THE RACE OF DEVELOPMENT : EGYPT vs. OTHERS

By

Dr. ABDULAZIZ I. DAGHISTANI

Assistant Professor of Economics

Department of Economics

College of Administrative Sciences

King Saud University

Riyadh

Saudi Arabia

Economic development is a long term process which involves major structural changes. It usually takes over twenty years to judge its achievements. And the yardstick is simply how close the economy came to the stage of takeoff into se'f-sustained economic growth. This stage is said to have been reached when growth perpetuates itself.

This paper attempts to throw some light on the process of development of five countries. These countries are Egypt in Africa, Turkey in Euro-Asia, and Thailand, South Korea and the Philippines in Asia. These countries were selected for comparative purposes for a number of reasons :

i) At some point in time (which we shall hereafter call, the starting point) these countries had **very similar** economic characteristics which are typical of the developing countries.

ii) Approximately twenty years after the starting period, the economies of these countries took **quite different shapes.**

iii) Although none of the sample countries is specified by the international agents as a developed economy, some of them has come a long way towards this classification while others were passed over.

The aim of this paper is to examine the structure and performance of the Egyptian economy during the period 1960-1982 in comparison with these of other countries which were at some point in time equally or even less developed than Egypt and yet finished in a much better place than this country in the race of development. It is also hoped that some useful explanation can be found for this disparity in the process of development.

The Structure of the Economies of the Sample Countries at he Starting Point

Due to lack of date we settled on the year 1960 as our starting point. A brief picture of the economies of our sample countries in the year 1960 is given in Table 1. The data in this table suggest that :

1.—The five sample countries had a **very sim lar** population size in 1960.

2.—Egypt and South Korea had approximately the same standard of living (measured by GDP per head). Turkey had double that standard of living while the standard of living in the Philippines was approximately 1.7 times that of Egypt and South Korea. On the other hand Thailand was the poorest of the sample countries with a per capita income of approximately two-thirds of that of Egypt and South Korea.

3.—The contribution of the Industrial Sector to GDP was higher in Egypt than in South Korea, Turkey and Thailand and only in the Philippines did the share of the industrial sector in GDP exceed its counterpart in Egypt. Moreover, the contribution of the agricultural sector to GDP was smaller in Egypt than in the other sample countries with the exception of the Philippines.

4.—Egypt was in much better position than South Korea in terms of the demand for resources. Thus Egypt had a gross rate of investment of 13 percent of GDP while South Korea had 11 percent. More importantly, Egypt had a 12 percent rate of gross savings while South Korea

Table 1

Basic Economic Indicators at the Starting Point (1960)

Item	Egypt	South Korea	Philippines	Thailand	Turkey
Population(in millions)	26	25	27	26	27
GDP(in million dollars)	3880	3710	6960	2550	8810
GDP per head (dollars)	149	148	258	98	326
Structure of Production (%) of GDP					
Agriculture	30	37	26	40	41
Industry	24	20	28	19	21
Services	46	43	46	41	38
Structure of Demand (%) of GDP:					
Private Consumption	71	84	76	76	76
Public Consumption	17	15	8	10	11
Gross Investment	13	11	16	16	16
Gross Savings	12	1	16	14	13
Exports	20	3	11	17	3
Resource balance	-1	-10	0	-2	-3
Structure of Employment: Percentage of Labor Force in:					
Agriculture	58	66	61	84	79
Industry	12	9	15	4	11
Services	30	25	24	12	10

Sources: - The World Bank; World Development Report, 1984.
- I.M.F.; International Financial Statistics, 1984.
- U.N.; National Accounts Yearbooks, 1982.

had only 1 per cent. This suggests that South Korea financed its development in the early stages using external finance while Egypt used internal resources. This is evident from the fact that South Korea had a resource balance of - 10 as compared to -1 in the case of Egypt.

5.—The demand for resources for public consumption and exports were higher in Egypt than in the other sample countries. But private consumption as a percentage of GDP was smaller in Egypt than in the other economies.

6.—Egypt depended less on its agriculture sector to provide jobs for its labour force than did all the other sample countries. Moreover, Egypt had a higher percentage of its labour force employed in the industrial sector than South Korea, Thailand and Turkey.

The above analysis suggests that Egypt at the starting point was **potentially** in a much better position than South Korea and Thailand to reach the stage of take-off. Turkey had a better standard of living than Egypt at the starting point which enabled her to save and invest a larger proportion of its GDP but Turkey's industrial sector was less developed than that of Egypt. The Philippines economy was even better equipped than the Egyptian economy for the race of development.

The Stucture of the Economies of the Sample Countries at the Terminal Point

Once again, for data limitations we have to fix our terminal time in 1982. The **relative** structure of our sample economies at the terminal point has changed radically This can be seen from the data in Table 2. These data suggest that the rank of the sample countries in terms of GDP per head has changed significantly between 1960 and 1982. This is despite the fact that the **relative** size in terms of population did not

change much between the two periods[1]. Thus Egypt which started the race with per capita income that is slightly higher than that of South Korea and over 1.7 times that of Thailand, ended with a per capita income of approximately one-third of that of South Korea and of .87 percent that of Thailand. In other words Egypt's **relative** position worsened against the others although the situation of the Philippines was worse still.

This opens an important question : Why did Egypt lag behind ? Or to put it differently ; How did the structure and performance of the economies of the countries which surpassed Egypt behave in comparison with the Egyptian economy? The following analyses may throw some light on the problem.

1.—Although all sample countries experienced a reduction in the contribution of the agricultural sector, the reduction was the greatest in the case of South Korea and the least in the cases of Egypt and the Philippines. It is a well-known principle that the process of development involves a reduction in the role of the agriculture sector. Those who succeeded to achieve greater reduction reached a higher stage of development.

2.—The contribution of the industrial sector to GDP and to the labour force has been much higher in all sample countries in 1982 than in 1960. But Egypt shows two peculiarities :

(i) While in other sample countries, the industrial sector attracted

---

(1) We calculated Spearman's rank correlation coefficient given by

$$r' = 1 - \frac{\Sigma D^2}{n(n^2 - 1)}$$

where, D = difference between ranks of corresponding data in the two periods.

n = the number of sample countries.

The value of r' for per capita GDP was only 200 which suggests that the ranking of the sample countries in terms of this variable was very different in the two periods.

Table 2

Basic Economic Indicators at the Terminal Point (1982)

Item	Egypt	South Korea	Phili-ppines	Thai-land	Turkey
Population(in millions)	44.3	39.3	50.7	48.5	46.6
GDP(in million dollars)	26400	68420	39850	36790	49980
GDP per head (dollars)	690	1910	820	790	1370
Structure of Production (%) of GDP					
Agriculture	20	16	22	22	21
Industry	34	39	36	28	31
Services	46	45	42	50	48
Structure of Demand (%) of GDP:					
Private Consumption	64	63	70	66	73
Public Consumption	21	13	9	13	11
Gross Investment	30	26	29	21	22
Gross Savings	15	24	21	21	16
Exports	32	39	16	25	11
Resource balance	-15	-2	-8	0	-6
Structure of Employment: Percentage of Labor Force in:					
Agriculture	50	34	46	76	54
Industry	30	29	17	9	13
Services	20	37	37	15	33

Sources: - The World Bank; World Development Report, 1984.
- I.M.F.; International Financial Statistics, 1984.
- U.N.; National Accounts Yearbooks, 1982.

its labour force from the agricultural sector, the available data seem to suggest that in the case of Egypt, the industrial sector attracted its labour force from the service sector. Thus the percentage of the labour force in the service sector of Egypt was less in 1982 than in 1960. This is contrary to the trend in other countries and contradicts the predictions of economic theory(2).

(ii) The expansion in the industrial sector in Egypt did not have as much impact on the import substitution or exports of manufactured goods as it had in other sample countries. This is evident from the data in Table 3 which give the structure of merchandise exports and imports in the sample countries.

The data in Table 3 clearly indicate the Egypt lagged behind all the other sample countries in expanding its manufacturing exports or reducing its manufacturing imports. Thus while the percentage of manufactured exports to total exports in other sample countries in 1981 was 6 to 13 times its level in 1960, the percentage in Egypt **went down** by approximately one third its level in 1969. Aslo while every other country in the sample **reduced** the share of manufactured imports to its total imports between 1960 and 1981, Egypt **increased** its percentage of manufactured imports. This suggests that the other sample countries followed a pattern of development which depends on the exports of manufacturers. Egypt, with similar population structure, continued to depend on its primary production.

The above results are very surprising given the fact that the share of the labour force in Egypt's industry in 1981 exceeded that of all other sample countries as can be seen from the data in Table 2. Also, Egypt's industrial output is a substantial proportion of its GDP and is only exceeded marginally by its counter part in South Korea and Philippines.

(2) Economic Theory suggests that as development proceeds labour will move from the agricultural sector to the manufacturing sector and to the service sector.

Table 3

Structure of Merchandise Exports and Imports of Sample Countries

Country	Exports (%)						Imports (%)							
	1960			1981			1960				1981			
	Fuel and Minerals	Other primary goods	Manufactures	Fuel and Minerals	Other primary goods	Manufactures	Food	Fuels	Other primary	Manufactures	Food	Fuels	Other primary	Manufactures
Egypt	4	84	12	69	23	8	23	11	16	50	34	3	6	57
South Korea	30	56	14	2	8	90	10	7	25	58	12	30	15	43
Philippines	10	86	4	16	39	45	15	10	5	70	8	30	4	58
Thailand	7	91	2	8	65	27	10	11	11	68	4	30	8	58
Turkey	8	89	3	7	56	37	7	11	16	66	3	44	6	47

Source: The World Bank; World Development Report, 1984.

This paradox suggests that, if the data were reliable, the industrial sector in Egypt is producing goods for **expanding** local demand[3]. But this is gain surprising since Egypt's population was not in 1982 larger than that of the other countries (with the exception of Philippines). One valid explanation may be that per capita consumption of manufactured goods was higher in Egypt than in other sample countries despite the fact the income per head in Egypt was in 1982 much lower than that in all the other sample countries. This could be due to a strong demonstration effect that prevails in Egypt and not in the other sample countries.

3.—The data in Table 3 suggest that the percentage of food imports to total imports was not only the highest in Egypt in 1960 but increased substantially in 1982. Thus while the other sample countries (with the exception of South Korea) reduced their percentage of food imports to total imports to less than half its level in 1960, Egypt **increased** its import percentage by approximately 50 percent. This may be explained by the differences in agricultural production mix and by the relatively higher food consumption per capita in the case of Egypt.

4.—The available data on savings would seem to support the assumption of higher consumption per head in Egypt. Thus Egypt had the **lowest** rate of gross savings in 1982. South Korea, on the other hand had the highest gross rate of savings. It should be remembered that in 1960 South Korea had the lowest rate of savings (only 1 percent). Thus, the accelerated rate of development achieved by South Korea is due, partially, to its ability to achieve a high rate of savings. The opposite may be said about Egypt[4].

5.—The relatively low rate of savings combined with the relatively high percentage of government consumption put the Egyptian economy

(3) There is of course the other possibilities that the Egyptian industries may have been engaged on producing arms or suffer from low productivity.

(4) In the very simple Harrod-Demor model of growth, development is a function of the savings ratio and the capital-output ratio.

at a greater disadvantage than the others in terms of resource balance. Egypt's government expenditure as a percentage of its GDP in 1982 was much higher than that of the other sample countries. Egypt also had the highest rate of gross investment in 1982. This, combined with the low gross rate of savings have forced the country to borrow heavily from overseas. Actually Egypt external debt was 52.8 percent of its GDP in 1982 while in none of the other sample countries did this ratio reach 30 percent. Most of Egypt's borrowing, however, was for military purposes to finance three wars which Egypt entered during the period. Thus Egypt did not benefit much from these loans in building its productive capacity. Unfortunately Egypt does not provide data on its defense expenditure. However, available data suggest that in 1982 Egypt lost over one-fifth of its export proceeds (an approximately 6.4 percent of its GNP) in servicing its external debt(5).This service ratio was much higher than its counterpart in the other sample countries. However, three points should be mentioned here :

i) The period of study (1960-1982) was not particularly peaceful for the other sample countries. South Korea spent approximately 33 percent of its total central government expenditure in 1981 on defence. The percentage of Thailand was 20.2 percent(6). These two countries started at the same (or even at a lesser, in the case of Thailand) stage of development as Egypt in 1960. Yet they both by-passed Egypt (and one by a very large margin) in 1982.

ii) The terms of public external borrowing were relatively more advantageous in the case of Egypt than in the case of the other sample countries. Thus the average interest rate on external debts in 1982 was 8.1 percent in the case of Egypt compared to 9.4 percent, 11.3 percent and 11.5 percent in the cases of Thailand, Philippines, Turkey and South Korea respectively(7).

(5) The World Bank; **World Development Report**, 1985.
(6) Ibid.
(7) Ibid.

iii) All sample countries had increased substantially their deficit in the balance of current accounts between 1960 and 1982. However, Egypt was distinguished by the high level of net direct private investment (650 million dollars in 1982, compared with 84 million dollars for Thailand and - 77 million dollars for South Korea) and its high level of receipts of workers' remittances. The latter increased from 29 million dollars in 1970 to 2074 millions in 1982[8]. These figures may be compared with those of South Korea (126 million dollars in 1982) and Thailand (84 million dollars in 1982).

Rates of Growth of Main Economic Variables in Sample Countries During the Period 1960-1982

The changing structure of the economies of the sample countries resulted from a process of growth of different economic variables. We measured the (exponential) constant rate of growth of these variables using the relationship :

$$Y_t = Y_o \, e^{rt}$$

where, Y_t = the value of the variable in period t

Y_o = the value of the variable in the original period.

t = time

r = the exponential rate of growth

$$= \frac{dY_t}{dt} \cdot \frac{1}{Y}$$

(8) Ibid.

A transformation of the above relationship gives the following :

$$\log_e Y_t = a + rt$$

Applying this model to different variables for the years 1961-1982, we obtained the regression results in the appendix. These results suggest that the model fitted the data extremely well (as indicated by the values of R^2 and F) and that the behaviour of the coefficient, which represents the growth rate, was statistically significant in each case at the 1 percent level of significance. This is indicated by the "t" value given in the parenthesis under the estimated coefficients.

The regression results shown in Table 4 give the estimates for the growth rates of economic variables in the sample countries. These results represent the experimental growth rates of the variables when measured at constant (1975) prices. Thus the effect of inflation has been suppressed. The following conclusions may be derived from the results in Table 4.

1.—Thailand had the highest rate of population growth during the period, while Egypt had the lowest rate of growth

2.—Egypt performance was extremely poor in comparison with the performance of the other sample countries and in particular South Korea and Thailand which started the race of development from the same (or, in the case of Thailand, a worse) position. In particular, Egypt failed to achieve high rates of growth in its manufacturing sector; in its gross domestic capital formation and in its exports.

3.—The rate of growth of government expenditure in Egypt was higher than the rate of growth of any other economic variable. This phenomenon was not observed in any of the other sample countries and suggest that government expenditure in Egypt drew heavily on available resources during the period of study.

4.—Egypt achieved a much lower rate of growth in her exports than in her imports during the period of study and hence faced balance

Table 4

Exponential (Constant) Growth Rates of Basic Economic Variables (1960-80) (Percentages)

Economic Variables	Egypt	South Korea	Philippines	Thailand	Turkey
GNP	4.67	9.67	5.52	7.20	6.20
Population	2.38	2.39	2.82	3.02	2.42
GNP (per head)	2.29	7.40	2.70	4.21	3.81
Agricultural sector	2.20	4.20	4.06	4.70	6.62
Industrial sector	7.38	16.20	8.30	10.10	12.24
Manufcturing sector	5.90	17.10	8.02	9.90	12.33
Service sector	2.05	14.54	7.61	7.10	11.34
Private consumption	2.90	7.92	10.25	6.60	11.04
Government expenditure	8.20	6.50	12.67	9.06	11.73
Gross fixed capital formation	6.65	16.90	13.49	9.80	14.57
Exports of goods and services	3.93	24.2	10.44	8.11	13.76
Imports of goods and services	4.76	17.9	11.20	7.40	14.23
Consumer price index	5.32	13.3	8.84	4.90	10.57

Source: Regression Results in the Statistical Appendix.

of payments problems. Both South Korea and Thailand did not suffer from this drawback.

5.—The consumer price index rose slower in Egypt than in the rest of the sample countries with the exception of Thailand. This may reflect the policy of subsidization which is practiced in Egypt.

6.—It is clear from the results in Table 4 that the countries with relatively higher rates of population growth and/or relatively higher rates of inflation were not the countries that recorded relatively slower rates of development.

Estimates of Functional Relationships

The changes in the structure and performance of the sample countries between 1960 and 1982 suggest that the economic variables behaved differently in each of them. We try in this section to estimate a consumption function, an investment function and an import function for each country. In order to estimate the short-run and long-run elasticities we used dynamic models (employing a Koyck transformation) in logarithmic forms :

The following models were econometrically tested using data at constant (1975) prices(9) :

1- Private Consumption

$$\log_e C_t = \alpha_o + \alpha_1 \log_e Y_t + \alpha_2 \log_e C_{t-1} + \mu_t$$

2- Gross Fixed Capital Formation

$$\log_e I_t = \beta_o + \beta_1 \log_e Y_{t-1} + \beta_2 \log_e I_{t-1} + v_t$$

(9) Data were derived and calculated from :
— U.N.; **National Accounts Statistics, 1982.**
— U.N.; **Demographic Yearbook, 1982.**
— I.M.F., **International Statistics Yearbook, 1984.**

3- Imports

$$\log_e M_t = \gamma_1 \log_e Y_t + \gamma_2 \log_e M_{t-1} + e_t$$

where, C_t = private consumption in period t

Y_t = GDP in period t

$\dot{Y}_t = Y_t/Y_{t-1}$

I_t = gross fixed capital formation in period t

M_t = imports of goods and services in period t

t = time

μ, v, e = error terms

Table 5 gives the regression results for each of the sample countries during the period of study. The figures in parenthesis under each coefficient represent the estimated "t" value for that coefficient.

Table 5

Functional Relationships in the Sample Countries

1960-1980

Egypt

(1) $\log_e C_t = 2.324 + .171 \log_e Y_t + .665 \log_e C_{t-1}$
(2.207) (2.634) (4.246)

$R^2 = .898$; $F = 64.6$; $h = .403$

(2) $\log_e I_t = -2.051 + 2.806 \log_e \dot{Y}_{t-1} + .878 I_{t-1}$
(-2.289) (2.817) (8.892)

(3) $\log_e M_t = 3.053 + .510 \log_e Y_t + .426 \log_e M_{t-1}$
(2.890) (2.490) (2.098)

$R^2 = .890$; $F = 64.7$; $h = .627$

Table 5 - contd.

South Korea

(1) $\log_e C_t = 3.942 + .531 \log_e Y_t + .367 \log_e C_{t-1}$
(4.099) (4.278) (2.345)

$R^2 = .998$; $F = 354.6$; $h = 1.475$

(2) $\log_e I_t = .549 + 1.774 \log_e \dot{Y}_t + .681 \log_e I_{t-1}$
(-.622) (1.919) (26.460)

$R^2 = .981$; $F = 391.6$; $h = .583$

(3) $\log_e M_t = 1.700 + 1.366 \log_e Y_t + .239 \log_e M_{t-1}$
(2.838) (2.847) (2.885)

$R^2 = .982$; $F = 438.1$; $h = 1.159$

Table 5 - contd.

Philippines:

(1) $\log_e C_t = -.871 + .248 \log_e Y_t + .789 \log_e C_{t-1}$
$(-.695) \quad (3.869) \qquad (3.768)$

$R^2 = .977$; $F = 341.8$; $h = .679$

(2) $\log_e I_t = .205 + 2.038 \log_e \dot{Y}_t + .841 \log_e I_{t-1}$
$(1.553) \quad (2.745) \qquad (22.8)$

$R^2 = .978$; $F = 326.1$; $h = -.025$

(3) $\log_e M_t = -.2.297 + .648 \log_e Y_t + .363 \log_e M_{t-1}$
$(-1.462) \quad (3.540) \qquad (3.332)$

$R^2 = .984$; $= 485.1$; $h = -.965$

Thailand:

(1) $\log_e C_t = - .124 + .348 \log_e Y_t + .626 \log_e C_{t-1}$
$(-1.622) \quad (2.606) \qquad (4.283)$

$R^2 = .9987$; $F = 6063$; $h = -1.245$

(2) $\log_e I_t = -1.894 + 1.885 \log_e \dot{Y}_t + .702 \log_e I_{t-1}$
$(-1.647) \quad (3.110) \qquad (27.9)$

$R^2 = .980$; $F = 388.8$; $h = -.718$

(3) $\log_e M_t = -.357 + .274 \log_e Y_t + .708 \log_e M_{t-1}$
$(-.798) \quad (2.559) \qquad (4.336)$

$R^2 = .962$; $F = 202.6$; $h = 1.412$

Table 5 - contd.

Turkey:

(1) $\log_e C_t = -1.762 + .499 \log_e Y_t + .493 \log_e C_{t-1}$
$(-1.333) \quad (3.268) \quad (5.841)$

$R^2 = .979 \; ; \; F = 369.5 \; ; \; h = .785$

(2) $\log_e I_t = -.038 + 1.998 \log_e \dot{Y}_t + .826 \log_e I_{t-1}$
$(-.194) \quad (2.191) \quad (23.2)$

$R^2 = .987 \; ; \; F = 401.6 \; ; \; h = -.314$

(3) $\log_e M_t = -7.301 + 1.165 \log_e Y_t + .475 \log_e M_{t-1}$
$(-2.301) \quad (2.408) \quad (2.272)$

$R^2 = .963 \; ; \; F = 207.3 \; ; \; h = -104$

The above regression results suggest that the fit in each case is good as indicated by the high values of R^2 and F. The coefficients have the correct sign and the right value. The Koyck variables lies, in each case, between zero and one. The results also suggest that there is no apparent problem of autocorrelation as indicated by the "h" value. It should be noted, however, that this statistic requires for its estimation a larger number of observations than has been used.

The statistical results give the short-run and long-run estimates of the elasticities that are shown in Table 6. The data in this table suggest :

1.—The response of consumption to changes in income in **the short-run** was the greatest in South Korea and the weakest in Egypt.

2.—The long-run consumption elasticities exceeded their short-run values in all cases. Egypt had the lowest income elasticity in the long run, while Turkey had the highest.

3.—The investment behaviour suggests that the value of the accelerator is higher in Egypt than in the other sample countries. The results also suggest that the adjustment coefficient is much lower in Egypt than in South Korea and Thailand. This indicates the presence of severe bottlenecks hampering the adjustment of investment to the change in income. The bottlenecks could be thought of as institutional, psychological and technological in nature resulting from the inadequate infrastructure and the resultant limited absorbative capacity of the economy.

4.—The statistical results for the import functions suggest that Egypt had the lowest long-run income elasticity of demand for imports. This indicates that Egypt's imports are mostly necessities. This is supported by the data in Table 3 above which reveal that over one-third of Egypt's imports consists of foodstuff. This has important implications regarding the future path of economic development in Egypt and, in particular, the manipulation of the rate of exchange. It is clear that devaluation of the Egyptian currency will not help much in curtailing its imports.

Table 6

Short-run and Long-run Elasticities for Different Economic Variables During the period 1960-1980

Economic Variables	Egypt	South Korea	Philippines	Thailand	Turkey
Short-run Consumption elasticity	.171	.531	.346	.348	.499
Long-run Consumption elasticity	.510	.839	1.650	.930	.984
The estimated accelerator	2.806	1.774	2.038	1.885	1.998
Investment adjustment coefficient	.122	.319	.159	.298	.174
Short-run import elasticity	.510	1.366	.648	.274	1.165
Long-run import elasticity	.889	1.796	1.017	.932	2.219

It would not help in encouraging exports either; since most of these, as shown in Table 3, consist mainly of primary goods.

Conclusions

We may sum up the main conclusions of this paper in the following :

1.—Egypt did not perform too well in the race of development which started in 1960. It was overtaken by many countries who were in equal or worse position than her at the starting point. These countries include South Korea and Thailand.

2.—Egypt did not develop its manufacturing sector in the same way as South Korea and Thailand. The Egyptian manufacturing sector failed to draw a significant proportion of the labour force from the agricultural sector. It also failed to develop a strong process of import substitution and to divert the Egyptian economy into a manufacture's export-economy.

3.—Gross fixed capital formation in Egypt grew at a slower rate than in the other countries. This may be due to lack of adequate domestic savings on the one hand and to lack of absorbative capacity (due to poor infrastructure, bottlenecks and low purchasing power) on the other hand.

4.—The rate of growth of government expenditure in Egypt was too high relative to that of other types of expendiure which may suggest that the Egyptiean economy was burdened by government outlays.

5.—The resource balance of Egypt has worsened a great deal between 1960 and 1982. This despite the significant transfers which Egypt obtains through its workers in the neighbouring countries.

6.—It should be noted that the process of development is a complicated one and involves the interaction of many non-economic factors. Egypt may have been unfortunate in this respect but the race of development is far from being lost.

This study answers many questions and opens much more. The above analysis would seem to suggest that Egypt would need to give a greater attention to its manufacturing sector. The process of import substitution must be enhanced and Egypt should aim at diverting its economy to become a major exporter of manufactures.

Also Egypt should try to contain the expansion in the government expenditure and link that expansion with the growth of its GDP. This may require overhauling of some of the government policies, e.g. the policy of subsidization.

The resource imbalance must be corrected not through further loans (for this could only aggravate the situation in the long-run) but through the development of the manufacturing sector to produce import substitutes and to export manufactures. Also Egypt must try to benefit from its size through land reforms to produce food and cut its import bill Furthermore, Egypt should rationalize its imports, perhaps by the adoption of an indexation policy whereby imports ar indexed to exports.

REFERENCES

(1) I M F ; **International Financial Statistics Yearbook, 1984.**

(2) Kyock; **Distributed Lags and Investment Analysis,** Amsterdam, Holland, 1954.

(3) U.N.; **Demographic Yearbook,** 1982.

(4) U.N.; **National Accounts Statistics,** 1982.

(5) The World Bank; **World Development Report,** 1984.

STATISTICAL APPENDIX

Regression Results for Growth Rates of Sample Countries

The Model: $\log_e Y_t = a + bt + u$

1- Egypt (1960-1980)

Economic Variables	a	b	R^2	F	D.W
GNP	1.634 (60.7)	.0467 (20.8)	.960	432	1.443
Population	3.237 (1471.4)	.0238 (129.5)	.999	16768	1.267
GNP per head	5.305 (188.9)	.0229 (9.775)	.841	95.6	1.407
Agricultural sector	6.915 (313.9)	.0221 (11.947)	.888	142.8	1.610
Industrial sector	5.815 (112.6)	.0738 (17.126)	.942	293.3	1.404
Manufacturing sector	5.716 (116.0)	.059 (14.266)	.919	203.5	1.876
Service sector	7.480 (161.4)	.0205 (5.301)	.609	28.1	1.502
Private consumption	7.630 (191.3)	.0291 (8.709)	.808	75.8	1.590
Gross fixed capital formation	5.948 (45.8)	.0665 (6.129)	.676	37.6	1.381
Government expenditure	5.790 (99.6)	.082 (16.945)	.941	287	1.398
Export of goods and services	6.342 (73.4)	.0393 (5.541)	.633	29.7	1.831
Imports of goods and services	6.659 (135.8)	.0466 (11.386)	.878	129.6	2.077
Consumer price index	3.188 (79.5)	.0532 (15.899)	.934	252.8	1.388

2- South Korea (1960-1980)

Economic Variables	a	b	R^2	F	D.W
GNP	1.738 (77.6)	.0967 (51.8)	.993	2679	1.659
Population	3.206 (371.9)	.0239 (31.144)	.982	969.9	1.420
GNP per head	5.435 (210.0)	.0735 (34.6)	.985	1195	1.534
Agricultural sector	7.132 (295.9)	.0421 (20.7)	.960	429.8	1.550
Industrial sector	5.359 (160.1)	.162 (58.1)	.995	3379	1.508
Manufacturing sector	5.112 (126.0)	.171 (50.6)	.993	2556	1.611
Service sector	5.915 (149.4)	.1454 (44.0)	.991	1934	1.910
Private consumption	7.625 (396.5)	.0792 (49.3)	.993	2434	1.686
Gross fixed capital formation	5.337 (69.5)	.169 (26.3)	.975	690.6	1.718
Government expenditure	5.844 (177.1)	.065 (23.8)	.969	566	1.487
Export of goods and services	4.091 (59.6)	.242 (42.3)	.990	1787.6	1.815
Imports of goods and services	5.442 (71.8)	.179 (28.3)	.978	803.2	2.113
Consumer price index	1.639 (62.08)	.133 (60.508)	.995	3661	2.033

3- Philippines (1960-1980)

Economic Variables	a	b	R^2	F	D.W
GNP	4.393 (397.4)	.0552 (59.2)	.995	3576	1.366
Population	3.2907 (1217.8)	.0282 (124.9)	.9988	15601	3.357
GNP per head	1.1027 (83.4)	.0270 (24.5)	.971	598.4	1.264
Agricultural sector	2.867 (187.4)	.0406 (13.8)	.983	1011	1.838
Industrial sector	2.194 (34.8)	.083 (15.8)	.933	249	1.632
Manufacturing sector	2.135 (34.6)	.0802 (15.6)	.931	242	1.607
Service sector	2.573 (66.5)	.0761 (23.7)	.969	563	1.877
Private consumption	2.640 (57.7)	.1025 (26.9)	.976	721	1.891
Gross fixed capital formation	1.014 (23.7)	.1349 (37.8)	.988	1431	1.413
Government expenditure	.209 (2.934)	.1267 (21.585)	.962	453	1.522
Export of goods and services	1.4889 (24.7)	.1044 (20.8)	.960	432	1.819
Imports of goods and services	1.505 (44.7)	.112 (40.0)	.989	1596	1.743
Consumer price index	2.553 (44.6)	.0884 (18.506)	.950	342.5	1.722

4- Thailand (1960-1980)

Economic Variables	a	b	R^2	F	D.W
GNP	5.032 (472.9)	.072 (81.4)	.997	6620	1.591
Population	3.248 (632.4)	.0302 (70.5)	.996	4971	1.380
GNP per head	1.784 (179.2)	.042 (50.6)	.993	2560	1.834
Agricultural sector	3.772 (256.8)	.047 (38.4)	.988	1474	1.547
Industrial sector	2.556 (145.5)	.101 (68.9)	.996	4745	1.788
Manufacturing sector	2.455 (187.2)	.099 (90.4)	.998	8165	1.359
Service sector	3.740 (183.0)	.0711 (41.4)	.990	1712	1.832
Private consumption	4.248 (714.9)	.066 (133.0)	.999	17691	1.647
Gross fixed capital formation	2.778 (37.6)	.098 (15.9)	.934	253.2	1.342
Government expenditure	2.084 (54.3)	.0906 (28.3)	.978	799.8	1.827
Export of goods and services	2.940 (61.6)	.0811 (20.4)	.958	414.7	1.543
Imports of goods and services	3.221 (47.1)	.074 (13.0)	.904	168.7	1.393
Consumer price index	3.296 (61.3)	.049 (10.836)	.867	117.4	1.332

5- Turkey (1960-1980)

Economic Variables	a	b	R^2	F	D.W
GNP	7.237 (484.5)	.0624 (50.1)	.993	2506	1.716
Population	3.3006 (478.6)	.0242 (42.1)	.9899	1771	1.625
GNP per head	3.9389 (250.1)	.0381 (29.0)	.979	841	1.717
Agricultural sector	3.784 (66.1)	.0662 (13.9)	.914	192	1.862
Industrial sector	2.672 (45.4)	.1224 (24.9)	.972	619.6	1.497
Manufacturing sector	2.522 (44.7)	.1233 (26.2)	.974	686	1.491
Service sector	3.4992 (55.5)	.1134 (21.5)	.963	463.4	1.555
Private consumption	4.245 (56.8)	.1104 (17.7)	.9457	313.2	1.471
Gross fixed capital formation	1.9449 (18.3)	.1457 (16.4)	.937	268.3	1.456
Government expenditure	2.415 (30.3)	.1173 (17.6)	.945	311	1.465
Export of goods and services	1.435 (19.6)	.1376 (22.6)	.966	511	1.527
Imports of goods and services	1.9745 (21.9)	.1423 (18.9)	.952	358.7	1.540
Consumer price index	1.0413 (8.223)	.1057 (9.997)	.847	99.9	1.802