THE PHILIPPINE REVIEW OF ECONOMICS
VOL. XLV NO. 1 JUNE 2008 P. 15-48

Sustaining the Philippine manufacturing sector

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The Philippine manufacturing sector is an anomaly in East Asia's economic development experience in that it fails to provide the dynamic growth push the successful East Asian economies experienced. After undergoing a wrenching adjustment in the 1990s and early 2000s, the sector is likely to experience robust growth from impulses from other sectors of the economy and as its industrial restructuring process deepens and widens to industries and niches in which the country has comparative advantage. In the process, the sector contributes to broad-based growth in the country, the first ever in its post-World War II economic history. In this scenario, the country's manufacturing sector will be essaying a model of manufacturing sector–overall economy interaction different from the historical experience of most East Asian economies. This scenario would demand improvement in the country's investment climate, requiring not only economic and institutional reforms but also political reforms.

JEL classification: E62, H83, J24, L60
Keywords: manufacturing, labor productivity, economic development

1. Introduction

The Philippine manufacturing sector is an anomaly in East Asia's economic development experience. Among the major economies of East Asia, it is only in the Philippines where the manufacturing sector contributed the least in terms of national employment and gross domestic product (GDP) share for nearly three decades. The sector failed to provide the dynamic growth push that the successful, high-flying East Asian economies experienced. The sector underwent a wrenching adjustment in the 1990s and early 2000 in the face of

a far more open economy and far greater competition in the world marl Nonetheless, the sector's future is not bleak; it is likely to experience rob growth as it benefits from growth impulses in other sectors of the economy a as its industrial restructuring process deepens and widens further to indust and niches in which the country has comparative advantage. In the process, sector contributes to a broad-based growth process in the country, the first e in the post-World War II economic history of the country. In this scenario, country's manufacturing sector will be essaying a model of manufacturing sec – overall economy interaction different from the historical experience of m East Asian economies. However, this scenario demands further improvem in the country's investment climate, which would require not only econo and institutional reforms but also political reforms.

The paper is structured as follows. The first section discusses the sec performance, compares it with other countries, and examines why the sec failed to pull the economy toward a dynamic and higher economic growth p The second section examines more closely the sector's adjustment experie during the past one-and-a-half decades and looks for clues to a probz emergence of a more competitive sector. The third section essays what app as an emerging broad-based growth impulse in the country, thereby contribu to a more robust and sustained growth of the manufacturing sector w reshaping its role in the country's development process. This is the likely path to the resurgence of the Philippine manufacturing sector. The last section br out the paper's policy and institutional reform implications.

2. The Philippine manufacturing sector in comparative and historical perspectives

The Philippine manufacturing sector is a poor performer in terms contribution to employment and output compared to other East Asian coun (see Table 1). The 9.3 percent share of manufacturing to total employmer the Philippines is the lowest in the region, paling in comparison to Malay 20 percent, South Korea's 18 percent, and Singapore's 18 percent. Note the share of manufacturing to total employment in South Korea and th Singapore were even much higher in the early 1990s (at nearly 30 percent) earlier. The South Korean and Singaporean experience up until the early 1 reflects the prominence of manufacturing as a dominant driver of grc and employment creation among the newly industrialized economies (N of Asia—increasingly Malaysia and Thailand. Note that the Philippines already been eclipsed by emerging Vietnam in terms of the importance of

manufacturing sector as a job creator. Note also that the share of manufacturing to total employment in the Philippines declined secularly from 10.1 percent in 1990; indeed, it has declined secularly since the early 1960s when its share was about 12 percent (i.e., 12.1 percent in 1960, 11.9 percent in 1970, 10.6 percent in 1980). Thus, the manufacturing sector has never been a major generator of employment in the Philippines, in sharp contrast to the NIEs' experience, and increasingly that of Malaysia and Thailand.

Table 1. Key indicators, 1990-2006

Country	*Percent share of manufacturing to total employment*			*Percent share of manufacturing to GDP*			*Percent share of industry to GDP (all)*		
	1990	2000	2006	1990	2000	2006	1990	2000	2006
China	13.3	11.2	12.1[a]	36.7	40.4	43.1	41.3	45.9	48.7
South Korea	27.2	20.3	18.0	24.5	26.1	24.7	37.3	36.2	35.2
Indonesia	10.1	13.0	12.2	20.7	27.7	28.0	39.1	45.9	47.0
Malaysia	19.9	23.5	20.3	24.2	30.9	29.8	42.2	48.3	49.9
Philippines	10.1	10.0	9.3	24.8	22.2	22.9	34.5	32.3	31.6
Singapore	29.0	20.8	17.0	25.7	26.2	27.7	32.5	33.5	33.0
Thailand	9.7	14.9	15.3	27.2	33.6	35.1	37.2	42.0	44.6
Vietnam	7.8	9.3	12.5	12.3	18.6	21.3	22.7	36.7	41.6

Sources: ADB 2007a, 2007b.

[a]Data from 2003.

The contribution of the manufacturing sector to the Philippine GDP is also among the weakest in East Asia (see Table 2). By 2006, Vietnam has nearly caught up with the Philippines, despite the fact that in 1990, manufacturing accounted for nearly 25 percent in the Philippines but only 12.3 percent in Vietnam. The share of manufacturing to GDP in the Philippines has largely stagnated, in sharp contrast to the still rising share in Indonesia, Thailand, Singapore, Malaysia, China, and more spectacularly, Vietnam. Again, this reflects the poor performance of the manufacturing sector as a growth driver in the Philippines.

The poor performance of the sector in terms of contribution to overall output and employment hides the dramatic shift in the composition of the country's exports and the significant shift in the composition of output within the manufacturing sector during the past two decades. From resource-based products in the 1970s and 1980s, the composition of Philippine exports has

Table 2. Share of sector to total employment in the Philippines, 1990 to 2006

Industry	*1990-93*	*1994-96*	*1997-99*	*2000-02*	*2003*	*2004*	*2005*	*2006*
Agriculture	45.20	43.78	38.74	37.10	36.62	36.00	36.02	35.84
Manufacturing	10.29	10.08	10.15	9.84	9.60	9.68	9.54	9.28
Mining	0.59	0.42	0.41	0.37	0.34	0.37	0.37	0.43
Others	43.92	45.72	50.69	52.69	53.44	53.95	54.07	54.45

Sources: ADB 2007a, 2007b.

become dominated by high-technology manufactures, primarily semiconductors; indeed, the Philippines has the highest share of technology exports to total merchandise exports in Southeast Asia. This reflects partly the success of the Philippines in riding onto one of the fastest-growing industries in the world. It also reflects the disappointing performance of many other export industries in the country.

There has been some change in the composition of manufacturing output toward the more skilled labor and technology-intensive industries during the past decade; i.e., electrical machinery, automotive, miscellaneous manufactures. The shift in the composition of output of the manufacturing sector is consistent with that in the composition of merchandise exports, but the pace of change is far more subdued. This is partly because the new major export products are heavily dependent on import, such that the large increase in manufactured exports during the past two decades did not have much domestic multiplier effect on the manufacturing sector.

How come Philippine manufacturing failed to ignite the whole economy toward a higher and sustained growth path similar to what happened in other East Asian countries? There are many reasons, but one hitherto underemphasized factor is presented here. A close look at the recent success stories in the region—i.e., Indonesia in the 1980s, China since the 1980s, and Vietnam since the 1990s—suggests the importance of the interaction between the agriculture and manufacturing sectors. Specifically, in the three cases (as well as in the earlier success stories like Taiwan), the progression of sustained development started with the significant rise in productivity and incomes in the agricultural sector and then in conjunction with the growth of (largely export-oriented) labor-intensive manufactures. China is perhaps the best example of this "phasing". Productivity growth of China's agriculture in the 1980s was particularly impressive, as the sector moved away from planning to a market system under the so-called household responsibility system (see Table 3). The

period 1978-1984 saw not only the sharp rise in agricultural productivity in China but also the remarkable reduction in rural poverty. By mid-1980s, China moved increasingly toward nonfarm employment through the growth of town and village enterprises (TVEs) producing labor-intensive products. The opening of China to foreign direct investment (FDI) and exports through the special economic zones such as Shenzhen led to the flood of FDIfrom Hong Kong and Taiwan initially, focused at the start toward export-oriented labor-intensive manufacturing. (It may be noted that Fan, Zhang, and Zhang [2002] found that agricultural R&D [first and dominant], rural education, rural roads, and, a far fourth, irrigation were the most important government investments that favorably led to greater agricultural productivity.)

Table 3. Indicators on China's rural sector

A. Growth rates (in percent, annual averages)

	1952-77	*1978-89*	*1990-97*
GDP	5.93	9.50	11.18
Agriculture	3.66	8.38	5.27
Urban industry	9.43	6.47	10.27
Urban services	5.10	13.91	7.04
Rural enterprises	...	19.27	27.86

Source: Fan, Zhang, and Zhang 2002: Table 2.1.

B. Poverty and income inequality in rural China

Indicator	*1978*	*1984*	*1990*	*1995*
Per capita income (yuan per person, 1990 prices)	220	522	686	846
Poverty incidence (% of population)	32.90	11.10	11.50	7.60
Gini Coefficient	0.21	0.26	0.31	0.34

Source: Fan, Zhang, and Zhang 2002: Table 2.3.
Note that number of poor declined from 260 million in 1978 to 89 million in 1984.

C. Development of rural nonfarm sector

	1978	*1985*	*1990*
Employment to total rural employment (%)	7	18	21
Rural nonfarm wage (1990 yuan)	640	1,141	1,322

Source: Fan, Zhang, and Zhang 2002: Table 2.2.

The experience of Vietnam is similar, to some extent, to that of China. Like in China, it was the significant rise in agricultural production and productivity since the late 1980s that paved the way for the economic rise of Vietnam. Vietnam's exports in the early 1990s were primarily agricultural, highlighted by the country's rise as an important exporter of rice and coffee in the world market. The growth of the agricultural sector was eventually complemented by the rise in the exports of labor-intensive manufactures such as garments and textiles. The rise of agricultural production and labor-intensive manufactured exports gave Vietnam one of the most impressive poverty reduction and economic growth rate performances in the world during the 1990s and in early 2000.

An important difference between the success stories of countries like China and Vietnam, on the one hand, and the Philippines, on the other, is that the "phasing" of agricultural productivity growth and then labor-intensive manufactured exports did not happen in the Philippines. Thus, for example, the period of high growth of manufacturing in the Philippines in the 1950s was not preceded by or did not coincide with high agriculture sector productivity. Moreover, the manufacturing sector was preponderantly domestic oriented during a period of import controls, rather than export oriented, which is the hallmark of the initial period in the successful economies in the region. Similarly, the late 1970s, when the country succeeded in becoming self-sufficient in rice due in part to the higher-yielding new rice varieties, was a period of increased manufacturing protection through nontariff barriers. It was also a period when the incentive structure for the manufacturing sector moved toward capital-intensive and domestic-oriented intermediate goods industries, rather than labor-intensive manufactured exports. In short, the robust growth in the agriculture sector in the late 1970s was not accompanied by the significant rise in export-oriented labor-intensive manufactures in an increasingly open economy (instead of merely export enclaves that have little interaction with the rest of the economy).

The more fundamental reason for the failure of the manufacturing sector in becoming a growth driver, however, is its poor productivity performance for decades. Cororaton and Abdula's [1999] estimates of total factor productivity in manufacturing show dismal productivity growth performance overall during the 1966-1991 period, after some robust productivity growth in 1958-1965. Total factor productivity barely increased by 0.1 percent annually from 1966 to 1980 and declined by an average of 0.7 percent per year from 1981 to 1991. The productivity performance was highly pro-business cycle, capped by large declines in total factor productivity during the 1983-1986 economic crisis

(around 25 percent drop during the period). It is also worth noting that total factor productivity declined by an average of 1.5 percent per year during the 1976-1980 period when the agricultural sector was doing well, a key reason why the robust growth in agriculture at that time did not pan out into a sustained overall economic growth like in the recent cases of Vietnam and China.

There are no available estimates of total factor productivity for manufacturing during the past decade. The partial labor productivity estimates for the period 1995-2005 show an average growth rate of 2.99 percent per year in 1995-1997, 0.69 percent per year in 1998-2001, and 3.14 percent per year in 2002-2005 (see Table 4). The estimates suggest that productivity performance is still highly pro-cyclical and that there seems to be some improvement, albeit most likely still marginally. Nonetheless, estimates of compensation index, labor productivity index, and unit labor cost index in manufacturing among firms with 20 employees and up, present some hopeful signs in recent years (see Table 5). Table 5 shows that in 1991-1998, the unit labor cost in manufacturing declined primarily through the reduction in average compensation, i.e., the "low road" of adjustment to globalization. In contrast, the unit labor cost in manufacturing declined in 2001-2005 primarily through increases in labor productivity even as average compensation also increased. This is the ideal case—the "high road" of adjustment to globalization. The key challenge is how to sustain this recent adjustment pattern.

3. Adjustment in the manufacturing sector

A close look at the performances of the industries in the manufacturing sector indicates that industry performances have been strongly affected by the ups and downs of the Philippine economy, trade liberalization, and shifts in the comparative advantage of the country. Import-dependent domestic-oriented industries (e.g., transport equipment, rubber products) were particularly vulnerable to sharp drops in domestic demand during the economic crisis in the early to mid-1980s and the Asian crisis of 1997-1999. Trade liberalization and currency appreciation in the face of the emergence of low labor-cost exporters like China during the 1990s led to difficulties in the more unskilled labor-intensive industries like textiles, garments, and footwear. Trade liberalization and the deforestation in the country led to the decline in output of the wood and wood products industry in the 1990s. Trade liberalization and high power cost in the country hurt energy-intensive industries like basic metals. It has been primarily the electronics and semiconductor industry that grew relatively robustly during the past two decades despite the turbulence in the domestic

and regional economies. The resilience of the industry is suggestive of th shifting comparative advantage of the country toward more skilled labor intensive industries. Similarly, the relatively steady performance (and recentl rising output share) of the food manufacturing industry reflects the fact tha food is a major expenditure item for the fast-growing Philippine populatio (see Intal and See [2006]).

Table 6 presents some indicators of adjustment at a more disaggregate level in the manufacturing sector in recent years, 2001-2005. The tabl indicates that textile manufacturing continues to streamline, with a reductio in the number of enterprises and workers but with increases in value adde With rising employment, ready-made garment manufacturing appears to b recovering very recently, although the remaining temporary quota on China i major export markets like the European Union may have been a factor for th recovery of the industry very recently. The industry has been in the throes c reorganization for the past decade in an effort to focus more on higher-valu

Table 4. Average growth rates of labor productivity in manufacturing and its minor industries (at constant 1985 prices)

Major and minor industry groups	*1995-97*	*1998-2001*	*2002-0*
ALL INDUSTRIES	1.73	1.41	2.85
MANUFACTURING	2.99	0.69	2.58
Manufacture of food, beverages, and tobacco	0.39	1.01	4.46
Textile, wearing apparel and leather industries	2.77	(0.43)	(3.17
Manufacture of wood and wood products, including furniture and fixtures	8.96	(3.59)	3.84
Manufacture of paper and paper products, printing and publishing	(1.81)	(1.27)	0.86
Manufacture of chemicals and chemical, petroleum, coal, rubber, and plastic products	2.57	(0.02)	3.64
Manufacture of nonmetallic mineral products, except products of petroleum and coal	2.86	(4.74)	(5.57
Basic metal industries	(4.40)	4.13	36.3
Manufacture of fabricated metal products, machinery and equipment/other manufacturing industries	2.28	4.01	(0.2

Source: BLES 2006.

Table 5. Index of unit labor cost for manufacturing, 1991-2005

Year	*Compensation index*	*Labor productivity index*	*Unit labor cost index*
1991	100.00	100.00	100
1992	103.11	97.03	106
1993	100.61	96.30	104
1994	102.56	97.91	105
1995	101.39	99.92	101
1996	96.86	99.89	97
1997	97.35	103.06	94
1998	93.40	106.64	88
1999	93.51	105.84	88
2001	97.85	108.60	90
2003	101.89	113.27	90
2005	104.37	119.70	87

Source: BLES 2007.

Notes:

1. From 1991 to 1998, firms employing an average of ten or more are considered; thereafter, firms employing 20 or more are considered.
2. Compensation index is derived from average monthly compensation.

products, including branded garments, as its means to remain competitive vis-à-vis low labor-cost countries. Given the reduction in the number of "large" garment enterprises, the increase in employment suggests that the average size of a "large" garment firm grew. Nonetheless, estimates on labor productivity for the "textile, wearing apparel and leather industries" subsector suggest that the reorganization and upgrading being undertaken in the textile and garments industries have not yet borne significant productivity improvements considering that the labor productivity level largely stagnated during the 2000-2005 period (see Table 4). This suggests that the textile and garments industries remain very vulnerable to increased competition from abroad, especially as the temporary quota on China's exports is finally lifted.

Resource-based industries that were also hit by trade liberalization in the 1990s—e.g., wood and wood products and manufacture of pulp and paper—appear to be recovering with the rise in the number of establishments, although the number of employees of the "large" enterprises remained stagnant over time. Energy-intensive industries, like the manufacture of basic iron and steel, cement and glass, and glass products, continued to streamline as indicated in

the decline of employment, number of establishments (for basic iron and steel), and mixed output growth performance. It is worth noting, nonetheless, that labor productivity in the basic iron and steel industry increased remarkably in recent years: labor productivity rose by 242 percent during the 2000-2005 period and 120 percent in 2002-2005. This is related to the rehabilitation of the former National Steel Corporation in Iligan City, which is now under Global Steel, an Indian company.

Two other industries that are also on the decline—(1) the manufacture of TV and radio receivers, sound or video recording/reproducing apparatus, and (2) the manufacture of electronic motors, generators, transformers, and electricity distribution and control apparatus—are worth noting. Especially for the first, the country is clearly losing out to low labor-cost countries (in efficiency terms) like China and Vietnam as well as to countries designated as regional production hubs (e.g., Malaysia).

The food manufacturing industry experienced remarkably high output growth in recent years, averaging 7.9 percent in 2002-2005, the growth pacesetter for the whole manufacturing sector during the period. As a result, its share to total manufacturing value added increased to nearly 41 percent in 2005 from about 36 percent in 2001. This good performance probably partly reflects the improved output performance of the agriculture sector and the preponderantly consumer-driven growth in the country in recent years. Underneath the high-growth performance of the industry are sub-industry adjustments. The most noteworthy is the significant reduction in the number of establishments and employees in sugar manufacturing. Considering that there has been a significant increase in sugar output, this means that the sugar milling industry has become more modernized and efficient. This seems to be corroborated by the substantial investments in fixed capital in sugar milling during the period. (This is a welcome development because the pressure for the high protection of the sugar industry was caused by comparatively low farm yield of sugarcane—this is now improving significantly—and by comparatively lower domestic milling efficiency vis-à-vis countries like Thailand.)

The number of "large" establishments as well as employment in rice and corn milling and other food products declined substantially during the 1999-2005 period, although there was some recovery in 2005 over 2003. The same pattern of decline and then some recovery more recently was evident in the sub-industry of the "production, processing, and preservation of meat, fish, other seafood, fruits, vegetables, oils, and slaughtering and meat packing". Despite nearly the same number of establishments between 2001 and 2005, the sub-industry registered increases in employment arising from substantial

Table 6. Number of establishments, total employment, and ratio of capital expenditures to value added in manufacturing, 1999-2005

1994 PSIC code	Industry description	Number of establishments				Total employment (as of November15)				Ratio of capital expenditures to value added			
		1999	2001	2003	2005	1999	2001	2003	2005	1999	2001	2003	2005
D	PHILIPPINES	7,450	6,397	5,901	6,563	1,089,837	942,215	986,921	1,026,631	0.18	0.10	0.18	0.16
151	Production, processing, and preservation of meat fish and other seafoods, fruits,vegetables, oils, and slaughtering and meat packing	339	313	298	315	64,280	50,586	54,530	53,427	0.07	0.04	0.22	0.13
152	Manufacture of dairy products	31	26	18	27	8,120	6,460	5,701	6,187	0.06	0.03	0.10	0.19
154	Manufacture of starches and starch products, prepared animal feeds and grain mill products except rice and corn milling	101	103	106	129	9,412	11,134	10,240	11,100	0.44	0.13	0.21	0.18
155	Manufacture of beverages	110	107	96	115	31,539	24,574	21,457	17,448	0.11	0.04	0.05	0.07

Table 6. Number of establishments, total employment, and ratio of capital expenditures to value added in manufacturing, 1999-2005 (continued)

1994 PSIC code	*Industry description*	*Number of establishments*				*Total employment (as of November15)*				*Ratio of capital expenditures to value added*			
		1999	*2001*	*2003*	*2005*	*1999*	*2001*	*2003*	*2005*	*1999*	*2001*	*2003*	*2005*
156	Manufacture of bakery products	327	253	222	358	29,613	26,407	26,096	32,750	0.23	0.23	0.36	0.30
157	Manufacture of sugar	35	33	25	22	18,081	16,642	13,147	10,475	0.11	0.18	0.28	0.22
158	Production of crude coconut oil, copra cake, meals and pellets	29	20	19	22	2,465	1,501	1,554	1,726	0.20	0.01	0.09	0.09
153, 159	Rice and corn milling, manufacture of other food products	437	345	274	294	38,304	31,706	22,087	31,573	0.15	0.03	0.08	0.04
160	Manufacture of tobacco products	18	16	14	15	10,891	10,553	9,606	9,557	0.02	0.01	0.05	0.09
171	Spinning, weaving, and finishing of textiles	123	114	96	105	21,739	17,989	14,008	13,336	0.51	0.09	0.08	0.08
172-174	Manufacture of other textiles	249	218	203	190	32,767	31,216	25,634	21,902	0.89	0.13	0.12	0.10
181	Ready-made garments												

Table 6. Number of establishments, total employment, and ratio of capital expenditures to value added in manufacturing, 1999-2005 (continued)

1994 PSIC code	*Industry description*	*Number of establishments*				*Total employment (as of November15)*				*Ratio of capital expenditures to value added*			
		1999	*2001*	*2003*	*2005*	*1999*	*2001*	*2003*	*2005*	*1999*	*2001*	*2003*	*2005*
182-189	Custom-tailoring and dressmaking, manufacture of wearing apparel, n.e.c.	262	229	194	222	40,524	34,222	30,935	40,298	0.04	0.07	0.05	0.03
191-192	Tanning and dressing of leather, manufacture of luggage, handbag, and footwear	198	151	132	195	30,679	22,297	19,574	20,692	0.03	0.07	0.03	0.14
201-202	Manufacture of wood, wood products and cork, except furniture; articles of bamboo, cane, rattan and the like; plaiting mate	242	193	170	203	20,160	17,723	20,962	20,472	0.08	0.08	0.11	0.54
210	Manufacture of pulp, paper, and paperboard	203	178	165	191	24,043	18,071	20,863	21,096	0.17	0.41	0.16	0.35
221	Publishing	69	64	63	68		6,004	7,307	5,823	0.03	0.03	0.03	0.06

Table 6. Number of establishments, total employment, and ratio of capital expenditures to value added in manufacturing, 1999-2005 (continued)

1994 PSIC code	*Industry description*	*Number of establishments*				*Total employment (as of November15)*				*Ratio of capital expenditures to value added*			
		1999	*2001*	*2003*	*2005*	*1999*	*2001*	*2003*	*2005*	*1999*	*2001*	*2003*	*2005*
222-223	Printing; publishing and printing activities	338	290	266	323	16,784	14,638	12,746	14,499	0.10	0.18	0.11	0.12
224	Reproduction of recorded media	-			3	-			286	-			0.42
232	Manufacture of refined petroleum products	4	3	3	5	863	1,181	943	1,531	0.04	0.02	0.00	0.29
231 & 239	Manufacture of cake oven products; other fuel products	9	4	3		516	162	142		0.06	0.00	0.18	
241	Manufacture of basic chemicals	179	140	133	149	14,087	10,283	10,652	11,974	0.11	0.10	0.06	0.37
242-243	Manufacture of other chemical products, man-made fibers	266	258	245	256	32,476	35,025	33,553	37,851	0.05	0.02	0.13	0.09
251	Manufacture of rubber products	106	103	104	81	9,624	9,328	10,869	7,727	0.33	-0.80	0.13	0.79
252	Manufacture of plastic products	375	331	331	331	32,828	28,072	39,574	35,428	0.13	0.12	0.12	0.11

Table 6. Number of establishments, total employment, and ratio of capital expenditures to value added in manufacturing, 1999-2005 (continued)

1994 PSIC code	*Industry description*	*Number of establishments*				*Total employment (as of November15)*				*Ratio of capital expenditures to value added*			
		1999	*2001*	*2003*	*2005*	*1999*	*2001*	*2003*	*2005*	*1999*	*2001*	*2003*	*2005*
262	Manufacture of cement	23	16	13	18	6,722	5,107	3,677	3,852	0.10	0.14	0.96	0.08
269	Manufacture of nonmetallic mineral products, n.e.c.	280	211	181	182	37,903	16,941	19,011	18,712	0.46	0.09	0.15	0.11
271	Manufacture of basic iron and steel	253	215	199	210	28,040	25,037	19,700	17,984	0.17	0.04	0.15	0.10
272	Manufacture of basic precious and nonferrous metals	41	31	27	23	4,564	3,846	3,001	3,047	0.04	0.07	0.15	0.09
273	Metal casting	40	39	39	42	3,110	2,831	5,134	4,026	0.29	0.10	0.28	0.11
281-289	Manufacture of fabricated metal products, except machinery and equipment	423	364	339	383	36,900	28,756	35,412	32,614	0.08	0.10	0.31	0.16
291-294	Manufacture of machinery and equipment, n.e.c.	394	324	284	281	32,725	24,401	30,072	25,721	0.22	0.16	0.16	0.04

Table 6. Number of establishments, total employment, and ratio of capital expenditures to value added in manufacturing, 1999-2005 (continued)

1994 PSIC code	*Industry description*	*Number of establishments*				*Total employment (as of November15)*				*Ratio of capital expenditures to value added*			
		1999	*2001*	*2003*	*2005*	*1999*	*2001*	*2003*	*2005*	*1999*	*2001*	*2003*	*2005*
301-302, 309	Manufacture of office, accounting, and computing machinery	28	29	28	45	34,567	30,337	36,974	58,222	1.03	0.15	0.28	0.13
311-312	Manufacture of electronic motors, generators, and transformers; electricity distribution and control apparatus	60	53	50	45	16,396	13,534	14,399	10,497	0.47	0.07	0.80	0.01
313	Manufacture of insulated wire and cables	39	34	34	47	9,242	8,853	14,244	19,100	0.13	0.09	0.09	0.16
314-319	Manufacture of accumulators, primary cells, and primary batteries; lighting equipment and electric lamps; other electrical equipment, n.e.c.	84	67	63	71	23,721	16,807	23,721	27,503	0.12	0.11	0.19	0.11

Table 6. Number of establishments, total employment, and ratio of capital expenditures to value added in manufacturing, 1999-2005 (continued)

1994 PSIC code	Industry description	Number of establishments				Total employment (as of November15)				Ratio of capital expenditures to value added			
		1999	2001	2003	2005	1999	2001	2003	2005	1999	2001	2003	2005
321-323	Manufacture of electronic valves and tubes; semiconductor devices and other electronic components; TV and radio transmitters and apparatus for line telephony and line telegraphy	153	154	182	181	109,895	121,495	135,333	136,223	0.35	0.22	0.36	0.28
324	Manufacture of TV and radio receivers, sound or video recording or reproducing apparatus and associated goods	52	40	33	29	16,661	18,121	14,122	9,278	0.09	0.34	0.23	0.16
331-333	Manufacture of medical precision and optical instruments, watches, and clocks	68	65	70	68	40,682	23,542	26,363	19,457	0.28	0.17	0.23	0.22

Table 6. Number of establishments, total employment, and ratio of capital expenditures to value added in manufacturing, 1999-2005 (continued)

1994 PSIC code	*Industry description*	*Number of establishments*				*Total employment (as of November15)*				*Ratio of capital expenditures to value added*			
		1999	*2001*	*2003*	*2005*	*1999*	*2001*	*2003*	*2005*	*1999*	*2001*	*2003*	*2005*
341-343	Manufacture of motor vehicles, trailers and semi-trailers	141	114	117	126	19,765	15,067	20,242	23,539	0.07	0.12	0.21	0.17
351-359	Manufacture of other transport equipment	79	68	68	64	9,912	7,712	10,834	11,204	0.17	0.12	0.55	0.08
360	Manufacture and repair of furniture	327	298	269	348	32,596	29,646	25,569	37,899	0.29	0.03	0.13	0.08
371-372	Recycling of metal and nonmetal waste and scrap	10	13	14	20	381	682	2,122	1,110	-	0.01	0.00	0.04
391-399	Manufacture of jewelry, musical instruments, sports goods, game and toys, and other related goods, n.e.c.	176	160	153	147	19,351	17,108	15,411	15,544	0.08	0.21	0.10	0.14

Source: Annual Survey of Philippine Business and Industry: 2000, 2002, 2004, and 2006.
Note: Data are for establishments with average total employment of 20 and over.

additional fixed investments during the period (especially in 2003 when there was a sharp increase in employment and investment). This suggests that the hitherto perennial problem of capacity underutilization in the industry (especially the meat processing industry) has been reduced; as a result, productivity performance of the industry improved in recent years. As Table 4 indicates, labor productivity in the "food, beverages, and tobacco" subsector rose by 4.5 percent in 2002-2005, as against 1 percent in 1998-2001 and 0.39 percent in 1995-1997. A reflection of the improved productivity performance of the sector is the consistently positive growth of exports of processed food and beverages, averaging 21.4 percent in 2000-2006.

Table 6 indicates that the industries that grew substantially in recent years in addition to food manufacturing are the more skilled labor-intensive industries either because of high technology or because of greater emphasis on design as bases for international competitiveness. Leading the way because of its size is the semiconductor and other electronic components industry. It is now the largest employer among the "large establishments"—i.e., establishments with employment of 20 or more—followed by ready-made garments manufacturing. The country is actually diversifying its competitive base in the electrical machinery subsector to include the fast-growing "office, accounting, and computing machinery manufacturing" industry and the "manufacture of insulated wires and cables". This is clearly an important revealed comparative advantage of the Philippines, based on the relatively well-educated labor force that requires less training time to adapt to the ever-changing technologies in the subsector. The "manufacture of accumulators, primary cells, and primary batteries; lighting equipment and electric lamps; and other electrical equipment" has successfully rebounded from the slump in early 2000 with the rise in employment despite the decline in the number of establishments compared to 1999.

The other export-oriented industry that also expanded in recent years after the downturn in 2001 is the "manufacture and repair of furniture". The country has gained a particular niche in the design-intensive furniture industry in the world market. Nonetheless, the quality-price gap between the Philippines and competitor countries like Vietnam, Malaysia, and China has been narrowing. The value of furniture exports has been rather stagnant in recent years, suggesting that the increase in the number of establishments and employees in the industry may be related more to the increase in domestic-oriented furniture establishments. This is in response to the growing domestic demand for furniture as the economy continues to improve.

The other industries that have also posted robust growth during the 2001-2005 period include the "motor vehicles and other transport equipment"

industry, "manufacture of fabricated metal products", and "manufacture o plastic products". The first is primarily domestic oriented but with a significan export exposure in automotive parts; the other two are preponderantl domestic oriented. The last two require access to low-cost materials in orde to be competitive vis-à-vis imports, hence the importance to them of the tarif liberalization exercise in manufactures during the 1990s. The automotive part exports are primarily linked to the automotive production networks in the region At the same time, the growing domestic market encourages the multinationa automotive firms to expand their presence in the country.

The discussion above indicates that majority of the industries in th manufacturing sector rely on a robust domestic market in order to grow well This suggests that ensuring a robust domestic economy and efforts at improvin productivity are critical in sustaining the Philippine manufacturing sector This implies a different pathway to the robust development of the Philippin manufacturing sector compared to the stereotypical East Asian model whereir the growth impulse in the manufacturing sector is initially export-oriented labor-intensive manufacturing accompanied by export substitution (i.e., domestic production of imported inputs for exports) and then to exports of the hitherto export substitutes.

4. Toward a new pathway to the development of the Philippine manufacturing sector

The Philippines is somewhat boxed in with respect to export competition in the region, which limits the growth of the manufacturing sector. On the one hand, Philippine exports are preponderantly skilled labor-intensive and technology-intensive products, which rely much on imported inputs because there is little domestic supply capacity. The result is that the local value added is substantially less than in countries like Malaysia, and therefore the growth of the industry has little multiplier effect on the economy. On the other hand, production costs in manufacturing in the Philippines are comparatively high in efficiency terms because of the high unit labor cost; the very high energy cost vis-à-vis other developing East Asian countries that have comparatively better oil, coal, and gas reserves; and the comparatively poor infrastructure and logistics facilities in the country. As a result, many of the manufacturing industries have a hard time competing in the international market. This explains the highly skewed commodity distribution of Philippine exports in favor of semiconductors and other electrical products vis-à-vis other countries in the region. This also suggests that an all-out export campaign in the manufacturing sector would not likely provide the initial growth push for the whole manufacturing sector.

The more realistic pathway toward the resurgence and further development of the Philippine manufacturing sector is to develop a strong domestic base upon which export niches can be developed and sustained. It is a robust domestic economy that will give many of the manufacturing industries the market size that will allow them to develop their own competitive niches and then export. (Note that the Philippines has one of the largest populations in the world. A growing domestic market can allow economies of scale of production and possibly of distribution to reduce unit costs and thereby gain competitiveness internationally.) However, given the low tariffs and minimal nontariff barriers in the country, the increased domestic demand can only be filled up by local production if it can compete well with imports in the domestic market. Thus, significantly improving the productivity of the domestic manufacturing industries in order to gain dominant market shares in the domestic economy is quite important.

The greater focus on the domestic market does not mean that exports are unimportant. In fact they are critical for any successful sustained growth of the Philippine manufacturing sector. Thus it is important to deepen the country's revealed and emerging comparative advantage in skilled labor-intensive manufactures. These include not only the "semiconductors and electrical machinery" industry but also the emerging shipbuilding industry, which has attracted billion-dollar investments from the world's shipbuilding giants (Japan and South Korea). In short, a robust domestic economy, significant productivity improvements in the manufacturing sector, and deepening comparative advantage in skilled labor-intensive manufactures are at the heart of the new pathway toward the sustained development of the Philippine manufacturing sector.

4.1. The prospects for a broad-based robust growth of the Philippine economy

There are indications that the Philippines can have a more broad-based and more robust growth path in the near future. The broad-based growth of the domestic economy benefits the Philippine manufacturing sector while the manufacturing sector itself contributes to the more robust and broader-based development of the Philippine economy. Perhaps there has never been a time in Philippine economic history as now when there seems to be a confluence of market developments and investor interest that point to significant growth impulses in virtually all sectors of the economy.

In agriculture, the sharp rise in the price of oil has led to the increased interest in coconut and sugar as biofuel feedstock. Two other plants are getting noticed as biofuel feedstock: jatropha and sweet sorghum. The impact of this has been

the rise in prices for the commodities. Corn is also a major biofuel feedstock in the developed world, thereby resulting in increased prices in the world market and in the process reducing the net protection to Philippine corn production. There has been a sharp rise in investment plans for biofuel processing itself. Indeed, newspaper reports highlight the billion-peso investment plans of a number of domestic and foreign investors in biofuel feedstock and processing. Note that coconut has one of the largest acreage and number of farmers in the country. Similarly, jatropha has potential for widespread production in the country, including the less favorable environments in the uplands. In short, the biofuel revolution could improve farm incomes across much of the archipelago, thereby increasing the domestic market (in the rural areas) for nonfarm goods including manufactures. (The increased farm incomes also increase the domestic demand for food products, both raw and processed.)

In a much smaller way, the introduction of the Pacific white shrimp in the country together with the faster-growing tilapia could lead to the recovery of the aquaculture industry in the country. This would contribute to the improvement in incomes in the rural areas, especially those near the seashores.

Apart from agriculture (and possibly aquaculture and mariculture), mining offers tremendous potentials for much higher foreign investments, increased output and incomes in mining communities, and higher exports in the country. If well managed, mining can provide substantial benefits to the local communities and to the country as a whole (in terms of exports and government revenues—which contribute to the improvement in the country's fiscal situation and investment climate). Chile and South Africa rely substantially on the mining industry. The Philippines is acknowledged as one of the most highly mineralized countries in the world. The country's mineral resources have started to generate significant foreign-investment interest and actual flows in recent years.

The Philippines is also acknowledged to have tremendous potential in tradable services. Tourism has been picking up, both in terms of arrivals and in terms of investments. There is a growing view that the country is on the cusp of a tourism boom barring any major political instability or terrorist attack. This is due to the inherent tourism assets of the country, its proximity to major tourism source countries in Northeast Asia, and its large potential in medical tourism, retirement, educational services, and possibly even in gaming and entertainment. Tourism has a particularly high linkage with the rest of the economy, hence a tourism boom has a large multiplier effect on the economy. It may be noted that many of the tourism assets of the country are in the provinces, thereby potentially generating a more spread out and broad-based development impact from the tourism boom.

The Philippine Amusement and Gaming Corporation (PAGCOR) recently presented to the public an ambitious plan to develop a tourism and entertainment zone in the reclamation area along Manila Bay. News reports indicate that a number of foreign investors are interested in the PAGCOR plan. The new tourism and entertainment zone is expected to generate scores of thousands of workers. The legislative approval during the past year or so of the extension of the corporate life of PAGCOR eliminated a major stumbling block to the finalization of the plan and its implementation.

It is nonetheless in the information and communications technology (ICT)-based tradable services where the country has made a major mark internationally in recent years. The boom in call centers, business process outsourcing (BPO), and knowledge process outsourcing (KPO) during the past half decade has led to employment expansion where the current total surpasses the "large enterprise" employment of each of the manufacturing industries. The country has become a location of choice for call centers and ranks well internationally in non-voice BPO and increasingly even in KPO. The areas of tradable ICT-based services in which the country can have comparative advantage is also expanding and deepening. ICT-based tradable services are largely more skilled labor-intensive and urban based. To some extent, this subsector is the urban equivalent of the biofuel "revolution" (which will likely benefit more the rural sector).

Within the manufacturing sector itself, the country has revealed comparative advantage in skilled labor-intensive industries. The semiconductor and electrical machinery cluster has dominated the export news during the past decade. Another promising skilled labor-intensive industry in which the Philippines seems to be increasingly competitive is shipbuilding. The Tsuneishi shipyard in Balamban, Cebu, has been successful and is currently expanding. The billion-dollar shipbuilding complex of Hanjin is currently being built in Subic; if it succeeds, other South Korean shipbuilders would also likely enter the Philippines. Note that in both the semiconductor/electronics industry and the shipbuilding industry, it is the inflow of foreign direct investments of large multinationals that has put the map in the export market.

Apart from agriculture, another industry that relies more on unskilled labor is construction. There is a gathering property market expansion, triggered by remittances from overseas Filipino workers (OFW), low interest rates, emergence of the BPO industry, and expansion of the retail industry. The uptick in the property market is likely to remain robust if the tourism industry takes off, the ICT-based tradable services industry continues to grow substantially, the OFW remittances flow in, the retirement industry gets established, and the overall economy grows robustly, which will lead to increased demand for residential,

commercial, and even industrial properties. The demand for construction services will also get further boosts from the expansion in infrastructure facilities, which are sine qua non for any large and continuing inflow of foreign direct investment.

In short, the potentials are there and the market and policy conditions are improving toward a broad-based—intersectorally, geographically, and even along labor skill lines—and robust growth of the Philippine economy.

4.2. Implications on the manufacturing sector

The broad-based and robust growth of the economy can be the important catalyst for the resurgence and further development of the Philippine manufacturing sector. The increase in per capita income would mean increased demand for goods and services, including manufactured goods. Consumption expenditures have been a critical growth impulse for the Philippines for the past decade. It is likely that consumption will remain an important driver of growth in the country in the near future. Note that a number of the manufacturing industries that have been hit by the liberalization-cum-peso appreciation in the 1990s and those that are being threatened by imports are consumer manufactures; e.g., apparel, textiles, footwear, furniture and fixtures. Note also that these industries tend to emphasize product differentiation as per capita incomes increase. Thus, as the country's per capita income increases and domestic market expands, the potentials for profitable market niching in the domestic market in a relatively open economy also grow. The growth of local brands in apparel is indicative of this trend toward product differentiation and market niching. This can be expected to generate increased demand for domestically produced manufactures, and thereby increase the demand for labor, mainly semiskilled workers.

However, the presumption of increased domestic production and employment in consumer manufactures assumes that the domestic manufacturers become competitive vis-à-vis imports. Thus, improving productivity in the manufacturing sector is critical, especially in the consumer manufacturing subsector. Table 4 indicates that much remains to be done to improve substantially the productivity performance of the consumer manufacturing subsector (excluding food processing). As shown in Table 4, labor productivity in the "textile, wearing apparel, and leather industries" as well as in the "wood and wood products and furniture and fixtures" industries remained virtually stagnant in 1995-2005. Labor productivity in the "paper and paper products and printing and publishing industries" declined during the 1995-2005 period. Clearly, the productivity performance of the aforementioned consumer

manufactures does not augur well for the manufacturing sector despite the expected increase in domestic demand for consumer manufactures because of much greater competition from imports in an open economy. Stagnant productivity and an appreciating peso will prevent the domestic consumer manufacturing subsector to benefit substantially from the increased domestic demand arising from a robustly growing economy.

Clearly, productivity growth and competitiveness must be the overriding concern of the manufacturing sector, especially the consumer manufacturing subsector. If the sector succeeds, then the manufacturing sector would reverse its apparent hollowing out and start to grow robustly. In the process, employment in the sector could grow and thereby add more fuel to the increasingly broad-based and more sustained growth of the Philippine economy.

5. Policy and institutional reform implications

The paper might sound rather Pollyannaish in highlighting an emerging confluence of sectoral opportunities that, for the first time in the economic history of the country during the post-World War II period, there could be a broad-based and sustained robust economic growth of the economy. However, this entails that the country improve its investment climate, maintain macroeconomic stability and manage the real effective exchange rate well, substantially improve its infrastructure facilities, reduce the cost of doing business in the country, deepen its human resource capital, and address corruption and political instability.

5.1. Investment climate

The Philippines needs a sharp increase in investments if the potentials discussed in the previous section are to be actualized. Broad-based growth demands large investments. The upgrading in the manufacturing sector to improve the productivity performance of the sector demands investments. The infrastructure requirements of a higher robust economy demand large investments. However, the county's investment performance has been scandalously poor relative to its competitor countries. The country's investment rate has declined precipitously from about 23 percent in 1995 to about 16.6 percent in 2006. The investment rate pales in comparison to that of other countries in the region (see Table 7); e.g., in 2006, 43.1 percent for China, 22.6 percent for Malaysia, 23.3 percent for Thailand, 28.3 percent for South Korea, 21.9 percent for Indonesia, 23.7 for Singapore, and 34.0 percent for Vietnam.

Table 7. Gross fixed capital formation as percent of GDP, 1989-2006 (at constant prices)

Year	*China*	*Indonesia*	*South Korea*	*Malaysia*	*The Philippines*	*Thailand*	*Singapore*	*Vietnam*
1989	26.01	24.80	31.20	29.05	20.56	33.50	27.31	...
1990	25.86	26.41	35.86	33.86	22.95	39.06	27.71	...
1991	27.87	27.37	37.51	37.82	19.80	40.54	...	...
1992	31.62	26.44	35.62	38.56	21.00	40.00	...	...
1993	37.67	26.28	36.16	41.33	22.36	40.38	...	...
1994	35.92	27.80	37.47	43.94	23.02	41.26	...	...
1995	34.35	29.28	38.82	49.15	23.02	42.02	30.97	25.42
1996	33.79	31.10	39.33	48.35	24.36	42.47	...	26.51
1997	32.88	32.25	36.72	49.18	25.82	34.21	...	27.00
1998	33.85	24.87	30.38	30.28	23.07	21.29	...	28.70
1999	34.04	20.19	30.06	26.66	21.80	19.72	...	27.82
2000	34.11	19.85	31.09	25.29	24.68	19.86	...	28.70
2001	34.43	20.36	29.89	24.64	21.09	19.66	...	29.73
2002	36.26	20.43	29.79	23.52	20.62	19.89	25.65	31.34
2003	39.38	19.62	30.04	22.86	20.39	20.80	24.06	32.67
2004	40.73	21.42	29.28	22.17	19.42	22.15	24.36	33.47
2005	42.13	22.46	28.77	22.17	17.30	23.54	22.88	33.88
2006	43.11	21.91	28.27	22.58	16.63	23.32	23.65	34.01

Source: ADB 2007a.
Note: (...) Data unavailable.

Table 8, which is on the ratio of FDI to GDP of selected Asian countries, presents an intriguing implication on the country's investment climate. The table indicates that the ratio of FDI to GDP in the Philippines in 2005-2006 was relatively high compared to the other Asian countries except for Singapore. Although there is some difference between the FDI data (financial) and domestic capital formation data (values of equipment and construction), the comparatively high FDI rate runs counter to the sharp drop in the investment rate (at current prices). This seems to suggest that the low investment rate in the country stems more from the unwillingness of the Filipinos to invest in their own country, rather than the lack of interest from foreign investors. It is to be noted that the country is a net saver at the moment, despite the consumption-led growth of the economy. This suggests that a key challenge

for the government is not only to generate more foreign investments but also to bring back confidence in the Philippines of Filipino investors, in order to substantially improve the country's investment rate.

Table 8. Ratio of FDI to GDP of selected Asian countries, 1996-2006

Country	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*	*2002*	*2003*	*2004*	*2005*	*2006*
China	4.38	4.38	4.00	3.34	3.13	2.88	3.30	3.03	3.10	3.55	2.77
South Korea	(0.38)	(0.29)	0.19	1.14	0.84	0.24	(0.04)	0.02	0.76	0.28	(0.44)
Indonesia	3.17	3.14	(0.64)	(3.86)	(2.76)	(2.12)	0.09	(0.32)	(0.82)	2.92	2.03
Malaysia	7.37	9.71	5.83	4.86	1.88	0.30	1.31	1.05	2.28	0.85	0.01
Philippines	4.13	3.67	7.33	4.74	9.61	1.73	7.37	0.94	0.53	7.58	9.01
Singapore	...	...	...	...	...	...	5.37	9.33	10.90	8.54	11.81
Thailand	3.03	4.65	0.50	(0.14)	(0.95)	(1.27)	(2.13)	(0.09)	3.35	6.39	4.18
Vietnam	12.36	11.22	9.06	7.68	6.72	6.54	6.83	6.69	6.99	7.62	8.71

Source: ADB 2007b.

Notes:

1. FDI is taken to be direct investments from the balance of payments accounts and converted into the national currency using the average annual exchange rate.
2. GDP is at constant prices.
3. (...) Data unavailable.

Clearly, improving the country's investment climate and attractiveness is a paramount challenge for the government and the country. Quite a number of initiatives can be done to substantially improve the country's investment climate, which will thereby raise significantly the country's investment rate. The recommendations below are expected to contribute to the improvement of the country's investment climate.

5.2. Macroeconomic stability and managing the real effective exchange rate

Macroeconomic instability was a key investment concern a few years ago; it no longer is. In 2003, fiscal deficit was 4.6 percent of GDP, after three years of large fiscal deficits that averaged 4.45 percent of GDP in 2000-2002. Public debt as a share of GDP rose from an average of 115 percent in 1997-1999 to 137.5 percent in 2003. The financial market demanded strong government action, as reflected in the downgrading of credit ratings and the rise in the risk premium on foreign loans to the Philippines. The government responded, highlighted by the Reformed Value-Added Tax Law. The country's fiscal situation has improved substantially since then, with fiscal deficit declining to a more manageable 1.1

percent of GDP and public sector debt to GDP ratio dramatically declining to 82 percent in 2006. It is likely that the significant rise in the share of FDI to GDP in 2005-2006 in the Philippines is a reflection of the positive impact of the improvement in the macroeconomic environment in the country.

While the fiscal situation is no longer a major concern, it is now the country's effective exchange rate that should be of significant worry for the country. Tables 9 and 10 indicate that the Philippines experienced the largest appreciation of its real effective exchange rate in 2005-2006 (and possibly also in 2007 to date since the peso appreciated the most compared to China, Malaysia, Singapore, and Thailand). The tables also indicate real depreciation for China, Malaysia, and Singapore in effective exchange rate terms in 2002-2006 while the Philippines and Thailand experienced real effective exchange rate appreciation during the same period. Table 9 indicates that the real effective change rate for the Philippines has been the most volatile. Considering that the productivity performance of the manufacturing sector has been mixed and, in fact, middling for consumer manufacturing industries, the volatility and significant appreciation of the real effective exchange rate hurts the country's producers of export and import substitutes. With poor productivity, the appreciation reduced the price competitiveness of Philippine tradable products, and the volatility increases business uncertainty. The country needs to manage the real effective exchange rate better to enable its businesses to adjust and grow better. Notice that China, with its huge tradable surpluses and the world's largest foreign exchange reserves, was able to even depreciate its currency in real effective terms.

Table 9. Real effective exchange rates, 1991-2006
(2000=100)

Country	*1991-93*	*1994-96*	*1997-99*	*2000-02*	*2003*	*2004*	*2005*	*2006*
China	79	85	102	102	95	93	92	94
Malaysia	124	124	106	103	99	95	95	99
Philippines	108	123	117	97	89	86	92	102
Singapore	99	107	106	99	94	93	92	94
Thailand	118	122	106	97	95	94	96	104

Source: IMF 2007.

Notes: 1. Increases denote appreciation of the real effective exchange rate.
2. Decreases denote depreciation of the real effective exchange rate.

Table 10. Growth rate of real effective exchange rates, 1991-2006. (2000=100)

Country	*1991-93*	*1994-96*	*1997-99*	*2000-02*	*2003*	*2004*	*2005*	*2006*
China	(10.83)	9.98	2.04	0.69	(6.56)	(2.63)	(0.23)	2.08
Malaysia	1.87	(0.06)	7.77	0.45	(5.52)	(4.37)	0.33	4.00
Philippines	3.27	5.53	2.43	(6.82)	(7.41)	(3.23)	7.02	11.08
Singapore	2.20	2.68	5.75	(2.50)	(3.63)	(1.12)	(1.28)	2.38
Thailand	0.39	1.98	2.20	(3.76)	(2.10)	(0.28)	1.62	8.13

Source: IMF 2007.

How can the country better manage its real effective exchange rate? One possible clue may be seen in Tables 11 and 12, which present the ratio of portfolio investment to foreign direct investment and the ratio of portfolio investment to the change in international reserves, respectively. The tables show that the ratio of portfolio investment to FDI was particularly high for the Philippines compared to the other countries in 2005-2006. Similarly, the ratio of portfolio investment to the change in international reserves was the highest for the Philippines in 2002-2006 compared to China, South Korea, Malaysia, Singapore, and Thailand. In short, portfolio investments have played a more important role in the Philippine balance of payments and foreign exchange market in recent years as compared to the other competitor countries in the region. It is likely that portfolio flows contributed to the substantial appreciation of the Philippine peso, in nominal and real effective terms, in recent years. It is apparent that if the country is interested in tempering the appreciation of the peso to give the country's tradable industries more leeway for an orderly adjustment, then it behooves the government to temper the flow of portfolio flows into the country. As Malaysia and Chile did in the early 1990s, this involves the imposition of temporary and variable tax on short-term capital flows, i.e., portfolio flows.

5.3. Infrastructure and logistics

In the annual world competitiveness surveys, the Philippines is always almost at the bottom of the rankings among emerging economies in terms of the quality of infrastructure. The poor quality of the country's infrastructure has always been a major concern of investors, especially given the comparatively high labor cost in the country. The poor quality of infrastructure reduces the efficiency of the country's logistics industry; e.g., the lack of facilities for night flights in a number of airports in the country prevents the faster flow of goods

and the more efficient utilization of airplanes (which could have led to lower unit costs and unit prices). The poor quality of infrastructure prevents greater integration of the domestic market across the archipelago, thereby preventing firms from benefiting more from economies of scale of production and instead forcing them to spend more on distribution costs.

Table 11. Ratio of portfolio investment to foreign direct investment (in percent), 2002-06

Country	*2002*	*2003*	*2004*	*2005*	*2006*	*2003-06*
China	(19.61)	21.36	32.48	(6.81)	(97.25)	(12.56)
South Korea	29.62	507.91	93.22	(27.39)	(618.45)	(11.18)
Indonesia	842.24	(377.10)	232.54	50.26	50.65	(10.91)
Malaysia	(53.45)	44.36	192.52	(61.20)	67.93	60.90
Philippines	95.78	38.29	15.84	147.08	140.13	85.34
Singapore	(179.12)	(82.11)	(35.51)	(55.23)	(58.59)	(57.86)
Thailand	(50.76)	(1.58)	53.08	72.85	50.50	43.71

Source: ADB 2007b.

Notes:

1. Portfolio investment is taken from the balance of payments (BOP) accounts.
2. Foreign direct investment is taken to be direct investments from the BOP Accounts.

Table 12. Ratio of portfolio investments to change in gross international reserves (in percent), 2002-06

Country	*2002*	*2003*	*2004*	*2005*	*2006*	*2003-06*
China	-13.52	9.76	9.54	-2.38	-27.35	-2.61
South Korea	3.81	52.76	19.72	-15.27	-78.92	-5.43
Malaysia	-44.56	10.48	40.35	-61.25	28.46	4.51
Philippines	110.90	80.52	205.22	153.35	61.36	125.11
Singapore	-98.64	-69.78	-42.71	-232.59	-69.30	-103.60
Thailand	-27.34	-2.26	39.97	274.06	29.91	85.42

Source: ADB 2007b.

Note:

1. Portfolio investment is taken from the balance of payments (BOP) accounts.

The government has acknowledged the critical importance of improved infrastructure for the international competitiveness of the country's industries and firms. A key reason for the low investments in infrastructure has been the perennial budgetary problem. The recent improvement of the country's fiscal situation encouraged the government to draw up a more ambitious infrastructure development program as enunciated in the 2007 state of the nation address. There is a long distance from planning to actual implementation, however. Much remains to be done in streamlining and facilitating the public investment review, approval and implementation process while at the same time improving the transparency and public accountability of the whole process. The Seamless Infrastructure Network Working Group of the National Competitiveness Council is helping out in this regard, through the encouragement of public-private partnership, monitoring of projects, and facilitation of consensus building on courses of action in order to accelerate the implementation of the country's infrastructure development program.

5.4. Transactions costs and flows

Complementing the improvement in infrastructure is the reduction in the transactions cost of doing business in the country, from the opening of a business to its closing, the permitting process and procedures in the movement of goods and persons, and even in the hiring and firing of people. Compared to other countries in the region, the Philippines again ranks poorly in terms of the speed and cost of opening business, the efficiency of permit process and customs procedures in the movement of goods, and even in the flexibility of labor laws. The Transactions Costs and Flows Working Group of the National Competitiveness Council is working hard at addressing these bottlenecks at the local and national levels. There are a number of initiatives in this area, including the rollout of the National Single Window, improved procedures in the granting of visas to foreign businessmen, shortening of the length of time to start a business, registering property and securing licenses, and encouraging local government units to streamline business registration and permitting processes.

5.5. Competitive human resources

Human resource is the base of the country's comparative advantage, especially in tradable services and skilled labor-intensive manufacturing. It therefore behooves the country to deepen (or at least maintain it in view of the aggressive human resource development programs in the competitor countries). There is growing concern that the country is in fact losing its competitive

edge in human resources because it has not been investing enough for quite some time while competitor countries have been aggressively investing in its human resources and research and development capability. For this reason, the National Competitiveness Council put as priority the improvement in the proficiency in English, Science, and Math by at least 30 percent by 2010 in part through stronger public-private sector partnership in the training of teachers and in the expansion of a nutrition program for the early graders, establishment of a "sustainable multisectoral mechanism to address the skills and labor market mismatch" in the country initially through the conduct of a people competitiveness summit, and the expansion of on-the-job training and dual-tech projects. It is to be noted, though, that only a few manufacturing industries spend for training of their workers. Indeed, the industries that have been threatened most by import competition have been the least investors in their workers. Thus, one of the challenges for industrial upgrading is how to encourage the private sector to invest more in their workers, especially those more reliant on unskilled labor.

5.6. Corruption and political uncertainty

The last but certainly not the least recommendation is the need to reduce corruption and minimize political uncertainty. Arguably, one major reason why Filipinos do not invest despite the high saving rate is the business uncertainty that arises from too much political noise as well as the investment uncertainty from changes in government. Arguably, one reason for the comparatively high investment rate in the country in the early 1990s as compared to the mid-2000s was the relatively more cooperative relationship in the early 1990s between the Executive (under President Fidel Ramos), the House of Representatives (under Speaker Jose de Venecia), and the Senate (under Senator Edgardo Angara), which led to the enactment of landmark economic reform bills. In addition to addressing political uncertainty, the country needs to address corruption more frontally. This is partly because as the country courts big-ticket investments as a means to raise its growth trajectory, corruption and governance become increasingly important in the investment decision process. Unfortunately, the high-profile corruption scandals in the country have put the country's reputation, rightly or wrongly, as one of the most corrupt countries in the world. Arguably, the high-profile corruption cases tend to be linked to the need to finance election campaigns. Thus, an important reform measure is the electoral financing bill that has been lingering in Congress—that is, for the taxpayers to finance the election campaign of accredited political parties in exchange for stricter rules and stiffer penalties on election campaign.

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