«Note»

Endogenous growth in China national accounts: for lasting stable growth by region

Hideyuki Kamiryo

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Abstract

Asian countries have a significantly high rate of saving compared with other countries. The Japanese economy with a high rate of saving has failed to recover in the 1990s and after due to the delay in structural reform. This suggests that it is more difficult for a high rate of saving economy to maintain a stable growth continuously. Even a high level of technology cannot convert a negative growth to a positive growth unless structural reform-oriented policies are steadily taken.

My report at Guilin intends to (1) prepare for/arrange data that are used for my endogenous growth model using China national accounts, (2) briefly explain the characteristics of my model, (3) calibrate a policy-oriented parameter, *beta*, and endogenously measure "growth variables" over time in recursive programming that includes the root mean square error (OLS) method, where growth variables are composed of the rate of technological progress, the growth rate of per capita output, the capital-output ratio, and the rate of profit, and (4) present/interpret the values of growth variables and clarify the character of China growth, suggesting a stable direction and its methodology.

For data arrangement, I use the data of China national accounts by year and region. As similarly shown in the OECD statistics, China national accounts do not show profit, the retention ratio, and capital (stock). I need these three values, and to get these values I must set up two equations together with assumptions. I prepared for several sets of these values and tested each result in recursive programming. I stress here that the rate of profit is, to some extent, related to the market interest rates and this rate will present a benchmark for estimation. Of course, a high rate of profit is useful to strengthen the foundation of continuous growth.

For the characteristics of my model, I divide (1) saving into retained earnings and household saving and (2) net investment into both corporate and government net investments, and (3) net investment into qualitative and quantitative net investments, and then I calibrate four policy-oriented parameters that show the improvement in resource redistribution,

structural reform, and deregulation by sector. This paper, for simplicity, concentrates on one of four parameters, *beta*, that is a weighted average of those in corporate and government investments.

For endogenous growth variables, I raise questions: (1) How much differences of growth variables are observed by the value of *beta* under CRC (including optimum CRC)? (2) How can I interpret the difference between the actual growth rates (under increasing/diminishing returns to capital; IRC/DRC) and growth variables (under CRC)? (3) How can China continuously maintain a stable growth? And, what conditions and factors are necessary for China to realize this stable growth? (4) Finally, what version is suggested for China to maintain a stable growth?

I observe significant differences of growth variables between Shanghai, 4 Direct Cities (including Shanghai), and other regions. E.g., under DRC 2001, the growth rate of per capita output for Shanghai is 18.19% with the current *beta* = 0.9882 and that for Region West-South is 6.74% with the current *beta* = 0.9147. However, under CRC 2001, the growth rate of per capita output for Shanghai is 10.0% with *beta* = 0.85 and that for West-South is 5.0% with *beta* = 0.85. Each actual growth rate of per capita output also shows a different value, yet in the long-term these rates are closely interrelated. And, the *beta* determines the level of a continuous growth.

For example, if the *beta* under DRC is 0.75 and the *beta* under CRC is 0.8, the level of growth is fully competitive in international competition. On the contrary, if the *beta* under DRC is 0.9 and the *beta* under CRC is 0.7, the level of growth is weak due to the delay in structural reform. And, if the *beta* under DRC is 1.2 (as seen in Japan for 1998), the foundation of growth is destroyed: there is no possibility/hope to recover positive growth unless the *beta* under DRC improve/decrease tremendously.

For the character of China growth, I indicate that although China enjoys a significantly high growth rate, its level is generally a result at the expense of a high *beta* under DRC. To maintain a certain level of growth continuously requires a corresponding improvement in *beta*. I can observe only twice good examples for 31 regions from 1999 to 2001: Regions Shanghai and 4 Direct Cities both for 2000, where the current *beta* under DRC is lower than the *beta* under CRC. I still wonder why Shanghai indicates an extremely high level of *beta* (0.988) in 2001, which, I understand, partly comes from a high relative share of profit.

For a version of growth in China, I indicate that it is natural for China to fall into DRC situation in the real world since the rate of saving is too high compared with western countries. The worst example is Japan in the 1990s and after, where the Japanese economy has already been out of control, decreasing the rate of saving and yet aggravating the *beta* with

huge budget deficits. This is partly because the capital-output ratio is beyond a limit for a continuous positive growth due to too much public investment. Before going into a mature economy, it is essential for China to decide a certain level of the capital-output ratio as a goal to guarantee its continuous growth. A best example is the UK, whose initial *beta* and capital-output ratio are lowest among western countries: four policy-oriented parameters are most competitive among countries.

As a summary of this report, I raise five hypotheses so as to match the stage of economic development.

It is difficult for any economy to improve the *beta* unless people really decide to accept this improvement as their own and get out of such excessive profit as does not exist in the UK. Strong leadership can do, and then, a new history and unique experiment will bear fruit.

1. Intention of this note (working paper)

The growth rate of per capita output (or output) is endogenously measured under both the constant returns to capital (CRC) situation and the optimum (profitability-maximized) CRC situation. In these cases, if the capital-output ratio over time is higher than the initial/current capital-output ratio, the growth rate of per capita output will be lower, and if the capital-output ratio over time is equal to the initial/current capital-output ratio, the growth rate of per capita output will be maximized under the optimum CRC situation. Under the diminishing or increasing returns to capital (DRC/IRC) situation, we cannot measure the growth rate of per capita output except for the actual growth rate of per capital output.

Surprisingly to say, China has maintained a higher growth rate of per capita output year by year. Some researchers have reviewed statistical stability. For example, Rowsky [2001] doubted the high level of GDP in China and Zhang [Sep 2002] presented a statistical verification for this critical opinion. This note does not directly express my opinion for China GDP statistics, but intends to apply my model to China national accounts by region, interpret the results, and suggest better direction to economic strengthening. Nevertheless, I found that China national accounts by region made it possible to consistently measure the

growth rate of per capita output. Therefore, for the above question, I can indirectly affirm that China statistics are consistent and useful to my application.

Now, my intention in this note is to present my interpretation and suggestions for the following four points:

1. Using recursive programming, the endogenous growth rate of per capita output by region ranges widely along with the change in the policy-oriented parameter, *beta*. Whether or not each level of variables is realizable depends on the difference between the current *beta* and the *beta* under CRC situation. The value of *beta* is the ratio of qualitative net investment to total net investment. Is the value of *beta* appropriate and gradually improving year by year in China?
2. Assuming that *beta* is fixed, the larger the rate of saving/net investment the higher the endogenous growth rate of per capita output. This asserts that an economy with a higher rate of saving (as in Asian countries) needs to pay more attention to the increase in qualitative investment that improves *beta*. In this respect, the Japanese economy is historically the worst case in the world.
3. Using recursive programming, the speed of convergence is measured by the capital-output ratio over time. The lower the capital-output ratio the faster the speed of convergence is. If the capital-output ratio increases gradually (although to some extent, this is unavoidable in the process when an economy develops), China cannot be proud of a high level of the growth rate of per capita output: the speed of convergence will be slower. This implies that the rate of technological progress cannot enjoy continuously a high level. What level of the capital-output ratio is appropriate by region depends on a national version for the future and economic policies to attain this version.
4. I am interested in China planning economy for the long-term. If policy-makers know its essential mechanism for endogenous growth, I am confi-

dent, China can realize economic planning continuously. China can control its planning economy, by changing its economic system very quickly with leadership. How can China connect economic policies with a "planned" growth rate of per capita output?

2. A perspective of my model

My model, the Kamiryo model [2002, 2003], endogenously measures the rate of technological progress and, accordingly, the growth rate of per capita output, by dividing total investment into "qualitative" and "quantitative" investment, dividing saving into retained earnings/undistributed profit and household saving, and calibrating an economic policy-oriented parameter, *beta*, in the Cobb-Douglas production function. The value of *beta* shows, in an economy, a level of resource redistribution, structural reform, and deregulation and is a weighted average of $theta_2$ in the corporate sector and *gamma* in the government sector. The value of *beta* must be less than 1.0, and the lower the *beta* the higher the growth rate of per capita output under the constant returns to capital (CRC) situation. Net investment in the corporate sector is, due to international competition, usually much more efficient than that in the government sector. In other words, $theta_2$ in the corporate sector is much lower than *gamma* in the government sector. Assume that *beta* is 1.0, the growth rate of per capita output is zero. If *beta* is 1.1817 and $theta_2$ is 0.7, *gamma* will be 1.7768, which implies that the government sector makes the growth rate of per capita output –0.02986, as shown in Japan for 1998. The Japanese economy is a typical case that depends on excessive and inefficient huge public investment, which allows excessive profit under no competition.

Except for transitional path in this note, I do not explain the situation using another parameter (that shows the improvement in qualitative investment over time), *delta*. This is because *beta* and *delta* are interrelated under the optimum

CRC situation, where the capital-output ratio equals the initial/current capital-output ratio.

3. Data and data setting

In this note, I prepare for seven value (the growth rate of population, population, capital/fixed assets, retained earnings, profit, wages, and net capital investment/saving), estimated from six available data by region (GDP, wages, gross fixed capital formation, depreciation, the increase in inventories, balance of payment/changes in claims to the rest of the world) in China national accounts. The difference between total saving and net capital investment is composed of the increase in inventories, balance of payment (exports less imports), and errors and omissions/statistical discrepancy. Net capital formation is equal to gross capital formation less depreciation. Then, if the value of errors and omissions is calculated within a certain range (e.g., less than 1% of GDP or net output), the equal ex-post relationship between saving and net investment holds. Thus, even if we cannot know the value of total saving in national accounts, we can reckon saving backward.

However, my model also needs "profit" as the sum of retained earnings and dividends paid. It is difficult to estimate profit, using operating surplus as the difference between GDP and the sum of wages, depreciation, statistical discrepancy, taxes on production and imports (less subsidies). Nevertheless, I can use, to estimate profit, the values of the relative share of profit, *alpha*, defined as profit divided by net output. The value of *alpha*, in my model, is usually 0.08 to 0.1 in many countries (for Japan in the1990s, between 0.06 and 0.1). I set an equation of profit = "the multiplier for profit" × (GDP – wages – depreciation), assuming the multiplier for profit = 0.16. In this case, *alpha* is calculated as 0.06 (Region West) to 0.14 (Region 4 Direct Cities). Next, I estimate the payouts ratio (= 1- the retention ratio) as 0.5 to 0.4 by region. I simulated the

change in the retention ratio and I found that this ratio slightly influences the growth rate of net output.

Finally, my model also needs "capital" as stock. It is difficult to estimate this value: e.g., in the OECD statistics only one-third countries disclose capital for manufacturers. I estimate this value using the capital-labour ratio, after estimating net output from gross output, where net output is the sum of wages and profit (hereunder, I call net output "output: $Y(0)$" since I do not use GDP in my model). Then how can I estimate the capital-labour ratio? To estimate capital, I need this ratio. I set an equation of $k(0)$=*alpha* ÷ "the multiplier for $k(0)$" (assuming between 0.19 and 0.11; changing by year) and use an equation of $K(0) = k(0) \times$ population. I adjust the value of the multiplier of "0.19 to 0.11" after examining the capita-output ratio calculated as $K(0) \div Y(0)$ and comparing the flow-based increase of capital with the stock-based increase of capital. The capital-output ratio, in my model, is usually 1.5 to 3.0 in many countries (except for Japan in the 1990s: 3.6 to 3.9), to some extent corresponding with the market interest rates [MRW, 1992, p.430].

In short, I totally estimate each value of unknown values of profit, retained earning or the retention ratio, and capital. I hope that we can get these values in China national accounts in the near future. The reason why I need these values in my model is that the value of *beta* is calibrated by dividing saving into two sectors (corporate and household sectors) and net investment into two sectors (corporate and government sectors), where *beta* determines the rate of technological progress given the rate of saving/net investment.

I stress here that China national accounts are trustworthy even if I have to estimate the three values (profit, the payout ratio, and capital). When they also supply us these data in the future, the contents will be more accurate. However, without these data, the interrelationship among values, parameters, and variables are under consistency. One more, I applied a common "multiplier for profit,"

0.16, to any region. This implies that I expressed an average result for profit in any region. If I change this multiplier common to any region, e.g., for Qinghai or Xinjiang, 0.05 and for Shanghai, 0.24, then the difference among regions are shown much widely. Also, I indicate here that the market interest rates should be compare with the rate of profit by region: if the rate of profit in a region is extremely high or low, then the estimation should be examined in detail. Furthermore, it is already clear that the current values of *beta* in low per capita output regions are high, yet the values of *beta* under optimum CRC situation are also high and rather stable. On the contrary, the current value of *beta* in Region Shanghai is high, but the value of *beta* under optimum CRC situation is extremely low and rather unstable.

4. Implication of simulation

First, I highlight the key findings from the simulation in recursive programming (using Table 14) and second, I briefly present its implication.

The purpose of simulation is to confirm how each of ten estimated initial values influences four variables (the rate of technological progress, the growth rate of per capita output, the capital-output ratio, and the rate of profit). In particular, I am interested in the change in profit since I need to know the influence of "reduced" profit on the above four (endogenous) variables. In Table 14, for simulation I use the change in profit, the retention ratio, saving/net capital investment, wages, the growth rate of population, and capital under an assumption that *beta* remains unchanged. Also, for simulation I use the change in *beta*, where other values remain unchanged. And, I found how *beta* significantly influenced the four variables.

I can clarify the results into four categories as follows:

1. The initial values that only influence the rate of profit: profit and the retention ratio. This finding, however, suggests a critical implication. If profit

decreases, the rate of profit also decreases, which in turn increases the capital-output ratio. If we intend to maintain the initial rate of profit for the optimum CRC, *beta* must be improved so much. On the contrary, if the relative share of profit, *alpha*, is higher due to higher profit (as in Shanghai), the corresponding *beta* will be higher, which implies the delay in structural reform.

2. The initial value that influences the rate of technological profit and the growth rate of per capita output: saving/net investment. Kamiryo [2003a, b] indicates a similar finding, which contradicts Solow's result that uses exogenous growth.
3. The initial values that slightly influence four variables: wages, the growth rate of population, and capital.
4. A parameter that surprisingly influences four variables: *beta*.

I can indicate that the errors caused by inappropriate estimation of ten initial values only slightly influence variables. However, a slight difference of *beta* does influence variables significantly. These show the characteristics of my model.

In this respect, I can summarize the relationship between *beta* and the rate of saving/net investment as follows:

1. Assuming that *beta* remains unchanged, the rate of saving/net investment influences two variables; the rate of technological progress and the growth rate of per capita output. The higher the rate of saving the higher the growth rates, but the capital-output ratio and the rate of profit remain unchanged.

This comes from the equation [2002] of $g_A^* = (1-\beta)\cdot i$, where $g_y^* = g_A^* / (1-\alpha)$.

(1)

Note that the slope of g_A^* to 1-*beta* is equal to the value of the rate of saving/net investment, i (see Figure 3).

2. When *beta* changes, the four variables change significantly at the same time

(showing an extremely high contribution rate). This policy-oriented parameter presents a key for controlling economic growth.

3. Note that in the real world the above simulation results may differ to some extent. For example, if wages and/or capital change, *beta* will at the same time change.

In short, *beta* and the rate of saving significantly influence variables. These results differ from those of the text-book Solow model [1956]. In particular, if the rate of saving is high as in Asian countries, it is difficult for an economy to control the rate of technological progress unless economic policies are *beta* improvement-oriented. I do not touch another factor (the growth rate of population) in this note, although this rate greatly influences variables as found in Kamiryo [2003a, b].

5. Implication of the growth rate of per capita output by region

Using Table 15 and Figures 3 and 4, I briefly present the implication of the growth rate of per capita output by region and suggestions for the future prosperity and stability.

As clear from Figure 3-1, the rates of technological progress in Regions Shanghai and 4 Direct Cities are significantly higher than that in China total. And, the rates of technological progress in Regions North, East, and West-South are similar to that in China total. It seems that Regions Shanghai and 4 Direct Cities show better performance. Strictly speaking, however, these results only show the difference between the rates of net investment (see Eq.1). Nevertheless, I notice different movements/cases in Regions Shanghai and 4 Direct Cities both for 2000, where I find once a good sign (under IRC or close to IRC) .

Now let me exclude the above different cases and then compare the values of the initial *beta* as an average between 1999 and 2001 (see Table 11): for the ini-

tial *beta*, Region Shanghai shows 0.99 and Region 4 Direct Cities show 0.97, while other regions show 0.89 to 0.91. If the initial *beta* were 0.89 to 0.91 in Shanghai and 4 Direct Cities we can affirm that the high rate of technological progress in these advanced regions will steadily continue also in the future. I interpret that advanced regions enjoy a high growth due to the increase in the capital-output ratio in the process from labour-oriented to capital-oriented output, which usually occurs in any countries when an economy develops.

Then, let me compare the *beta* under the optimum CRC situation, $\beta^*_{\delta=0}$, by region (Table 11): for $\beta^*_{\delta=0}$, Region Shanghai shows the lowest values and Region 4 Direct Cities shows 0.6 to 0.65 while other regions show 0.65 to 0.8 (in Region West-South).

I admit that under the optimum CRC situation, the rate of technological progress is naturally high with a low $\beta^*_{\delta=0}$ and, accordingly, the speed of convergence is faster and more stable as seen in Figure 4. A critical question in an economy is: the optimum CRC situation is within reach or not. We may answer this question by judging the difficulties to approach $\beta^*_{\delta=0}$. Even if the difference between the current *beta* and $\beta^*_{\delta=0}$ is significant, policy-makers may promote the decrease in *beta* with strong leadership. If the value of $\beta^*_{\delta=0}$ is too low to approach, the value of *beta* will be set at a higher level, where the rate of technological progress will be lower than that under the optimum CRC situation. For example, assume that *beta* = 0.85 in 2001 is appropriate, then the rate of technological progress is 0.0454 in China total, 0.0805 in Region Shanghai, 0.0781 in Region 4 Direct Cities, 0.0490 in Region North, 0.0443 in Region East, and 0.0460 in Region West-South, where each capital-output ratio is much higher than that under the optimum CRC situation.

It is most important for policy-makers to plan the rate of technological progress together with the improvement of the current *beta*. We need an estimation of tendency in the rate of saving/net investment for the future as well as a

version to the capital-output ratio as a basic goal. Both are interrelated. By taking advantage of the relationship between the current *beta* and $\beta^*_{\delta=0}$, policy-makers can be confident in maintaining a long stable economic growth. Planning is realized with strong leadership and by removing obstacles for improving the current *beta*. The best but difficult path is not to increase in the capita-output ratio and to increase in qualitative human-capital investment instead of quantitative physical investment. To maintain a high level of economic growth cannot be a goal but one of results. For an economy, a final goal is to strengthen competitiveness in the world economy.

6. Transitional path by region: difference among regions

The situation under IRC/DRC converges to the situation under CRC. This path is called transitional path. Transition dynamics is shown using the Cobb-Douglas production function after Solow [1956]. However, one cannot show transition dynamics with an example values in the text-book. This is because variables under IRC/DRC cannot be measured due to no-convergence. For this conventional approach, I [2003b, citing two equations below] developed a new transitional path in transition dynamics. The transitional path sets *beta* on the X axis and *delta*, which is another policy-oriented parameter that shows the improvement in qualitative net investment over time, on the Y axis. A hyperbolic curve is formulated as:

$$k(0)^{\delta^*} = \frac{\Omega^* \cdot i\,(1-\beta^*)(1+n)}{(1-\alpha)(\beta^* \cdot i - \Omega^* \cdot n)} \text{ and,}$$

set $m = k(0)^{\delta^*}$, then solve for $\delta^* = LN(m) / LN(k(0))$. (2)

Spot A´ is the point of the intersection of *beta* and *delta* under IRC/DRC and spot B is the *beta* at *delta*=0 under the optimum CRC situation. Spot A´ only determines the area under IRC/DRC. Spot B is a goal under CRC. The area of transition dynamics is divided into 6: Area 1 corresponds with the first Quad-

rant, Areas 2 and 3 correspond with the second Quadrant, Area 4 corresponds with the third Quadrant, and Areas 5 and 6 correspond with the Fourth quadrant. Spot B is the origin and the hyperbolic curve is shown from Quadrant 4 to Quadrant 2 via the origin. The asymptote of this curve exists at *beta* = 1, where *delta* is negatively infinite. The slope is calculated by dividing "$\delta^*_{(calibrated\beta)}$ less *delta*" (the numerator on the Y axis) by "$\beta^*_{\delta=0}$ less *beta*," (the denominator on the X axis), where $\beta^*_{\delta=0} = \dfrac{\Omega^*\left(n(1-\alpha)+i\,(1+n)\right)}{i(1-\alpha)+\Omega^*\cdot i(1+n)}$. (3)

Now, Spot A is a point of intersection of "$\delta^*_{(calibrated\beta)}$ less *delta*" and *beta* in the same area as Spot A'. The transitional path is shown from Spot A to the origin with an arrow.

Now in Table 11, the transition dynamics is shown by region. The characteristics of China transition dynamics is that: (1) the initial/current situation stays almost at Area 1 under DRC except for three cases (Regions Shanghai, and 4 Direct Cities for 2000 and Region East for 1998). This comes from the fact that the *beta* under IRC/DRC (ranging from 0.88 to 0.98) is much higher than the *beta* under CRC (ranging from 0.6 to 0.7/0.8). E.g., in the UK 1983-95 on average, the *beta* under IRC/DRC is 0.85 and the *beta* under CRC is 0.73, and in Japan 1983-95 on average, the *beta* under IRC/DRC is 0.94 and the *beta* under CRC is 0.84. The difference between both values of *beta* is much wider than those in the UK (under structural reform) and Japan (enjoying the best conditions).

The slope of a transitional path is 3 to 4 in China by region, whose values are similar to the UK and Japan and the Japan in the 1990s, but much lower than that in the US under IRC. The US has an extremely high rate of the growth rate of population and thus its growth structure differs from other western countries.

In short, a high growth rate does not always match the current situation. It is more important for China to improve transition dynamics. However, it is more difficult for China to improve *beta*, which is an obstacle common to a high rate

of saving countries. The Japanese economy had enjoyed a high growth rate in 1980s under an extremely high rate of saving. In the last ten years, Japan has been under an extreme DRC situation. After reaching a critical level of the capital-output ratio, the actual growth rate of capital cannot be maintained to match the current high level of capital-output ratio. Nevertheless, government tried to increase demand by raising public investment using household saving. The fact is that, without structural reform and deteriorating *beta*, public net investment occupies more than 30% of annual total investment and corresponds with the annual sum of six advanced countries. An extremely high level of *beta* has destroyed the Japanese economy completely under huge deficits. If household saving were much less than the current level and if national resources were earlier used for educational cooperation and R&D for new business, the Japanese economy had recovered little by little.

7. Conclusions: with hypotheses from economic immaturity to maturity

China is steadily developing economic activities, starting with immature situation. China also includes both immature and mature situations in 31 regions. How can my model as a preceding endogenous growth model interpret these situations?

I conclude this note by presenting possible hypotheses. Of course, these hypotheses must be examined together with China economists, researchers, and policy-makers. This is because the policy-oriented parameters, *beta* and *delta*, change from time to time with effective adopted policies and a planning set for steady growth as a manifest.

As a base for hypotheses, I attach importance to the capital-output ratio, which shows not only the relationship between "per capita capital" and "per capita output" but also the relationship between the relative share of profit, *alpha*, and the rate of profit. Also I need to pay attention to the relationships between values

and ratios in national accounts and those in financial accounts. One typical point is the relationship between the rate of profit in national accounts and the market interest rate that reflects synthetic results in financial accounts and markets. Another typical point is the relationship between the rate of saving in national accounts and the financial surplus or deficit balance. Of course, the balance of payment (changes in claims to the rest of the world) in national accounts should be equal to the financial surplus or deficit balance in financial accounts, assuming that (1) the change in foreign exchanges reserves, (2) capital transfers, receivables and payables, and (3) errors and omissions are all zero. However, I connect the rate of saving with the balance of payment in that if the rate of saving decreases with economic maturity an economy must prepare for a higher rate of profit to maintain domestic situation more attractive to outside investors with a higher rate of profit. Japan after the 1990s completely failed to take urgent actions for the decrease in the rate of saving and the interest rate. Note that if *beta* is 1.0, there is no growth and no interest rate under a terrible investment-trap.

Therefore, possible hypotheses are as follows:

1. **There must be a certain upper level of the capital-output ratio when an economy approaches a mature situation:** When an economy develops, both the capital-labour ratio and the capital-output ratio increase, which are unavoidable in the process of economic development. However, at a mature stage, the capital-output ratio cannot increase any more. In this respect, I remind of the facts found by Kaldor [1978] and Jones [1998]. If the capital-output ratio continues to increase under a high rate of saving, the rate of profit approaches zero.
2. **This upper limit of the capital-output ratio will be determined with the long-term inclination of the rate of profit and the market interest rate (including the official rate of the central bank).** When an economy fails

to manipulate this operation, once either the balance of payment, capital-transfers, overseas economy, financial markets, or other external changes vary suddenly, the economy cannot survive.

3. **To prevent the worst possibility to fall into economic crisis, an economy must be alert at the change in *beta*, not to make widen the difference between the current *beta* and the *beta* under CRC.** An economic crisis will be accelerated by zero-interest policy and budget deficits if *beta* does not improve by converting quantitative into qualitative investment. The actual growth rate and the actual rate of profit verify this fact year by year.
4. **Each region, mature and immature, has its own merits and demerits in terms of economic development, supplementing each other.** When an economy is composed of both immature and mature situations as seen in Regions Shanghai and West-South, the economy can increase possible selections of economic planning among regions, assuming that each region survives by itself and guarantees living costs.
5. **A well-known common policy for any region to maintain its economy is to invest in human capital, R&D, and technology. However, it is more important for any region to measure each yearly result by confirming the improvement in *beta* than any planning and campaign.**

The above hypotheses are tested and supported by the worst examples in Japan after 1990s. For the time being, China total at *beta* = 0.91 in 2001 will grow highly in particular supported by developing regions. However, economic activities will gradually move to inland from coast regions if structural reform cannot improve in coast regions.

Strictly assuming that the current *beta* equals the *beta* under CRC for China 2002, if *beta* = 0.8 under CRC, the growth rate will be 7% and if *beta* = 0.9 under CRC, the growth rate will be 3–4%. According to my research [2003b], the growth rates in many countries converge to 2% assuming that *beta* = 0.8

with the same rate of saving and the same growth rate of population. In this respect, China will decrease its growth rate gradually unless Regions Shanghai at *beta* = 0.988 and 4 Direct Cities at *beta* = 0.971 improve *beta*. Another signal is the rate of profit. If this rate becomes below the market interest rates, more shift from quantitative investment to qualitative investment is required continuously.

Finally, I leave a question for the future: why *beta* approaches 1.0 when the relative share of profit, *alpha*, increases? This is a phenomenon common to any region and economy. I intuitively think that an economy needs more human capital-oriented wages. And, the reduction of the corporate tax rate will be effective only when *beta* improves.

REFERENCES

Kamiryo, H. 1998. *Economic Accounting: a Macro and Micro Common Approach Using National and Corporate Accounts*. Hiroshima: Hiroshima Shudo University. 305pp. (Annotation: Journal of Economic Literature 37(March), JEL99–0079).

Kamiryo, H. 2000. Growth Accounting: in Discrete Time: a New Approach Using Recursive Programming. Hiroshima: Hiroshima Shudo University. 306pp. (JEL2001-0349).

Kamiryo, H. 2002. Numerical Relationships between Technological Progress and Structural Reform: to Save the Unprecedented Difficulties in the Japanese Economy. National Institute for Research Advancement. *NIRA Report 2002/July*. 75pp.

Kamiryo, H. 2003a. Furthering the Role of Corporate Finance in Economic Growth. The University of Auckland (unpublished). 200pp.

Kamiryo, H. 2003b. A new transition dynamics in an endogenous growth model: from either an IRC or a DRC to an optimal CEC situation. (unpublished) 55pp.

Nan Zhang. 2001. The Flow of Funds in East Asia. *Journal of Economic Sciences* 6 (Feb):29–42.

Rawski, T. G. 2001. What is happening to China's GDP statistics? *China Economic Review* 12 (4): 347–354.

Xianchun Xu. 2002. China's GDP Statistics: Sources and Methods (translated by Nan Zhang). *Statistics* 83: 66–78.

T1–4 net output as a base 4

Table 1. Key parameters and variables with ratios by region in China (1)

S_{Π}: Retained earnings　　Assuming s_{Π}=0.6 (0.5 for East area)　　億元 Y: net output=Profit+W　　億元(yuan)　　(1)

各地域		1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
1*. 北 京	Beijing	67.13	62.06	69.20	88.01	103.12	979.34	1083.34	1168.42	1277.71	1473.69
2*. 天 津	Tianjin	40.72	40.18	45.81	57.98	66.43	699.13	775.76	831.68	862.50	945.80
A 北部三省	North	210.89	205.92	215.00	250.33	275.56	3842.87	4197.87	4436.67	4839.33	5263.44
B 東北三省	East-North	244.23	254.20	279.32	353.23	357.17	4313.50	4734.03	4871.55	5127.73	5767.48
9*. 上 海	Shanghai	142.85	153.52	161.95	185.84	200.03	1452.62	1586.45	1753.56	1964.15	2127.90
C 東部沿海	East	739.94	784.23	831.78	887.58	967.98	14100.62	15202.10	16076.00	17835.17	19538.43
D 中部沿海	Middle	517.38	535.88	594.42	696.26	775.04	12788.93	13616.51	14003.46	15347.88	16756.46
22*. 重庆	Chongqing	44.29	39.63	41.27	44.74	51.67	841.45	875.27	892.31	936.48	1028.76
E 西南内陸	West-South	179.94	180.10	178.27	208.76	216.46	3493.83	3815.23	3991.25	4162.58	4579.91
F 西部内陸	West	95.59	103.05	112.33	112.32	117.96	2215.15	2346.25	2448.35	2760.76	3061.16
G 4 直轄市	4 Direct Cities	294.99	295.39	318.23	376.56	421.25	3972.54	4320.82	4645.97	5040.83	5576.15
地域合計	Region: total	1987.97	2063.38	2211.12	2508.49	2710.17	40754.90	43911.99	45827.29	50073.45	54966.88
合計	China: total	2282.96	2358.77	2529.35	2885.05	3131.42	44727.44	48232.81	50473.26	55114.28	60543.02

$s_{S\Pi/Y}$: Retained earnings/net output　　Assuming s_{Π}=0.6 (0.5 for East area) 億元　　y: Net output/Population　　千元(thousand yuan)　　(4)

各地域		1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
1*. 北 京	Beijing	0.0685	0.0573	0.0592	0.0689	0.0700	7.898	8.695	9.295	9.245	10.656
2*. 天 津	Tianjin	0.0582	0.0518	0.0551	0.0672	0.0702	7.336	8.106	8.672	8.616	9.420
A 北部三省	North	0.0549	0.0491	0.0485	0.0517	0.0524	3.205	3.473	3.643	3.897	4.263
B 東北三省	East-North	0.0566	0.0537	0.0573	0.0689	0.0619	4.101	4.477	4.587	4.813	5.392
9*. 上 海	Shanghai	0.0983	0.0968	0.0924	0.0946	0.0940	9.970	10.836	11.897	11.733	13.184
C 東部沿海	East	0.0525	0.0516	0.0517	0.0498	0.0495	4.156	4.452	4.679	5.126	5.588
D 中部沿海	Middle	0.0405	0.0394	0.0424	0.0454	0.0463	3.761	3.970	4.047	4.294	4.721
22*. 重庆	Chongqing	0.0526	0.0453	0.0462	0.0478	0.0502	2.766	2.860	2.902	3.031	3.322
E 西南内陸	West-South	0.0515	0.0472	0.0447	0.0502	0.0473	2.133	2.306	2.389	2.538	2.696
F 西部内陸	West	0.0432	0.0439	0.0459	0.0407	0.0385	2.515	2.635	2.724	3.010	3.329
G 4 直轄市	4 Direct Cities	0.0743	0.0684	0.0685	0.0747	0.0755	5.936	6.423	6.868	7.053	7.856
地域合計	Region: total	0.0488	0.0470	0.0482	0.0501	0.0493	3.525	3.767	3.902	4.201	4.593
合計	China: total	0.0510	0.0489	0.0501	0.0523	0.0517	3.657	3.912	4.063	4.363	4.775

T1–4 net output as a base 4

Table 2. Key parameters and variables with ratios by region in China (2)

Π: Profit=(GDP-W-DEP)*0.16　　億元　GDP (data)　　億元　(2)

各地域		1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
1*. 北 京	Beijing	111.88	103.44	115.33	146.69	171.86	1870.93	2011.31	2174.46	2478.76	2845.65
2*. 天 津	Tianjin	67.87	66.97	76.35	96.63	110.72	1240.4	1336.38	1450.06	1639.36	1840.1
A 北部三省	North	351.48	343.20	358.34	417.22	459.27	6510.32	6934.38	7344.17	8133.78	8903.54
B 東北三省	East-North	407.05	423.67	465.53	588.71	595.29	7598.80	8238.40	8730.01	9743.25	10626.56
9*. 上 海	Shanghai	285.70	307.04	323.91	371.67	400.06	3360.21	3688.2	4034.96	4551.15	4950.84
C 東部沿海	East	1479.88	1568.45	1663.56	1775.17	1935.96	25193.31	27293.64	29037.28	32122.89	35417.86
D 中部沿海	Middle	862.30	893.14	990.70	1160.44	1291.74	20181.84	21439.98	22649.65	25336.71	27710.25
22*. 重庆	Chongqing	73.82	66.04	68.78	74.57	86.12	1350.1	1429.26	1479.71	1589.34	1749.77
E 西南内陸	West-South	299.90	300.16	297.11	347.93	360.77	5852.22	6307.22	6584.82	7076.33	7720.10
F 西部内陸	West	159.32	171.75	187.21	187.20	196.59	3576.52	3815.57	4068.02	4537.80	5001.59
G 4 直轄市	4 Direct Cities	539.27	543.49	584.37	689.55	768.76	7821.64	8465.15	9139.19	10258.61	11386.36
地域合計	Region: total	3559.93	3700.37	3962.46	4476.67	4839.62	68913.01	74029.19	78413.95	86950.76	95379.90
合計	China: total	4099.20	4243.86	4546.83	5166.22	5608.37	76734.65	82494.34	87553.14	97209.37	106766.26

Correction by the author: 17. GDP of Hubei State 1998 as 3704.21.

alpha=profit/net output　　k(0)=alpha/0.19; 0.164; 0.15; 0.135; 0.11 by year　　千元 (5)

各地域		1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
1*. 北 京	Beijing	0.1142	0.0955	0.0987	0.1148	0.1166	6.012	5.822	6.581	8.504	10.602
2*. 天 津	Tianjin	0.0971	0.0863	0.0918	0.1120	0.1171	5.110	5.264	6.120	8.299	10.642
A 北部三省	North	0.0915	0.0818	0.0808	0.0862	0.0873	4.814	4.985	5.384	6.386	7.932
B 東北三省	East-North	0.0944	0.0895	0.0956	0.1148	0.1032	4.967	5.457	6.371	8.504	9.383
9*. 上 海	Shanghai	0.1967	0.1935	0.1847	0.1892	0.1880	10.352	11.801	12.314	14.017	17.091
C 東部沿海	East	0.1050	0.1032	0.1035	0.0995	0.0991	5.524	6.291	6.899	7.373	9.008
D 中部沿海	Middle	0.0674	0.0656	0.0707	0.0756	0.0771	3.549	4.000	4.716	5.601	7.008
22*. 重庆	Chongqing	0.0877	0.0755	0.0771	0.0796	0.0837	4.617	4.601	5.139	5.898	7.610
E 西南内陸	West-South	0.0858	0.0787	0.0744	0.0836	0.0788	4.518	4.797	4.963	6.191	7.161
F 西部内陸	West	0.0719	0.0732	0.0765	0.0678	0.0642	3.785	4.464	5.098	5.023	5.838
G 4 直轄市	4 Direct Cities	0.1357	0.1258	0.1258	0.1368	0.1379	7.145	7.670	8.385	10.133	12.533
地域合計	Region: total	0.0873	0.0843	0.0865	0.0894	0.0880	4.597	5.138	5.764	6.622	8.004
合計	China: total	0.0916	0.0880	0.0901	0.0937	0.0926	4.824	5.365	6.006	6.943	8.421

T1–4 net output as a base 4

Table 3. Key parameters and variables with ratios by region in China (3)

W: Labour expenses (data) 億元 DEP: Depreciation (data) 億元 (3)

各地域		1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
1*. 北 京	Beijing	867.46	979.9	1053.09	1131.02	1301.83	304.25	384.94	400.53	430.93	469.68
2*. 天 津	Tianjin	631.26	708.79	755.33	765.87	835.08	184.93	209.05	217.54	269.58	313.01
A 北部三省	North	3491.39	3854.67	4078.33	4422.11	4804.17	822.16	934.71	1026.24	1104.06	1228.91
B 東北三省	East-North	3906.45	4310.36	4406.02	4539.02	5172.19	1148.28	1280.10	1414.43	1524.77	1733.82
9*. 上 海	Shanghai	1166.92	1279.41	1429.65	1592.48	1727.84	407.67	489.77	580.89	635.73	722.64
C 東部沿海	East	12620.74	13633.65	14412.44	16060.00	17602.47	3323.35	3857.16	4227.57	4968.08	5715.66
D 中部沿海	Middle	11926.63	12723.37	13012.76	14187.44	15464.72	2865.81	3134.48	3445.01	3896.52	4172.16
22*. 重庆	Chongqing	767.63	809.23	823.53	861.91	942.64	121.11	207.25	226.32	261.39	268.91
E 西南内陸	West-South	3193.93	3515.07	3694.14	3814.65	4219.14	783.89	916.16	1033.72	1087.14	1246.17
F 西部内陸	West	2055.83	2174.50	2261.14	2573.56	2864.57	524.96	567.62	636.79	794.22	908.32
G 4 直轄市	4 Direct Cities	3433.27	3777.33	4061.60	4351.28	4807.39	1017.96	1291.01	1425.28	1597.63	1774.24
地域合計	Region: total	37194.97	40211.62	41864.83	45596.78	50127.26	9468.45	10690.23	11783.76	13374.79	15005.04
合計	China: total	40628.24	43988.95	45926.43	49948.06	54934.65	10486.41	11981.24	13209.04	14972.42	16779.28

K: Capital stock=k(0)*L 億元 Omega(0)=Capital stock/net output=k/y (6)

各地域		1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
1*. 北 京	Beijing	745.54	725.40	827.18	1175.28	1466.23	0.7613	0.6696	0.7079	0.9198	0.9949
2*. 天 津	Tianjin	486.95	503.73	586.92	830.68	1068.50	0.6965	0.6493	0.7057	0.9631	1.1297
A 北部三省	North	5772.80	6025.00	6558.28	7929.77	9795.02	1.5022	1.4353	1.4782	1.6386	1.8610
B 東北三省	East-North	5223.45	5770.22	6766.35	9061.46	10036.21	1.2110	1.2189	1.3890	1.7671	1.7401
9*. 上 海	Shanghai	1508.21	1727.70	1815.13	2346.42	2758.56	1.0383	1.0890	1.0351	1.1946	1.2964
C 東部沿海	East	18740.40	21483.98	23700.63	25650.50	31493.58	1.3290	1.4132	1.4743	1.4382	1.6119
D 中部沿海	Middle	12068.51	13716.43	16319.88	20017.94	24873.83	0.9437	1.0073	1.1654	1.3043	1.4844
22*. 重庆	Chongqing	1404.55	1407.90	1580.11	1822.51	2356.77	1.6692	1.6085	1.7708	1.9461	2.2909
E 西南内陸	West-South	7399.24	7937.90	8291.75	10156.43	12165.91	2.1178	2.0806	2.0775	2.4399	2.6564
F 西部内陸	West	3334.13	3973.93	4581.81	4606.96	5368.91	1.5052	1.6937	1.8714	1.6687	1.7539
G 4 直轄市	4 Direct Cities	4781.20	5159.44	5672.67	7241.94	8896.07	1.2036	1.1941	1.2210	1.4367	1.5954
地域合計	Region: total	53159.27	59889.35	67704.42	78926.14	95798.10	1.3044	1.3638	1.4774	1.5762	1.7428
合計	China: total	59003.26	66141.60	74600.87	87715.19	106768.00	1.3192	1.3713	1.4780	1.5915	1.7635

T1–4 net output as a base 4

Table 4. Key parameters and variables with ratios by rregion in China (4)

S: Saving=corporate and household saving=ΔK 100 million RMB 億元(yuan) D: Dividends=Profit - retained earnings 100 m. RMB 億元(yuan)

各地域		1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
1*. 北 京	Beijing	697.48	790.84	832.93	946.05	1162.15	44.75	41.37	46.13	58.68	68.74
2*. 天 津	Tianjin	397.50	433.61	414.38	425.52	492.33	27.15	26.79	30.54	38.65	44.29
A 北部三省	North	1415.49	1305.26	1784.78	1947.61	2081.04	140.59	137.28	143.33	166.89	183.71
B 東北三省	East-North	938.97	1112.98	1085.54	1323.59	1461.65	162.82	169.47	186.21	235.49	238.12
9*. 上 海	Shanghai	1388.16	1563.02	1220.70	1297.28	1377.35	142.85	153.52	161.95	185.84	200.03
C 東部沿海	East	4949.60	5518.06	5825.42	6417.83	6971.82	739.94	784.23	831.78	887.58	967.98
D 中部沿海	Middle	3155.95	3796.95	4095.02	4339.89	4913.51	344.92	357.26	396.28	464.18	516.70
22*. 重庆	Chongqing	271.55	311.54	332.67	372.04	491.42	29.53	26.42	27.51	29.83	34.45
E 西南内陸	West-South	1048.42	1339.72	1352.40	1461.08	1699.48	119.96	120.06	118.85	139.17	144.31
F 西部内陸	West	806.88	1020.37	1111.84	1304.13	1461.36	63.73	68.70	74.89	74.88	78.64
G 4 直轄市	4 Direct Cities	2754.69	3099.00	2800.68	3040.89	3523.25	244.28	248.10	266.14	312.99	347.51
地域合計	Region: total	12315.31	14093.34	15255.00	16794.13	18588.86	1571.96	1637.00	1751.34	1968.19	2129.44
合計	China: total	15070.00	17192.34	18055.68	19835.02	22112.11	1816.24	1885.10	2017.48	2281.17	2476.95

s=S/Y: Saving/net output

$s_H=S_H/(D+W)$: Household saving/(net output - retained e.)

各地域		1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
1*. 北 京	Beijing	0.7122	0.7300	0.7129	0.7404	0.7886	0.6931	0.7154	0.6966	0.7235	0.7751
2*. 天 津	Tianjin	0.5686	0.5590	0.4982	0.4934	0.5205	0.5433	0.5361	0.4701	0.4582	0.4859
A 北部三省	North	0.3683	0.3109	0.4023	0.4025	0.3954	0.3325	0.2760	0.3726	0.3707	0.3628
B 東北三省	East-North	0.2177	0.2351	0.2228	0.2581	0.2534	0.1712	0.1922	0.1760	0.2039	0.2047
9*. 上 海	Shanghai	0.9556	0.9852	0.6961	0.6605	0.6473	0.9573	0.9903	0.6695	0.6291	0.6147
C 東部沿海	East	0.3510	0.3630	0.3624	0.3598	0.3568	0.3162	0.3295	0.3287	0.3274	0.3244
D 中部沿海	Middle	0.2468	0.2788	0.2924	0.2828	0.2932	0.2154	0.2497	0.2615	0.2492	0.2595
22*. 重庆	Chongqing	0.3227	0.3559	0.3728	0.3973	0.4777	0.2857	0.3260	0.3431	0.3678	0.4511
E 西南内陸	West-South	0.3001	0.3511	0.3388	0.3510	0.3711	0.2627	0.3197	0.3085	0.3174	0.3406
F 西部内陸	West	0.3643	0.4349	0.4541	0.4724	0.4774	0.3362	0.4097	0.4287	0.4508	0.4572
G 4 直轄市	4 Direct Cities	0.6934	0.7172	0.6028	0.6033	0.6318	0.6716	0.6992	0.5758	0.5736	0.6043
地域合計	Region: total	0.3022	0.3209	0.3329	0.3354	0.3382	0.2671	0.2882	0.2998	0.3011	0.3046
合計	China: total	0.3369	0.3564	0.3577	0.3599	0.3652	0.3021	0.3242	0.3247	0.3254	0.3315

T5 net captal investment 1

Table 5. Investment and saving by region in China

Gross Fixed Capital Formation ΔK_{GROSS} 100 million RMB 億元(yuan)

各地域		1997	1998	1999	2000	2001
1*. 北 京	Beijing	1001.73	1171.9	1233.46	1376.98	1631.83
2*. 天 津	Tianjin	582.43	640.15	631.92	695.1	805.34
A 北部三省	North	2237.65	2577.30	2811.02	3051.67	3309.95
B 東北三省	East-North	2087.25	2377.19	2499.97	2848.36	3195.47
9*. 上 海	Shanghai	1795.83	1804.81	1801.59	1933.01	2099.99
C 東部沿海	East	8272.95	9326.21	10052.99	11385.91	12687.48
D 中部沿海	Middle	6021.76	6897.94	7540.03	8236.41	9085.67
22*. 重庆	Chongqing	392.66	516.31	558.99	633.43	760.33
E 西南内陸	West-South	1832.31	2244.62	2386.12	2548.22	2945.65
F 西部内陸	West	1331.84	1581.55	1748.63	2098.35	2369.68
G 4 直轄市	4 Direct Cities	3772.65	4133.17	4225.96	4638.52	5297.49
地域合計	Region: total	21783.76	25004.81	27038.76	30168.92	33593.90
合計	China: total	25556.41	29137.98	31264.72	34807.44	38891.39

Borrowings from household saving 100 million RMB 億元(yuan)

各地域		1997	1998	1999	2000	2001
1*. 北 京	Beijing	630.35	724.90	763.73	858.04	1059.03
2*. 天 津	Tianjin	356.78	390.92	368.57	367.54	425.90
A 北部三省	North	1204.60	1099.34	1569.78	1697.28	1805.48
B 東北三省	East-North	694.74	858.78	806.22	970.36	1104.48
9*. 上 海	Shanghai	1245.31	1409.49	1058.75	1111.44	1177.32
C 東部沿海	East	4209.66	4733.84	4993.64	5530.25	6003.84
D 中部沿海	Middle	2638.57	3261.07	3500.60	3643.63	4138.47
22*. 重庆	Chongqing	227.26	271.91	291.40	327.30	439.75
E 西南内陸	West-South	868.48	1159.62	1174.13	1252.32	1483.02
F 西部内陸	West	711.29	917.32	999.51	1191.81	1343.40
G 4 直轄市	4 Direct Cities	2459.70	2803.61	2482.45	2664.33	3102.00
地域合計	Region: total	10327.34	12029.96	13043.88	14285.64	15878.69
合計	China: total	12787.04	14833.57	15526.33	16949.97	18980.69

Depreciation 100 million RMB 億元(yuan)

各地域		1997	1998	1999	2000	2001
1*. 北 京	Beijing	304.25	384.94	400.53	430.93	469.68
2*. 天 津	Tianjin	184.93	209.05	217.54	269.58	313.01
A 北部三省	North	822.16	934.71	1026.24	1104.06	1228.91
B 東北三省	East-North	1148.28	1280.10	1414.43	1524.77	1733.82
9*. 上 海	Shanghai	407.67	489.77	580.89	635.73	722.64
C 東部沿海	East	3323.35	3857.16	4227.57	4968.08	5715.66
D 中部沿海	Middle	2865.81	3134.48	3445.01	3896.52	4172.16
22*. 重庆	Chongqing	121.11	207.25	226.32	261.39	268.91
E 西南内陸	West-South	783.89	916.16	1033.72	1087.14	1246.17
F 西部内陸	West	524.96	567.62	636.79	794.22	908.32
G 4 直轄市	4 Direct Cities	1017.96	1291.01	1425.28	1597.63	1774.24
地域合計	Region: total	9468.45	10690.23	11783.76	13374.79	15005.04
合計	China: total	10486.41	11981.24	13209.04	14972.42	16779.28

Net Fixed Capital Formation $I_{NET}=\Delta K_{NET}$ 億元(yuan)

1997	1998	1999	2000	2001
697.48	786.96	832.93	946.05	1162.15
397.5	431.1	414.38	425.52	492.33
1415.49	1292.39	1784.78	1947.61	2081.04
938.97	1097.09	1085.54	1323.59	1461.65
1388.16	1553.42	1220.7	1297.28	1377.35
4949.60	5469.05	5825.42	6417.83	6971.82
3155.95	3763.46	4095.02	4339.89	4913.51
271.55	309.06	332.67	372.04	491.42
1048.42	1328.46	1352.40	1461.08	1699.48
806.88	1013.93	1111.84	1304.13	1461.36
2754.69	3080.54	2800.68	3040.89	3523.25
12315.31	13964.38	15255.00	16794.13	18588.86
15070.00	17044.92	18055.68	19835.02	22112.11

Retained earnings/undistributed profit 億元(yuan)

1997	1998	1999	2000	2001
67.13	62.06	69.20	88.01	103.12
40.72	40.18	45.81	57.98	66.43
210.89	205.92	215.00	250.33	275.56
244.23	254.20	279.32	353.23	357.17
142.85	153.52	161.95	185.84	200.03
739.94	784.23	831.78	887.58	967.98
517.38	535.88	594.42	696.26	775.04
44.29	39.63	41.27	44.74	51.67
179.94	180.10	178.27	208.76	216.46
95.59	103.05	112.33	112.32	117.96
294.99	295.39	318.23	376.56	421.25
1987.97	2063.38	2211.12	2508.49	2710.17
2282.96	2358.77	2529.35	2885.05	3131.42

Using China Statistical Yearbooks by year 億元(yuan)

NOTES:	1998	1999	2000	2001
Total saving	18934.55	18056.69	22000	24000
Δinventories	1915.1	1226.1	2300	2500
EX-IM (US$)	293	156.7	205	174
By @8.28 yuan	2426.04	1297.48	1697.40	1440.72
Net S	14593	15533	18003	20059
Borrowings	11981.24	13209.04	14972.42	16779.28
Diffrence	2612.17	2324.07	3030.18	3280.00
I adjusted borrowings to match net saving with minimum E & O.				
ΔK	17157	18056	19835	22112
ΔK - Net S	2563	2523	1832	2053
E. & O. by me.	−137.29	−1225.09	−135.02	−612.11
E & O.*	−1372	−1361	−1056	

*: by Nan Zhang [Feb, 2003, p.39, Table 5: his estimation.]

Table 6–7 Actual growth rates 2

Table 6 Key parameters and variables with

Y: Net output=Profit+W

100 million RMB 億元(yuan)

各地域		1997	1998	1999	2000	2001
1*. 北 京	Beijing	979.34	1083.34	1168.42	1277.71	1473.69
2*. 天 津	Tianjin	699.13	775.76	831.68	862.50	945.80
A 北部三省	North	3842.87	4197.87	4436.67	4839.33	5263.44
B 東北三省	East-North	4313.50	4734.03	4871.55	5127.73	5767.48
9*. 上 海	Shanghai	1452.62	1586.45	1753.56	1964.15	2127.90
C 東部沿海	East	14100.62	15202.10	16076.00	17835.17	19538.43
D 中部沿海	Middle	12788.93	13616.51	14003.46	15347.88	16756.46
22*. 重庆	Chongqing	841.45	875.27	892.31	936.48	1028.76
E 西南内陸	West-South	3493.83	3815.23	3991.25	4162.58	4579.91
F 西部内陸	West	2215.15	2346.25	2448.35	2760.76	3061.16
G 4 直轄市	4 Direct Cities	3972.54	4320.82	4645.97	5040.83	5576.15
地域合計	Region: total	40754.90	43911.99	45827.29	50073.45	54966.88
合計	China: total	44727.44	48232.81	50473.26	55114.28	60543.02

y: Net output/Population

千元(thousand yuan)

各地域		1997	1998	1999	2000	2001
1*. 北 京	Beijing	7.898	8.695	9.295	9.245	10.656
2*. 天 津	Tianjin	7.336	8.106	8.672	8.616	9.420
A 北部三省	North	3.205	3.473	3.643	3.897	4.263
B 東北三省	East-North	4.101	4.477	4.587	4.813	5.392
9*. 上 海	Shanghai	9.970	10.836	11.897	11.733	13.184
C 東部沿海	East	4.156	4.452	4.679	5.126	5.588
D 中部沿海	Middle	3.761	3.970	4.047	4.294	4.721
22*. 重庆	Chongqing	2.766	2.860	2.902	3.031	3.322
E 西南内陸	West-South	2.133	2.306	2.389	2.538	2.696
F 西部内陸	West	2.515	2.635	2.724	3.010	3.329
G 4 直轄市	4 Direct Cities	5.936	6.423	6.868	7.053	7.856
地域合計	Region: total	3.525	3.767	3.902	4.201	4.593
合計	China: total	3.657	3.912	4.063	4.363	4.775

A: The level of technology

各地域		1997	1998	1999	2000	2001
1*. 北 京	Beijing	6.434	7.348	7.718	7.231	8.091
2*. 天 津	Tianjin	6.262	7.023	7.344	6.798	7.142
A 北部三省	North	2.775	3.046	3.179	3.322	3.558
B 東北三省	East-North	3.526	3.846	3.843	3.764	4.280
9*. 上 海	Shanghai	6.296	6.721	7.482	7.119	7.732
C 東部沿海	East	3.474	3.682	3.832	4.202	4.495
D 中部沿海	Middle	3.453	3.625	3.626	3.770	4.063
22*. 重庆	Chongqing	2.419	2.549	2.558	2.631	2.803
E 西南内陸	West-South	1.874	2.038	2.120	2.179	2.309
F 西部内陸	West	2.285	2.362	2.405	2.698	2.972
G 4 直轄市	4 Direct Cities	4.546	4.971	5.256	5.138	5.544
地域合計	Region: total	3.085	3.282	3.353	3.548	3.824
合計	China: total	3.165	3.375	3.457	3.638	3.920

each growth rate by region (1)

The growth rate of net output: $g_{Y(actual)}$

1997	1998	1999	2000	2001
---	0.1062	0.0785	0.0935	0.1534
---	0.1096	0.0721	0.0371	0.0966
---	0.0924	0.0569	0.0908	0.0876
---	0.0975	0.0290	0.0526	0.1248
---	0.0921	0.1053	0.1201	0.0834
---	0.0781	0.0575	0.1094	0.0955
---	0.0647	0.0284	0.0960	0.0918
---	0.0402	0.0195	0.0495	0.0985
---	0.0920	0.0461	0.0429	0.1003
---	0.0592	0.0435	0.1276	0.1088
---	0.0877	0.0753	0.0850	0.1062
---	0.0775	0.0436	0.0927	0.0977
---	0.0784	0.0465	0.0920	0.0985

The growth rate of per person net output: $g_{y(actual)}$

1997	1998	1999	2000	2001
---	0.1009	0.0691	-0.0054	0.1526
---	0.1050	0.0699	-0.0065	0.0933
---	0.0839	0.0487	0.0699	0.0937
---	0.0916	0.0245	0.0492	0.1205
---	0.0869	0.0978	-0.0137	0.1236
---	0.0711	0.0512	0.0955	0.0901
---	0.0558	0.0193	0.0610	0.0994
---	0.0341	0.0145	0.0444	0.0961
---	0.0808	0.0361	0.0623	0.0624
---	0.0479	0.0336	0.1050	0.1059
---	0.0820	0.0692	0.0270	0.1138
---	0.0689	0.0356	0.0768	0.0931
---	0.0700	0.0386	0.0737	0.0946

$g_{A(actual)}$: The rate of technological progress=$g_{y(actual)}-\alpha * g_{k(actual)}$

1997	1998	1999	2000	2001
---	0.1045	0.0562	-0.0389	0.1238
---	0.1024	0.0549	-0.0463	0.0602
---	0.0810	0.0423	0.0539	0.0726
---	0.0827	0.0085	0.0108	0.1098
---	0.0598	0.0898	-0.0399	0.0824
---	0.0567	0.0412	0.0887	0.0681
---	0.0475	0.0066	0.0469	0.0801
---	0.0343	0.0055	0.0326	0.0718
---	0.0760	0.0335	0.0416	0.0500
---	0.0348	0.0228	0.1060	0.0955
---	0.0728	0.0575	-0.0015	0.0812
---	0.0590	0.0251	0.0635	0.0747
---	0.0601	0.0278	0.0591	0.0748

Table 6–7 Actual growth rates 2

Table 7. Key parameters and variables with

K: Capital stock=k(0)*L

100 million RMB 億元

各地域		1997	1998	1999	2000	2001
1*. 北 京	Beijing	745.54	725.40	827.18	1175.28	1466.23
2*. 天 津	Tianjin	486.95	503.73	586.92	830.68	1068.50
A 北部三省	North	5772.80	6025.00	6558.28	7929.77	9795.02
B 東北三省	East-North	5223.45	5770.22	6766.35	9061.46	10036.21
9*. 上 海	Shanghai	1508.21	1727.70	1815.13	2346.42	2758.56
C 東部沿海	East	18740.40	21483.98	23700.63	25650.50	31493.58
D 中部沿海	Middle	12068.51	13716.43	16319.88	20017.94	24873.83
22*. 重庆	Chongqing	1404.55	1407.90	1580.11	1822.51	2356.77
E 西南内陸	West-South	7399.24	7937.90	8291.75	10156.43	12165.91
F 西部内陸	West	3334.13	3973.93	4581.81	4606.96	5368.91
G 4 直轄市	4 Direct Cities	4781.20	5159.44	5672.67	7241.94	8896.07
地域合計	Region: total	53159.27	59889.35	67704.42	78926.14	95798.10
合計	China: total	59003.26	66141.60	74600.87	87715.19	106768.00

k: Capital/Population

千元(thousand yuan)

各地域		1997	1998	1999	2000	2001
1*. 北 京	Beijing	6.012	5.822	6.581	8.504	10.602
2*. 天 津	Tianjin	5.110	5.264	6.120	8.299	10.642
A 北部三省	North	4.814	4.985	5.384	6.386	7.932
B 東北三省	East-North	4.967	5.457	6.371	8.504	9.383
9*. 上 海	Shanghai	10.352	11.801	12.314	14.017	17.091
C 東部沿海	East	5.524	6.291	6.899	7.373	9.008
D 中部沿海	Middle	3.549	4.000	4.716	5.601	7.008
22*. 重庆	Chongqing	4.617	4.601	5.139	5.898	7.610
E 西南内陸	West-South	4.518	4.797	4.963	6.191	
F 西部内陸	West	3.785	4.464	5.098	5.023	5.838
G 4 直轄市	4 Direct Cities	7.145	7.670	8.385	10.133	12.533
地域合計	Region: total	4.597	5.138	5.764	6.622	8.004
合計	China: total	4.824	5.365	6.006	6.943	8.421

L: Population

x 10000 万人

各地域		1997	1998	1999	2000	2001
1*. 北 京	Beijing	1240	1246	1257	1382	1383
2*. 天 津	Tianjin	953	957	959	1001	1004
A 北部三省	North	11992	12086	12180	12417	12348
B 東北三省	East-North	10517	10574	10621	10655	10696
9*. 上 海	Shanghai	1457	1464	1474	1674	1614
C 東部沿海	East	33927	34150	34355	34791	34963
D 中部沿海	Middle	34008	34295	34602	35742	35493
22*. 重庆	Chongqing	3042	3060	3075	3090	3097
E 西南内陸	West-South	16378	16547	16708	16404	16989
F 西部内陸	West	8808	8903	8988	9172	9196
G 4 直轄市	4 Direct Cities	6692	6727	6765	7147	7098
地域合計	Region: total	115630	116555	117454	119181	119685
合計	China: total	122322	123282	124219	126328	126783

each growth rate by region (2)

The growth rate of capital: $g_{K(actual)}$

1997	1998	1999	2000	2001
---	-0.0270	0.1403	0.4208	0.2476
---	0.0345	0.1652	0.4153	0.2863
---	0.0437	0.0885	0.2091	0.2352
---	0.1047	0.1726	0.3392	0.1076
---	0.1455	0.0506	0.2927	0.1756
---	0.1464	0.1032	0.0823	0.2278
---	0.1365	0.1898	0.2266	0.2426
---	0.0024	0.1223	0.1534	0.2931
---	0.0728	0.0446	0.2249	0.1979
---	0.1919	0.1530	0.0055	0.1654
---	0.0791	0.0995	0.2766	0.2284
---	0.1266	0.1305	0.1657	0.2138
---	0.1210	0.1279	0.1758	0.2172

The growth rate of per person capital: $g_{k(actual)}$

1997	1998	1999	2000	2001
---	-0.0317	0.1303	0.2923	0.2467
---	0.0302	0.1627	0.3559	0.2824
---	0.0356	0.0801	0.1860	0.2421
---	0.0987	0.1674	0.3349	0.1033
---	0.1401	0.0435	0.1383	0.2194
---	0.1389	0.0966	0.0687	0.2218
---	0.1270	0.1792	0.1875	0.2513
---	-0.0035	0.1168	0.1478	0.2902
---	0.0618	0.0345	0.2476	0.1566
---	0.1792	0.1421	-0.0147	0.1623
---	0.0735	0.0933	0.2084	0.2369
---	0.1177	0.1218	0.1489	0.2087
---	0.1123	0.1194	0.1562	0.2128

n: The growth rate of population: $n_{(actual)}$

1997	1998	1999	2000	2001
---	0.0048	0.0088	0.0994	0.0007
---	0.0042	0.0021	0.0438	0.0030
---	0.0078	0.0078	0.0195	-0.0056
---	0.0054	0.0044	0.0032	0.0038
---	0.0048	0.0068	0.1357	-0.0358
---	0.0066	0.0060	0.0127	0.0049
---	0.0084	0.0090	0.0329	-0.0070
---	0.0059	0.0049	0.0049	0.0023
---	0.0103	0.0097	-0.0182	0.0357
---	0.0108	0.0095	0.0205	0.0026
---	0.0052	0.0056	0.0565	-0.0069
---	0.0080	0.0077	0.0147	0.0042
---	0.0078	0.0076	0.0170	0.0036

T8 Technology and ratios 1

Table 8 Key prameters and variables

alpha=profit/net output Omega(0)=Capital stock/net output

各地域		1997	1998	1999	2000	2001
1*. 北 京	Beijing	0.1142	0.0955	0.0987	0.1148	0.1166
2*. 天 津	Tianjin	0.0971	0.0863	0.0918	0.1120	0.1171
A 北部三省	North	0.0915	0.0818	0.0808	0.0862	0.0873
B 東北三省	East-North	0.0944	0.0895	0.0956	0.1148	0.1032
9*. 上 海	Shanghai	0.1967	0.1935	0.1847	0.1892	0.1880
C 東部沿海	East	0.1050	0.1032	0.1035	0.0995	0.0991
D 中部沿海	Middle	0.0674	0.0656	0.0707	0.0756	0.0771
22*. 重庆	Chongqing	0.0877	0.0755	0.0771	0.0796	0.0837
E 西南内陸	West-South	0.0858	0.0787	0.0744	0.0836	0.0788
F 西部内陸	West	0.0719	0.0732	0.0765	0.0678	0.0642
G 4 直轄市	4 Direct Cities	0.1357	0.1258	0.1258	0.1368	0.1379
地域合計	Region: total	0.0873	0.0843	0.0865	0.0894	0.0880
合計	China: total	0.0916	0.0880	0.0901	0.0937	0.0926

r(0)=alpha/Omega

各地域		1997	1998	1999	2000	2001
1*. 北 京	Beijing	0.1501	0.1426	0.1394	0.1248	0.1172
2*. 天 津	Tianjin	0.1394	0.1329	0.1301	0.1163	0.1036
A 北部三省	North	0.0609	0.0570	0.0546	0.0526	0.0469
B 東北三省	East-North	0.0779	0.0734	0.0688	0.0650	0.0593
9*. 上 海	Shanghai	0.1894	0.1777	0.1784	0.1584	0.1450
C 東部沿海	East	0.0790	0.0730	0.0702	0.0692	0.0615
D 中部沿海	Middle	0.0715	0.0651	0.0607	0.0580	0.0519
22*. 重庆	Chongqing	0.0526	0.0469	0.0435	0.0409	0.0365
E 西南内陸	West-South	0.0382	0.0367	0.0357	0.0341	0.0295
F 西部内陸	West	0.0478	0.0432	0.0409	0.0406	0.0366
G 4 直轄市	4 Direct Cities	0.1128	0.1053	0.1030	0.0952	0.0864
地域合計	Region: total	0.0670	0.0618	0.0585	0.0567	0.0505
合計	China: total	0.0695	0.0642	0.0609	0.0589	0.0525

A(0)=k(0)^(1-alpha)/Omega(0)

各地域		1997	1998	1999	2000	2001
1*. 北 京	Beijing	6.434	7.348	7.718	7.231	8.091
2*. 天 津	Tianjin	6.262	7.023	7.344	6.798	7.142
A 北部三省	North	2.775	3.046	3.179	3.322	3.558
B 東北三省	East-North	3.526	3.846	3.843	3.764	4.280
9*. 上 海	Shanghai	6.296	6.721	7.482	7.119	7.732
C 東部沿海	East	3.474	3.682	3.832	4.202	4.495
D 中部沿海	Middle	3.453	3.625	3.626	3.770	4.063
22*. 重庆	Chongqing	2.419	2.549	2.558	2.631	2.803
E 西南内陸	West-South	1.866	2.038	2.120	2.179	2.309
F 西部内陸	West	2.285	2.362	2.405	2.698	2.972
G 4 直轄市	4 Direct Cities	4.546	4.971	5.256	5.138	5.544
地域合計	Region: total	3.085	3.282	3.353	3.548	3.824
合計	China: total	3.165	3.375	3.457	3.638	3.920

for main regions

Omega(0)=Capital stock/net output

1997	1998	1999	2000	2001
0.7613	0.6696	0.7079	0.9198	0.9949
0.6965	0.6493	0.7057	0.9631	1.1297
1.5022	1.4353	1.4782	1.6386	1.8610
1.2110	1.2189	1.3890	1.7671	1.7401
1.0383	1.0890	1.0351	1.1946	1.2964
1.3290	1.4132	1.4743	1.4382	1.6119
0.9437	1.0073	1.1654	1.3043	1.4844
1.6692	1.6085	1.7708	1.9461	2.2909
2.1178	2.0806	2.0775	2.4399	2.6564
1.5052	1.6937	1.8714	1.6687	1.7539
1.2036	1.1941	1.2210	1.4367	1.5954
1.3044	1.3638	1.4774	1.5762	1.7428
1.3192	1.3713	1.4780	1.5915	1.7635

k(0)=the capital-labour ratio 千元(thousand yuan)

1997	1998	1999	2000	2001
6.012	5.822	6.581	8.504	10.602
5.110	5.264	6.120	8.299	10.642
4.814	4.985	5.384	6.386	7.932
4.967	5.457	6.371	8.504	9.383
10.352	11.801	12.314	14.017	17.091
5.524	6.291	6.899	7.373	9.008
3.549	4.000	4.716	5.601	7.008
4.617	4.601	5.139	5.898	7.610
4.518	4.797	4.963	6.191	7.161
3.785	4.464	5.098	5.023	5.838
7.145	7.670	8.385	10.133	12.533
4.597	5.138	5.764	6.622	8.004
4.824	5.365	6.006	6.943	8.421

v(0)=A(0)k(0)^alpha 千元(thousand yuan)

1997	1998	1999	2000	2001
7.898	8.695	9.295	9.245	10.656
7.336	8.106	8.672	8.616	9.420
3.205	3.473	3.643	3.897	4.263
4.101	4.477	4.587	4.813	5.392
9.970	10.836	11.897	11.733	13.184
4.156	4.452	4.679	5.126	5.588
3.761	3.970	4.047	4.294	4.721
2.766	2.860	2.902	3.031	3.322
2.133	2.306	2.389	2.538	2.696
2.515	2.635	2.724	3.010	3.329
5.936	6.423	6.868	7.053	7.856
3.525	3.767	3.902	4.201	4.593
3.657	3.912	4.063	4.363	4.775

T9–10 Form of RP 2

Table 9. Data and ratios necessary for the model

		$g_{Y(actual)}$	$g_{K(actual)}$	n	$L(0)$ x 10000	$K(0)$	$S_{\Pi}(0)$
全 国	China: total						
	1998	0.07837	0.12098	0.00785	123282	66141.60	2358.77
	1999	0.04645	0.12790	0.00760	124219	74600.87	2529.35
	2000	0.09195	0.17579	0.01698	126328	87715.19	2885.05
	2001	0.09850	0.21721	0.00360	126783	106768.00	3131.42
9*. 上 海	Shanghai						
	1998	0.09213	0.14553	0.00480	1464	1727.70	153.52
	1999	0.10533	0.05060	0.00683	1474	1815.13	161.95
	2000	0.12009	0.29270	0.13569	1674	2346.42	185.84
	2001	0.08337	0.17565	-0.03584	1614	2758.56	200.03
G 4 直轄市	4 Direct Cities						
	1998	0.08767	0.07911	0.00523	6727	5159.44	295.39
	1999	0.07525	0.09947	0.00565	6765	5672.67	318.23
	2000	0.08499	0.27664	0.05647	7147	7241.94	376.56
	2001	0.10620	0.22841	-0.00686	7098	8896.07	421.25
A 北部三省	North						
	1998	0.09238	0.04369	0.00784	12086	6025.00	205.92
	1999	0.05689	0.08851	0.00778	12180	6558.28	215.00
	2000	0.09076	0.20912	0.01946	12417	7929.77	250.33
	2001	0.08764	0.23522	-0.00556	12348	9795.02	275.56
C 東部沿海	East						
	1998	0.07812	0.14640	0.00657	34150	21483.98	784.23
	1999	0.05749	0.10318	0.00600	34355	23700.63	831.78
	2000	0.10943	0.08227	0.01269	34791	25650.50	887.58
	2001	0.09550	0.22780	0.00494	34963	31493.58	967.98
E 西南内陸	West-South						
	1998	0.09199	0.07280	0.01032	16547	7937.90	180.10
	1999	0.04614	0.04458	0.00973	16708	8291.75	178.27
	2000	0.04292	0.22488	-0.01819	16404	10156.43	208.76
	2001	0.10026	0.19785	0.03566	16989	12165.91	216.46

in recursive programming

$D(0)$	$\Pi(0)$	$W(0)$	$Y(0)$	$S(0)$
		100 million RMB		億元(yuan)
1885.10	4243.86	43988.95	48232.81	17192.34
2017.48	4546.83	45926.43	50473.26	18055.68
2281.17	5166.22	49948.06	55114.28	19835.02
2476.95	5608.37	54934.65	60543.02	22112.11
153.52	307.04	1279.41	1586.45	1563.02
161.95	323.91	1429.65	1753.56	1220.70
185.84	371.67	1592.48	1964.15	1297.28
200.03	400.06	1727.84	2127.90	1377.35
248.10	543.49	3777.33	4320.82	3099.00
266.14	584.37	4061.60	4645.97	2800.68
312.99	689.55	4351.28	5040.83	3040.89
347.51	768.76	4807.39	5576.15	3523.25
137.28	343.20	3854.67	4197.87	1305.26
143.33	358.34	4078.33	4436.67	1784.78
166.89	417.22	4422.11	4839.33	1947.61
183.71	459.27	4804.17	5263.44	2081.04
784.23	1568.45	13633.65	15202.10	5518.06
831.78	1663.56	14412.44	16076.00	5825.42
887.58	1775.17	16060.00	17835.17	6417.83
967.98	1935.96	17602.47	19538.43	6971.82
120.06	300.16	3515.07	3815.23	1339.72
118.85	297.11	3694.14	3991.25	1352.40
139.17	347.93	3814.65	4162.58	1461.08
144.31	360.77	4219.14	4579.91	1699.48

T9–10 Form of RP 2

Table 10 Key ratios calculated using data: for the model

		alpha	*Omega*(0)	*r*(0)	*k*(0)	*y*(0)	*s*
全　　国	China: total				1000 yuan	1000 yuan	
	1998	0.0880	1.3713	0.0642	5.365	3.912	0.3564
	1999	0.0901	1.4780	0.0609	6.006	4.063	0.3577
	2000	0.0937	1.5915	0.0589	6.943	4.363	0.3599
	2001	0.0926	1.7635	0.0525	8.421	4.775	0.3652
9*. 上 海	Shanghai						
	1998	0.1935	1.0890	0.1777	11.801	10.836	0.9852
	1999	0.1847	1.0351	0.1784	12.314	11.897	0.6961
	2000	0.1892	1.1946	0.1584	14.017	11.733	0.6605
	2001	0.1880	1.2964	0.1450	17.091	13.184	0.6473
G 4 直轄市	4 Direct Cities						
	1998	0.1258	1.1941	0.1053	7.670	6.423	0.7172
	1999	0.1258	1.2210	0.1030	8.385	6.868	0.6028
	2000	0.1368	1.4367	0.0952	10.133	7.053	0.6033
	2001	0.1379	1.5954	0.0864	12.533	7.856	0.6318
A 北部三省	North						
	1998	0.0818	1.4353	0.0570	4.985	3.473	0.3109
	1999	0.0808	1.4782	0.0546	5.384	3.643	0.4023
	2000	0.0862	1.6386	0.0526	6.386	3.897	0.4025
	2001	0.0873	1.8610	0.0469	7.932	4.263	0.3954
C 東部沿海	East						s
	1998	0.1032	1.4132	0.0730	6.291	4.452	0.3630
	1999	0.1035	1.4743	0.0702	6.899	4.679	0.3624
	2000	0.0995	1.4382	0.0692	7.373	5.126	0.3598
	2001	0.0991	1.6119	0.0615	9.008	5.588	0.3568
E 西南内陸	West-South						
	1998	0.0787	2.0806	0.0367	4.797	2.306	0.3511
	1999	0.0744	2.0775	0.0357	4.963	2.389	0.3388
	2000	0.0836	2.4399	0.0341	6.191	2.538	0.3510
	2001	0.0788	2.6564	0.0295	7.161	2.696	0.3711

in recursive programming

s_{Π}	s_H	$s_{SP/Y}$	$A(0)$	$g_{A(\text{actual})}$
0.5558	0.3234	0.0489	3.3748	0.0652
0.5563	0.3238	0.0501	3.4573	0.0278
0.5584	0.3245	0.0523	3.6381	0.0591
0.5583	0.3306	0.0517	3.9200	0.0748
0.5000	0.9903	0.0968	6.7209	0.0714
0.5000	0.6695	0.0924	7.4818	0.0898
0.5000	0.6291	0.0946	7.1194	-0.0399
0.5000	0.6147	0.0940	7.7317	0.0824
0.5435	0.6992	0.0684	4.9711	0.0799
0.5446	0.5758	0.0685	5.2559	0.0575
0.5461	0.5736	0.0747	5.1381	-0.0015
0.5480	0.6043	0.0755	5.5439	0.0812
0.6000	0.2760	0.0491	3.0458	0.0854
0.6000	0.3726	0.0485	3.1795	0.0423
0.6000	0.3707	0.0517	3.3216	0.0539
0.6000	0.3628	0.0524	3.5579	0.0726
0.5000	0.3295	0.0516	3.6822	0.0629
0.5000	0.3287	0.0517	3.8317	0.0412
0.5000	0.3274	0.0498	4.2020	0.0887
0.5000	0.3244	0.0495	4.4946	0.0681
0.6000	0.3197	0.0472	2.0381	0.0804
0.6000	0.3085	0.0447	2.1203	0.0335
0.6000	0.3174	0.0502	2.1789	0.0416
0.6000	0.3406	0.0473	2.3086	0.0500

11–12 Transi sign slop speed 2

Table 11 Transitional path: each sign and slope by region and year in China

	delta	$\delta = LOG(m,k)$	*beta*	$\beta^{-}_{delta=0}$	*m*	Signs	Region & situation	Slope
(1) China total								
1998	0.01633	–1.04213	0.90094	0.61696	0.17366	–/– = +	1 DRC	3.727
1999	0.04707	–0.87545	0.89144	0.63512	0.20817	–/– = +	1 DRC	3.599
2000	0.01683	–0.82888	0.90815	0.67356	0.20065	–/– = +	1 DRC	3.605
2001	0.01087	–0.77051	0.91159	0.66819	0.19364	–/– = +	1 DRC	3.210
(2) Shanghai								
1998	0.01089	–1.94877	0.99407	0.57845	0.00815	–/– = +	1 DRC	4.715
1999	0.01082	–1.56292	0.98496	0.56647	0.01976	–/– = +	1 DRC	3.760
2000	12.71000	1.21824	0.34043	0.73673	24.94015	–/+ = –	6 DRC	–255.090
2001	0.01313	–1.43757	0.98820	0.57210	0.01690	–/– = +	1 DRC	3.486
(3) 4 Direct Cities								
1998	0.01439	–1.53661	0.96949	0.58308	0.04370	–/– = +	1 DRC	4.014
1999	0.02029	–1.36136	0.96264	0.58991	0.05530	–/– = +	1 DRC	3.707
2000	14.50346	#NUM!	0.12211	0.69657	–37.69523	+/+ = +	5 DRC	#NUM!
2001	0.01233	–1.15084	0.97060	0.64021	0.05449	–/– = +	1 DRC	3.521
(4) Region North								
1998	0.00852	–0.94673	0.88348	0.62859	0.21852	–/– = +	1 DRC	3.748
1999	0.02999	–0.99465	0.89994	0.63164	0.18740	–/– = +	1 DRC	3.819
2000	0.02072	–0.83872	0.90639	0.68034	0.21117	–/– = +	1 DRC	3.802
2001	0.01243	–0.80267	0.91173	0.65924	0.18970	–/– = +	1 DRC	3.228
(5) Region East								
1998	–0.32988	–2.18773	0.98919	0.62527	0.01789	–/– = +	2 DRC	5.105
1999	0.02858	–0.96702	0.91711	0.63436	0.15449	–/– = +	1 DRC	3.521
2000	0.00876	–0.92377	0.91649	0.64136	0.15795	–/– = +	1 DRC	3.389
2001	0.01329	–0.79929	0.91478	0.65224	0.17258	–/– = +	1 DRC	3.095
(6) Region West–South								
1998	0.00608	–0.80317	0.89754	0.71780	0.28382	–/– = +	1 DRC	4.502
1999	0.03560	–0.71304	0.88549	0.71595	0.31910	–/– = +	1 DRC	4.416
2000	0.02384	–0.74740	0.89720	0.68108	0.25599	–/– = +	1 DRC	3.569
2001	0.00785	–0.43956	0.91467	0.82672	0.42091	–/– = +	1 DRC	5.087

Note: This idea comes from Kamiryo [2003b].

11–12 Transi sign slop speed 2

Table 12 Comparisons in variables with the speed by region and year in China

	Speed (1): $\Omega(0)\neq\Omega^*$					Speed (2): $\Omega(0)=\Omega^*$				
	Speed	$g_A(t)$	$g_y(t)=gk(t)$	$\Omega(t)=k(t)/y(t)$	$r(t)$	Speed	$g_A(t)$	$g_y(t)=gk(t)$	$\Omega(t)=k(t)/y(t)$	$r(t)$
(1) China total										
1998	80	0.08656	0.09530	2.00553	0.04387	66	0.11303	0.12458	1.36352	0.06453
1999	94	0.05840	0.06436	3.28246	0.02744	62	0.10701	0.11821	1.49307	0.06033
2000	52	0.08294	0.09190	1.95074	0.04805	71	0.09795	0.10861	1.57274	0.05960
2001	71	0.09371	0.10376	1.93820	0.04779	62	0.10019	0.11097	1.76000	0.05263
(2) Shanghai										
1998	71	0.12384	0.15577	4.23818	0.04567	29	0.33259	0.42765	1.09310	0.17706
1999	48	0.13034	0.16216	2.61636	0.07060	34	0.24550	0.30902	1.03748	0.17804
2000	43	0.04037	0.05002	2.63350	0.07185	29	0.14262	0.17873	1.19494	0.15836
2001	62	0.13479	0.16851	3.17327	0.05925	43	0.22612	0.28538	1.29746	0.14490
(3) 4 Direct Cities										
1998	85	0.11954	0.13788	3.25318	0.03866	34	0.24240	0.28182	1.19593	0.10518
1999	62	0.10096	0.11630	3.22175	0.03904	52	0.20151	0.23367	1.22358	0.10280
2000	52	0.06459	0.07520	3.18553	0.04294	39	0.14889	0.17445	1.44807	0.09447
2001	57	0.13232	0.15505	2.63891	0.05224	39	0.18556	0.21827	1.59600	0.08638
(4) Region North										
1998	76	0.08769	0.09586	1.63595	0.04997	62	0.09610	0.10510	1.42805	0.05725
1999	71	0.07152	0.07804	3.00818	0.02685	66	0.12122	0.13255	1.48772	0.05429
2000	57	0.08487	0.09324	2.16088	0.03990	52	0.10575	0.11628	1.64170	0.05252
2001	62	0.09821	0.10809	2.24221	0.03892	52	0.11160	0.12290	1.84459	0.04730
(5) Region East										
1998	71	0.08602	0.09638	2.07241	0.04978	90	0.11259	0.12633	1.40657	0.07335
1999	76	0.06960	0.07794	2.73261	0.03787	62	0.10915	0.12249	1.47877	0.06998
2000	52	0.09779	0.10917	1.62307	0.06132	57	0.10674	0.11922	1.43214	0.06950
2001	62	0.09268	0.10339	1.86231	0.05321	57	0.10274	0.11467	1.60287	0.06182
(6) Region West-South										
1998	76	0.07883	0.08585	2.17956	0.03610	66	0.08095	0.08816	2.10707	0.03734
1999	94	0.05096	0.05517	3.50003	0.02127	62	0.07978	0.08646	2.06343	0.03608
2000	131	0.07019	0.07684	3.85408	0.02169	80	0.09228	0.10111	2.44878	0.03413
2001	71	0.05557	0.06047	2.55120	0.03088	94	0.05307	0.05773	2.65315	0.02969

T13F1–2 Curve of delt to beta 3

Table 13 The relationship between delta and

(1) China total

beta	*delta* 1998	*delta* 1999	*delta* 2000	*delta* 2001
0.5	0.2926	0.3188	0.4024	0.3337
0.6	0.0434	0.0851	0.1745	0.1400
0.7	–0.2251	–0.1667	–0.0665	–0.0698
0.8	–0.5500	–0.4714	–0.3541	–0.3246
0.9	–1.0359	–0.9268	–0.7799	–0.7066
0.95	–1.4820	–1.3449	–1.1685	–1.0578
0.975	–1.9107	–1.7467	–1.5410	–1.3956
beta	0.9009	0.8914	0.9081	0.9116
delta	–1.0421	–0.8755	–0.8289	–0.7705

(3) 4 Direct Cities

beta	*delta* 1998	*delta* 1999	*delta* 2000	*delta* 2001
0.5	0.1662	0.1730	0.4141	0.2244
0.6	–0.0346	–0.0199	0.2056	0.0667
0.7	–0.2528	–0.2293	–0.0077	–0.1061
0.8	–0.5183	–0.4839	–0.2565	–0.3179
0.9	–0.9171	–0.8662	–0.6188	–0.6375
0.95	–1.2841	–1.2180	–0.9465	–0.9325
0.975	–1.6373	–1.5563	–1.2593	–1.2167
beta	0.9695	0.9626	0.1221	0.9706
delta	–1.5366	–1.3614	#NUM!	–1.1508

(5) Region East

beta	*delta* 1998	*delta* 1999	*delta* 2000	*delta* 2001
0.5	0.2855	0.2921	0.3061	0.2921
0.6	0.0591	0.0768	0.0917	0.1034
0.7	–0.1853	–0.1558	–0.1376	–0.1007
0.8	–0.4815	–0.4377	–0.4133	–0.3482
0.9	–0.9249	–0.8598	–0.8238	–0.7189
0.95	–1.3322	–1.2476	–1.1998	–1.0596
0.975	–1.7237	–1.6204	–1.5606	–1.3871
beta	0.9892	0.9171	0.9165	0.9148
delta	–2.1877	–0.9670	–0.9238	–0.7993

Note: The last two lines of each area show the case of the current *beta* under DRC.

beta under CRC by region and year in China

(2) Shanghai

beta	*delta* 1998	*delta* 1999	*delta* 2000	*delta* 2001
0.5	0.1289	0.1077	0.5349	0.0957
0.6	–0.0362	–0.0555	0.2992	–0.0384
0.7	–0.2159	–0.2326	0.0824	–0.1876
0.8	–0.4347	–0.4482	–0.1549	–0.3726
0.9	–0.7636	–0.7719	–0.4860	–0.6545
0.95	–1.0665	–1.0697	–0.7787	–0.9161
0.975	–1.3580	–1.3563	–1.0554	–1.1686
beta	0.9941	0.9850	0.3404	0.9882
delta	–1.9488	–1.5629	1.2182	–1.4376

(4) Region North

beta	*delta* 1998	*delta* 1999	*delta* 2000	*delta* 2001
0.5	0.3396	0.3295	0.4403	0.3116
0.6	0.0774	0.0813	0.2007	0.1207
0.7	–0.2046	–0.1863	–0.0521	–0.0892
0.8	–0.5452	–0.5103	–0.3534	–0.3468
0.9	–1.0540	–0.9950	–0.7989	–0.7364
0.95	–1.5208	–1.4401	–1.2052	–1.0963
0.975	–1.9692	–1.8678	–1.5946	–1.4431
beta	0.8835	0.8999	0.9064	0.9117
delta	–0.9467	–0.9946	–0.8387	–0.8027

(6) Region West–South

beta	*delta* 1998	*delta* 1999	*delta* 2000	*delta* 2001
0.5	0.6281	0.6081	0.3810	1.0452
0.6	0.3513	0.3377	0.1804	0.7178
0.7	0.0569	0.0498	–0.0459	0.4215
0.8	–0.2962	–0.2956	–0.3291	0.0998
0.9	–0.8205	–0.8086	–0.7640	–0.3465
0.95	–1.3001	–1.2779	–1.1697	–0.7399
0.975	–1.7601	–1.7282	–1.5622	–1.1114
beta	0.8975	0.8855	0.8972	0.9147
delta	–0.8032	–0.7130	–0.7474	–0.4396

T13F1-2Curve of delt to beta 3

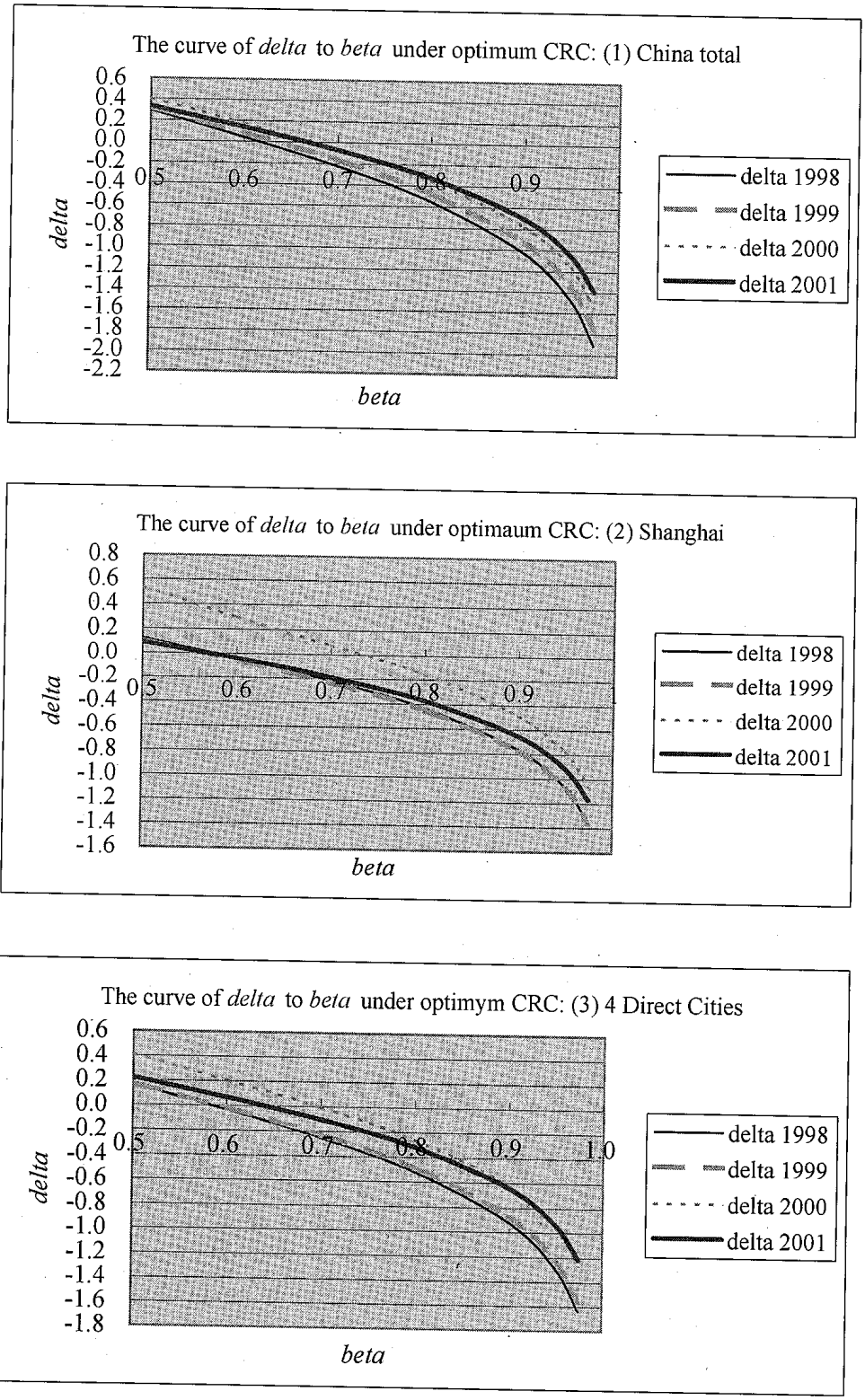
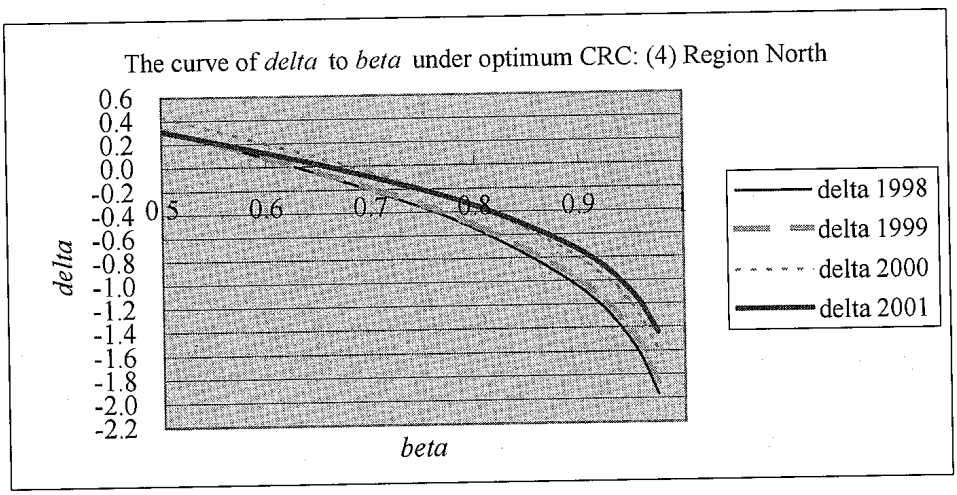
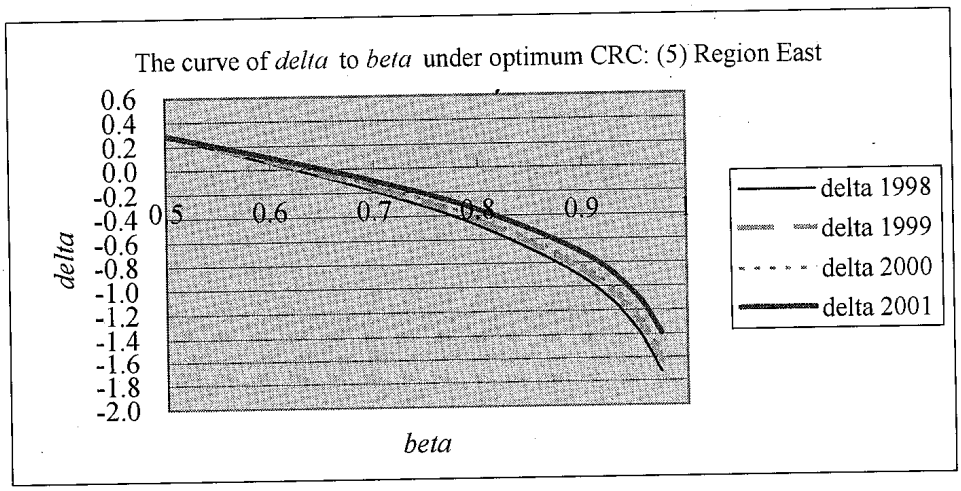


Figure 1. The relationship between *delta* and *beta* under CRC by region and year in China (1)

T13F1-2Curve of delt to beta 3





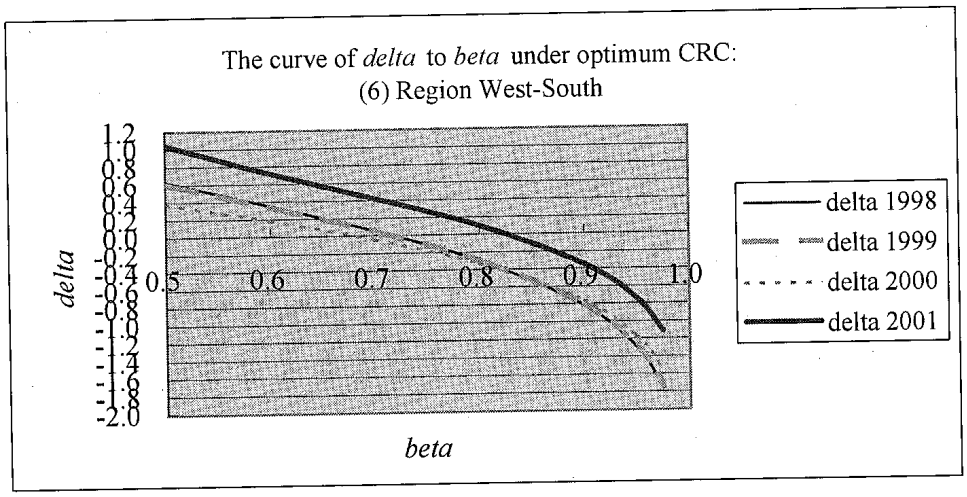


Figure 2. The relationship between *delta* and *beta* under CRC by region and year in China (2)

T14SIMU for profit Chinatotal 1

Table 14 What reduces the rate of technological progress, $g_A(t)$?: simulation using China total 2001

	n	$L(0)$	$K(0)$	$S_{\Pi}(0)$	$D(0)$	$\Pi(0)$	$W(0)$	$Y(0)$	$S(0)$	$S_H(0)$	*alpha=delta* t=1000			
	0.0036	12678	106768	3131	2477	5608	54935	60543	22112	18981	Variables under optimum CRC situation			
0.0	α	$\Omega(0)$	$r(0)$	$k(0)$	$y(0)$	s	s_{Π}	s'_H	$s_{SH/Y}$	$s_{SH/Y}$	$g_A(t)$	$g_y(t)$	$\Omega(t)=k(t)/y(t)$	$r(t)$
	0.09263	1.76351	0.05253	8.42132	4.77533	0.36523	0.55830	0.33061	0.05172	0.31351	0.10019	0.11097	1.76000	0.05263
1-1. Decrease Profit, Π, by 0.25 from 5608 to 4206:														
	0.07112	1.80531	0.03940	8.42132	4.66474	0.37389	0.55830	0.34800	0.03971	0.33418	0.10169	0.10989	1.80330	0.03944
1-2. Increase Profit, Π, by 0.25 from 5608 to 7010:														
	0.11317	1.72359	0.06566	8.42132	4.88592	0.35696	0.55830	0.31359	0.06318	0.29378	0.09876	0.11204	1.71869	0.06585
2-1. Increase *beta** by 0.25 from 0.668827 to 0.891769 under 0.0:														
	0.09263	1.76351	0.05253	8.42132	4.77533	0.36523	0.55830	0.33061	0.05172	0.31351	0.03274	0.03615	6.76568	0.01369
2-2. Increase *beta** by 0.25 from 0.668827 to 0.891769 under 1.1:														
	0.07112	1.80531	0.03940	8.42132	4.66474	0.37389	0.55830	0.34800	0.03971	0.33418	0.03323	0.03582	6.92318	0.01027
3-1. Decrease the retention ratio, s_{Π}, by 0.25 from 0.55830 to 0.418725 under 0.0:														
	0.09263	1.76351	0.05253	8.42132	4.77533	0.36523	0.41873	0.33961	0.03879	0.32644	0.09933	0.11001	1.75959	0.05265
3-2. Decrease the retention ratio, s_{Π}, by 0.25 from 0.55830 to 0.418725 under 1.1:														
	0.11317	1.72359	0.06566	8.42132	4.88592	0.35696	0.41873	0.32497	0.04739	0.30957	0.09771	0.11085	1.71823	0.06587
3-3. Increase the retention ratio, s_{Π}, by 0.25 from 0.55830 to 0.7444 under 0.0:														
	0.09263	1.76351	0.05253	8.42132	4.77533	0.36523	0.74440	0.31822	0.06896	0.29627	0.10133	0.11224	1.76052	0.05262
3-4. Increase the retention ratio, s_{Π}, by 0.25 from 0.55830 to 0.7444 under 1.1:														
	0.11317	1.72359	0.06566	8.42132	4.88592	0.35696	0.74440	0.29781	0.08425	0.27272	0.10015	0.11364	1.71930	0.06582
4.1. Decrease saving/net investment, $S=\Delta K$, by 0.25 from 22112 to 16584 under 0.0:														
	0.09263	1.76351	0.05253	8.42132	4.77533	0.27392	0.55830	0.23432	0.05172	0.22220	0.07600	0.08407	1.74458	0.05310
4.2. Increase saving/net investment, $S=\Delta K$, by 0.25 from 22112 to 27640 under 0.0:														
	0.09263	1.76351	0.05253	8.42132	4.77533	0.45654	0.55830	0.42690	0.05172	0.40482	0.12438	0.13792	1.76879	0.05237
5.1. Decrease wages, W, by 0.1 from to under 0.0:														
	0.10188	1.93949	0.05253	8.42132	4.34203	0.40168	0.55830	0.36559	0.05688	0.34480	0.11019	0.12343	1.74570	0.05836
5.2. Increase wages, W, by 0.1 from to under 0.0:														
	0.08493	1.61680	0.05253	8.42132	5.20862	0.33485	0.55830	0.30174	0.04742	0.28743	0.09185	0.10080	1.77080	0.04796
6.1. Decrease the growth rate of population, n, from 0.0036 to under 0.0:														
	0.09263	1.76351	0.05253	8.42132	4.77533	0.36523	0.55830	0.33061	0.05172	0.31351	0.10019	0.11097	1.82343	0.05080
6.2. Increase the growth rate of population, n, from 0.0036 to 0.01 under 0.0:														
	0.09263	1.76351	0.05253	8.42132	4.77533	0.36523	0.55830	0.33061	0.05172	0.31351	0.10019	0.11097	1.65749	0.05589
7.1. Decrease capital stock, K, by 0.1 from 106768 to 96091.2 under 0.0:														
	0.09263	1.58716	0.05837	7.57919	4.77533	0.36523	0.55830	0.33061	0.05172	0.31351	0.10019	0.11097	1.76000	0.05263
7.2. Increase capital stock, K, by 0.1 from 106768 to 117444. 8 under 0.0:														
	0.09263	1.93986	0.04775	9.26345	4.77533	0.36523	0.55830	0.33061	0.05172	0.31351	0.10019	0.11097	1.76000	0.05263

T15F3-4SIMU beta gA & speed 2

Table 15. The relationship between beta, the rate of technological progress, and the speed of convergence

by region for 2001 under CRC, where *alpha=delta* t=1000

(1) China total 2001 (2) Shanghai 2001

Variables under optimum CRC situation						Variables under optimum CRC situation					
beta	$g_A(t)$	$g_y(t)$	$\Omega(t)=k(t)/y(t)$	$r(t)$	speed	*beta*	$g_A(t)$	$g_y(t)$	$\Omega(t)=k(t)/y(t)$	$r(t)$	speed
0.66883	0.10019	0.11097	1.7600	0.05263	62*	0.57862	0.22612	0.28538	1.2975	0.14490	34*
0.7	0.09076	0.10048	2.0277	0.04568	66	0.7	0.16099	0.20182	2.3663	0.07945	66
0.75	0.07563	0.08367	2.5910	0.03575	76	0.75	0.13416	0.16770	3.1980	0.05879	76
0.8	0.06051	0.06688	3.4220	0.02707	80	0.8	0.10733	0.13377	4.6092	0.04079	85
0.85	0.04538	0.05013	4.7702	0.01942	141	0.85	0.08049	0.10004	7.5255	0.02498	238
0.9	0.03025	0.03339	7.3365	0.01263	159	0.9	0.05366	0.06649	17.0843	0.01100	268
0.95	0.01513	0.01668	14.1274	0.00656	288	0.95	0.02683	0.03393	2984	0.00006	No conv.
0.975	0.00756	0.00834	24.6445	0.00376	478	0.975	0.01342	0.02039	332435296	0.00000	No conv.
0.91159	0.10946	0.12033	2.3773	0.03897	No conv.	0.98820	0.15342	0.18190	5.2263	0.03597	No conv.

(3) 4 Direct Cities in 2001(4) Region North in 2001

Variables under optimum CRC situation						Variables under optimum CRC situation					
beta	$g_A(t)$	$g_y(t)$	$\Omega(t)=k(t)/y(t)$	$r(t)$	speed	*beta*	$g_A(t)$	$g_y(t)$	$\Omega(t)=k(t)/y(t)$	$r(t)$	speed
0.64356	0.18556	0.21827	1.5960	0.08638	39*	0.65849	0.11160	0.12290	1.8446	0.04730	52*
0.7	0.15618	0.18332	2.0799	0.06628	39	0.7	0.09803	0.10789	2.2485	0.03881	52
0.75	0.13015	0.15247	2.7007	0.05105	48	0.75	0.08169	0.08984	2.9251	0.02983	76
0.8	0.10412	0.12174	3.6517	0.03775	85	0.8	0.06535	0.07182	3.9692	0.02198	90
0.85	0.07809	0.09113	5.2903	0.02606	90	0.85	0.04902	0.05383	5.7906	0.01507	117
0.9	0.05206	0.06063	8.7813	0.01570	116	0.9	0.03268	0.03586	9.7715	0.00893	206
0.95	0.02603	0.03025	21.3295	0.00646	297	0.95	0.01634	0.01791	25.3311	0.00344	454
0.975	0.01301	0.01511	62.2395	0.00222	726	0.975	0.00817	0.00897	90.8353	0.00096	1400
0.97060	0.14863	0.17090	3.5036	0.03935	No conv.	0.91173	0.11167	0.12207	2.7753	0.03144	No conv.

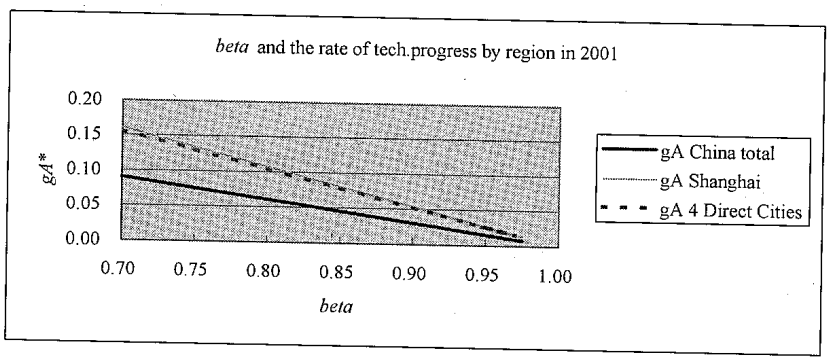
(5) Region East in 2001(6) Region West-South in 2001

Variables under optimum CRC situation						Variables under optimum CRC situation					
beta	$g_A(t)$	$g_y(t)$	$\Omega(t)=k(t)/y(t)$	$r(t)$	speed	*beta*	$g_A(t)$	$g_y(t)$	$\Omega(t)=k(t)/y(t)$	$r(t)$	speed
0.65215	0.10274	0.11467	1.6029	0.06182	62*	0.82676	0.05307	0.05773	2.6531	0.02969	90*
0.7	0.08861	0.09882	1.9833	0.04996	48	0.7	0.09189	0.10013	1.5386	0.05120	48
0.75	0.07384	0.08229	2.5278	0.03920	71	0.75	0.07658	0.08339	1.8827	0.04184	57
0.8	0.05907	0.06578	3.3260	0.02979	90	0.8	0.06126	0.06667	2.3403	0.03366	76
0.85	0.04431	0.04930	4.6084	0.02150	117	0.85	0.04595	0.04997	2.9785	0.02645	76
0.9	0.02954	0.03284	7.0066	0.01414	168	0.9	0.03063	0.03329	3.9304	0.02004	108
0.95	0.01477	0.01641	13.0956	0.00757	416	0.95	0.01532	0.01664	5.5020	0.01432	108
0.975	0.00738	0.00820	21.8497	0.00453	574	0.975	0.00766	0.00832	6.7459	0.01168	131
0.91478	0.10808	0.11961	2.3183	0.04274	No conv.	0.91467	0.06213	0.06735	2.7314	0.02884	No conv.

Note:
1. The speed of convergence with * is that under $\Omega(0)=\Omega^*$(under optimum CRC).
2. The speed of convergence without * is that under CRC, where Ω^* differs from $\Omega(0)$.
3. The last line of each region shows those values at t=300 under DRC/IRC (with the current *beta* with *delta*=0).

T15F3–4SIMU beta gA & speed 2

F3-1



F3-2

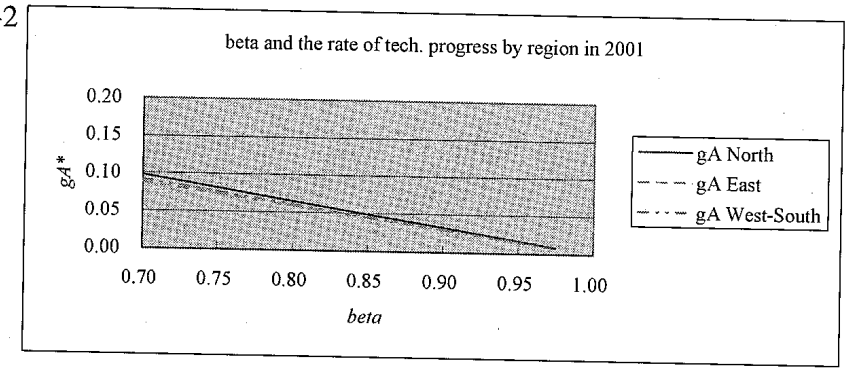
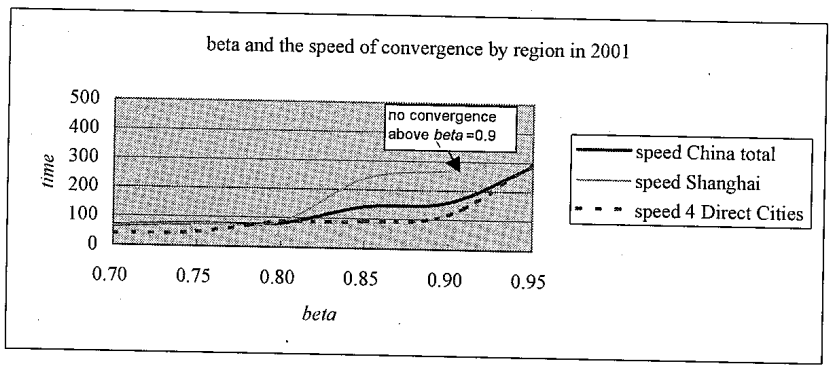


Figure 3. The relationship between *beta* and the rate of technological progress under CRC by region for 2001

F4-1



F4-2

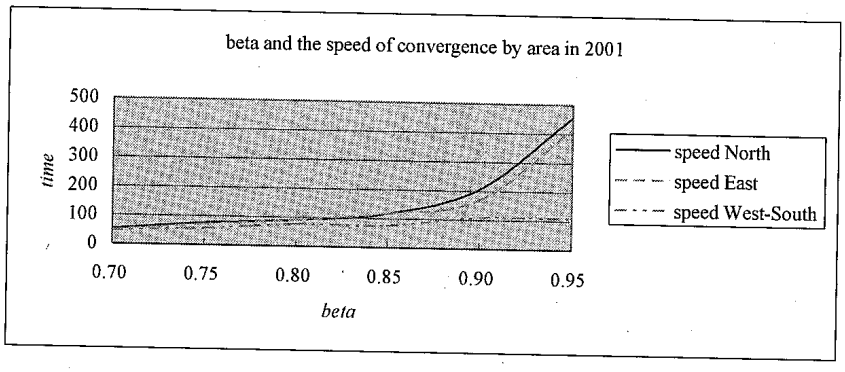


Figure 4. The relationship between *beta* and the speed of convergence under CRC by region for 2001

中国の地域別内生的成長率における構造：持続的成長への要諦

上　領　英　之

要　約

1．研究目的と帰結：地域別にみた中国経済の内生的成長率（理論値）は，the Kamiryo model[2002] を適用した場合，どのように測定されるのか。また，計画成長率を設定した場合，どの程度達成できるのか。その方法論とそれから得られる帰結を提供することを，本ノートの目的とする。内性的成長率は，recursive programming based on the Cobb-Douglas production function（逐次的な解法）に従うため，実績成長率と関連してはいるが，むしろ計画成長率値のあるべき姿を強く示唆できる。内生的成長率は，政策パラメータ（本ノートでは，構造改革および規制緩和の部門別加重平均として calibrate される *beta* 値に限定）に対応して異なる値を示す。そのような成長率の有効範囲は，計画値における *beta* 値が実際の *beta* 値から大きく遊離しない範囲内に止められるべきであろう。たとえば，1999–2002の平均値を対象として，中国合計でみると，実際の*beta*値が0.9前後にあり（Table 11参照），計画成長率をかりに7%とすると，その場合に要求される *beta* 値は，0.8である（Figure 3参照）。また，上海市でみると，実際の *beta* 値が0.98の高いレベルにあるにもかかわらず，内生的成長率は，理論値の場合（under optimum CRC），15%であり，その場合に要求される *beta* 値は，0.6である。上海市の場合，計画成長率をかりに7%とすると，その場合に要求される *beta* 値は，0.88である。いかなる成長率に対しても，計画値における *beta* 値と実際の *beta* 値とを比較することによって，達成の難易・安定度を manifest できる。さら

に，経済システムが有効に働いているか否かを識別可能である。ちなみに，日本の現状分析の結果 [Kamiryo, 2002/7] は，構造改革をリードしない，先送りの経済システムが今日までの十数年にわたって内生的成長率をマイナスに釘付けし，プラスに転化できないことを論証している。

2．原データ出所：年度別中国統計年鑑 (China Statistical Yearbook compiled by National Bureau of Statistics, People's Republic of China: China Statistics Press)

3．研究対象：1997–2001年の5年間にわたる地域別国民経済計算（SNA）主要勘定を，対象とする。地域（region）は，所定の31地域から，4直轄市（上海市，北京市，天津市および重慶市）を分離，分離後の各地域を六つに分ける。6地域は，北部三省，東北三省，東部沿岸，中部沿岸，西南内陸および西部内陸である。地域別は，最終的に，4直轄市，地域合計および中国合計にまとめられる。

4．方法論：方法論は，モデルに要求されるデータ整序に必要な方法論と，recursive programming における整合性維持のための方法論からなる。それらの方法論は，本来一体である。データ整序においては，人口，人件費，固定資産投資，減価償却，在庫品増加，経常収支（海外に対する債権の純増）および GDP を用いて，三つの未知数（固定資産，利益（operating surplusより狭い概念であり，社内留保と配当の計），留保性向および貯蓄）と統計上の不突合（errors and omissions）の許容範囲[1)]を，必要な式と乗数を仮定して[2)]，推定しなければならな

1) Nan Zhang [2003, pp. 29-42]. National Accounts と Financial Accounts との関係，とくに，統計上の不突合をどの程度に抑えるべきか等について，感謝の意を表したい。

2) 三つの仮定は，筆者が本ノートにおいてはじめて設定した（英文参照）。とくに，固定資産有高の設定に当たっては，ある年度の初期値を推定するという便宜性を排除し，10年におよぶモデルの諸外国への適用経験に基づいた比率相互の整合性維持にからめて推定できたと考えている。

い。recursive programming に未知および既知のデータを代入して得られる変数の測定結果は，データ整序プロセスおよび関連するシムレーション結果と一体をなすものとして相互に整合性を確保しているか否かの試行錯誤を重ねた。本ノートは，モデルに要求されるデータが未知の場合であっても，原データを加工することによって，モデルを有効に生かし得ることをはじめて確認できたのである。中国における地域別国民経済計算（SNA）それ自体における基盤としての整合性があって，はじめて可能であったと考えている。

5．留意事項：

（1）データ整序における金額推定値の差異や誤差が大きくなっても，内生的成長率測定値には，ほとんど影響しない。その根拠は，第一に，モデルの特性による（Table 14 simulation 結果参照）。第二に，パラメータとしての *beta* 値（企業部門および家計部門の両貯蓄の遣い方を構造改革と規制緩和に即してのレベルとして示すもの）の影響（寄与度）が80台%程度にも及ぶためである。

（2）内生的成長率は，地域別に相当に異なる。しかし，上海市や北京市，天津市，重慶市は必ずしも，成長構造にすぐれているとはいえない。上海市の場合，*beta* 値が0.98（1.0に異常に接近）であり，むしろ危険性をはらんでいる。構造改革を相当にすすめないと（現実には，可能性を越えるレベルにある），収穫不変状態における成長率は高率であっても持続的に達成できないことを示すためである。むしろ，西南内陸地域のように，かなり成長の低い地域であっても，それほど構造改革を必要とせず，その収穫不変状態への収束期間も安定していることを指摘できる。かりに，国全体として，7%の成長を維持していこうとすると，*beta* 値は，今の0.9から0.8近くまで改善しなければならない。この格差（0.9 – 0.8 = 0.1）の大きさそれ自体は，他国に比して，むしろ良好である。今の0.9のままの場合，国全体としての最適成長率は，厳密な前提を置くと，3–4%にとどまる

(Table 15参照)。

(3) 本ノートでは，企業部門の利益をやや大きめに設定した。しかし，利益の減少は，資本利益率を引き下げるのみであり，成長率には，ほとんど影響しない。この資本利益率は，市場金利のベースと連動している。また，利益，貯蓄および *beta* 値以外の値の増減は，成長率には，ごくわずかに影響する程度である。貯蓄の減少の場合には，*beta* 値の変動とともに，技術進歩率したがって，それに近い成長率を大きく引き下げる。収穫不変状態における技術進歩率は，*beta* 値の一次関数であるためである (Figure 3参照)。ここで，技術進歩率の *beta* 値に対する勾配は，つねに投資率（銀行コストをゼロとして，貯蓄率に一致）に等しいことを忘れてはならない。

(4) 本ノートは，桂林における日中経済統計国際会議報告 (Oct 2003) (sars によって延期確定) 準備のためにまとめたデータ整序である。その意図は，中国経済がどの程度の成長率を計画すべきかの，検討資料の提供にある。中国は，他の国よりはるかに，安定的に，高い成長率を維持してきたが，その基盤は，なお，構造改革や規制緩和が進んでいないことを示す。成長率の計画設定は，構造改革や規制緩和のレベルに対応した範囲に止めるべきことが示唆される。*beta* 値が90%台にあるので，いつまでも高率の (特定地域では，13–16% を越える) 成長率を維持できないはずである。現実の収穫逓減・逓増状態と理論上の収穫不変状態との格差がさらに拡大しないように，計画的に *beta* 値と計画成長率を制御することが必要であり，また，そのような制御は，中国の場合には，可能である。

(5) SNA では，固定資産有高には時価を，フローの貯蓄に対応する純固定資産増減には取得原価をとるため，ストックからの ΔK とフローからの ΔK とは，かなり異なる。一つの目安として，1 対 2 の範囲以内となるように，固定資産有高推定を調整する

要がある。その結果，1997年の*k(0)*に使われる係数は，0.18から0.19に再調整した。

(6) *k(0)*に使われる係数 (*k(0)=alpha*÷"the multiplier for *k(0)*" in 3. Data and data setting in English version) についての補足説明：利益分配率と資本・労働比率との関係は，$\frac{w}{r}=\frac{W}{\Pi}\cdot\frac{K}{L}=\frac{1-\alpha}{\alpha}\cdot k$から，$k=(w/r)\alpha/(1-\alpha)$となる。上記係数は，αを α/(1–α) に置き換えて、賃金レート÷利潤率としての w/r 相当分に関連づけることもできるが，ペンローズ曲線のように，利潤率÷市場利子率としての勾配に関連づけないと，内生的な技術進歩率を取り込むことができないと考えている。この点は，別稿に詳述（Uzawa［1969］におけるペンローズ曲線を modify した)。

資料（全地域別： 以下最終頁まで）

1. Sn: Retained earnings　　Assuming sn=0.6 (0.5 for East area)　億元

各 地 域		1997	1998	1999	2000	2001
1*. 北 京	Beijing	67.13	62.06	69.20	88.01	103.12
2*. 天 津	Tianjin	40.72	40.18	45.81	57.98	66.43
3. 河 北	Hebei	127.93	137.66	138.44	161.12	177.95
4. 山 西	Shanxi	52.62	44.99	51.12	55.38	59.32
5. 内蒙古	Inner Mongolia	30.34	23.27	25.44	33.83	38.29
A 北部三省	North	210.89	205.92	215.00	250.33	275.56
6. 遼 宁	Liaoning	119.71	123.91	138.07	172.21	190.12
7. 吉 林	Jilin	32.39	31.45	35.12	43.26	32.95
8. 黑龙江	Heilongjiang	92.13	98.84	106.12	137.76	134.10
B 東北三省	East-North	244.23	254.2	279.32	353.23	357.17
9*. 上 海	Shanghai	142.85	153.52	161.95	185.84	200.03
10. 江 苏	Jiangsu	181.10	200.08	216.68	241.36	261.53
11. 浙 江	Zhejiang	158.08	172.05	185.68	182.89	209.45
12. 安 徽	Anhui	84.59	75.99	78.05	78.09	85.06
13. 福 建	Fujian	88.28	93.68	103.48	123.14	132.40
14. 江 西	Jiangxi	28.16	35.86	27.41	34.62	38.89
15. 山 东	Shangdong	199.73	206.57	220.48	227.49	240.66
C 東部沿海	East	739.94	784.23	831.78	887.58	967.98
16. 河 南	Henan	88.33	106.13	112.73	127.19	132.21
17. 湖 北	Hubei	70.76	79.70	88.85	103.45	120.24
18. 湖 南	Hunan	59.95	64.35	78.40	79.29	85.54
19. 广 东	Guangdong	248.83	234.49	257.37	323.76	380.93
20. 广 西	Guangxi	40.05	40.58	45.24	49.52	42.35
21. 海 南	Hainan	9.46	10.64	11.83	13.05	13.78
D 中部沿海	Middle	517.38	535.88	594.42	696.26	775.04
22*. 重 庆	Chongqing	44.29	39.63	41.27	44.74	51.67
23. 四 川	Sichuan	95.55	87.09	92.08	106.04	109.67
24. 貴 州	Guizhou	20.44	18.21	19.44	24.98	30.13
25. 云 南	Yunnan	63.00	74.14	65.42	76.89	75.37
26. 西 藏	Tibet	0.95	0.65	1.32	0.85	1.30
E 西南内陸	West-South	179.94	180.10	178.27	208.76	216.46
27. 陕 西	Shanxi	33.50	37.66	40.97	38.51	37.23
28. 甘 肃	Gansu	25.59	29.25	31.06	20.93	27.94
29. 青 海	Qinghai	4.33	4.58	4.68	4.24	6.20
30. 宁 夏	Ningxia	4.89	5.16	4.82	5.68	6.19
31. 新 疆	Xinjiang	27.28	26.39	30.79	42.96	40.40
F 西部内陸	West	95.59	103.05	112.33	112.32	117.96
G 4直轄市	4 Direct Cities	294.99	295.39	318.23	376.56	421.25
地域合計	Region: total	1987.97	2063.38	2211.12	2508.49	2710.17
合計	China: total	2282.96	2358.77	2529.35	2885.05	3131.42

2. Y: net output=Profit+W

100 million RMB 億元 (yuan) (1)

各地域		1997	1998	1999	2000	2001
1*. 北京	Beijing	979.34	1083.34	1168.42	1277.71	1473.69
2*. 天津	Tianjin	699.13	775.76	831.68	862.50	945.80
3. 河北	Hebei	2320.53	2483.38	2706.14	2961.54	3223.22
4. 山西	Shanxi	836.71	892.32	862.36	945.74	1023.15
5. 内蒙古	Inner Mongolia	685.63	822.18	868.16	932.05	1017.07
A 北部三省	North	3842.87	4197.87	4436.67	4839.33	5263.44
6. 遼宁	Liaoning	1919.24	2180.77	2254.37	2386.18	2529.88
7. 吉林	Jilin	947.15	1031.16	1084.20	1116.92	1400.92
8. 黑龙江	Heilongjiang	1447.12	1522.10	1532.98	1624.63	1836.68
B 東北三省	East-North	4313.50	4734.03	4871.55	5127.73	5767.48
9*. 上海	Shanghai	1452.62	1586.45	1753.56	1964.15	2127.90
10. 江苏	Jiangsu	3795.82	4064.24	4274.41	4745.32	5277.23
11. 浙江	Zhejiang	2519.89	2693.99	2842.53	3348.18	3672.96
12. 安徽	Anhui	1490.40	1638.83	1690.30	1785.19	1929.78
13. 福建	Fujian	1725.70	1905.45	2030.65	2131.13	2302.70
14. 江西	Jiangxi	1158.99	1223.83	1265.16	1288.18	1348.70
15. 山东	Shangdong	3409.81	3675.77	3972.95	4537.18	5007.06
C 東部沿海	East	14100.62	15202.10	16076.00	17835.17	19538.43
16. 河南	Henan	2752.26	2830.62	2969.75	3316.50	3691.70
17. 湖北	Hubei	2226.46	2393.25	2394.75	2701.27	2908.55
18. 湖南	Hunan	2060.66	2139.26	2206.87	2419.61	2633.81
19. 广东	Guangdong	4011.62	4615.63	4775.55	5188.19	5583.08
20. 广西	Guangxi	1477.65	1359.96	1362.49	1401.49	1602.61
21. 海南	Hainan	260.29	277.80	294.05	320.83	336.71
D 中部沿海	Middle	12788.93	13616.51	14003.46	15347.88	16756.46
22*. 重庆	Chongqing	841.45	875.27	892.31	936.48	1028.76
23. 四川	Sichuan	2019.30	2243.89	2293.60	2439.94	2727.51
24. 貴州	Guizhou	539.48	584.03	628.13	646.23	661.16
25. 云南	Yunnan	875.62	929.72	999.61	995.19	1095.92
26. 西藏	Tibet	59.43	57.59	69.91	81.21	95.32
E 西南内陸	West-South	3493.83	3815.23	3991.25	4162.58	4579.91
27. 陕西	Shanxi	847.73	854.85	887.65	1056.70	1185.73
28. 甘肃	Gansu	456.21	505.59	542.13	614.21	635.45
29. 青海	Qinghai	137.89	145.09	158.70	166.57	192.39
30. 宁夏	Ningxia	134.70	144.87	155.94	166.11	186.26
31. 新疆	Xinjiang	638.61	695.86	703.93	757.17	861.34
F 西部内陸	West	2215.15	2346.25	2448.35	2760.76	3061.16
G 4直轄市	4 Direct Cities	3972.54	4320.82	4645.97	5040.83	5576.15
地域合計	Region: total	40754.90	43911.99	45827.29	50073.45	54966.88
合計	China: total	44727.44	48232.81	50473.26	55114.28	60543.02

3. Π: Profit=(GDP-W-DEP)*0.16

億元

各地域		1997	1998	1999	2000	2001
1*. 北京	Beijing	111.88	103.44	115.33	146.69	171.86
2*. 天津	Tianjin	67.87	66.97	76.35	96.63	110.72
3. 河北	Hebei	213.21	229.44	230.74	268.54	296.59
4. 山西	Shanxi	87.71	74.99	85.19	92.30	98.86
5. 内蒙古	Inner Mongolia	50.56	38.78	42.40	56.38	63.82
A 北部三省	North	351.48	343.20	358.34	417.22	459.27
6. 遼宁	Liaoning	199.51	206.52	230.12	287.01	316.87
7. 吉林	Jilin	53.99	52.42	58.54	72.10	54.92
8. 黑龙江	Heilongjiang	153.56	164.73	176.87	229.60	223.50
B 東北三省	East-North	407.05	423.67	465.53	588.71	595.29
9*. 上海	Shanghai	285.70	307.04	323.91	371.67	400.06
10. 江苏	Jiangsu	362.20	400.16	433.36	482.72	523.05
11. 浙江	Zhejiang	316.16	344.10	371.36	365.79	418.90
12. 安徽	Anhui	169.18	151.98	156.10	156.19	170.12
13. 福建	Fujian	176.55	187.36	206.96	246.28	264.79
14. 江西	Jiangxi	56.32	71.72	54.81	69.23	77.78
15. 山东	Shangdong	399.46	413.14	440.97	454.97	481.32
C 東部沿海	East	1479.88	1568.45	1663.56	1775.17	1935.96
16. 河南	Henan	147.22	176.88	187.88	211.99	220.34
17. 湖北	Hubei	117.94	132.84	148.09	172.41	200.40
18. 湖南	Hunan	99.92	107.25	130.67	132.16	142.56
19. 广东	Guangdong	414.72	390.81	428.95	539.60	634.89
20. 广西	Guangxi	66.75	67.63	75.39	82.54	70.58
21. 海南	Hainan	15.76	17.74	19.72	21.75	22.97
D 中部沿海	Middle	862.30	893.14	990.70	1160.44	1291.74
22*. 重庆	Chongqing	73.82	66.04	68.78	74.57	86.12
23. 四川	Sichuan	159.25	145.15	153.47	176.73	182.78
24. 貴州	Guizhou	34.06	30.35	32.41	41.63	50.22
25. 云南	Yunnan	105.01	123.57	109.03	128.15	125.61
26. 西藏	Tibet	1.58	1.09	2.20	1.41	2.16
E 西南内陸	West-South	299.90	300.16	297.11	347.93	360.77
27. 陕西	Shanxi	55.83	62.77	68.29	64.18	62.06
28. 甘肃	Gansu	42.64	48.76	51.77	34.88	46.56
29. 青海	Qinghai	7.22	7.64	7.80	7.07	10.33
30. 宁夏	Ningxia	8.15	8.60	8.03	9.47	10.31
31. 新疆	Xinjiang	45.47	43.99	51.32	71.60	67.34
F 西部内陸	West	159.32	171.75	187.21	187.20	196.59
G 4直轄市	4 Direct Cities	539.27	543.49	584.37	689.55	768.76
地域合計	Region: total	3559.93	3700.37	3962.46	4476.67	4839.62
合計	China: total	4099.20	4243.86	4546.83	5166.22	5608.37

4. GDP (data) Correction by the author: GDP of 17. Hubei State for 1998 as 3704.21. 億元 (2)

各 地 域		1997	1998	1999	2000	2001
1*. 北 京	Beijing	1870.93	2011.31	2174.46	2478.76	2845.65
2*. 天 津	Tianjin	1240.40	1336.38	1450.06	1639.36	1840.10
3. 河 北	Hebei	3953.78	4256.01	4569.19	5088.96	5577.78
4. 山 西	Shanxi	1473.40	1486.08	1506.78	1643.81	1779.97
5. 内蒙古	Inner Mongolia	1083.14	1192.29	1268.20	1401.01	1545.79
A 北部三省	North	6510.32	6934.38	7344.17	8133.78	8903.54
6. 遼 宁	Liaoning	3490.36	3881.73	4171.69	4669.06	5033.08
7. 吉 林	Jilin	1468.21	1557.78	1660.91	1821.19	2032.48
8. 黑龙江	Heilongjiang	2640.23	2798.89	2897.41	3253.00	3561.00
B 東北三省	East-North	7598.80	8238.40	8730.01	9743.25	10626.56
9*. 上 海	Shanghai	3360.21	3688.20	4034.96	4551.15	4950.84
10. 江 苏	Jiangsu	6609.60	7199.95	7697.82	8582.73	9511.91
11. 浙 江	Zhejiang	4619.03	4987.50	5364.89	6036.34	6748.15
12. 安 徽	Anhui	2669.95	2805.45	2908.58	3038.24	3290.13
13. 福 建	Fujian	3005.07	3286.56	3550.24	3920.07	4253.68
14. 江 西	Jiangxi	1664.58	1851.98	1853.65	2003.07	2175.68
15. 山 东	Shangdong	6625.08	7162.20	7662.10	8542.44	9438.31
C 東部沿海	East	25193.31	27293.64	29037.28	32122.89	35417.86
16. 河 南	Henan	4079.26	4356.60	4576.10	5137.66	5640.11
17. 湖 北	Hubei	3371.12	3704.21	3857.99	4276.32	4662.28
18. 湖 南	Hunan	2993.00	3118.09	3326.75	3691.88	3983.00
19. 广 东	Guangdong	7315.51	7919.12	8464.31	9662.23	10647.71
20. 广 西	Guangxi	2015.20	1903.04	1953.27	2050.14	2231.19
21. 海 南	Hainan	407.75	438.92	471.23	518.48	545.96
D 中部沿海	Middle	20181.84	21439.98	22649.65	25336.71	27710.25
22*. 重 庆	Chongqing	1350.1	1429.26	1479.71	1589.34	1749.77
23. 四 川	Sichuan	3320.11	3580.26	3711.61	4010.25	4421.76
24. 貴 州	Guizhou	808.78	841.88	911.86	993.53	1084.90
25. 云 南	Yunnan	1644.23	1793.90	1855.74	1955.09	2074.71
26. 西 藏	Tibet	79.10	91.18	105.61	117.46	138.73
E 西南内陸	West-South	5852.22	6307.22	6584.82	7076.33	7720.10
27. 陕 西	Shanxi	1326.04	1381.53	1487.61	1660.92	1844.27
28. 甘 肃	Gansu	781.34	869.75	931.98	983.36	1072.51
29. 青 海	Qinghai	208.08	220.16	238.39	263.59	300.95
30. 宁 夏	Ningxia	210.92	227.46	241.49	265.57	298.38
31. 新 疆	Xinjiang	1050.14	1116.67	1168.55	1364.36	1485.48
F 西部内陸	West	3576.52	3815.57	4068.02	4537.80	5001.59
G 4直轄市	4 Direct Cities	7821.64	8465.15	9139.19	10258.61	11386.36
地域合計	Region: total	68913.01	74029.19	78413.95	86950.76	95379.90
合計	China: total	76734.65	82494.34	87553.14	97209.37	########

5. W: Labour expenses (data)

億元

各 地 域		1997	1998	1999	2000	2001
1*. 北 京	Beijing	867.46	979.90	1053.09	1131.02	1301.83
2*. 天 津	Tianjin	631.26	708.79	755.33	765.87	835.08
3. 河 北	Hebei	2107.32	2253.94	2475.40	2693.00	2926.63
4. 山 西	Shanxi	749.00	817.33	777.17	853.44	924.29
5. 内蒙古	Inner Mongolia	635.07	783.40	825.76	875.67	953.25
A 北部三省	North	3491.39	3854.67	4078.33	4422.11	4804.17
6. 遼 宁	Liaoning	1719.73	1974.25	2024.25	2099.17	2213.01
7. 吉 林	Jilin	893.16	978.74	1025.66	1044.82	1346.00
8. 黑龙江	Heilongjiang	1293.56	1357.37	1356.11	1395.03	1613.18
B 東北三省	East-North	3906.45	4310.36	4406.02	4539.02	5172.19
9*. 上 海	Shanghai	1166.92	1279.41	1429.65	1592.48	1727.84
10. 江 苏	Jiangsu	3433.62	3664.08	3841.05	4262.60	4754.18
11. 浙 江	Zhejiang	2203.73	2349.89	2471.17	2982.39	3254.06
12. 安 徽	Anhui	1321.22	1486.85	1534.20	1629.00	1759.66
13. 福 建	Fujian	1549.15	1718.09	1823.69	1884.85	2037.91
14. 江 西	Jiangxi	1102.67	1152.11	1210.35	1218.95	1270.92
15. 山 东	Shangdong	3010.35	3262.63	3531.98	4082.21	4525.74
C 東部沿海	East	12620.74	13633.65	14412.44	16060	17602.47
16. 河 南	Henan	2605.04	2653.74	2781.87	3104.51	3471.36
17. 湖 北	Hubei	2108.52	2260.41	2246.66	2528.86	2708.15
18. 湖 南	Hunan	1960.74	2032.01	2076.20	2287.45	2491.25
19. 广 东	Guangdong	3596.90	4224.82	4346.60	4648.59	4948.19
20. 广 西	Guangxi	1410.90	1292.33	1287.10	1318.95	1532.03
21. 海 南	Hainan	244.53	260.06	274.33	299.08	313.74
D 中部沿海	Middle	11926.63	12723.37	13012.76	14187.44	15464.72
22*. 重 庆	Chongqing	767.63	809.23	823.53	861.91	942.64
23. 四 川	Sichuan	1860.05	2098.74	2140.13	2263.21	2544.73
24. 貴 州	Guizhou	505.42	553.68	595.72	604.60	610.94
25. 云 南	Yunnan	770.61	806.15	890.58	867.04	970.31
26. 西 藏	Tibet	57.85	56.50	67.71	79.80	93.16
E 西南内陸	West-South	3193.93	3515.07	3694.14	3814.65	4219.14
27. 陕 西	Shanxi	791.90	792.08	819.36	992.52	1123.67
28. 甘 肃	Gansu	413.57	456.83	490.36	579.33	588.89
29. 青 海	Qinghai	130.67	137.45	150.90	159.50	182.06
30. 宁 夏	Ningxia	126.55	136.27	147.91	156.64	175.95
31. 新 疆	Xinjiang	593.14	651.87	652.61	685.57	794.00
F 西部内陸	West	2055.83	2174.50	2261.14	2573.56	2864.57
G 4直轄市	4 Direct Cities	3433.27	3777.33	4061.60	4351.28	4807.39
地域合計	Region: total	37194.97	40211.62	41864.83	45596.78	50127.26
合計	China: total	40628.24	43988.95	45926.43	49948.06	54934.65

6. DEP: Depreciation (data)

億元 (3)

各 地 域		1997	1998	1999	2000	2001
1*. 北 京	Beijing	304.25	384.94	400.53	430.93	469.68
2*. 天 津	Tianjin	184.93	209.05	217.54	269.58	313.01
3. 河 北	Hebei	513.89	568.08	651.67	717.61	797.47
4. 山 西	Shanxi	176.23	200.09	197.15	213.50	237.78
5. 内蒙古	Inner Mongolia	132.04	166.54	177.42	172.95	193.66
A 北部三省	North	822.16	934.71	1026.24	1104.06	1228.91
6. 遼 宁	Liaoning	523.70	616.74	709.16	776.07	839.64
7. 吉 林	Jilin	237.64	251.39	269.40	325.76	343.22
8. 黑龙江	Heilongjiang	386.94	411.97	435.87	422.94	550.96
B 東北三省	East-North	1148.28	1280.10	1414.43	1524.77	1733.82
9*. 上 海	Shanghai	407.67	489.77	580.89	635.73	722.64
10. 江 苏	Jiangsu	912.22	1034.88	1148.29	1303.16	1488.65
11. 浙 江	Zhejiang	439.31	487.00	572.71	767.78	875.99
12. 安 徽	Anhui	291.34	368.75	398.73	433.07	467.23
13. 福 建	Fujian	352.47	397.48	433.03	496.00	560.82
14. 江 西	Jiangxi	209.89	251.60	300.73	351.41	418.62
15. 山 东	Shangdong	1118.12	1317.45	1374.08	1616.66	1904.35
C 東部沿海	East	3323.35	3857.16	4227.57	4968.08	5715.66
16. 河 南	Henan	554.11	597.37	619.96	708.22	791.61
17. 湖 北	Hubei	525.50	613.56	685.77	669.88	701.65
18. 湖 南	Hunan	407.76	415.79	433.88	578.46	600.74
19. 广 东	Guangdong	1126.64	1251.72	1436.78	1641.14	1731.46
20. 广 西	Guangxi	187.11	188.03	194.97	215.33	258.06
21. 海 南	Hainan	64.69	68.01	73.65	83.49	88.64
D 中部沿海	Middle	2865.81	3134.48	3445.01	3896.52	4172.16
22*. 重 庆	Chongqing	121.11	207.25	226.32	261.39	268.91
23. 四 川	Sichuan	464.72	574.33	612.28	642.46	734.68
24. 貴 州	Guizhou	90.47	98.53	113.60	128.72	160.10
25. 云 南	Yunnan	217.33	215.43	283.71	287.11	319.34
26. 西 藏	Tibet	11.37	27.87	24.13	28.85	32.05
E 西南内陸	West-South	783.89	916.16	1033.72	1087.14	1246.17
27. 陝 西	Shanxi	185.18	197.14	241.44	267.26	332.74
28. 甘 肃	Gansu	101.24	108.19	118.06	186.02	192.61
29. 青 海	Qinghai	32.27	34.95	38.74	59.91	54.34
30. 宁 夏	Ningxia	33.43	37.46	43.37	49.73	58.00
31. 新 疆	Xinjiang	172.84	189.88	195.18	231.30	270.63
F 西部内陸	West	524.96	567.62	636.79	794.22	908.32
G 4直轄市	4 Direct Cities	1017.96	1291.01	1425.28	1597.63	1774.24
地域合計	Region: total	9468.45	10690.23	11783.76	13374.79	15005.04
合計	China: total	10486.41	11981.24	13209.04	14972.42	16779.28

7. S: Saving=corporate and household saving (borrowings)

億元 (yuan)

各 地 域		1997	1998	1999	2000	2001
1*. 北 京	Beijing	697.48	790.84	832.93	946.05	1162.15
2*. 天 津	Tianjin	397.50	433.61	414.38	425.52	492.33
3. 河 北	Hebei	972.18	1105.62	1170.63	1246.04	1291.42
4. 山 西	Shanxi	257.88	364.72	408.20	444.10	485.26
5. 内蒙古	Inner Mongolia	185.43	−165.09	205.95	257.47	304.36
A 北部三省	North	1415.49	1305.26	1784.78	1947.61	2081.04
6. 遼 宁	Liaoning	452.75	460.57	406.66	517.85	604.51
7. 吉 林	Jilin	148.74	192.86	255.64	301.98	356.43
8. 黑龙江	Heilongjiang	337.48	459.55	423.24	503.76	500.71
B 東北三省	East-North	938.97	1112.98	1085.54	1323.59	1461.65
9*. 上 海	Shanghai	1388.16	1563.02	1220.70	1297.28	1377.35
10. 江 苏	Jiangsu	1383.75	1619.91	1694.36	1822.26	1954.51
11. 浙 江	Zhejiang	1255.26	1371.75	1397.88	1499.42	1769.41
12. 安 徽	Anhui	487.87	458.73	440.56	495.02	545.08
13. 福 建	Fujian	628.98	753.72	751.81	762.89	758.50
14. 江 西	Jiangxi	267.41	271.46	251.94	254.13	278.08
15. 山 东	Shangdong	926.33	1042.48	1288.87	1584.11	1666.24
C 東部沿海	East	4949.60	5518.06	5825.42	6417.83	6971.82
16. 河 南	Henan	701.48	824.11	852.57	951.36	1014.80
17. 湖 北	Hubei	576.60	630.32	634.33	781.97	909.28
18. 湖 南	Hunan	317.97	434.60	522.22	503.54	632.43
19. 广 东	Guangdong	1162.05	1414.18	1537.54	1534.79	1760.72
20. 广 西	Guangxi	300.18	387.61	434.10	455.32	477.50
21. 海 南	Hainan	97.67	106.14	114.26	112.91	118.78
D 中部沿海	Middle	3155.95	3796.95	4095.02	4339.89	4913.51
22*. 重 庆	Chongqing	271.55	311.54	332.67	372.04	491.42
23. 四 川	Sichuan	512.56	616.32	617.53	707.23	841.57
24. 貴 州	Guizhou	188.20	242.21	284.86	330.12	419.45
25. 云 南	Yunnan	332.09	478.55	437.16	414.32	428.52
26. 西 藏	Tibet	15.57	2.63	12.85	9.41	9.94
E 西南内陸	West-South	1048.42	1339.72	1352.40	1461.08	1699.48
27. 陕 西	Shanxi	279.62	378.70	409.89	528.95	554.5
28. 甘 肃	Gansu	114.74	132.89	165.79	150.21	171.73
29. 青 海	Qinghai	69.28	81.72	92.38	97.06	147.83
30. 宁 夏	Ningxia	54.67	71.51	87.24	111.09	137.81
31. 新 疆	Xinjiang	288.57	355.55	356.54	416.82	449.49
F 西部内陸	West	806.88	1020.37	1111.84	1304.13	1461.36
G 4直轄市	4 Direct Cities	2754.69	3099.00	2800.68	3040.89	3523.25
地域合計	Region: total	12315.31	14093.34	15255.00	16794.13	18588.86
合計	China: total	15070.00	17192.34	18055.68	19835.02	22112.11

8. D: Dividends=Profit - retained earnings　　100 million RMB 億元 (yuan) (4)

各 地 域		1997	1998	1999	2000	2001
1*. 北 京	Beijing	44.75	41.37	46.13	58.68	68.74
2*. 天 津	Tianjin	27.15	26.79	30.54	38.65	44.29
3. 河 北	Hebei	85.28	91.78	92.30	107.41	118.64
4. 山 西	Shanxi	35.08	29.99	34.08	36.92	39.55
5. 内蒙古	Inner Mongolia	20.23	15.51	16.96	22.55	25.53
A 北部三省	North	140.59	137.28	143.33	166.89	183.71
6. 遼 宁	Liaoning	79.80	82.61	92.05	114.80	126.75
7. 吉 林	Jilin	21.59	20.97	23.41	28.84	21.97
8. 黑龙江	Heilongjiang	61.42	65.89	70.75	91.84	89.40
B 東北三省	East-North	162.82	169.47	186.21	235.49	238.12
9*. 上 海	Shanghai	142.85	153.52	161.95	185.84	200.03
10. 江 苏	Jiangsu	181.10	200.08	216.68	241.36	261.53
11. 浙 江	Zhejiang	158.08	172.05	185.68	182.89	209.45
12. 安 徽	Anhui	84.59	75.99	78.05	78.09	85.06
13. 福 建	Fujian	88.28	93.68	103.48	123.14	132.40
14. 江 西	Jiangxi	28.16	35.86	27.41	34.62	38.89
15. 山 东	Shangdong	199.73	206.57	220.48	227.49	240.66
C 東部沿海	East	739.94	784.23	831.78	887.58	967.98
16. 河 南	Henan	58.89	70.75	75.15	84.80	88.14
17. 湖 北	Hubei	47.17	53.14	59.24	68.97	80.16
18. 湖 南	Hunan	39.97	42.90	52.27	52.86	57.02
19. 广 东	Guangdong	165.89	156.33	171.58	215.84	253.96
20. 广 西	Guangxi	26.70	27.05	30.16	33.02	28.23
21. 海 南	Hainan	6.31	7.09	7.89	8.70	9.19
D 中部沿海	Middle	344.92	357.26	396.28	464.18	516.70
22*. 重 庆	Chongqing	29.53	26.42	27.51	29.83	34.45
23. 四 川	Sichuan	63.70	58.06	61.39	70.69	73.11
24. 貴 州	Guizhou	13.62	12.14	12.96	16.65	20.09
25. 云 南	Yunnan	42.00	49.43	43.61	51.26	50.24
26. 西 藏	Tibet	0.63	0.44	0.88	0.56	0.87
E 西南内陸	West-South	119.96	120.06	118.85	139.17	144.31
27. 陕 西	Shanxi	22.33	25.11	27.32	25.67	24.82
28. 甘 肃	Gansu	17.06	19.50	20.71	13.95	18.62
29. 青 海	Qinghai	2.89	3.06	3.12	2.83	4.13
30. 宁 夏	Ningxia	3.26	3.44	3.21	3.79	4.12
31. 新 疆	Xinjiang	18.19	17.59	20.53	28.64	26.93
F 西部内陸	West	63.73	68.70	74.89	74.88	78.64
G 4 直轄市	4 Direct Cities	244.28	248.10	266.14	312.99	347.51
地域合計	Region: total	1571.96	1637.00	1751.34	1968.19	2129.44
合計	China: total	1816.24	1885.10	2017.48	2281.17	2476.95

9. ssn/y: Retained earnings/net output　　Assuming sn=0.6(0.5 for East area)

各 地 域		1997	1998	1999	2000	2001
1*. 北 京	Beijing	0.0685	0.0573	0.0592	0.0689	0.0700
2*. 天 津	Tianjin	0.0582	0.0518	0.0551	0.0672	0.0702
3. 河 北	Hebei	0.0551	0.0554	0.0512	0.0544	0.0552
4. 山 西	Shanxi	0.0629	0.0504	0.0593	0.0586	0.0580
5. 内蒙古	Inner Mongolia	0.0442	0.0283	0.0293	0.0363	0.0376
A 北部三省	North	0.0549	0.0491	0.0485	0.0517	0.0524
6. 遼 宁	Liaoning	0.0624	0.0568	0.0612	0.0722	0.0752
7. 吉 林	Jilin	0.0342	0.0305	0.0324	0.0387	0.0235
8. 黑龙江	Heilongjiang	0.0637	0.0649	0.0692	0.0848	0.0730
B 東北三省	East-North	0.0566	0.0537	0.0573	0.0689	0.0619
9*. 上 海	Shanghai	0.0983	0.0968	0.0924	0.0946	0.094
10. 江 苏	Jiangsu	0.0477	0.0492	0.0507	0.0509	0.0496
11. 浙 江	Zhejiang	0.0627	0.0639	0.0653	0.0546	0.0570
12. 安 徽	Anhui	0.0568	0.0464	0.0462	0.0437	0.0441
13. 福 建	Fujian	0.0512	0.0492	0.0510	0.0578	0.0575
14. 江 西	Jiangxi	0.0243	0.0293	0.0217	0.0269	0.0288
15. 山 东	Shangdong	0.0586	0.0562	0.0555	0.0501	0.0481
C 東部沿海	East	0.0525	0.0516	0.0517	0.0498	0.0495
16. 河 南	Henan	0.0321	0.0375	0.0380	0.0384	0.0358
17. 湖 北	Hubei	0.0318	0.0333	0.0371	0.0383	0.0413
18. 湖 南	Hunan	0.0291	0.0301	0.0355	0.0328	0.0325
19. 广 东	Guangdong	0.0620	0.0508	0.0539	0.0624	0.0682
20. 广 西	Guangxi	0.0271	0.0298	0.0332	0.0353	0.0264
21. 海 南	Hainan	0.0363	0.0383	0.0402	0.0407	0.0409
D 中部沿海	Middle	0.0405	0.0394	0.0424	0.0454	0.0463
22*. 重 庆	Chongqing	0.0526	0.0453	0.0462	0.0478	0.0502
23. 四 川	Sichuan	0.0473	0.0388	0.0401	0.0435	0.0402
24. 貴 州	Guizhou	0.0379	0.0312	0.0310	0.0387	0.0456
25. 云 南	Yunnan	0.0720	0.0797	0.0654	0.0773	0.0688
26. 西 藏	Tibet	0.0160	0.0114	0.0189	0.0104	0.0136
E 西南内陸	West-South	0.0515	0.0472	0.0447	0.0502	0.0473
27. 陕 西	Shanxi	0.0395	0.0441	0.0462	0.0364	0.0314
28. 甘 肃	Gansu	0.0561	0.0579	0.0573	0.0341	0.0440
29. 青 海	Qinghai	0.0314	0.0316	0.0295	0.0255	0.0322
30. 宁 夏	Ningxia	0.0363	0.0356	0.0309	0.0342	0.0332
31. 新 疆	Xinjiang	0.0427	0.0379	0.0437	0.0567	0.0469
F 西部内陸	West	0.0432	0.0439	0.0459	0.0407	0.0385
G 4直轄市	4 Direct Cities	0.0743	0.0684	0.0685	0.0747	0.0755
地域合計	Region: total	0.0488	0.0470	0.0482	0.0501	0.0493
合計	China: total	0.0510	0.0489	0.0501	0.0523	0.0517

10. y: Net output/Population multiplied by 10 千元 (thousand yuan) (5)

各 地 域		1997	1998	1999	2000	2001
1*. 北 京	Beijing	7.898	8.695	9.295	9.245	10.656
2*. 天 津	Tianjin	7.336	8.106	8.672	8.616	9.420
3. 河 北	Hebei	3.556	3.780	4.092	4.391	4.811
4. 山 西	Shanxi	2.664	2.813	2.692	2.868	3.127
5. 内蒙古	Inner Mongolia	2.948	3.506	3.676	3.923	4.279
A 北部三省	North	3.205	3.473	3.643	3.897	4.263
6. 遼 宁	Liaoning	4.638	5.246	5.405	5.630	6.032
7. 吉 林	Jilin	3.604	3.900	4.079	4.094	5.206
8. 黑龙江	Heilongjiang	3.858	4.034	4.043	4.404	4.819
B 東北三省	East-North	4.101	4.477	4.587	4.813	5.392
9*. 上 海	Shanghai	9.970	10.836	11.897	11.733	13.184
10. 江 苏	Jiangsu	5.310	5.659	5.926	6.380	7.175
11. 浙 江	Zhejiang	5.682	6.046	6.352	7.159	7.962
12. 安 徽	Anhui	2.433	2.650	2.710	2.982	3.050
13. 福 建	Fujian	5.258	5.776	6.124	6.140	6.694
14. 江 西	Jiangxi	2.793	2.920	2.990	3.112	3.222
15. 山 东	Shangdong	3.881	4.159	4.473	4.997	5.538
C 東部沿海	East	4.156	4.452	4.679	5.126	5.588
16. 河 南	Henan	2.978	3.039	3.164	3.545	3.864
17. 湖 北	Hubei	3.791	4.052	4.033	4.481	4.868
18. 湖 南	Hunan	3.187	3.290	3.379	3.757	3.993
19. 广 东	Guangdong	5.689	6.462	6.569	6.003	7.173
20. 广 西	Guangxi	3.189	2.909	2.891	3.122	3.347
21. 海 南	Hainan	3.503	3.689	3.859	4.077	4.230
D 中部沿海	Middle	3.761	3.97	4.047	4.294	4.721
22*. 重 庆	Chongqing	2.766	2.860	2.902	3.031	3.322
23. 四 川	Sichuan	2.395	2.642	2.683	2.929	3.157
24. 貴 州	Guizhou	1.496	1.597	1.693	1.833	1.740
25. 云 南	Yunnan	2.139	2.244	2.385	2.321	2.556
26. 西 藏	Tibet	2.396	2.285	2.731	3.100	3.624
E 西南内陸	West-South	2.133	2.306	2.389	2.538	2.696
27. 陕 西	Shanxi	2.375	2.377	2.453	2.931	3.241
28. 甘 肃	Gansu	1.829	2.007	2.132	2.397	2.468
29. 青 海	Qinghai	2.780	2.885	3.112	3.216	3.679
30. 宁 夏	Ningxia	2.542	2.693	2.872	2.956	3.308
31. 新 疆	Xinjiang	3.717	3.983	3.968	3.933	4.591
F 西部内陸	West	2.515	2.635	2.724	3.01	3.329
G 4直轄市	4 Direct Cities	5.936	6.423	6.868	7.053	7.856
地域合計	Region: total	3.525	3.767	3.902	4.201	4.593
合計	China: total	3.657	3.912	4.063	4.363	4.775

11. alpha=profit/net output

億元

各地域		1997	1998	1999	2000	2001
1*. 北京	Beijing	0.1142	0.0955	0.0987	0.1148	0.1166
2*. 天津	Tianjin	0.0971	0.0863	0.0918	0.1120	0.1171
3. 河北	Hebei	0.0919	0.0924	0.0853	0.0907	0.0920
4. 山西	Shanxi	0.1048	0.0840	0.0988	0.0976	0.0966
5. 内蒙古	Inner Mongolia	0.0737	0.0472	0.0488	0.0605	0.0627
A 北部三省	North	0.0915	0.0818	0.0808	0.0862	0.0873
6. 遼宁	Liaoning	0.1040	0.0947	0.1021	0.1203	0.1253
7. 吉林	Jilin	0.0570	0.0508	0.0540	0.0646	0.0392
8. 黑龙江	Heilongjiang	0.1061	0.1082	0.1154	0.1413	0.1217
B 東北三省	East-North	0.0944	0.0895	0.0956	0.1148	0.1032
9*. 上海	Shanghai	0.1967	0.1935	0.1847	0.1892	0.1880
10. 江苏	Jiangsu	0.0954	0.0985	0.1014	0.1017	0.0991
11. 浙江	Zhejiang	0.1255	0.1277	0.1306	0.1092	0.1140
12. 安徽	Anhui	0.1135	0.0927	0.0924	0.0875	0.0882
13. 福建	Fujian	0.1023	0.0983	0.1019	0.1156	0.1150
14. 江西	Jiangxi	0.0486	0.0586	0.0433	0.0537	0.0577
15. 山东	Shangdong	0.1171	0.1124	0.1110	0.1003	0.0961
C 東部沿海	East	0.1050	0.1032	0.1035	0.0995	0.0991
16. 河南	Henan	0.0535	0.0625	0.0633	0.0639	0.0597
17. 湖北	Hubei	0.0530	0.0555	0.0618	0.0638	0.0689
18. 湖南	Hunan	0.0485	0.0501	0.0592	0.0546	0.0541
19. 广东	Guangdong	0.1034	0.0847	0.0898	0.1040	0.1137
20. 广西	Guangxi	0.0452	0.0497	0.0553	0.0589	0.0440
21. 海南	Hainan	0.0606	0.0638	0.0671	0.0678	0.0682
D 中部沿海	Middle	0.0674	0.0656	0.0707	0.0756	0.0771
22*. 重庆	Chongqing	0.0877	0.0755	0.0771	0.0796	0.0837
23. 四川	Sichuan	0.0789	0.0647	0.0669	0.0724	0.0670
24. 貴州	Guizhou	0.0631	0.0520	0.0516	0.0644	0.0760
25. 云南	Yunnan	0.1199	0.1329	0.1091	0.1288	0.1146
26. 西藏	Tibet	0.0266	0.0189	0.0315	0.0174	0.0227
E 西南内陸	West-South	0.0858	0.0787	0.0744	0.0836	0.0788
27. 陝西	Shanxi	0.0659	0.0734	0.0769	0.0607	0.0523
28. 甘肃	Gansu	0.0935	0.0964	0.0955	0.0568	0.0733
29. 青海	Qinghai	0.0524	0.0527	0.0491	0.0424	0.0537
30. 宁夏	Ningxia	0.0605	0.0593	0.0515	0.0570	0.0553
31. 新疆	Xinjiang	0.0712	0.0632	0.0729	0.0946	0.0782
F 西部内陸	West	0.0719	0.0732	0.0765	0.0678	0.0642
G 4直轄市	4 Direct Cities	0.1357	0.1258	0.1258	0.1368	0.1379
地域合計	Region: total	0.0873	0.0843	0.0865	0.0894	0.0880
合計	China: total	0.0916	0.0880	0.0901	0.0937	0.0926

12. k(0)=alpha/0.19; 0.164; 0.15; 0.135; 0.11 by year　　訂正 in 1997　　千元 (6)

各 地 域		1997	1998	1999	2000	2001
1*. 北 京	Beijing	6.012	5.822	6.581	8.504	10.602
2*. 天 津	Tianjin	5.110	5.264	6.120	8.299	10.642
3. 河 北	Hebei	4.836	5.634	5.684	6.717	8.365
4. 山 西	Shanxi	5.517	5.124	6.586	7.229	8.784
5. 内蒙古	Inner Mongolia	3.882	2.876	3.256	4.481	5.705
A 北部三省	North	4.814	4.985	5.384	6.386	7.932
6. 遼 宁	Liaoning	5.471	5.774	6.805	8.910	11.386
7. 吉 林	Jilin	3.000	3.100	3.599	4.782	3.564
8. 黑龙江	Heilongjiang	5.585	6.599	7.692	10.469	11.062
B 東北三省	East-North	4.967	5.457	6.371	8.504	9.383
9*. 上 海	Shanghai	10.352	11.801	12.314	14.017	17.091
10. 江 苏	Jiangsu	5.022	6.004	6.759	7.535	9.010
11. 浙 江	Zhejiang	6.603	7.788	8.710	8.093	10.368
12. 安 徽	Anhui	5.974	5.655	6.157	6.481	8.014
13. 福 建	Fujian	5.385	5.996	6.795	8.560	10.454
14. 江 西	Jiangxi	2.558	3.573	2.888	3.981	5.243
15. 山 东	Shangdong	6.166	6.853	7.399	7.428	8.739
C 東部沿海	East	5.524	6.291	6.899	7.373	9.008
16. 河 南	Henan	2.815	3.81	4.218	4.735	5.426
17. 湖 北	Hubei	2.788	3.384	4.123	4.728	6.264
18. 湖 南	Hunan	2.552	3.057	3.947	4.046	4.921
19. 广 东	Guangdong	5.441	5.163	5.988	7.704	10.338
20. 广 西	Guangxi	2.378	3.032	3.689	4.362	4.003
21. 海 南	Hainan	3.188	3.893	4.471	5.021	6.202
D 中部沿海	Middle	3.549	4.000	4.716	5.601	7.008
22*. 重 庆	Chongqing	4.617	4.601	5.139	5.898	7.610
23. 四 川	Sichuan	4.151	3.944	4.461	5.365	6.092
24. 貴 州	Guizhou	3.323	3.168	3.439	4.772	6.905
25. 云 南	Yunnan	6.312	8.104	7.272	9.538	10.420
26. 西 藏	Tibet	1.400	1.154	2.101	1.286	2.063
E 西南内陸	West-South	4.518	4.797	4.963	6.191	7.161
27. 陕 西	Shanxi	3.466	4.477	5.129	4.499	4.758
28. 甘 肃	Gansu	4.920	5.880	6.366	4.207	6.661
29. 青 海	Qinghai	2.757	3.211	3.277	3.144	4.880
30. 宁 夏	Ningxia	3.185	3.618	3.434	4.224	5.032
31. 新 疆	Xinjiang	3.747	3.854	4.860	7.004	7.107
F 西部内陸	West	3.785	4.464	5.098	5.023	5.838
G 4 直轄市	4 Direct Cities	7.145	7.670	8.385	10.133	12.533
地域合計	Region: total	4.597	5.138	5.764	6.622	8.004
合計	China: total	4.824	5.365	6.006	6.943	8.421

13. K: Capital stock=k(0)*L divided by 10　　訂正 in 1997　　億元

各地域		1997	1998	1999	2000	2001
1*. 北京	Beijing	745.54	725.40	827.18	1175.28	1466.23
2*. 天津	Tianjin	486.95	503.73	586.92	830.68	1068.50
3. 河北	Hebei	3155.36	3700.66	3759.62	4529.70	5603.80
4. 山西	Shanxi	1732.91	1625.36	2110.17	2383.48	2874.21
5. 内蒙古	Inner Mongolia	902.84	674.37	769.11	1064.67	1355.96
A 北部三省	North	5772.80	6025.00	6558.28	7929.77	9795.02
6. 遼宁	Liaoning	2263.97	2400.41	2838.48	3775.92	4775.46
7. 吉林	Jilin	788.38	819.63	956.71	1304.40	959.07
8. 黑龙江	Heilongjiang	2094.88	2489.82	2916.70	3861.89	4215.86
B 東北三省	East-North	5223.45	5770.22	6766.35	9061.46	10036.21
9*. 上海	Shanghai	1508.21	1727.70	1815.13	2346.42	2758.56
10. 江苏	Jiangsu	3589.84	4311.76	4875.22	5604.65	6627.19
11. 浙江	Zhejiang	2928.62	3470.46	3897.57	3784.89	4782.79
12. 安徽	Anhui	3660.55	3496.78	3840.02	3879.40	5071.28
13. 福建	Fujian	1767.22	1977.95	2253.10	2971.20	3596.11
14. 江西	Jiangxi	1061.45	1497.65	1222.01	1648.18	2194.68
15. 山东	Shangdong	5416.63	6057.01	6572.96	6743.76	7900.80
C 東部沿海	East	18740.40	21483.98	23700.63	25650.50	31493.58
16. 河南	Henan	2602.14	3549.22	3959.16	4429.86	5184.53
17. 湖北	Hubei	1637.34	1999.21	2448.01	2849.97	3742.48
18. 湖南	Hunan	1649.91	1987.57	2578.37	2605.50	3245.68
19. 广东	Guangdong	3836.43	3687.86	4353.37	6657.89	8045.98
20. 广西	Guangxi	1101.52	1417.57	1738.59	1958.30	1916.87
21. 海南	Hainan	236.84	293.14	340.68	395.13	493.71
D 中部沿海	Middle	12068.51	13716.43	16319.88	20017.94	24873.83
22*. 重庆	Chongqing	1404.55	1407.90	1580.11	1822.51	2356.77
23. 四川	Sichuan	3499.16	3349.92	3814.05	4468.86	5263.50
24. 貴州	Guizhou	1198.31	1159.01	1276.05	1682.21	2623.18
25. 云南	Yunnan	2584.02	3358.46	3048.26	4090.11	4466.89
26. 西藏	Tibet	34.72	29.07	53.78	33.69	54.26
E 西南内陸	West-South	7399.24	7937.90	8291.75	10156.43	12165.91
27. 陕西	Shanxi	1237.52	1610.04	1855.63	1621.94	1740.92
28. 甘肃	Gansu	1226.99	1481.23	1618.93	1077.76	1715.26
29. 青海	Qinghai	136.73	161.53	167.11	162.84	255.24
30. 宁夏	Ningxia	168.78	194.67	186.49	237.38	283.27
31. 新疆	Xinjiang	643.75	673.37	862.25	1348.37	1333.26
F 西部内陸	West	3334.13	3973.93	4581.81	4606.96	5368.91
G 4直轄市	4 Direct Cities	4781.20	5159.44	5672.67	7241.94	8896.07
地域合計	Region: total	53159.27	59889.35	67704.42	78926.14	95798.10
合計	China: total	59003.26	66141.60	74600.87	87715.19	########

14. Omega(0)=Capital stock/net output=k/y　　訂正 in 1997　　億元 (7)

各地域		1997	1998	1999	2000	2001
1*. 北京	Beijing	0.7613	0.6696	0.7079	0.9198	0.9949
2*. 天津	Tianjin	0.6965	0.6493	0.7057	0.9631	1.1297
3. 河北	Hebei	1.3598	1.4902	1.3893	1.5295	1.7386
4. 山西	Shanxi	2.0711	1.8215	2.4470	2.5202	2.8092
5. 内蒙古	Inner Mongolia	1.3168	0.8202	0.8859	1.1423	1.3332
A 北部三省	North	1.5022	1.4353	1.4782	1.6386	1.8610
6. 遼宁	Liaoning	1.1796	1.1007	1.2591	1.5824	1.8876
7. 吉林	Jilin	0.8324	0.7949	0.8824	1.1679	0.6846
8. 黒龙江	Heilongjiang	1.4476	1.6358	1.9026	2.3771	2.2954
B 東北三省	East-North	1.2110	1.2189	1.3890	1.7671	1.7401
9*. 上海	Shanghai	1.0383	1.0890	1.0351	1.1946	1.2964
10. 江苏	Jiangsu	0.9457	1.0609	1.1406	1.1811	1.2558
11. 浙江	Zhejiang	1.1622	1.2882	1.3712	1.1304	1.3022
12. 安徽	Anhui	2.4561	2.1337	2.2718	2.1731	2.6279
13. 福建	Fujian	1.0241	1.0380	1.1095	1.3942	1.5617
14. 江西	Jiangxi	0.9158	1.2237	0.9659	1.2795	1.6273
15. 山东	Shangdong	1.5885	1.6478	1.6544	1.4863	1.5779
C 東部沿海	East	1.3290	1.4132	1.4743	1.4382	1.6119
16. 河南	Henan	0.9455	1.2539	1.3332	1.3357	1.4044
17. 湖北	Hubei	0.7354	0.8354	1.0222	1.0550	1.2867
18. 湖南	Hunan	0.8007	0.9291	1.1683	1.0768	1.2323
19. 广东	Guangdong	0.9563	0.7990	0.9116	1.2833	1.4411
20. 广西	Guangxi	0.7455	1.0424	1.2760	1.3973	1.1961
21. 海南	Hainan	0.9099	1.0552	1.1586	1.2316	1.4663
D 中部沿海	Middle	0.9437	1.0073	1.1654	1.3043	1.4844
22*. 重庆	Chongqing	1.6692	1.6085	1.7708	1.9461	2.2909
23. 四川	Sichuan	1.7329	1.4929	1.6629	1.8315	1.9298
24. 貴州	Guizhou	2.2212	1.9845	2.0315	2.6031	3.9676
25. 云南	Yunnan	2.9511	3.6123	3.0494	4.1099	4.0759
26. 西藏	Tibet	0.5842	0.5048	0.7693	0.4148	0.5692
E 西南内陸	West-South	2.1178	2.0806	2.0775	2.4399	2.6564
27. 陝西	Shanxi	1.4598	1.8834	2.0905	1.5349	1.4682
28. 甘肃	Gansu	2.6895	2.9297	2.9862	1.7547	2.6993
29. 青海	Qinghai	0.9916	1.1133	1.0530	0.9776	1.3267
30. 宁夏	Ningxia	1.2530	1.3438	1.1959	1.4290	1.5209
31. 新疆	Xinjiang	1.0081	0.9677	1.2249	1.7808	1.5479
F 西部内陸	West	1.5052	1.6937	1.8714	1.6687	1.7539
G 4直轄市	4 Direct Cities	1.2036	1.1941	1.2210	1.4367	1.5954
地域合計	Region: total	1.3044	1.3638	1.4774	1.5762	1.7428
合計	China: total	1.3192	1.3713	1.4780	1.5915	1.7635

15. s=S/Y: Saving/net output

各 地 域		1997	1998	1999	2000	2001
1*. 北 京	Beijing	0.7122	0.7300	0.7129	0.7404	0.7886
2*. 天 津	Tianjin	0.5686	0.5590	0.4982	0.4934	0.5205
3. 河 北	Hebei	0.4189	0.4452	0.4326	0.4207	0.4007
4. 山 西	Shanxi	0.3082	0.4087	0.4734	0.4696	0.4743
5. 内蒙古	Inner Mongolia	0.2705	–0.2008	0.2372	0.2762	0.2993
A 北部三省	North	0.3683	0.3109	0.4023	0.4025	0.3954
6. 遼 宁	Liaoning	0.2359	0.2112	0.1804	0.2170	0.2389
7. 吉 林	Jilin	0.1570	0.1870	0.2358	0.2704	0.2544
8. 黑龙江	Heilongjiang	0.2332	0.3019	0.2761	0.3101	0.2726
B 東北三省	East-North	0.2177	0.2351	0.2228	0.2581	0.2534
9*. 上 海	Shanghai	0.9556	0.9852	0.6961	0.6605	0.6473
10. 江 苏	Jiangsu	0.3645	0.3986	0.3964	0.3840	0.3704
11. 浙 江	Zhejiang	0.4981	0.5092	0.4918	0.4478	0.4817
12. 安 徽	Anhui	0.3273	0.2799	0.2606	0.2773	0.2825
13. 福 建	Fujian	0.3645	0.3956	0.3702	0.3580	0.3294
14. 江 西	Jiangxi	0.2307	0.2218	0.1991	0.1973	0.2062
15. 山 东	Shangdong	0.2717	0.2836	0.3244	0.3491	0.3328
C 東部沿海	East	0.3510	0.3630	0.3624	0.3598	0.3568
16. 河 南	Henan	0.2549	0.2911	0.2871	0.2869	0.2749
17. 湖 北	Hubei	0.2590	0.2634	0.2649	0.2895	0.3126
18. 湖 南	Hunan	0.1543	0.2032	0.2366	0.2081	0.2401
19. 广 东	Guangdong	0.2897	0.3064	0.3220	0.2958	0.3154
20. 广 西	Guangxi	0.2031	0.2850	0.3186	0.3249	0.2980
21. 海 南	Hainan	0.3752	0.3821	0.3886	0.3519	0.3528
D 中部沿海	Middle	0.2468	0.2788	0.2924	0.2828	0.2932
22*. 重 庆	Chongqing	0.3227	0.3559	0.3728	0.3973	0.4777
23. 四 川	Sichuan	0.2538	0.2747	0.2692	0.2899	0.3085
24. 貴 州	Guizhou	0.3489	0.4147	0.4535	0.5108	0.6344
25. 云 南	Yunnan	0.3793	0.5147	0.4373	0.4163	0.3910
26. 西 藏	Tibet	0.2620	0.0457	0.1838	0.1159	0.1043
E 西南内陸	West-South	0.3001	0.3511	0.3388	0.3510	0.3711
27. 陕 西	Shanxi	0.3298	0.443	0.4618	0.5006	0.4676
28. 甘 肃	Gansu	0.2515	0.2628	0.3058	0.2446	0.2702
29. 青 海	Qinghai	0.5024	0.5632	0.5821	0.5827	0.7684
30. 宁 夏	Ningxia	0.4059	0.4936	0.5594	0.6688	0.7399
31. 新 疆	Xinjiang	0.4519	0.5110	0.5065	0.5505	0.5219
F 西部内陸	West	0.3643	0.4349	0.4541	0.4724	0.4774
G 4直轄市	4 Direct Cities	0.6934	0.7172	0.6028	0.6033	0.6318
地域合計	Region: total	0.3022	0.3209	0.3329	0.3354	0.3382
合計	China: total	0.3369	0.3564	0.3577	0.3599	0.3652

16. $s_H=S_H/(D+W)$: Household saving/(net output – retained earnings) (8)

各 地 域		1997	1998	1999	2000	2001
1*. 北 京	Beijing	0.6910	0.7136	0.6948	0.7212	0.7727
2*. 天 津	Tianjin	0.5419	0.5349	0.4690	0.4568	0.4843
3. 河 北	Hebei	0.3850	0.4127	0.4020	0.3874	0.3656
4. 山 西	Shanxi	0.2618	0.3773	0.4402	0.4366	0.4419
5. 内蒙古	Inner Mongolia	0.2367	-0.2358	0.2142	0.2490	0.2718
A 北部三省	North	0.3317	0.2754	0.3718	0.3699	0.3620
6. 遼 宁	Liaoning	0.1851	0.1637	0.1269	0.1561	0.1771
7. 吉 林	Jilin	0.1272	0.1614	0.2102	0.2410	0.2365
8. 黒龙江	Heilongjiang	0.1811	0.2534	0.2222	0.2462	0.2153
B 東北三省	East-North	0.1707	0.1917	0.1756	0.2032	0.2041
9*. 上 海	Shanghai	0.9508	0.9836	0.6652	0.6250	0.6107
10. 江 苏	Jiangsu	0.3327	0.3674	0.3642	0.3510	0.3375
11. 浙 江	Zhejiang	0.4646	0.4757	0.4563	0.4159	0.4504
12. 安 徽	Anhui	0.2869	0.2449	0.2248	0.2442	0.2494
13. 福 建	Fujian	0.3302	0.3643	0.3364	0.3186	0.2885
14. 江 西	Jiangxi	0.2116	0.1983	0.1814	0.1751	0.1826
15. 山 东	Shangdong	0.2263	0.2410	0.2847	0.3148	0.2991
C 東部沿海	East	0.3151	0.3283	0.3276	0.3263	0.3233
16. 河 南	Henan	0.2302	0.2635	0.2590	0.2584	0.2480
17. 湖 北	Hubei	0.2347	0.2380	0.2366	0.2612	0.2830
18. 湖 南	Hunan	0.1290	0.1784	0.2085	0.1813	0.2146
19. 广 东	Guangdong	0.2427	0.2693	0.2833	0.2490	0.2652
20. 广 西	Guangxi	0.1809	0.2630	0.2952	0.3002	0.2789
21. 海 南	Hainan	0.3517	0.3574	0.3629	0.3245	0.3251
D 中部沿海	Middle	0.2150	0.2493	0.2611	0.2487	0.2590
22*. 重 庆	Chongqing	0.2851	0.3254	0.3424	0.367	0.4501
23. 四 川	Sichuan	0.2168	0.2454	0.2387	0.2576	0.2796
24. 貴 州	Guizhou	0.3232	0.3959	0.4361	0.4912	0.6170
25. 云 南	Yunnan	0.3311	0.4727	0.3979	0.3675	0.3460
26. 西 藏	Tibet	0.2500	0.0347	0.1681	0.1066	0.0919
E 西南内陸	West-South	0.2621	0.3190	0.3079	0.3167	0.3399
27. 陝 西	Shanxi	0.3023	0.4173	0.4357	0.4817	0.4504
28. 甘 肅	Gansu	0.2070	0.2176	0.2636	0.2179	0.2367
29. 青 海	Qinghai	0.4863	0.5490	0.5694	0.5718	0.7607
30. 宁 夏	Ningxia	0.3835	0.4749	0.5454	0.6570	0.7309
31. 新 疆	Xinjiang	0.4274	0.4917	0.4839	0.5235	0.4983
F 西部内陸	West	0.3356	0.4089	0.4279	0.4500	0.4564
G 4直轄市	4 Direct Cities	0.6688	0.6965	0.5736	0.5712	0.6018
地域合計	Region: total	0.2664	0.2875	0.2991	0.3003	0.3039
合計	China: total	0.3013	0.3234	0.3238	0.3245	0.3306

17. Gross Fixed Capital Formation $I_{GROSS}=\Delta K_{GROSS}$ 億元

各 地 域		1997	1998	1999	2000	2001
1*. 北 京	Beijing	1001.73	1171.90	1233.46	1376.98	1631.83
2*. 天 津	Tianjin	582.43	640.15	631.92	695.10	805.34
3. 河 北	Hebei	1486.07	1665.10	1822.30	1963.65	2088.89
4. 山 西	Shanxi	434.11	562.00	605.35	657.60	723.04
5. 内蒙古	Inner Mongolia	317.47	350.20	383.37	430.42	498.02
A 北部三省	North	2237.65	2577.30	2811.02	3051.67	3309.95
6. 遼 宁	Liaoning	976.45	1069.57	1115.82	1293.92	1444.15
7. 吉 林	Jilin	386.38	442.28	525.04	627.74	699.65
8. 黑龙江	Heilongjiang	724.42	865.34	859.11	926.70	1051.67
B 東北三省	East-North	2087.25	2377.19	2499.97	2848.36	3195.47
9*. 上 海	Shanghai	1795.83	1804.81	1801.59	1933.01	2099.99
10. 江 苏	Jiangsu	2295.97	2642.29	2842.65	3125.42	3443.16
11. 浙 江	Zhejiang	1694.57	1848.00	1970.59	2267.20	2645.40
12. 安 徽	Anhui	779.21	822.73	839.29	928.09	1012.31
13. 福 建	Fujian	981.45	1145.35	1184.84	1258.89	1319.32
14. 江 西	Jiangxi	477.30	520.82	552.67	605.54	696.70
15. 山 东	Shangdong	2044.45	2347.02	2662.95	3200.77	3570.59
C 東部沿海	East	8272.95	9326.21	10052.99	11385.91	12687.48
16. 河 南	Henan	1255.59	1414.85	1472.53	1659.58	1806.41
17. 湖 北	Hubei	1102.10	1238.90	1320.10	1451.85	1610.93
18. 湖 南	Hunan	725.73	846.37	956.10	1082.00	1233.17
19. 广 东	Guangdong	2288.69	2651.24	2974.32	3175.93	3492.18
20. 广 西	Guangxi	487.29	573.10	629.07	670.65	735.56
21. 海 南	Hainan	162.36	173.48	187.91	196.40	207.42
D 中部沿海	Middle	6021.76	6897.94	7540.03	8236.41	9085.67
22*. 重 庆	Chongqing	392.66	516.31	558.99	633.43	760.33
23. 四 川	Sichuan	977.28	1185.21	1229.81	1349.69	1576.25
24. 貴 州	Guizhou	278.67	339.60	398.46	458.84	579.55
25. 云 南	Yunnan	549.42	689.35	720.87	701.43	747.86
26. 西 藏	Tibet	26.94	30.46	36.98	38.26	41.99
E 西南内陸	West-South	1832.31	2244.62	2386.12	2548.22	2945.65
27. 陕 西	Shanxi	464.80	573.49	651.33	796.21	887.24
28. 甘 肃	Gansu	215.98	239.25	283.85	336.23	364.34
29. 青 海	Qinghai	101.55	116.38	131.12	156.97	202.17
30. 宁 夏	Ningxia	88.10	108.65	130.61	160.82	195.81
31. 新 疆	Xinjiang	461.41	543.78	551.72	648.12	720.12
F 西部内陸	West	1331.84	1581.55	1748.63	2098.35	2369.68
G 4 直轄市	4 Direct Cities	3772.65	4133.17	4225.96	4638.52	5297.49
地域合計	Region: total	21783.76	25004.81	27038.76	30168.92	33593.90
合計	China: total	25556.41	29137.98	31264.72	34807.44	38891.39

18. Net Fixed Capital Formation $I_{NET}=\Delta K_{NET}$ 億元

各 地 域		1997	1998	1999	2000	2001
1*. 北 京	Beijing	697.48	786.96	832.93	946.05	1162.15
2*. 天 津	Tianjin	397.50	431.10	414.38	425.52	492.33
3. 河 北	Hebei	972.18	1097.02	1170.63	1246.04	1291.42
4. 山 西	Shanxi	257.88	361.91	408.20	444.10	485.26
5. 内蒙古	Inner Mongolia	185.43	−166.54	205.95	257.47	304.36
A 北部三省	North	1415.49	1292.39	1784.78	1947.61	2081.04
6. 遼 宁	Liaoning	452.75	452.83	406.66	517.85	604.51
7. 吉 林	Jilin	148.74	190.89	255.64	301.98	356.43
8. 黑龙江	Heilongjiang	337.48	453.37	423.24	503.76	500.71
B 東北三省	East-North	938.97	1097.09	1085.54	1323.59	1461.65
9*. 上 海	Shanghai	1388.16	1553.42	1220.70	1297.28	1377.35
10. 江 苏	Jiangsu	1383.75	1607.41	1694.364	1822.26	1954.51
11. 浙 江	Zhejiang	1255.26	1361.00	1397.88	1499.42	1769.41
12. 安 徽	Anhui	487.87	453.98	440.56	495.02	545.08
13. 福 建	Fujian	628.98	747.87	751.81	762.89	758.50
14. 江 西	Jiangxi	267.41	269.22	251.94	254.13	278.08
15. 山 东	Shangdong	926.33	1029.57	1288.87	1584.11	1666.24
C 東部沿海	East	4949.60	5469.05	5825.42	6417.83	6971.82
16. 河 南	Henan	701.48	817.48	852.57	951.36	1014.80
17. 湖 北	Hubei	576.60	625.34	634.33	781.97	909.28
18. 湖 南	Hunan	317.97	430.58	522.22	503.54	632.43
19. 广 东	Guangdong	1162.05	1399.52	1537.539	1534.79	1760.72
20. 广 西	Guangxi	300.18	385.07	434.10	455.32	477.50
21. 海 南	Hainan	97.67	105.47	114.26	112.91	118.78
D 中部沿海	Middle	3155.95	3763.46	4095.02	4339.89	4913.51
22*. 重 庆	Chongqing	271.55	309.06	332.67	372.04	491.42
23. 四 川	Sichuan	512.56	610.88	617.53	707.23	841.57
24. 貴 州	Guizhou	188.20	241.07	284.86	330.12	419.45
25. 云 南	Yunnan	332.09	473.92	437.16	414.32	428.52
26. 西 藏	Tibet	15.57	2.59	12.85	9.41	9.94
E 西南内陸	West-South	1048.42	1328.46	1352.40	1461.08	1699.48
27. 陝 西	Shanxi	279.62	376.35	409.89	528.95	554.50
28. 甘 肃	Gansu	114.74	131.06	165.79	150.21	171.73
29. 青 海	Qinghai	69.28	81.43	92.38	97.06	147.83
30. 宁 夏	Ningxia	54.67	71.19	87.24	111.09	137.81
31. 新 疆	Xinjiang	288.57	353.90	356.54	416.82	449.49
F 西部内陸	West	806.88	1013.93	1111.84	1304.13	1461.36
G 4直轄市	4 Direct Cities	2754.69	3080.54	2800.68	3040.89	3523.25
地域合計	Region: total	12315.31	13964.38	15255.00	16794.13	18588.86
合計	China: total	15070.00	17044.92	18055.68	19835.02	22112.11

19. Borrowings from household saving

100 million RMB 億元 (yuan)

各地域		1997	1998	1999	2000	2001
1*. 北京	Beijing	630.35	728.78	763.73	858.04	1059.03
2*. 天津	Tianjin	356.78	393.43	368.57	367.54	425.90
3. 河北	Hebei	844.25	967.96	1032.19	1084.92	1113.47
4. 山西	Shanxi	205.26	319.73	357.08	388.72	425.94
5. 内蒙古	Inner Mongolia	155.09	−188.35	180.51	223.64	266.07
A 北部三省	North	1204.60	1099.34	1569.78	1697.28	1805.48
6. 遼宁	Liaoning	333.04	336.66	268.59	345.64	414.39
7. 吉林	Jilin	116.35	161.40	220.52	258.72	323.48
8. 黑龙江	Heilongjiang	245.35	360.71	317.12	366.00	366.61
B 東北三省	East-North	694.74	858.78	806.22	970.36	1104.48
9*. 上海	Shanghai	1245.31	1409.49	1058.75	1111.44	1177.32
10. 江苏	Jiangsu	1202.65	1419.84	1477.69	1580.90	1692.98
11. 浙江	Zhejiang	1097.18	1199.70	1212.20	1316.53	1559.96
12. 安徽	Anhui	403.28	382.74	362.51	416.93	460.02
13. 福建	Fujian	540.70	660.05	648.33	639.75	626.10
14. 江西	Jiangxi	239.25	235.60	224.53	219.51	239.19
15. 山东	Shangdong	726.60	835.91	1068.39	1356.62	1425.58
C 東部沿海	East	4209.66	4733.84	4993.64	5530.25	6003.84
16. 河南	Henan	613.15	717.99	739.84	824.17	882.59
17. 湖北	Hubei	505.84	550.62	545.48	678.52	789.04
18. 湖南	Hunan	258.02	370.25	443.82	424.25	546.89
19. 广东	Guangdong	913.22	1179.69	1280.17	1211.03	1379.79
20. 广西	Guangxi	260.13	347.03	388.86	405.80	435.15
21. 海南	Hainan	88.21	95.49	102.43	99.86	105.00
D 中部沿海	Middle	2638.57	3261.07	3500.60	3643.63	4138.47
22*. 重庆	Chongqing	227.26	271.91	291.40	327.30	439.75
23. 四川	Sichuan	417.01	529.23	525.45	601.19	731.90
24. 貴州	Guizhou	167.76	224.00	265.42	305.14	389.32
25. 云南	Yunnan	269.09	404.41	371.74	337.43	353.15
26. 西藏	Tibet	14.62	1.98	11.53	8.56	8.64
E 西南内陸	West-South	868.48	1159.62	1174.13	1252.32	1483.02
27. 陝西	Shanxi	246.12	341.04	368.92	490.44	517.27
28. 甘肃	Gansu	89.15	103.63	134.73	129.28	143.79
29. 青海	Qinghai	64.95	77.13	87.70	92.82	141.63
30. 宁夏	Ningxia	49.78	66.35	82.42	105.41	131.62
31. 新疆	Xinjiang	261.29	329.16	325.75	373.86	409.09
F 西部内陸	West	711.29	917.32	999.51	1191.81	1343.40
G 4直轄市	4 Direct Cities	2459.70	2803.61	2482.45	2664.33	3102.00
地域合計	Region: total	10327.34	12029.96	13043.88	14285.64	15878.69
合計	China: total	12787.04	14833.57	15526.33	16949.97	18980.69

20. Retained earnings/undistributed profit

億元

各 地 域		1997	1998	1999	2000	2001
1*. 北 京	Beijing	67.13	58.18	69.20	88.01	103.12
2*. 天 津	Tianjin	40.72	37.67	45.81	57.98	66.43
3. 河 北	Hebei	127.93	129.06	138.44	161.12	177.95
4. 山 西	Shanxi	52.62	42.18	51.12	55.38	59.32
5. 内蒙古	Inner Mongolia	30.34	21.81	25.44	33.83	38.29
A 北部三省	North	210.89	193.05	215.00	250.33	275.56
6. 遼 宁	Liaoning	119.71	116.17	138.07	172.21	190.12
7. 吉 林	Jilin	32.39	29.49	35.12	43.26	32.95
8. 黒龙江	Heilongjiang	92.13	92.66	106.12	137.76	134.10
B 東北三省	East-North	244.23	238.31	279.32	353.23	357.17
9*. 上 海	Shanghai	142.85	143.93	161.95	185.84	200.03
10. 江 苏	Jiangsu	181.10	187.57	216.68	241.36	261.53
11. 浙 江	Zhejiang	158.08	161.30	185.68	182.89	209.45
12. 安 徽	Anhui	84.59	71.24	78.05	78.09	85.06
13. 福 建	Fujian	88.28	87.82	103.48	123.14	132.40
14. 江 西	Jiangxi	28.16	33.62	27.41	34.62	38.89
15. 山 东	Shangdong	199.73	193.66	220.48	227.49	240.66
C 東部沿海	East	739.94	735.21	831.78	887.58	967.98
16. 河 南	Henan	88.33	99.49	112.73	127.19	132.21
17. 湖 北	Hubei	70.76	74.72	88.85	103.45	120.24
18. 湖 南	Hunan	59.95	60.33	78.40	79.29	85.54
19. 广 东	Guangdong	248.83	219.83	257.37	323.76	380.93
20. 广 西	Guangxi	40.05	38.04	45.24	49.52	42.35
21. 海 南	Hainan	9.46	9.98	11.83	13.05	13.78
D 中部沿海	Middle	517.38	502.39	594.42	696.26	775.04
22*. 重 庆	Chongqing	44.29	37.15	41.27	44.74	51.67
23. 四 川	Sichuan	95.55	81.65	92.08	106.04	109.67
24. 貴 州	Guizhou	20.44	17.07	19.44	24.98	30.13
25. 云 南	Yunnan	63.00	69.51	65.42	76.89	75.37
26. 西 藏	Tibet	0.95	0.61	1.32	0.85	1.30
E 西南内陸	West-South	179.94	168.84	178.27	208.76	216.46
27. 陕 西	Shanxi	33.50	35.31	40.97	38.51	37.23
28. 甘 肃	Gansu	25.59	27.43	31.06	20.93	27.94
29. 青 海	Qinghai	4.33	4.30	4.68	4.24	6.20
30. 宁 夏	Ningxia	4.89	4.84	4.82	5.68	6.19
31. 新 疆	Xinjiang	27.28	24.74	30.79	42.96	40.40
F 西部内陸	West	95.59	96.61	112.33	112.32	117.96
G 4直轄市	4 Direct Cities	294.99	276.93	318.23	376.56	421.25
地域合計	Region: total	1987.97	1934.42	2211.12	2508.49	2710.17
合計	China: total	2282.96	2211.35	2529.35	2885.05	3131.42

1. Y: Net output=Profit+W

100 million RMB 億元 (yuan)

各地域		1997	1998	1999	2000	2001
1*. 北京	Beijing	979.34	1083.34	1168.42	1277.71	1473.69
2*. 天津	Tianjin	699.13	775.76	831.68	862.50	945.80
3. 河北	Hebei	2320.53	2483.38	2706.14	2961.54	3223.22
4. 山西	Shanxi	836.71	892.32	862.36	945.74	1023.15
5. 内蒙古	Inner Mongolia	685.63	822.18	868.16	932.05	1017.07
A 北部三省	North	3842.87	4197.87	4436.67	4839.33	5263.44
6. 遼宁	Liaoning	1919.24	2180.77	2254.37	2386.18	2529.88
7. 吉林	Jilin	947.15	1031.16	1084.20	1116.92	1400.92
8. 黑龙江	Heilongjiang	1447.12	1522.10	1532.98	1624.63	1836.68
B 東北三省	East-North	4313.50	4734.03	4871.55	5127.73	5767.48
9*. 上海	Shanghai	1452.62	1586.45	1753.56	1964.15	2127.90
10. 江苏	Jiangsu	3795.82	4064.24	4274.41	4745.32	5277.23
11. 浙江	Zhejiang	2519.89	2693.99	2842.53	3348.18	3672.96
12. 安徽	Anhui	1490.40	1638.83	1690.30	1785.19	1929.78
13. 福建	Fujian	1725.70	1905.45	2030.65	2131.13	2302.70
14. 江西	Jiangxi	1158.99	1223.83	1265.16	1288.18	1348.70
15. 山东	Shangdong	3409.81	3675.77	3972.95	4537.18	5007.06
C 東部沿海	East	14101.00	15202.00	16076.00	17835.00	19538.00
16. 河南	Henan	2752.26	2830.62	2969.75	3316.50	3691.70
17. 湖北	Hubei	2226.46	2393.25	2394.75	2701.27	2908.55
18. 湖南	Hunan	2060.66	2139.26	2206.87	2419.61	2633.81
19. 广东	Guangdong	4011.62	4615.63	4775.55	5188.19	5583.08
20. 广西	Guangxi	1477.65	1359.96	1362.49	1401.49	1602.61
21. 海南	Hainan	260.29	277.80	294.05	320.83	336.71
D 中部沿海	Middle	12789.00	13617.00	14003.00	15348.00	16756.00
22*. 重庆	Chongqing	841.45	875.27	892.31	936.48	1028.76
23. 四川	Sichuan	2019.3	2243.89	2293.6	2439.94	2727.51
24. 貴州	Guizhou	539.48	584.03	628.13	646.23	661.16
25. 云南	Yunnan	875.62	929.72	999.61	995.19	1095.92
26. 西藏	Tibet	59.43	57.59	69.91	81.21	95.32
E 西南内陸	West-South	3493.83	3815.23	3991.25	4162.58	4579.91
27. 陕西	Shanxi	847.73	854.85	887.65	1056.70	1185.73
28. 甘肃	Gansu	456.21	505.59	542.13	614.21	635.45
29. 青海	Qinghai	137.89	145.09	158.70	166.57	192.39
30. 宁夏	Ningxia	134.70	144.87	155.94	166.11	186.26
31. 新疆	Xinjiang	638.61	695.86	703.93	757.17	861.34
F 西部内陸	West	2215.15	2346.25	2448.35	2760.76	3061.16
G 4直轄市	4 Direct Cities	3972.54	4320.82	4645.97	5040.83	5576.15
地域合計	Region: total	40755.00	43912.00	45827.00	50073.00	54967.00
合計	China: total	44727.00	48233.00	50473.00	55114.00	60543.00

The growth rate of net output: $g_{Y(actual)}$

—	0.1062	0.0785	0.0935	0.1534
—	0.1096	0.0721	0.0371	0.0966
—	0.0702	0.0897	0.0944	0.0884
—	0.0665	–0.0336	0.0967	0.0819
—	0.1991	0.0559	0.0736	0.0912
—	0.0924	0.0569	0.0908	0.0876
—	0.1363	0.0338	0.0585	0.0602
—	0.0887	0.0514	0.0302	0.2543
—	0.0518	0.0071	0.0598	0.1305
—	0.0975	0.0290	0.0526	0.1248
—	0.0921	0.1053	0.1201	0.0834
—	0.0707	0.0517	0.1102	0.1121
—	0.0691	0.0551	0.1779	0.0970
—	0.0996	0.0314	0.0561	0.0810
—	0.1042	0.0657	0.0495	0.0805
—	0.0559	0.0338	0.0182	0.0470
—	0.0780	0.0808	0.1420	0.1036
—	0.0781	0.0575	0.1094	0.0955
—	0.0285	0.0492	0.1168	0.1131
—	0.0749	0.0006	0.1280	0.0767
—	0.0381	0.0316	0.0964	0.0885
—	0.1506	0.0346	0.0864	0.0761
—	–0.0796	0.0019	0.0286	0.1435
—	0.0672	0.0585	0.0911	0.0495
—	0.0647	0.0284	0.0960	0.0918
—	0.0402	0.0195	0.0495	0.0985
—	0.1112	0.0222	0.0638	0.1179
—	0.0826	0.0755	0.0288	0.0231
—	0.0618	0.0752	–0.0044	0.1012
—	–0.0310	0.2140	0.1616	0.1738
—	0.0920	0.0461	0.0429	0.1003
—	0.0084	0.0384	0.1904	0.1221
—	0.1082	0.0723	0.1330	0.0346
—	0.0522	0.0938	0.0496	0.1550
—	0.0755	0.0765	0.0652	0.1213
—	0.0897	0.0116	0.0756	0.1376
—	0.0592	0.0435	0.1276	0.1088
—	0.0877	0.0753	0.0850	0.1062
—	0.0775	0.0436	0.0927	0.0977
—	0.0784	0.0465	0.0920	0.0985

2. y: Net output/Population　　億元／万人 x 10 = 千元　　千元

各地域		1997	1998	1999	2000	2001
1*. 北　京	Beijing	7.898	8.695	9.295	9.245	10.656
2*. 天　津	Tianjin	7.336	8.106	8.672	8.616	9.420
3. 河　北	Hebei	3.556	3.780	4.092	4.391	4.811
4. 山　西	Shanxi	2.664	2.813	2.692	2.868	3.127
5. 内蒙古	Inner Mongolia	2.948	3.506	3.676	3.923	4.279
A　北部三省	North	3.205	3.473	3.643	3.897	4.263
6. 遼　宁	Liaoning	4.638	5.246	5.405	5.630	6.032
7. 吉　林	Jilin	3.604	3.900	4.079	4.094	5.206
8. 黑龙江	Heilongjiang	3.858	4.034	4.043	4.404	4.819
B　東北三省	East-North	4.101	4.477	4.587	4.813	5.392
9*. 上　海	Shanghai	9.970	10.836	11.897	11.733	13.184
10. 江　苏	Jiangsu	5.310	5.659	5.926	6.380	7.175
11. 浙　江	Zhejiang	5.682	6.046	6.352	7.159	7.962
12. 安　徽	Anhui	2.433	2.650	2.710	2.982	3.050
13. 福　建	Fujian	5.258	5.776	6.124	6.140	6.694
14. 江　西	Jiangxi	2.793	2.920	2.990	3.112	3.222
15. 山　东	Shangdong	3.881	4.159	4.473	4.997	5.538
C　東部沿海	East	4.156	4.452	4.679	5.126	5.588
16. 河　南	Henan	2.978	3.039	3.164	3.545	3.864
17. 湖　北	Hubei	3.791	4.052	4.033	4.481	4.868
18. 湖　南	Hunan	3.187	3.290	3.379	3.757	3.993
19. 广　东	Guangdong	5.689	6.462	6.569	6.003	7.173
20. 广　西	Guangxi	3.189	2.909	2.891	3.122	3.347
21. 海　南	Hainan	3.503	3.689	3.859	4.077	4.230
D　中部沿海	Middle	3.761	3.970	4.047	4.294	4.721
22*. 重　庆	Chongqing	2.766	2.860	2.902	3.031	3.322
23. 四　川	Sichuan	2.395	2.642	2.683	2.929	3.157
24. 貴　州	Guizhou	1.496	1.597	1.693	1.833	1.740
25. 云　南	Yunnan	2.139	2.244	2.385	2.321	2.556
26. 西　藏	Tibet	2.396	2.285	2.731	3.100	3.624
E　西南内陸	West-South	2.133	2.306	2.389	2.538	2.696
27. 陝　西	Shanxi	2.375	2.377	2.453	2.931	3.241
28. 甘　肃	Gansu	1.829	2.007	2.132	2.397	2.468
29. 青　海	Qinghai	2.780	2.885	3.112	3.216	3.679
30. 宁　夏	Ningxia	2.542	2.693	2.872	2.956	3.308
31. 新　疆	Xinjiang	3.717	3.983	3.968	3.933	4.591
F　西部内陸	West	2.515	2.635	2.724	3.010	3.329
G　4直轄市	4 Direct Cities	5.936	6.423	6.868	7.053	7.856
地域合計	Region: total	3.525	3.767	3.902	4.201	4.593
合計	China: total	3.657	3.912	4.063	4.363	4.775

The growth rate of per person net output: $g_{y(actual)}$

—	0.1009	0.0691	–0.0054	0.1526
—	0.1050	0.0699	–0.0065	0.0933
—	0.0630	0.0823	0.0733	0.0957
—	0.0560	–0.0432	0.0657	0.0901
—	0.1894	0.0483	0.0673	0.0908
—	0.0839	0.0487	0.0699	0.0937
—	0.1311	0.0303	0.0417	0.0713
—	0.0821	0.0459	0.0037	0.2715
—	0.0457	0.0021	0.0894	0.0943
—	0.0916	0.0245	0.0492	0.1205
—	0.0869	0.0978	–0.0137	0.1236
—	0.0656	0.0472	0.0766	0.1246
—	0.0641	0.0507	0.1270	0.1122
—	0.0895	0.0226	0.1004	0.0226
—	0.0985	0.0602	0.0026	0.0902
—	0.0456	0.0240	0.0406	0.0355
—	0.0715	0.0754	0.1174	0.1082
—	0.0711	0.0512	0.0955	0.0901
—	0.0205	0.0411	0.1205	0.0899
—	0.0687	–0.0046	0.1112	0.0863
—	0.0322	0.0269	0.1121	0.0628
—	0.1357	0.0166	–0.0861	0.1949
—	–0.0879	–0.0062	0.0799	0.0721
—	0.0531	0.0460	0.0564	0.0377
—	0.0558	0.0193	0.0610	0.0994
—	0.0341	0.0145	0.0444	0.0961
—	0.1030	0.0153	0.092	0.0776
—	0.0672	0.0604	0.0828	–0.0507
—	0.0490	0.0629	–0.0267	0.1015
—	–0.0464	0.1950	0.1350	0.1693
—	0.0808	0.0361	0.0623	0.0624
—	0.0011	0.0321	0.1947	0.1055
—	0.0972	0.0622	0.1246	0.0294
—	0.0376	0.0788	0.0334	0.1440
—	0.0595	0.0665	0.0292	0.1193
—	0.0716	–0.0038	–0.0087	0.1673
—	0.0479	0.0336	0.1050	0.1059
—	0.0820	0.0692	0.0270	0.1138
—	0.0689	0.0356	0.0768	0.0931
—	0.0700	0.0386	0.0737	0.0946

3. Π: Profit=(GDP-W-DEP)*0.15

100 million RMB 億元

各 地 域		1997	1998	1999	2000	2001
1*. 北 京	Beijing	111.88	103.44	115.33	146.69	171.86
2*. 天 津	Tianjin	67.87	66.97	76.35	96.63	110.72
3. 河 北	Hebei	213.21	229.44	230.74	268.54	296.59
4. 山 西	Shanxi	87.71	74.99	85.19	92.30	98.86
5. 内蒙古	Inner Mongolia	50.56	38.78	42.40	56.38	63.82
A 北部三省	North	351.48	343.20	358.34	417.22	459.27
6. 遼 宁	Liaoning	199.51	206.52	230.12	287.01	316.87
7. 吉 林	Jilin	53.99	52.42	58.54	72.10	54.92
8. 黑龙江	Heilongjiang	153.56	164.73	176.87	229.60	223.50
B 東北三省	East-North	407.05	423.67	465.53	588.71	595.29
9*. 上 海	Shanghai	285.70	307.04	323.91	371.67	400.06
10. 江 苏	Jiangsu	362.20	400.16	433.36	482.72	523.05
11. 浙 江	Zhejiang	316.16	344.10	371.36	365.79	418.90
12. 安 徽	Anhui	169.18	151.98	156.10	156.19	170.12
13. 福 建	Fujian	176.55	187.36	206.96	246.28	264.79
14. 江 西	Jiangxi	56.32	71.72	54.81	69.23	77.78
15. 山 东	Shangdong	399.46	413.14	440.97	454.97	481.32
C 東部沿海	East	1479.88	1568.45	1663.56	1775.17	1935.96
16. 河 南	Henan	147.22	176.88	187.88	211.99	220.34
17. 湖 北	Hubei	117.94	132.84	148.09	172.41	200.40
18. 湖 南	Hunan	99.92	107.25	130.67	132.16	142.56
19. 广 东	Guangdong	414.72	390.81	428.95	539.60	634.89
20. 广 西	Guangxi	66.75	67.63	75.39	82.54	70.58
21. 海 南	Hainan	15.76	17.74	19.72	21.75	22.97
D 中部沿海	Middle	862.30	893.14	990.70	1160.44	1291.74
22*. 重 庆	Chongqing	73.82	66.04	68.78	74.57	86.12
23. 四 川	Sichuan	159.25	145.15	153.47	176.73	182.78
24. 貴 州	Guizhou	34.06	30.35	32.41	41.63	50.22
25. 云 南	Yunnan	105.01	123.57	109.03	128.15	125.61
26. 西 藏	Tibet	1.58	1.09	2.20	1.41	2.16
E 西南内陸	West-South	299.90	300.16	297.11	347.93	360.77
27. 陕 西	Shanxi	55.83	62.77	68.29	64.18	62.06
28. 甘 肃	Gansu	42.64	48.76	51.77	34.88	46.56
29. 青 海	Qinghai	7.22	7.64	7.80	7.07	10.33
30. 宁 夏	Ningxia	8.15	8.60	8.03	9.47	10.31
31. 新 疆	Xinjiang	45.47	43.99	51.32	71.60	67.34
F 西部内陸	West	159.32	171.75	187.21	187.20	196.59
G 4 直轄市	4 Direct Cities	539.27	543.49	584.37	689.55	768.76
地域合計	Region: total	3559.93	3700.37	3962.46	4476.67	4839.62
合計	China: total	4099.20	4243.86	4546.83	5166.22	5608.37

The growth rate of profit: $g_{\Pi(actual)}$

—	–0.0754	0.1150	0.2719	0.1716
—	–0.0134	0.1401	0.2656	0.1459
—	0.0761	0.0057	0.1638	0.1045
—	–0.1450	0.1361	0.0834	0.0711
—	–0.2331	0.0935	0.3297	0.1319
—	–0.0236	0.0441	0.1643	0.1008
—	0.0351	0.1143	0.2472	0.1040
—	–0.0289	0.1166	0.2317	–0.2382
—	0.0727	0.0737	0.2982	–0.0266
—	0.0408	0.0988	0.2646	0.0112
—	0.0747	0.0549	0.1475	0.0764
—	0.1048	0.0830	0.1139	0.0836
—	0.0884	0.0792	–0.0150	0.1452
—	–0.1017	0.0272	0.0005	0.0892
—	0.0612	0.1046	0.1899	0.0752
—	0.2734	–0.2358	0.2631	0.1235
—	0.0343	0.0674	0.0318	0.0579
—	0.0599	0.0606	0.0671	0.0906
—	0.2015	0.0622	0.1283	0.0394
—	0.1264	0.1148	0.1642	0.1623
—	0.0733	0.2184	0.0114	0.0787
—	–0.0576	0.0976	0.2580	0.1766
—	0.0132	0.1148	0.0948	–0.1449
—	0.1250	0.1119	0.1027	0.0564
—	0.0358	0.1092	0.1713	0.1131
—	–0.1053	0.0414	0.0842	0.1549
—	–0.0886	0.0573	0.1516	0.0342
—	–0.1091	0.0679	0.2847	0.2062
—	0.1768	–0.1177	0.1753	–0.0198
—	–0.3107	1.0220	–0.3602	0.5346
—	0.0008	–0.0101	0.1710	0.0369
—	0.1242	0.0879	–0.0601	–0.0331
—	0.1433	0.0618	–0.3262	0.3348
—	0.0580	0.0207	–0.0937	0.4611
—	0.0548	–0.0655	0.1790	0.0883
—	–0.0325	0.1667	0.3951	–0.0595
—	0.0781	0.0900	–0.0001	0.0502
—	0.0078	0.0752	0.1800	0.1149
—	0.0395	0.0708	0.1298	0.0811
—	0.0353	0.0714	0.1362	0.0856

4. K: Capital stock=k(0)*L

100 million RMB 億元

各 地 域		1997	1998	1999	2000	2001
1*. 北 京	Beijing	745.54	725.40	827.18	1175.28	1466.23
2*. 天 津	Tianjin	486.95	503.73	586.92	830.68	1068.50
3. 河 北	Hebei	3155.36	3700.66	3759.62	4529.70	5603.80
4. 山 西	Shanxi	1732.91	1625.36	2110.17	2383.48	2874.21
5. 内蒙古	Inner Mongolia	902.84	674.37	769.11	1064.67	1355.96
A 北部三省	North	5772.8	6025.00	6558.28	7929.77	9795.02
6. 遼 宁	Liaoning	2263.97	2400.41	2838.48	3775.92	4775.46
7. 吉 林	Jilin	788.38	819.63	956.71	1304.40	959.07
8. 黑龙江	Heilongjiang	2094.88	2489.82	2916.70	3861.89	4215.86
B 東北三省	East-North	5223.00	5770.00	6766.00	9061.00	10036.00
9*. 上 海	Shanghai	1508.21	1727.7	1815.13	2346.42	2758.56
10. 江 苏	Jiangsu	3589.84	4311.76	4875.22	5604.65	6627.19
11. 浙 江	Zhejiang	2928.62	3470.46	3897.57	3784.89	4782.79
12. 安 徽	Anhui	3660.55	3496.78	3840.02	3879.40	5071.28
13. 福 建	Fujian	1767.22	1977.95	2253.10	2971.20	3596.11
14. 江 西	Jiangxi	1061.45	1497.65	1222.01	1648.18	2194.68
15. 山 东	Shangdong	5416.63	6057.01	6572.96	6743.76	7900.80
C 東部沿海	East	18740.00	21484.00	23701.00	25650.00	31494.00
16. 河 南	Henan	2602.14	3549.22	3959.16	4429.86	5184.53
17. 湖 北	Hubei	1637.34	1999.21	2448.01	2849.97	3742.48
18. 湖 南	Hunan	1649.91	1987.57	2578.37	2605.50	3245.68
19. 广 东	Guangdong	3836.43	3687.86	4353.37	6657.89	8045.98
20. 广 西	Guangxi	1101.52	1417.57	1738.59	1958.3	1916.87
21. 海 南	Hainan	236.84	293.14	340.68	395.13	493.71
D 中部沿海	Middle	12069	13716	16320	20018	24874
22*. 重 庆	Chongqing	1404.55	1407.9	1580.11	1822.51	2356.77
23. 四 川	Sichuan	3499.16	3349.92	3814.05	4468.86	5263.50
24. 貴 州	Guizhou	1198.31	1159.01	1276.05	1682.21	2623.18
25. 云 南	Yunnan	2584.02	3358.46	3048.26	4090.11	4466.89
26. 西 藏	Tibet	34.72	29.07	53.78	33.69	54.26
E 西南内陸	West-South	7399.00	7938.00	8292.00	10156.00	12166.00
27. 陕 西	Shanxi	1237.52	1610.04	1855.63	1621.94	1740.92
28. 甘 肃	Gansu	1226.99	1481.23	1618.93	1077.76	1715.26
29. 青 海	Qinghai	136.73	161.53	167.11	162.84	255.24
30. 宁 夏	Ningxia	168.78	194.67	186.49	237.38	283.27
31. 新 疆	Xinjiang	643.75	673.37	862.25	1348.37	1333.26
F 西部内陸	West	3334.13	3973.93	4581.81	4606.96	5368.91
G 4 直轄市	4 Direct Cities	4781.20	5159.44	5672.67	7241.94	8896.07
地域合計	Region: total	53159.00	59889.00	67704.00	78926.00	95798.00
合計	China: total	59003.00	66142.00	74601.00	87715.00	106768.00

訂正 in 1997

The growth rate of capital: $g_{K(actual)}$

—	–0.0270	0.1403	0.4208	0.2476
—	0.0345	0.1652	0.4153	0.2863
—	0.1728	0.0159	0.2048	0.2371
—	–0.0621	0.2983	0.1295	0.2059
—	–0.2531	0.1405	0.3843	0.2736
—	0.0437	0.0885	0.2091	0.2352
—	0.0603	0.1825	0.3303	0.2647
—	0.0396	0.1672	0.3634	–0.2647
—	0.1885	0.1715	0.3241	0.0917
—	0.1047	0.1726	0.3392	0.1076
—	0.1455	0.0506	0.2927	0.1756
—	0.2011	0.1307	0.1496	0.1824
—	0.1850	0.1231	–0.0289	0.2637
—	–0.0447	0.0982	0.0103	0.3072
—	0.1192	0.1391	0.3187	0.2103
—	0.4109	–0.1840	0.3487	0.3316
—	0.1182	0.0852	0.0260	0.1716
—	0.1464	0.1032	0.0823	0.2278
—	0.3640	0.1155	0.1189	0.1704
—	0.2210	0.2245	0.1642	0.3132
—	0.2047	0.2972	0.0105	0.2457
—	–0.0387	0.1805	0.5294	0.2085
—	0.2869	0.2265	0.1264	–0.0212
—	0.2377	0.1622	0.1598	0.2495
—	0.1365	0.1898	0.2266	0.2426
—	0.0024	0.1223	0.1534	0.2931
—	–0.0427	0.1385	0.1717	0.1778
—	–0.0328	0.1010	0.3183	0.5594
—	0.2997	–0.0924	0.3418	0.0921
—	–0.1626	0.8500	–0.3737	0.6107
—	0.0728	0.0446	0.2249	0.1979
—	0.3010	0.1525	–0.1259	0.0734
—	0.2072	0.0930	–0.3343	0.5915
—	0.1814	0.0345	–0.0256	0.5675
—	0.1534	–0.0420	0.2729	0.1933
—	0.0460	0.2805	0.5638	–0.0112
—	0.1919	0.1530	0.0055	0.1654
—	0.0791	0.0995	0.2766	0.2284
—	0.1266	0.1305	0.1657	0.2138
—	0.1210	0.1279	0.1758	0.2172

5. k: Capital/Population　　億元／万人 x 10= 千元　　千元

各地域		1997	1998	1999	2000	2001
1*. 北京	Beijing	6.012	5.822	6.581	8.504	10.602
2*. 天津	Tianjin	5.110	5.264	6.120	8.299	10.642
3. 河北	Hebei	4.836	5.634	5.684	6.717	8.365
4. 山西	Shanxi	5.517	5.124	6.586	7.229	8.784
5. 内蒙古	Inner Mongolia	3.882	2.876	3.256	4.481	5.705
A 北部三省	North	4.814	4.985	5.384	6.386	7.932
6. 遼宁	Liaoning	5.471	5.774	6.805	8.910	11.386
7. 吉林	Jilin	3.000	3.100	3.599	4.782	3.564
8. 黑龙江	Heilongjiang	5.585	6.599	7.692	10.469	11.062
B 東北三省	East-North	4.967	5.457	6.371	8.504	9.383
9*. 上海	Shanghai	10.352	11.801	12.314	14.017	17.091
10. 江苏	Jiangsu	5.022	6.004	6.759	7.535	9.010
11. 浙江	Zhejiang	6.603	7.788	8.710	8.093	10.368
12. 安徽	Anhui	5.974	5.655	6.157	6.481	8.014
13. 福建	Fujian	5.385	5.996	6.795	8.560	10.454
14. 江西	Jiangxi	2.558	3.573	2.888	3.981	5.243
15. 山东	Shangdong	6.166	6.853	7.399	7.428	8.739
C 東部沿海	East	5.524	6.291	6.899	7.373	9.008
16. 河南	Henan	2.815	3.810	4.218	4.735	5.426
17. 湖北	Hubei	2.788	3.384	4.123	4.728	6.264
18. 湖南	Hunan	2.552	3.057	3.947	4.046	4.921
19. 广东	Guangdong	5.441	5.163	5.988	7.704	10.338
20. 广西	Guangxi	2.378	3.032	3.689	4.362	4.003
21. 海南	Hainan	3.188	3.893	4.471	5.021	6.202
D 中部沿海	Middle	3.549	4.000	4.716	5.601	7.008
22*. 重庆	Chongqing	4.617	4.601	5.139	5.898	7.610
23. 四川	Sichuan	4.151	3.944	4.461	5.365	6.092
24. 貴州	Guizhou	3.323	3.168	3.439	4.772	6.905
25. 云南	Yunnan	6.312	8.104	7.272	9.538	10.42
26. 西藏	Tibet	1.400	1.154	2.101	1.286	2.063
E 西南内陸	West-South	4.518	4.797	4.963	6.191	7.161
27. 陕西	Shanxi	3.466	4.477	5.129	4.499	4.758
28. 甘肃	Gansu	4.920	5.880	6.366	4.207	6.661
29. 青海	Qinghai	2.757	3.211	3.277	3.144	4.880
30. 宁夏	Ningxia	3.185	3.618	3.434	4.224	5.032
31. 新疆	Xinjiang	3.747	3.854	4.860	7.004	7.107
F 西部内陸	West	3.785	4.464	5.098	5.023	5.838
G 4直轄市	4 Direct Cities	7.145	7.670	8.385	10.133	12.533
地域合計	Region: total	4.597	5.138	5.764	6.622	8.004
合計	China: total	4.824	5.365	6.006	6.943	8.421

訂正 in 1997

The growth rate of per person capital: $g_{k(actual)}$

—	–0.0317	0.1303	0.2923	0.2467
—	0.0302	0.1627	0.3559	0.2824
—	0.1650	0.0090	0.1816	0.2454
—	–0.0712	0.2853	0.0977	0.2151
—	–0.2591	0.1323	0.3761	0.2731
—	0.0356	0.0801	0.1860	0.2421
—	0.0554	0.1785	0.3092	0.2780
—	0.0334	0.1611	0.3284	–0.2546
—	0.1816	0.1656	0.3610	0.0567
—	0.0987	0.1674	0.3349	0.1033
—	0.1401	0.0435	0.1383	0.2194
—	0.1954	0.1258	0.1148	0.1958
—	0.1794	0.1183	–0.0708	0.2812
—	–0.0535	0.0888	0.0526	0.2366
—	0.1135	0.1333	0.2598	0.2212
—	0.3971	–0.1918	0.3784	0.3169
—	0.1115	0.0797	0.0038	0.1765
—	0.1389	0.0966	0.0687	0.2218
—	0.3534	0.1069	0.1226	0.1460
—	0.2140	0.2181	0.1468	0.3248
—	0.1978	0.2913	0.0250	0.2162
—	–0.0511	0.1598	0.2866	0.3419
—	0.2754	0.2166	0.1826	–0.0823
—	0.2213	0.1484	0.1230	0.2354
—	0.1270	0.1792	0.1875	0.2513
—	–0.0035	0.1168	0.1478	0.2902
—	–0.0498	0.1310	0.2028	0.1354
—	–0.0466	0.0856	0.3875	0.4469
—	0.2840	–0.1028	0.3117	0.0924
—	–0.1759	0.8211	–0.3880	0.6045
—	0.0618	0.0345	0.2476	0.1566
—	0.2916	0.1455	–0.1228	0.0575
—	0.1952	0.0826	–0.3392	0.5835
—	0.1650	0.0203	–0.0406	0.5525
—	0.1362	–0.0509	0.2299	0.1912
—	0.0286	0.2610	0.4411	0.0146
—	0.1792	0.1421	–0.0147	0.1623
—	0.0735	0.0933	0.2084	0.2369
—	0.1177	0.1218	0.1489	0.2087
—	0.1123	0.1194	0.1562	0.2128

6. L: Population

万人

各地域		1997	1998	1999	2000	2001
1*. 北京	Beijing	1240	1246	1257	1382	1383
2*. 天津	Tianjin	953	957	959	1001	1004
3. 河北	Hebei	6525	6569	6614	6744	6699
4. 山西	Shanxi	3141	3172	3204	3297	3272
5. 内蒙古	Inner Mongolia	2326	2345	2362	2376	2377
A 北部三省	North	11992	12086	12180	12417	12348
6. 遼宁	Liaoning	4138	4157	4171	4238	4194
7. 吉林	Jilin	2628	2644	2658	2728	2691
8. 黑龙江	Heilongjiang	3751	3773	3792	3689	3811
B 東北三省	East-North	10517	10574	10621	10655	10696
9*. 上海	Shanghai	1457	1464	1474	1674	1614
10. 江苏	Jiangsu	7148	7182	7213	7438	7355
11. 浙江	Zhejiang	4435	4456	4475	4677	4613
12. 安徽	Anhui	6127	6184	6237	5986	6328
13. 福建	Fujian	3282	3299	3316	3471	3440
14. 江西	Jiangxi	4150	4191	4231	4140	4186
15. 山东	Shangdong	8785	8838	8883	9079	9041
C 東部沿海	East	33927	34150	34355	34791	34963
16. 河南	Henan	9243	9315	9387	9356	9555
17. 湖北	Hubei	5873	5907	5938	6028	5975
18. 湖南	Hunan	6465	6502	6532	6440	6596
19. 广东	Guangdong	7051	7143	7270	8642	7783
20. 广西	Guangxi	4633	4675	4713	4489	4788
21. 海南	Hainan	743	753	762	787	796
D 中部沿海	Middle	34008	34295	34602	35742	35493
22*. 重庆	Chongqing	3042	3060	3075	3090	3097
23. 四川	Sichuan	8430	8493	8550	8329	8640
24. 貴州	Guizhou	3606	3658	3710	3525	3799
25. 云南	Yunnan	4094	4144	4192	4288	4287
26. 西藏	Tibet	248	252	256	262	263
E 西南内陸	West-South	16378	16547	16708	16404	16989
27. 陕西	Shanxi	3570	3596	3618	3605	3659
28. 甘肃	Gansu	2494	2519	2543	2562	2575
29. 青海	Qinghai	496	503	510	518	523
30. 宁夏	Ningxia	530	538	543	562	563
31. 新疆	Xinjiang	1718	1747	1774	1925	1876
F 西部内陸	West	8808	8903	8988	9172	9196
G 4直轄市	4 Direct Cities	6692	6727	6765	7147	7098
地域合計	Region: total	115630	116555	117454	119181	119685
合計	China: total	122322	123282	124219	126328	126783

n: The growth rate of population: $n_{(actual)}$

—	0.0048	0.0088	0.0994	0.0007
—	0.0042	0.0021	0.0438	0.0030
—	0.0067	0.0069	0.0197	–0.0067
—	0.0099	0.0101	0.0290	–0.0076
—	0.0082	0.0072	0.0059	0.0004
—	0.0078	0.0078	0.0195	–0.0056
—	0.0046	0.0034	0.0161	–0.0104
—	0.0061	0.0053	0.0263	–0.0136
—	0.0059	0.0050	–0.0272	0.0331
—	0.0054	0.0044	0.0032	0.0038
—	0.0048	0.0068	0.1357	–0.0358
—	0.0048	0.0043	0.0312	–0.0112
—	0.0047	0.0043	0.0451	–0.0137
—	0.0093	0.0086	–0.0402	0.0571
—	0.0052	0.0052	0.0467	–0.0089
—	0.0099	0.0095	–0.0215	0.0111
—	0.0060	0.0051	0.0221	–0.0042
—	0.0066	0.0060	0.0127	0.0049
—	0.0078	0.0077	–0.0033	0.0213
—	0.0058	0.0052	0.0152	–0.0088
—	0.0057	0.0046	–0.0141	0.0242
—	0.0130	0.0178	0.1887	–0.0994
—	0.0091	0.0081	–0.0475	0.0666
—	0.0135	0.0120	0.0328	0.0114
—	0.0084	0.0090	0.0329	–0.0070
—	0.0059	0.0049	0.0049	0.0023
—	0.0075	0.0067	–0.0258	0.0373
—	0.0144	0.0142	–0.0499	0.0777
—	0.0122	0.0116	0.0229	–0.0002
—	0.0161	0.0159	0.0234	0.0038
—	0.0103	0.0097	–0.0182	0.0357
—	0.0073	0.0061	–0.0036	0.0150
—	0.0100	0.0095	0.0075	0.0051
—	0.0141	0.0139	0.0157	0.0097
—	0.0151	0.0093	0.0350	0.0018
—	0.0169	0.0155	0.0851	–0.0255
—	0.0108	0.0095	0.0205	0.0026
—	0.0052	0.0056	0.0565	–0.0069
—	0.0080	0.0077	0.0147	0.0042
—	0.0078	0.0076	0.0170	0.0036

7. A: The level of technology

各 地 域		1997	1998	1999	2000	2001
1*. 北 京	Beijing	6.4345	7.3485	7.7178	7.2310	8.0910
2*. 天 津	Tianjin	6.2617	7.0234	7.3436	6.7978	7.1422
3. 河 北	Hebei	3.0769	3.2224	3.5281	3.6949	3.9573
4. 山 西	Shanxi	2.2272	2.4522	2.2342	2.3649	2.5348
5. 内蒙古	Inner Mongolia	2.6671	3.3357	3.4696	3.5825	3.8359
A 北部三省	North	2.7755	3.0458	3.1795	3.3216	3.5579
6. 遼 宁	Liaoning	3.8870	4.4434	4.4440	4.3281	4.4479
7. 吉 林	Jilin	3.3853	3.6820	3.8065	3.7009	4.9529
8. 黑龙江	Heilongjiang	3.2143	3.2890	3.1948	3.1602	3.5973
B 東北三省	East-North	3.5258	3.8463	3.8428	3.7639	4.2796
9*. 上 海	Shanghai	6.2960	6.7209	7.4818	7.1194	7.7317
10. 江 苏	Jiangsu	4.5524	4.7434	4.8823	5.1950	5.7702
11. 浙 江	Zhejiang	4.4837	4.6514	4.7875	5.6968	6.0981
12. 安 徽	Anhui	1.9858	2.2568	2.2913	2.5324	2.5384
13. 福 建	Fujian	4.4261	4.8432	5.0374	4.7907	5.1106
14. 江 西	Jiangxi	2.6682	2.7101	2.8559	2.8889	2.9283
15. 山 东	Shangdong	3.1365	3.3500	3.5816	4.0872	4.4964
C 東部沿海	East	3.4737	3.6822	3.8317	4.2020	4.4946
16. 河 南	Henan	2.8173	2.7951	2.8883	3.2094	3.4927
17. 湖 北	Hubei	3.5906	3.7864	3.6947	4.0582	4.2898
18. 湖 南	Hunan	3.0458	3.1109	3.1148	3.4810	3.6631
19. 广 东	Guangdong	4.7755	5.6233	5.5933	4.8549	5.5001
20. 广 西	Guangxi	3.0670	2.7529	2.6895	2.8626	3.1488
21. 海 南	Hainan	3.2658	3.3825	3.4902	3.6542	3.7348
D 中部沿海	Middle	3.4527	3.6253	3.6264	3.7696	4.0631
22*. 重 庆	Chongqing	2.4187	2.5492	2.5579	2.6313	2.8028
23. 四 川	Sichuan	2.1410	2.4176	2.4272	2.5938	2.7968
24. 貴 州	Guizhou	1.3868	1.5037	1.5885	1.6577	1.5028
25. 云 南	Yunnan	1.7148	1.6988	1.9206	1.7359	1.9542
26. 西 藏	Tibet	2.3751	2.2791	2.6678	3.0861	3.5654
E 西南内陸	West-South	1.8742	2.0381	2.1203	2.1789	2.3086
27. 陕 西	Shanxi	2.1879	2.1295	2.1635	2.6753	2.9865
28. 甘 肃	Gansu	1.5761	1.6919	1.7865	2.2096	2.1476
29. 青 海	Qinghai	2.6363	2.7126	2.9354	3.0631	3.3785
30. 宁 夏	Ningxia	2.3695	2.4948	2.6950	2.7226	3.0253
31. 新 疆	Xinjiang	3.3835	3.6575	3.5360	3.2721	3.9388
F 西部内陸	West	2.2853	2.3620	2.4050	2.6980	2.9722
G 4直轄市	4 Direct Cities	4.5455	4.9711	5.2559	5.1381	5.5439
地域合計	Region: total	3.0849	3.2821	3.3533	3.5481	3.8241
合計	China: total	3.1655	3.3748	3.4573	3.6381	3.9200

訂正 in 1997

$g_{A(actual)}$: The rate of technological progress=$g_{y(actual)}$-a*$g_{k(actual)}$

—	0.1045	0.0562	–0.0389	0.1238
—	0.1024	0.0549	–0.0463	0.0602
—	0.0478	0.0815	0.0568	0.0731
—	0.0620	–0.0714	0.0562	0.0693
—	0.2017	0.0419	0.0445	0.0736
—	0.0810	0.0423	0.0539	0.0726
—	0.1258	0.0121	0.0045	0.0365
—	0.0804	0.0372	–0.0175	0.2815
—	0.0260	–0.0170	0.0384	0.0874
—	0.0827	0.0085	0.0108	0.1098
—	0.0598	0.0898	–0.0399	0.0824
—	0.0464	0.0344	0.0649	0.1052
—	0.0411	0.0352	0.1348	0.0802
—	0.0944	0.0144	0.0958	0.0017
—	0.0873	0.0467	–0.0274	0.0648
—	0.0223	0.0323	0.0202	0.0172
—	0.0590	0.0665	0.1170	0.0912
—	0.0567	0.0412	0.0887	0.0681
—	–0.0016	0.0343	0.1126	0.0812
—	0.0568	–0.0181	0.1018	0.0639
—	0.0223	0.0096	0.1107	0.0511
—	0.1401	0.0022	–0.1159	0.1560
—	–0.1016	–0.0182	0.0692	0.0757
—	0.0389	0.0361	0.0481	0.0216
—	0.0475	0.0066	0.0469	0.0801
—	0.0343	0.0055	0.0326	0.0718
—	0.1062	0.0066	0.0773	0.0685
—	0.0696	0.0560	0.0579	–0.0846
—	0.0112	0.0741	–0.0669	0.0909
—	–0.0430	0.1691	0.1417	0.1556
—	0.0760	0.0335	0.0416	0.0500
—	–0.0203	0.0209	0.2022	0.1025
—	0.0784	0.0543	0.1438	–0.0134
—	0.0289	0.0778	0.0351	0.1143
—	0.0514	0.0692	0.0161	0.1087
—	0.0698	–0.0228	–0.0505	0.1661
—	0.0348	0.0228	0.1060	0.0955
—	0.0728	0.0575	–0.0015	0.0812
—	0.0590	0.0251	0.0635	0.0747
—	0.0601	0.0278	0.0591	0.0748

1. alpha=profit/net output

100 million RMB 億元 (yuan)

各 地 域		1997	1998	1999	2000	2001
1*. 北 京	Beijing	0.1142	0.0955	0.0987	0.1148	0.1166
2*. 天 津	Tianjin	0.0971	0.0863	0.0918	0.1120	0.1171
3. 河 北	Hebei	0.0919	0.0924	0.0853	0.0907	0.0920
4. 山 西	Shanxi	0.1048	0.0840	0.0988	0.0976	0.0966
5. 内蒙古	Inner Mongolia	0.0737	0.0472	0.0488	0.0605	0.0627
A 北部三省	North	0.0915	0.0818	0.0808	0.0862	0.0873
6. 遼 宁	Liaoning	0.1040	0.0947	0.1021	0.1203	0.1253
7. 吉 林	Jilin	0.0570	0.0508	0.0540	0.0646	0.0392
8. 黑龙江	Heilongjiang	0.1061	0.1082	0.1154	0.1413	0.1217
B 東北三省	East-North	0.0944	0.0895	0.0956	0.1148	0.1032
9*. 上 海	Shanghai	0.1967	0.1935	0.1847	0.1892	0.1880
10. 江 苏	Jiangsu	0.0954	0.0985	0.1014	0.1017	0.0991
11. 浙 江	Zhejiang	0.1255	0.1277	0.1306	0.1092	0.1140
12. 安 徽	Anhui	0.1135	0.0927	0.0924	0.0875	0.0882
13. 福 建	Fujian	0.1023	0.0983	0.1019	0.1156	0.1150
14. 江 西	Jiangxi	0.0486	0.0586	0.0433	0.0537	0.0577
15. 山 东	Shangdong	0.1171	0.1124	0.1110	0.1003	0.0961
C 東部沿海	East	0.1050	0.1032	0.1035	0.0995	0.0991
16. 河 南	Henan	0.0535	0.0625	0.0633	0.0639	0.0597
17. 湖 北	Hubei	0.0530	0.0555	0.0618	0.0638	0.0689
18. 湖 南	Hunan	0.0485	0.0501	0.0592	0.0546	0.0541
19. 广 东	Guangdong	0.1034	0.0847	0.0898	0.1040	0.1137
20. 广 西	Guangxi	0.0452	0.0497	0.0553	0.0589	0.0440
21. 海 南	Hainan	0.0606	0.0638	0.0671	0.0678	0.0682
D 中部沿海	Middle	0.0674	0.0656	0.0707	0.0756	0.0771
22*. 重 庆	Chongqing	0.0877	0.0755	0.0771	0.0796	0.0837
23. 四 川	Sichuan	0.0789	0.0647	0.0669	0.0724	0.0670
24. 貴 州	Guizhou	0.0631	0.0520	0.0516	0.0644	0.0760
25. 云 南	Yunnan	0.1199	0.1329	0.1091	0.1288	0.1146
26. 西 藏	Tibet	0.0266	0.0189	0.0315	0.0174	0.0227
E 西南内陸	West-South	0.0858	0.0787	0.0744	0.0836	0.0788
27. 陕 西	Shanxi	0.0659	0.0734	0.0769	0.0607	0.0523
28. 甘 肃	Gansu	0.0935	0.0964	0.0955	0.0568	0.0733
29. 青 海	Qinghai	0.0524	0.0527	0.0491	0.0424	0.0537
30. 宁 夏	Ningxia	0.0605	0.0593	0.0515	0.0570	0.0553
31. 新 疆	Xinjiang	0.0712	0.0632	0.0729	0.0946	0.0782
F 西部内陸	West	0.0719	0.0732	0.0765	0.0678	0.0642
G 4直轄市	4 Direct Cities	0.1357	0.1258	0.1258	0.1368	0.1379
地域合計	Region: total	0.0873	0.0843	0.0865	0.0894	0.0880
合計	China: total	0.0916	0.0880	0.0901	0.0937	0.0926

2. Omega(0)=Capital stock/net output　　訂正 in 1997

各 地 域		1997	1998	1999	2000	2001
1*. 北 京	Beijing	0.7613	0.6696	0.7079	0.9198	0.9949
2*. 天 津	Tianjin	0.6965	0.6493	0.7057	0.9631	1.1297
3. 河 北	Hebei	1.3598	1.4902	1.3893	1.5295	1.7386
4. 山 西	Shanxi	2.0711	1.8215	2.4470	2.5202	2.8092
5. 内蒙古	Inner Mongolia	1.3168	0.8202	0.8859	1.1423	1.3332
A 北部三省	North	1.5022	1.4353	1.4782	1.6386	1.8610
6. 遼 宁	Liaoning	1.1796	1.1007	1.2591	1.5824	1.8876
7. 吉 林	Jilin	0.8324	0.7949	0.8824	1.1679	0.6846
8. 黒龙江	Heilongjiang	1.4476	1.6358	1.9026	2.3771	2.2954
B 東北三省	East-North	1.2110	1.2189	1.3890	1.7671	1.7401
9*. 上 海	Shanghai	1.0383	1.0890	1.0351	1.1946	1.2964
10. 江 苏	Jiangsu	0.9457	1.0609	1.1406	1.1811	1.2558
11. 浙 江	Zhejiang	1.1622	1.2882	1.3712	1.1304	1.3022
12. 安 徽	Anhui	2.4561	2.1337	2.2718	2.1731	2.6279
13. 福 建	Fujian	1.0241	1.0380	1.1095	1.3942	1.5617
14. 江 西	Jiangxi	0.9158	1.2237	0.9659	1.2795	1.6273
15. 山 东	Shangdong	1.5885	1.6478	1.6544	1.4863	1.5779
C 東部沿海	East	1.3290	1.4132	1.4743	1.4382	1.6119
16. 河 南	Henan	0.9455	1.2539	1.3332	1.3357	1.4044
17. 湖 北	Hubei	0.7354	0.8354	1.0222	1.0550	1.2867
18. 湖 南	Hunan	0.8007	0.9291	1.1683	1.0768	1.2323
19. 广 东	Guangdong	0.9563	0.7990	0.9116	1.2833	1.4411
20. 广 西	Guangxi	0.7455	1.0424	1.2760	1.3973	1.1961
21. 海 南	Hainan	0.9099	1.0552	1.1586	1.2316	1.4663
D 中部沿海	Middle	0.9437	1.0073	1.1654	1.3043	1.4844
22*. 重 庆	Chongqing	1.6692	1.6085	1.7708	1.9461	2.2909
23. 四 川	Sichuan	1.7329	1.4929	1.6629	1.8315	1.9298
24. 貴 州	Guizhou	2.2212	1.9845	2.0315	2.6031	3.9676
25. 云 南	Yunnan	2.9511	3.6123	3.0494	4.1099	4.0759
26. 西 藏	Tibet	0.5842	0.5048	0.7693	0.4148	0.5692
E 西南内陸	West-South	2.1178	2.0806	2.0775	2.4399	2.6564
27. 陝 西	Shanxi	1.4598	1.8834	2.0905	1.5349	1.4682
28. 甘 肃	Gansu	2.6895	2.9297	2.9862	1.7547	2.6993
29. 青 海	Qinghai	0.9916	1.1133	1.0530	0.9776	1.3267
30. 宁 夏	Ningxia	1.2530	1.3438	1.1959	1.4290	1.5209
31. 新 疆	Xinjiang	1.0081	0.9677	1.2249	1.7808	1.5479
F 西部内陸	West	1.5052	1.6937	1.8714	1.6687	1.7539
G 4 直轄市	4 Direct Cities	1.2036	1.1941	1.2210	1.4367	1.5954
地域合計	Region: total	1.3044	1.3638	1.4774	1.5762	1.7428
合計	China: total	1.3192	1.3713	1.4780	1.5915	1.7635

3. r(0)=alpha/Omega　　訂正 in 1997

各　地　域		1997	1998	1999	2000	2001
1*. 北　京	Beijing	0.1501	0.1426	0.1394	0.1248	0.1172
2*. 天　津	Tianjin	0.1394	0.1329	0.1301	0.1163	0.1036
3. 河　北	Hebei	0.0676	0.0620	0.0614	0.0593	0.0529
4. 山　西	Shanxi	0.0506	0.0461	0.0404	0.0387	0.0344
5. 内蒙古	Inner Mongolia	0.0560	0.0575	0.0551	0.0530	0.0471
A　北部三省	North	0.0609	0.0570	0.0546	0.0526	0.0469
6. 遼　宁	Liaoning	0.0881	0.0860	0.0811	0.0760	0.0664
7. 吉　林	Jilin	0.0685	0.0640	0.0612	0.0553	0.0573
8. 黑龙江	Heilongjiang	0.0733	0.0662	0.0606	0.0595	0.0530
B　東北三省	East-North	0.0779	0.0734	0.0688	0.0650	0.0593
9*. 上　海	Shanghai	0.1894	0.1777	0.1784	0.1584	0.1450
10. 江　苏	Jiangsu	0.1009	0.0928	0.0889	0.0861	0.0789
11. 浙　江	Zhejiang	0.1080	0.0992	0.0953	0.0966	0.0876
12. 安　徽	Anhui	0.0462	0.0435	0.0407	0.0403	0.0335
13. 福　建	Fujian	0.0999	0.0947	0.0919	0.0829	0.0736
14. 江　西	Jiangxi	0.0531	0.0479	0.0449	0.0420	0.0354
15. 山　东	Shangdong	0.0737	0.0682	0.0671	0.0675	0.0609
C　東部沿海	East	0.0790	0.0730	0.0702	0.0692	0.0615
16. 河　南	Henan	0.0566	0.0498	0.0475	0.0479	0.0425
17. 湖　北	Hubei	0.0720	0.0664	0.0605	0.0605	0.0535
18. 湖　南	Hunan	0.0606	0.0540	0.0507	0.0507	0.0439
19. 广　东	Guangdong	0.1081	0.1060	0.0985	0.0810	0.0789
20. 广　西	Guangxi	0.0606	0.0477	0.0434	0.0421	0.0368
21. 海　南	Hainan	0.0666	0.0605	0.0579	0.0550	0.0465
D　中部沿海	Middle	0.0715	0.0651	0.0607	0.0580	0.0519
22*. 重　庆	Chongqing	0.0526	0.0469	0.0435	0.0409	0.0365
23. 四　川	Sichuan	0.0455	0.0433	0.0402	0.0395	0.0347
24. 貴　州	Guizhou	0.0284	0.0262	0.0254	0.0247	0.0191
25. 云　南	Yunnan	0.0406	0.0368	0.0358	0.0313	0.0281
26. 西　藏	Tibet	0.0455	0.0375	0.0410	0.0418	0.0399
E　西南内陸	West-South	0.0405	0.0378	0.0358	0.0343	0.0297
27. 陕　西	Shanxi	0.0451	0.0390	0.0368	0.0396	0.0356
28. 甘　肃	Gansu	0.0348	0.0329	0.0320	0.0324	0.0271
29. 青　海	Qinghai	0.0528	0.0473	0.0467	0.0434	0.0405
30. 宁　夏	Ningxia	0.0483	0.0442	0.0431	0.0399	0.0364
31. 新　疆	Xinjiang	0.0706	0.0653	0.0595	0.0531	0.0505
F　西部内陸	West	0.0478	0.0432	0.0409	0.0406	0.0366
G　4 直轄市	4 Direct Cities	0.1128	0.1053	0.1030	0.0952	0.0864
地域合計	Region: total	0.0670	0.0618	0.0585	0.0567	0.0505
合計	China: total	0.0695	0.0642	0.0609	0.0589	0.0525

4. k(0)=the capital-labour ratio　　訂正 in 1997　　千元

各地域		1997	1998	1999	2000	2001
1*. 北京	Beijing	6.012	5.822	6.581	8.504	10.602
2*. 天津	Tianjin	5.110	5.264	6.120	8.299	10.642
3. 河北	Hebei	4.836	5.634	5.684	6.717	8.365
4. 山西	Shanxi	5.517	5.124	6.586	7.229	8.784
5. 内蒙古	Inner Mongolia	3.882	2.876	3.256	4.481	5.705
A 北部三省	North	4.814	4.985	5.384	6.386	7.932
6. 遼宁	Liaoning	5.471	5.774	6.805	8.910	11.386
7. 吉林	Jilin	3.000	3.100	3.599	4.782	3.564
8. 黒龙江	Heilongjiang	5.585	6.599	7.692	10.469	11.062
B 東北三省	East-North	4.967	5.457	6.371	8.504	9.383
9*. 上海	Shanghai	10.352	11.801	12.314	14.017	17.091
10. 江苏	Jiangsu	5.022	6.004	6.759	7.535	9.010
11. 浙江	Zhejiang	6.603	7.788	8.710	8.093	10.368
12. 安徽	Anhui	5.974	5.655	6.157	6.481	8.014
13. 福建	Fujian	5.385	5.996	6.795	8.560	10.454
14. 江西	Jiangxi	2.558	3.573	2.888	3.981	5.243
15. 山东	Shangdong	6.166	6.853	7.399	7.428	8.739
C 東部沿海	East	5.524	6.291	6.899	7.373	9.008
16. 河南	Henan	2.815	3.810	4.218	4.735	5.426
17. 湖北	Hubei	2.788	3.384	4.123	4.728	6.264
18. 湖南	Hunan	2.552	3.057	3.947	4.046	4.921
19. 广东	Guangdong	5.441	5.163	5.988	7.704	10.338
20. 广西	Guangxi	2.378	3.032	3.689	4.362	4.003
21. 海南	Hainan	3.188	3.893	4.471	5.021	6.202
D 中部沿海	Middle	3.549	4.000	4.716	5.601	7.008
22*. 重庆	Chongqing	4.617	4.601	5.139	5.898	7.610
23. 四川	Sichuan	4.151	3.944	4.461	5.365	6.092
24. 貴州	Guizhou	3.323	3.168	3.439	4.772	6.905
25. 云南	Yunnan	6.312	8.104	7.272	9.538	10.42
26. 西藏	Tibet	1.400	1.154	2.101	1.286	2.063
E 西南内陸	West-South	4.518	4.797	4.963	6.191	7.161
27. 陝西	Shanxi	3.466	4.477	5.129	4.499	4.758
28. 甘肃	Gansu	4.920	5.880	6.366	4.207	6.661
29. 青海	Qinghai	2.757	3.211	3.277	3.144	4.880
30. 宁夏	Ningxia	3.185	3.618	3.434	4.224	5.032
31. 新疆	Xinjiang	3.747	3.854	4.860	7.004	7.107
F 西部内陸	West	3.785	4.464	5.098	5.023	5.838
G 4直轄市	4 Direct Cities	7.145	7.670	8.385	10.133	12.533
地域合計	Region: total	4.597	5.138	5.764	6.622	8.004
合計	China: total	4.824	5.365	6.006	6.943	8.421

5. A(0)=k(0)^(1-alpha)/Omega(0)　　訂正 in 1997

各地域		1997	1998	1999	2000	2001
1*. 北　京	Beijing	6.4345	7.3485	7.7178	7.2310	8.0910
2*. 天　津	Tianjin	6.2617	7.0234	7.3436	6.7978	7.1422
3. 河　北	Hebei	3.0769	3.2224	3.5281	3.6949	3.9573
4. 山　西	Shanxi	2.2272	2.4522	2.2342	2.3649	2.5348
5. 内蒙古	Inner Mongolia	2.6671	3.3357	3.4696	3.5825	3.8359
A　北部三省	North	2.7755	3.0458	3.1795	3.3216	3.5579
6. 遼　宁	Liaoning	3.8870	4.4434	4.4440	4.3281	4.4479
7. 吉　林	Jilin	3.3853	3.6820	3.8065	3.7009	4.9529
8. 黒龙江	Heilongjiang	3.2143	3.2890	3.1948	3.1602	3.5973
B　東北三省	East-North	3.5258	3.8463	3.8428	3.7639	4.2796
9*. 上　海	Shanghai	6.2960	6.7209	7.4818	7.1194	7.7317
10. 江　苏	Jiangsu	4.5524	4.7434	4.8823	5.1950	5.7702
11. 浙　江	Zhejiang	4.4837	4.6514	4.7875	5.6968	6.0981
12. 安　徽	Anhui	1.9858	2.2568	2.2913	2.5324	2.5384
13. 福　建	Fujian	4.4261	4.8432	5.0374	4.7907	5.1106
14. 江　西	Jiangxi	2.6682	2.7101	2.8559	2.8889	2.9283
15. 山　东	Shangdong	3.1365	3.3500	3.5816	4.0872	4.4964
C　東部沿海	East	3.4737	3.6822	3.8317	4.2020	4.4946
16. 河　南	Henan	2.8173	2.7951	2.8883	3.2094	3.4927
17. 湖　北	Hubei	3.5906	3.7864	3.6947	4.0582	4.2898
18. 湖　南	Hunan	3.0458	3.1109	3.1148	3.4810	3.6631
19. 广　东	Guangdong	4.7755	5.6233	5.5933	4.8549	5.5001
20. 广　西	Guangxi	3.0670	2.7529	2.6895	2.8626	3.1488
21. 海　南	Hainan	3.2658	3.3825	3.4902	3.6542	3.7348
D　中部沿海	Middle	3.4527	3.6253	3.6264	3.7696	4.0631
22*. 重　庆	Chongqing	2.4187	2.5492	2.5579	2.6313	2.8028
23. 四　川	Sichuan	2.1410	2.4176	2.4272	2.5938	2.7968
24. 貴　州	Guizhou	1.3868	1.5037	1.5885	1.6577	1.5028
25. 云　南	Yunnan	1.7148	1.6988	1.9206	1.7359	1.9542
26. 西　藏	Tibet	2.3751	2.2791	2.6678	3.0861	3.5654
E　西南内陸	West-South	1.8742	2.0381	2.1203	2.1789	2.3086
27. 陝　西	Shanxi	2.1879	2.1295	2.1635	2.6753	2.9865
28. 甘　肃	Gansu	1.5761	1.6919	1.7865	2.2096	2.1476
29. 青　海	Qinghai	2.6363	2.7126	2.9354	3.0631	3.3785
30. 宁　夏	Ningxia	2.3695	2.4948	2.6950	2.7226	3.0253
31. 新　疆	Xinjiang	3.3835	3.6575	3.5360	3.2721	3.9388
F　西部内陸	West	2.2853	2.3620	2.4050	2.6980	2.9722
G　4直轄市	4 Direct Cities	4.5455	4.9711	5.2559	5.1381	5.5439
地域合計	Region: total	3.0849	3.2821	3.3533	3.5481	3.8241
合計	China: total	3.1655	3.3748	3.4573	3.6381	3.9200

6. y(0)=A(0)k(0)^alpha　　訂正 in 1997　　千元

各 地 域		1997	1998	1999	2000	2001
1*. 北 京	Beijing	7.898	8.695	9.295	9.245	10.656
2*. 天 津	Tianjin	7.336	8.106	8.672	8.616	9.420
3. 河 北	Hebei	3.556	3.780	4.092	4.391	4.811
4. 山 西	Shanxi	2.664	2.813	2.692	2.868	3.127
5. 内蒙古	Inner Mongolia	2.948	3.506	3.676	3.923	4.279
A 北部三省	North	3.205	3.473	3.643	3.897	4.263
6. 遼 宁	Liaoning	4.638	5.246	5.405	5.630	6.032
7. 吉 林	Jilin	3.604	3.900	4.079	4.094	5.206
8. 黑龙江	Heilongjiang	3.858	4.034	4.043	4.404	4.819
B 東北三省	East-North	4.101	4.477	4.587	4.813	5.392
9*. 上 海	Shanghai	9.970	10.836	11.897	11.733	13.184
10. 江 苏	Jiangsu	5.310	5.659	5.926	6.380	7.175
11. 浙 江	Zhejiang	5.682	6.046	6.352	7.159	7.962
12. 安 徽	Anhui	2.433	2.650	2.710	2.982	3.050
13. 福 建	Fujian	5.258	5.776	6.124	6.140	6.694
14. 江 西	Jiangxi	2.793	2.920	2.990	3.112	3.222
15. 山 东	Shangdong	3.881	4.159	4.473	4.997	5.538
C 東部沿海	East	4.156	4.452	4.679	5.126	5.588
16. 河 南	Henan	2.978	3.039	3.164	3.545	3.864
17. 湖 北	Hubei	3.791	4.052	4.033	4.481	4.868
18. 湖 南	Hunan	3.187	3.290	3.379	3.757	3.993
19. 广 东	Guangdong	5.689	6.462	6.569	6.003	7.173
20. 广 西	Guangxi	3.189	2.909	2.891	3.122	3.347
21. 海 南	Hainan	3.503	3.689	3.859	4.077	4.230
D 中部沿海	Middle	3.761	3.970	4.047	4.294	4.721
22*. 重 庆	Chongqing	2.766	2.860	2.902	3.031	3.322
23. 四 川	Sichuan	2.395	2.642	2.683	2.929	3.157
24. 貴 州	Guizhou	1.496	1.597	1.693	1.833	1.740
25. 云 南	Yunnan	2.139	2.244	2.385	2.321	2.556
26. 西 藏	Tibet	2.396	2.285	2.731	3.100	3.624
E 西南内陸	West-South	2.133	2.306	2.389	2.538	2.696
27. 陕 西	Shanxi	2.375	2.377	2.453	2.931	3.241
28. 甘 肃	Gansu	1.829	2.007	2.132	2.397	2.468
29. 青 海	Qinghai	2.780	2.885	3.112	3.216	3.679
30. 宁 夏	Ningxia	2.542	2.693	2.872	2.956	3.308
31. 新 疆	Xinjiang	3.717	3.983	3.968	3.933	4.591
F 西部内陸	West	2.515	2.635	2.724	3.010	3.329
G 4直轄市	4 Direct Cities	5.936	6.423	6.868	7.053	7.856
地域合計	Region: total	3.525	3.767	3.902	4.201	4.593
合計	China: total	3.657	3.912	4.063	4.363	4.775