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Preliminary

**Policy Simulations with an Integrated Model
for Japan and Northeast Asia**

by

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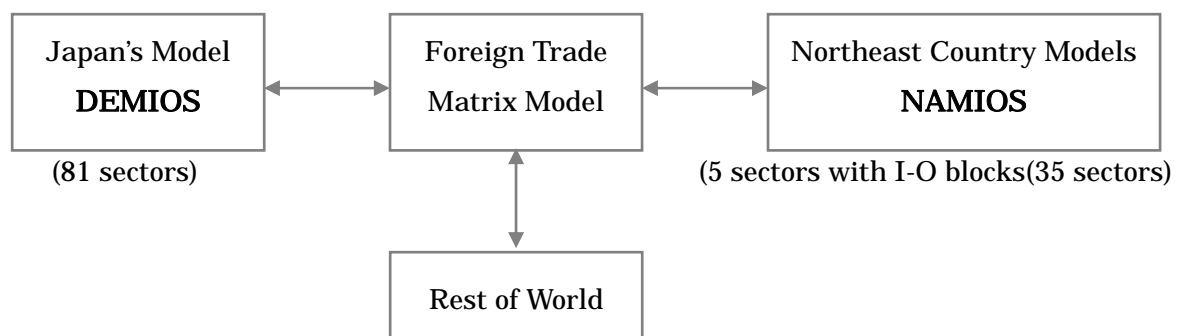
1. Introduction

In view of the growing importance of Northeast Asia in the 21st century world economy, an empirical study was conducted in the Leontief – Keynesian framework under the support of the National Institute for Research Advancement (NIRA).

The study covers Japan, and seven Northeast Asian countries including China, Hong Kong, Taiwan, Republic of Korea (ROK), North Korea (PDRK), Mongolia, and Russia with two sub-regions for Northeast China and the Russian Far East. These submodels are attached to the above main system, because of their growing mutual inter-dependence with Japan. The above country models are linked with each other as shown below by means of a trade matrix specifically designed for this region.

Regarding the specifications of the country models, Japan's model (DEMIOS) is exceptionally large in terms of sector divisions, with 81 sectors, and in the number of behavioral equations, covering detailed fiscal and monetary variables. The total numbers of endogenous variables are about 4,000. For other countries, the specifications of each model are fairly standardized, having 5 common sectors for output, employment, capital stock, etc. and common aggregate expenditure variables such as private consumption, investment, exports, etc. Prices and wage rates are also endogenized. In view of the recent changes in demographic trends, total population, fertility and death rates, age components, emigration, etc. are all endogenized in each country model. Particular attention is paid with respect to the interdependence between economic growth and demographic changes. The original version of these country models, with a trade linkage (NAMIOS), was developed by the Economic Research Institute of Northeast Asia (ERINA) in Niigata in 1998 [2] and the present version is an extended version renewed on an updated data basis.

Flow Chart of International Model



2. Japan's Model (DEMIOS)

The original version of this multi-sector model was constructed in 1997 on a project which was carried out under the collaboration of the Project LINK of university of Pennsylvania on a 64-sector basis, covering both sector output, employment, investment, etc., with a market adjustment mechanism for prices and wage rates as well as ordinary macroeconomic variables related to fiscal and momentary policy. [1]

The model is known as the NIRA-LINK Model because of its historical background. The present version is an extended one with a larger sectional breakdown, i.e. 81 sectors and more elaborate fiscal and monetary sectors such as public sectors including central, local and social insurance, and monetary sectors including security stock markets. The demographic variable block, though slightly simplified as compared with its predecessor, covers all major demographic variables. The basic characteristics of the previous model, the NIRA-LINK model, especially the V-RAS system representing flexible input-output coefficients including primary factors, are retained and are further elaborated in DEMIOS. Detailed analysis was conducted with special reference to sector changes in TFP in the framework of the V-RAS system.[4] [5] [6]

An essential feature of this V-RAS system is to integrate input-output coefficients, including primary factors, in the framework of rectangular matrix as shown bellow and to analyze both individual coefficients and total factor productivity (TFP) in each column and at the same time to trace output price repercussions in each row from the upper to the lower stream. The system is summarized as below, unlike the ordinary input-output matrix of intermediate input, the V-RAS matrix is rectangular with more number of row than that of column, since it also covers primary factors such as services of labor, capital, land, etc.

$$a_{kj}^* = \begin{bmatrix} a_{11} & \cdots & a_{1n} \\ \vdots & \ddots & \vdots \\ a_{n1} & \cdots & a_{nm} \\ v_{11} & \cdots & v_{1n} \\ \vdots & & \vdots \\ v_{m1} & \cdots & v_{mn} \end{bmatrix} \quad (1)$$

Total value of inputs represents a reciprocal of TFP (τ_j) as shown below.

$$\tau_j = \frac{1}{\sum_k a_{kj}^*} \quad (k = 1, 2, \dots, n+m) \quad (j = 1, 2, \dots, n) \quad (2)$$

All values are shown in terms of constant prices at base year, implying $\bar{p}_i = 1$. The V-RAS formula and parameters for inter-factor substitution r , total savings s , and cost-price relations are formulated below in equations (3) to (10).

$$a_{kj}^* = r_k \hat{a}_{kj} s_j \quad (3)$$

$$s_j = f\left(\frac{1}{\tau_j}, \dots\right) \quad (4)$$

$$r_k = [r_i; r_s] \quad (i = 1, \dots, n) \quad (s = 1, \dots, m) \quad (5)$$

$$r_i = f(\hat{p}_i, \dots) \quad (6)$$

$$\hat{p}_i = \frac{(p_i / \bar{p}_i)}{(\bar{p}_i / \bar{p}_i)} \quad (7)$$

$$p_i = (1 - \mu_j) p_{x,i} + \mu_j p_{m,i} \quad (8)$$

$$p_{x,j} = \sum_i a_{ij} p_i + p_{v,j} \quad (9)$$

$$p_{v,j} = \sum_s v_{k,j} p_{f,s} + \pi_j \quad (10)$$

Where a_{kj}^* = input-output coefficient of a rectangular matrix including primary factors (V) for base year, \hat{a}_{kj} = base year I-O coefficient, τ_j = total factor productivity of j^{th} sector, r_k = substitution parameter of k^{th} sector, s_m = efficiency parameter of j^{th} sector, s_m = efficiency parameter of j^{th} sector, p_x = output price, p_m = input price, p = average of p_x and p_m , \bar{p} = average of p_x and p_m , μ = import dependency, \hat{p} = average import price, \bar{p} = base year price.

While equations (3) to (5) are related to total input, including primary inputs, equations (6) and (7) are related only to intermediate inputs. S_i and r_i are derived from the annual I-O table in constant prices and estimated for forecasting by using equations (4) and (6) by ordinary least squares, where \hat{p}_i and \bar{p}_i play significant

roles respectively. The r_j , substitution parameter for primary inputs, also derived from the V-RAS formula, was used for important indicators for the demand functions of primary inputs. A direct spectral approach to primary factor demand, however, was taken by using conventional methods for factor demand functions on a sectional basis, as described later.

Regarding the production side, derived as a dual price-cost relationship, the following system is formulated on the basis of the conventional Leontief model.

$$U_i = a_{ij} \cdot X_j \quad (11)$$

$$D_i = U_i + F_i + E_i \quad (12)$$

$$X_i = D_i - M_i \quad (13)$$

$$M_i = f(D_i, p_{mi} / p_n) \quad (14)$$

$$U_{ij} = \sum_i a_{ij} X_j \quad (15)$$

$$Z_j = U_{rj} + \bar{w}_j \cdot L_j + \bar{p}_{kj} \cdot K_j + \bar{p}_{aj} \cdot A_j \quad (16)$$

$$\tau_j = X_j / Z_j \quad (17)$$

Where U_i = intermediate demand, U_r = intermediate input, D_i = demand total, F_i = final demand, E_i = exports, M_i = imports, K_i = capital stock, A_i = land, Z_j = total input.

All the equations related to supply and demand variables are price sensitive, thus being affected by sectional changes in TFP and feign prices as well as market conditions. Unlike conventional specifications for business investment, one of the features of the present model is government investment in social overhead which is significant with a two or three year time lag for important private sectors such as agriculture, basic manufacturing, public utilities, etc. Private housing investment is also partly dependent on government investment such as highway access, renewal of urban facilities, etc. This explicit consideration of forward linkages of the I-O model of public sectors, providing for the external economy, is one of the important features of the present Japanese model.

Regarding labor demand, the specialization of the predecessor model, the log linear functions, with output and relative wage rates as explanatory variables, are inherited.

These factor demand equations are summarized as below.

$$L_j = f[X_j, W_j/PX_j, L_{j-1}] \quad (18)$$

$$KP_j = Ip_j - DP_j + KP_{j-1} \quad (19)$$

$$IP_j = f[X_j, KP_{j-1}, INTGB_{-1}, PX_j/PZ_j, IG_{-1}] \quad (20)$$

Where L_j = employment, W_j = wage rate, PX_j = producer price, PZ_j = input price, KP_j = capital stock, IP_j = business investment, DP_j = depreciation, $INTGB$ = long-term interest rate, IG = government investment by type.

Finally, producer prices, as shown below, are determined by total input price, proxy rate of capacity utilization, unemployment rate, exchange rate, etc.

$$\ln PX_j = f[\ln PZ_j, \ln(KP_{j-1}/X_{j-1}), \ln URATE, \ln EXR_{-1}, \ln PX_{j-1}] \quad (21)$$

Where PX_j = producer price, PZ_j = input price of all factors, $URATE$ = unemployment rate, EXR = exchange rate (¥/\$).

At an aggregate level the potential GDP^C was estimated in order to evaluate the rate of operation, i. e., $(=GDP / GDP^C)$. The aggregate production function was estimated which includes the scale effect and technical progress symbolized as TFP. The Cobb-Douglas type was estimated by using private fixed capital stock, labor inputs, the unemployment rate, and time trends, and the result was normalized in terms of working hours and the unemployment rate to obtain the value of capacity GDP.

Regarding the macroeconomic block, more elaborate improvements were carried out for the fiscal and monetary sub-blocks. The public sector is divided into central government, local government and social insurance, and financial assets and liabilities as well as various types of expenditures and transfer payments are specified and endogenized. For the monetary block, the stock price index and exchange rates are newly endogenized and the relationship between fiscal and monetary blocks are more closely elaborated through the monetary policy of the central bank and national debt management of the central government.

In view of the growing importance of the changes in demographic structure, especially regarding the aging issue, the equations on demographic variables such as fertility and mortality rates, the proportion of elderly people, the rate of international migration, etc. are strengthened on an improved data basis and with improved specifications. As noted later, one of the important findings is that demographic trends are closely related to economic growth.

3. Northeast Asian Country Models (NAMIOS):

The coverage of the NAMIOS has been extended to new members, i.e., Hong Kong and Taiwan, thus now numbering nine countries.

As in the previous model, common specifications are applied in each country model. Production and employment are divided into five sectors, i.e., agriculture, mining, manufacturing, construction, and services, as previously noted. Exceptionally, however, some sectors are aggregated due to the data limitations.

Regarding investment and capital stock, all countries have investment functions by sector, but capital stock by sector is only available in China where production functions are also estimated by sector on the basis of labor and capital stock series. Capacity output and the rate of utilization of total production at the aggregate level is also available in China, but not for other countries. The rate of unemployment, however, is available for all country models which is used as a prox variable of supply side constraint.

As noted earlier, the interdependence between economic growth and demographic trend are explicitly endogenized in each country model. Particularly important are the rates of fertility and net migration, which are sensitive to the employment opportunity and the expectation on income growth in the longer period than conventionally by expected.

Common categories are also used on the expenditure side, which are linked to the input-output system with the Leontief framework. This I-O counterpart of NAMIOS is divided into 35 sectors for output and foreign trade. Although the above two new countries, Hong Kong and Taiwan, are still excluded, China and Russia are divided respectively into Northeast China and the rest of China, and the Russian Far East and the rest of Russia. This multiregional I-O model (7x7) covering most of Northeast Asia is originally based on a 1995 table estimated by ERINA in 1998. [3] The model is constructed in the Chenery-Moses type on a 35-sector basis for each

country and sub-region. Structural changes are analyzed for the period between 1995 and 2010 as shown in Table 3.

4. Policy Simulation

(Long Term simulations)

In the following we present two types of policy simulations. The first one is related to long-term simulations for the period: 2000-2020, by using NAMIOS, while the second one concentrates on medium-term simulations by using an integrated model of DEMIOS and NAMIOS for the period: 2002-2010.

In both cases, common policy assumptions are used: a) base line, b) China's growth acceleration, c) Japan's growth acceleration, and d) world chronic recession.

A caution is needed in this context that the Japan's model (DEMIOS) is used only for the medium-term analysis and that only Japan's imports are exogenously assumed in the case of NAMIOS forecast for the long-term simulation.

This idea is derived from the DEMIOS's assumption of GDP growth at about 4% with a more liberal import policy.

In Table-1 and Table-2 four alternative long-term scenarios are presented. The first scenario relates to the result of forecasts based on the simple extrapolation of exogenous variables. The results of this base line scenario are indicated in terms of population, real GDP growth, foreign trade, price levels, etc. during the 20 years between 2000 and 2020. Indicating relatively faster growth of GDP and foreign trade, China continues to be ahead in terms of its annual rate of increase, while Japan still remains in a mild deflationary trend. The disparity ratios remain almost unchanged in terms of the growth rate of GDP among China, Japan, South Korea, and other countries in the region. China tends to gradually overtake Japan in terms of exports though in around 2015.

The second scenario is related to the case of the Chinese accelerated rate of growth with more active fiscal policy and foreign direct investment. The actual performance over recent years seems to be nearer to this scenario, since the growth rate of real GDP has further accelerated by nearly 1% and a similar trend is observed in foreign trade, overtaking Japan significantly. The expansionary impact on South Korea, Taiwan, Russia and other neighboring countries is also noticeable. Regarding the trend of prices in China, its inflationary impact still remains modest without any indication of further acceleration. Similarly, no indication of excessiveness is

observed in terms of the GDP gap and foreign trade balance despite the acceleration of growth. The impact on Japan is also noticeable in terms of its exports, rising to 3.1% from 2.9% in the base line scenario.

The third scenario indicates a case where the Japanese economy accelerates in growth to about 4%, recovering from the chronic deflationary trend which has continued for more than ten years. Real imports are also assumed to rise by 5.5%. The impact is significant, though not as high as in the second case, having a strong effect on every region of Northeast Asia. Particularly noteworthy is the impact on two regions, Northeast China and the Russian Far East, the effects being greater than in the second scenario, as shown in Table 2. It is also noteworthy that China tends to accelerate in growth due to financial and technical collaboration from Japan, which is assumed in this scenario. [5]

The last scenario is less optimistic, assuming a reduction in world trade caused by chronic stagnation in the United States, Japan, and the rest of the world. A deceleration in terms of growth in the United States is assumed to continue due to twin-deficits in fiscal and trade balances. Negative economic impact is widely observed in this scenario in almost all of the regions in the Northeast. Population also tends to decrease in many regions, which further accelerates a downward trend in aggregate demand. It is noted, however, that the Chinese decline remains modest, despite strong downward trends in other regions. This is mostly accounted for by the fact that Chinese dependence on foreign trade is relatively modest.

Regarding the export performance in Table 3-1, China overtakes Japan, becoming the second, next to the United States, in 2010 in both cases of China's growth acceleration and Japan's growth acceleration scenarios, and in 2015 and 2020 for the base line and the world recession scenarios, respectively. With respect to imports in Table 3-2, however, Japan keeps the present second rank until 2020 in the Japan's growth acceleration scenario, while China becomes the second in 2010 for all other scenarios.

As for demographic trends in Table 3-3, it is generally observed that the causes due to the aging issue tend to decelerate almost all the countries in the region. The economic growth, however, tends to affect positively their demographic trends in most countries such as China, Hong Kong, S. Korea, Mongolia, etc. through the improvement of the employment opportunity and living conditions, as typically shown in the China's growth acceleration scenario. Also noteworthy are the impacts

of migration which negatively affected the demographic trend in Taiwan.

Turning to the more sectoral aspects from the macro economic side shown above, various findings are observed from the multi-sector input-output model for the Northeast region as shown in Table 4. After tentatively updating the multi-regional input-output table for 1995 prepared by ERINA, a Leontief type model based on the table is used for forecasting for 2010. The model has 34 sectors for each of the 7 regions which cover 5 countries, excluding Hong Kong and Taiwan, and the 2 sub-regions mentioned above. The model enables structural analysis of the Northeast region during the 15 years between 1995 and 2010 as shown in the table. It is generally observed that the share of agriculture, forestry and fishery and light manufacturing tends to decline and there is a marked shift to heavy industry, particularly machinery industries with higher value-added ratios. Also noteworthy is a rising tendency, marking more than four times, for steel, non-ferrous metals, electric machinery and transport equipment. Even among light manufacturing industries a significant rising trend is observed for textiles, apparels, household utensils, sundry goods, etc. What is especially noted is the role of foreign direct investment, which contributes to the promotion of productivity, thus accelerating exports. This rapid increase in terms of the share of Chinese exports is already mentioned above in the context of the trade matrix.

Northeast China is no exception, showing a similar trend, particularly for steel, electric machinery and transport equipment. A rising trend is also noticeable for crude oil and natural gas, which tend to grow faster than in other Chinese districts. A long-term dynamic growth in industrial structure is also noteworthy in South Korea, though its pace is slightly below that of China. Particularly noted is the high pace of growth in IT industries with rapid technological progress. Rising shares are noted in transport equipment and precision industries. Russia is relatively behind in economic growth though showing relative advantages in forestry, coal, crude oil and natural gas, metal mining, steel and non-ferrous metals, etc. This trend is particularly noted in the Russian Far East where there are signs of remarkable progress especially in agriculture, forestry, crude oil and natural gas, food, lumber, household utensils, paper and pulp, non-ferrous metals, and construction, etc.

Although the above trend is commonly observed in each scenario, there are delicate, interesting differences that deserve attention. In the second scenario of Chinese growth acceleration, sectors related to investment such as in construction

steel and non-ferrous metals, tend to propagate all kinds of growth in machinery, impacting related countries such as Japan, Southeast countries, the United States and the EU, etc. in terms of demand for steel, construction machinery, etc.

In the third scenario of Japan's growth acceleration, particularly noted are consumption goods in the rest of China such as textiles, apparels, sundry goods, household utensils, etc. Also showing remarkable increases are pulp and paper, and printing and publishing in Northeast China, in addition to the general expansion observed in the rest of China. For other districts where there is a similar impact such as that in China, particularly noteworthy are increases in crude oil, natural gas, petroleum products, steel, etc. in the Russian Far East.

The fourth scenario of world trade decline due to chronic recession indicates a general falling tendency in particular export related industries such as textiles and apparels in South Korea and China. These construction industries are generally the least affected due to dependence on domestic demand.

(Medium Term Simulation)

Now we turn to more detailed annual changes up to 2010 by using our integrated model in which Japan is completely endogenized to analyze the mutual interdependence between Northeast Asia and Japan. Particularly important is the feedback effect from Northeast Asia to Japan, which is not fully endogenized in the long-term simulations discussed above.

Tables 5-1, 5-2, and 5-3 indicate the levels of real GDP, real exports, real imports for Northeast Asian countries, including Japan.

A similar pattern of sensitivity to the long-term simulation for the period between 2002 and 2010 are generally observed. Since, however, Japan's simulations with DEMIOS start from 2003, unlike other countries which start from 2001, these differences need to be adjusted for comparability. In Table 6 the results of this adjustment are indicated in which Japanese figures are related to 2010 while those for other countries are related to 2008, thus the imports become comparable in the 7th year.

A remarkable difference becomes noticeable in this table as compared with the long-term simulations.

As compared with base line simulation, the imports under Japan's growth acceleration indicate significantly higher values than in China's growth acceleration

which is generally dominant over Japan in the long term simulation. This tendency is observed especially in terms of GDP and imports.

The results of the DEMIOS simulation for Japan's growth acceleration are summarized in Table 7. As against a base line simulation of about 0.7% of GDP growth, the acceleration simulation assumes about a 10-15% growth rate in public investment, strong financial support to business investment, and housing investment of about 2% of GDP, resulting in a higher 2003 to 2010. The unemployment rate declines significantly from about 5% to 3.8%, while the rate of capacity utilization rises from 92% to 100%, 15% higher than the base line scenario in 2010. Total imports also keep rising, reaching a level 13% higher than the base line.

This indicates a significant increase in tax revenues, and the ratio of net government debt against nominal GDP also improves from 1.32 to 1.14.

In Table 7-2, sectoral changes in output and imports are summarized for major sectors. Particularly noteworthy are the sectors heavily related to public and private investment in terms of output. As compared with the base line scenario, raw material sectors such as forestry, lumber, non-metallic mineral products, cement, glass, plastic products, and metal products are also significantly affected. General machineries and electrical machinery also strongly increase, but most noticeable impacts are found in construction sectors, such as public work, residential and non-residential construction, etc. Sectors related to private consumption such as foods, textiles and apparels, etc. are positively affected. Particularly noteworthy are information related service sectors which contribute to Japan's general growth acceleration.

Regarding imports which tend to stimulate exports from Northeast Asia, energy and raw materials are most important items as indicated in the table. Particularly noteworthy are crude oil, significantly from the Russian Far East; non-ferrous metallic ores, including those from Mongolia; non metal ores; ceramic products; steel, mostly from South Korea; and metal products. Capital goods including IT related products, mostly from Taiwan, South Korea and China, show a rising tendency.

In conclusion, from the above scenario of Japan's growth acceleration, it is suggested that there is no more horizontal trade linkage as observed during the 1980's, but a more hybrid relationship of horizontal and vertical division of labor becoming dominant, and this new trend has been strengthened by global capital

movement, especially foreign direct investment since the 1990's, the post cold war period.

(Concluding Remarks)

As suggested in the above scenarios, the growing interdependence in Northeast Asia indicates relative advantages of mutual collaboration in terms of the promotion of infra-structure, environmental protection, energy saving technology by foreign direct investment, FTA agreements and trade liberalization, etc., and while these suggested areas for collaboration seem to be rapidly expanding, it should also be emphasized that the Northeast Asian contribution to the world economy is steadily growing as one of the engines for global development. This fact should not be under-emphasized, as well as the growing need for international collaboration within and outside of Northeast Asia.[7]

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Table-1
Alternative Scenarios : GDP

Base Line		2000	2005	2010	2015	2020	20 years average
China	level	5,248	7,228	8,931	11,487	15,402	9,659
	annual rate (%)		6.6	4.3	5.2	6.0	5.5
Hongkong	level	998	1,612	1,580	1,924	2,333	1,689
	annual rate (%)		10.1	-0.4	4.0	3.9	4.3
South Korea (ROK)	level	486,745	685,900	892,600	1,138,070	1,438,155	928,294
	annual rate (%)		7.1	5.4	5.0	4.8	5.6
Mongolia	level	585,874	802,695	840,447	1,024,082	940,466	838,713
	annual rate (%)		6.5	0.9	4.0	-1.7	2.4
North Korea	level	1,620	1,972	2,363	2,907	2,820	2,336
	annual rate (%)		4.0	3.7	4.2	-0.6	2.8
Taiwan	level	9,199	11,964	14,027	17,095	20,878	14,633
	annual rate (%)		5.4	3.2	4.0	4.1	4.2
Russia	level	461	464	482	506	534	489
	annual rate (%)		0.1	0.8	1.0	1.1	0.7

China's Growth Acceleration

		2000	2005	2010	2015	2020	20 years average
China	level	5,248	7,805	10,673	13,931	18,913	11,314
	annual rate (%)		8.3	6.5	5.5	6.3	6.6
Hongkong	level	998	1,643	1,670	2,002	2,447	1,752
	annual rate (%)		10.5	0.3	3.7	4.1	4.6
South Korea (ROK)	level	486,745	693,007	932,605	1,217,330	1,566,506	979,239
	annual rate (%)		7.3	6.1	5.5	5.2	6.0
Mongolia	level	585,874	803,591	851,446	1,055,393	990,521	857,365
	annual rate (%)		6.5	1.2	4.4	-1.3	2.7
North Korea	level	1,620	1,972	2,374	2,936	2,874	2,355
	annual rate (%)		4.0	3.8	4.3	-0.4	2.9
Taiwan	level	9,199	12,120	14,710	18,275	22,747	15,410
	annual rate (%)		5.7	3.9	4.4	4.5	4.6
Russia	level	461	465	485	512	545	494
	annual rate (%)		0.2	0.9	1.1	1.2	0.8

Japan's Growth Acceleration

		2000	2005	2010	2015	2020	20 years average
China	level	5,248	7,272	9,195	12,080	16,480	10,055
	annual rate (%)		6.7	4.8	5.6	6.4	5.9
Hongkong	level	998	1,616	1,606	1,959	2,390	1,714
	annual rate (%)		10.1	-0.1	4.0	4.1	4.5
South Korea (ROK)	level	486,745	687,594	911,260	1,183,227	1,521,518	958,069
	annual rate (%)		7.2	5.8	5.4	5.2	5.9
Mongolia	level	585,874	802,752	843,842	1,036,841	965,675	846,997
	annual rate (%)		6.5	1.0	4.2	-1.4	2.6
North Korea	level	1,620	1,972	2,371	2,929	2,864	2,351
	annual rate (%)		4.0	3.8	4.3	-0.4	2.9
Taiwan	level	9,199	11,992	14,288	17,673	21,939	15,018
	annual rate (%)		5.4	3.6	4.3	4.4	4.4
Russia	level	461	464	483	509	541	492
	annual rate (%)		0.1	0.8	1.0	1.2	0.8

World Recession

		2000	2005	2010	2015	2020	20 years average
China	level	5,248	6,948	8,337	10,564	13,999	9,019
	annual rate (%)		5.8	3.7	4.8	5.8	5.0
Hongkong	level	998	1,480	1,359	1,644	1,910	1,478
	annual rate (%)		8.2	-1.7	3.9	3.0	3.4
South Korea (ROK)	level	486,745	662,118	826,680	1,017,679	1,248,651	848,375
	annual rate (%)		6.3	4.5	4.2	4.2	4.8
Mongolia	level	585,874	801,306	832,614	1,005,556	912,484	827,567
	annual rate (%)		6.5	0.8	3.8	-1.9	2.3
North Korea	level	1,620	1,969	2,350	2,880	2,774	2,319
	annual rate (%)		4.0	3.6	4.2	-0.7	2.7
Taiwan	level	9,199	11,580	13,141	15,538	18,420	13,576
	annual rate (%)		4.7	2.6	3.4	3.5	3.5
Russia	level	461	461	474	491	512	480
	annual rate (%)		0.0	0.5	0.7	0.8	0.5

Note: currency unit: **China**: 1990 B yuan, **HongKong**: 1990 M HK\$, **South Korea**: 1995 B won, **Mongolia**: 1990 M tugrik, **North Korea**: 1995 B won, **Russia**: 1997 B ruble, **Taiwan**: 1996 B T\$

Table-2
China's Northeast 3 Provinces and Russian Far East : 4 Scenarios

China's Northeast 3 Provinces

	2000	2005	2010	2015	2020	Average
Base Line	4638	6,522	9,137	12,605	17,393	
		7.1	7.0	6.6	6.7	6.83
China's Growth Acceleration	4,638	6,647	9,454	12,980	17,809	
		7.5	7.3	6.5	6.5	6.96
Japan's Growth Acceleration	4,638	6,662	9,506	13,025	17,846	
		7.5	7.4	6.5	6.5	6.97
World Recession	4,638	6,531	9,162	12,648	17,454	
		7.1	7.0	6.7	6.7	6.85

Russian Far East

	2000	2005	2010	2015	2020	Average
Base Line	16.8	32.9	36.7	41.3	46.8	
		14.4	2.2	2.4	2.5	1.78
China's Growth Acceleration	16.8	33.1	37.2	42.1	47.9	
		14.5	2.4	2.5	2.6	1.87
Japan's Growth Acceleration	16.8	33	37.1	42.2	48.4	
		14.5	2.4	2.6	2.8	1.93
World Recession	16.8	32.1	34.7	37.7	41.3	
		13.8	1.6	1.7	1.8	1.27

Table 3-1 Exports

2000-2020

(1995 mil. U.S. \$)

Base Line

		2000	2005	2010	2015	2020	20 years average
China	level	306,861	565,592	674,755	858,054	1,076,429	696,338
	annual rate (%)		13.0	3.6	4.9	4.6	6.5
Hongkong	level	239,257	379,779	466,203	572,125	700,519	471,577
	annual rate (%)		9.7	4.2	4.2	4.1	5.5
South Korea (F)	level	202,453	252,363	309,081	383,947	476,569	324,883
	annual rate (%)		4.5	4.1	4.4	4.4	4.4
Mongolia	level	538	719	889	1,119	1,425	938
	annual rate (%)		6.0	4.3	4.7	5.0	5.0
North Korea	level	1,009	1,211	1,414	1,672	1,988	1,459
	annual rate (%)		3.7	3.2	3.4	3.5	3.5
Taiwan	level	167,050	212,599	252,485	306,826	374,560	262,704
	annual rate (%)		4.9	3.5	4.0	4.1	4.1
Russia	level	110,281	125,658	140,438	158,470	180,058	142,981
	annual rate (%)		2.6	2.2	2.4	2.6	2.5
U.S.A.	level	912,538	1,098,394	1,385,996	1,726,108	2,134,826	1,451,572
	annual rate (%)		3.8	4.8	4.5	4.3	4.3
Japan	level	533,740	617,860	686,022	803,809	949,012	718,089
	annual rate (%)		3.0	2.1	3.2	3.4	2.9
Rest of World	level	5,121,232	5,382,839	7,029,183	8,778,740	11,011,670	7,464,733
	annual rate (%)		1.0	5.5	4.5	4.6	3.9

China's Growth Acceleration

		2000	2005	2010	2015	2020	20 years average
China	level	306,861	573,253	714,980	934,475	1,208,801	747,674
	annual rate (%)		13.3	4.5	5.5	5.3	7.2
Hongkong	level	239,257	383,352	480,836	597,438	738,363	487,849
	annual rate (%)		9.9	4.6	4.4	4.3	5.8
South Korea (F)	level	202,453	256,252	327,226	417,610	530,617	346,832
	annual rate (%)		4.8	5.0	5.0	4.9	4.9
Mongolia	level	538	747	1,010	1,339	1,768	1,080
	annual rate (%)		6.8	6.2	5.8	5.7	6.1
North Korea	level	1,009	1,235	1,548	1,945	2,449	1,637
	annual rate (%)		4.1	4.6	4.7	4.7	4.5
Taiwan	level	167,050	215,664	265,895	330,738	412,030	278,275
	annual rate (%)		5.2	4.3	4.5	4.5	4.6
Russia	level	110,281	126,418	143,967	165,042	190,461	147,234
	annual rate (%)		2.8	2.6	2.8	2.9	2.8
U.S.A.	level	912,538	1,113,400	1,468,066	1,890,394	2,409,945	1,558,869
	annual rate (%)		4.1	5.7	5.2	5.0	5.0
Japan	level	533,740	622,019	702,927	832,305	991,722	736,543
	annual rate (%)		3.1	2.5	3.4	3.6	3.1
Rest of World	level	5,121,232	5,382,839	7,029,183	8,778,740	11,011,670	7,464,733
	annual rate (%)		1.0	5.5	4.5	4.6	3.9

Japan's Growth Acceleration

		2000	2005	2010	2015	2020	20 years average
China	level	306,861	569,102	702,445	919,146	1,186,510	736,813
	annual rate (%)		13.1	4.3	5.5	5.2	7.1
Hongkong	level	239,257	380,177	469,793	580,784	716,612	477,325
	annual rate (%)		9.7	4.3	4.3	4.3	5.7
South Korea (F)	level	202,453	253,455	317,698	403,583	512,106	337,859
	annual rate (%)		4.6	4.6	4.9	4.9	4.7
Mongolia	level	538	725	934	1,224	1,618	1,008
	annual rate (%)		6.1	5.2	5.6	5.7	5.7
North Korea	level	1,009	1,224	1,511	1,890	2,377	1,602
	annual rate (%)		3.9	4.3	4.6	4.7	4.4
Taiwan	level	167,050	213,206	257,518	318,419	395,748	270,388
	annual rate (%)		5.0	3.8	4.3	4.4	4.4
Russia	level	110,281	125,848	141,969	162,022	186,510	145,326
	annual rate (%)		2.7	2.4	2.7	2.9	2.7
U.S.A.	level	912,538	1,105,315	1,439,812	1,848,156	2,354,121	1,531,988
	annual rate (%)		3.9	5.4	5.1	5.0	4.9
Japan	level	533,740	618,173	689,624	812,555	965,613	723,941
	annual rate (%)		3.0	2.2	3.3	3.5	3.0
Rest of World	level	5,121,232	5,382,839	7,029,183	8,778,740	11,011,670	7,464,733
	annual rate (%)		1.0	5.5	4.5	4.6	3.9

World Recession

		2000	2005	2010	2015	2020	20 years average
China	level	306,861	529,826	592,852	719,396	856,311	601,049
	annual rate (%)		11.5	2.3	3.9	3.5	5.3
Hongkong	level	239,257	361,988	420,590	491,194	575,427	417,691
	annual rate (%)		8.6	3.0	3.2	3.2	4.5
South Korea (F)	level	202,453	240,713	280,069	332,926	397,032	290,639
	annual rate (%)		3.5	3.1	3.5	3.6	3.4
Mongolia	level	538	692	818	994	1,233	855
	annual rate (%)		5.1	3.4	4.0	4.4	4.2
North Korea	level	1,009	1,157	1,279	1,438	1,633	1,303
	annual rate (%)		2.8	2.0	2.4	2.6	2.4
Taiwan	level	167,050	205,332	234,587	275,420	325,213	241,520
	annual rate (%)		4.2	2.7	3.3	3.4	3.4
Russia	level	110,281	122,518	132,428	144,358	158,388	133,595
	annual rate (%)		2.1	1.6	1.7	1.9	1.8
U.S.A.	level	912,538	1,034,891	1,226,170	1,446,332	1,705,097	1,265,006
	annual rate (%)		2.5	3.5	3.4	3.3	3.2
Japan	level	533,740	601,216	643,625	727,976	829,201	667,152
	annual rate (%)		2.4	1.4	2.5	2.6	2.2
Rest of World	level	5,121,232	5,382,839	7,029,183	8,778,740	11,011,670	7,464,733
	annual rate (%)		1.0	5.5	4.5	4.6	3.9

Table 3-2 Imports

2000-2020

(1995 mil. U.S. \$)

Base Line

		2000	2005	2010	2015	2020	20 years average
China	level	242,360	388,390	503,249	670,420	904,357	541,755
	annual rate (%)		9.9	5.3	5.9	6.2	6.8
Hongkong	level	254,025	474,570	524,091	648,382	803,481	540,910
	annual rate (%)		13.3	2.0	4.3	4.4	5.9
South Korea (level	157,513	231,480	309,462	401,957	513,433	322,769
	annual rate (%)		8.0	6.0	5.4	5.0	6.1
Mongolia	level	797	934	1,318	1,464	1,729	1,248
	annual rate (%)		3.2	7.1	2.1	3.4	3.9
North Korea	level	4,625	11,849	16,554	23,086	22,045	15,632
	annual rate (%)		20.7	6.9	6.9	-0.9	8.1
Taiwan	level	131,198	178,800	214,975	268,242	333,920	225,427
	annual rate (%)		6.4	3.8	4.5	4.5	4.8
Russia	level	42,155	42,169	42,219	42,330	42,481	42,271
	annual rate (%)		0.0	0.0	0.1	0.1	0.0
U.S.A.	level	1,389,580	1,585,279	1,934,580	2,359,559	2,876,610	2,029,122
	annual rate (%)		2.7	4.1	4.1	4.0	3.7
Japan	level	392,227	431,050	490,788	558,377	634,847	501,458
	annual rate (%)		1.9	2.6	2.6	2.6	2.4
Rest of World	level	3,859,591	4,196,455	4,864,841	5,639,684	6,537,939	5,019,702
	annual rate (%)		1.7	3.0	3.0	3.0	2.7

China's Growth Acceleration

		2000	2005	2010	2015	2020	20 years average
China	level	242,360	411,922	593,524	819,892	1,119,213	637,382
	annual rate (%)		11.2	7.6	6.7	6.4	8.0
Hongkong	level	254,025	479,808	543,235	674,808	847,025	559,780
	annual rate (%)		13.6	2.5	4.4	4.7	6.3
South Korea (level	157,513	233,634	323,334	430,676	560,292	341,090
	annual rate (%)		8.2	6.7	5.9	5.4	6.6
Mongolia	level	797	950	1,395	1,610	1,957	1,342
	annual rate (%)		3.6	8.0	2.9	4.0	4.6
North Korea	level	4,625	11,860	16,693	23,444	22,707	15,866
	annual rate (%)		20.7	7.1	7.0	-0.6	8.5
Taiwan	level	131,198	181,490	226,791	288,686	366,268	238,887
	annual rate (%)		6.7	4.6	4.9	4.9	5.3
Russia	level						
	annual rate (%)						
U.S.A.	level	1,389,580	1,585,279	1,934,580	2,359,559	2,876,610	2,029,122
	annual rate (%)		2.7	4.1	4.1	4.0	3.7
Japan	level	392,227	444,356	587,984	775,700	1,021,038	644,261
	annual rate (%)		2.5	5.8	5.7	5.7	4.9

Japan's Growth Acceleration

		2000	2005	2010	2015	2020	20 years average
China	level	242,360	389,465	515,466	702,145	965,563	563,000
	annual rate (%)		10.0	5.8	6.4	6.6	7.2
Hongkong	level	254,025	474,982	529,096	658,196	822,516	547,763
	annual rate (%)		13.3	2.2	4.5	4.6	6.1
South Korea (I)	level	157,513	231,925	315,850	418,072	543,610	333,394
	annual rate (%)		8.0	6.4	5.8	5.4	6.4
Mongolia	level	797	937	1,346	1,533	1,856	1,294
	annual rate (%)		3.3	7.5	2.6	3.9	4.3
North Korea	level	4,625	11,854	16,651	23,361	22,589	15,816
	annual rate (%)		20.7	7.0	7.0	-0.7	8.5
Taiwan	level	131,198	179,281	219,472	278,249	352,276	232,095
	annual rate (%)		6.4	4.1	4.9	4.8	5.1
Russia	level	42,155	42,170	42,232	42,359	42,535	42,290
	annual rate (%)		0.0	0.0	0.1	0.1	0.0
U.S.A.	level	1,389,580	1,585,279	1,934,580	2,359,559	2,876,610	2,029,122
	annual rate (%)		2.7	4.1	4.1	4.0	3.7
Japan	level	392,227	444,356	587,984	775,700	1,021,038	644,261
	annual rate (%)		2.5	5.8	5.7	5.7	4.9
Rest of World	level	3,859,591	4,196,455	4,864,841	5,639,684	6,537,939	5,019,702
	annual rate (%)		1.7	3.0	3.0	3.0	2.7

World Recession

		2000	2005	2010	2015	2020	20 years average
China	level	242,360	376,806	472,786	615,064	818,551	505,113
	annual rate (%)		9.2	4.6	5.4	5.9	6.3
Hongkong	level	254,025	447,162	467,062	556,745	656,432	476,285
	annual rate (%)		12.0	0.9	3.6	3.3	4.9
South Korea (I)	level	157,513	223,681	286,114	358,211	444,073	293,918
	annual rate (%)		7.3	5.0	4.6	4.4	5.3
Mongolia	level	797	917	1,272	1,382	1,601	1,194
	annual rate (%)		2.9	6.8	1.7	3.0	3.6
North Korea	level	4,625	11,810	16,388	22,761	21,492	15,415
	annual rate (%)		20.6	6.8	6.8	-1.1	8.3
Taiwan	level	131,198	172,180	199,606	241,245	291,347	207,115
	annual rate (%)		5.6	3.0	3.9	3.8	4.1
Russia	level	42,155	42,142	42,153	42,215	42,305	42,194
	annual rate (%)		-0.0	0.0	0.0	0.0	0.0
U.S.A.	level	1,389,580	1,524,158	1,771,214	2,057,620	2,389,643	1,826,443
	annual rate (%)		1.9	3.1	3.0	3.0	2.7
Japan	level	392,227	405,018	426,879	449,856	474,004	429,597
	annual rate (%)		0.6	1.1	1.1	1.1	1.0

Table 3-3 Population

Base Line

		2000	2005	2010	2015	2020	20 years average
China	level	1,273	1,334	1,375	1,396	1,418	1,359
	annual rate (%)		0.9	0.6	0.3	0.3	0.5
Hongkong	level	6,661,255	6,956,310	7,792,094	8,115,304	8,530,366	7,611,066
	annual rate (%)		0.9	2.3	0.8	1.0	1.2
South Korea (F)	level	47,179	48,888	50,633	52,624	54,822	50,829
	annual rate (%)		0.7	0.7	0.8	0.8	0.8
Mongolia	level	2,411,402	2,531,252	2,647,720	2,759,158	2,839,834	2,637,873
	annual rate (%)		1.0	0.9	0.8	0.6	0.8
North Korea	level	22,311,550	22,764,860	24,437,450	25,914,390	23,579,570	23,801,564
	annual rate (%)		0.4	1.4	1.2	-1.9	0.3
Taiwan	level	21,518	21,526	21,594	21,594	21,649	21,576
	annual rate (%)		0.0	0.1	0.0	0.1	0.0
Russia	level	146	144	142	140	138	142
	annual rate (%)		-0.2	-0.3	-0.3	-0.3	-0.3

China's Growth Acceleration

		2000	2005	2010	2015	2020	20 years average
China	level	1,273	1,334	1,379	1,406	1,428	1,364
	annual rate (%)		0.9	0.7	0.4	0.3	0.6
Hongkong	level	6,661,255	6,956,856	7,850,009	8,278,725	8,674,723	7,684,314
	annual rate (%)		0.9	2.4	1.1	0.9	1.3
South Korea (F)	level	47,179	48,888	50,643	52,728	55,123	50,912
	annual rate (%)		0.7	0.7	0.8	0.9	0.8
Mongolia	level	2,411,402	2,531,257	2,648,044	2,761,114	2,845,292	2,639,422
	annual rate (%)		1.0	0.9	0.8	0.6	0.8
North Korea	level	22,311,550	22,764,860	24,437,090	25,912,050	23,590,310	23,803,172
	annual rate (%)		0.4	1.4	1.2	-1.9	0.3
Taiwan	level	21,518	21,526	21,597	21,597	21,651	21,578
	annual rate (%)		0.0	0.1	0.0	0.0	0.0

Japan's Growth Acceleration

		2000	2005	2010	2015	2020	20 years average
China	level	1,273	1,334	1,375	1,398	1,421	1,360
	annual rate (%)		0.9	0.6	0.3	0.3	0.6
Hongkong	level	6,661,255	6,956,315	7,799,982	8,163,422	8,597,186	7,635,632
	annual rate (%)		0.9	2.3	0.9	1.0	1.3
South Korea (F)	level	47,179	48,888	50,635	52,667	54,973	50,868
	annual rate (%)		0.7	0.7	0.8	0.9	0.8
Mongolia	level	2,411,402	2,531,252	2,647,778	2,759,782	2,842,074	2,638,458
	annual rate (%)		1.0	0.9	0.8	0.6	0.8
North Korea	level	22,311,550	22,764,860	24,437,330	25,912,410	23,586,120	23,802,454
	annual rate (%)		0.4	1.4	1.2	-1.9	0.3
Taiwan	level	21,518	21,526	21,595	21,595	21,650	21,577
	annual rate (%)		0.0	0.1	0.0	0.1	0.0

World Recession

		2000	2005	2010	2015	2020	20 years average
China	level	1,273	1,333	1,373	1,393	1,417	1,358
	annual rate (%)		0.9	0.6	0.3	0.3	0.5
Hongkong	level	6,661,255	6,953,277	7,551,975	7,711,083	8,047,761	7,385,070
	annual rate (%)		0.9	1.7	0.4	0.9	1.0
South Korea (F)	level	47,179	48,888	50,592	52,410	54,318	50,677
	annual rate (%)		0.7	0.7	0.7	0.7	0.7
Mongolia	level	2,411,402	2,531,242	2,647,364	2,757,745	2,836,540	2,636,859
	annual rate (%)		1.0	0.9	0.8	0.6	0.8
North Korea	level	22,311,550	22,764,830	24,438,970	25,914,300	23,561,180	23,798,166
	annual rate (%)		0.4	1.4	1.2	-1.9	0.3
Taiwan	level	21,518	21,526	21,590	21,589	21,644	21,573
	annual rate (%)		0.0	0.1	-0.0	0.1	0.0

Note: China: million, Hongkong: one person, S.Korea: million, Mongolia: one person, N. Korea: one person, Taiwan: million,

Table-4
Output: North East Asia in 2010

4 Scenarios

(1995
100 mill \$)

North East China	Base Line	China		Japan		World		South Korea	Base Line	China		Japan		World	
		Acceleration	Recession	Acceleration	Recession	Acceleration	Recession			Acceleration	Recession	Acceleration	Recession		
110 Agriculture	18,996	18,809	18,966	19,078				110 Agriculture	13,624	14,185	13,887	12,693			
120 Forestry	1,318	1,303	1,315	1,324				120 Forestry	373	388	380	347			
130 Fishing	2,200	2,177	2,195	2,209				130 Fishing	7,412	7,768	7,579	6,826			
210 Coal	443	439	442	445				210 Coal	13	13	13	13			
220 Crude oil & gas	906	906	906	906				220 Crude oil & gas	0	0	0	0			
230 Metal mining	6	6	6	6				230 Metal mining	0	0	0	0			
290 Non-metal mining	680	680	680	681				290 Non-metal mining	320	340	329	287			
301 Food, tobacco	11,437	11,549	11,646	11,487				301 Food, tobacco	57,511	60,025	58,686	53,336			
302 Textiles, apparels	3,978	3,944	3,979	3,997				302 Textiles, apparels	66,047	69,839	67,847	59,920			
303 Wood products	577	570	576	579				303 Wood products	430	452	441	394			
304 Furniture	568	561	566	570				304 Furniture	8,106	8,435	8,257	7,544			
305 Pulp, paper products	1,021	1,077	1,082	1,024				305 Pulp, paper products	3,850	4,062	3,950	3,509			
306 Printing, publishing	155	164	165	155				306 Printing, publishing	5,234	5,457	5,338	4,862			
307 Chemicals	3,495	3,463	3,492	3,511				307 Chemicals	31,086	32,776	31,886	28,346			
308 Petroleum, coal produc	2,122	2,117	2,121	2,123				308 Petroleum, coal produc	14,720	15,442	15,060	13,536			
309 Rubber products	168	167	168	169				309 Rubber products	5,944	6,297	6,112	5,376			
310 Leather products	330	327	330	331				310 Leather products	7,989	8,420	8,193	7,289			
311 Non-metallic products	948	941	947	952				311 Non-metallic products	2,946	3,111	3,024	2,679			
312 Iron & steel	705	705	705	705				312 Iron & steel	14,100	14,985	14,522	12,681			
313 Non-ferrous metals	107	106	107	107				313 Non-ferrous metals	1,942	2,062	2,000	1,749			
314 Metal products	952	942	950	956				314 Metal products	19,603	20,601	20,070	17,956			
315 General machinery	11,573	11,515	11,570	11,602				315 General machinery	63,660	66,340	64,885	59,074			
316 Electrical machinery	7,225	7,152	7,215	7,258				316 Electrical machinery	159,820	168,636	163,982	145,460			
317 Motor vehicles, aircraft	4,450	4,422	4,444	4,461				317 Motor vehicles, aircraft	96,490	101,009	98,591	88,951			
319 Other transport	990	985	990	993				319 Other transport	25,363	26,641	25,959	23,245			
320 Precision instruments	136	135	136	136				320 Precision instruments	10,871	11,337	11,085	10,076			
321 Other manufacturing	898	891	897	901				321 Other manufacturing	24,479	25,892	25,150	22,195			
400 Construction	40,544	40,311	40,505	40,648				400 Construction	255,037	264,439	259,249	238,485			
500 Electricity, gas	1,643	1,622	1,639	1,652				500 Electricity, gas	11,809	12,305	12,040	10,979			
600 Wholesale & retail trad	21,243	22,228	22,381	21,322				600 Wholesale & retail trad	104,873	109,155	106,853	97,645			
700 Transportation	3,206	3,176	3,207	3,222				700 Transportation	26,618	27,728	27,134	24,762			
800 Communication	121	120	121	122				800 Communication	9,058	9,438	9,235	8,421			
910 Finance, real estate	4,738	4,889	4,931	4,760				910 Finance, real estate	115,411	120,196	117,632	107,376			
920 Other services	29,969	36,023	36,112	30,015				920 Other services	188,370	192,765	190,418	181,029			

Other China	Base Line	China		Japan		World		North Korea	Base Line	China		Japan		World	
		Acceleration	Recession	Acceleration	Recession	Acceleration	Recession			Acceleration	Recession	Acceleration	Recession		
110 Agriculture	165,072	191,346	169,224	155,557				110 Agriculture	1,641	1,649	1,646	1,632			
120 Forestry	13,425	15,424	13,778	12,586				120 Forestry	26	27	27	26			
130 Fishing	20,083	23,095	20,604	18,842				130 Fishing	604	607	606	601			
210 Coal	7,645	8,390	7,866	7,046				210 Coal	18	18	18	18			
220 Crude oil & gas	6,708	7,075	6,958	5,969				220 Crude oil & gas	0	0	0	0			
230 Metal mining	248	261	257	221				230 Metal mining	0	0	0	0			
290 Non-metal mining	4,987	5,359	5,182	4,423				290 Non-metal mining	13	14	14	13			
301 Food, tobacco	163,553	187,289	167,911	152,505				301 Food, tobacco	1,924	1,934	1,930	1,914			
302 Textiles, apparels	259,592	279,291	269,238	231,738				302 Textiles, apparels	1,011	1,018	1,016	1,004			
303 Wood products	3,959	4,200	4,124	3,473				303 Wood products	12	12	12	12			
304 Furniture	15,359	16,981	15,887	13,916				304 Furniture	240	242	241	239			
305 Pulp, paper products	15,796	18,574	16,089	15,053				305 Pulp, paper products	59	60	60	59			
306 Printing, publishing	4,559	5,375	4,641	4,354				306 Printing, publishing	187	188	188	187			
307 Chemicals	65,577	71,760	67,749	59,528				307 Chemicals	533	536	535	530			
308 Petroleum, coal produc	4,579	5,170	4,713	4,236				308 Petroleum, coal produc	198	199	199	197			
309 Rubber products	6,318	6,956	6,515	5,778				309 Rubber products	33	33	33	33			
310 Leather products	23,104	25,087	23,929	20,758				310 Leather products	145	146	146	144			
311 Non-metallic products	20,610	22,253	21,314	18,604				311 Non-metallic products	41	42	42	41			
312 Iron & steel	17,507	18,596	18,229	15,373				312 Iron & steel	13	13	13	13			
313 Non-ferrous metals	8,100	8,602	8,435	7,111				313 Non-ferrous metals	20	21	21	20			
314 Metal products	36,641	40,284	37,900	33,177				314 Metal products	306	308	307	304			
315 General machinery	122,793	152,001	126,215	117,064				315 General machinery	1,704	1,715	1,712	1,690			
316 Electrical machinery	175,400	194,281	181,353	159,279				316 Electrical machinery	1,692	1,703	1,700	1,678			
317 Motor vehicles, aircraft	46,666	56,062	48,031	43,957				317 Motor vehicles, aircraft	558	562	560	554			
319 Other transport	14,046	16,849	14,465	13,203				319 Other transport	277	279	278	274			
320 Precision instruments	19,550	21,474	20,317	17,426				320 Precision instruments	533	537	536	529			
321 Other manufacturing	78,113	83,122	81,250	68,877				321 Other manufacturing	249	251	250	248			
400 Construction	349,700	453,496	359,210	338,152				400 Construction	7,355	7,405	7,392	7,296			
500 Electricity, gas	10,801	12,307	11,094	10,070				500 Electricity, gas	347	349	348	345			
600 Wholesale & retail trad	155,704	190,828	158,570	149,878				600 Wholesale & retail trad	3,674	3,694	3,687	3,654			
700 Transportation	25,831	30,295	26,447	24,488				700 Transportation	928	933	931	924			
800 Communication	1,087	1,308	1,113	1,036				800 Communication	137	138	138	137			
910 Finance, real estate	19,027	23,411	19,347	18,296				910 Finance, real estate	2,903	2,918	2,913	2,887			
920 Other services	242,227	322,615	243,928	238,370				920 Other services	5,506	5,519	5,514	5,493			

Table-4
Output: North East Asia in 2010

4 Scenarios

(1995
100 mill \$)

	Base Line	China Acceleration	Japan Acceleration	World Recession		Base Line	China Acceleration	Japan Acceleration	World Recession
Russian Far East					Mongolia				
110 Agriculture	1,746	1,754	1,754	1,705	110 Agriculture	263	268	264	259
120 Forestry	695	707	703	645	120 Forestry	0	0	0	0
130 Fishing	980	988	987	942	130 Fishing	0	0	0	0
210 Coal	394	401	399	366	210 Coal	8	8	8	8
220 Crude oil & gas	368	374	373	342	220 Crude oil & gas	0	0	0	0
230 Metal mining	111	112	112	104	230 Metal mining	40	44	42	38
290 Non-metal mining	0	0	0	0	290 Non-metal mining	0	0	0	0
301 Food, tobacco	3,019	3,055	3,047	2,860	301 Food, tobacco	138	139	138	137
302 Textiles, apparels	110	110	110	107	302 Textiles, apparels	71	75	73	70
303 Wood products	934	950	945	869	303 Wood products	20	21	20	20
304 Furniture	68	69	69	66	304 Furniture	0	0	0	0
305 Pulp, paper products	84	85	84	81	305 Pulp, paper products	0	0	0	0
306 Printing, publishing	68	69	68	65	306 Printing, publishing	2	2	2	2
307 Chemicals	323	325	324	313	307 Chemicals	6	6	6	6
308 Petroleum, coal produc	217	221	219	201	308 Petroleum, coal produc	0	0	0	0
309 Rubber products	26	26	26	25	309 Rubber products	0	0	0	0
310 Leather products	135	136	136	132	310 Leather products	17	17	17	17
311 Non-metallic products	92	92	92	90	311 Non-metallic products	13	14	13	13
312 Iron & steel	94	95	95	88	312 Iron & steel	0	0	0	0
313 Non-ferrous metals	690	701	698	643	313 Non-ferrous metals	2	2	2	2
314 Metal products	96	98	98	90	314 Metal products	2	2	2	2
315 General machinery	680	695	690	636	315 General machinery	0	0	0	0
316 Electrical machinery	77	78	78	72	316 Electrical machinery	1	1	1	1
317 Motor vehicles, aircraft	227	232	230	212	317 Motor vehicles, aircraft	2	2	2	2
319 Other transport	62	63	63	58	319 Other transport	0	0	0	0
320 Precision instruments	46	47	47	43	320 Precision instruments	2	2	2	2
321 Other manufacturing	659	669	666	617	321 Other manufacturing	52	55	53	49
400 Construction	10,548	10,857	10,753	9,620	400 Construction	120	125	122	117
500 Electricity, gas	53	53	53	51	500 Electricity, gas	88	88	88	88
600 Wholesale & retail trad	4,004	4,035	4,032	3,854	600 Wholesale & retail trad	0	0	0	0
700 Transportation	779	784	784	751	700 Transportation	56	56	56	55
800 Communication	101	102	102	98	800 Communication	29	29	29	29
910 Finance, real estate	1,855	1,857	1,857	1,846	910 Finance, real estate	0	0	0	0
920 Other services	3,239	3,252	3,249	3,183	920 Other services	210	213	211	209
Other Russia					Total				
110 Agriculture	23,171	23,308	23,229	22,822	North East China	177,847	184,421	185,493	178,406
120 Forestry	1,320	1,337	1,328	1,280	Other China	2,124,370	2,519,419	2,181,884	1,990,342
130 Fishing	702	707	704	690	South Korea	1,353,109	1,410,538	1,379,786	1,257,044
210 Coal	624	632	628	607	North Korea	32,884	33,067	33,011	32,693
220 Crude oil & gas	13,391	13,593	13,479	12,924	Russian Far East	32,580	33,092	32,943	30,775
230 Metal mining	4,013	4,072	4,039	3,877	Other Russia	356,905	359,200	357,924	351,303
290 Non-metal mining	0	0	0	0	Mongolia	1,142	1,169	1,151	1,125
301 Food, tobacco	27,494	27,673	27,571	27,040					
302 Textiles, apparels	4,067	4,095	4,079	3,997					
303 Wood products	1,724	1,743	1,733	1,679					
304 Furniture	1,415	1,433	1,423	1,375					
305 Pulp, paper products	1,632	1,652	1,641	1,586					
306 Printing, publishing	1,619	1,639	1,628	1,573					
307 Chemicals	8,502	8,614	8,550	8,241					
308 Petroleum, coal produc	6,635	6,734	6,679	6,405					
309 Rubber products	742	752	747	720					
310 Leather products	1,372	1,381	1,376	1,348					
311 Non-metallic products	1,023	1,031	1,026	1,003					
312 Iron & steel	7,642	7,759	7,693	7,370					
313 Non-ferrous metals	8,322	8,442	8,374	8,043					
314 Metal products	1,540	1,555	1,547	1,505					
315 General machinery	11,825	11,937	11,876	11,557					
316 Electrical machinery	2,027	2,047	2,036	1,981					
317 Motor vehicles, aircraft	5,280	5,330	5,303	5,160					
319 Other transport	931	940	935	911					
320 Precision instruments	788	796	792	771					
321 Other manufacturing	2,395	2,413	2,402	2,354					
400 Construction	36,629	36,941	36,784	35,848					
500 Electricity, gas	645	650	647	636					
600 Wholesale & retail trad	47,571	47,879	47,704	46,781					
700 Transportation	10,155	10,221	10,183	9,985					
800 Communication	1,320	1,328	1,324	1,297					
910 Finance, real estate	45,253	45,279	45,264	45,186					
920 Other services	75,134	75,283	75,198	74,752					

Table 5-1 Medium Term Simulation
GDP

Base Line

		2002	2003	2004	2005	2006	2007	2008	2009	2010
Japan	GDP	528465	542503	552967	556522	555105	547990	543975	550879	568448
China	V_C	6032	6596	7127	7561	7667	7600	7809	8450	9030
Hongkong	V_H	1080	1537	1724	1635	1364	1191	1374	1469	1576
S.Korea	V_K	570610	620964	671144	720201	759940	788958	825905	869445	917401
Mongolia	V_M	547760	591382	713455	812826	913306	929596	924295	867373	854320
N. Korea	V_NK	1824	1890	1941	1990	2038	2106	2181	2277	2382
Russia FE	V_RF	31.76	32.39	35.23	33.59	34.40	34.75	35.52	36.28	37.15
Taiwan	V_T	9938510	10650890	11612830	12352100	12731050	12900170	13118430	13655880	14270030
China NE	VDF_NE	5275	5647	6151	6634	7064	7439	7880	8455	9089
Russia	VD_RU	457.9	460.3	463.2	466.6	469.6	472.5	475.4	479.3	483.5

China's Acceleration

		2002	2003	2004	2005	2006	2007	2008	2009	2010
Japan	GDP	528499	542660	553341	557197	556185	549510	545961	553275	571322
China	V_C	6117	6809	7491	8107	8423	8528	8907	9752	10583
Hongkong	V_H	1082	1545	1742	1664	1398	1219	1401	1520	1645
S.Korea	V_K	570950	622403	674359	725861	768655	801061	841384	888574	940871
Mongolia	V_M	547778	591464	713753	813680	915159	932879	929232	873914	862356
N. Korea	V_NK	1824	1890	1941	1991	2039	2108	2183	2280	2386
Russia FE	V_RF	31.77	32.44	35.32	33.74	34.62	35.05	35.90	36.74	37.70
Taiwan	V_T	9947271	10686950	11690900	12484620	12926870	13161020	13438080	14036460	14727900
China NE	VDF_NE	5281	5664	6184	6686	7136	7527	7980	8575	9240
Russia	VD_RU	457.9	460.5	463.6	467.2	470.5	473.8	477.0	481.2	485.7

Japan's Acceleration

		2002	2003	2004	2005	2006	2007	2008	2009	2010
Japan	GDP	528464	542502	565244	590224	610328	623062	638701	664059	697359
China	V_C	6032	6596	7157	7641	7776	7725	7937	8581	9189
Hongkong	V_H	1080	1537	1727	1645	1378	1201	1380	1482	1592
S.Korea	V_K	570610	620964	672485	724695	767690	799424	838356	883390	933374
Mongolia	V_M	547760	591382	713500	812996	913900	931039	926796	870856	858547
N. Korea	V_NK	1824	1890	1941	1991	2040	2110	2186	2284	2391
Russia FE	V_RF	31.76	32.39	35.26	33.70	34.58	34.97	35.77	36.55	37.45
Taiwan	V_T	9938510	10650890	11634530	12423430	12851190	13054860	13288490	13833330	14468730
China NE	VDF_NE	5275	5647	6153	6641	7074	7450	7890	8466	9103
Russia	VD_RU	457.9	460.3	463.3	467.1	470.3	473.5	476.5	480.4	484.7

World Recession

		2002	2003	2004	2005	2006	2007	2008	2009	2010
Japan	GDP	528092	541447	550995	553544	550973	542839	537770	543755	560248
China	V_C	5983	6483	6955	7323	7386	7300	7493	8052	8515
Hongkong	V_H	1051	1474	1623	1508	1251	1114	1278	1304	1362
S.Korea	V_K	567640	613266	657577	699933	732771	755026	785418	821158	859756
Mongolia	V_M	547732	591291	713112	811963	911576	926778	920374	862558	848782
N. Korea	V_NK	1824	1889	1940	1988	2035	2102	2175	2269	2373
Russia FE	V_RF	31.62	32.07	34.70	32.86	33.47	33.60	34.17	34.69	35.29
Taiwan	V_T	9886929	10516780	11380620	12018700	12307580	12400070	12555590	13001130	13484390
China NE	VDF_NE	5272	5637	6135	6612	7038	7412	7853	8423	9046
Russia	VD_RU	457.3	459.0	461.1	463.6	465.8	467.8	469.9	472.7	475.9

Table 5-2 Exports

Base Line		1995mil us\$								
		2002	2003	2004	2005	2006	2007	2008	2009	2010
China	E\$_C	412492	493136	563814	612879	615408	599985	604179	658966	705482
Hongkong	E\$_H	273447	337697	365892	385707	402018	417406	432787	450848	470109
S. Korea	E\$_K	214650	235101	251410	266977	275495	282058	289264	304111	318694
Mongolia	E\$_M	660.8	700.7	744.9	796.1	824.5	847	861.1	898.8	939.5
N. Korea	E\$_NK	1205.4	1255.7	1308.6	1377.8	1398.2	1422.2	1427.5	1479.8	1525.7
Taiwan	E\$_T	179061	195005	211373	221078	226997	230606	235708	246975	258027
Russia	E\$_R	118825	121815	124916	128285	130912	133384	135716	138906	142201
China's Acc.		2002	2003	2004	2005	2006	2007	2008	2009	2010
China	E\$_C	412726	494229	566363	617451	622211	608664	613759	670069	720724
Hongkong	E\$_H	273704	338684	367879	388952	406792	423808	440794	460582	481794
S. Korea	E\$_K	214870	235963	253181	269913	279824	287837	296388	312742	329225
Mongolia	E\$_M	662.6	707.6	758.7	818.7	857.8	891.8	917.3	967.2	1021.7
N. Korea	E\$_NK	1206.3	1259.1	1315.8	1390	1416.2	1446.6	1458	1517.5	1571.4
Taiwan	E\$_T	179252	195754	212910	223623	230746	235595	241833	254375	267084
Russia	E\$_R	118871	121992	125277	128881	131791	134569	137199	140716	144385
Japan's Acc.		2002	2003	2004	2005	2006	2007	2008	2009	2010
China	E\$_C	412492	493136	566656	621618	628935	616618	622224	677905	727757
Hongkong	E\$_H	273447	337697	366186	386635	403502	419308	434979	453256	472870
S. Korea	E\$_K	214650	235101	252277	269613	279528	287030	294813	310084	325576
Mongolia	E\$_M	660.8	700.7	749.2	809.3	844.9	872.3	889.9	930.2	975.5
N. Korea	E\$_NK	118825	121815	125065	128740	131610	134252	136700	139980	143433
Taiwan	E\$_T	179061	195005	211846	222542	229283	233460	238890	250389	261993
Russia	E\$_R	273447	337697	366186	386635	403502	419308	434979	453256	472870
Wld Rec.		2002	2003	2004	2005	2006	2007	2008	2009	2010
China	E\$_C	407751	480419	542765	582614	577886	557794	558595	603708	635010
Hongkong	E\$_H	269681	329770	353499	368559	379929	390237	400404	412812	425919
S. Korea	E\$_K	212730	230719	244352	256997	262708	266630	271310	282782	293213
Mongolia	E\$_M	658	693.5	732.3	777.3	799.6	816.2	825.2	855.8	887.7
N. Korea	E\$_NK	1199.1	1240.9	1284.3	1342.7	1352.6	1365.8	1361.1	1400.3	1430.9
Taiwan	E\$_T	177936	192299	206952	214765	218942	221052	224784	233936	242168
Russia	E\$_R	118219	120519	122873	125438	127238	128866	130343	132579	134824

Table 5-3 Imports

Base Line		1995mil us\$								
		2002	2003	2004	2005	2006	2007	2008	2009	2010
China	M\$_C	312529	342026	374821	407448	432077	446806	460955	485128	515433
Hongkong	M\$_H	284948	371505	443828	481990	474253	440538	438156	487208	527613
S. Korea	M\$_K	189008	206694	225302	243899	260051	272639	286205	301801	319181
Mongolia	M\$_M	987.3	993.3	930.1	984.5	1120.1	1184.9	1310.3	1332.3	1356.9
N. Korea	M\$_NK	10084	10868	11480	12081	12639	13462	14351	15516	16784
Taiwan	M\$_T	143838	156254	172329	185526	192000	194768	199090	208395	219216
Russia	M\$_R	42196	42187	42185	42190	42193	42197	42202	42215	42231
China's Acc.										
		2002	2003	2004	2005	2006	2007	2008	2009	2010
China	M\$_C	314360	349015	388820	430220	465530	491593	516949	553113	596977
Hongkong	M\$_H	285208	372717	446617	486926	481519	449546	447700	497892	542728
S. Korea	M\$_K	189097	207099	226269	245681	262884	276685	291510	308451	327383
Mongolia	M\$_M	988.4	997.4	938.4	998.1	1140.2	1212.3	1345.3	1375.8	1409.8
N. Korea	M\$_NK	10085	10870	11483	12088	12652	13482	14380	15555	16835
Taiwan	M\$_T	143989	156876	173674	187810	195374	199267	204612	214977	227140
Russia	M\$_R	42196	42189	42188	42195	42201	42207	42214	42230	42250
Japan's Acc.										
		2002	2003	2004	2005	2006	2007	2008	2009	2010
China	M\$_C	312529	342026	375474	409716	436125	452389	467649	492611	524074
Hongkong	M\$_H	284948	371505	444124	483209	476696	443745	440985	489458	530998
S. Korea	M\$_K	189008	206694	225653	245185	262479	276131	290546	306795	324907
Mongolia	M\$_M	987.3	993.3	932.7	992.5	1132.3	1200.1	1327.9	1352.3	1380.4
N. Korea	M\$_NK	10084	10868	11484	12095	12664	13503	14416	15603	16889
Taiwan	M\$_T	143838	156254	172703	186756	194070	197434	202020	211460	222662
Russia	M\$_R	42196	42187	42186	42194	42199	42205	42210	42224	42242
Wld Rec										
		2002	2003	2004	2005	2006	2007	2008	2009	2010
China	M\$_C	311426	338622	368519	397744	419085	431141	443142	464042	489467
Hongkong	M\$_H	281137	360362	425348	455501	442339	406867	404299	445963	472351
S. Korea	M\$_K	188230	204437	221050	237276	250888	260920	271979	284758	298816
Mongolia	M\$_M	985.7	989	922.6	973.2	1105	1165.8	1287.3	1304.4	1322.9
N. Korea	M\$_NK	10082	10862	11467	12057	12600	13407	14277	15423	16671
Taiwan	M\$_T	142949	153944	168328	179782	184703	186129	189341	197047	205594
Russia	M\$_R	42191	42177	42168	42166	42162	42159	42157	42162	42171

**Table 6 Comparison of Scenarios in 7th Year
GDP, Exports, and Imports**

			Base Line	China Acc.	Jpn Acc.	Wld Rec.
			2008	2008	2010	2008
China	GDP	V_C	7,809	8,907	9,189	7,493
	Exports	E\$	604,179	613,759	727,757	558,595
	Imports	M\$	460,955	516,949	524,074	443,142
Hongkong	GDP	V_H	1,374	1,401	1,592	1,278
	Exports	E\$	432,787	440,794	472,870	400,404
	Imports	M\$	438,156	447,700	530,998	404,299
S.Korea	GDP	V_K	826	841	933	785
	Exports	E\$	289,264	296,388	325,576	271,310
	Imports	M\$	286,205	291,510	324,907	271,979
Mongolia	GDP	V_M	924	929	859	920
	Exports m\$	E\$	861	917	976	825
	Imports m\$	M\$	1,310	1,345	1,380	1,287
N. Korea	GDP	V_NK	2,181	2,183	2,391	2,175
	Exports m\$	E\$	1,428	1,458	143,433	1,361
	Imports m\$	M\$	14,351	14,380	16,889	14,277
Taiwan	GDP	V_T	13,118	13,438	14,469	12,556
	Exports	E\$	235,708	241,833	261,993	224,784
	Imports	M\$	199,090	204,612	222,662	189,341
Russia	GDP	VD_RU	475	477	485	470
	Exports	E\$	135,716	137,199	472,870	130,343
	Imports	M\$	42,202	42,214	42,242	42,157
China NE	GDP	VDF_NE	7,880	7,980	9,103	7,853
	Exports	ED_NE	1,462	1,653	1,685	1,404
	Imports	ID_NE	2,962	2,946	3,477	2,969
Russia FE	GDP	V_RF	35.5	35.9	37.5	34.2
	Exports	E_RF	36.0	36.5	38.7	34.2
	Imports	M_RF	27.7	28.1	29.9	26.2

Note: exports and imports: 1995 bil us\$, except for China NE and Russia FE, using local currency.

Table 7-1 Japan Acceleration Sc. vs. Base Line Sc.

			2003	2004	2005	2006	2007	2008	2009	2010
Nominal GDP, bil	GDP_N	Japan acc.	514,062	518,186	536,962	557,220	585,160	609,659	634,755	667,525
		Baseline	514,062	516,027	524,575	526,976	532,297	528,503	522,040	521,358
		% Deviation	0.00	0.42	2.36	5.74	9.93	15.36	21.59	28.04
GDP, real(90p.), bil.	GDP	Japan acc.	542,502	565,244	590,224	610,328	623,062	638,701	664,059	697,359
		Baseline	542,503	552,967	556,522	555,105	547,990	543,975	550,879	568,448
		% Deviation	0.00	2.22	6.06	9.95	13.70	17.41	20.55	22.68
Priv. consumption, real	CX82	Japan acc.	324,682	331,825	347,092	353,761	359,470	360,333	370,022	380,668
		Baseline	324,682	331,826	339,902	339,204	339,252	335,550	340,849	347,277
		% Deviation	0.00	0.00	2.12	4.29	5.96	7.39	8.56	9.62
Priv. residential investment, real	IH	Japan acc.	25,256	24,863	28,996	30,556	31,997	29,133	30,511	35,455
		Baseline	25,256	24,863	25,099	21,284	18,358	12,758	13,202	17,905
		% Deviation	0.00	0.00	15.52	43.56	74.29	128.34	131.11	98.02
Business investment, real	IPXSUM	Japan acc.	102,648,100	109,338,100	115,847,000	119,390,600	116,358,500	118,607,500	122,008,900	126,977,100
		Baseline	102,648,300	101,085,800	101,074,600	101,829,500	96,358,890	93,625,650	91,820,690	92,118,040
		% Deviation	0.00	8.16	14.62	17.25	20.76	26.68	32.88	37.84
Government investment, real	IG	Japan acc.	33218.40	38201.00	43931.00	47007.00	50297.00	53818.00	57585.00	61616.00
		Baseline	33218.40	33218.40	33218.40	33218.40	33218.40	33218.40	33218.40	33218.40
		% Deviation	0.00	15.00	32.25	41.51	51.41	62.01	73.35	85.49
Government consumption, real	CG	Japan acc.	48,472	49,927	51,424	52,967	54,556	56,193	57,879	59,615
		Baseline	48,472	49,200	49,937	50,687	51,447	52,219	53,002	53,797
		% Deviation	0.00	1.48	2.98	4.50	6.04	7.61	9.20	10.81
Exports, G&S, real	E82	Japan acc.	82,167,040	89,835,840	94,636,320	97,871,620	100,797,200	105,644,300	111,691,800	118,163,700
		Baseline	82,167,040	89,808,450	94,536,820	97,686,480	100,538,200	105,340,400	111,356,000	117,758,600
		% Deviation	0.00	0.03	0.11	0.19	0.26	0.29	0.30	0.34
Imports, G&S, real	M82	Japan acc.	78,353,210	81,861,470	89,730,390	90,852,220	92,771,570	90,932,580	94,186,520	96,773,760
		Baseline	78,353,280	80,368,980	85,302,730	84,293,950	84,845,500	82,082,690	84,604,050	85,829,790
		% Deviation	0.00	1.86	5.19	7.78	9.34	10.78	11.33	12.75
Current balance, M\$	BLCURNT	Japan acc.	129,929	196,918	209,620	194,294	190,510	205,592	257,004	303,772
		Baseline	129,929	205,768	242,019	264,010	306,582	366,709	492,191	593,890
		% Deviation	0.00	-4.30	-13.39	-26.41	-37.86	-43.94	-47.78	-48.85
Rate of utilization of GDP, %	ROUSP	Japan acc.	92.0	93.7	95.8	96.8	96.3	96.3	97.9	100.6
		Baseline	92.0	91.7	90.4	88.4	85.8	83.7	83.7	85.4
		% Deviation	0.00	2.22	6.02	9.40	12.28	14.99	16.98	17.75
Unemployment rate, %	URATE	Japan acc.	4.74	4.67	4.48	4.25	4.10	4.06	4.00	3.82
		Baseline	4.74	4.67	4.66	4.76	4.94	5.22	5.47	5.57
		% Deviation	0.00	0.00	-3.88	-10.54	-16.95	-22.22	-26.93	-31.36
GDP deflator	P	Japan acc.	94.8	92.7	91.0	91.3	93.9	95.5	95.6	95.7
		Baseline	94.8	94.3	94.3	94.9	97.1	97.2	94.8	91.7
		% Deviation	0.00	-1.74	-3.48	-3.83	-3.31	-1.75	0.87	4.37
Wage rate (¥1000)	W	Japan acc.	5,608	5,602	5,685	5,833	6,043	6,206	6,332	6,461
		Baseline	5,608	5,624	5,683	5,731	5,793	5,781	5,717	5,655
		% Deviation	0.00	-0.39	0.03	1.76	4.32	7.36	10.75	14.26
Priv. consumption deflator	PC	Japan acc.	101.4	98.9	99.4	100.7	104.3	105.5	105.6	105.3
		Baseline	101.4	99.9	100.7	101.3	103.4	102.7	100.6	98.0
		% Deviation	0.00	-1.02	-1.35	-0.54	0.91	2.77	4.97	7.49
Exchange rate, ¥/\$	EXR	Japan acc.	112.7	105.0	98.9	104.6	108.1	115.4	110.5	108.3
		Baseline	112.7	106.5	100.6	102.5	99.7	100.1	89.0	83.9
		% Deviation	0.00	-1.38	-1.75	2.13	8.45	15.22	24.19	29.03
Stock price (TOPIX)	STOCKPR	Japan acc.	1,197	1,542	1,696	1,604	1,849	2,068	2,024	2,041
		Baseline	1,197	1,397	1,277	1,036	1,205	1,444	1,463	1,567
		% Deviation	0.00	10.39	32.80	54.83	53.48	43.22	38.41	30.25
Long-term interest rate, %	INTGB	Japan acc.	1.11	1.34	2.08	1.90	2.45	2.47	3.03	3.74
		Baseline	1.11	1.19	1.68	1.29	1.87	1.68	1.93	2.43
		% Deviation	0.00	13.09	23.90	46.73	31.09	47.48	57.08	54.32
Government debt ratio, net	GGFDNRA	Japan acc.	0.560	0.692	0.832	0.937	1.028	1.104	1.185	1.137
		Baseline	0.560	0.688	0.836	0.968	1.095	1.217	1.347	1.317
		% Deviation	0.00	0.60	-0.41	-3.13	-6.11	-9.27	-12.02	-13.67
Primary balance	PBR	Japan acc.	-0.042	-0.052	-0.058	-0.064	-0.077	-0.083	-0.085	-0.086
		Baseline	-0.042	-0.045	-0.048	-0.051	-0.058	-0.056	-0.050	-0.043
		% Deviation	0.00	16.11	19.84	25.20	34.44	48.50	68.83	98.72
do, central gov.	PBRC	Japan acc.	-0.033	-0.035	-0.035	-0.035	-0.039	-0.037	-0.035	-0.031
		Baseline	-0.033	-0.033	-0.036	-0.039	-0.042	-0.038	-0.035	-0.028
		% Deviation	0.00	5.67	-2.72	-9.41	-6.13	-3.31	0.70	11.59
do, local gov.	PBRL	Japan acc.	-0.009	-0.017	-0.023	-0.029	-0.038	-0.046	-0.050	-0.054
		Baseline	-0.009	-0.012	-0.012	-0.013	-0.016	-0.017	-0.016	-0.015
		% Deviation	0.00	45.16	87.65	130.61	140.03	163.93	216.19	261.10
Tax & soc. insurance rev.,	TSUM	Japan acc.	146,227	149,221	155,253	163,156	168,932	178,303	188,941	199,388
		Baseline	146,227	147,031	148,027	149,067	148,247	150,870	154,339	157,679
		% Deviation	0.00	1.49	4.88	9.45	13.95	18.18	22.42	26.45
Total population, th.	POPT	Japan acc.	127,253	127,302	127,411	127,531	127,672	127,817	127,968	128,149
		Baseline	127,253	127,302	127,367	127,380	127,394	127,383	127,324	127,246
		% Deviation	0.00	0.00	0.03	0.12	0.22	0.34	0.51	0.71

Table 7-2 Japan: Sectoral Output and Imports

A. Output, 2010					B. Imports, 2010				
		Annual rate	Annual rate	% Deviation		Annual rate	Annual rate	% Deviation	
		BS	Japan Accel			BS	Japan Accel	deviation	
X06	Forestry	-3.38%	2.04%	46.52	M04	Livestock for textiles	-1.00%	2.38%	26.48
X13	Other mining	-0.91%	10.38%	112.79	M09	Crude oil	2.28%	4.28%	14.51
X21	Textiles	-0.02%	2.79%	21.48	M12	Non-ferrous metal mining	0.19%	4.24%	31.94
X23	Apparels	-2.86%	1.90%	39.85	M13	Other mining	0.08%	6.13%	50.88
X25	Wood products	-3.21%	4.21%	67.77	M36	Other ceramic products	-1.53%	7.30%	82.47
X26	Utensils	-1.26%	3.54%	39.41	M37	Iron	8.87%	5.82%	-18.01
X29	Coal products	0.25%	6.24%	50.12	M38	Steel	2.05%	12.83%	102.00
X34	Plastic products	-0.17%	3.76%	31.00	M41	Metallic products	-0.66%	7.33%	71.87
X35	Cement	-1.43%	8.92%	101.16	M44	Industrial electric machinery	2.33%	4.72%	17.49
X41	Metal products	-0.47%	3.93%	35.33	M46	Precision Instruments	2.20%	5.52%	25.09
X42	Office equipments	1.28%	4.56%	24.95	M82	Total Imports	1.31%	3.06%	12.75
X44	Industrial Electric machinery	1.81%	4.54%	20.35					
X53	Residential building	-4.10%	5.01%	88.75					
X54	Non-residential building	-0.76%	4.46%	43.22					
X55	Public work	-0.02%	13.47%	142.49					
X56	Other construction	0.00%	-1.23%	59.97					
X71	real estate	0.00%	3.88%	7.65					
X72	Information services	0.00%	-0.30%	31.93					
X73	Other office services	0.12%	3.84%	29.09					
X82	Total output	0.52%	3.62%	23.74					