Index of Speed of Economic Global Integration
Notes on the World Bank Approach

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ملخص

ملاحظات حول دليل البنك الدولى لقياس سرعة التكامل الاقتصادي الدولي

من المنتظر أن تشهد اقتصادات دول العالم تطورات جوهرية كنتيجة لما أسفرت عنه مفاوضات اتفاقية الجات وما واكبها من سياسات اقتصادية تتبعها دول العالم حالياً لإزالة أو تخفيف حواجز التبادل التجاري والاستعداد لانفتاح الأسواق المحلية على الأسواق العالمية .

من هنا أصبح لزاماً على دول العالم النامى أن تـــدرك أن تعظيم منافعها الاقتصادية من الانخراط فى النظام العالمى الجديد يعتمد بصفة أساسية على قدرتها على تحقيق الانفتاح دولياً والتكامل اقتصادياً فى تزامن واحد لتحقيق معدلات نمـــو متزايدة . وفى محاولة لقياس قدرة الدول المختلفة على التكامل مع النظام العــالمى الجديد قدم البنك الدولى دليلاً حسابياً مركباً من أربعة مؤشرات اقتصاديـــة لقيــاس سرعة التكامل الاقتصادى لدول العالم . واقتناعاً من الباحثين بأهمية هـــذا الدليــل وفائدته ، فقد سعيا من خلال هذه الورقة البحثية إلى تقديـــم وتقييــم هـــذا الدليــل اقتصادياً وحسابياً واقتراح بعض التعديلات لزيادة قدرته على قياس ما يهدف إليه .

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I- Introduction :

With the conclusion of GATT 1994 negotiations, the world economic order is expected to witness major developments. Relaxation of trade barriers and the establishment of the World Trade Organization are the institutional characteristics of the new order; which has its implications on both the domestic markets and production processes. Markets are no longer domestic. They increasingly become extension of the international markets with no barriers. Also production processes are integrated vertically and competing horizontally with their counterpart processes over the world. This indicates that the main features of the new economic order exceed and are wider than the mere openness and outward orientation that economic literature has advocated long time ago. Openness may be viewed as a necessary but not a sufficient condition for a specific economy to share gains of global integration. To guarantee such gains, integration of production and services processes is required.

For developing countries to maximize benefits from new trade arrangements depends on their capabilities in achieving openness and integration simultaneously. These countries target expected gains from this integration in terms of higher growth rates. Hence, it is of great importance to them to well measure their degree and speed of global integration. In this context, the World Bank (1996) presented a composite index with simple weights to measure the concept of integration and assess its speed. This index is the focus of the present paper.

In section two (and appendix I) the paper introduces the economic components of the index, analyzes briefly their economic rational, and casts light on some of the characteristics of the index, which may limit its capabilities. In section three, we introduce and apply some suggestions for developing the index. Some policy implications are discussed in the final section.

II- Index of speed of integration

Economic concepts related to integration could be captured in two different ways. One way is by documenting both policy stance such as

lation and laws of liberal trade policy, and the economy capabilities. In practice, comparisons of such factors across nations may be difficult and requires a lot of approximations. The other way is through figuring out outcomes of those policies and capabilities, and expressing them by some measurable economic variables. The methodology underpinning the World Bank's index of speed of integration (ISI) encompasses both ways. Four components to express direct as well as indirect measures of integration - using the World Bank terminology - are included in the index. "Ratios of trade to GDP and FDI to GDP [are the direct measures] .. Creditworthiness ratings [,] a measure of access to international capital markets, [,] and the share of manufactures in exports [,] an imperfect measure of a country's ability to produce at world standards and absorb technical knowledge [are the indirect ones]"(World Bank 1996, p20). The four components are normalized and averaged by simple weights to formulate a measure of integration. ISI is derived from changes in the levels of this measure between two selective periods of time (see appendix I for some details). On the basis of ISI, developing countries are grouped in four categories ranging from "fast integrators" to "slow integrators". ISI is a simple index, yet indicative, for international comparisons and economic policy inferences. Limiting components of the index to a small number make the index easy, doable and readable.

In the following sub-section we discuss ISI from three aspects, related to its methodology, the society of application, and the computational technique, bearing in mind that the index simplicity is a major advantage that must be kept.

Methodology

Formulating the index through the above mentioned components takes into consideration many concepts that express the new characteristics of international transactions, mainly the huge growing levels of trade (trade ratio to GDP), increasing importance of trade manufactures (the ratio of manufactures to merchandise exports) and also by counting for declining terms of trade of primary commodities versus the manufactures (by expressing trade ratios in real terms), and the

substantial levels of private capital flows in terms of investmer lending (FDI ratio to GDP and country creditworthiness rating).

Yet, many other aspects are not as much emphasized in the composition, such as the structure of trade and the concept of openness vs. integration. The growing value and importance of trade in services are apparent in trade statistics. In the World Bank's words (World Bank, 199, p43): there is now more to trade due to internationalization of trade in services. Really the ratio of trade to GDP captures the growth of trade in both merchandise as well as services. However, the change in the structure itself is not reflected in the measure, despite that ISI reflects the change in the structure of merchandise trade, for instance. In the same time, it could be argued that the index reflects market integration more than it expresses production integration, the new feature of globalization of the world economic system and its trade regime. Therefore, the concepts of "country of origin" are continuously under development, due to the increasing integration of production processes over the world. As indicated by the World Bank: "the composition of trade is different today, with a lower share of commodity trade in the total and higher shares of intra-industry trade" (World Bank 1996, p.21). To modernize and create many advanced industries in developing countries - informatics for instance - would require integrating these industrial processes with their counterparts in other countries.

In the same time, some aspects shown in the index are not purposed by the World Bank. For instance, manufactures ratio is used to reflect country's modern technological capabilities - and not to stress the change in merchandise structure. Also country's rating is intended mainly to reflect creditworthiness and not increasing levels of private capital flows. Therefore, it can be said that there is a mix in the index formulation between reflecting the country's capabilities indirect measure in the World Bank's terms and the outcome of these capabilities in terms of more global integration-direct measure. This un-homogeneity of the index methodology is questionable. Achieving homogeneity in index formulation would require the inclusion of other economic variables to replace the indirect measures. Ratios of private

loans to concessional debt and international aid flows, for example, may replace the index of country's creditworthiness. Analogously, trade in intermediates could express the outcome of country's ability to absorb technology, besides the usefulness of this variable in reflecting production integration. Deciding which variables to be picked to achieve homogeneity is highly debatable, yet, here we are concerned with the concept of formulation more than the case of selection.

Society of application

ISI is formulated on the purpose of assessing an economy success in keeping pace with international trade developments. Markets are now wider due to the relaxation of trade barriers. Also there is increasingly more to trade accompanying the internationalization of services, the quick developments in manufactures, and the globalization of production. ISI gives an answer to the question about the ability of a specific economy to make use of all these favorable developments. By definition, this index concerns with developing countries. Disparities of this ability are expected to be reflected in disparities of growth levels. Therefore, the World Bank used ISI levels to group developing countries into the above mentioned four categories, which is reasonable. Here we have to inquire about the rational of normalizing the components of the index by the whole world data – developed and developing , as it appears in the World Bank's actual application of ISI. What is the reason to combine two different sets of data. Recent economic integration policies and agreements seek, and sometimes, put stresses to ensure active participation of all countries of the world. This, besides the appreciated efforts of the international organizations to consolidate databases suitable for international comparisons, give reasonable justification for the World Bank to consider all of the world countries (except for few countries which have no available data) in the calculation process of the integration index.

However, and despite the above justification, countries of the world are by no means homogenous, either in their development stage or in the magnitude of their economic size. Hence, standardizing the underlying variables of the index based on some sub-grouping criteria will be more accurate and unbiased to the side of the developed

countries from the economic point of view. Moreover, it will give a better chance to each country to compare its integration progress with a comparable group of countries. Hence questioning the expected gains from applying the World Bank's aggregated formula in measuring the index must be made. Why to compare across economies that have no minimum common feature, of course, they all share the same international market. But when we come to draw policy lessons for Egypt or Tunisia, for instance, the eye will be on the good and bad experience of newly industrialized countries, not USA or England. Therefore, limiting the application to a society of countries with something in common would be very useful analytically.

Calculation technique

World Bank speed of integration index is derived purely from changes in the four indicative variables mentioned above. The concept underlying the methodology of calculation is that the change in selected variables attributed to integration gives an indication of how rapidly an economy is integrating with the global economy. The changes in the integration variables are computed for a period between two measures of three-year averages to reduce the effect of a single year measurement.

Speed of integration is of course function of the initial or starting level of integration. For this reason, the eliminating effect of the starting level of integration on its speed will provide more fair measurement of the efforts of the developing countries towards the integration with the rest of the world.

Also due to the proportional nature of both share of trade and FDI ratios-two of the above selected economic variables- with respect to GDP, the index is suffering from the lack of measuring the real changes of these components. This might show misleading results. For example the increase in the trade ratio may be due to other factors related to deterioration of GDP level rather than to more tendency towards openness. More generally, high proportional values might result in as a consequence of decrease in the denominator i.e. GDP

rather than increases in the numerators of such variables. Modifying the index to reflect the directions and magnitudes of these variables rather than just the relative concepts may come out with useful concepts. Weighting this ratio by the rate of exports growth, for instance, may express powerfully the feature of wider markets to trade the economic rational behind this indicator.

Moreover, effects of the four underlying components of the index on the integration are treated equally for each country. Thinking of inter-weights among these components to reflect the internal characteristics of the countries' economies, may lead to simple, yet, indicative mechanism for analyzing determinants of integration. This task necessitates the existence of time series of ISI figures. Hence analyzing the development path of the index and the influence of its components would be possible. Confining measuring to just the initial three years (on average) of the outset of each decade (80's and 90's) – as the World Bank did – would limit the index usefulness and capabilities. Annual application may be of more benefit. In the same time, it still gives room for any sort of aggregation.

III- Suggestions for developing the index

In the present section, three possible modifications of the ISI, are presented respectively with the due analytical implication on economic policy.

Table (1) summarizes results of applying an income grouping criteria for the society of application (see appendix II, and Abdel-latif and Selim for details of selection of countries) as compared to the measures of the World Bank.

Table (1)
Measuring speed of integration

Country	World Bank initial level of integration index 1981-83 (1)	World Bank speed of integration index 81-83 to 91-93 (2)	Adjusted initial level of integration index 1981-83 (3)	Adjusted speed of integration index 81-83 to 91-93 (4)
China	0.74	-0.29	0.75	-0.35
Egypt, Arab Rep.	-0.42	-0.19	-0.52	-0.78
Indonesia	-0.17	0.81	-0.06	0.01
Jordan	-0.05	-.039	-0.26	-0.52
Korea, Rep.	0.93	0.63	0.97	0.05
Philippines	-0.04	0.99	-0.33	0.32
Thailand	-0.06	2.12	-0.21	1.10
Tunisia	0.38	0.16	0.45	-0.63
Turkey	-0.42	1.87	-0.79	0.79

Source: Columns (1) and (2) : World Bank, Global Economic Prospects and the Developed Countries, 1996, tables A2-1 and A2-2. Columns (3) and (4) are calculated by the authors.

Columns (1) and (2) give the figures calculated by the World Bank for the selected group of countries based on the overall world standardization. Differences of these figures from those listed in columns (3) and (4) are due to the modification of standardization to be based on the within group of countries average and standard deviation. As could be seen from inter-comparison of these four columns, the resultant index is highly sensitive to the society of application. For instance, Egypt could be viewed as a slow integrator according to ISI of the World Bank. Yet, according to the proposed modification of the context of international comparison, Egypt is lacking behind her competitor economies in integration matters. As a matter of fact the new ISI depicts the Egyptian situation clearly. Egypt looks as if she is withdrawing from the international economy. A completely contrary situation to what her economic policy targets. .This indicates that something wrong is taking place. Implemented policy measures may be not enough in their magnitudes or there is something in the structure of the economy that is not well taken into consideration. This economic depiction is not available via the original ISI.

Second modification is presented in table (2). It is a suggested revised index for measuring the speed of integration among the selected group of countries with elimination of the effect of the stating level of integration, which is calculated as follows:

Step 1 : Changes relative to the initial value are calculated for each of the four underlying components of the index.

Step 2 : based on the average and standard deviation of the relative changes of each component, the revised index is calculated for each of the selected countries as an arithmetic mean with equal weights of the four standardized scores.

Table (2)
The revised index of speed of integration

Country	Average annual changes of the four components as percentages of the initial values				Revised speed of integration index 81-83 to 91-93
	Population adjusted trade ratio	Institution-al investor rating	FDI as a share of ppp GDP	Manufactur-ing export share	
China	3.99	-1.31	68.33	0.87	0.14
Egypt	-29.51	-2.00	-7.02	28.32	-0.71
Indonesia	-11.97	-0.09	17.50	77.13	0.34
Jordan	46.77	-3.36	-7.14	2.08	-0.35
Korea, Rep.	5.85	2.31	15.71	0.29	-0.12
Philippines	26.44	0.32	21.00	5.58	0.04
Thailand	48.36	2.01	16.43	13.26	0.40
Tunisia	-3.65	-1.08	-5.30	8.46	-0.58
Turkey	24.59	8.74	41.43	7.73	0.84

Source: calculated by the authors.

Revised ISI provides a simple illustrative mechanism of convergence-growth analysis. Korea, a fast integrator according to ISI, is now decelerating according to the revised ISI. With the emergence and activation of the industrial activities in other Asian countries Korea is loosing to a certain extent - a part of its international markets. If economic policy in Korea would fail to depict such features, the economy is in danger to loose its international competitiveness, mainly due to slow progress of manufacture exports – as shown in table (3). The table presents an assessment of the effect of each of the

selected economic variables in the overall degree of integration progress.

Table (3)
Measuring the effect of the four components on the speed of integration

Country	Average of the rate of change of the four components (1)	Relative effect (%) of population adjusted trade ratio on the speed of integration index (2)	Relative effect (%) of institutional investor rating on the speed of integration index (3)	Relative effect (%) of FDI as a share of ppp GDP on the speed of integration index (4)	Relative effect (%) of manufacturing export share on the speed of integration index (5)
China	17.97	5.56	-1.82	95.06	1.21
Egypt	-2.55	-289.07	-19.57	-68.73	277.37
Indonesia	20.64	-14.49	-0.11	21.19	93.41
Jordan	9.59	121.97	-8.76	-18.76	5.42
Korea, Rep.	6.04	24.23	9.56	65.03	1.18
Philippines	13.34	49.56	0.61	39.37	10.46
Thailand	20.01	60.41	2.51	20.52	16.56
Tunisia	-0.39	-231.27	-68.58	-335.36	535.22
Turkey	20.62	29.81	10.59	50.22	9.38

Source : Calculated by the authors

The idea behind this calculation is to find the relative contribution of the annual change of each variable-measured as percentages of the initial values-as related to the overall mean of the four annual changes. In more details starting with the percentage of the annual change of each of the four variables to its initial level (presented in table (2)), column (1) of table (3) is calculated as the percentage of these four percentages. Then, columns (2)-(5) re-weight the percentage of each of the four components as a level of contribution in the overall average.

Another modification is presented in table (4). Integration index is measured on annual bases. Its trend is used to analyze the determinants of integration.

Table (4)
The annual revised index of speed of integration

Country	1970	1975	1080	1985	1990	1991	1992	1993
China	..	..	-0.515	-0.545	-0.486	-0.177	0.051	0.311
Egypt	0.075	0.051	0.149	0.161	-0.232	-0.705	-0.650	-0.741
Indonesia	..	..	..	..	..	..	..	..
Jordan	..	..	..	..	..	..	..	..
Korea, Rep.	..	..	..	..	..	..	..	..
Philippines	-0.204	0.040	-0.141	-0.313	-0.400	0.039	-0.689	..
Thailand	0.332	-0.010	0.299	0.304	1.109	..	..	..
Tunisia	0.347	0.126	0.684	0.254	-0.088	0.022	0.496	0.243
Turkey	-0.619	-0.633	-0.722	-0.397	-0.458	-0.409	-0.381	-0.255

Note: (..) data are not available for one or more component
Source: Calculated by the authors.

From the figures of table (4), both China and Thailand are fast integrators, yet due to different factors. While exports of manufactures are the dominant factor that fast integration of China is accrued to, it is financial flows for lending the private business in Thailand that play the key role in integration with minor role for manufactured exports (see appendix III for details of annual integration index). Recent events in Thailand indicate that factors behind international integration play a major role in determining the sustainability of the pace on integration and the due growth rates. That is to say, financial integration if not well balanced with factors of integration that are related to the real sector of the economy, the whole integration process and the resultant growth are questionable.

Conclusion

The paper shows that ISI is a promising index. Modifications of the index to reflect some analytical desired characteristics are possible. Some of these modifications are presented in the paper with brief discussion of their economic policy usefulness.

References

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Appendix I : details on the World Bank Speed of Integration Index

The index's underlying four components are :

1-Annual average change in real trade of goods and services as share of GDP (adjusted for population size[1]) over the period 1980-83 to 1990-93.

2-Annual average change in institutional investor credit rating which ranks the chances of a country's default from zero to 100, with 100 representing the least chance of default over the period 1983-85 to 1993-95.

3-Annual average change in net foreign direct investment (FDI) computed as a ratio to GDP converted to international dollars using purchasing power parities (PPP's) over the period 1980-82 to 1990-92. Net FDI is defined as the investment to acquire a lasting management interest (at least 10 percent of voting stock) in an enterprise operating in a country other than that of the investor. It includes equity capital, reinvestment of earnings, other long-term capital, and short-term capital.

4-Annual average change in manufacturing exports over the period 1981-83 to 1991-93.

World Bank calculation of the speed of integration index proceeds as follows: First, yearly average rate of change is calculated for each of the above mentioned variables based on the two available measures. Second, standardized score for each of the four variables is computed based on the overall world average and standard deviation of each respective variable. Third, the index is then computed as simple arithmetic mean of the four standardized score for each country.

Two measurements of integration are reported in the Global Economic Prospects, 1996 : .

- Initial level of integration index, which depends on the values of the underlying variables during the period (1981-83).

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[1] The population – adjusted trade ratios are calculated as the residuals from a regression of the ratio of trade to PPP GDP on population.

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- Speed of integration index, which depends on the annual average changes of these variables over the subsequent period of about 10 years.

Table (A-1), shows the initial measure and the estimated yearly average of change for each of the four variables for the set of countries considered in the current study.

Table (A-1)
Initial and change levels of the underlying indicators of the speed of integration index

Country	Population adjusted trade ratio 1981-83	Institut-ional investor rating 1981-83	FDI as a share of ppp GDP 1982-83	Manufa-cturing export share 1981-83	Change in real trade as a share of GDP 80-83 to 90-93	Change in institutio-nal investor rating 80-83 to 93-95	Change in FDI as a share of GDP 80-82 to 90-92	Change in manufact-uring export share 81-83 to 91-93
China	14.52	65.60	0.06	70.40	0.58	-0.86	0.04	0.61
Egypt	-6.37	35.03	0.57	9.52	-1.88	-070	-0.04	2.70
Indonesia	11.70	55.73	0.12	4.94.	-1.40	-0.05	0.02	3.81
Jordan	-5.11	39.30	0.28	42.37	2.39	-1.32	-0.02	0.88
Korea, Rep.	23.40	56.30	0.07	90.95	1.37	1.30	0.01	0.26
Philippines	-6.96	40.10	0.10	48.21	1.84	0.13	0.02	2.69
Thailand	-6.72	51.30	0.28	28.89	3.25	1.03	0.05	3.83
Tunisia	-7.39	47.07	1.51	39.49	-0.27	-0.51	-0.08	3.34
Turkey	-6.71	17.63	0.07	42.28	1.65	1,54	0.03	3.27
Average	1.15	45.34	0.34	41.89	0.84	0.06	0.00	2.38
Standard deviation	11.95	14.21	0.47	27.04	1.73	1.02	0.04	1.41

Source: World Bank, Global Economic Prospects and the Developed Countries, 1996, tables A2-1 and A2-2.

Appendix II : details on the selection of society of application

Countries sample was selected according to a descriptive analysis for these countries paths of GNP growth since the 60s. the trend of GNP per capita is frequently used in the economic literature as an indicator for assessing the economic growth on the macro level. Accordingly, this indicator is used in the current study as a criterion for country sample selection. Long series of GNP per capita are maintained for the nine countries reported in table (A-2).

Table (A-2)
Trends of GNP per capita for the selected sample over 35 years

Country	Average (1961-75) (US$)	As % of sample average	Average (1976-87) (US$)	As % of sample average	Average (1988-95) (US$)	As % of sample average
China[2]	235	96	329	32	474	25
Egypt, Arab Rep.	215	88	549	53	709	38
Indonesia	214	87	481	46	728	39
Jordan[3]	246	100	2077	199	1459	78
Korea, Rep.	252	103	1928	185	6814	362
Philippines	231	94	587	56	814	43
Thailand	192	78	706	68	1864	99
Tunisia	323	131	1143	110	1564	83
Turkey	299	122	1583	152		133
Average of averages	245		1042		1881	
Standard deviation of averages	42		666		1963	
Coefficient of variation	0.17		0.64		1.04	

Source : Calculated from the World Bank WDI database 1977 and the World Bank, World Tables, 1975.

In table (A-2) we divided the 35 years into three periods, during the first (1961-75) the overall average of GNP per capita indicator was approximately 245 US$ and all countries' averages were very close to that level (S.D. = 42). In the second period (1976-87) the averages doubled more than four times and the deviations among the nine countries became significantly higher (S.D. = 666). The Egyptian average doubled two and half times during that period. During the period (1988-95), increases in the GDP per capita became huge in some countries like Korea, Rep., Turkey, and Thailand. This directed the trend of the overall countries average to a very high level of 2504 US$, and also the discrepancies among the nine countries (S.D. – 1963).

The above simple analysis leads to a rough conclusion that, although the selected countries had a similar start during the 60's and early 70's the levels of growth, as reflected by the GNP per capita indicator, became very different afterward. Historical application of ISI would

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[2] GNP is not available for the period (1970-75)
[3] GNP is not available for the period (1970-83)

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reveal much concerning to determinants of this deviation and hence growth. This group of countries is just a sample for illustration purpose, many other countries satisfy the same criterion. Many other criteria could be used.

Appendix III: details of the annual integration index:

Table (A-3)
Calculations of the first component: share of trade in GDP

	1970	1975	1980	1985	1990	1991	1992	1993
(I) GDP at factor cost (constant 1987 USS Millions)								
China	..	..	128774.3	197155.1	299871.0	327341.6	376927.7	422601.3
Egypt	9325.3	13053.7	22214.6	31374.7	36857.0	37646.7	37771.8	37978.2
Indonesia	..	..	..		..	..	..	..
Jordan	..	..	..	5208.3	4217.3	4337.2	4880.3	5188.5
Korea, Rep.	28097.4	44848.9	66193.2	97075.6	150794.6	172683.4	181418.5	..
Philippines	17381.7	22354.1	29878.8	28856.5	35806.4	35442.6	35391.6	..
Thailand	15531.5	20586.4	29670.6	38955.2	62188.7	..	..	..
Tunisia	3182.5	4873.3	6516.5	8110.0	9391.9	9787.3	10522.5	10660.9
Turkey	36421.5	48581.2	56403.9	70542.7	89189.2	90250.0	95827.3	101620.7
(II) Exports of foods and services (constant 1987 USS Millions)								
China	4914.8	8630.1	15785.6	28095.6	49344.0	56934.0	65665.1	71722.8
Egypt	2731.3	3446.2	5451.7	5886.9	9310.1	10306.2	10893.7	9651.8
Indonesia	7649.1	13233.4	18479.2	13759.5	20355.7	24403.8	28114.8	29030.7
Jordan	..	..	..	2119.7	3494.9	3367.6	3525.8	3798.4
Korea, Rep.	3458.6	10293.2	22002.3	35575.9	61593.5	68872.6	76436.0	85082.9
Philippines	3184.0	3942.4	8008.3	7091.4	11369.8	12024.5	12494.3	13271.5
Thailand	2821.2	3816.2	7040.4	10386.4	25124.3	29004.5	33104.7	37179.7
Tunisia	1007.4	1677.2	2744.8	2830.8	4494.0	4454.5	4811.7	5032.3
Turkey	1863.2	2538.3	2727.3	10828.1	16444.4	17056.9	18933.3	20388.3
(III) Imports of goods and services (constant 1987 USS Millions)								
China	4175.8	6886.2	19978.1	45674.5	40475.2	46914.9	60189.9	78553.7
Egypt	5500.4	9914.4	12854.7	14044.8	12884.6	12794.3	12436.1	13008.7
Indonesia	2514.5	7437.6	12456.1	16011.7	18736.5	21873.5	23793.2	24899.7
Jordan	..	..	..	4342.0	4966.6	4813.5	5828.2	6218.1
Korea, Rep.	6207.5	12154.1	24392.0	31779.7	67244.2	80185.6	84285.5	89931.8
Philippines	3932.7	5185.6	8786.0	6129.2	13175.7	12685.1	14160.9	15789.8
Thailand	5442.2	6095.9	10099.9	10821.3	30050.2	33766.9	36385.0	41174.2
Tunisia	1230.7	2143.1	3584.8	3672.6	5114.7	4826.8	5394.0	5581.5
Turkey	4283.5	8198.6	5849.6	11699.2	21070.9	19919.6	22094.2	29981.5
(IV) Share of trade in GDP = {(II)+(III)} / (I)								
China	..	..	0.28	0.37	0.30	0.32	0.33	0.36
Egypt	0.88	1.02	0.82	0.64	0.60	0.61	0.62	0.60
Indonesia	..	..	..	..	..	..	..	..
Jordan	..	..	..	1.24	2.01	1.89	1.92	1.93
Korea, Rep.	0.34	0.50	0.70	0.69	0.85	0.86	0.89	..
Philippines	0.41	0.41	0.56	0.46	0.69	0.70	0.75	..
Thailand	0.53	0.48	0.58	0.54	0.89	..	..	..
Tunisia	0.70	0.78	0.97	0.80	1.02	0.95	0.97	1.00
Turkey	0.17	0.22	0.15	0.32	0.42	0.41	0.43	0.50

Source: Items (I), (II), and (III): World Bank, WDI database, 1996. Item (IV) is calculated by the authors.

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Table (A-4)
Calculations of the second component: financial integration

	1970	1975	1980	1985	1990	1991	1992	1993
(I) Private non-guaranteed debt (USS Millions)								
China	0.0	0.0	0.0	0.0	0.0	0.0	200.4	555.5
Egypt	0.0	0.0	265.0	750.0	1478.5	850.0	600.0	500.0
Indonesia	461.0	2369.0	3142.0	3836.5	10260.5	13176.0	16281.0	14029.0
Jordan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Korea, Rep.	..	..	..	..	..	..	..	..
Philippines	919.3	1411.2	2454.3	2600.0	1200.9	1362.4	1030.4	2209.5
Thailand	401.5	736.2	1702.5	3369.9	7311.1	11970.7	13774.6	14585.1
Tunisia	0.0	0.0	180.0	246.0	218.0	213.0	208.0	203.0
Turkey	42.0	160.2	535.0	358.9	1053.8	1927.7	3431.1	6008.0
(II) External debt, total (USS Millions)								
China	0.0	0.0	4503.6	16696.0	55301.4	60259.2	72428.0	85927.7
Egypt	1801.6	4835.4	19130.7	36102.0	33402.1	33032.9	31575.3	31110.1
Indonesia	3432.7	11497.8	20937.7	36715.3	69871.5	79547.7	88003.7	89147.6
Jordan	119.5	345.0	1971.3	4021.8	8184.1	9553.2	7819.1	7501.2
Korea, Rep.	..	..	..	..	..	..	..	..
Philippines	2196.1	4170.7	17417.2	26638.6	30614.4	32448.0	32997.5	35928.1
Thailand	1000.6	1865.3	8297.1	17551.9	28088.0	37705.0	41811.8	42696.8
Tunisia	598.7	1108.7	3526.4	4884.0	7690.5	8249.5	8541.7	8681.5
Turkey	2746.4	5058.8	19131.1	25998.0	49237.7	50747.3	56451.3	68800.0
(III) Imports of goods and services (constant 1987 USS Millions)								
China	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Egypt	0.00	0.00	0.01	0.02	0.04	0.03	0.02	0.02
Indonesia	0.13	0.21	0.15	0.10	0.15	0.17	0.19	0.16
Jordan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Korea, Rep.	..	..	..	..	..	..	..	..
Philippines	0.42	0.34	0.14	0.10	0.04	0.04	0.03	0.06
Thailand	0.40	0.39	0.21	0.19	0.26	0.32	0.33	0.34
Tunisia	0.00	0.00	0.05	0.05	0.03	0.03	0.02	0.02
Turkey	0.02	0.03	0.03	0.01	0.02	0.04	0.06	0.09

Source: Items (I) and (II): World Bank, WDI database, 1996. Item (III) is calculated by the authors.

Table (A-5)
The third and fourth components: Foreign direct investment
and the share of manufacturing in exports

	1970	1975	1980	1985	1990	1991	1992	1993
(I) Foreign direct investment, net inflows (% of GDP)								
China	0.000	0.000	0.000	0.544	0.983	1.159	2.668	6.372
Egypt	0.000	0.070	2.392	3.396	2.074	0.772	1.291	1.253
Indonesia	0.860	1.481	0.231	0.355	0.955	1.156	1.277	1.268
Jordan	..	..	..	0.501	0.945	-0.286	0.798	-0.607
Korea, Rep.	..	..	..	..	..	..	..	..
Philippines	-0.373	0.654	-0.326	0.039	1.196	1.199	0.430	2.275
Thailand	0.607	0.148	0.587	0.419	2.854	2.050	1.898	1.444
Tunisia	1.101	1.034	2.688	1.284	0.617	0.964	3.377	3.848
Turkey	0.324	0.244	0.026	0.147	0.454	0.536	0.531	0.353
(II) Manufactures (% of merchandise exports)								
China	..	41.8	47.5	35.9	61.6	75.7	78.7	80.6
Egypt	27.1	34.1	10.9	10.1	32.4	30.7	35.3	32.9
Indonesia	1.2	1.2	2.3	11.0	35.5	40.8	47.5	53.1
Jordan	..	..	..	..	..	..	..	..
Korea, Rep.	76.5	81.4	89.5	91.3	93.5	91.7	92.8	93.1
Philippines	7.5	11.7	21.1	26.6	39.0	69.8	41.3	41.6
Thailand	4.7	14.7	25.2	38.1	63.1	65.5	66.8	71.1
Tunisia	19.1	19.6	35.7	44.5	69.1	68.9	72.9	75.1
Turkey	8.9	23.3	26.9	61.0	67.9	65.8	71.3	71.8

Source: World Bank, WDI database, 1996.