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Modeling the Concept of 'Hegemony' in International Financial Systems

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Abstract

In this paper, we perform a graphical analysis of hegemonic leadership in international finance, based upon the historical studies by Kindleberger and Sobel about the Dutch and British financial hegemony in the 1600s-1800s. The socio-technical systems of public and of private finance in nations interact with the self-organizing system of international finance. We design a systems model for a stable international financial system in a global world, using the lessons from the history of Dutch and British fiscal hegemony.

Keywords: International Finance, Institutional Economics, Central Banks

1. Introduction

A major issue is the 'stability' of the international system of finance. Historically, there are many instances of 'instability' in the socio-technical system of international finance. Most recently, there were the Asian financial crisis of 1997, the Global financial crisis of 2007, and the Euro Crisis of 2010. There have been many studies of such instabilities. But what about the stability of international finance? There have been fewer studies of these, with two of the most notable by Charles Kindleberger (1973) and by Andrew Sobel (2012).

Charles Kindleberger had asked: "What produced the world depression of 1930; why was it so widespread, so deep, so long?"(1973) Kindleberger focused on the previous British Empire's 'liberal hegemon' over international finance in the nineteenth century, based upon the British currency. But this historical situation was ended by the World War of 1914-18. Afterwards in the 1930s (and aggravated by instabilities in international financial obligations), a world depression occurred, which resulted in national economic depressions, societal instability in Germany and the rise of fascism -- finally World War II.

For example, Benn Steil has described how, after World War II, the Bretton Woods system established some institutions for enabling an international monetary system, establishing the International Monetary Fund (IMF) and the International Bank for Reconstruction and Development (IBRD), which became the World Bank Group. (2014) The idea of the system was to have countries adopt monetary policies which maintained a stable exchange rate between a national currency and the dollar. In 1971, the United States went off the gold standard, ending a key assumption underlying the Bretton Woods system. Neither the IMF nor World Bank had any regulatory authority over national financial systems. Major international financial crises have continued to occur in Asia in 1997, in the U.S. in 2008, and in Europe in 2010.

In effect, the U.S. had assumed the role of a 'liberal hegemon' in world finance and trade, with the dollar as the international currency for capital flows in the system of international finance. This hegemony ended with the twentieth century. Then again the issue of 'liberal hegemony in finance and trade' arose over the 'stability' of international finance in a 'global economy'. Andrew Sobel began to address this issue, tracing the institutional aspects of the concept, from the origin of liberal hegemony in the Dutch Republic 1600s and its succession by financial leadership by Britain in the 1700s and later by the US after 1945. (2012)

We use a methodology which applies topological modeling techniques on historical cases of societal stasis and change. We will not be doing 'history' -- but using historical cases to graphically identify the major factors and explanations in a history. This methodology facilitates the construction of 'middle-range' social science theory and societal models, in the methodological spirit as urged by Robert K. Merton (1968). Applied to financial history, this modeling technique focuses upon developing an 'institutional model' of financial processes. An institutional model is a graphic form of

relating important features in the structure and processes of an institution (such as individual leadership, governance, policy, strategy, etc.).

I have not tried to summarize all the literature on hegemonic processes but only focused upon two historical accounts of: (1) the end of British hegemon and (2) the origin of Dutch hegemony. These two studies have provided rich historical evidence upon which to explore the modeling challenge -- whether and how a graphic model of the institutional basis of hegemony can be constructed. Accordingly, we focus upon Kindleberger's (1973) and Sobel's (2012) studies of the end of British hegemony and the origin of Dutch hegemony. We use a lot of direct quotes from these studies, as a 'case study' approach to summarizing historical events and to avoid injecting additional interpretation into their own perspectives (Kindleberger's and Sobel's). These case studies provide the empirical evidence upon which to abstract key phenomenal factors for constructing models of societal processes in the events. Thus proper evidence for a modeling analysis depends upon the accuracy of a historian's account of a societal event. A general modeling framework can facilitate the abstraction of key social science factors in a historical case. Abstraction from empirical phenomena is the first methodological step toward model construction.

Accordingly, we graphically analyze these cases in a modeling framework, for viewing them as an issue of 'system control of a self-organizing financial system'. An institutional model is important to try to understand the issue addressed here: how can an international financial system in the modern world be made 'stable', when no nation can now play the role of a hegemon in the political-economic concept of 'financial hegemony'?

First, we review why the political-economic concept of a 'liberal hegemon' was important. Second, we review how a 'liberal hegemon' was composed. Third, we construct a graphic model of an international replacement for a 'liberal hegemon' in the modern global world. The intention is the address the important issue of what kind of an 'institutional model' could facilitate financial stability in a global world.

2. Financial Instability in the 1930 World Depression

Charles Kindleberger explained the 1930 world depression, not in terms of 'causality' but in terms of 'systems failure'. It occurred as a failure of policies, a failure of institutional systems, a failure of financial processes, bad political and policy decisions -- occurring all in failures of 'hegemonic leadership'. Kindleberger wrote: "The explanation . . . is that the 1929 depression was so wide, so deep and so long because the international economic system was rendered unstable by British inability and United States unwillingness to assume responsibility for stabilizing it . . . " (1973)

There were different circumstances in each country, which were connected together through different government policies and through unstable flows in international finance and trade. Germany repatriations to France contributed to German societal instability, while Germany had also lost traditional governance. Austria had lost its monarch and empire. Britain and France had lost one-quarter of their young men in the war (which would have formed new families and contributed to market growth and demand). Also financially, they had large war debts to the U.S. European nations were unstable from consequences of the First World War.

Andrew Sobel wrote: "During the war, Germany's currency base expanded its money supply by 350%, and prices increased by more than threefold. In Great Britain, the money supply more than doubled with a 250% increase in prices. On top of the problem of inflated currencies by the war's conclusion, the European governments were left with huge outstanding debt or reparation obligations and drained national treasuries. . . The Germans were then shackled with excessive reparations. The end of the war presented all governments with the dilemma of constraining inflated money supply, restoring the gold standard, and meeting debt or reparation obligations. These demands proved incompatible. . . ."(2012)

Monetary policy destabilized Germany society and prepared the way for the Nazi revolution in the 1930s. Sobel wrote: "The interaction of Germany's economic circumstances at the end of the war and the burden of reparations placed German policy makers in an extremely difficult position. Addressing inflation and paying reparations were almost mutually impossible policy objectives without causing severe economic hardship and massive unemployment within Germany and feeding revolutionary political upheaval. Instead the Reichsbank chose to continue to expand the money supply to provide what the government needed to finance its budget, to make reparation payments and to avoid inflation. This led to the well-documented hyperinflation that struck Germany in the early 1920s.Without the burden of excessive reparations, Germany would not have fallen into arrears on its payments and French and Belgian troops would not have occupied the Ruhr Valley in lieu of payment. Certainly, this would have influenced extremist, nationalistic politics in Germany, maybe altering the dynamic that led to the success of Hitler's National Socialist Party." (2012)

Another deflationary factor was a decline in commodity prices. The price of wheat dropped from $1.5 dollars per bushel in June 1929 to $1.05 in June 1930. All other commodity prices declined world-wide in 1930. Kindleberger wrote: "The essential truth is found in the conventional wisdom that price declines are deflationary in so far as they 'check confidence, provoke bank failures, encourage hoarding and in various ways discourage investment'." (1975)

Government policies about international trade also contributed to deflation. A U.S. tariff act, the Smoot-Hawley Tariff Bill in June 1930, raised tariffs on US imports. Charles Kindleberger wrote: "While other countries had raised tariffs before the Smoot-Hawley Bill became law, the course of the legislation through Congress had been followed with close attention .There were thirty-four formal foreign governmental protests. (The bill) let loose a wave of retaliation. . .. This was a failure in leadership." (1975) Andrew Sobel wrote: "The trade process is another means to push liquidity into the international system.(There was a) downward spiral in international trade, a reduction of approximately 60% from 1929 to 1933." (2012)

About Germany, Kindleberger wrote: "When Germany restricted long-term borrowing abroad in the late 1920s, it failed to limit short-term. Germany was subject to the outflow of foreign funds. . . A crisis occurred in March 1930 because of unemployment. . . By early 1930, unemployment was at 1.9 million people, . . . (creating) a budget took over the government .. . . Deflation was called for German obligations under the Young Plan, by the fear of inflation, which persisted from 1923, and by the notion that profits could be restored by pushing wages down. . . The budget had to be balanced: old taxes were raised . . . new ones imposed . . . Expenditures were reduced. The deflationary policy was followed for two fateful years. . . (Unemployment rose) from 176,000 in 1929 to 2,800,000 in 1931." (1975) Elections were held in September 1930, and the Nazi party went from 12 to 107 seats in the parliament. There was a withdrawal of foreign funds. In 1933, the Nazi party won more seats, and President Hindenburg appointed Adolf Hitler as chancellor. Hitler began his reign of terror in Germany.

Capital flows also played an important factor in the international deflation. Kindleberger wrote: "With the tension growing among Germany France and Britain, the crack, when it came, appeared in Austria. In the early spring of 1931, a Dutch bank wrote a polite letter to the Credit-Anstalt in Vienna saying that it was obligated to raise the charge on its acceptance credits from 1/4 a month to 3/8 percent. . . Credit-Anstalt chose to pay off the loan.(Three months later the Credit Anstalt could have used the money.) The Austrian banking system, hurt by both the break-up of the Austro-Hungarian Empire and inflation, had adjusted haphazardly, placing heavy reliance on short-term credit from abroad." (1975) Credit-Anstalt had fused with Bodenkerdianstalt and gained 80 million of capita but 140 million of losses. It needed help and requested assistance from the National Bank. But when announcement of support was made in May 1931, a run on the bank began.

The Credit-Anstalt failure triggered other bank runs. Then the bank runs triggered a currency crisis. Investors turned to gold, upon which the British currency was based. This began a run on the British pound. Kindleberger wrote: "At the end of May 1931, Austrian financial difficulties ramified widely and led to runs in the banks of Hungary, Czechoslovakia, Romania, Poland, and Germany. There were new bankruptcies in Germany, which communicated tension to Amsterdam, which in turn drew funds from London. . . The pace of withdrawal (in London) accelerated. On 21 September, Great Britain left the gold standard." (1975) This illustrated how interconnected were the banking systems in Europe.

Bank runs in the instability of the financial systems, nationally and internationally, were important contributors to the world depression. For this reason, Kindleberger's answer was: "The explanation . . . is that the 1929 depression was so wide, so deep and so long because the international economic system was rendered unstable by British inability and United States unwillingness to assume responsibility for stabilizing it in three particulars: (a) maintaining a relatively open market for distress goods; (b) providing counter-cyclical long-term lending; and (c) discounting in crisis. . . When every country turned to protect its own national private interest, the world public interest went down the drain, and with it the private interests of all." (1975)

When economies decline, produced goods are under stress (distressed) as they cannot find markets and cannot be sold. Stimulating markets in depression aids the sales of consumer goods. Thus politics, money, trade instabilities -- all contributed to the world depression.

3. Methodology

The world depression of 1930 was triggered by the US depression, which in turn had been triggered by the 1929 US stock market crash. In a previous paper, the author had applied graphical analysis to the US depression. (2013) That depression began with the bad banking practice of excessive funding of stock speculation. The US stock market rose to a financial bubble due to extensive purchase of stock through bank loans (stocks purchased on margin). When the market collapsed, such margined stock reverted to banks as collateral -- but of decreasing value as the market continued to collapse. The banks which had made large amounts of broker loans then became insolvent, and bank runs on them occurred. Sobel wrote: "As important as were the reparations-war-debt-connection, and the trade-area, neither fed the fundamental problems leading to the 1929 stock market crash, nor the insolvency and liquidity problems underpinning the US banking crisis, that festered after 1929 and culminated in 1933. US financial practices and processes were nontransparent, lacked credible monitoring and accountability, were excessively vulnerable to manipulation, corruption, and cronyism, and lacked sufficient public and private regulatory oversight to address ills before they could overwhelm

the confidence of those engaged in financial exchange.” (2012) Bad banking practices tipped an unstable US financial system into crisis.

Now we apply the graphical analysis to understanding the dynamics of the world depression, as shown in Figure 1.

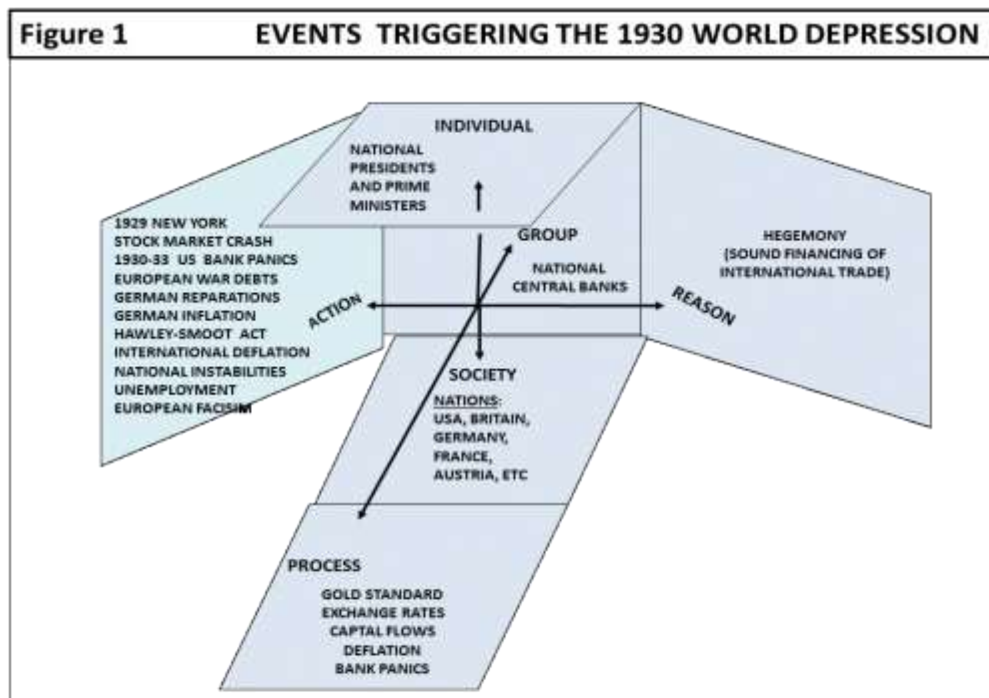


Figure 1 EVENTS TRIGGERING THE 1930 WORLD DEPRESSION

SOCIETY -- The societies involved in the 1930s world depression were the nations of the U.S. and Europe, and included Japan.

INDIVIDUAL -- The individuals involved were key decision makers of the U.S. presidency and European presidents and prime ministers.

GROUP -- The organizations were principally central banks of a nation, which oversaw the financial stability of a nation.

PROCESS -- The processes involved were financial in the forms of national debts and budgets, international capital flows and exchange rates, and the dropping of the British pound from its traditional ‘gold standard’.

ACTION - Actions in the events, which contributed to the world depression, were many. They included the 1929 New York Stock Market crash, which was followed by three years of U.S. bank panics in 1930-33. Contributing to destabilizing the European government budgets were the large British and French war debts to the U.S. and large German war reparations to France and Britain. Government funding of German reparations triggered hyperinflation in Germany and the French occupation of the German Ruhr. The inflation and French occupation increased the political influence of the Nazi political party in Germany. The U.S. Hawley-Smoot Act triggered retaliatory trade tariffs in European nations, diminishing world trade and contributing to deflation of international commodity prices. Bank runs froze credit -- contributing to declines in production and raising unemployment in the US and Europe. European fascism in Italy and in Germany enabled dictators who began the Second World War in Europe.

REASON -- Prior to the First World War, liberal hegemony in the British governmental and financial systems had made Britain the financial center of the world. The British pound was backed by gold, then international currency standard. But Britain was unable to continue to play this international hegemonic role -- after the causalities and financial burden from the First World War. Without such leadership, the financial system of the world became unstable.

This analytic form highlights the explanations of the world depression, which lay in institutional factors -- institutional economics. Institutional arrangements are significant but none is ever a single ‘cause’ of societal events. The crises in the US and Europe in their financial and economic and political systems resulted in changes -- the depressed economic structure of the US (deflation) and the Nazi political coup in Germany (dictatorship).

Crises in a society alter the basic features of a society -- changing the stasis (stable operations) of the structural-functional systems of a society. The war debts of Britain and France to the U.S. had been in the four-million-dollar range, but the war reparation of Germany to France was in the tens-of-millions-of-dollar range. This

financial burden could not be economically born by the Germans, in rebuilding their economy from the war. In response, the first German government inflated the ‘mark’. In one year a million-inflated-marks were later replaced by one ‘new mark’. All mortgages in Germany were wiped out, destroying the wealth of people and banks who lent money. International financial systems were not independent of national financial policies. In historical retrospective (and graphically viewed), one can see that, as Kindleberger emphasized, it was ‘policy’ that contributed to the destabilization of the international economic situation.

Among historians of the period of the First World War and its aftermath, there is no exact consensus on a ‘normative judgment’ about policy, about ‘blame’ for the war. But there is agreement that it was a terrible war and, perhaps, unnecessary. It created the societal disruptions, from which the Second World War would emerge.

As to my opinion, I think it was bad policy for the governmental leaders of the USA to insist upon the repayment of these war debts by Britain and France. If the US really believed in the Allies’ side of the war story, then perhaps the US should have forgiven the debts, so the US allies of Britain and France could have more rapidly recovered. I think it was also bad policy for the French leaders to impose and insist upon German reparations. After all, it had been the ‘balance-of-power’ international alliances which had actually precipitated the war. In this policy framework, all the European nations were equally to blame, since they had all entered into alliances. At the time of the assassination of the Austrian-Serb affair, all nations mobilized -- the Russian, the German, the French, the Austrian armies. Thus no single nation was to blame for the war -- not the Germans, not the Austrians, not the Russians, not the French, not the British. It was (as Kindleberger emphasized in the factors of history) an ‘accident’. It was an accident of ‘mobilization’, an accident of ‘policy’, an accident of ‘national leaders not really thinking though the consequences of their decisions’, an accident in ‘misunderstanding’ the major changes in war technology.

Leaders (political and military) did not understand the increased destructiveness of military technology. Frontal assaults by masses of infantry were not possible against the then new machine gun and steel artillery. The French launched a massive assault in 1915, failing with 50,000 casualties. In 1916, the British launched a massive assault, failing with enormous casualties. In the spring of 1918, the Germans launched their massive assault, failing and (with the addition of fresh American troops) resulting in the German surrender. The people who paid the price in the war were not the leaders, but the soldiers and civilians. They were the soldiers slaughtered in a new mechanized war of destructive steel artillery, machine guns, and poison gases. Images from the war are memorable, Figure 2.

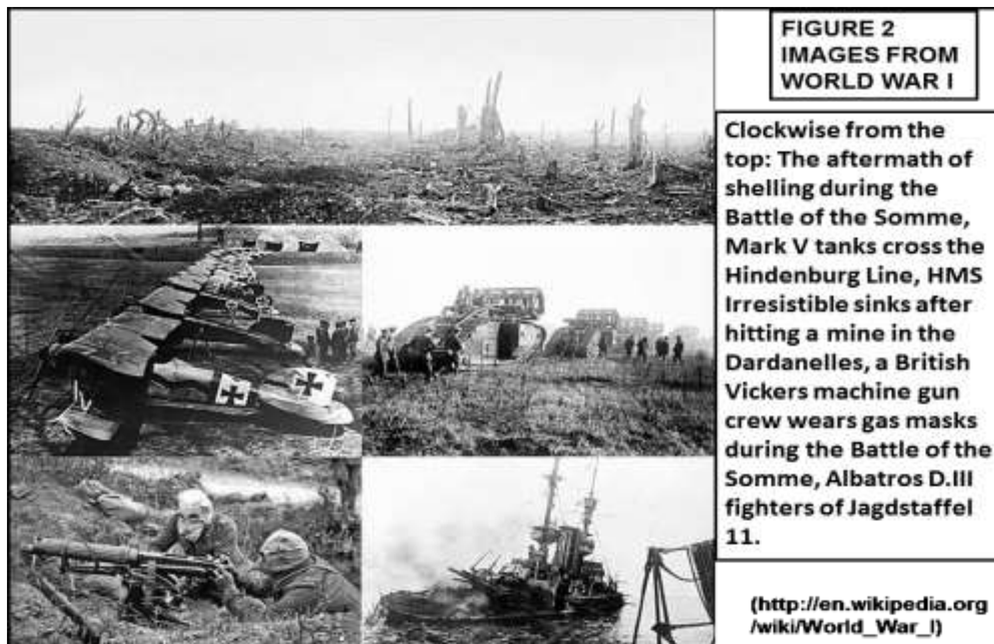


FIGURE 2
IMAGES FROM WORLD WAR I

Clockwise from the top: The aftermath of shelling during the Battle of the Somme, Mark V tanks cross the Hindenburg Line, HMS Irresistible sinks after hitting a mine in the Dardanelles, a British Vickers machine gun crew wears gas masks during the Battle of the Somme, Albatros D.III fighters of Jagdstaffel 11.

(http://en.wikipedia.org/wiki/World_War_I)

3.1 Dutch Financial Hegemony

An economic theory of stability of international finance should be constructed around institutional relations (or as the sociologists would call this, around the ‘institutionalization’ of the system). The Kindleberger and Sobel studies in economic history about hegemony have provided an ‘institutional prototype’. We can examine the institutional history of how, first the Dutch and then the British, had created international hegemonies of stable financial systems -- in the 1600s, 1700s, and 1800s. Economic theory can and should learn from economic history.

Here we briefly summarize the first historical example of a ‘liberal hegemony’ in international finance, the Dutch hegemony. Andrew Sobel wrote: “Dutch finance came to dominate international commercial and financial relations in the 1600s and for most of the 1700s.Financial innovations, fiscal responsibility, respect for property rights and contracts, and Dutch adherence to the rule of law engendered confidence in the Dutch system and thus contributed to an increasing return dynamic that brought new capital to the Dutch financial markets from domestic and foreign savers.” (2012)

The historical situation which stimulated the rise of Dutch hegemony was described by Sobel: “Seventeen provinces, with decentralized governance and financial mechanisms, made up the Hapsburg Netherlands in the mid-1500s. Despite enjoying relative autonomy and local privilege granted by Charles V and his son Philip II of the Hapsburg dynasty, the Netherlands came into conflict with Phillip II . . . By 1568, the Dutch had begun a full-fledged rebellion against the Hapsburgs. . . .” (2012) It was in this rebellion that Dutch methods of government, commerce and finance would develop to provide a basis for pursuing the war with the Hapsburgs, Figure 3.

Rebellion and independence were the political drivers behind the events of reform in governance and finance, which established Dutch hegemony. Historically, the infrastructure of the Dutch had already grown upon mercantile interests. Sobel wrote: “By the mid-1500s, the Dutch were already one of the more industrious and commercially busy societies in Europe. Cities in the Hapsburg Netherlands were some of the most densely populated in Europe and the inhabitants among the best educated, but the Dutch lacked significant agricultural capacity and natural resources.(2012)

The trigger for the rebellion occurred after Phillip II became emperor of the Hapsburg domains. Sobel wrote: “In 1549, Crown Prince Philip had visited the Hapsburg Netherlands as part of his tour through the empire he was to inherit. By this time, the Dutch had obtained a good measure of autonomy from the Hapsburgs with the Transaction of Augsburg and the Pragmatic Sanction of 1549.Economic success and relative political autonomy also spilled over to religion in Dutch society. By the mid-1500s, Protestants had become an influential minority that fully participated in Dutch economic life. . . Rumors circulated that Philip might extend the Inquisition to the Netherlands.. . Philip dispatched the Duke of Alba and approximately 10,000 Spanish troupes to restore order and Spanish dominance. The revolt was on!” (2012)

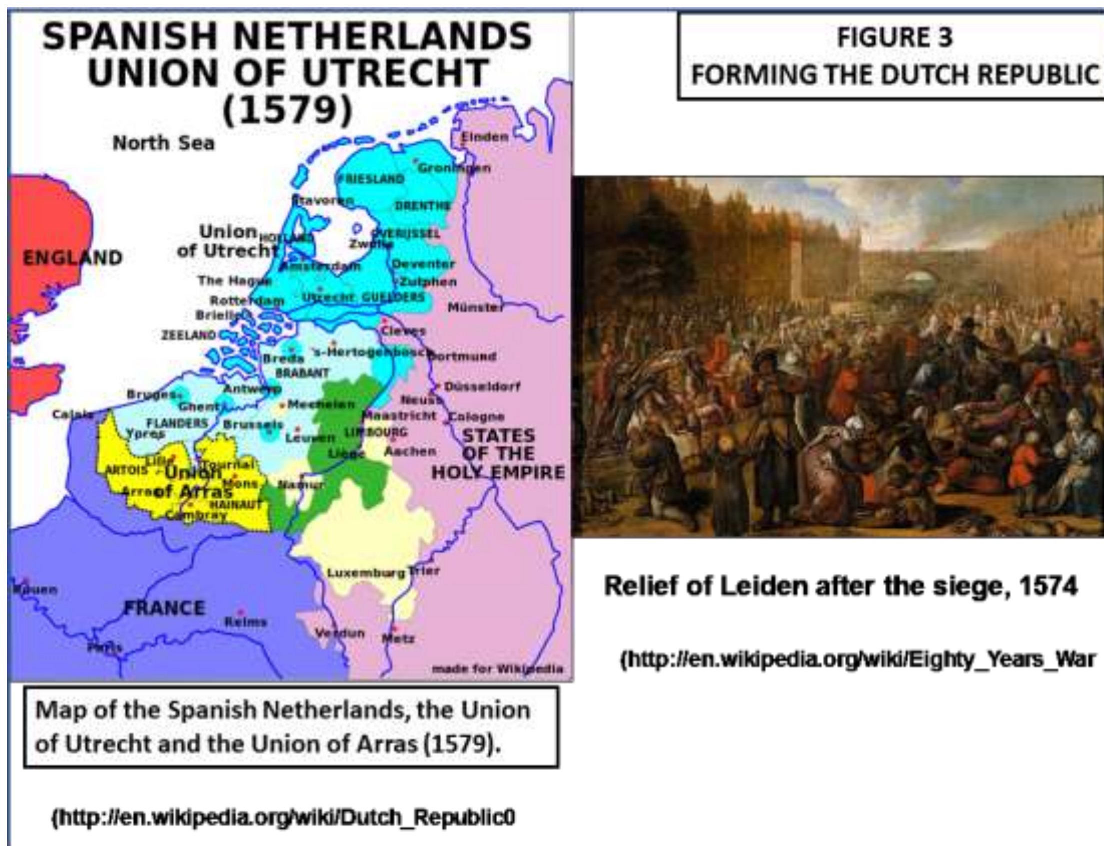


FIGURE 3
FORMING THE DUTCH REPUBLIC

Map of the Spanish Netherlands, the Union of Utrecht and the Union of Arras (1579).

(http://en.wikipedia.org/wiki/Dutch_Republic0

Relief of Leiden after the siege, 1574

(http://en.wikipedia.org/wiki/Eighty_Years_War

Thus it was upon the forge of war that the Dutch provinces formed themselves into a nation, leading the world in finance and trade -- a liberal hegemon. After independence, the Dutch would extend their empire into Southeast Asia and the new world of the Americas.

In the Dutch Republic, a significant innovation in 'financial innovations' was the Bank of Amsterdam. Sobel wrote: "All modern political economies . . . have some organization (or organizations) that act as a lender-of-last-resort for its economy and the broader global economy. Developing a reliable currency that others in the system are willing to use as an international transactional currency to settle accounts across national borders (or hold as a storehouse of value over time) is essential to becoming a lender-of-last-resort that can lubricate international economic activity and manage economic dislocations to the system." (2012)

Andrew C. Sobel had summarized Kindleberger's description of a 'liberal hegemon': "Kindleberger suggests that a political economy acting as the (financial) system leader provides five key collective goods: 'maintaining a relatively open market for distress goods, providing countercyclical, or at least stable, long-term lending; policing a relatively stable system of exchange rates; ensuring the coordination of macroeconomic policies; and acting as a lender of last resort by discounting or otherwise providing liquidity in financial crisis. The historical record appears consistent with Kindleberger's explanation that the provision of collective goods (in the political operation of an international economic system) creates the essential scaffolding for productive liberal exchange and globalization of (economic trade)." (Sobel, 2012) Sobel was emphasizing that financial history does provide evidence that an 'essential scaffolding' (a proper institutionalization of international finance) facilitates international trade. Such an 'essential scaffolding' for finance was constructed in the Dutch republic around a 'good money', which arises from sound governmental fiscal policy.

For a 'reliable currency', Sobel wrote about the financial innovation of the Bank of Amsterdam: "The creation of the Bank of Amsterdam by the provincial government of Holland helped address the currency confusion. First, the provincial government minted and supported two good coinages, the guider and stuiver, The Bank willingly served as a clearinghouse for currencies. It accepted deposits of any currency, assessed the gold and silver content of such currencies and gave the depositors an equivalent value in guilder and stuivers. The bank became a financial clearinghouse. The guilder and stuiver became the preferred currency for international exchange." (2012) Other currencies then in use were deposited in accounts of the Bank of Amsterdam and translated into the preferred 'guilder and stuiver'.

The first requirement of a financial hegemon is to establish a 'preferred currency for international exchange' -- good money. Two institutional forms are needed to do this -- a government and a financial institution. A financially-sound government is needed to mint 'good' money (good in the sense that 'bad' money drives out good); and a central-bank must act as an honest clearing house for good money.

A second requirement is about a financially-sound government, it must have a fair and sufficient taxation policy to fund public services. Sobel wrote: "Taxation affects a society's capacity to provide public services, such as national security, infrastructure . . . Taxation is an incredibly difficult task. . . Ultimately, a good tax system is one of the foundations of a hegemon's capacity to exercise leadership, as it is a means of extracting surplus and providing liquidity. Productive taxation spills over into another critical aspect of public finance, borrowing by public authorities. It contributes to a government's ability to borrow by providing a mechanism to finance debt, adding to a government's credibility in its promises to repay its debt obligations. Even successful governments face emergencies, such as a war, that are too immense to pay-as-you-go, in the short term. "(2012)

Sobel has emphasized that both public and private institutions are needed for financial leadership by a nation. Private financial institutions also play an important role in hegemony. Sobel wrote: "A hegemon's private financial markets are critical to the accumulation, formation, and reallocation of capital that underpins the pro-cyclical provision of liquidity in the system. This liquidity promotes new economic enterprise and the creation of employment. To sit at the hub of a network of global finance, a political economy must be relatively porous to international flows of capital. Amsterdam emerged at the heart of a (financial) network. The relative transparency, predictability, efficiency, reliability, and adherence to the rule-of-law by Dutch governance and finance engendered confidence in Dutch financial markets and merchants." (2012)

In Sobel's description, one sees the need for both public and private institutional partnerships and rules for system performance (with 'transparency, predictability, efficiency, reliability, and rule-of-law'). We depict this in the graphic form of societal dynamics, Figure 4.

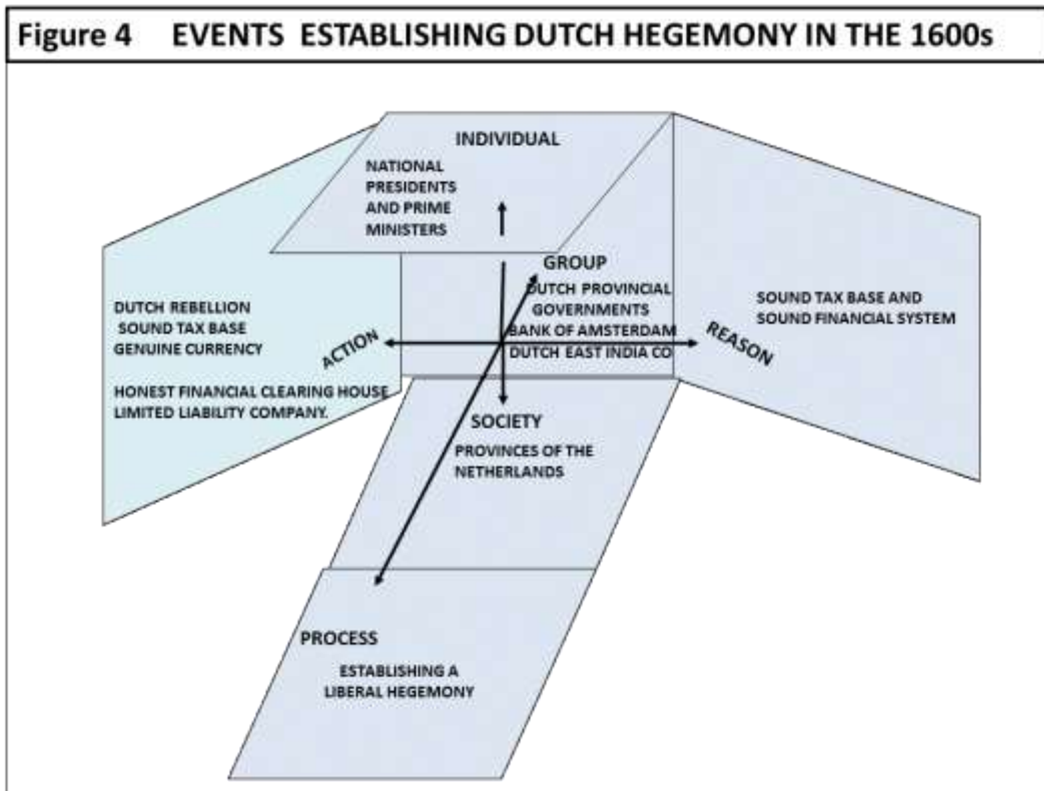


Figure 4 EVENTS ESTABLISHING DUTCH HEGEMONY IN THE 1600s

GROUP -- The groups involved in the events were the Dutch Provincial Government and the Bank of Amsterdam.

PROCESS -- The process involved was establishing a liberal hegemony for Holland in international finance and trade.

ACTION -- The actions occurred during the Dutch rebellion from Spanish rule. They included the creation of a fair and stable tax base in the Dutch Netherland provincial governments. Also the Dutch Provincial Government minted good currency. The Bank of Amsterdam was established as a financial clearing house.

REASON -- The reasoning of the Dutch were (1) to create a sound tax base to fund the wars of overthrowing Spanish rule and (2) to create a sound financial system for facilitating Dutch trade and a merchant class.

SOCIETY -- The societies involved were the provinces of the Netherlands, which united into the Dutch nation.

INDIVIDUAL -- Individuals involved were Dutch merchants, peasants, and leaders brought together to oppose foreign governance and establish a prosperous trading society.

We can next use the societal perceptual space to analysis the system conditions for the Dutch hegemon of the 1600s. The connections between the dimensional factors form a graph with fifteen kinds of explanations in historical events, Figure 5. Partitioning the societal graph into upper and lower pyramids identifies the kinds of system control possible in a societal event: (1) control of managed systems, (2) control of socio-technical systems, and (3) control of self-organizing systems. See Betz (2012).

Since two organizations are important to the explanation of Dutch hegemony, we graphically analyze this event with two managed systems (Dutch government and Bank of Amsterdam), and a self-organizing system of the Dutch economy, Figure 6. A financially-sound-government needs a sufficient and fair tax base to finance public needs, create fiscal credibility, and issue sound money. A central bank needs to act as an honest clearing house for private financial transactions. This graphic analysis emphasizes that three kinds of systems were involved: (1) a public financial system of the Dutch provinces, (2) a private financial system around the Bank of Amsterdam, and (3) an international financial system, in which the Bank of Amsterdam played a role of a national central bank.

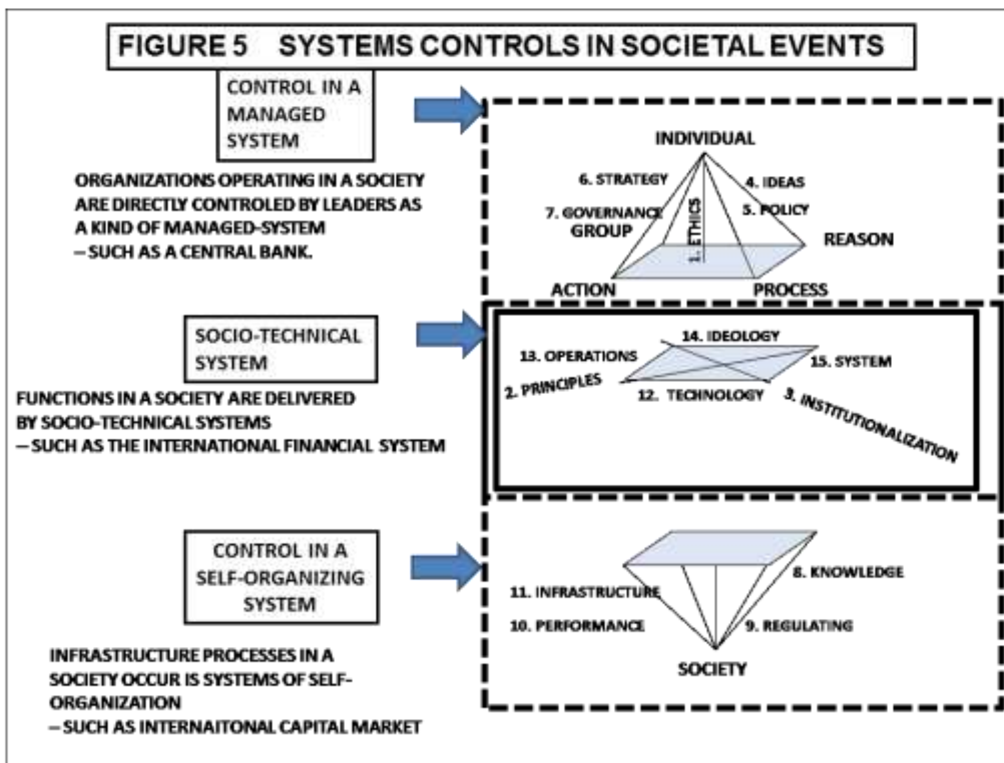


FIGURE 5 SYSTEMS CONTROLS IN SOCIETAL EVENTS
CONTROL IN A MANAGED SYSTEM
ORGANIZATIONS OPERATING IN A SOCIETY ARE DIRECTLY CONTROLED BY LEADERS AS A KIND OF MANAGED-SYSTEM – SUCH AS A CENTRAL BANK.
INDIVIDUAL
6. STRATEGY
4. IDEAS
7. GOVERNANCE
5. POLICY
1. ETHICS
GROUP
REASON
ACTION
PROCESS
SOCIO-TECHNICAL SYSTEM
FUNCTIONS IN A SOCIETY ARE DELIVERED BY SOCIO-TECHNICAL SYSTEMS – SUCH AS THE INTERNATIONAL FINANCIAL SYSTEM
14. IDEOLOGY
13. OPERATIONS
15. SYSTEM
2. PRINCIPLES
12. TECHNOLOGY
3. INSTITUTIONALIZATION
CONTROL IN A SELF-ORGANIZING SYSTEM
INFRASTRUCTURE PROCESSES IN A SOCIETY OCCUR IS SYSTEMS OF SELF-ORGANIZATION – SUCH AS INTERNAITONAL CAPITAL MARKET
11. INFRASTRUCTURE
8. KNOWLEDGE
10. PERFORMANCE
9. REGULATING
SOCIETY

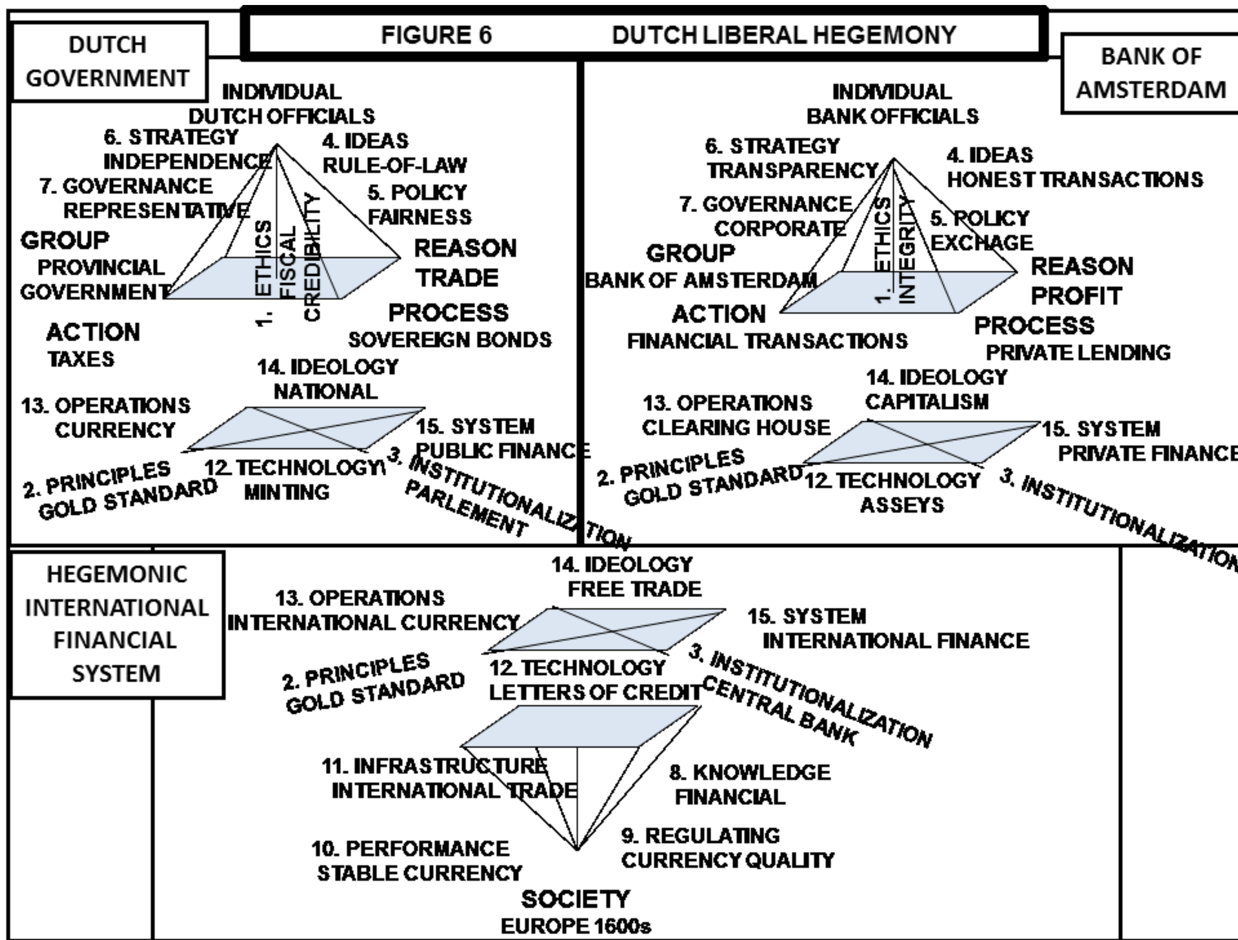


FIGURE 6 DUTCH LIBERAL HEGEMONY
DUTCH GOVERNMENT
INDIVIDUAL DUTCH OFFICIALS
6. STRATEGY INDEPENDENCE
4. IDEAS RULE-OF-LAW
7. GOVERNANCE REPRESENTATIVE
5. POLICY FAIRNESS
1. ETHICS FISCAL CREDIBILITY
GROUP PROVINCIAL GOVERNMENT
REASON TRADE
PROCESS SOVEREIGN BONDS
ACTION TAXES
14. IDEOLOGY NATIONAL
13. OPERATIONS CURRENCY
15. SYSTEM PUBLIC FINANCE
2. PRINCIPLES GOLD STANDARD
12. TECHNOLOGY MINTING
3. INSTITUTIONALIZATION PARLEMENT
BANK OF AMSTERDAM
INDIVIDUAL BANK OFFICIALS
6. STRATEGY TRANSPARENCY
4. IDEAS HONEST TRANSACTIONS
7. GOVERNANCE CORPORATE
5. POLICY EXCHAGE
1. ETHICS INTEGRITY
GROUP BANK OF AMSTERDAM
REASON PROFIT
ACTION FINANCIAL TRANSACTIONS
PROCESS PRIVATE LENDING
14. IDEOLOGY CAPITALISM
13. OPERATIONS CLEARING HOUSE
15. SYSTEM PRIVATE FINANCE
2. PRINCIPLES GOLD STANDARD
12. TECHNOLOGY ASSEYS
3. INSTITUTIONALIZATION
HEGEMONIC INTERNATIONAL FINANCIAL SYSTEM
14. IDEOLOGY FREE TRADE
13. OPERATIONS INTERNATIONAL CURRENCY
15. SYSTEM INTERNATIONAL FINANCE
2. PRINCIPLES GOLD STANDARD
12. TECHNOLOGY LETTERS OF CREDIT
3. INSTITUTIONALIZATION CENTRAL BANK
11. INFRASTRUCTURE INTERNATIONAL TRADE
8. KNOWLEDGE FINANCIAL
10. PERFORMANCE STABLE CURRENCY
9. REGULATING CURRENCY QUALITY
SOCIETY EUROPE 1600s

We recall that Sobel indicated that some ‘institutional foundations’ were necessary. Sobel wrote: “The following micro-foundations are critical to the ability to provide such collective services: “(1) a political economy’s governance arrangements, (2) its public and private financial arrangements, (3) credibility of those arrangements, and (4) development of a global financial network around those arrangements.” (2012) The graphic analysis depicts and expands upon the following points:

(1) The *governance* arrangements of the Dutch political economy as the provincial governments of the Netherlands in the 1600s,

(2) Public financial arrangements in the form of *taxes* and *currency* of the Dutch Provincial Government and the private financial arrangements of the Bank of Amsterdam as a *clearing house* for transactions,

(3) The *fiscal credibility* of the government public finance and the *integrity* of bank private finance in their *respective Ethics*, and

(4) The development of a *self-organizing hegemonic international financial system*.

The graphic analysis adds more necessary institutional connections:

(5) Proper *governance* in a nation for hegemonic leadership, in terms of a *strategy* of independence, *ideas* of a rule-of-law, and *policies* for fairness,

(6) Proper fiscal responsibility in public finance, in terms of the need for *adequate taxes* and *representation* in assignment of taxes.

(7) Proper *credibility* in public and private financial systems in terms of : no government-debt defaults nor coinage debasement and also honest private financial transactions.

(8) A system of international finance, based upon the *principles* of a gold standard with an international Dutch currency, whose quality was regulated by a ‘central bank’ of the Dutch government.

The political-economic concept of ‘liberal hegemony’ is a complicated idea -- with several institutional requirements to implement and sustain. It was first established by the Dutch in the 1600s. A graphic analysis of the Dutch historical situation makes clear the component ideas in the concept and their connections.

Later in the 1700s, Great Britain began replacing the Netherlands as the ‘liberal hegemon’ in international trade and finance, maintaining that leadership through the 1800s. Sobel described how the acceptance of William of Orange to overthrow James II brought Dutch methods of finance to England. (2012) Great Britain established its empire in the 1700s and dominated world trade and finance through the 1800s. It was the war of 1914 that destroyed Great Britain’s place as financial leader. Britain had large war debts, a shrunken market with one quarter of its male youth dead and not able to begin new families. Britain took its currency off the gold standard.

With regard to the US, both Kindleberger and Sobel argued that the US was incapable of leading international finance in the 1930s. The US fell into a deep depression over the three years of 1930 to 1933 and was unable even to lead itself out of the depression. Europe followed into the world depression. It was only after World War II that the US was capable of acting as the ‘liberal hegemon’ in international trade and finance. This was in competition against the USSR and other communist countries. But after the fall of the Soviet Union, the twenty-first century began as a new ‘global economy’, with no one nation able to act in the old tradition of a ‘liberal hegemon’. The new political-economic issue is about how a stable international financial system can be constructed, without a liberal hegemon.

3.2 Model of an International Central Bank

What can we learn from this historical analysis of hegemony for the modern problem of stability in the international financial system of a global economy? We next design a model for a stable international financial system in a global world, using the lessons from the Dutch hegemony.

The first lesson is that for each nation included in a stable system one must pay attention both to public and private financial institutions in the nation. Accordingly, for each nation, one needs to graphically model two managed systems, one of the government and one of the central bank and then in addition, identify the international scene as a self-organizing system. This is depicted in Figure 7.

Each managed system of government and central bank has a pyramid of: Individual leadership over the Group (government or bank) and the Actions, Reasoning, and Process of each group’s activities. And beneath each Leadership pyramid is the Socio-Technical System of the government or bank by which each operates. For the government, the system is the public finance of the nation. For the central bank, the system is the private finance of the nation.

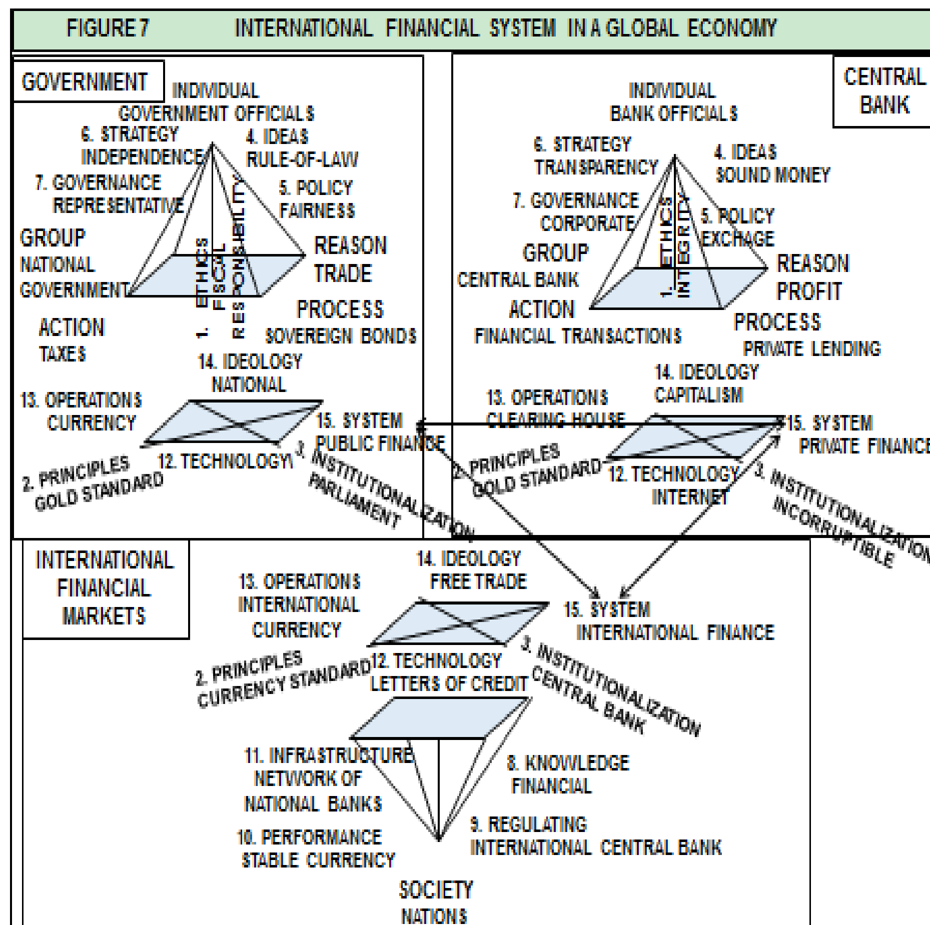


FIGURE 7 INTERNATIONAL FINANCIAL SYSTEM IN A GLOBAL ECONOMY

The socio-technical systems of public and of private finance both interact with the financial markets, the self-organizing system of international finance. These are system interactions between the financial systems of nations and the capital flows around and between nations, as international finance.

And connections between these systems are based upon the *ideas, policies, strategy, governance, and ethics* -- all of which empirically exist at a given time within the managed-systems of public and private finance. For example, the two basic *Ideas* in a government and in its central bank are the *Rule-of-Law* and *Good Money* -- which together must underlie the effective *Regulation* of the self-organizing financial markets. When governments do not act under the *rule-of-law* and banks do not operate with *trustworthy currency*, no financial system can be effective or stable. *Ideas* are basic to societies and social-technical systems. So too, the *Ethics* of *fiscal responsibility* and *banking integrity* are basic to the stability of financial systems. This is why an institutional analysis of economics and finance is essential for modeling the socio-technical systems of an economy. And this is one reason why Kindleberger was correct in rejecting economic explanations of financial crisis which only search for a single 'cause'.

The advantage of graphing all this is that one can systematically address the important *institutional issues* about the interaction of these systems. For the public and private financing in each nation, one can discuss issues of *leadership, strategy, governance, ideas, and policies* -- in the managed-system of government and in the managed-system of the central bank. Also one can discuss issues in a nation of *operations, ideology, technology, principles, or institutionalization* -- in the interacting systems of public and private finance. By depicting the institutionalization of the international-financial-system (in which capital flows between nations) as a self-organizing system, one can talk about the *infrastructure, performance, regulation, or knowledge* of the self-organizing world of international finance. Also one can discuss issues about *operation, ideology, technology, principles, or institutionalization* in the international system of finance.

The systems of public and private finance and international financial markets interact with one another, connecting the managed-systems of a government and its central bank to the self-organizing system of the international markets. This graphic model depicts how the financial systems of societies institutionally interact. A graphic approach may at first appear complicated, but the systems of national and international finance are complicated. Trying to simplify such systems (say down to algebraic equations of import-exports) just leaves out much of the important empirical information about how international capital really flows. A graphical approach is mathematically basic to any

institutional analysis of financial and economic system. A topological approach does not preclude the use of algebraic equations in models, particularly when flows can be quantitatively measured in the institutional connections of a graph.

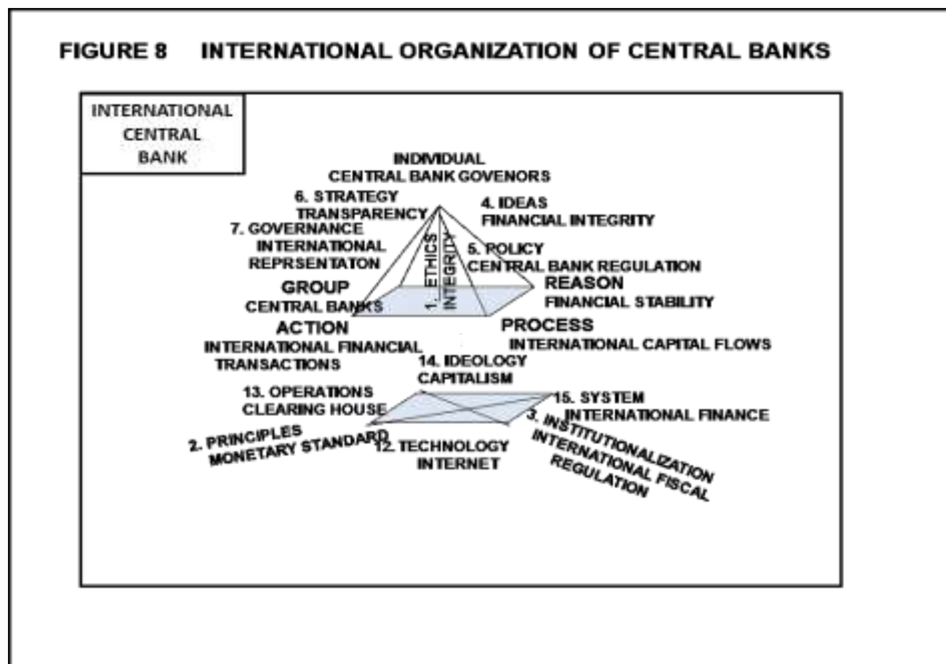
> *The first system requirement for a stable international system is that each nation which participates in the system must have sound financial policies in its government and also an effective central-bank regulatory policy over its private banks.* *<u>Nations which do not meet these requirements should not be included in the international financial system.</u>*

For example, the lack of fiscal responsibility by some of the nations in the European Union triggered the Euro crisis in 2010. See, for example: Kantor (2013).

We recall that the Sobel-Kindleberger description of a 'liberal hegemon' provided five key collective goods, as Sobel summarized: "maintaining a relatively open market for distress goods, providing countercyclical, or at least stable, long-term lending; policing a relatively stable system of exchange rates; ensuring the coordination of macroeconomic policies; and acting as a lender of last resort by discounting or otherwise providing liquidity in financial crisis" (2012) These are central bank functions. To construct a stable but non-hegemonic international system, this suggests that there need be an international central bank, which regulates the central banks of each nation participating in the international system.

> *A second system requirement is that the international system should be organized in a cooperative manner, such as have an international central bank under which all national central banks are themselves regulated.* *<u>Central banks of each nation need to be under some international regulation.</u>*

We graph an international central bank managed-system in Figure 8.



The Group in an International Central Bank (ICB) would include the central banks of nations which agree to being regulated by the ICB. The governance of the ICB should be by international representation. There is precedent for 'international representation' in the governances of the World Bank and the International Monetary Fund.

The strategy of ICB should be to introduce 'transparency' into international cash flows. This is a condition not so, at present. For example, Nicholas Shaxson has estimated a large percentage of the contemporary flows of international capital are for (or from) illegal activities. Shaxson wrote: "Most people are dimly aware of the murky world of offshore finance. But how big is the problem? The OECD reckons that about half of all the world's cross-border trade involves structures for concealing money . . . as corporations and rich individuals shuffle profits around to avoid taxes and for yet more nefarious reasons. . . There are basically three forms of dirty money. One is criminal money: from drug dealing, say, or slave trading or terrorism. The next is corrupt money, like the late former Nigerian dictator Sani Abacha's looted oil billions. The third form, commercial money -- what our finest companies and richest individuals hide from our tax collectors -- is bigger. The point is that these three forms of dirty money use exactly the same mechanisms and subterfuges: tax havens, shell banks, shielded trusts, anonymous foundations, dummy corporations, mispricing schemes . . . all administered by . . . mainstream banks, lawyers, and accountants." (2007)

Using the model for an International Central Bank, we can now begin the construction of a model of a cooperative (hegemonic) international financial system, as in Figure 9.

The small figures of the Nations 1 to 3 indicate that an institutional model of each nation is necessary for all nations participating in an international central bank arrangement. The lines indicate that the connections from each nation's central bank to the international central bank is one for the regulation of central banks. The line connecting the institutionalization procedures of the international central bank to the self-organizing system of international financial markets indicates that the function of the international central bank is to stabilize the infrastructure of international banking.

This model consists of two managed systems in each participating nation of public and private financial systems. As the arrows indicate, drawn from each nation's central bank toward the International Central Bank (ICB), the central banks in the national financial systems join together in the ICB -- also modeled as a managed-system. The International Regulation of the Institutionalization in the managed-system of the ICB then provides the function of Regulation over all the national central banks participating in the self-organizing system of international finance.

One of the societal functions of a central bank in a nation is to regulate the financial banking system of the nation. Without proper central bank regulation, banks can be operated improperly, leading to bank runs. The problem of the present international financial system is that there is no international central bank regulating the central banks of each nation. Thus the international banking system as a whole is unregulated. To create an international central bank would provide a way for the self-organizing system of international finance to be under some regulatory control -- regulating each member nation's financial systems. System control would be over the fiscal integrity of the member nation government and over the regulatory integrity of the central bank of the nation.

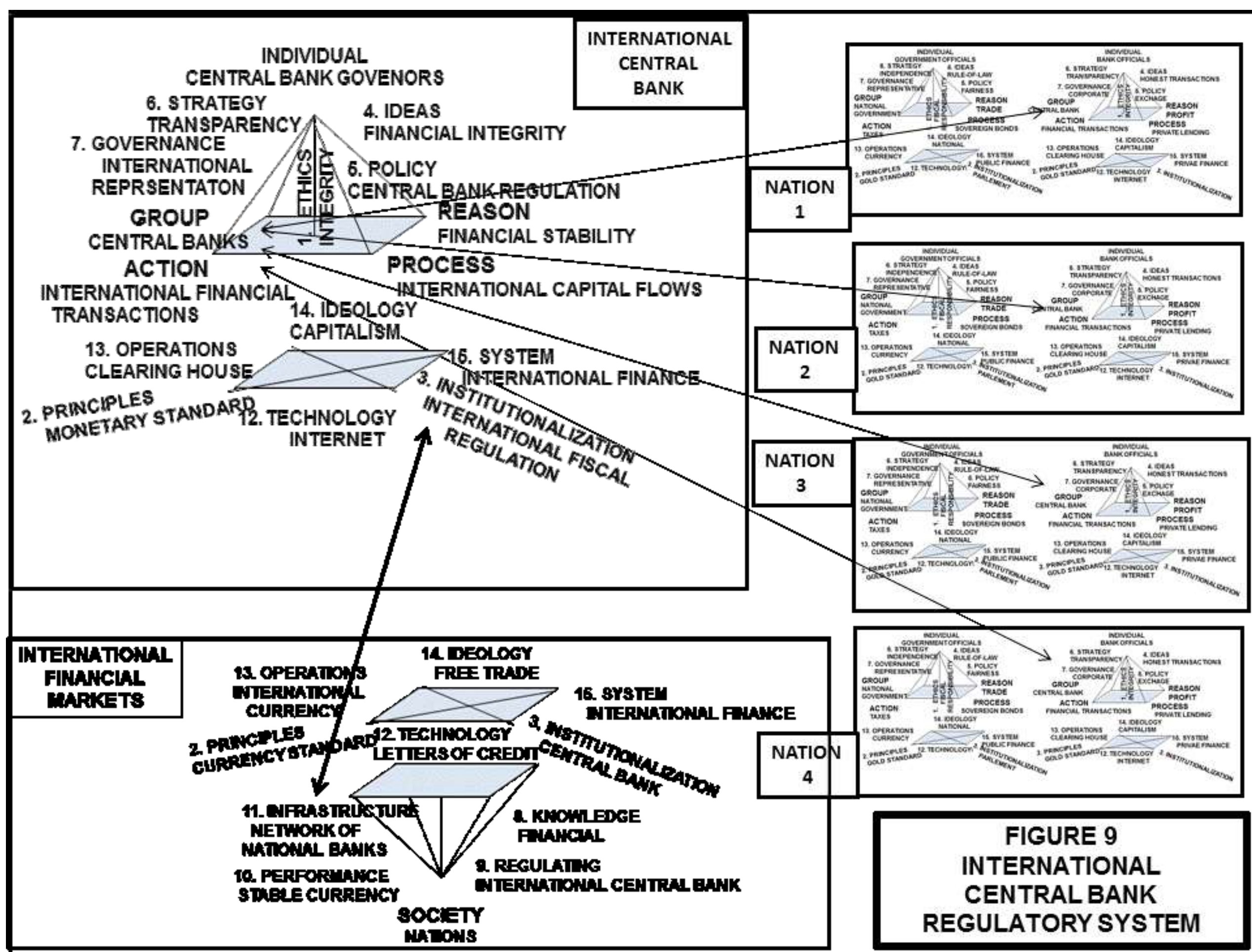


FIGURE 9 INTERNATIONAL CENTRAL BANK REGULATORY SYSTEM

In the models, the socio-technical-system of each component has the criterion of 'institutionalization' as a specification. In any societal system, how the functions of a society are established, institutionalized, is a critical feature of the society. As seen in the history of the Dutch hegemony, their financial system operated as a stable system, institutionalized with

government-fiscal-soundness and banking-integrity. Regulation is the key societal feature for the regulation of institutionalized procedures, so that activities are functional and effective and not corrupted.

4. Discussion

A historical precedent for this model of an 'international central bank (ICB)' has actually occurred in the 2010-14 Euro crisis in Europe. The Euro Dollar crisis of 2010-2014 resulted in European Union legislation for an international (EU only) regulatory body over banks in the nations of the EU. A stable international currency needs a stable international banking system. When the European Union was formed, it stipulated that member nations were required to operate with balanced budgets and avoid large annual deficits. This regulation was not enforced. By 2010, several EU nations were funding large annual deficits by selling sovereign bonds to banks. Greece, Italy, Spain, Portugal were on the brink of default, as interest rates on their bonds jumped; and the EU financial crisis began. Thus the EU had fiscal restrictions in place but no agency to enforce them.

Finally in 2013, EU legislation was passed to empower the EU Central Bank to regulate large banks based in the EU countries. James Kanter wrote; "European Union legislators overwhelmingly approved a law on Thursday that puts about 130 of the euro zone's largest banks under the direct scrutiny of the European Central Bank. The legislation contains provisions that would give the European Parliament somewhat more oversight of a supervisory body, operating under the aegis of the central bank, when the body assumes its new authority. . . .. . The Single Supervisory Mechanism, the body it creates, is expected to start work during the autumn of 2014 after the European Central Bank conducts a "stress test" on the lenders coming within its purview. The idea is that the central bank would do a better job than national supervisors of nipping financial problems in the bud so that governments would not need to resort to bank bailouts that destabilize the euro and penalize taxpayers. Once up and running, the new supervisory authority will have a range of powers to intervene when it detects problems, including the ability to conduct inspections that could lead to sanctions on banks or their managers. The measure is the first step toward a broader, Europe-wide vision of banking. The next stage of that effort, creation of a single system for shutting or restructuring banks, is under way." (2013)

Also as an example (even in the European Union), some national banking systems in nations are not always well regulated. For example in 2014 although German had a strong economy, its banking system had flaws. Jack Ewing wrote: "One of the most battered banking systems in Europe has a history of mismanagement, corruption and politically connected lending, and it has cost taxpayers hundreds of billions of euros. Is it Italy, Spain or perhaps Greece? No. That description is of Germany's banking sector. While the country's economy is often held up as a model, German banks are among Europe's most troubled. They required a bailout bigger than the one American banks received, and many are still struggling to recover. But there is remarkably little discussion about fundamentally changing the structure of the German banking system. On the contrary, Europe's economic leaders criticize Germany for slowing progress toward unifying the Continent's patchwork system of bank regulation, an effort seen as crucial to restoring faith in the euro zone and averting future globe-threatening crises. Ailing German banks are also a dead weight on the euro zone economy as it struggles to crawl out of recession." (2013)

Unless banking systems are properly regulated, they are always prone to abuse and fraud. Ewing wrote: "The landesbanks, typically owned by state governments and local institutions, have a long history of corruption and mismanagement. BayernLB already required a 10 billion euro bailout from state taxpayers, and several other of its former top managers were under investigation for insider trading. Six former top managers of HSH Nordbank, a landesbank in Hamburg, are on trial for charges that include fraud and illegally concealing the bank's true financial state, including losses on loans to the depressed shipping industry.Yet there is little appetite for change in Germany because the banking system is so deeply intertwined with its politics, serving as a rich source of patronage and financing for local projects." (2013)

About the abuses of many of the central banks in the nations of the European Union -- there was no proper regulation to prevent European banks from buying too many sovereign bonds from European nations with inadequate taxation policies (such as Greece). Consequently, the fiscal unity of the EU nations was threatened, and some EU nations were on the brink of defaulting on their national debts.

5. Summary

For a stable international financial system, the first lesson is that -- for each nation to be included in a stable international financial system, attention must be given both to its public and private finances. For each nation, one needs to graphically model two managed systems, one of the government and one of the central bank and then, in addition, identify the international scene as a self-organizing financial market. The advantage of graphing the institutional basis of international capital flows is that then one can analyze the important issues about the interaction of national and international capital systems. For the public and private financing in each nation, one can examine issues of leadership, strategy, governance, ideas, and policies in the managed-system of government and in the managed-system of the

central bank. Also one can examine issues in a nation of operations, ideology, technology, principles, or institutionalization in the interacting systems of public and private finance. In the international financial system, one can examine issues about the infrastructure, performance, regulation, or knowledge of the self-organizing world of international finance. An institutional model of international capital flows is necessary for proper regulation of an international system for stability rather than instability.

Focusing upon the institutional behavior of societal systems requires the identification of the groups and leadership of institutions and of their strategies, ideas, policies, operations, etc. The graphic model presented here facilitates a systematic analysis of institutional functioning in a society.

The importance of an institutional approach to regulation of international finance was nicely summarized in a recent commentary by the economist Paul Krugman: “For it’s now clear that the flood of money into emerging markets — which briefly drove Brazil’s currency up by almost 40 percent, a rise that has now been completely reversed — was yet another in the long list of financial bubbles over the past generation. There was the housing bubble, of course. But before that there was the dot-com bubble; before that the Asian bubble of the mid-1990s; before that the commercial real estate bubble of the 1980s. That last bubble, by the way, imposed a huge cost on taxpayers, who had to bail out failed savings-and-loan institutions. The thing is, it wasn’t always thus. The ’50s, the ’60s, even the troubled ’70s, weren’t nearly as bubble-prone. So what changed? O.K., the . . . obvious culprit is financial deregulation — not just in the United States but around the world, and including the removal of most controls on the international movement of capital. Banks gone wild were at the heart of the commercial real estate bubble of the 1980s and the housing bubble that burst in 2007. Cross-border flows of hot money were at the heart of the Asian crisis of 1997-98 and the crisis now erupting in emerging markets — and were central to the ongoing crisis in Europe, too. In short, the main lesson of this age of bubbles — a lesson that India, Brazil, and others are learning once again — is that when the financial industry is set loose to do its thing, it lurches from crisis to crisis.” (2013)

The financial-system model proposed here assumes that the key to a stable international financial system (in the global world) will require an international institution -- an International Central Bank -- with regulatory powers for the international system to operate stably.

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