

Korea 2020, National Security Futures, Development, Democracy, and Choices: Building a Korea Peace Structure¹

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Abstract

In November, the USA's National Intelligence Council released its 2020 Project Report, which included alternative scenarios for Korea as well as virtually all the worlds' countries. The scenarios were explored using the International Futures simulation, a complex, multidimensional and multipurpose computer model and database under development for the last 35 years. This paper examines the Korean case from the perspective of four key dimensions of national security: development, democracy, peace, and unification. A transformation in the "power" of decision-making is taking place today, a feature of globalization that has not been the focus of media or academic attention. It is emerging as a new phenomenon, far from fully developed, yet one which already promises far greater social responsibility and social justice for average people worldwide. Korean society thus should benefit both from the trends in national security indicators and changes in the global decision making ethos. Korea's greatest immediate challenge, of course, remains relating to the North in such a way as to promise long term unity with a minimum of political and social dislocation to the advantage of both North and South. The trends in security indicators and global decision making increasingly strengthen the opportunities to meet this challenge successfully.

Introduction

A few years ago, I remarked that "In many leaders' lives there comes a time when they court disaster if they do not take seriously the refinement of their visions of distant, alternative futures. What seems idealistic and visionary, unrealistic and counter-intuitive today can in the end be the vision that, in its implementation, yields the fruits of [political] stability, prosperity and peace."² I did not know then that just a few years later that the NIC's (National Security Council) would be using a global model to refine and envision in detail a variety of possible alternative futures. I've discussed the general theory, philosophy, and application of global modeling elsewhere.³ This paper reports on a particular application of some of the NIC's IFs scenario specifically relevant to North-South Korean relations. I generated four kinds of outputs from the NIC scenarios related to (1) economic development, (2) political stability (regime effectiveness, levels of democracy, and political corruption), (3) scenario implications for peace in the region, and (4) potential for reunification of Korea.

As will become evident, the plight of most North Koreans is projected to remain desperate no matter which IFs scenario we look at. This was not intentional. The scenarios were constructed to reflect large-scale international alternative possible (and perhaps likely) futures, only one of which, or some mix of which, can ultimately occur. The focus in this

essay is on implications, not on persuasion for one policy or another. The implications are at several levels: (1) the country specific level, focusing on internal economic and political change, (2) the regional level, focusing on regional, East Asian relations in a globalizing context, and (3) systemic, focusing on the global distribution of power and wealth and the implications for peace and the climate for unification.

As a final introductory note, the reader is somewhat at a disadvantage if not familiar with the NIC 2020 Project Report (2004), the Hughes and Hillebrand (2006) text, and Saaty's (2005a, 2005b) analytic network process. The first is a major study of alternative futures scenarios of international political, economic, social, and environmental conditions, estimated with a global model and database for all the countries of the world, each with several hundred variables and parameters, projected through the year 2020. The second is a new textbook about the IFs global model, its database, and general philosophy. The third reviews the theory and application of a decision support system, Saaty's analytic network process that enables the construction alternative futures in terms of comparative benefits, opportunities, risks, and costs of decisions and outcomes.

This set of decision support tools, all freely available as computer programs and databases on the Internet, represent an information and collective intelligence revolution that is just beginning, and promises a paradigmatic shift in how collective decision making takes place, and in the qualitative characteristics of the process. By applying these tools, national security strategy is likely to attain a new level of value and competence. The significance of this change was anticipated in Sherman Kent's perspective on national security strategy, which

...considers the nation-state to the depth and breadth of its being. This is what Sherman Kent called a nation's strategic stature: not just the means it possessed to wage war, but its total potential for war--the resources that are available, or might be made available; the population, industrial plant, and transportation net; the political and social structure, their stability, and the "moral quality of the people and their strength of values"--their willingness to be mobilized for war and the reasons for which they would fight--and, lastly, the political leadership, their strength and "genius (or want of it) for organizing men and materials into a community of life and strength."⁴

Two generations of strategic studies in the USA since World War II have been informed by this understanding. As information communication technology has grown worldwide in our generation, the field of strategic studies has been revolutionized concomitantly. The analysis here illustrates and exemplifies such an approach, albeit briefly and in summary form.

The International Futures Simulation (IFs) Applied to East Asia

The story of IFs, developed by Barry Hughes over the last generation, begins with his study under Mihajlo Mesarovic in the 1970s and work on Mesarovic's WIM (World Integration Model) reported on in the second report to the Club of Rome.⁵ From that beginning, as information technology developed and funding permitted Hughes gradually expanded his core economic and demographic model to include political, social, environmental, and international system factors that affected and/or were affected by the core economic and demographic models. The model was strengthened in applications with UNEP, the EU and currently the NIC.

In the NIC application, four scenarios are constructed in addition to a "base case" representing current policies and trends. These are

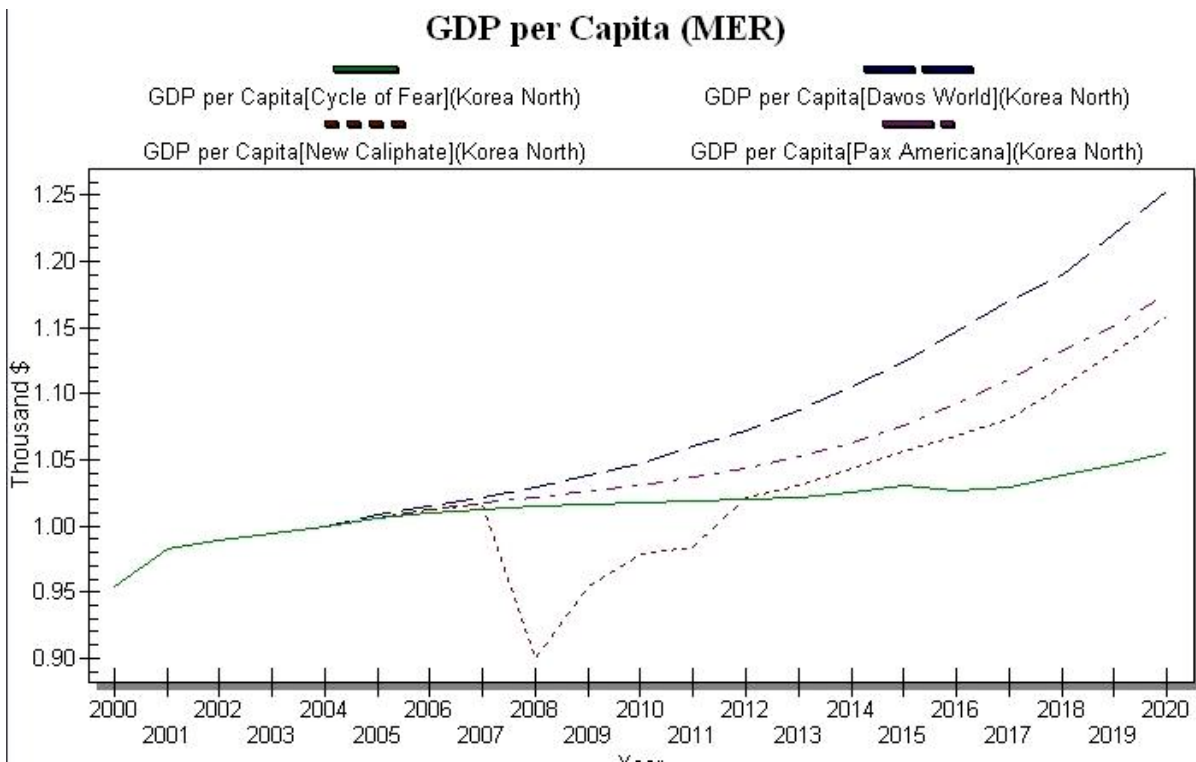
- Davos World:⁶ - globalization under optimal conditions with attendant inequalities
- Pax Americana - unipolarity with minimal power transitions
- New Caliphate - stalled democratization and globalization, rising identity politics
- Cycle of Fear - increased terrorism, political instability, power transitions, WMD

Although the entire world is examined in the NIC application, I will focus here on the implications for Northeast Asia, principally North and South Korea, China, Japan, and the USA, primarily because of our interest in North-South Korean relations over the next decade or so.

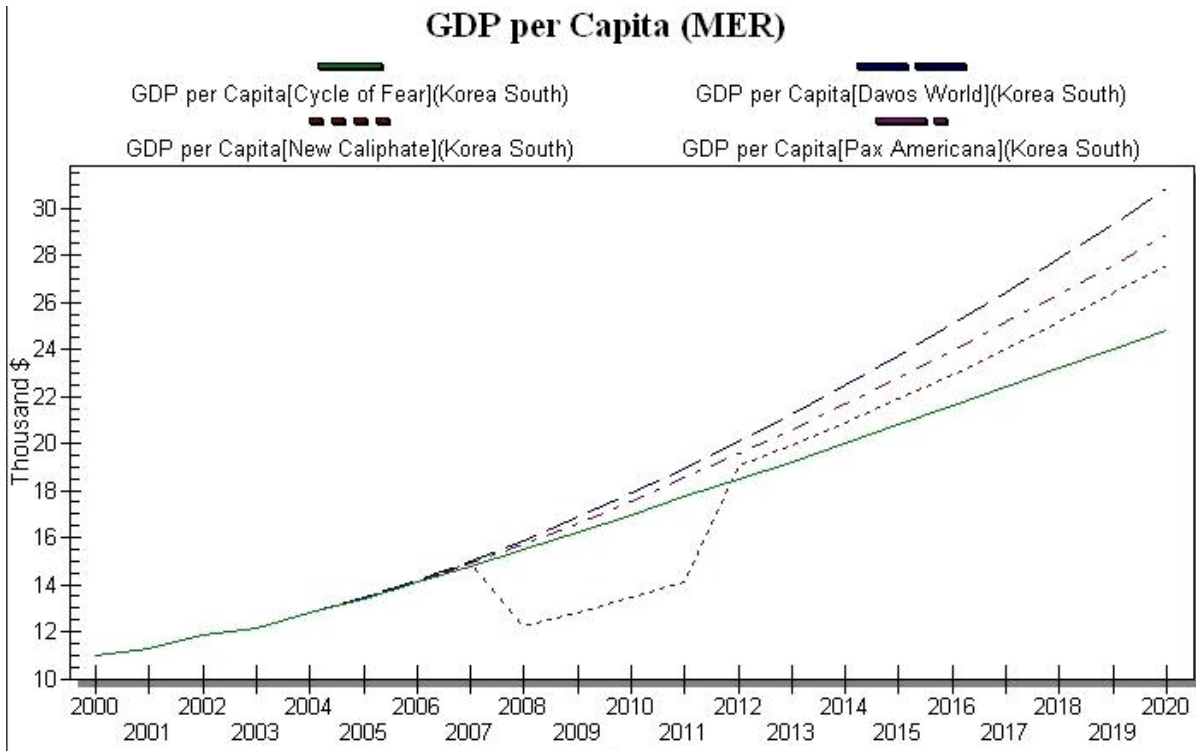
The first dimension to examine will be development, below, followed by the other three, democracy, peace, and unification. For illustrative purposes I'll present only North and South Korea and major powers (China, Russia, Japan, and the USA). The reader interested in the larger picture is referred to the NIC application of IFs at ifsmode.org.

Development

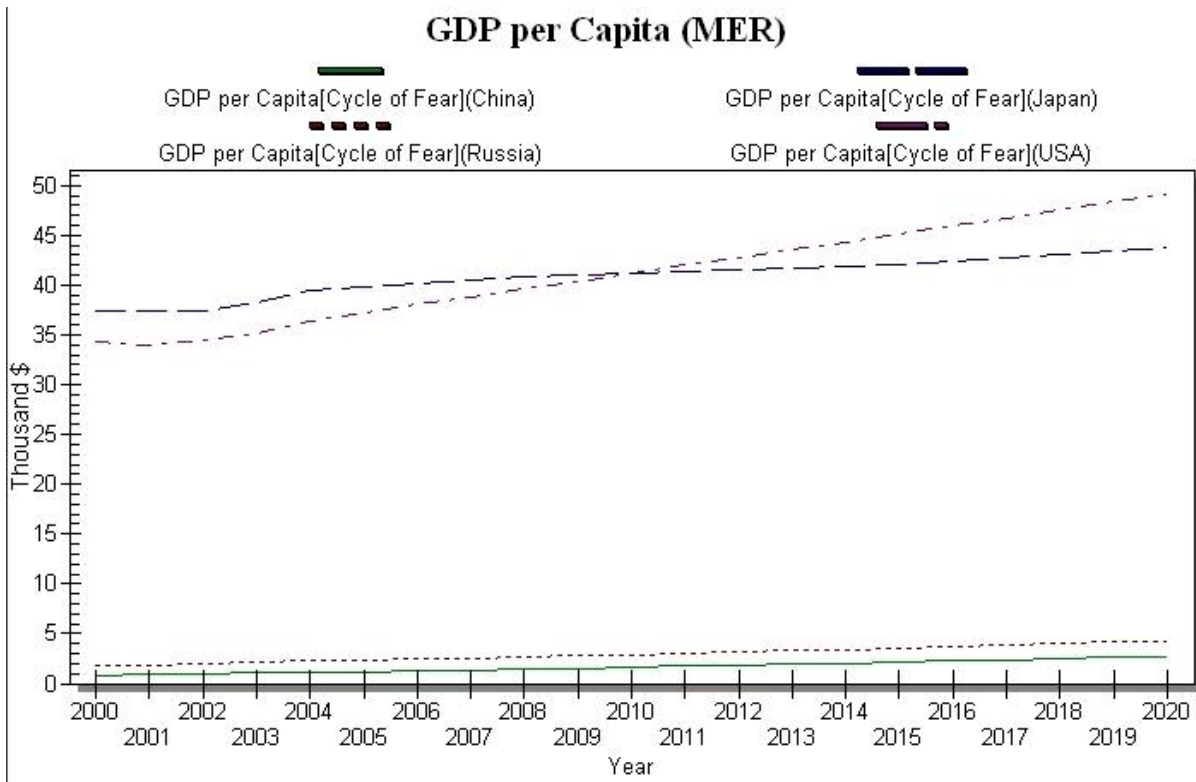
Interestingly, North Korea fares best in the Davos World scenario. In comparison with the Cycle of Fear scenario (presumably the one most consistent with the current North Korean regime), its per capita income is about 25% higher by 2020 (see graph below⁷).

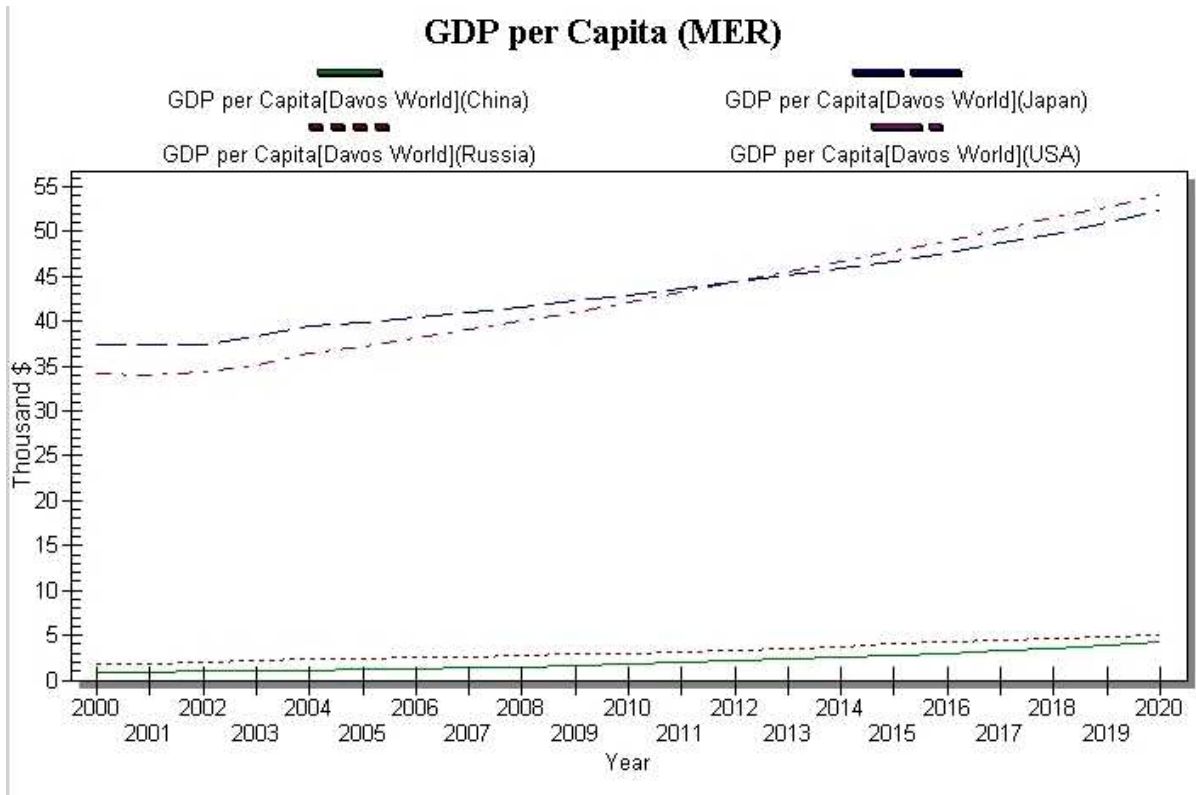


For South Korea we see a similar story (see graph below). Here the pattern is similar but at a much higher level of per capita income (a gap ratio of about 24:1 by 2020). We also see the penalty of a global Cycle of fear scenario, the difference between \$24K and \$32K per capita for the average South Korean by 2020 as compared with the Davos scenario.



The major powers in the region fare similarly. Below is the worst-case scenario (Cycle of Fear), characterized by slow growth and stagnation. Notice the USA's growth.



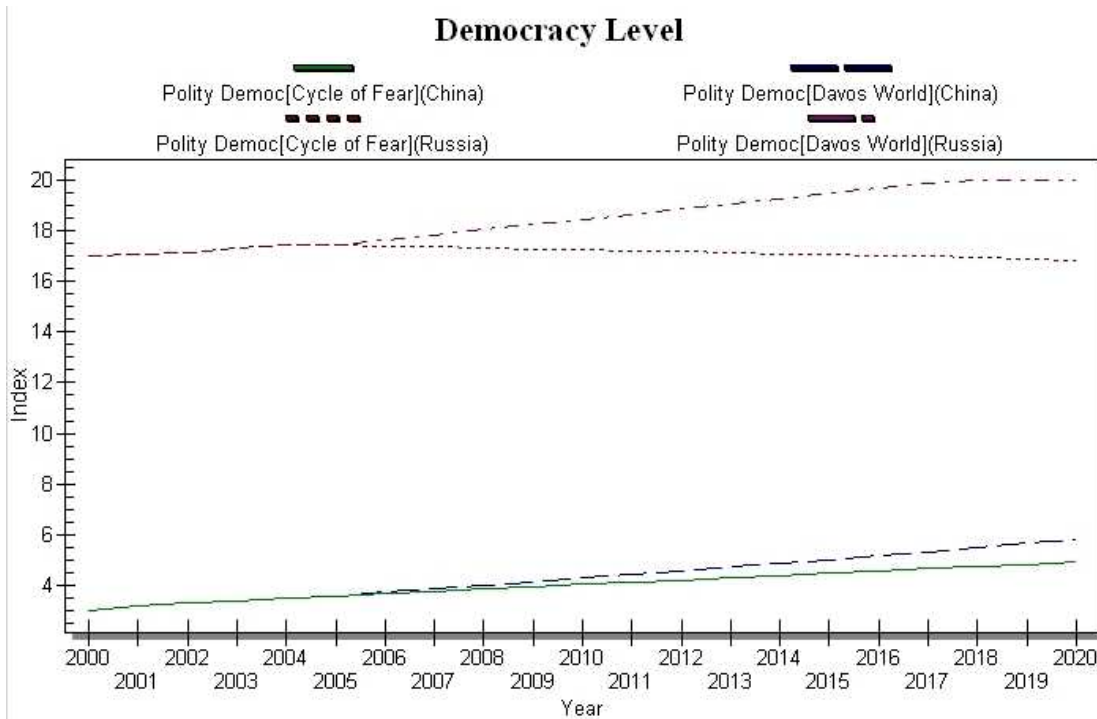


Above we see the same pattern as with the Cycle of Fear scenario, but careful examination reveals that the upper per capital income is in the neighborhood of \$55K in the Davos scenario, about \$5K greater for the USA, and Japan's income keeps closer pace with the USA's. The difference is similar for all the other figures. The IFs has many other development indicators. The reader is referred to the IFs model at <http://ifsmode.org> for further evaluation.

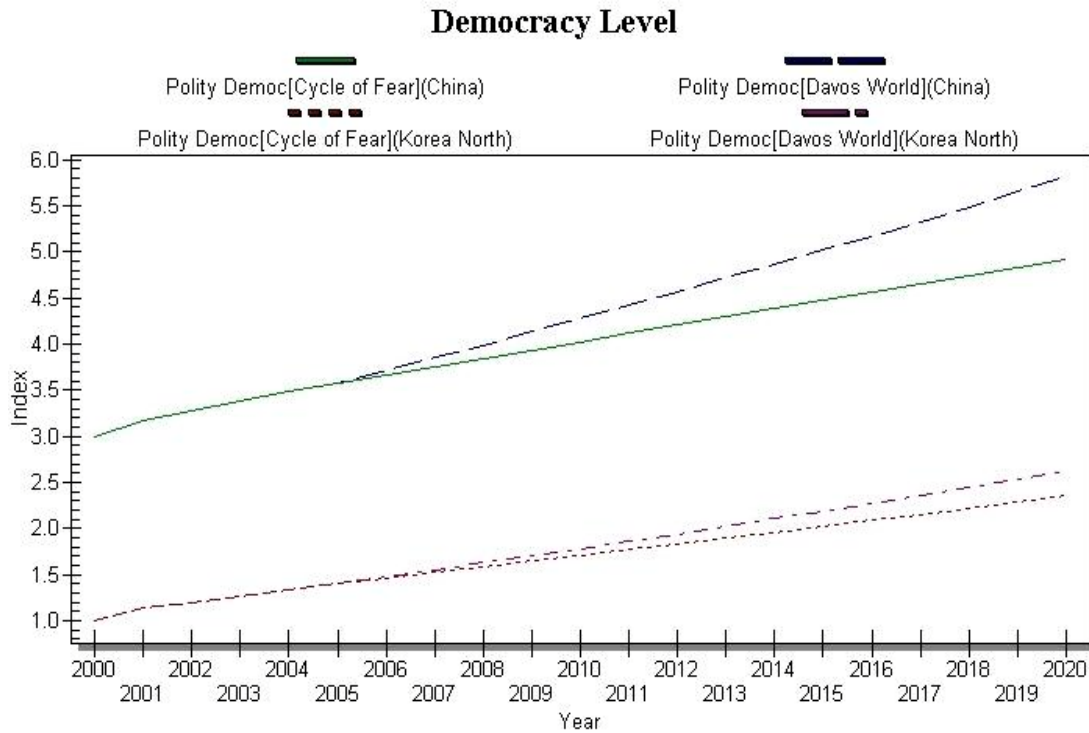
Democracy

As might be expected given the economic develop trends in the four scenarios, democratic development improves most with the Davos scenario. Major powers in the region, China and Russia in particular, show significantly different trends depending on which economic development path is followed (see graph below). By 2020, Russia actually shows a tendency towards less democratic norms than it had in 2006 under the Cycle of Fear scenario, and shows continued strengthening of democratic norms under the Davos scenario. By contrast, at a much lower level of democratic development, China shows slight increases in democratic development under both scenarios.

What of the Korean peninsula? When we compare North and South we find the startling but expected pattern repeated with the Davos scenario producing slight increases in democratization and the Cycle of Fear scenario producing either modest decline in the South Korea case and a marginal slowing of democratization in the North but overall at a far lower level, which is to say not democratic at all.



Because of the large gaps between highly democratized and non-democratic regimes a significant difference between projected changes in China and North Korea is missed. The last graph in this section compares these two countries (below). We observe that there is actually a wide and growing gap between China and North Korea in the direction of

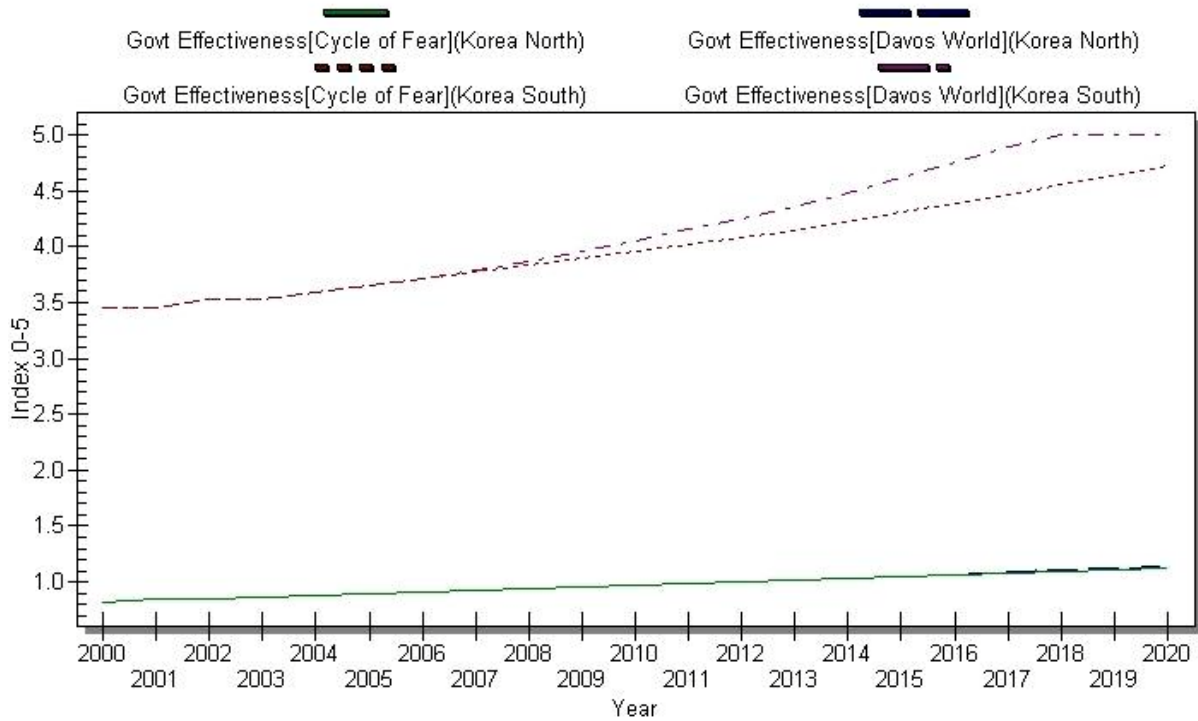


democratization in the Davos scenario whereas in the Cycle of Fear scenario the gap remains relatively constant. Increasingly, under the Davos scenario one would expect an

increasingly problematic relationship between them as they grow apart both in terms of economic development and type of political economic system.

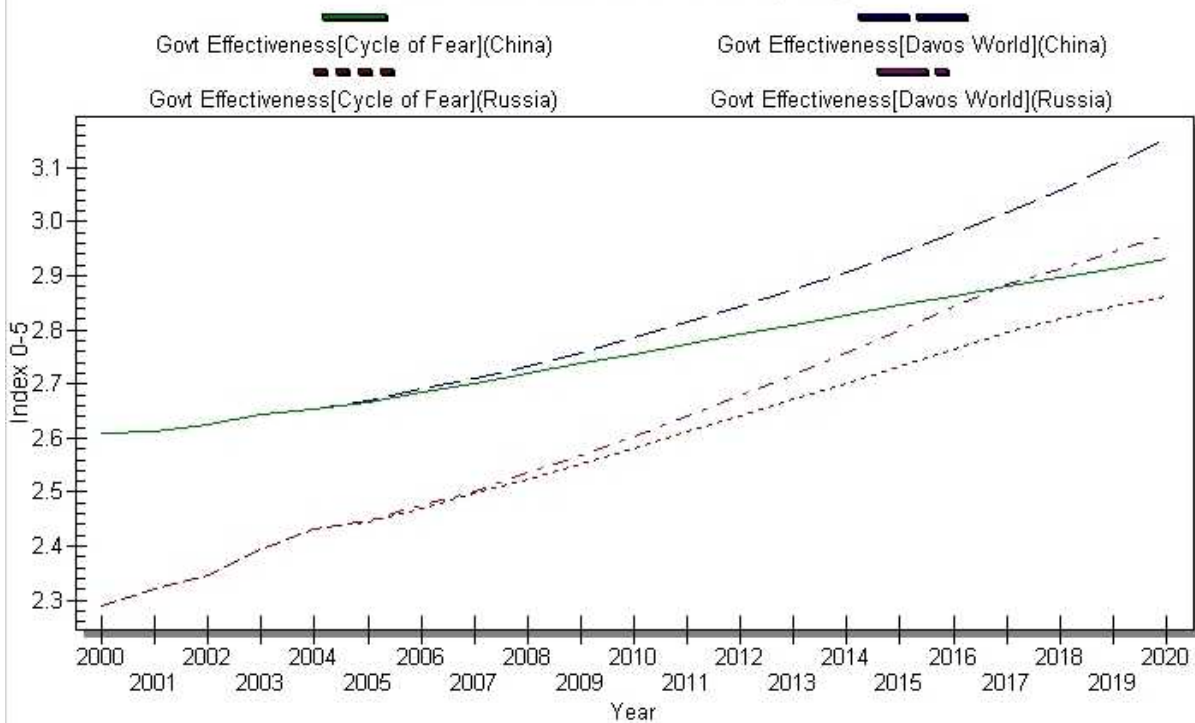
Several other features of regime type are available in IFs, measures of governmental effectiveness and estimates of political and administrative corruption. Again comparing scenarios, let us briefly look at North and South Korea on these indicators.

Governance Effectiveness (WB)



Clearly we expect virtually no change in North Korea's ineffectual regime and only small but positive changes in South Korea. Sandwiched between the 1.0 and 3.5 levels above are Russia and China (see below), with China a bit above. Both trends again are positive but gains are small. Not shown, both the USA and Japan are at or near the maximum on effectiveness by 2020, Japan making great strides under the Davos scenario fairly steadily for the period.

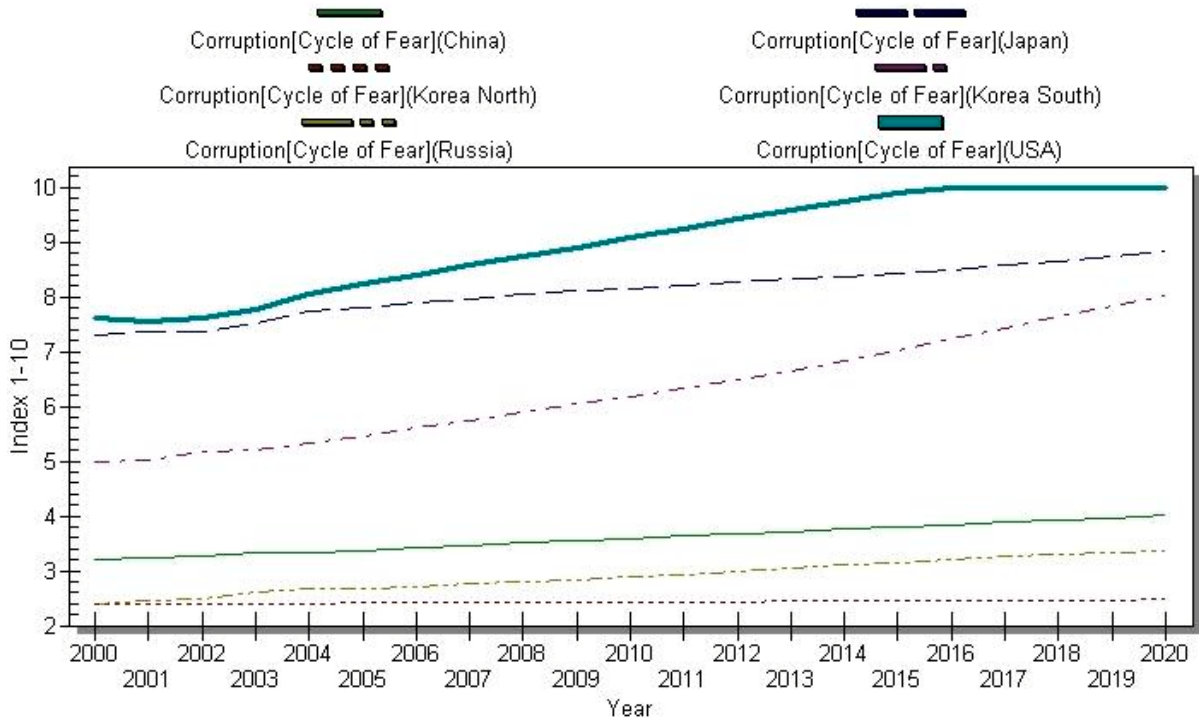
Governance Effectiveness (WB)



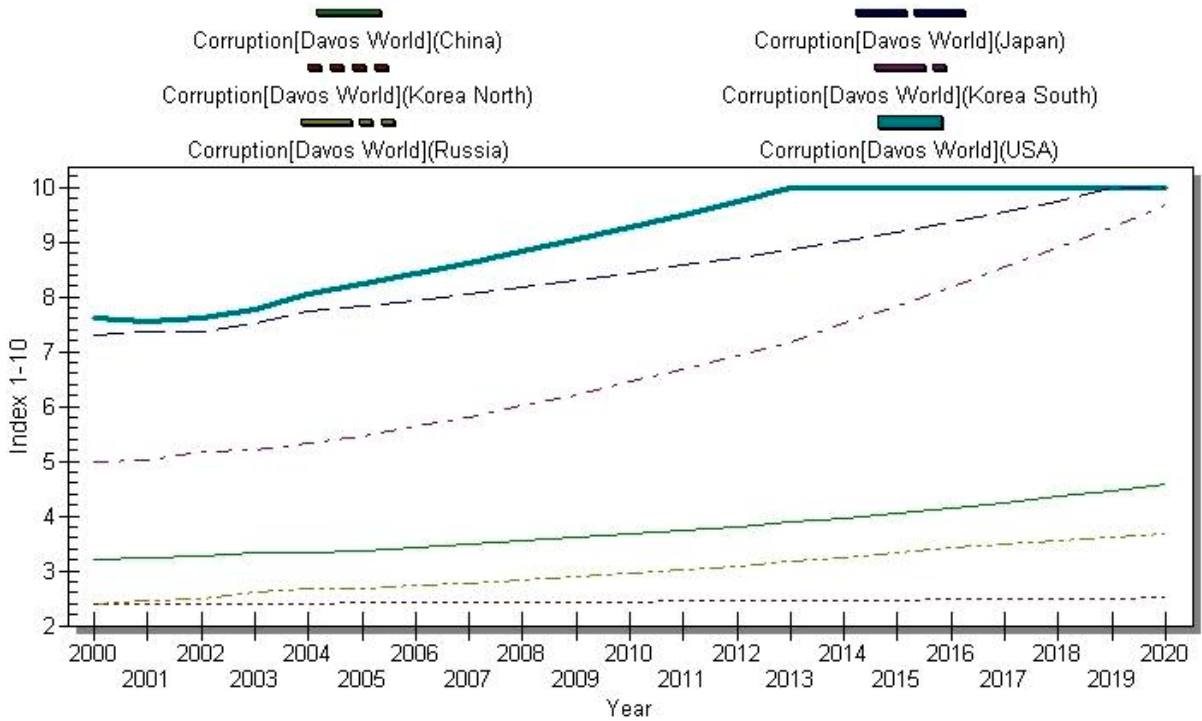
Here we note that the effectiveness measure improves gradually for both countries under both scenarios, but the growth in effectiveness is marginally greater under the Davos scenario.

The last indicator is of political corruption, with the higher score implying the least corruption. The two scenarios are separated for comparisons below. The Cycle of Fear and Davos scenarios both show improvement for the USA, Japan, and South Korea, but much more so in the Davos scenario. China, Russia, and North Korea, however, show only moderate improvement, China being the least corrupt of the three.

Governance Corruption (TI)



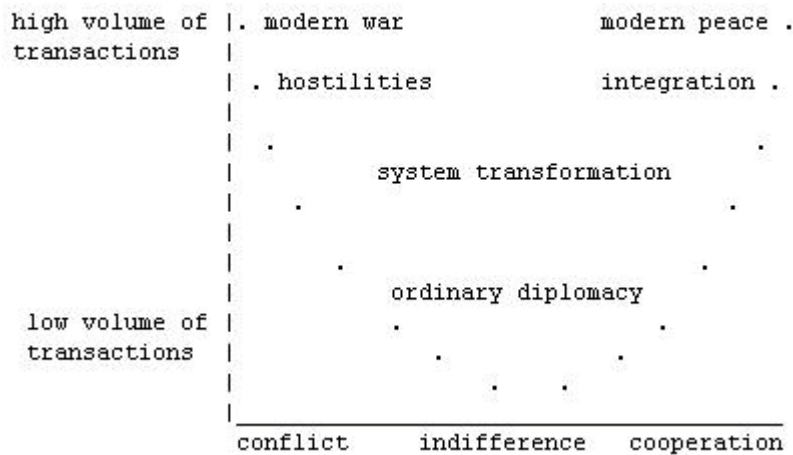
Governance Corruption (TI)



Peace and Development

Positive and negative peace refer to perceived rewards for nonviolent relations between states. Positive peace denotes an assessment that benefits and opportunities in a set of nonviolent international relations between states are far greater than the risks and costs of using violence or the threat of violence. Negative peace denotes deterrence, the use of coercion short of violence to maintain an international system or regional subsystem. Mutually advantageous trade, disaster relief, and the use of international law to resolve disputes exemplify the positive. Coercion short of the use of physical violence--in short, the absence of war--exemplify negative peace. Deutsch (1966), without using the terms positive and negative peace, proposed a relationship between the two in a manner that has yet to be thoroughly researched and which I have rendered in the form of the graph below.

System Stability, Conflict, Cooperation, and Volume of Transactions

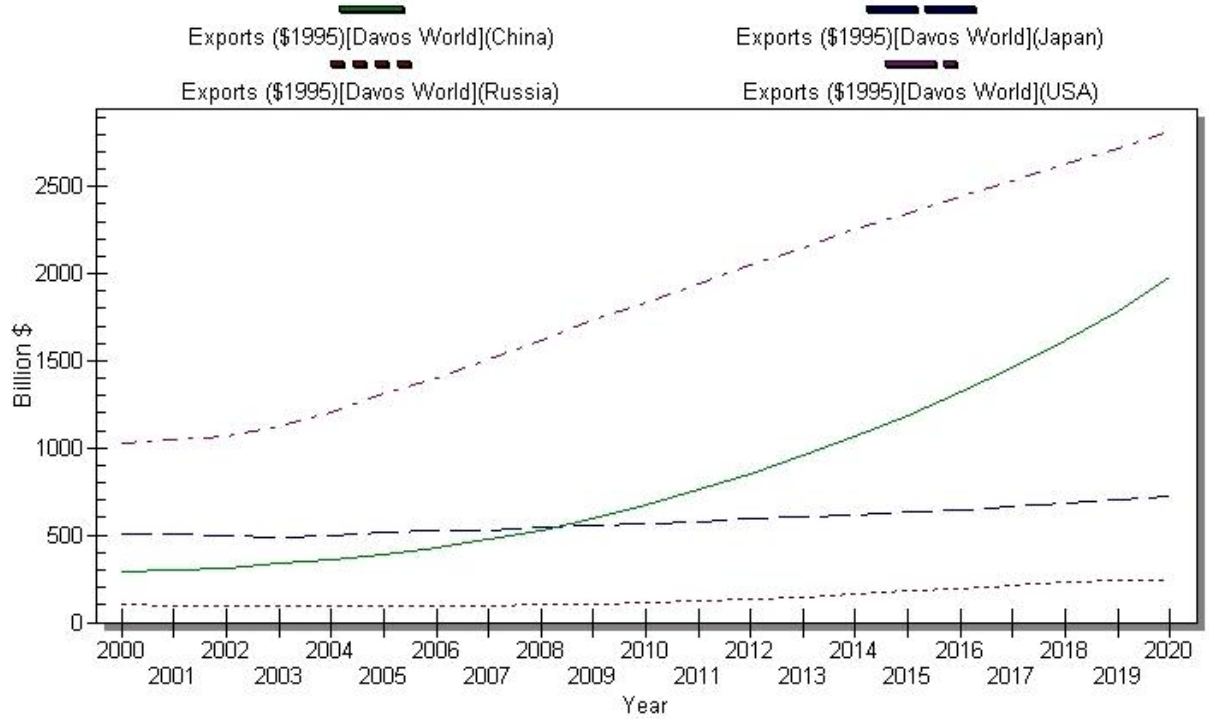


The dotted line indicates the equilibrium or central tendency. At low volumes of transactions, governments are relatively indifferent to the ratio of conflictful to cooperative transactions; but as the stakes become higher, system transformations take place such as new organizational and institutional frameworks invested with the economic, military, intelligence, and diplomatic apparatus of the states and societies involved. As relationships become more significant, pressures are put on institutions to stabilize them, to reach agreements or at least establish policies that make the relationships predictable and hence manageable.

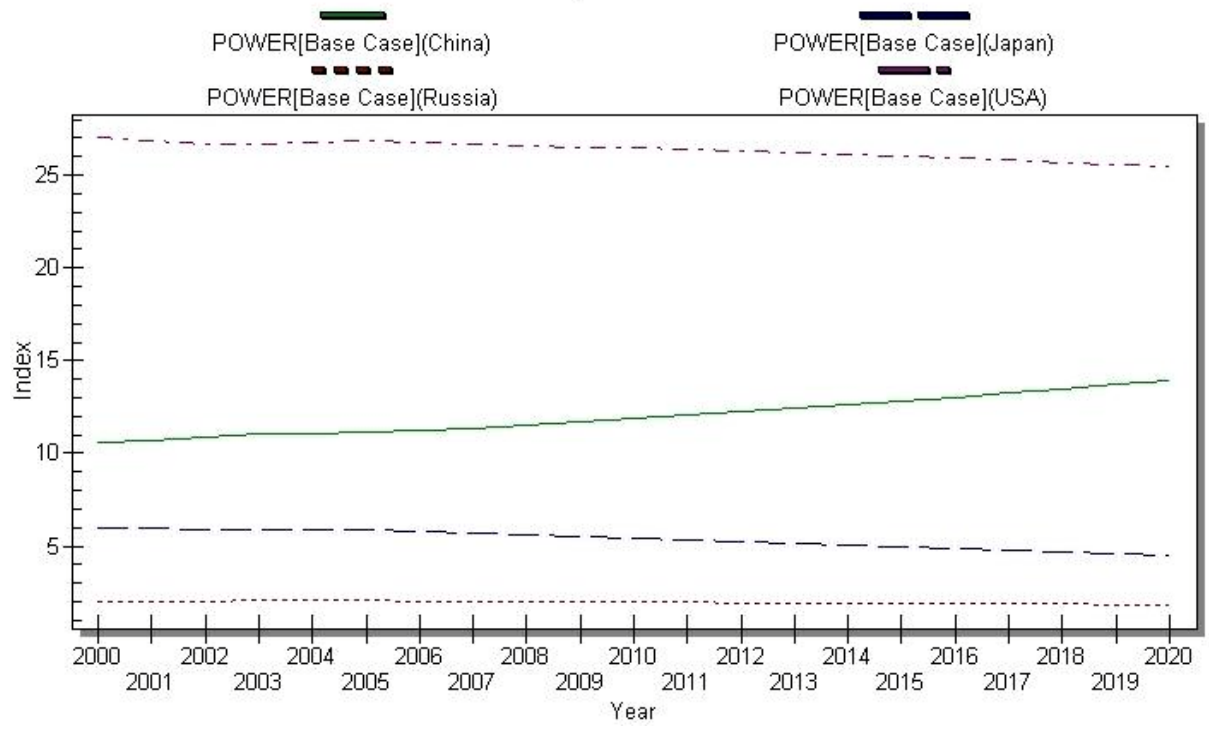
This pattern can be seen intuitively in the history of European nations relations in the last century as the Europeans transitioned from colonization and war to nearly complete system breakdown, to integration, more or less following the equilibrium path of the graph above. Similarly, hostilities between major powers in the East Asian region have transitioned from hostile to competitive while working together to form new institutional structures to shape their new relationships--to prevent the "tragedy of the commons" that so often moves nations from "value adding" relations to "value subtracting" ones.⁸

In the case of major powers in East Asia, consider the following graphs for IFs exports and "power" index.⁹

Exports



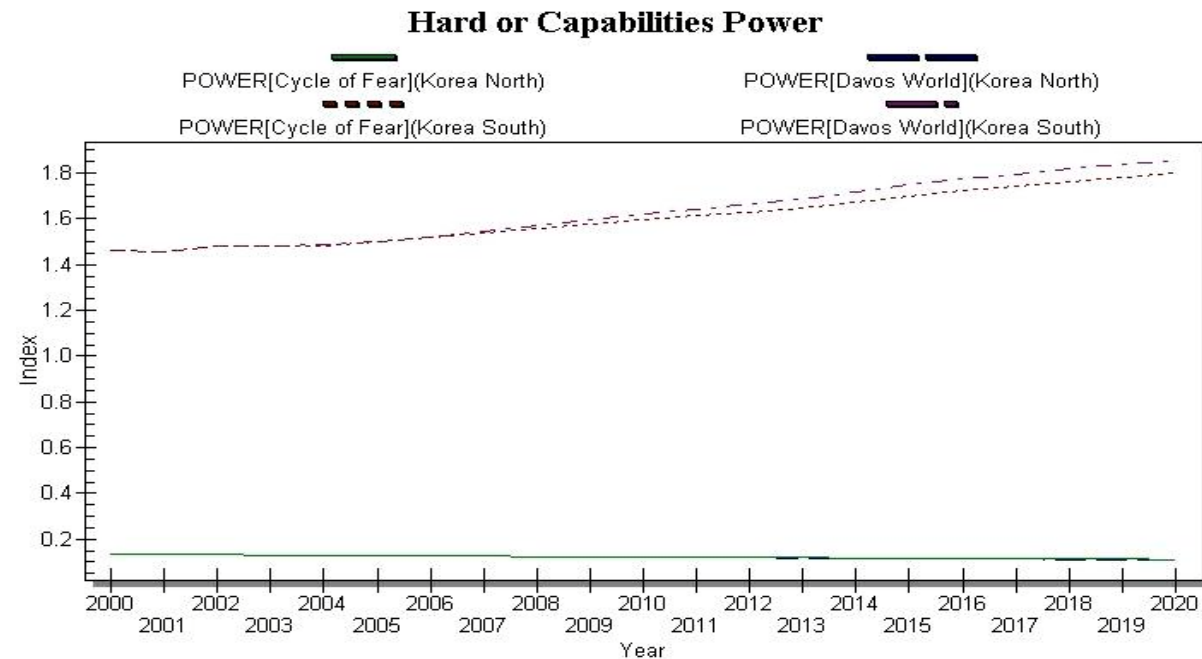
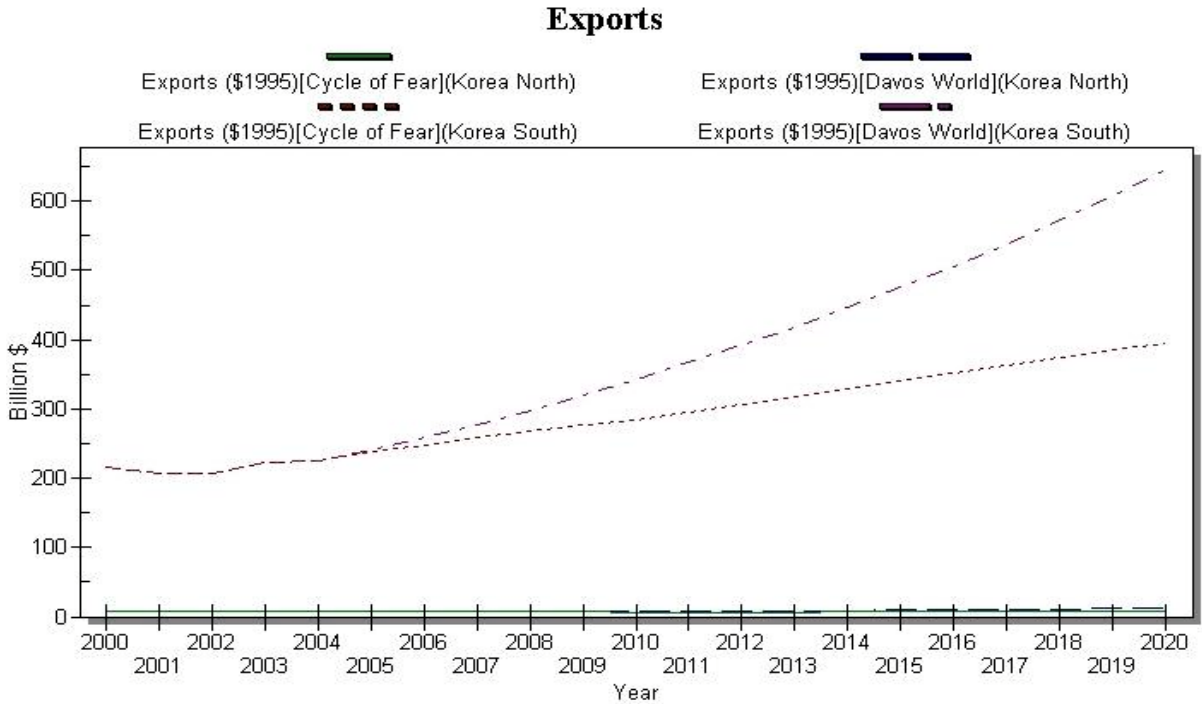
Hard or Capabilities Power



One can see immediately that the huge growth in exports (consistent with the GDPPC growth previously indicated) in the Davos scenario is accompanied by gradually declining USA power and gradually increasing Chinese power, clearly increasing the conditions that

encourage states to transition from hostile relations to cooperative (albeit competitive) ones in their mutual self interest.

By contrast, consider the Davos and Cycle of Fear scenarios for North and South Korean power and exports trends. The gap in both export and power growth increases in both scenarios. North Korea looks more and more like the "hermit kingdom" in relation to the South, with very little structural incentive to move to more cooperative strategies.



If peace is to be attained between the Koreans, it would appear from these scenarios that the major powers in the region themselves have an incentive to pursue peace through institution building and cooperative economic strategies. It is clearly in their interest to continue globalization in its many dimensions, and for whom the Cycle of Fear alternative relative to the Davos scenario, is clearly a costly one.¹⁰ Similarly, as we know, South Korea's trade volume with China and the USA is nearly equal, giving it an incentive to cooperate with the North in development projects, the cost of which might come from reductions in military budgets on both sides. Kim Dae Jung's "sunshine policy" was a start, but as I mentioned earlier (Chadwick, 2002) the tendency for "offensive realism" and "hawk engagement" at the time did not contribute to achieving a peaceful resolution to the North-South split. It is obvious that the IFs projections support the idea and that the cost to all concerned would be far outweighed by the benefits and opportunities such a strategy might provide. A concrete possibility might be the revival of the Tumen River Project discussed a decade ago.

Unification

The role played by IFs as a tool for analysis spans three interlaced or intermingled paradigms. One facet is philosophical, one practical or applied, and one scientific. The table below summarizes this framework (cf. Chadwick, 2006).

| The Paradigms | Philosophy | Practice (Applied) | Science |
|---|--|--|--|
| Gaps between: | What is desirable vs. what is possible | What is desirable vs. what is real | What is possible vs. what is real |
| <u>Purpose</u> What is the focus of dissonance? What is the type of change, aimed at? | <u>Transcend</u> Rethink values and conceptual frameworks, invent new ways of thinking about situations, develop insights that resolve puzzles, paradoxes, and obstacles | <u>Achieve</u> Improve conditions of existence, try to achieve, to change some aspect Korean <i>problematique</i> or problem complex, e.g., positive peace through trust building and stable change | <u>Understand</u> Improve empirical explanations of observations and capabilities for control of outcomes through better understanding, e.g., through global modeling |
| <u>Application</u> to Korea's political economy and international relations | <u>Conceive new forms</u> of governance, value frameworks, legal or normative frameworks, to redefine political problems related to globalization and traditional survival and security issues. | <u>Change outcomes</u> through political strategy analysis of alternative futures, institution building and policy implementation, both domestically and internationally | <u>Improve understanding</u> of various facets of observed political participation, governance systems, conflict and cooperation behavior, and political culture |
| Major type of assumptions | <u>Adequate intelligence</u> (data, analysis for reliability and validity) | <u>Adequate theory</u> (political, economic, social and environmental) | <u>Adequate institutions</u> (intelligence network and institutions, broadly conceived) |

Let us use an example that is of immediate relevance to show the connections between these paradigms, the possible existence of North Korean nuclear weapons.

The role played by theory for advancing hypothetical alternative futures is to determine plausibility both in the sense of possibility and likelihood. For example, in the NIC's summary document, "Conference Report on Northeast and Southeast Asia," a unified Korea with nuclear weapons was briefly alluded to as a "must be considered" possibility for 2020:

The ultimate resolution of the dispute over North Korea's development of nuclear weapons will have a profound affect on the future of force in the region—including shaping future security alliances of several key players in the region, including China, Japan, the Republic of Korea, and the U.S. The most likely outcome is North Korea's possession of nuclear weapons by 2020, which could, in turn, raise questions for Japan and South Korea. (A unified Korea maintaining nuclear weapons is also a possibility that must be considered for 2020.)¹¹

How do we know that "the most likely outcome is North Korea's possession of nuclear weapons by 2020?" In the NIC conference report, "The Future of Force in the Region" (p. 1), we find language that only alludes to this possibility, and that distances the writer from any such conclusions: "... tensions of the Korean peninsula remain high and North Korea's nuclear weapons program, *as so reported* [italics added], have concerned all actors in the region." One also finds references to nuclear fuel reprocessing but not to any of the technologies needed to actually construct and detonate a bomb, such as a nuclear trigger device. In short, theory can allow us to model alternative possible futures, but it takes the search for facts and their scientific evaluation to discipline theoretical speculation.¹²

At the same time, it should be noted that the IFs projections do not include anything useful about the policy steps and sociopolitical conditions that might bring unification about, not to mention what considerations would go into making such policies a priority.¹³

Another example of the need for theory to be amended by data, and practice to be amended by theory, is particularly relevant to the North Korean internal political situation. Gorbachev recently discussed his *perestroika* policy and its policy consequences, noting that it was habits of thought that were misjudged and essentially brought sound policy and philosophy down to defeat.

We knew that it would be difficult, but we probably did not know how much the mindset of the people was affected by history.

.....
...after two years, we understood that the system itself resisted any attempt to reform, to go the way of perestroika, to go the way of democracy, glasnost, or to go the way of creating a market economy.
.....

...
We had some ideas about how to do it, but we did not have the courage to implement those ideas. We had the courage to start perestroika for example, but when we understood that a 10 percent cut in the defense spending would solve the problem of the consumer market, we did not do it.

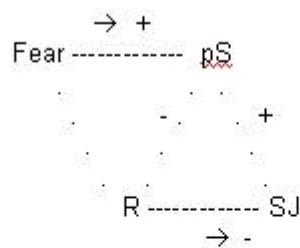
Gorbachev (2005, 11-12)

It may be that the problem facing Kim Jong Il today is similar to that faced by Gorbachev. The necessity of changing course politically may simply be overwhelmed by the rhetoric of

traditional realist politics. In a sense, Gorbachev was a neorealist surrounded by realists, if you understand realism to be strict concern with power as coercive influence and neorealism to be a concern for influence based on mutually beneficial economic transactions and development, and the "soft" power of ideology, as well as the "hard" power of military capabilities.

Then there is the political stability issue. In political stability theory, there are essentially two general ways to obtain stability (see diagram 1, below). One way is to improve a populations perception that social justice is on the increase, a value-added strategy for politics. The other is to engage in repression to induce enough fear to obtain conformity, a value-subtracting strategy for politics. In the North Korean case the pattern is obvious, as it was in Soviet Russia. In the Chinese case, opening the society to market forces and encouraging a pragmatic approach to political economic relations has produced a society that is gradually opening itself to pressures for social justice. As the graphs on relative power, income, and democratic development indicate, it would seem that the North's intransigent attitude towards change is becoming less and less bearable by both its neighbors and, if the mass migration of Koreans to China is any indication, less bearable to its people. IFs, incidentally, has a migration (inward) capacity but was not employed for this study.

Diagram 1. Political Stability, Social Justice, Repression and Fear



- where pS - political Stability,
 SJ - Social Justice,
 R - Repression, and
 Fear - fear of further repression. The hypotheses are
1. The more social justice, the greater political stability.
 2. The more political stability, the less repression.
 3. The more repression, the less social justice.
 4. The more repression, the more fear.
 5. The more fear, the more political stability.

From an internal politics perspective, the general problem is to move from dependence on fear to the use of economic and social development forces to achieve the same end of stability. Gorbachev's failure was instructive to Deng Xiaoping who interpreted it as wrong to begin with political reformation and right to begin with economic reformation policies. Whether Deng was correct in this assessment is less important, however, than the model China has set for North Korea. If the indicators tell an accurate story, North Korea's government is ineffective and corrupt, and consistent with these characteristics is completely stalled economically at all levels, and increasingly unable to pose a threat to the south with conventional military forces. A major change direction is needed, and indeed has already begun, as noted by Lee (2002), and currently being reinforced as noted by Reed's (2005)

review of current North Korean "alternative approach to opening." It may be that Kim Jong Il has made the change in direction, albeit erratically.

What would the future of Korea look like if indeed unification became the ultimate goal in practice? Since neither the North nor the South wish to continue dependency on allies, and indeed have *de facto* much less dependency than at any time in recent history, some strategy needs to be developed for mutual cooperation and trust building between North and South. One approach is "functional integration," reminiscent of the move from distrust and antagonism to trust and cooperation in Europe following World War II. Choo Won Suh's (2005) planning suggestions for North Korean industry exemplifies this path. However, as Lee (2002b) pointed out, it will be difficult to get North Korea to give up its missile program. I should add, that even today, the UK and France, integral members of a peaceful EU, still keep their ballistic missiles intact; and Germany still is not an acceptable nuclear power, though it could be. This has not prevented EU integration, but then the UK and French missiles are not pointed at fellow EU members.

Another strategy is to await the inevitable collapse, East Germany and/or Soviet Union style, of the North Korean regime. However, considering that there is no Gorbachev at the helm, the longevity of the North Korean regime, the tight control of its military, and the population's habit of tolerating suffering, this strategy is less likely to work than the functional integration approach.

A third strategy is a combination of a "hands off" approach by major powers on North-South affairs, and a Fisher-like approach to bargaining and negotiation between the two Korean governments (Fisher et al., 1991).

I wrote earlier (Chadwick, 2002) that the reunification of Korea seemed to be in no major regional power's interest. Times, however, have changed. At that writing, 9/11 was not in the mix, and five years of fighting terrorism and what amounts to a civil war in Iraq, had yet to be experienced. The USA's approach, what might be termed "offensive democratization," is largely based on its post-World War II experience with Japan, Germany, other European states (including Russia), South Korea, Taiwan, and the Philippines. Today, however, such a strategy seems inappropriate in a world racked by the fear of great power coercion, no-power (stateless) terrorism, and a host of world health and environmental problems that need its full attention.

Miller (2005) has attempted to grasp these and other patterns in an effort to study just how regions become peaceful. Core to his research is the "state-nation" problem, the need for states to represent nationalities. Clearly, Koreans as a nation--a people with a common history and ethnic identity--have a problem not unlike the Germans after World War II--divided, torn by rival major powers to engage in proxy war and deterrence, and with a historical memory of oppression both against them and against others.

With this new set of conditions facing us, consider the following scenario. A northern Korea, part of a neutral Korean Federation, no longer making a living selling the means of terrorism, no longer a financial or migratory burden on China, posing no threat to anyone or even to itself, would seem rather more inviting than the present situation, even for Kim Jong Il. Similarly, a southern Korea, part of a Korean Federation, that retains its democratic institutions and economic integrity, continuing to be an economic partner to both China and the US, with the investment capital to gradually bring the north into the modern era, and with a neutral military stance that would be good both for its own economy, the USA's image, and

a partner for peace and stability in the region, also would seem quite attractive, even to the USA because of the radically reduced costs, both financial and diplomatic. The problem with such a rosy scenario is we wouldn't know how to bring it about without the an honest effort by both modern Korean governments.¹⁴

The future awaits.

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Endnotes

¹ Various parts of this paper were prepared for discussion in different venues between May 16 and 19, 2006, including a workshop at the Research Institute for International Affairs (Seoul), a workshop at the Korea Institute for National Unification (Seoul), an International Conference supported by the German Ebert Foundation and hosted by the Institute for East Asian Studies at Dong-A University (Busan), a workshop at the Korea Institute for National Defense (Seoul), and an international conference organized by the Association of World Peace (Seoul). I would like to thank them all for the support of this effort.

² Chadwick (2002).

³ For a brief history see Chadwick (2000), available on my website at www.hawaii.edu/intlrel/; for a philosophical analysis see Chadwick (2006) (to download a copy, go to the MPSA website at www.mwpsa.org, click on "Upload 2006 Conference papers" then enter my last name under "Quick Search," then on the same page click on "Authors" after opening the pull down menu immediately

below "Quick Search," then click on "Go;" you can then click on the title of my paper to download a copy in PDF format).

⁴ Quoted by Donald P. Steury, "Introduction" in Kent (1975), The original source of the quoted remarks is footnoted as HS/HC-7 CIA Progress Report; Office of National Estimates (ONE) Section I "Intelligence and the Problem of National Foreign Policy," 26 December 1951, p. 2; this document is also noted as not yet declassified. See <http://www.cia.gov/csi/books/shermankent/intro.html#rft16>. For further discussion of this point see Chadwick (2006).

⁵ See Mesarovic and Pestel (1974) for details. The global model, WIM (World Integration Model) developed by Mesarovic's team (which included Barry Hughes) was a sequel to Jay Forester's (1971) and the Meadows et al. (1972) works, also commissioned by the Club of Rome. For a brief history of global modeling, see Chadwick (2000).

⁶ Davos, as in "Davos Man: An archetype of ... cosmopolitan business people and administrators. Derivation: From the financial summit held in Davos, Switzerland. Coined by Harvard political scientist Samuel Huntington. Citation: "...Davos Man", the prototype believer in free-market economics.. ". *Financial Times* 2000-05-27. Source: <http://pages.zoom.co.uk/leveridge/dictionary.html#davos>

⁷ All graphs presented in this paper were generated from the IFs model and database currently available at <http://ifsmodel.org/>

⁸ The neologism "coopition," a blend of cooperation and competition, has emerged in the business community to describe such changing relations. See for instance, Vise and Malseed's (2005) usage in describing the Google Corporation.

⁹ The term "hard" power is used to distinguish capabilities (geographic, economic, and military) from "soft" power (strategic purpose, will) (I'm borrowing Ray Cline's terms here, from *World Power Trends*).

¹⁰ It might be noted that this observation is consistent with Organski's power transition theory (see Tammen et al., 2000), and that China and the USA are well on their way towards evolving the norms and institutional arrangements and understandings that are necessary for global powers approaching parity--something the current IFs trends hint at but also indicate is a long way off.

¹¹ The National Intelligence Council 2020 Project (2004) "Conference Report on Northeast and Southeast Asia." Convened by the Asia Society and the NIC May 5-7, 2004.

¹² See Malik (2003) for a contemporary history and policy analysis regarding the North Korean efforts to acquire nuclear weapons and missile technology. Although he warns of future problems of nuclear proliferation, he also does not address the question of whether North Korea has a nuclear bomb or not.

¹³ One might suppose that North Korea would be the subject of a state failure analysis, but although state failure equations exist in IFs, they apparently were not used in the NIC 2020 analyses reported. Hughes has this to say in his online help at <http://www.ifs.du.edu/WebHelp/ifshelp.htm> (under "Socio-Political" then "Social and Political Flow Charts," then "Social Organization: Stability/State Failure"):
The State Failure project has analyzed the propensity for different types of state failures within countries, including those associated with revolution, ethnic conflict, genocide-politicide, and abrupt regime change (using categories and data pioneered by Ted Robert Gurr. Upon the advice of Gurr, IFs groups the first three as internal war and the last as political instability.

IFs uses the same primary variables (infant mortality, democracy, and trade openness) as the State Failure project to drive forecasts of the probability of individual events of state failure, of ongoing episodes of it, and of the magnitude of episodes. In addition, it allows the use in the

formulation of GDP per capita and years of education. Many other linkages have been and can be explored, including cultural regions.

One might note that the indicators above do not include explicitly the control of information, migration, oppression, military support or ideology, all factors that contribute to fear based rather than social justice based regimes.

¹⁴ It would be interesting to model such a process with the IFs, but at present the IFs does not have the capability to interface with decision support systems such as Saaty's *Superdecisions* software (see www.superdecisions.com).