
- the customer’s occupation, business activities or functions;
- the nature of the customer’s business with the reporting entity including, where appropriate;
  - the purpose of specific transactions; and
the expected nature and level of transaction behavior;
• the income or assets available to the customer;
• the customer’s source of funds and, if appropriate, the origin of the funds;
• the customer’s financial position;
• details in respect of the ownership and control structure of the customer;
• the beneficial ownership of the funds used by the customer;
• the beneficiaries of the transaction and, where appropriate, destination of funds; and
• the identity of any relevant party that might be related to the customer such as a subsidiary or an officer. (http://www.aar.com.au/pubsaml/fmres/foamlmay06.htm)

ISF = Identification of Sources of Funds
ISF refers to the activities from which the funds came—legal or illegal employment, trust, another financial institution, etc..

ICEA = Identification of Clients’ Economic Activity
ICEA refers to the legal or illegal activities in which the clients engage.

IUB = Identification of Ultimate Beneficiary
IUB refers to the natural person(s) who ultimately owns or controls a customer and/or the person on whose behalf a transaction is being conducted. It also incorporates those persons who exercise ultimate effective control over a legal person or arrangement.
Source: http://www.fatf-gafi.org/dataoecd/42/43/33628117.PDF

The KPMG survey, Global Anti-Money Laundering Survey 2007, focused on the broader region of Europe, to include Western Central, and portions of Eastern Europe. – Europe, North America, Asia Pacific, Central and South America and the Caribbean, Russian and the Commonwealth of Independent States, and the Middle East and Africa. Of 224 of the world’s 1000 largest banks as defined by Tier 1 Capital, 25% represented the top 250 banks; 60% of institutions surveyed are multi-national banks. Ten topic areas were covered by the survey:

1. The role of senior management in AML issues.
2. The costs of AML compliance
3. AML policies and procedures
4. Formal monitoring of AML systems and controls
5. Taking a risk-based approach to ‘Know Your Customer’ activity
6. Politically Exposed Persons
7. Transaction monitoring
8. Training
9. Attitudes towards regulation
An example of question items and results from the region of Europe are shown in Table 5. They concern formal testing and monitoring, know your customer, politically exposed persons, and transaction monitoring systems.

**Table 5: Responses on Five Areas of Concern**

<table>
<thead>
<tr>
<th>Area of Concern</th>
<th>Item</th>
<th>Europe</th>
<th>Total All Regions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formal Testing &amp; Monitoring</td>
<td>Respondents with a formal program for testing and monitoring the effectiveness of their AML systems and controls</td>
<td>70%</td>
<td>83%</td>
</tr>
<tr>
<td>Know Your Customer</td>
<td>Respondents with a program to remediate gaps in KYC information held on existing customers</td>
<td>73%</td>
<td>77%</td>
</tr>
<tr>
<td>Politically Exposed Persons</td>
<td>Respondents with specific procedures for identifying and monitoring PEPs on an ongoing basis</td>
<td>65%</td>
<td>71%</td>
</tr>
<tr>
<td>Transaction Monitoring Systems:</td>
<td>Respondents’ satisfaction with transaction monitoring systems [1=very unsatisfactory to 5=very satisfactory]</td>
<td>3.8</td>
<td>3.7</td>
</tr>
</tbody>
</table>

Information in Table 5 show results from respondents representing only European Union banks relative to the average for all respondents from banks representing all regions covered in the survey on five topics. Respondents from European Union banks report a lower percentage of formal programs for testing and monitoring effectiveness of AML systems and controls, a lower percentage of programs to remediate gaps in KYC information, and a lower percentage of specific procedures for identifying and monitoring PEPs on an ongoing basis. By contrast, respondents from Europe indicate a higher level of satisfaction with transaction monitoring systems than do respondents from all regions combined. With respect to formal monitoring, while the findings of the survey indicate a lower level of testing effectiveness of AML, KPMG suggests that there is likely confusion about the meaning of the inquiry that causes European Union banks to have few respondents saying that they have a formal program for testing the effectiveness of AML. With respect to KYC information and PEPs, a significant proportion of
European Union banks have remediation programs in place for collecting information and identifying and monitoring PEPs.

The KPMG study covers additional information not covered by the earlier EYGL study, including the role of senior management, outsourcing/offshoring, use of global AML policies, and increase in number of SARS – Suspicious Activity Reports – that are transmitted to FATF. Information about the role of Senior Management is important since implementation of the EU Third Money Laundering Directive requires incorporation “into member states’ national law of specific provisions on the role of senior management in respect to AML. Specifically, the Directive requires that senior management approval is obtained for certain AML-related tasks, such as the establishment of correspondent banking relationships and the acceptance of customers that are classified by the bank as ‘high risk’” (p. 51). These requirements are in the guides to good practice from the Joint Money Laundering Steering Group’s guidance notes (JMLSG, 2006).

Outsourcing and offshoring, while not extensively used, were also topics of concern. Current trends in other industries covered by AML suggest that these practices are likely to become more accepted and prevalent in the future. Currently, three European Union countries report that banks outsource some of their AML functions – U. K. (29% of respondents), the Netherlands (33%), and Italy (29%). [http://www.kpmg.com/SiteCollectionDocuments/Global%20Anti-money%20laundering%20survey%202007.pdf]. In addition, European Union Banks tend to use one of two AML models – a global approach where policies are implemented consistently across their entire organization or a hybrid approach where detailed procedures of a global AML policy are set at a regional or local level (p. 52).

Conclusions and Future Research

The environment in which anti-money laundering policies and strategies are being implemented is complex and global. Institutions that must satisfy the requirements being implemented must now comply and address the complexities of the requirements being implemented. However, developing policies and procedures is far different than the actual implementation of those same policies and procedures. Employees of covered institutions must
be trained and educated to perform the tasks required under the new rules and directives and must educate themselves to understand the importance of following through with said policies and procedures. They must also anticipate the possible legal implications including fines leveraged for non-compliance.

There appears to be a substantial gap in research on the preparation of individuals within affected U. S. institutions on how to comply with the evolving AML rules and regulations. Similarly, the surveys done on The European Union Third Directive collected opinion data but did not speak to the actually preparation and training of individuals that must implement the directives. Research needs to inform affected parties, educators, and trainers about the available training needs and materials available to meet that need.

Research should also document process, performance outcomes, and costs. For example, implementation of the AML initiatives will undoubtedly result in additional costs to financial institutions, casinos, insurance companies, stored value card businesses, and other money service businesses as a result of the additional training that all employees will need. There will also be costs associated with the additional paperwork that will be involved to document questionable transactions required by the appropriate authorities, improvements necessary to the firm’s information systems for screening data, and the additional work hours necessary for employees to perform additional procedures for both existing and new clients. Though efforts were made to anticipate these costs, additional research needs to be conducted on methodologies for assessment of related costs. Collection and analysis of these data will lower uncertainty and support future decision making concerning similar initiatives.

Implications for Business Educators

Business educators need to learn the language associated with anti-money laundering initiatives for several reasons. First, while most have mastered the language and terminology surrounding such forms of corruption as bribery, very little information is available in textbooks on AML. Even the language and information on Identity Theft omits the fact that ID theft may be used in money laundering schemes. This is further aggravated by the lack of information on important task force groups and agencies such as FATF and FinCEN. Second, students majoring in a diverse set of majors frequently accept employment in financial and other institutions covered by AML policies and strategies. At the very least, business educators should provide
students with information that will enable them to effectively evaluate their work environment and the compliance issues they will confront. Third, business educators have long acknowledged that a business organization is not a closed system and is one that operates in a complex, sometimes turbulent open system. As such, there should be an appropriate level of recognition that illegal as well as legal activities are present in that environment. Implications are that textbooks, curriculum, and training materials need to be updated to inform future business leaders about the responsibilities associated with maintaining the integrity of the work environment.

The information on AML policy and strategy provides numerous avenues of research for business educators. For example, results of studies suggest that the tone at the top of an organization matters. Future research needs to explore what this really means in an AML covered organization and how best to educate future managers in order to positively influence how they will approach AML compliance. In addition, a great deal of work needs to be done to address the complexity in estimating costs associated with putting into place an infrastructure for AML compliance, including training, across-border cooperation, compliance with other countries laws, and reporting. It also appears that legislative actions of the European Union and the United States are closely aligned. Research needs to explore how the infrastructure created to enforce laws in each region is likely to be closely aligned and to influence the language of future legislation and structural changes in other countries.

Technology as a driving force that impacts how AML policies are developed and implemented is also an area of promising research. While technology enhances the ability of some money laundering schemes to prosper, it makes efficient identification of suspicious activity timelier. The monitoring capabilities are substantially more effective and will likely lead to an increase in the filing of SARS. Technology and globalism are also driving the need for new standards in the financial services industry that are independent of region.

In the end, some countries and regions will be better able than are others to respond to global concerns such as those evidenced by problems associated with money laundering. Questions will undoubtedly arise concerning how countries or regions should cooperate on AML. For the business educator, the challenge is to guide students in understanding the implications for creating a sustainable society in the face of illegal activity, from bribery to money laundering to other forms of immoral decision making.
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