

Economic Implications of Reform

The previous chapter discussed key reforms of governance to which the Government has expressed its strong commitment. The case studies focused on five key areas of reforms: (1) public finance, (2) public administration reforms, (3) decentralization, (4) judicial/legal reforms, and (5) regional integration. Some lessons were drawn from these reforms to improve and promote good governance in Cambodia.

This report is based on the following hypothesis: governance reforms will have a positive impact on Cambodia's economy and development in the new millennium. These reforms are expected to help break the vicious cycle of poverty, foster the development of the private sector, and ensure that Cambodia is on the right track toward development and prosperity. However, the hypothesis remains untested and several questions have emerged. Will reforms have a positive impact on Cambodia's economy? What would be the extent of this impact? Can such an impact be quantified?

This chapter seeks to answer these questions. To do so, a technique of macro-economic projection is employed to assess the long-term impact of governance reforms on Cambodia's economy. The projection is carried out using two scenarios: (1) a Reform Scenario, and (2) a No Reform Scenario. The results of the two scenarios are then compared to assess the impact of governance reforms on Cambodia's economy.

The current study is a preliminary attempt to assess the impact of governance reforms. Assessing the impact of reforms is a difficult task because there are many additional factors that affect Cambodia's economy. The uncertainty about future economic and political environments is significant, particularly in the long term. Thus the results reported here should be read with those qualifications in mind.

The first section describes briefly the nature of the macro-economic model and the database on which the model is based. The second section sets out the basic assumptions under the two development scenarios explained. The last section compares the results of projections under the two scenarios, and provides an assessment of the impact of governance reforms.

Model and Data

The macro-economic model used in this chapter is named the CAMPI (Cambodian Prospective and Integrated) model. This model was originally developed at the Ministry of Economy and Finance (MEF) in 1994 with assistance from the World Bank, and further elaborated at the Cambodia Development Research Institute. MEF compiled a detailed macro-economic database that includes 22 production sectors of the Cambodian economy. Data on employment, wages and salaries, foreign trade, and investment are also disaggregated for 22 sectors. The CAMPI model incorporates a detailed fiscal operation of the public sector, balance of payments, and

the financial sector. The model is developed to run medium to long-term projections of Cambodia's economy. The database used for the CAMPI model covers 1960 to 1998, the most recent year that data are available.²⁵¹

Assumptions of Two Scenarios: Reform and No Reform

The Government is already taking steps to implement key reforms in priority areas. What impacts those reforms would have on Cambodia's economy is of great interest to policymakers, aid agencies, and all those involved in development and reforms in Cambodia. An assessment of long-term impacts, over 20 years for example, is particularly interesting because reforms are undertaken over many years.

To shed light on this question, a long-term projection until the year 2020 was carried out using the CAMPI model and the two scenarios. This enables us to estimate the impact of reforms by comparing the results of the two scenarios. It also gives us a feasible range of the development of Cambodia's economy in the coming 20 years.

Reform Scenario

The Reform Scenario assumes that the Government vigorously undertakes the reforms set out in its reform programs. Table 11 summarizes the Reform Scenario assumptions.

In public finance reform, revenue-enhancing measures increase the efficiency of tax collection. This enables the Government to increase actual revenues from direct taxes, indirect taxes, and customs duties, close to their potential levels. The efficiency of tax collection indicated by the ratio of actual-potential tax revenues is assumed to increase rapidly between 2000 and 2005 due to vigorous public finance reform, then gradually between 2006 and 2020.

Public administration reforms consist of three components: (1) the demobilization of soldiers and security officers; (2) the rationalization of civil administration; and (3) an increase in the average monthly salaries of public officials. During the reform period between the years 2000 and 2007, the number of soldiers and security officers is reduced

from 200,000 to 100,000, the number of civil servants is reduced from 150,000 to 100,000, and average wages of public officials are raised from \$35 to \$150 per month by 2007. After reforms are completed by 2007, the number of armed forces are assumed to remain constant, the number of civil servants increases at the rate of population growth, and average monthly wages of officials rise at the rate of nominal GDP growth during the period 2008-2020.

Forestry sector reforms increase the Government's managerial capacity to control the volume of logging. This enables the forestry sector to be sustainable and bring long-term revenues to the national Treasury. The volume of logging is assumed to decrease from 800,000 cubic meters (m³) to 600,000 m³ between 2000 and 2005, then remain at 600,000 m³ until 2020.

Judiciary/legal reforms and the development of a private sector framework provide the business sector with an environment favorable to long-term and large-scale investment. These reforms also create a level playing field for domestic and foreign investors. In the reform scenario, foreign direct investment (FDI) is assumed to increase from \$180 million in 2000 to \$780 million in 2020. In addition, an environment conducive to the private sector development generates confidence among investors in the future prospects of Cambodia's economy and public policy. This enables the Government to establish financial markets in 2003. Portfolio investment is assumed to flow into Cambodia, and increase from \$200 million in 2005 to \$950 million in 2020. Furthermore, the integration with the regional and world economies improves Cambodia's prospects as an industrial base for exports targeting the region and the rest of the world. In the reform scenario, exports are assumed to increase from \$770 million in 2000 to \$13 billion in 2020.

Finally, under the reform scenario, the Government's strong commitment to reforms sends positive signals to foreign aid agencies. This enables Cambodia to have access to official grants and loans that are necessary to carry out various reforms and development programs. Official grants are assumed to increase from \$215 million in 2000 to \$220 million in 2005, and remains steady at \$170 million from 2006 to 2020. Net official loans are also assumed to

²⁵¹ For more detailed descriptions of the CAMPI model, see Sok Hach (2000), *Cambodian Macro-economic Modeling*, work in progress at CDRI.

Table 11: Assumptions of Two Scenarios: Reform and No Reform

National Reform	Policy Measure	Assumption of Reform Scenario	Assumption of No Reform Scenario
Public finance reform	Enhance revenue-raising capacity; the efficiency of tax collection	Increase the ratio of actual-potential tax revenues: Direct tax: Increase from 16 percent in collection in 2000 to 40 percent in 2005, and slowly to 50 percent from 2006 to 2020. Indirect tax: Increase from 28 percent in 2000 to 60 percent in 2005 Customs duties: Increase from 55 percent in 2000 to 95 percent in 2020	Increase the ratio of actual-potential tax revenues: increasing Direct tax: Increase from 16 percent in 2000 to 36 percent in 2020 Indirect tax: Increase from 28 percent in 2000 to 48 percent in 2020 Customs duties: Increase from 55 percent in 2000 to 75 percent in 2020
Public administration reform	Demobilize soldiers and rationalize civil administration Average monthly wage rates of public officials	Decrease the number of armed forces (police and army) from 200,000 in 2000 to 100,000 in 2007; Civil servants from 150,000 to 100,000 in 2007; Keep same number for the armed forces up to 2020, while number of civil servants will increase the rates of population growth between 2009 and 2020 (2.5 percent per annum) Increase from US\$35 in 2000 to US\$150 in 2007; Increase at the rates of GDP growth from 2008 to 2020	Increase the total number of public officials (armed forces and civil servants) at population growth rates between 2000 and 2020 Increase by the growth rates of GDP from 2000 to 2020
Forestry reform logging	Control the volume of logging in 2001 to 600,000m ³	Reduce from 800,000m ³ in 2000 to 600,000m ³ between 2000 and 2005; Continue at 600,000m ³ from 2006 to 2020	Increase from 800,000m ³ in 2000 to 1.6million m ³ in 2005 Decline rapidly to 75,000m ³ in 2010 and then keep flat up to 2020
Official development assistance (affected by national reforms)	Official grants	Increase from US\$215 million in 2000 to US\$220 million in 2005; Continue at US\$170 million from 2006 to 2020.	Decline from US\$215 million in 2000 to US\$140 million in 2005; Decline to US\$70 million from 2006 to 2020
Official loans (net)		Increase from US\$96 million in 2000 to US\$296 million in 2005; Increase at slower rates from US\$296 million in 2005 to US\$876 million in 2020.	Decrease from US\$96 million in 2000 to US\$63 million in 2005; Decrease at faster rates from US\$63 million in 2005 to US\$1 million in 2020
Foreign direct investment (affected by national reforms)	FDI Portfolio investment	Increase from US\$180 million in 2000 to US\$780 million in 2020 Establish financial markets in 2003; Increase from US\$200 million in 2005 to US\$950 million in 2020	Remain flat at US\$160 million from 2000 to 2020 Fail to establish financial markets (zero portfolio investment from 2000 to 2020)

Table 12. Impact of Reform on Cambodia's Economy: A Comparison of Two Scenarios

	Reform Scenario					
	1995	2000	2005	2010	2015	2020
GDP (current price; Million US\$)	2,923.0	3,302.0	5,713.0	10,263.0	17,631.0	28,718.0
GDP per capita (current price; US\$)	284.0	274.0	420.0	671.0	1,034.0	1,522.0
GDP per capita (1993 price; US\$)	212.0	215.0	267.0	350.0	447.0	542.0
Real GDP growth (%)	7.6	4.3	7.7	8.4	6.8	5.5
Inflation (final quarter basis; %)	3.5	4.1	3.6	3.4	3.5	3.8
Exchange rate (Riel/US\$; end of period)	2,560.0	3,975.0	4,000.0	4,000.0	4,000.0	4,000.0
Public revenue (% of GDP)	8.9	11.3	14.0	15.4	16.6	17.5
Public expenditure (% of GDP)	16.7	15.7	18.6	18.8	19.0	19.2
Current public deficit (% of GDP)	-0.8	1.3	2.5	4.4	5.1	5.2
Overall public deficit (% of GDP)	-7.7	-4.4	-4.6	-3.5	-2.4	-1.6
Exports of goods (% of GDP)	12.0	20.0	22.2	29.9	39.2	45.7
Imports of goods (% of GDP)	23.9	34.1	38.2	39.7	41.1	41.3
Trade balance (% of GDP)	-12.0	-14.1	-16.0	-9.8	-2.0	4.4
Current account balance (% of GDP)	-12.9	-12.7	-13.6	-6.6	-1.2	5.3
External contribution to the economy (% of GDP)	21.0	15.7	15.4	11.7	9.1	7.0
Total savings (% of GDP)	21.0	21.5	27.2	29.6	28.7	26.8
External debts (% of GDP)	4.0	14.0	37.0	42.0	42.0	40.0
Population (million)	10.3	12.0	13.6	15.3	17.1	18.9
Unemployment (% of labour force)	1.7	4.2	5.5	4.8	4.1	3.8

Source: CDRI.

increase from \$96 million in 2000 to \$296 million in 2005, then increase at a slower rate to \$876 million in 2020.

No Reform Scenario

Under the No Reform Scenario, the Government is assumed to be unable to translate reform programs into actions. The structural problems of governance continue until the year 2020.

In public finance reforms, revenue-enhancing measures are not carried out vigorously, and tax collection continues to be inefficient. In the No Reform Scenario, the ratios of actual-potential tax revenues are assumed to increase at a much slower pace than that under the Reform Scenario until the year 2020.

Public administration reforms stall, and the Government is unable to rationalize and downsize the armed forces and civil administration. The total number of public officials (armed forces and civil services) is assumed to increase continuously at the rate of population growth between 2000 and 2020. The salaries of public officials are assumed to be adjusted at the rate of nominal GDP growth from 2000 to 2020.

Forestry reforms do not proceed, and logging activities are out of control. Under the No Reform Scenario, the volume of logging is assumed to in-

crease from 800,000 m³ in 2000 to 1.6 million m³ in 2005. The sharp increase is followed by a rapid decline because such levels of logging are unsustainable. The volume of logging is assumed to decline from 1,600,000m³ in 2005 to only 75,000m³ in 2010, and remains flat until 2020.

Under the No Reform Scenario, judicial/legal reforms and development of the private sector framework make little progress. Businesses in Cambodia continue to operate in an environment where rules and regulations are vaguely defined, private property is not well protected, and the Judiciary is not prepared to handle complex business conflicts. Consequently, foreign direct investment is assumed to remain at \$160 million from 2000 to 2020, and financial markets are not established. Exports are assumed to increase only marginally from \$770 million in 2000 to \$1.2billion in 2020, mainly due to Cambodia's weak export base caused by stagnant foreign investment inflows.

Finally, under the No Reform Scenario, the Government's weak commitment to reform creates "fatigue" among the aid community. The access to official grants and loans for necessary structural reforms becomes gradually more difficult, except for humanitarian assistance. Official grants are assumed

No Reform Scenario					
1995	2000	2005	2010	2015	2020
2,903.0	3,275.0	3,867.0	3,966.0	4,402.0	4,953.0
284.0	272.0	284.0	259.0	258.0	262.0
212.0	213.0	230.0	213.0	214.0	219.0
7.6	3.4	2.8	1.2	2.3	2.6
3.5	4.1	11.1	11.9	11.6	11.6
2,560.0	3,975.0	7,992.0	16,071.0	32,321.0	65,007.0
8.9	11.4	12.2	12.9	13.8	14.8
16.7	15.8	14.8	14.4	14.1	14.8
-0.8	1.3	1.1	1.4	2.2	3.1
-7.7	-4.4	-2.6	-1.5	-0.3	-0.1
12.0	20.2	25.8	20.8	21.4	21.2
23.9	33.9	32.7	34.1	33.8	34.2
-12.0	-13.8	-6.9	-13.3	-12.4	-13.0
-12.9	-12.3	-4.1	-8.2	-5.9	-4.5
21.0	15.2	9.6	8.1	6.8	6.1
21.0	21.0	17.7	16.6	15.3	15.7
4.0	14.0	36.0	42.0	40.0	36.0
10.3	12.0	13.6	15.3	17.1	18.9
1.7	4.3	6.2	8.8	11.2	13.4

to decline from \$215 million in 2000 to \$140 million in 2005, and further down to \$70 million in 2020. Net official loans also decline from \$96 million in 2000 to \$63 million in 2005, and to only \$1 million in 2020.

Long-term Impact of Reform on Cambodia's Economy

Table 12 summarizes the results of the projection of Cambodia's economy to the year 2020. A comparison of the two scenarios—Reform and No Reform—presents the impacts of the reforms on Cambodia's economy in the long run. An overall conclusion drawn from the current scenario work is that the Government's reform programs, if implemented on a full scale, will have a major positive impact on Cambodia's economy in the coming two decades.

If the reform programs are fully implemented, the real GDP growth rate will accelerate from 4.3 percent in 2000 to 7.7 percent in 2005, and will be maintained around the annual average 7 percent from 2005 to 2020. This contrasts sharply with the No Reform Scenario in which the growth of real GDP

will stagnate. Without reforms, the real GDP growth rate will decline from 4.1 percent in 2000 to 2.8 percent in 2005, and will be stagnant at a low level around the annual average two percent until 2020.

The high economic growth stimulated by the reform programs has major implications for the level of income per population. The level of nominal GDP per capita will be raised from \$274 in 2000 to \$671 in 2010, and further up to \$1,522 in 2020, a more than 500 percent increase in 20 years. Even taking into account inflation, the real income per capita in 2020 will be 2.5 times higher than that in 2000. This would have dramatic, positive impact on poverty reduction in Cambodia, assuming some measure of income equity exists.

By contrast, the picture is gloomy without reforms. With stagnant economic growth, nominal GDP per capita will be \$272 in 2000, and remain within the range between \$260 and \$290 throughout the period between 2000 and 2020. Accordingly, no significant changes will occur in income in real terms. Progress in poverty alleviation would be minimal.

Reforms also have a major impact on the performance of public finance. Under the Reform Scenario, public revenues as percentage of GDP will increase from 11.3 percent in 2000 to 15.4 percent in

2010, and further up to 17.5 percent in 2020. Public expenditures will be also raised from 15.7 percent relative to GDP in 2000 to 19.2 percent in 2020, and yet the overall public deficits will gradually decline relative to GDP from 4.4 percent in 2000 to 1.6 percent in 2020. This would allow for greater public investment and increases in social sector spending, giving a boost to both Cambodia's economy and the welfare of its citizens.

Without reforms, increases in public revenues and expenditures will be considerably slower. Public revenues relative to GDP will increase from 11.4 percent in 2000 to 14.8 percent in 2020.

Public expenditures relative to GDP will actually decline from 15.8 percent in 2000 to 14.8 percent, reflecting the reduction of official grants and loans.

Reforms are expected to have a positive impact on the balance of payments as well. Reflecting the steady expansion of FDI and exports under the Reform Scenario, Cambodia's trade deficit relative to GDP will decline gradually from 14 percent in 2000 to 9.8 percent in 2010, and produce a modest surplus of 4.4 percent in 2020. Absent reforms, the trade deficit will remain around 13 percent of GDP throughout the period between 2000 and 2020.