

## **Korea's Capitalistic Planning Model: Policy Lessons for Mongolia\***

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Mongolia transitioned from a socialist economy to a free market system in the early 1990s. Its status as a land-locked country with abundant natural resources and but a small population of only 3 million has prompted the growth of livestock herding and mining as the two major industries. This dependence has rendered Mongolia's economy susceptible to fluctuations in the world market.

This paper analyzes Korea's model of long-term planning to highlight the essential conditions for economics success, inclusive of strong political leadership and labor migration from the rural sector to urban sectors. Mongolia is urged to adopt a capitalistic planning model to secure long term development, placing particular emphasis on the development of a proper macroeconomic management strategy to lessen the impact of the 2008 global financial crisis.

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## **1. THE CAPITALISTIC PLANNING MODEL**

### **1.1. Economic Planning in a Capitalist Country**

Korea went through seven rounds of the Five Year Economic Plan (FEP) from 1962-1996. The first FEP was a great success. Its formulation was reliant nation had to rely on foreign expertise. The featured planning techniques lacked sophistication, partly owing to the paucity of statistical data. Notwithstanding these deficiencies, the Korean economy performed well with growth rates for each of the five year periods exceeding their targets.

Economic planning had long been exclusively associated with socialist countries. After World War II, however, many African and Asian countries sought to implement planning measures in their respective economies. As the recipients of economic aid from Western donor countries, they were entitled to concessionary loans from international financial organizations.

There are far more differences than similarities between socialist and capitalist planning. First of all, economic goals in democratic countries represent the aims of the majority of people, policy makers are themselves democratically elected by the people. Therefore, national goals and intermediate targets in long-term plans reflect the overall preferences of the majority of the people.

Secondly, the planning utilized by the capitalist countries is a lot more flexible than communism. Along with trade and financial liberalization, national economies are heavily dependent upon one another, and they are exposed to internal and external shocks. For example, planning authorities can change policy instruments, and revise forecasts of their target variables if their initial projection of the future state variables proves inaccurate.

### **1.2. The Conditions for Successful Development Planning**

Development planning provides economic agents with basic policy

objectives germane to the domestic and external economy. It sets national economic priorities and identifies problem areas, by passing through the consensus-building process and seeking appropriate policy instruments. Through their involvement, bureaucrats receive training on how to expedite the flow of information.

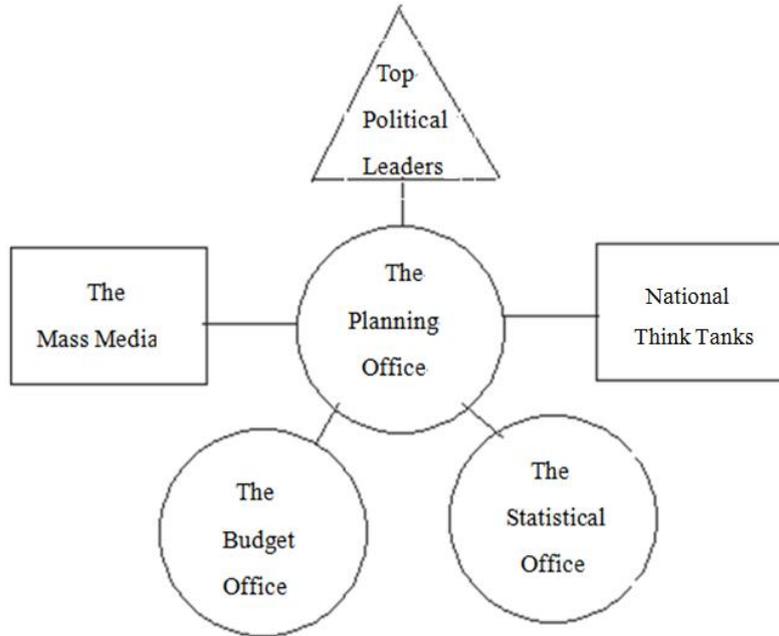
The success of development planning is critically dependent upon efficient and effective implementation. Its prerequisites are political stability and political leadership. In the early stage of development, human resources are poor. The state leader therefore needs to demonstrate the necessity of development planning to attain national consensus for massive investments and borrowing from abroad.

The Korean people greeted President Park as a hero, at least in the beginning of his first term when a military coup brought him to power in 1961. The public generally characterized Park a benevolent dictator in recognition of how his authoritarian regime initiated a series of successful economic reforms. However, a declared intent to ensconce himself in the Presidency on a permanent basis eventually undermined his popularity.

### **1.3. Korea's Economic Planning System**

Six agents are integral to the functioning of Korea's system of economic planning: the state leader, the planning office, the budget office, the statistical office, the media, and the nation's think tanks. Figure 1 illustrates how each plays a very distinctive and important role.

The diagram in figure 1 resembles a walking robot. The activation of the six organs implements the internally consistent economic plans. The process can be described as the preparation of Korea's long-term development plans through active interactions among the various planning organizations. Top political leaders assume full responsibility for the planning process. National goals reflect the public's general preferences. Specialists assist planners to design long-term plans by providing special knowledge and planning techniques. In addition, the three government

**Figure 1 Korea's Economic Planning System**

agencies cooperate together to achieve a mutual objective. The planning office plays the central role when interacting with the budget and statistical offices. The mass media also plays a critical role in checking for the potential adverse effects of the plans, thereby influencing the prioritization of national goals.

## **2. KOREA'S DEVELOPMENT STRATEGY DURING 1962-1997**

### **2.1. State leadership and Economic Performance**

Korea went through seven rounds of Five-year Economic Plans from 1962-1997. During this period Korea achieved high growth, and much credit should be given to the government for its planning strategy. Korea

had to prepare long-term development plans in order to receive aid from the US and to receive concessionary loans from other international organizations such as the Asia Development Bank, the World Bank and the IMF (International Monetary Fund).

During the seven plan periods, five state leaders held the presidential office in Korea. President Park, Chung Hee controlled the country from 1961 until his assassination in October 1979. The Korean constitution authorized Prime Minister Choi, Kyu Ha to automatically assume the presidency. President Choi kept his presidential position until May 1981. During his short presidency, President Choi did not provide much influence on the economy, acting merely as a care-taker during a transitional period. General Chun held the reins of power during President Choi's presidency.

After President Chun had ruled for seven years, he peacefully abdicated to his military friend, General Roh, Tae Woo in 1988. General Roh took power on account of a presidential election largely influenced by the incumbent President Chun. Having been complacent with the legitimacy of his power, President Roh did not emphasize the nation's economic growth to the same extent as his predecessors. He sought to accommodate workers' demands. Consequently, national competitiveness began to rapidly weaken. After President Roh, a civilian President, Kim, Young Sam governed Korea from 1992-1997.

A brief view of Korea's economic conditions under the different regimes is provided in table 1. In the early 1960s, President Park laid the foundation for high-speed economic growth, and successfully initiated long-term planning for the first time. His planning strategy worked quite well, and the economy grew rapidly. He initiated a national campaign, the "New Village Movement" which emphasized the spirit of self-help and self-support, and provided rewards to competent and honest bureaucrats.

President Chun exercised strong leverage over the National Assembly and the government, and was able to get his agenda easily passed in the legislature. Luckily, the international environment was very favorable for

**Table 1 Korea's Economic Performance by Regime**

President	Date	5-Year Plans	Target Growth Rate* (%)	Actual Growth Rate* (%)
Park, Chung Hee (Military)	1961. 5-1979. 10	1) 1962-1966	7.1	7.8
		2) 1967-1971	7.0	9.6
		3) 1972-1976	8.6	9.7
		4) 1977-1981	9.2	5.8
Chun, Doo Hwan (Military)	1981. 5-1988. 2	5) 1982-1986	7.5	8.6
		6) 1987-1991	7.3	10
Roh, Tae Woo (Military)	1988. 5-1993. 2	6) 1987-1991	7.3	10
		7) 1993-1997	7.5	7
Kim, Young Sam (Civilian)	1993. 2-1998. 2	7) 1993-1997	7.5	7

Sources: National Statistical Office, Various Issues of Annual Statistical Reports. \* refers to the average economic growth rate over a 5 year period.

Korea. World energy prices and international interest rates were substantially low, and the value of the Japanese yen stayed at a relatively high level as compared to the U.S. dollar. This allowed Korea to compete with Japan in exporting goods to the U.S. and other countries. Because of these favorable factors, Korea enjoyed high growth, stable prices, and large trade surpluses during 1986-1989. It was about this time that the Korean firms began to substantially expand and become internationally competitive.

When President Roh took over in 1988, the Korean economy had already begun to lose its dynamism. President Roh's conciliatory approach afforded labor activists greater latitude to strike. Labor's relationship with management consequently deteriorated rapidly. The macroeconomic indicators appeared reasonable, but cracks began to appear in the backbone of the economy.

The seventh 5 year economic plan over the period of 1992-1996 warrants a special mention. In March 1992, the seventh 5 year plan was announced by President Roh. However, when President Kim, Young Sam took over the government in March 1992, he discarded the announced seventh 5 year plan and implemented the New Economy Five Year Plan (1993-1997). Upon his presidential inauguration, President Kim announced the “New Economy 100 Day Plan” to quickly boost the Korean economy. The Plan emphasized globalization, industrialization, technological advancement, and social overhead capital

During the seven rounds of the 5 year economic planning periods (1962-1997), four presidents ruled Korea. With the exception of Kim, Young Sam, all came from military backgrounds. Their politics were typically viewed as dictatorial, whereas in economic terms they were feted as heroes. Their respective military regime outperformed all previous efforts at economic management. The actual growth rates mostly exceeded their target growth rates. Among the military dictators, President Park ruled Korea for the longest time, being 18 years, and his economic performance was more outstanding than any other period of Korea's history.

## **2.2. Korea's Industrialization**

Korea's industrialization commenced in 1962, and has reached its apogee during the fifth economic planning period (1982-1986). As reported in table 2, the GDP share of mining and manufacture was 20.5% during the period of the first plan. It attained its highest level, 32.6% during the fifth period, before declining to a level of 25.9% during 1993-1997. In contrast, Korea's agricultural sector declined over the entire period. The GDP share of agriculture, forestry, and fishery was 34.9% for the first period, falling to only 5.7% for the last period (1993-1997). Strikingly, the GDP share of social- overhead capital and other services continuously increased from 44.6% in the first period to 68.4% in the last period. Evidently, the services sector plays a dominant role in Korea. The structural change in both the light

**Table 2 Changes in Industrial Structure**

Planning Period	Industrial Structure			Manufacturing Structure	
	Agriculture, Forestry, and Fishery	Mining and Manufacture	SOC and Others	Light Industry	HCI
1st EDP Period (1962-1966)	34.9 (34.0)	20.5 (27.2)	44.6 (38.8)	65.9	34.1
2nd EDP Period (1967-1971)	27 (34.0)	22.3 (26.8)	50.7 (39.2)	60.7	39.3
3rd EDP Period (1972-1976)	23.7 (22.4)	28.6 (27.9)	47.7 (49.7)	53.2	46.8
4th EDP Period (1977-1981)	17.2 (18.5)	30 (40.9)	52.8 (40.6)	47.1	52.9
5th EDP Period (1982-1986)	11.5 (12.2)	32.6 (31.0)	55.9 (56.9)	40.4	59.6
6th EDP Period (1987-1991)	8 (10.1)	28.6 (32.9)	63.4 (59.0)	31.7	68.3
New Economic Plan Period (1993-1997)	5.7	25.9	68.4	22.8	77.2

Note: Figures in parentheses represent the target rates.

Source: Dal Hyun Kim (2009).

industry and heavy/chemical industry (HCI), is striking. Korea's light industry has steadily shrunk whereas its HCI has been expanding.

Korea's population is almost 50 million. During the period 1960s-1970s, Korea had an advantage in terms of surplus labor. Korean leaders have tried to redirect the surplus labor from agriculture to the manufacturing sector. The influence of Nobel Prize winning economist Professor Arthur Lewis' seminal work (1955) is apparent in this approach. Korea's labor migration strategy proved successful. However, this strategy is not practical for a small but resources-rich country such as Mongolia.

### 3. MONGOLIA'S ECONOMIC SITUATION

#### 3.1. The Real-Side Economy

Mongolia was a communist country until the collapse of the Soviet Union in 1989. In 1990 Mongolia began its transition to a democratic market economy. The New Constitution of 1992 formalized democratic reforms. This has extended to economic management and development of its market infrastructure.

Mongolia is a land-locked country with abundant natural resources, neighbored by China and Russia. See figure 2. While its territory is as huge as 156,000km<sup>2</sup>, its population is a mere 3 million. In contrast, South Korea's territory is only 80,000km<sup>2</sup> with its population being 50 million. The major urban centers include: Ulaanbaatar (800,000), Darkhan (72,000), Erdenet (63,000), Tchoibalsan (40,000), and Soukhe Baatar (23,000). The numbers in parentheses indicate the size of population as of 2005. In 2008 approximately 60% of its population could be classified as urban dwellers.

Mongolia is solely dependent on nomadic livestock husbandry. Agriculture accounts for 36% of employment and 19% of GDP. About 80% of agricultural production is animal-based, with the remaining 20% comprised of wheat. Only 1% (1.35 million hectares) of land is arable, and more than 80% of its area supports livestock herding. Livestock herding and mining are the two major industries. Mongolian herds predominantly consist of goats and sheep. Agricultural production is subject to climactic fluctuations, most notably the so-called "dzud" — a winter disaster that covers pastures with ice and causes mass starvation of livestock. Recent occurrences between 1996-1997, 1999-2000 and 2000-2001 were notable for their severity, particularly the last dzud, which killed 13% of the total livestock.

Banking and tourism in the urban areas are becoming important industries in Mongolia. According to the 2007/8 Household Socio-Economic Survey, rural poverty combined with unemployment and inflation fueled migration

**Figure 2 Major Cities in Mongolia**

from the countryside to Ulaanbaatar. Nevertheless, pastoral livestock herding and mining in the rural areas are still important industries. Owing to the small population and the abundant natural resources in the rural areas, Mongolia will have to simultaneously develop both the rural and urban sectors. As of the end of 2000, the sector allocation of Mongolia's GDP is as follows: agriculture (33%), industry (19%), and services (48%). In contrast, in Korea, the GDP is comprised of agriculture (5.7%), industry (25.9%), and services (68.4 %).

To achieve a long term sustainable growth, Mongolians will need to place high value on its economic objectives such as human development and quality of living, harmony between growth and environment, and the advancement of science and technology.

### 3.2. Macroeconomic Management

Mongolia has enjoyed robust economic growth, averaging 9% per year over 2007-2009. Stronger economic growth is expected over the medium term mainly due to the mining sector. However, the 2008 global financial crisis devastated the economy. Falling mineral prices and a steep drop in external demand slowed its economy. Inflation has eased significantly from 33.7% in August 2008 to 4.9% in July 2009. Mongolia's long-term sustainable growth is dependent on structural reforms, including increased competition in the non-mining sector and deeper integration into the global economy.

Table 3 shows Mongolia's key indicators from 2003-2009. The rate of unemployment has been steadily decreasing since 2004. This is consistent with its high growth trend. The average annual growth rate for the period 2003-2008 was 8.8%. However, inflation has fluctuated wildly, obliging the government to stabilize the economy. Government spending on public sector wages, along with social overhead capital, increased in 2008. The government balance ratio was around 3% from 2005-2007 but dropped to a negative 5% in 2008.

The country's trade account and current account balances recorded deficits in 2008, which appears set to continue owing to reductions in export revenue. However, foreign exchange reserves were increasing, while the value of 'Togrok', the Mongolian currency has been decreasing. In view of the real effective exchange rates, the competitiveness of the Mongolian export products is overall being maintained in the world market.

Considering the goal variables of inflation and the current account balances as well as the policy variables of fiscal spending and the exchange rate, we can find a desirable policy direction for Mongolia by adopting the policy-mix model developed by Robert Mundell (1962).

**Table 3 Mongolia's Key Economic Indicators**

	2005	2006	2007	2008
Real GDP Growth (%)	7.3	8.6	10.2	8.9
Nominal GDP (\$ million)	2,307	3,156	3,930	5,258
GDP per Capita (USD)	900	1,214	1,491	1,960
Unemployment (%)	3.3	3.2	2.8	2.8
Consumer Price Index (%)	9.6	5.9	14.1	23.2
Government Balance (% of GDP)	2.6	3.3	2.8	-5.0
Trade Balance (\$ million)	-99.5	136.2	-52.4	-612.6
Exports of Goods (\$ million)	1,066.1	1,543.9	1,950.7	2,539.3
Copper Export (%)	14.7	94.8	27.7	3.0
Imports of Goods (\$ million)	1,165.6	1,407.7	211.7	3,615.8
Current Account Balance (\$ million)	29.7	221.6	264.8	-729.9
Foreign Direct Investment (\$ million)	257.6	289.6	360.0	585.5
External Debt (\$ million)	1,360.0	1,413.9	1,528.7	1,600.5
Foreign Reserves Gross (\$ million)	333.1	718.0	1,000.6	656.7
Domestic Credit (%)	18.8	-3.1	78.4	60.6
Short-term Interest Rate (% per annum)	3.7	5.1	8.4	9.8
Exchange Rate (Togrok/USD)	1,221.0	1,165.0	1,170.0	1,267.5
Real Effective Exchange Rate (2006=100)	99.6	102.8	104.8	127.4

Source: The World Bank's Monthly Economic Update, December 2009.

#### 4. APPROPRIATE USE OF POLICY INSTRUMENTS

To illustrate how the central bank can implement macroeconomic policies, we adopt the Mundell model (1962) to the internal and external balance of

payments equilibrium. The equation for internal balance is set up as follows:

$$Y_f = D = C(G) + I(r) + G + X - M(D), \quad (1)$$

$$Y_f = D(G, r). \quad (2)$$

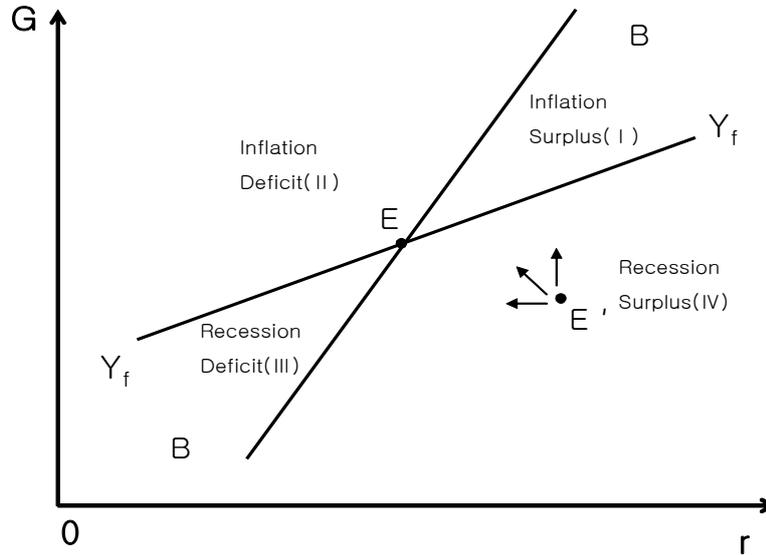
The the slope of the  $Y_f$  curve is negative as in (3),

$$-(D_r / D_g) > 0. \quad (3)$$

Equation (1) explains that aggregate demand  $D$  is equated to full-employment output supply.  $D$  is a function of household consumption which is, in turn, a positive function of government spending  $G$  and the corporate firm's investment  $I$  is negatively related to the rate of interest, government spending, exports, and imports which are negatively related to aggregate demand. Equation (1) can thus be reduced to (2). Total differentiation of (2) yields the slope of the internal balance curve as derived in (3).  $D_r$  and  $D_g$  refer to the partial derivative of aggregate demand with respect to the rate of interest and to government spending respectively. The external balance curve, on the other hand, is expressed as in (4).

$$B = X - M(D) + K(r). \quad (4)$$

Equation (4) is the balance of payments which is a function of net exports,  $X - M(D)$  plus the balance of capital account transactions  $K(r)$ . It is assumed that import is a positive function of aggregate demand whereas capital inflow is a positive function of the change in the domestic interest rate. Total differentiation of (4) yields that the slope of the external balance curve is positive as in (5),

**Figure 3** Appropriate Use of Monetary and Fiscal Policy

$$\frac{(K_r / M_d) - D_r}{D_g} > 0. \quad (5)$$

If the economy is at  $E'$  with recession being a BOP surplus, it requires a lower interest rate and greater government spending. If one compares (3) and (5), the slope of the external balance curve is greater than that of the internal balance curve. This is demonstrated in figure 3. In the  $G$ - $r$  space, there are four regions. Region I relates to inflation and the BOP surplus. Region II includes inflation and the BOP deficit. Region III concerns recession and the BOP deficit. Region IV entails recession and the BOP surplus. At point  $E$ , both internal and external balances are simultaneously achieved. If the economy is at  $E'$  characterized by recession and surplus, the government will want to increase its spending whereas the central bank will want to lower the interest rate.

Alternatively, the government can achieve full employment and a trade balance by using its spending and exchange rate policy. The internal and

external balance equations can be derived almost in the same manner as before. This model has an important policy implication for Mongolia because it can use its exchange rate as a policy instrument.

The internal balance equation can be expressed as (6). In (6) and (7), the exchange rate enters the trade function as an argument.

$$Y_f = D = C(G) + I + G + X(S) - M(G, S), \quad (6)$$

$$Y_f = D(G, S). \quad (7)$$

Total differentiation of (7) yields that the slope of the internal balance curve is negative as in (8),

$$-(D_s / D_g) < 0. \quad (8)$$

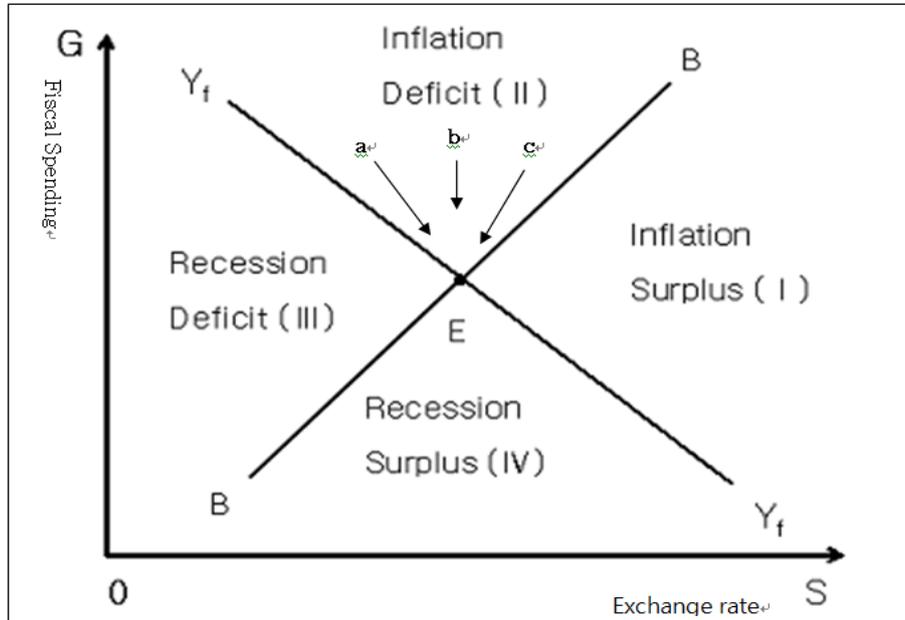
The external balance here is the trade balance only. If the interest rate policy is not effective for some reasons, government spending is used with the exchange rate policy as expressed in (9),

$$B = X(S) - M(G, S). \quad (9)$$

Setting the total differentiation of (14) to zero yields that the slope of the external balance equation is positive as in (10),

$$(B_s / B_g) > 0. \quad (10)$$

Figure 4 shows the intersection of the two slopes. The internal balance line is negatively sloped whereas the external balance line is positively sloped. This policy-mix framework is readily applicable to a small economy in a state of transition, as is the case with Mongolia. Suppose that the Mongolian economy is placed in region II with inflation and trade deficit.

**Figure 4 Appropriate Use of Fiscal and Exchange Rate Policy**

It is then necessary to reduce its fiscal spending. However, it is not clear whether the Mongolian government should devalue or revalue its currency. If their economy is situated at point b, they do not need to undertake exchange rate policy. However, if the Mongolian economy is either at point 'a' or at point 'c', then the exchange rate authority must either devalue or revalue the Mongolian currency.

## 5. POLICY LESSONS FOR MONGOLIA

Mongolia is a small economy, being rich in natural resources including copper and gold. It has a comparative advantage in livestock herding given its vast land mass. To join a group of newly emerging economies in becoming an industrially advanced economy, Mongolia is required to design long term development plans.

To this end, Mongolia can learn from Korea's lessons in development planning. Korea has experienced seven rounds of five year economic planning practices during 1962-1997. Korea adopted a capitalistic planning model comprised of six different organs: strong political leadership, economic planning agency, the mass media, think tanks, the budget office, and the statistical office. Of these six organs, presidential or political leadership is the most important. A shortage of domestic savings can be compensated for through foreign borrowing. Targets may be readjusted as necessary.

Mongolia is capable of simultaneously developing its rural and industrial sectors. In Korea's case, the labor migration strategy was successful due to surplus labor in the rural sector. In Mongolia's case, however, an abundance of natural resources in the rural sector prevents the ready adoption of the migration strategy. Compared to Korea's population of 50 million, Mongolia's 3 million is much smaller. Hence, it needs to develop the two sectors simultaneously.

Mongolia's economy was badly hit by the 2008 global financial crisis. Reduction in external demand caused a significant decline in its export revenue. Moreover, collapsing prices of mining products resulted in a recession and fiscal deficits. The Mongolian central bank may wish to devalue its currency for export promotion. To achieve this task, the Mongolian policy authorities will need to undertake a proper combination of fiscal spending and exchange rate policy.

As of 2008, the Mongolian economy experienced both inflation and trade deficits. If this situation were prevailing now, the government should certainly curtail its spending. However, it is not clear that Mongolia should devalue or alternatively revalue its currency. Any decision will be subject to the economy's exact location on the fiscal policy and exchange rate policy graph, even if it lies in the region of a recession and trade deficit. Policy experts will have to know the effectiveness of each of the two policies.

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