

An Engineering Design of the China's Social Structure In a Technology Era

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Abstract

This paper uses an engineering system design approach to propose a new social structure for current Chinese society. A country is similar to a big engineering system. For the system to achieve maximum efficiency, components such as culture, history, economy and international environments as well as available technologies must be carefully coordinated. The design objectives are for the system to have higher speed on the evolution road of human civilization, and for the transition to be as smooth as possible, hopefully as smooth as the continuity of second derivative. After a study of the power and force relationships of the current structure, the paper investigates the feasibility of the new structure and the executability of the transition. The cost of the new structure is numerically analyzed. The stabilities of the current and proposed structures are compared. The new social structure is conceptually proven to be of better efficiency with least resistance for transformation.

Introduction

Systems engineering is an approach to create and execute the development and organization of complex process to ensure that customer and stakeholder's needs are satisfied in a high quality, trustworthy, cost efficient and schedule compliant manner throughout a system's entire life cycle, from planning to operation to disposal. This process usually comprises the following seven tasks: State the problem, Investigate alternatives, Model the system, Integrate, Launch the system, Assess performance, and Re-evaluate. The main engineering ingredients for systems design are: (1) design for executability; (2) design for quality; (3) design for cost; and (4) design for life cycle. [1,2].

By its very nature engineering is bound up with society and human behavior. Every product or construction used by modern society will have been influenced by engineering design. Engineering design is a very powerful tool to make changes to environment, society and economies, and its application brings with it a great responsibility. Engineering is a key driver of human development. [3]

Engineers apply the sciences of physics and mathematics to find suitable solutions to problems or to make improvements to the status quo. More than ever, Engineers are now

required to have knowledge of relevant sciences for their design projects. If multiple options exist, engineers weigh different design choices on their merits and choose the solution that best matches the requirements. The crucial and unique task of the engineer is to identify, understand, and interpret the constraints on a design in order to produce a successful result. It is usually not enough to build a technically successful product; it must also meet further requirements. Constraints may include available resources, physical, imaginative or technical limitations, flexibility for future modifications and additions, and other factors. [3]

While the social structure of a human community is much more complex than any material system, the engineering design approach can nonetheless be utilized to generate some surprising choices. The objective of this paper is to use such engineering design approach to study the Chinese society and to propose a model of system so that, people, whoever interested in this subject of matter, will know there is such an alternative.

State of the Problem

“Change” is absolute, it is happening all the time, nobody can stop it, while “No-change” is relative. The same is true for China’s political system. It can not be stagnant forever. The current Chinese political system is autocratic. The government is not elected, therefore, it does not have to be accountable for its people.

Some people argue that the communist party (CCP) government has made significant efforts (compare to its past) to improve its image, also did a relatively good job in governing China in recent years, is political reform really needed? In the modern world, very few people, especially Chinese, will believe that the government power is assigned by god as claimed by the Chinese empires in the past. Even CCP is telling people that power comes from people. However, the current system does not manifest so. Without open election, the authority of the officials is not assigned by people, but by their superiors who appointed them. Officials and the government do not have to be accountable for the voters since no voters exist. “Power from people” is not true unless under the extreme situation when revolution erupts.

The current system is unable to eliminate corruption. There is no real freedom of speech and real scrutiny of press in dictatorship. Corruption is inherent to dictatorship, although, democracy alone does not automatically mean corruption-free.

Any society under dictatorship is not truly governed by law, even, on paper, the CCP government advocates “law-governing”, the current Chinese society is factually mostly governed by man. Unfairness or injustice is common in people’s life, which is another source for instability.

As China’s economy grows, more and more people will meet the needs of survival and security, then they will demand the social recognition such as democracy. The question is: what is a realistic alternative to China’s current political system, what kind of system should China take if the current communist party decides to change, so that China’s society will have a peaceful and smooth transition from the current system to the next?

Proposed Model of System

This paper proposes a political structure named “constitutional communist party (CCP) monarchy” as the goal of China’s political reform. Constitutional monarchy is a political structure for many western countries such as that of Britain, Norway, Japan, etc. “Constitutional CCP monarchy” is similar to this structure, the differences are: CCP monarchy will have more political power and will extend to the smallest Chinese government unit: township.

The “Prime minister” or “Premier” who heads the executive office of the government should be elected directly by people. There are currently two legislative offices which will remain, but members should be elected by the people. Communist party members will not be allowed to compete for any of these offices. They can vote, they can take government jobs, but if someone wants to compete for elected office, he or she has to quit the CCP first.

The duties and authorities assigned to CCP will include: protect and interpret the Constitution, preside elections, control the military and a National security department, sign and approve important treaties with foreign countries such as those involve sovereignty of the country, and declare war against foreign enemies or internal secession forces.

Compensation for CCP will be guaranteed top salaries for its members in monarchy positions and a subsidization for old members based on current rank and length of membership. (The subsidization will not be given to new members.)

Performance Analysis

The proposed system is a more stable system. In the current system: communist party dictates the government, all government offices are appointed not elected, a leader is appointed by his or her superior. The problem is how the supreme leader is generated? There is no rule except power struggle. From an engineering view, this is an unstable system. Such power struggle has profound effects on the entire nation and its people. In the modern history, one can tell that China has been frequently under the influence and destruction of these power struggles from “the cultural revolution” to “June 4th student movement”. CCP leaders realize the instability of the system too. It is their slogan of governing method, “Stability rules over everything.”

In the proposed system, how the leaders of CCP (no matter what level) are generated is now a party internal affair. The power struggle within the party has limited effect on the society since the government is elected. At the same time, since CCP is controlling the military and presiding the election, election will not create chaos either. Therefore, the proposed structure is much more stable.

The proposed system is democratic, there will be open election. People have to openly compete to get the government power, in turn, the government has to be accountable for the voters. Government service will dramatically improve with open competition.

It is a stable system. CCP will guarantee the election. The elected government will then perform the government functions to serve the people. The law-governed society can be relatively easier to realize in this structure. Real freedom of speech and press can be achieved since CCP will no longer object to such freedom. Currently, CCP controls speech, because, if someone criticizes the government, it is equivalent to criticizing the CCP. If you have the power to choose between “being criticized and punished” or “being appraised and awarded” for the same thing you did, it is obvious an easy choice of the later. Now, in the proposed system, CCP would love the watch of the press, because if you criticize the government with another party in power, you are actually protecting the interest of the CCP.

For the same reason, it is much easier to build a clean government without corruption. CCP is the supreme power in this structure, however, CCP members do not have detailed executive power, therefore, they have very little chance (or much less chances) to corrupt. Meantime, the party in power is not only under the watch of public but also under the watch of CCP.

Design for Executability

In China’s current political system, on every level of government, there are already two parallel sets of organizations, the CCP committee and the “government” which is also made of CCP members, mostly. The proposed system is very close to the two-organization system. The CCP committee will remain, however, its charges will change, its size will be dramatically reduced gradually. The “government” will be there too, but it will be publicly elected. Furthermore, in China’s current constitution, it says “the country must be lead by CCP”, the proposed system confirms to it.

What is the driving force of China’s political reform? At present time, most Chinese people only care for money, they do not care for politics, is political reform possible? There are three possibilities that political reform might happen in China. 1. A super leader emerges, who realizes the urgency of political reform and unselfishly push for it for the benefits of the Nation and its people. This is a very small possibility, even there is such a leader, the task might be too big to any single human being’s capability. 2. China collapses, large-scale starvation prevails, people have to rise up against the government. This is a very small possibility too. Chinese people are famous for their endurance, unless it is starvation or no way to make a living, there will be no uprising. But if this situation happens, it will be a revolution, it will be bloody, the end result may not be democracy. 3. Power struggle within CCP forces change. This is a real possibility. China’s current political system is not stable, when a leader nominally comes to power, its legitimacy is doubtful since there was not competition and election. To gain 100 percent control, the leader has to gradually eliminate oppositions. In Mao’s era, he used “physical elimination”, opposition figures were simply

killed (from Peng Dehuai, Liu Shaoqi to Lin Biao, just to name a few of those famous figures in his era). In Deng's era, he used "house arrest" ("Gang of Four", Hua Guofeng, to Zhao Ziyang). In Jiang's era, he had to tolerate power groups such as former Premier, Li Peng, and other Deng's loyalties. In Hu's years, he has to use the art of balances. Political reform does not have to be a goal, it can be a tool too. Deng Xiaoping used this tool. It can be sure that this tool will be used again soon. When someone decides to use this tool, "constitutional CCP monarchy" will be a good choice.

Role of technology:

Technology, especially the internet, plays a tremendous role in bringing changes to China's political system. There are many examples of how the internet helped Chinese government to enact a law. With the modern technologies, CCP's iron grip of what people think can not be as tight as in the past, Chinese people will have more contact with the outside world, all kinds of news or ideas will be floating around. It will become harder and harder for the CCP to control the propaganda.

Public Education

Although no outside force can push or control a big country such as China to move along a specified direction, educating its people is the best way to exert an impact to its path. People need to know the choices. Social change is similar to engineering design process, first we need to come up with a conceptual design or several design options to realize the function, then we will study the potential problems and the solutions to those problems, and we will compare the efficiency or cost of different designs to make a selection. There is no perfect system, there is only better system. How do you know which one is better? The most effective way is to educate people and let people know the options.

Power and force analysis

Engineers know that power is an energy rate, it could come from a number of things such as force, heat, radiation, nuclear fission or fusion. However, Chinese communist party leaders only believe that power comes from force, Mao said "power comes out of a gun." Political reform should be peaceful and gradual. Excessive force usually does more damage than good. CCP is current in power. Who is willing to give up power without a fight? The proposed system is a compromise that the current political structure of China could be transformed into with peace. The CCP will keep some power and rip the benefits while give up the main part of the power as well as the responsibility.

Launch the System

To transform the political system, a trial city can be chosen, then spread it to the entire country. The trial city could be a typical inland city or Hong Kong. CCP has already promised Hong Kong to publicly elect its leader in 2017, at the same time, they are really

worried about losing control of Hong Kong. Constitutional CCP monarchy would be a good option for them.

Design for Cost

Your proposal is setting up a privileged class of 70 million people, they do not have to do anything but collecting money, can China afford it? The communist party claims it has 70 million members. In the proposal, subsidies will be paid to old members based on current rank and length of membership. This body of privileged class will shrink because new members will not be entitled to the subsidies. In fact, China is paying for this privileged class now, almost 100 percent of government positions are held by CCP members in current structure. In 2007, China's GDP is 24 trillion RMB, government tax income is 5 trillion RMB. In 2000, there were data indicating Chinese government spent 0.2 trillion RMB in "eat and drink" (government dining parties), 0.3 trillion RMB in cars. In 2007, these numbers could be much higher. It was also estimated that overseas sight-seeing trips by officials cost China 0.2 trillion RMB in 2006. Aside from a small portion of these kinds of spending that is for necessary and legitimate official business, it would be a very conservative estimate that at least 0.7 trillion RMB is wasted or used for personal purposes in 2007. If this money would be used as the subsidies, each CCP member on average can get 10,000 RMB per year.

Furthermore, this class of people is not "doing nothing", the communist party still has to perform its duties as described in their by-laws and as stated in this proposal, most CCP members will still stay with their current professional jobs. Elected officials are very small percentages of the population in any democracy. Some of the current CCP members will probably quit the CCP to organize another party to compete for the elected government.

Democracy and economy

Will a democratic system impede economic growth? China's economy had many years of continuous high speed growth, is it an indication that current political structure is the best for Chinese economy? Is dictatorship better for economy growth?

The answer is NO. Per capita, China's economy is still at a very low level. Continuous high-speed growth at low level is not abnormal. Japan had 30 years of continuous growth after the World War II. United States had a very high growth decade of 1990s. Even now, economic growth in countries with elections such as Brazil, India, and Russia is very rapid. For example, in Russia, per capita income doubled in past 3 years.

The actual driving force of China's economic growth is its people and Chinese culture, not the dictatorship. Chinese people have been poor for such a long time that they blame all their sufferings on poverty. The force convergent from the 1.4 billion people's desire of getting out of poverty is insurmountable Chinese culture of always comparing to others is another force fueling the economic growth. People keep asking "if he can get rich, why can't I?"

There are reports in China: some democratic communities could not get anything done, because the two sides of pro and con always fight for each other. Chinese people are worried that if China becomes democratic, will this kind of phenomenon become norm?

The fact is: this kind of scrutiny of government activity is indeed good for its people. In investment terminology, Chinese government economic activities are in high-risk high-return category. Many projects are gambling rather than reasoning, such as Shanghai's magnetic train, 3-gorge dam, building a sea port for Pakistan, etc. The fundamental reason behind these activities is lack of accountability, if it is a big loss, so be it, nothing personal. It happens in democratic societies too (look at the Iraq war), however it is happening at a much lower rate in democratic system. On the other hand, there are plenty of successful examples too, for an example, the highway system in US that was built in 1960s.

Investigate the Alternatives

America is the number one super power economically and militarily, which mean its political system is the best. Why not American democracy model?

The American political system is the best for America, might not be the best for China. Following questions have to be answered for the American political system to have a chance in China. From the public's side: if we use American model, who can guarantee that another party will not be more corrupted than CCP, who can guarantee that the other party will not become a dictatorship once it is in power, who can guarantee there will be election in future? In the 50 years' history of China before PRC, there were wars all the time, mostly internal wars. Who can guarantee there will be no wars, no bloody conflicts from election such as what happened in countries like Pakistan, Palestine, and Kenya? Who can guarantee there will be no gangs, no religious cults, or other organization to manipulate politics, who can guarantee there will be no military coup, who can guarantee that the country will no be split, who can guarantee there will be no chaotic racial conflicts? All those are possible events that can be easily manipulated by scrupulous politicians. Hatred can be readily spread into the society, that was how CCP won the battle. Any internal wars or violence will only destroy a country's assets, they never create wealth.

From CCP's side: we fought more than 30 years of wars, millions of lives lost including thousands of CCP members', now we won, we are in power, why should we give it out? If we give up the power, how does the party provide the benefits for the 70 million CCP members, especially most of the leaders are just "professional" leaders? Never mention the multi-party competition to the leaders of CCP, no clear-minded CCP leaders dare to relax the control a little bit. Mao did not, Deng did not, Jiang did not, neither will Hu. Back as early as 1927, CCP's leader, Chen Duxiu, tried the parliament election approach and failed. No CCP member will want that history to repeat itself.

Conclusion

This paper proposes a new model of political system as an option for China's political reform. Constitutional CCP monarchy can be a feasible and stable democratic political system for China. This is only a frame with many details to be developed. In the foreseeable future, when the time comes for China's political reform, "constitutional CCP monarchy" will be a good choice for them. Hopefully, the paper is also a driving force for China's political reform by providing a real alternative.

References

- [1] Groover, M.P. Fundamentals of Modern Manufacturing, John Wiley & Sons, Third edition, 2007, pp.937-946.
- [2] Juvinall, R.C., and Marshek, K.M., Fundamentals of Machine Component Design, 4th Edition, John Wiley & Sons, 2006, pp.1-14
- [3] http://en.wikipedia.org/wiki/Engineering#Modern_Era

Biography

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