# Chapter 4 Policy Simulations

#### 4.1 Background Analysis of Policy Simulations

Following the continued decline in economic growth, China's fiscal revenue growth fell to 8.6 % in 2004, the lowest growth rate in 23 years. However, the fiscal revenue share of GDP did not fall<sup>1</sup> but showed a slight increase of 0.1 percentage points over the previous year. *The generalized government revenue as a share of GDP remained high at 37.2* %.

The reasons are as follows. First, from the fiscal revenue structure, the economic slowdown affected the tax revenue growth, which fell significantly. Its proportion of fiscal revenue declined from 88.1 % in 2010 to 84.9 % in 2014. At the same time, the growth of nontax revenue increased significantly, its proportion reaching 15.1 % of fiscal revenue (see Table 4.1). Nontax revenue had become an important means for local governments to make up for declining tax revenue. Second, by structure of tax revenue, the growth of indirect taxes slowed down primarily in VAT, business taxes, consumption taxes, customs duties, and other turnover taxes. Because of the growth of income and automobile consumption and the tax base for real estate tax and other taxes related to the state-owned land expansion and their high growth, the growth of direct taxes remained high. In fact, since 2011, the growth of direct taxes has been higher than that of indirect taxes in China. In 2014, the growth rate of direct taxes was 9.7 %, which was higher than that of indirect taxes by 3 %. Affected by these, the ratio of direct to indirect taxes increased substantially, from 0.48 in 2010 to 0.59 in 2014 (Fig. 4.1).

The *Decision* pointed out that the gradually increasing proportion of direct taxes is important to deepen China's tax reform and improve the tax system. In the past three years, following the significantly higher growth of direct taxes compared to indirect taxes, the proportion of direct taxes increased rapidly. This seems to satisfy

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<sup>&</sup>lt;sup>1</sup>See the footnote of Table 4.1 for related estimation instructions.

Items	2010	2011	2012	2013	2014
Fiscal revenue	8310.15	10387.44	11725.35	12920.96	14035.00
Tax revenue	7321.08	8973.84	10061.43	11053.07	11915.80
Nontax revenue	989.07	1413.60	1663.92	1867.89	2119.20
Tax-to-revenue ratio (%)	88.1	86.4	85.8	85.5	84.9
Nontax-to-revenue ratio (%)	11.9	13.6	14.2	14.5	15.1
Governmental fund revenue	3678.50	4136.31	3753.49	5226.88	5409.30
State-owned capital management: revenue	55.87	76.50	149.59	171.34	190.00ª
Social insurance fund: revenue	1707.07	2575.77	3141.10	3599.36	4029.20ª
GDP	40151.28	47310.4	51947.01	58801.9	63646.3
Fiscal revenue-to-GDP ratio (%)	20.7	22.0	22.6	22.0	22.1
Government revenue	13751.59	17176.02	18769.54	21918.53	23663.50
Government revenue-to- GDP ratio (%)	34.2	36.3	36.1	37.3	37.2

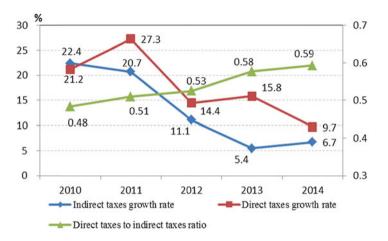
 Table 4.1 Changes in fiscal revenue indicators from 2010 to 2014 (in billion yuan)

Notes: 1. The government revenue defined here mainly consists of four parts: fiscal revenue, government fund revenue, the state-owned capital operating income, and social insurance funds. 2. The data table marked with <sup>a</sup>is estimated by the authors. Among them, the state-owned capital operating income is obtained as follows: the 2014 central state-owned capital operating income plus the difference between the average state capital operating income and average central state capital income for 2011–2013. The social insurance fund income is obtained as follows: the national social security fund plus the growth rate of the difference between the social insurance fund revenue and national social security fund revenue for 2011–2013

the requirements of the Decision for the reform of the tax system. However, the rise in proportion of direct taxes due to the difference in growth rates between direct and indirect taxes is different from that due to tax adjustments.<sup>2</sup> The former is unstable, because once the economic situation changes, the proportion of direct taxes may subsequently reverse. The declining share of indirect taxes due to economic slowdown is not the result of declining marginal tax rate, but the result of declining tax base. It only meets the Decision's requirement in a statistical sense and is not the reform result of perfecting the tax system and adjusting the economic structure that the Decision raises. The marginal tax effect of individual production or consumption behavior has not changed.

Because the tax structure is mainly based on indirect taxes, the tax burden can easily be transferred from producers to consumers and hence consumers actually

<sup>&</sup>lt;sup>2</sup>Structural tax cuts over the past few years, such as "replacing business tax with VAT," tax cuts for micro- and small businesses, and property tax pilot. Although the tax system was fine-tuning, overall, it did not substantially adjust the indirect tax-based tax system. The decline in indirect taxes share, especially the low growth of VAT and business tax, was mainly due to the real economy shrinking and service trade slowdown.



**Fig. 4.1** The 2010–2014 growth rate and ratio changes of direct and indirect taxes (Data source: CEIC, Notes: 1. Indirect taxes are of 10 types: VAT, business tax, consumption tax, customs duties, excise duty and VAT of imported products, urban maintenance and construction tax, resource tax, stamp duty, tobacco tax, and tonnage tax. Direct taxes are of nine types: property tax, corporate income tax, personal income tax, urban land use tax, land value increment tax, travel tax, deed tax, cultivated land usage tax, and vehicle purchase tax. 2. The city maintenance and construction tax for 2014 is extrapolated by its proportion of VAT, sales tax, and excise tax for 2010–2013. The resource tax, stamp duty, tobacco tax, property tax, travel tax, vehicle purchase tax, and other small taxes are extrapolated by their growth rate in 2013)

bear most of the tax burden. This reduces the consumers' disposable income and thereby inhibits the growth of consumption. In addition, indirect taxes do not have vertical equity features. Therefore, by reducing the proportion of indirect taxes, increasing the proportion of direct taxes, and levying more taxes directly related to the level of personal income, taxes can help balance the income distribution between businesses and residents, narrow down the income gap between all income classes, and promote consumer spending.

Finally, compared to other countries, the current ratio of direct taxes in China is still low. The proportion of direct taxes in China is lower than that in not only the developed high-income countries but also the same-income (upper-middle income), middle-income, and lower-middle-income countries (Table 4.2). Thus, there is large room for increasing the share of direct taxes in China.

In our view, we should focus on the Decision's requirements.<sup>3</sup> We should also adjust the indirect marginal tax rates, lower the indirect taxes initiatively, and reduce the total tax burden of the national economy. This could lead to the following advantages:

<sup>&</sup>lt;sup>3</sup>The *Decision* requires that "We should advance VAT reform and simplify rate levels, and adjust the scope and rate of the consumption tax. Energy and pollution-intensive products and some highend consumer products will be subject to a consumption tax. We should establish an individual income tax system in which taxable income is defined in both comprehensive and categorized ways. We should accelerate property-tax legislation and related reform at an appropriate time and change the current environmental-protection fee into an environment tax."

Country	2007	2008	2009	2010	2011	2012
Australia	2.63	2.72	2.65	2.35	2.49	2.68
Brazil	1.23	1.15	1.15	1.06	1.13	1.13
India	1.11	1.12	1.43	1.24	1.24	1.10
Japan	1.74	1.49	1.17	1.23	1.29	1.36
Peru	1.04	0.96	0.89	0.89	1.05	1.11
The USA	16.57	14.71	11.96	12.65	12.86	13.01
The eurozone	0.91	0.88	0.82	0.76	0.78	0.76
OECD countries	1.12	1.06	0.90	0.81	0.88	0.85
High-income countries	1.00	1.01	0.91	0.84	0.82	0.82
Middle-income countries	0.59	0.67	0.65	0.62	0.61	0.57
Upper-middle-income countries	0.64	0.65	0.67	0.58	0.53	0.55
Lower-middle-income countries	0.49	0.57	0.59	0.54	0.57	
The world average	0.63	0.68	0.65	0.63	0.63	0.62
China a	0.56	0.47	0.41	0.36	0.39	
China b	0.44	0.49	0.49	0.48	0.51	0.52

 Table 4.2
 Changes of the ratio of indirect tax to direct taxes in some countries and regions from 2007 to 2012

Notes: 1. Except for the data of China b that is obtained from CEIC database, the remaining data are obtained from WDI 2014. 2. The specific algorithm is (taxes on income, profits and capital gains+other taxes)/(taxes on goods and services+taxes on international trade). Among them, the other taxes include taxes on wages and labor, confiscation of property, income tax, and other revenues that have not been categorized

- 1. The increase in proportion of direct taxes will be stable and not a temporary adjustment based on economic growth.
- 2. Although it could bring about short-term reduction in indirect taxes, in the long term, it is conducive to economic transformation and upgrading. By promoting business investment, it can stimulate economic growth, bring about sustainable tax revenue growth, and avoid the risk of passive adjustments that can lead to continued decline of tax revenue growth rate.
- 3. Under the "tax price" system designed in China, it could reduce the indirect taxes' marginal rate, bring down the price level, increase the household purchasing power, promote residual consumption, stimulate economic growth, and improve the demand structure.

## 4.2 Scenario Design of Policy Simulations

Further to the above analysis, we use the CQMM to simulate macroeconomic effects and increase the ratio of direct taxes to indirect taxes to the world average (0.63) from 2012 to 2014. This helps us to verify the aforementioned qualitative judgment and give policy recommendations. Our policy simulation design is as follows:

1. Lower the indirect tax revenues from 2012 and gradually adjust the 2014 Chinese ratio of direct and indirect taxes in Fig. 4.1 to the world average (0.63).

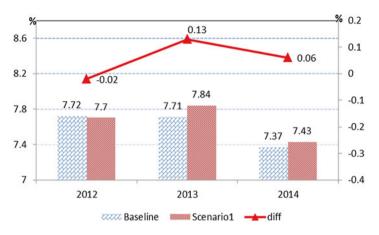
- 2. To achieve our hypothesis goal, we design the following two scenarios:
  - Scenario 1: Keeping the total tax burden on the national economy unchanged, we adjust the ratio of direct and indirect taxes to the new scale by lowering the indirect taxes and raising the direct taxes. Therefore, the average annual decline in indirect taxes from 2010 to 2014 is 118.65 billion yuan, and the increase of direct taxes is the same amount each year. After adjustments, the ratios of China's direct taxes to indirect taxes for 2102, 2013, and 2014 were 0.55, 0.60, and 0.63, respectively. Considering the tax feedbacks on endogenous macroeconomic variables, the actual ratio of the simulation results may vary. In this scenario, the simulation adjusts only the structure of direct taxes and indirect taxes and does not reduce the overall national economy macroeconomic effects of tax burden.
  - Scenario 2: Keeping the direct taxes unchanged, we reduce the indirect taxes. The direct and indirect taxes will adjust to the new scale, reducing the overall tax burden on the national economy. While the average annual decline from 2012 to 2014 in indirect taxes is 318.24 billion yuan, after adjustment, the ratios of China's direct taxes to indirect taxes for 2012, 2013, and 2014 will be 0.55, 0.60, and 0.63, respectively. Similarly, considering the tax feedbacks on the endogenous macroeconomic variables, the actual ratio of the simulation results may vary. Under this scenario, the simulation incorporates both the tax structure adjustment of direct and indirect taxes and the overall national economy macroeconomic effects of reducing the tax burden.

The economic logic behind these policy simulations is as follows. Under Scenario 1, on the one hand, the decline of indirect taxes would reduce fiscal revenue, which would in turn reduce fiscal expenditure and dampen GDP growth. On the other hand, the decline in indirect taxes would reduce business costs, expand production and sales, and lead to increased profits, expand the investment needs of self-financed business capital. Furthermore, the decline in indirect taxes would lower the price level and promote consumption, both of which stimulate economic growth and lead to the sustained growth of tax income. In contrast, increasing the direct taxes would reduce the disposable income and lead to a decline in residual consumption. Macroeconomic changes occur as a result of both tax strategies together. Under Scenario 2, the decline of indirect taxes is based on exogenous assumptions, and so direct taxes are endogenous on the changes of economic growth.

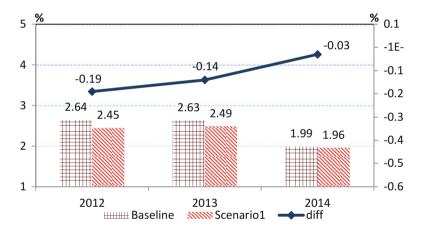
## 4.3 The Result of Policy Simulations

#### 4.3.1 The Simulation Result of Scenario 1

First, the tax structure adjustment in 2012 led to a slight reduction in economic growth; this was slightly lower than the reference value by 0.02 percentage points. However, in the next two years, thanks to the acceleration of urban fixed investment growth and the rise in residual consumption, the GDP growth rate was higher than



**Fig. 4.2** Changes in GDP growth rate (Note: Baseline denotes benchmark simulation; Scenario 1 denotes the simulation result of Scenario 1; diff denotes the simulation result difference between Scenario 1 and Baseline)



**Fig. 4.3** Changes in price level (Note: Baseline denotes benchmark simulation; Scenario 1 denotes the simulation result of Scenario 1; diff denotes the simulation result difference between Scenario 1 and Baseline)

the reference value by 0.13 and 0.06 percentage points, respectively, in 2013 and 2014 (Fig. 4.2). Thus, a reduction in indirect taxes and rise in direct taxes, although it has a slightly negative impact on economic growth in the short term, can promote economic growth in the long term.

Second, a reduction in indirect taxes would decrease the price level slightly and increase resident consumption. In 2012, the CPI was about 2.45, 0.19 percentage points less than the reference value. This then dropped and was less than the reference value by 0.14 and 0.03 percentage points in 2013 and 2014, respectively (Fig. 4.3).

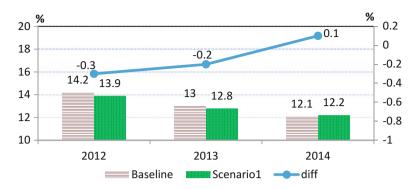
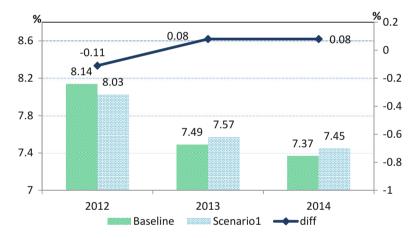
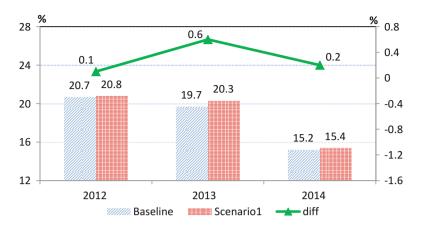


Fig. 4.4 Changes in growth of total social retail sales (Note: Baseline denotes benchmark simulation; Scenario 1 denotes the simulation result of Scenario 1; diff denotes the simulation result difference between Scenario 1 and Baseline)



**Fig. 4.5** Changes in residual consumption growth at comparable prices (Note: Baseline denotes benchmark simulation; Scenario 1 denotes the simulation result of Scenario 1; diff denotes the simulation result difference between Scenario 1 and Baseline)

Following the rise in direct taxes and dilution of price declines, the nominal growth rate of total retail sales was less than the reference value by 0.3 and 0.2 percentage points in 2012 and 2013, respectively. However, with the rise in economic growth, the nominal growth rate of total retail sales in 2014 was higher than the reference value by 0.1 percentage point (Fig. 4.4). After excluding the price factor, the growth rate of residual consumption, except when it was less than the reference value by 0.11 percentage points in 2012, was higher than the reference value by 0.11 percentage points in 2012, was higher than the reference value by 0.08 percentage points both in 2013 and 2014 (Fig. 4.5). This suggests that for residual consumption, the incentive effect of decline in price level due to reduction in indirect taxes is greater than the inhibition of increasing direct taxes. Tax restructuring would improve the fairness of the tax burden and raise resident consumption.

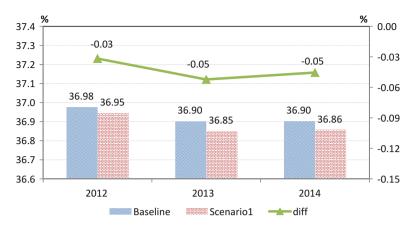


**Fig. 4.6** Changes in urban fixed asset investment growth (Note: Baseline denotes benchmark simulation; Scenario 1 denotes the simulation result of Scenario 1; diff denotes the simulation result difference between Scenario 1 and Baseline)

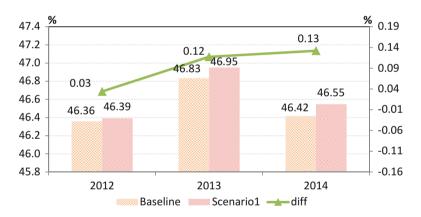
Third, urban fixed asset investment is expected to increase rapidly. Because the total amount of tax has remained unchanged, changes in the ratio of direct and indirect taxes would have little effect on government-led investment, but would have a positive impact on the investment of self-financed enterprise capital, which promotes the overall urban investment growth. The urban fixed asset investment growth for 2012, 2013, and 2014, compared with the reference value, increased by 0.1, 0.6, and 0.2 percentage points, respectively (Fig. 4.6). Among them, self-finance business investment growth improved by 0.1, 0.8, and 0.2 percentage points, respectively, compared with the reference value. This shows that China's current tax system based on indirect taxes indeed inhibits the expansion of private investment. Against the current background of weak business investment will, a reduction in burden of companies would improve the business investment will and effectively promote the growth of investment.

Fourth, the total demand structure is slightly inclined toward investment. After adjustment of the tax structure, the absolute amount of both household consumption and investment would increase, but in view of the ratio of investment and consumption, it would decrease slightly, because investment grew faster than consumption. Compared with the reference value, the ratio of household consumption for 2012, 2013, and 2014 decreased by 0.03, 0.05, and 0.05 percentage points, respectively (Fig. 4.7); therefore, the investment share increased slightly by 0.03, 0.12, and 0.13 percentage points, respectively, compared with the reference values (Fig. 4.8).

Finally, the growth rate of direct taxes increased at first and then decreased, while the growth of indirect taxes was in the opposite direction. In 2012, the reduction in indirect taxes led to a fall in indirect taxes growth rate by 2.05 percentage points compared with the reference value. However, as the economic growth accelerated, the lagged growth effect of indirect taxes gradually increased. Coupled with the base effect of the previous year, although the indirect taxes continued to decline by



**Fig. 4.7** Changes in the division of residual consumption (Note: Baseline denotes benchmark simulation; Scenario 1 denotes the simulation result of Scenario 1; diff denotes the simulation result difference between Scenario 1 and Baseline)



**Fig. 4.8** Changes in the division of gross capital formation (Note: Baseline denotes benchmark simulation; Scenario 1 denotes the simulation result of Scenario 1; diff denotes the simulation result difference between Scenario 1 and Baseline)

118.65 billion yuan a year, the year-on-year growth appeared to rise, increasing by 0.11 and 0.15 percentage points in 2013 and 2014, respectively (Fig. 4.9a), compared with the reference value; direct taxes showed the opposite trend. In 2012, an increase in direct taxes substantially raised the year-on-year growth rate, which was 3.4 percentage points higher than the reference value. In 2013 and 2014, this slightly decreased by 0.5 and 0.2 percentage points, respectively (Fig. 4.9b), suggesting that the increasing effect of economic growth on direct taxes is stronger than that on indirect taxes. Thus, the ratios of direct taxes to indirect taxes in the final simulation results for 2012, 2013, and 2014 were 0.55, 0.61, and 0.62, respectively, close to the initial target. The total tax revenue growth remained unchanged.

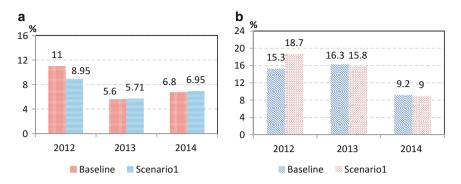
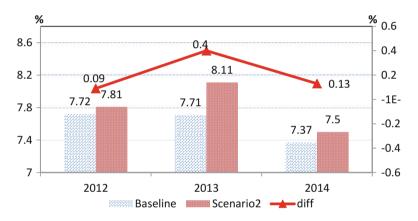


Fig. 4.9 Changes in classified tax growth rate. (a) Change of direct tax growth. (b) Change of indirect tax growth (Note: Baseline denotes benchmark simulation; Scenario 1 denotes the simulation result of Scenario 1; diff denotes the simulation result difference between Scenario 1 and Baseline)

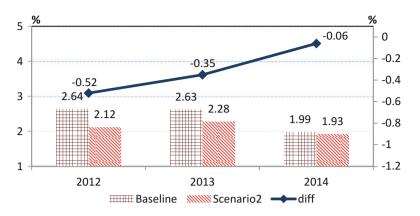


**Fig. 4.10** Changes in GDP growth rate (Note: Baseline denotes basic simulation; Scenario 2 denotes the simulation results in Scenario 2; diff denotes the difference between the simulation results in Scenario 2 and the basic simulation results)

### 4.3.2 The Simulation Results of Scenario 2

Scenario 2 assumes that direct taxes are kept constant, indirect taxes go down, and the change in proportion of direct and indirect taxes is due to the decrease in indirect taxes. Therefore, the difference between the two scenarios is not only with regard to change in proportion of the two kinds of taxes but also decrease in total taxes of the national economy. The policy simulation results indicate the following:

First, there are strong promotional effects on economic growth. In 2012, 2013, and 2014, the growth rate of GDP increased by 0.09, 0.40, and 0.13 percentage points, respectively, compared with the reference values (Fig. 4.10), obviously higher than the deviation from the reference values in Scenario 1 (Fig. 4.2). This



**Fig. 4.11** Changes in CPI (Note: Baseline denotes basic simulation; Scenario 2 denotes the simulation results in Scenario 2; diff denotes the difference between the simulation results in Scenario 2 and the basic simulation results)

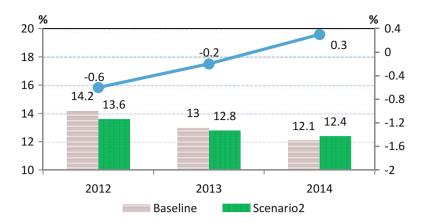
shows that the direct and indirect tax structure adjustments are stronger with taxreducing effects than without tax-reducing effects for promoting economic growth. Tax reduction has extra promotional effects on economic growth.

Second, the decline range of price level is higher. Moreover, since the direct tax is constant, the growth rate of residents' consumption in comparable prices increases further. In 2012, 2013, and 2014, the CPI decreases by 0.52, 0.35, and 0.06 percentage points, respectively, compared with the base values (Fig. 4.11).

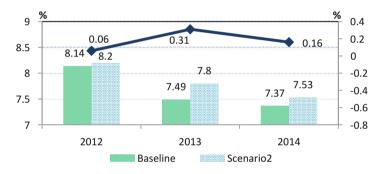
The relatively higher decline range of price leads a higher decline range of nominal growth rate of the social consumption goods' total retail sales. In 2012, the nominal growth rate of social consumption goods' total retail sales decreased by 0.6 percentage points compared with the base values; however, it increases rapidly later, by 0.3 percentage points, compared with the base values until 2014 (Fig. 4.12). The growth rate of residents' consumption in comparable prices obviously accelerates without an increase in direct taxes. It increased by 0.06, 0.31, and 0.16 percentage points in 2012, 2013, and 2014, respectively, compared with the base values (Fig. 4.13); the growth rate is obviously higher than the simulation results in Scenario 1 (Fig. 4.5).

Third, because of decrease in the national economy's overall tax, the increase in growth rate of urban fixed asset investment is more significant. The growth rate of urban fixed assets investment increased by 0.5, 1.7, and 0.5 percentage points in 2012, 2013, and 2014, respectively, compared with the base values (Fig. 4.14).

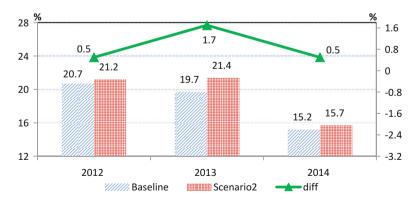
Fourth, as with Scenario 1, although the residents' consumption increases in absolute value, its proportion in aggregate demand structure appears to slightly shrink because of faster increase in investment, but the range of shrinkage is less than that in Scenario 1. The ratio of residents' consumption over GDP decreases by 0.01, 0.04, and 0.03 percentage points in 2012, 2013, and 2014, respectively, compared with the base values (Fig. 4.15); the decline range each year is lower than the results in Scenario 1 and the investment proportion increases further. The



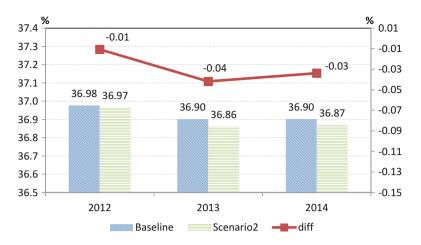
**Fig. 4.12** Changes in growth rate of total social consumption goods' retail sales (Note: Baseline denotes basic simulation; Scenario 2 denotes the simulation results in Scenario 2; diff denotes the difference between the simulation results in Scenario 2 and the basic simulation results)



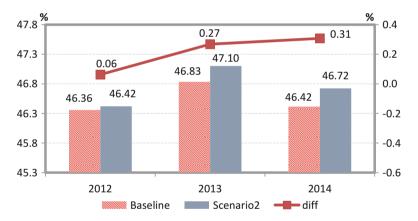
**Fig. 4.13** Changes in growth rate of residents' consumption in comparable prices (Note: Baseline denotes basic simulation; Scenario 2 denotes the simulation results in Scenario 2; diff denotes the difference between the simulation results in Scenario 2 and the basic simulation results)



**Fig. 4.14** Changes in growth rate of urban fixed asset investment (Note: Baseline denotes basic simulation; Scenario 2 denotes the simulation results in Scenario 2; diff denotes the difference between the simulation results in Scenario 2 and the basic simulation results)



**Fig. 4.15** Changes in proportion of residents' consumption (Note: Baseline denotes basic simulation; Scenario 2 denotes the simulation results in Scenario 2; diff denotes the difference between the simulation results in Scenario 2 and the basic simulation results)



**Fig. 4.16** Changes in proportion of gross capital formation (Note: Baseline denotes basic simulation; Scenario 2 denotes the simulation results in Scenario 2; diff denotes the difference between the simulation results in Scenario 2 and the basic simulation results)

ratio of gross capital formation over GDP increases by 0.06, 0.27, and 0.31 percentage points in 2012, 2013, and 2014, respectively, compared with the base values (Fig. 4.16).

Finally, as with Scenario 1, following the recovery of economic growth, although a certain fixed amount of indirect taxes decreases each year, the growth rate of indirect taxes increased by 0.3 and 0.38 percentage points in 2013 and 2014, respectively, compared with the base values (Fig. 4.17a), but in 2012 there appears a relatively larger decline range, with a 5.31 percentage points decrease

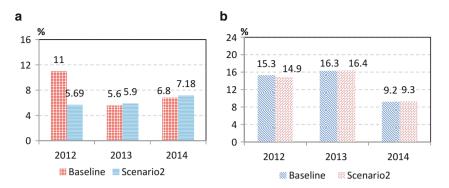
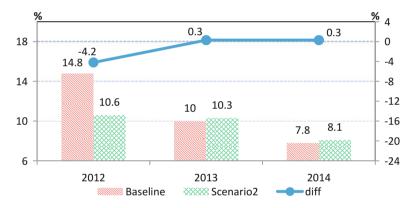


Fig. 4.17 Changes in growth rate of classified taxes. (a) Changes in growth rate of indirect taxes. (b) Changes in growth rate of direct taxes (Note: Baseline denotes basic simulation; Scenario 2 denotes the simulation results in Scenario 2; diff denotes the difference between the simulation results in Scenario 2 and the basic simulation results)



**Fig. 4.18** Changes in growth rate of gross tax revenue (Note: Baseline denotes basic simulation; Scenario 2 denotes the simulation results in Scenario 2; diff denotes the difference between the simulation results in Scenario 2 and the basic simulation results)

compared with the base values. The growth rate of direct tax is basically stable (Fig. 4.17b). In 2012, the growth rate goes down by 0.4 percentage points compared with the base values, but it increases by 0.1 percentage points in the following two years. The ratio of direct taxes to indirect taxes in the final simulation results is 0.55, 0.61, and 0.62 for 2012, 2013, and 2014, respectively, the same simulation results in Scenario 1.

In terms of gross tax revenue, affected by the large decline range of indirect taxes, the growth rate of gross tax revenue in 2012 decreased by 4.2 percentage points from the base values and then increased by 0.3 percentage points over the base values in both 2013 and 2014 (Fig. 4.18). Reducing the tax not only does not decrease the long-term growth rate of gross tax revenue, but, through the

optimization of tax structure, maintains the sustainable long-term growth of the gross tax revenue.

In summary, the results of policy simulation are as follows:

- 1. The tax structure adjustment of reducing indirect taxes and increasing direct taxes helps in decreasing the price level; improves consumption; promotes investment, especially private self-financed investment; and finally boosts economic growth. This clearly illustrates that the current tax structure of China, which mainly depends on indirect taxes, dampens enterprise investment and residents' consumption. For the Chinese economy, further accelerating the tax structure adjustment, decreasing the indirect tax proportion, and increasing the direct tax proportion are the policy issues that needs to be solved as soon as possible if the economy is to enter the new development stage.
- 2. A comparison of the two policy simulations (Scenario 1 and Scenario 2) shows that the adjustment of proportion of direct and indirect taxes with reducing tax effects (Scenario 2) has stronger effects on the economy's growth rate, residents' consumption, and investment in urban fixed assets than the adjustment without reducing tax effects (Scenario 1). This shows that while adjusting the tax structure, reducing the national economy's gross tax has better policy effects currently.
- 3. Reducing indirect taxes can lead to slightly adverse effects for the aggregate demand structure. While the residents' consumption increases in absolute terms, its proportion in aggregate demand decreases slightly. Benefiting from the accelerating investment, the proportion of gross capital formation will increase. However, since the growth rate of residents' consumption keeps stable and even appears to increase—this structure change mainly reflects that the decrease in indirect taxes promotes investment, rather than depresses consumption—as a whole, its effects on the economic growth is positive.
- 4. Although reducing the indirect taxes could cause the growth rate of the gross tax revenue to fall in the short term, the growth rate of residents' consumption and private investment will increase. Moreover, the long-term recovery of the economic growth rate ensures that the growth rate of the gross tax revenue does not persistently decline; it also assures the long-term sustainable growth of tax revenue.

From the policy simulation of the CQMM and analysis of the current Chinese economic issues, we consider a current moderate decrease in indirect taxes and a subsequent moderate reduction in the national economy's gross tax not only feasible but also necessary. We might even say that this is one of the key possibilities to recreate the Chinese economy's potential growth in the next stage.

First, the policy simulation results show that a decrease in indirect taxes will not produce serious negative effects whether the gross tax revenue keeps constant or moderately decreases but helps to stimulate the growth of residents' consumption and private investment instead and therefore boosts the economic growth. This shows that reducing indirect taxes has a positive effect on the macroeconomy and deserves to be given a try. Second, the Chinese policy practices in the last three years show that the easing monetary policy is too weak to attract social investment and promote economic growth because of serious transmission barriers. The structural contradiction is the major sticking point of the current Chinese economy. This makes the monetary policy, which is good at gross controlling, especially inflation controlling, difficult to work. In comparison, fiscal policy is better for structure adjustment. Fiscal policy is nothing more than reducing tax and increasing spending; the increase in spending is limited to the tax revenue and government debts, and tax reduction is relatively uncontrolled. Moreover, the theory of the supply-side economist and policy practices of US President Reagan have already shown that reducing taxes is not equal to reducing fiscal revenue.

Third, from the perspective of implementing the government's fully covered budget, a decrease of fiscal revenue is not equal to a decrease of government revenue. Government revenue includes the government's fund revenue, social insurance revenue, and state-owned capital operating revenue. The Decision requires that the profit-delivering proportion of state-owned enterprises increases by 30 % percent. Based on calculations using the current data, in 2013, the gross profit of the central enterprises was 1.62 trillion yuan, the net profit was 1.17 trillion, and the profit after tax and deducting 10 % statutory reserves about 1.05 trillion yuan.<sup>4</sup> In 2013, the profit revenue of central state-owned capital operation was about 103.96 billion yuan and the turning-over proportion was about 9.88 %, which is still a bit far from the target value. Therefore, following the Decision's requirement, gradually improving the real profit turning-over proportion of the state-owned enterprises in the future 5 years would help in some degree to offset the possible decrease in fiscal revenue growth rate due to reducing taxes.<sup>5</sup>

Fourth, the government's revenue-expenditure condition can be improved by further optimizing the fiscal spending structure, transforming the government function, specifying the boundary of government's responsibility and obligation, improving the capital utilizing efficiency, compressing the government's administration expenditure, and guaranteeing livelihood expenditures. In 2014, following the high pressure of anti-corruption, although the growth rate of fiscal revenue decreased, the growth rate of fiscal expenditure, especially the general public service expenditure, decreased faster. There was not lack of compression of the past extravagant waste spending.<sup>6</sup>

<sup>&</sup>lt;sup>4</sup>The after-tax revenue still needs to deduct the unrecovered deficit at the beginning of the year. Since complete corresponding statistics are unavailable, we do not consider it, and the real average turning-over proportion may be a bit higher.

<sup>&</sup>lt;sup>5</sup>Only some state-owned financial enterprises turn over their profits to the government currently. The four state-owned commercial banks are the most profitable state-owned enterprises in China currently. In the first half-year of 2014, 16 listed banks achieved a net profit of 6907.81 trillion yuan; this covered about 51.63 % of the net profit of 2558 listed enterprises, with the four state-owned banks covering up to 35.34 %. However, in 2013, all the state-owned financial enterprises turned over profits of only 117 million yuan.

 $<sup>^{6}</sup>$ The general public service spending rose by 2.0 % cumulatively in the first 11 months of 2014, falling by 9.1 % year on year. This accounted for 9.3 % of the total financial expenditure, a decrease of 0.8 % from the previous year.

Finally, fiscal deficit still has some space. In 2014, the fiscal deficit in China was about 1.35 trillion yuan, an increase by 150 billion yuan from 2013; the deficit ratio was about 2.1 %, which is still lower than the international deficit warning line of 3 %. If indeed necessary, the government can moderately increase the deficit rate and release the space for reducing the tax and increasing spending.