Future of China’s economic, political and social systems

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Forecasting methodology

1. Econometric method by the use of econometric models and statistical analysis.

2. Method to forecast historical and non-repetitive events is similar in logic to econometric method – consider important factors affecting subject to be forecast, and use judgment to determine the effects of these factors on the future of the subject.

Example: A professor knowing the factors affecting a grad student’s performance can forecast his/her future career – the degree of success, the kind of work, etc.

Examples of non-econometric forecasts for China and Hong Kong

1. Economic Reform would start after Mao’s death because 1) the Communist Party needed to regain its popularity after the Cultural Revolution; 2) failure of the planning system and 3) economic success of the 4 tigers, Hong Kong, Singapore, Taiwan and South Korea.

2. Rapid economic growth following economic reform due to 1) the abundance of high-quality human capital, 2) the existence of a set of functioning, though imperfect, market institutions and 3) China being in its early stage of economic development that enables it to catch up rapidly.

3. A bright future of Hong Kong after 1997 if one knew the nature of the thinking of the Chinese leadership. There was no need for Hong Kong residents to move to Canada.
Forecasting China’s future

• 4. Same principles apply to forecasting behaviors of groups of people in China.
• 5. For forecasting China’s political and social systems, this paper relies on such forecasts of the behavior of groups of Chinese people, including Communist Party leaders, other members of the society, and segments of the Chinese population based on my observations of their past behavior.

Future of Economic Growth

• What will the rate of growth of GDP for China be in the next ten to fifteen years?
• My answer is: the average rate of growth during this period will be about 8 percent or slightly higher, with the rate of growth in the first half of the period somewhat higher than for the second half.
• To justify my answer I will point out that in the last three decades the growth rate averaged about 9.5 percent, remaining high even as late as 2008 to 2012 when there was a world recession in the US and in Europe.
Three factors affecting economic growth

• The factors contributing to China’s rapid growth rate are three:
• 1. China has an abundance of high-quality of human capital in its resourceful entrepreneurs, hard-working and efficient workers and an intelligent and reliable labor force in general. Such high-quality human capital has resulted from China’s history and culture for thousands of years, beginning at least from the Shang Dynasty about four thousand years ago when the bronze vessels made by high-quality labor using advanced technology were made.
• 2. China has a set of functioning market institutions although some of these institutions are imperfect. During the period of central planning China did not grow as rapidly because of the lack of this factor.
• 3. As a late comer China has been able to catch up at a high speed. US possesses factors 1 and 2 but cannot grow rapidly because of the lack of factor 3.

China will continue to grow because of the first two factors will remain unchanged while the force of the third factor will gradually decrease as China becomes more developed. The change of the third factor affecting the rate of growth will be gradual because China is a large country. While the coastal areas will become richer much of the interior remains poor and will still provide much room for growth. That is why I gave the above prediction for the rate of growth at 8 percent or slightly higher in the next 15 years or so. This rate of growth is considered optimistic.
Forecasting GDP growth by China’s stage of economic development

• Maddison’s estimates* show that China’s current status relative to the US is similar to that of Japan in 1951, Singapore in 1967, Taiwan in 1975, and Korea in 1977. GDP grew 9.2 percent in Japan between 1951 and 1971, 8.6 percent in Singapore between 1967 and 1987, 8.3 percent in Taiwan between 1975 and 1995, and 7.6 percent in Korea between 1977 and 1997. China’s development strategy after the reform in 1979 is similar to that of Japan, Singapore, Korea, and Taiwan. Therefore, from the point of advantage of backwardness, China has the potential to achieve another 20 years of 8 percent growth.

• Econometric method will be used to supplement this forecast.


Scatter diagram of ln(GDP) against time – rate of growth undiminished in recent years
Forecasting by projection 1

- Denoting t = year - 1978, a regression of ln(GDP) on t and t² using data from 1978 to 2011 is
  \[ \text{ln}(\text{GDP}) = 7.617 + 0.093(0.003) \cdot t + 0.000(0.000) \cdot t^2 \]
  \[ R^2 = .9986 \]
  where the number in parentheses after each coefficient is its standard error.
- From the coefficient of t we observe that the past growth rate of real GDP has been at an exponential rate of 0.93.
- If this equation is projected forward for 10 to 15 years the slope and thus the rate of increase in real GDP will remain constant and not decreasing.
- Such a forecast is even more optimistic than my forecast of about 8 percent for China's GDP growth rate for the next 10 to 15 years. The statistical analysis implies that the momentum of China's GDP growth seems to be undiminished in recent years.

Regression statistics
- `regress lny t tsq`
- `Source | SS   df  MS` Number of obs = 34
- `-----------+-----------------` F( 2, 31) = 11215.75
- `Model | 29.6157096  2 14.8075854  Prob > F = 0.0000`
- `Residual | .040928456 31 .001320273  R-squared = .9986`
- `-----------+-----------------` Adj R-squared = 0.9985
- `Total | 29.65663833 .898686  Root MSE = .03634`
- `-----------+-----------------`
- `lny | Coef.   Std. Err.  t   P>|t|   [95% Conf. Interval]
- `-----------+-----------------`
- `t | .0931054 .0026151 35.60 0.000  .0877719 .0984388`
- `tsq | .0000578 .0000725 0.80 0.431  -.00009 .0002057`
- `cons | 7.523835 .0198507 379.02 0.000  7.483349 7.564321`
Forecasting by using a system of equations to explain economic growth in *China’s Economic Transformation, Chapter 5*

- \( L_t = 1.011 L_{t-1} \) \hspace{1cm} (5.1)
- \( I_t = .3373 Y_{t-1} \) \hspace{1cm} (5.2)
- \( K_t = (1-0.04)K_{t-1} + I_t \) \hspace{1cm} (5.3)
- \( Y_t = Ae^{0.0281t} K_t^{0.6342} L_t^{0.3658} \) \hspace{1cm} (5.4)

The production function (5.4) explains how output \( Y = \) real GDP will grow once we know how \( L \) and \( K \) will grow. (5.1) explains how \( L \) will grow. (5.3) explains how \( K \) will grow once we know how investment \( I \) will grow. Equation (5.2) explains how \( I \) will grow.

Forecasting real GDP by using a system of equation - 2

- I used annual data from 1952 to 2011 to re-estimate the production function (5.4) to obtain:
- \( Y = 0.180 e^{0.0274t} K^{0.661} L^{0.339} \) excluding data for 1958-1969 as before (when using data only up to 1998) and assuming constant returns to scale. The estimated production function is practically the same as before.
- I found there was no technological change before 1978. Hence \( t \) is set equal to zero up to 1977 and set equal to 1 in 1978 and to increase by 1 each year afterwards.
Forecasting real GDP by using a system of equation - 3

- Let \( y = \frac{Y}{L} \) and \( k = \frac{K}{L} \). The production function for output/laborer is
- \( \text{logy} = \text{constant} + .028t + .661 \log k \)
- \( \frac{d\text{logy}}{dt} = .028 + .661 \frac{d\log k}{dt} \)
- In equilibrium, \( \frac{d\text{logy}}{dt} = \frac{d\log k}{dt} \), implying
- \( \frac{d\text{logy}}{dt} = \frac{.028}{1-.661} = \frac{.028}{.339} = .0826 \)
- \( \frac{d\log Y}{dt} = .0826 + \frac{d\log L}{dt} = .0826 + .011 = .0936 \)
- As long as the above production function remains valid the growth rate of real GDP will remain about the same, but the growth rate will decline when the capital exponent .661 declines.

Political system 1

- The ruling Communist Party will remain in power in the foreseeable future. Leaders of the Communist Party, like any ruling political leaders, are most interested in preserving their own power. In order to do so the leaders have tried and will try to control the people in China if necessary and to provide them with what they desire if necessary.
- The leaders will use carrots and sticks. The carrots include social welfare, economic infrastructure, social infrastructure such as the promotion of education and the promotion of democracy. The promotion of democracy has been a topic included in the Annual Report of the Premier to the National People’s Congress in recent years.
- To complete my prediction of the future political system in China, besides the prediction of the political behavior of the leaders of the Communist Party, I would need to predict the reactions of the Chinese people to the policies of the Communist Party.
Political system -2

• Since the policies of the Communist Party are multi-dimensional and there are many segments of the Chinese population responding to the policies the answer to the above question will depend on which policy and which segment of the population that we wish to predict. Even if we predict correctly the introduction of certain policies by the Communist Party in the future, we still need to predict which segments of the Chinese population will be supporting these policies and which segments will not. Social stability in China will depend on how many segments of the Chinese population will be strongly objecting to certain important policies in the future and if there are strong objections whether the Communist Party of China will change such policies.

Political System 3

• After examining the behavioral characteristics of the Communist Party leaders and of the Chinese people, I have come to the conclusion that the leaders of the Communist Party will be intelligent enough not to force unpopular policies to the Chinese people for the sake of their own survival and, at the same time, to provide benefit to the Chinese people as they deem appropriate. Hence China will be politically stable in the future.
• Political instability could result from the following two factors:
  • 1. Discontent of farmers when their land has been taken over illegally.
  • 2. Rampant corruption resulting from Chinese government officials using their power to extract economic rent from entrepreneurs when the latter require their approval in starting and operating their business enterprises.
• Communist Party leaders have been unable to deal with these two problems, but in my judgment these problems are not serious enough to affect continued political stability and economic growth which has continued in spite of corruption.
Political system - 4

• Concerning the nature of the Communist Party leadership, members (seven as of 2012) of the Standing Committee of the Politbureau are the most powerful persons. Its general secretary is the leader of this group. Under the present system the General Secretary needs to obtain consent of the other six members and is not as powerful as Mao or even Deng during their times. There may be disagreement among the seven members of the Standing Committee but the disagreement is not as strong as people suppose because all members have the same objectives in most issues even though they may disagree on the best means to achieve the objectives.

Development of democracy

• Will a democratic government be developed in China? The answer depends on how democracy is defined. Some form of democracy will be developed gradually because both the Communist Party and the influential Chinese people desire it. The development of democracy is a subject in the annual report of the Chinese Premier to the National People’s Congress.
• The development of democracy as a topic is not as important for most of the people residing in China as for US intellectuals and the educated Chinese living in the US and Europe.
• When democracy is developed gradually in China its nature will be different from the form of democracy as practiced in the US mainly because China has a different cultural tradition from the US tradition. In fact even the democratic systems of the European countries are different from the US system, not to speak of Taiwan’s democratic system.
Democracy 2

- Americans value freedom while Chinese value social order more. Americans are individualistic while the Chinese are more community minded. The Chinese value social harmony and law and order more than freedom. They are concerned with relations with members of their families, including their elders and their friends.
- According to a well-known essay on “an ideal society with social harmony” attributed to Confucius, in an ideal society the people are supposed to take care of the children and elders of others as their own.
- Of course social values in China can and will change as the economic environment changes. Chinese people can become more individualistic as competition in the Chinese market economy becomes more severe. Within the next 15 years such fundamental changes will be slow.

Democracy 3

- Some form of elections may be introduced for the selection of officials in the government and of leaders of the Communist Party. At present members of the Central Committee of the Communist Party are elected by representatives of the Party a level below. Members of the Political Bureau are elected by members of the Central Committee and members of the Standing Committee of the Political Bureau (the seven most powerful persons in China) are elected by members of the Political Bureau. However in practice the candidates are determined by influential leaders above as in the election of members of Board of Directors of a modern corporation. In the future such elections may truly represent the majority opinions of the electors in each group.
- At present democracy is practiced in the form of direct election of village heads in many parts of China. In the future, direct election can be extended to the election of higher-level government officials.
Social changes

• 1. The effects of the one-child family policy introduced in 1980 will be apparent. This policy led to self-centered behavior of the generations born after 1980. They grew up receiving much attention from their parents and two sets of grand-parents. The positive effect of such an experience is that they have developed self-confidence. This helps them achieve more in their careers.

• 2. Use of the internet allows the Chinese people more freedom in expressing their opinions. The government is trying to limit information flow through the internet but is not entirely successful.

• 3. As a natural consequence of economic development the Chinese people can afford to devote their time and spend their money to promote cultural activities, including the promotion of art, literature, music and other leisure activities. This is simply the income effect on the demand for the above goods and services.

Social changes 2

• 4. The Chinese people will be more law-abiding. The current practice in the production and distribution of faked products will be reduced. There will be more concern with other people. People will line up rather than rushing ahead in taking trains and boarding airplanes. Chinese leaders are learning from Taiwan how to establish a suitable legal system.

• 5. Corporations and individuals will assume social responsibilities to a larger extent.

• 6. On the negative side, as China becomes stronger as a nation, it may be more aggressive towards its neighbors as in general power corrupts. The US after WWII is an example.
• Thank you