

Notes on
the Chinn-Ito Financial Openness Index
2008 Update

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The Chinn-Ito index (*KAOPEN*) is an index measuring a country's degree of capital account openness. The index was initially introduced in Chinn and Ito (*Journal of Development Economics*, 2006). *KAOPEN* is based on the binary dummy variables that codify the tabulation of restrictions on cross-border financial transactions reported in the IMF's *Annual Report on Exchange Arrangements and Exchange Restrictions (AREAER)*.

More information on how the index is constructed, the index's summary statistics, and how it compares with other measures of cross-border financial flows can be found in:

[“A New Measure of Financial Openness”](#), *Journal of Comparative Policy Analysis*, Volume 10, Issue 3 September 2008, p. 309 - 322. Note that this paper uses the 2007 version of the dataset (containing data up to only 2005), which will differ from the current version of the dataset.

The dataset is available at http://web.pdx.edu/~ito/Chinn-Ito_website.htm.

kaopen_2008.xls (Excel format) or *kaopen_2008.dta* (STATA dataset format) is a data file that contains the updated version of the Chinn and Ito index series. The dataset encompasses the time period of **1970-2008** for **182 countries**. A complete list of the countries and their data availability are presented in the Country List shown below.

What's new?

- *KAOPEN* is updated for 2008 using the summary table of AREAER 2009.
- The underlying data from the AREAER for *KAOPEN* of the following countries have been corrected.

Antigua and Barbuda (311), Botswana (616), Burkina Faso (748), Cameroon (622),

Central African Rep. (626), Chad (628), Congo Rep. (634), Costa Rica (238), Cyprus (423), Gabon (646), Gambia (648), Mauritania (682), New Zealand (196), Niger (692), Peru (293), Sudan (732), Togo (742), UAE (466)

- It appears that the international sanctions against terrorist states have made some countries, especially industrialized countries, start reporting implementations of capital controls from 2005 on. Hence, in the AREAER, the following countries appear as though they “imposed” capital controls since 2005. However, given the nature of the “capital controls” and also given the lack of perception or evidence that these countries did actually implement capital controls in economically meaningful ways, we decided to consider that these countries did not impose capital controls (i.e., the original k_3 is given the value of zero) from 2005 through 2008.

The countries of our concern here are:

Austria (122), Belgium (124), Germany (134), Sweden (144), Switzerland (146), Japan (158), Finland (172), Greece (174), Portugal (182), Spain (184), Czech Rep. (935), and Hungary (944).

Summary Statistics of *KAOPEN*

The summary statistics of *KAOPEN* for different income groups are shown in Table 1.

Figure 1 compares the subsample averages of *KAOPEN* for different income groups of countries. Figure 2 does the same thing, but in terms of ratios with the maximal value normalized as 1.00 for different income groups and decades.¹ Figure 3 compares the ratios of *KAOPEN* for developing countries across different geographical regions.

Table 2 ranks countries based on the level of *KAOPEN* as of 2008. The furthest right column indicates whether a country of concern increased (“Up”) or decreased (“Down”) the level of *KAOPEN* compared to that as of 2007. There are 56 countries that score the “most financially open” value of 2.50 in 2008 whereas there are 10 countries with the “least financial open” score of -1.83.

Table 3 reports that 23 countries increased the level of *KAOPEN* in 2008. Countries in the table are ranked based on the size of increase in *KAOPEN*. It appears that Seychelles liberalized its financial markets the most, increasing *KAOPEN* by 2.30.

¹ The emerging market countries are defined as the countries classified as either emerging or frontier during the period of 1980-1997 by the International Financial Corporation plus Hong Kong and Singapore.

Table 4 shows that 11 countries decreased the level of *KAOPEN* in 2008. Not surprisingly, Iceland tightened capital controls most significantly.

Figure 4 compares the averages of annual changes in *KAOPEN* (i.e., the first-differenced change in the normalized *KAOPEN*) for different time periods and different income groups. Figure 5 does the same thing for different geographical groups of developing countries.

Notes

The dataset is available at http://web.pdx.edu/~ito/Chinn-Ito_website.htm .

The document [“A New Measure of Financial Openness”](#) details the construction of the index and other relevant information. Please consult that document before sending inquiries to ito@pdx.edu.

When you use the index, please acknowledge our *JDE* or *JCPA* paper (see below) as the data source. We are not responsible for the results of the estimations that use the index. Although the index is based on the information released by the International Monetary Fund, the index is not associated with the Fund. All the errors of the index are the authors’ own. All rights reserved.

References:

- Chinn, Menzie D. and Hiro Ito (2008). [“A New Measure of Financial Openness”](#). *Journal of Comparative Policy Analysis*, Volume 10, Issue 3, p. 309 – 322 (September).
- Chinn, Menzie D. and Hiro Ito (2006). [“What Matters for Financial Development? Capital Controls, Institutions, and Interactions.”](#) *Journal of Development Economics*, Volume 81, Issue 1, Pages 163-192 (October). The longer version is available as NBER Working Paper No. 11370 (May 2005). The previous version is [“Capital Account Liberalization, Institutions and Financial Development: Cross Country Evidence.”](#) NBER Working Paper Series, #8967 (June 2002).

Appendix I: Country List

	Country Numb.	Country Code	Country Name	Availability		Country Numb.	Country Code	Country Name	Availability
1	512	AFG	Afghanistan	1970-2008	23	616	BWA	Botswana	1972-2008
2	914	ALB	Albania	1995-2008	24	223	BRA	Brazil	1970-2008
3	612	DZA	Algeria	1970-2008	25	918	BGR	Bulgaria	1994-2008
4	614	AGO	Angola	1993-2008	26	748	BFA	Burkina Faso	1988-2008
5	311	ATG	Antigua and Barbuda	1985-2008	27	618	BDI	Burundi	1970-2008
6	213	ARG	Argentina	1970-2008	28	522	KHM	Cambodia	1973-2008
7	911	ARM	Armenia	1996-2008	29	622	CMR	Cameroon	1970-2008
8	314	ABW	Aruba	1992-2008	30	156	CAN	Canada	1970-2008
9	193	AUS	Australia	1970-2008	31	624	CPV	Cape Verde	1982-2008
10	122	AUT	Austria	1970-2008	32	626	CAF	Central African Rep.	1970-2008
11	912	AZE	Azerbaijan	1996-2008	33	628	TCD	Chad	1970-2008
12	313	BHS	Bahamas, The	1977-2008	34	228	CHL	Chile	1970-2008
13	419	BHR	Bahrain	1976-2008	35	924	CHN	China	1984-2008
14	513	BGD	Bangladesh	1976-2008	36	233	COL	Colombia	1970-2008
15	316	BRB	Barbados	1974-2008	37	632	COM	Comoros	1981-2008
16	913	BLR	Belarus	1996-2008	38	636	ZAR	Congo, Dem. Rep.	1970-2000
17	124	BEL	Belgium	1970-2008	39	634	COG	Congo, Rep.	1970-2008
18	339	BLZ	Belize	1985-2008	40	238	CRI	Costa Rica	1970-2008
19	638	BEN	Benin	1979-2008	41	662	CIV	Cote d'Ivoire	1970-2008
20	514	BTN	Bhutan	1985-2008	42	960	HRV	Croatia	1996-2008
21	218	BOL	Bolivia	1970-2008	43	423	CYP	Cyprus	1970-2008
22	963	BIH	Bosnia & Herzegovina	1999-2008	44	935	CZE	Czech Republic	1996-2008

	Country Numb.	Country Code	Country Name	Availability		Country Numb.	Country Code	Country Name	Availability
45	128	DNK	Denmark	1970-2008	69	336	GUY	Guyana	1970-2008
46	611	DJI	Djibouti	1982-2008	70	263	HTI	Haiti	1970-2008
47	321	DMA	Dominica	1982-2008	71	268	HND	Honduras	1970-2008
48	243	DOM	Dominican Republic	1970-2008	72	532	HKG	Hong Kong, China	1970-2008
49	248	ECU	Ecuador	1970-2008	73	944	HUN	Hungary	1986-2008
50	469	EGY	Egypt, Arab Rep.	1970-2008	74	176	ISL	Iceland	1970-2008
51	253	SLV	El Salvador	1970-2008	75	534	IND	India	1970-2008
52	642	GNQ	Equatorial Guinea	1973-2008	76	536	IDN	Indonesia	1970-2008
53	643	ERI	Eritrea	1998-2008	77	429	IRN	Iran, Islamic Rep.	1970-2008
54	939	EST	Estonia	1996-2008	78	433	IRQ	Iraq	1970-2008
55	644	ETH	Ethiopia	1970-2008	79	178	IRL	Ireland	1970-2008
56	819	FJI	Fiji	1975-2008	80	436	ISR	Israel	1970-2008
57	172	FIN	Finland	1970-2008	81	136	ITA	Italy	1970-2008
58	132	FRA	France	1970-2008	82	343	JAM	Jamaica	1970-2008
59	646	GAB	Gabon	1970-2008	83	158	JPN	Japan	1970-2008
60	648	GMB	Gambia, The	1971-2008	84	439	JOR	Jordan	1970-2008
61	915	GEO	Georgia	1996-2008	85	916	KAZ	Kazakhstan	1996-2008
62	134	DEU	Germany	1970-2008	86	664	KEN	Kenya	1970-2008
63	652	GHA	Ghana	1970-2008	87	826	KIR	Kiribati	1990-2005
64	174	GRC	Greece	1970-2008	88	542	KOR	Korea, Rep.	1970-2008
65	328	GRD	Grenada	1979-2008	89	443	KWT	Kuwait	1970-2008
66	258	GTM	Guatemala	1970-2008	90	917	KGZ	Kyrgyz Republic	1997-2008
67	656	GIN	Guinea	1970-2008	91	544	LAO	Lao PDR	1970-2008
68	654	GNB	Guinea-Bissau	1981-2008	92	941	LVA	Latvia	1996-2008

	Country Numb.	Country Code	Country Name	Availability		Country Numb.	Country Code	Country Name	Availability
93	446	LBN	Lebanon	1970-2008	117	138	NLD	Netherlands	1970-2008
94	666	LSO	Lesotho	1972-2008	118	353	ANT	Netherlands Antilles	1970-2008
95	668	LBR	Liberia	1970-2008	119	196	NZL	New Zealand	1970-2008
96	672	LBY	Libya	1970-2008	120	278	NIC	Nicaragua	1970-2008
97	946	LTU	Lithuania	1996-2008	121	692	NER	Niger	1970-2008
98	962	MKD	Macedonia, FYR	1997-2008	122	694	NGA	Nigeria	1970-2008
99	674	MDG	Madagascar	1970-2008	123	142	NOR	Norway	1970-2008
100	676	MWI	Malawi	1970-2008	124	449	OMN	Oman	1977-2008
101	548	MYS	Malaysia	1970-2008	125	564	PAK	Pakistan	1970-2008
102	556	MDV	Maldives	1982-2008	126	283	PAN	Panama	1970-2008
103	678	MLI	Mali	1970-2008	127	853	PNG	Papua New Guinea	1979-2008
104	181	MLT	Malta	1972-2008	128	288	PRY	Paraguay	1970-2008
105	867	MHL	Marshall Islands	1996-2008	129	293	PER	Peru	1970-2008
106	682	MRT	Mauritania	1970-2008	130	566	PHL	Philippines	1970-2008
107	684	MUS	Mauritius	1972-2008	131	964	POL	Poland	1986-2008
108	273	MEX	Mexico	1970-2008	132	182	PRT	Portugal	1970-2008
109	868	FSM	Micronesia, Fed. Sts.	1996-2008	133	453	QAT	Qatar	1976-2008
110	921	MDA	Moldova	1996-2008	134	968	ROM	Romania	1976-2008
111	948	MNG	Mongolia	1995-2008	135	922	RUS	Russian Federation	1996-2008
112	686	MAR	Morocco	1970-2008	136	714	RWA	Rwanda	1970-2008
113	688	MOZ	Mozambique	1988-2008	137	862	WSM	Samoa	1975-2008
114	518	MMR	Myanmar	1970-2008	138	135	SMR	San Marino	1996-2008
115	728	NAM	Namibia	1994-2008	139	716	STP	Sao Tome and Principe	1981-2008
116	558	NPL	Nepal	1970-2008	140	456	SAU	Saudi Arabia	1970-2008

	Country Numb.	Country Code	Country Name	Availability		Country Numb.	Country Code	Country Name	Availability
141	722	SEN	Senegal	1970-2008	165	866	TON	Tonga	1989-2008
142	718	SYC	Seychelles	1981-2008	166	369	TTO	Trinidad and Tobago	1970-2008
143	724	SLE	Sierra Leone	1970-2008	167	744	TUN	Tunisia	1970-2008
144	576	SGP	Singapore	1970-2008	168	186	TUR	Turkey	1970-2008
145	936	SVK	Slovak Republic	1996-2008	169	925	TKM	Turkmenistan	1996-2008
146	961	SVN	Slovenia	1996-2008	170	746	UGA	Uganda	1970-2008
147	813	SLB	Solomon Islands	1982-2008	171	926	UKR	Ukraine	1996-2008
148	726	SOM	Somalia	1970-2008	172	466	ARE	United Arab Emirates	1976-2008
149	199	ZAF	South Africa	1970-2008	173	112	GBR	United Kingdom	1970-2008
150	184	ESP	Spain	1970-2008	174	111	USA	United States	1970-2008
151	524	LKA	Sri Lanka	1970-2008	175	298	URY	Uruguay	1970-2008
152	361	KNA	St. Kitts and Nevis	1988-2008	176	927	UZB	Uzbekistan	1996-2008
153	362	LCA	St. Lucia	1983-2008	177	846	VUT	Vanuatu	1985-2000
154	364	VCT	St. Vinc. & the Grenad.	1983-2008	178	299	VEN	Venezuela, RB	1970-2008
155	732	SDN	Sudan	1970-2007	179	582	VNM	Vietnam	1970-2007
156	366	SUR	Suriname	1970-2008	180	474	YEM	Yemen, Rep.	1995-2008
157	734	SWZ	Swaziland	1973-2008	181	754	ZMB	Zambia	1970-2008
158	144	SWE	Sweden	1970-2008	182	698	ZWE	Zimbabwe	1984-2008
159	146	CHE	Switzerland	1996-2008					
160	463	SYR	Syrian Arab Republic	1970-2008					
161	923	TJK	Tajikistan	1997-2008					
162	738	TZA	Tanzania	1970-2008					
163	578	THA	Thailand	1970-2008					
164	742	TGO	Togo	1970-2008					

Table 1: Summary Statistics

	Minimum	Mean	Median	Maximum	Standard Deviation
Full Sample	-1.83	0.00	-0.60	2.50	1.52
Industrialized Countries	-1.83	1.23	1.70	2.50	1.40
Developing Countries	-1.83	-0.22	-1.14	2.50	1.43
Emerging Markets	-1.83	-0.22	-0.87	2.50	1.43

Table 2: Country Ranking

Ranking	Country Name	KAOPEN	Change in KAOPEN	Ranking	Country Name	KAOPEN	Change in KAOPEN
1	Armenia	2.50		57	Chile	2.23	Down
1	Austria (IDC)	2.50		57	Lithuania	2.23	Down
1	Belgium (IDC)	2.50		57	Seychelles	2.23	Up
1	Bosnia and Herzegovina	2.50	Up	57	Slovenia	2.23	Down
1	Botswana	2.50		57	United States (IDC)	2.23	Down
1	Bulgaria	2.50		63	Dominican Republic	1.97	Up
1	Canada (IDC)	2.50		63	Jamaica	1.97	Down
1	Cyprus	2.50	Up	65	Sao Tome and Principe	1.81	Up
1	Czech Republic	2.50		66	Kyrgyz Republic	1.70	Up
1	Denmark (IDC)	2.50		67	Antigua and Barbuda	1.45	Down
1	Djibouti	2.50		67	France (IDC)	1.45	
1	Ecuador	2.50		67	Georgia	1.45	
1	Egypt, Arab Rep.	2.50		67	Slovak Republic	1.45	
1	El Salvador	2.50		71	Afghanistan	1.43	
1	Estonia	2.50		71	Mongolia	1.43	Up
1	Finland (IDC)	2.50		73	Cambodia	1.25	
1	Gambia, The	2.50		73	Costa Rica	1.25	
1	Germany (IDC)	2.50		75	Paraguay	1.18	Down
1	Greece (IDC)	2.50		76	Australia (IDC)	1.17	
1	Guatemala	2.50		76	Colombia	1.17	Up
1	Guyana	2.50		76	Croatia	1.17	
1	Haiti	2.50		76	Dominica	1.17	Up
1	Hong Kong, China	2.50		76	Honduras	1.17	Up
1	Hungary	2.50		76	Indonesia	1.17	
1	Ireland (IDC)	2.50		76	Kenya	1.17	
1	Israel	2.50		76	Kuwait	1.17	
1	Italy (IDC)	2.50		76	Lebanon	1.17	
1	Japan (IDC)	2.50		76	Malaysia	1.17	Up
1	Jordan	2.50		76	Marshall Islands	1.17	
1	Latvia	2.50		76	Mexico	1.17	
1	Liberia	2.50		76	San Marino	1.17	
1	Maldives	2.50		76	Saudi Arabia	1.17	
1	Malta (IDC)	2.50	Up	90	Bolivia	0.92	Down
1	Mauritius	2.50		91	Brazil	0.71	Down
1	Micronesia, Fed. Sts.	2.50		92	Azerbaijan	0.65	Up
1	Netherlands (IDC)	2.50		92	Papua New Guinea	0.65	Up
1	New Zealand (IDC)	2.50		94	Iraq	0.38	Up
1	Nicaragua	2.50		95	Korea, Rep.	0.18	Up
1	Norway (IDC)	2.50		96	Iran, Islamic Rep.	0.12	
1	Oman	2.50		96	Macedonia, FYR	0.12	
1	Panama	2.50		96	Netherlands Antilles	0.12	
1	Peru	2.50		96	Philippines	0.12	
1	Portugal (IDC)	2.50		96	Poland	0.12	
1	Qatar	2.50		96	Sierra Leone	0.12	Up
1	Romania	2.50		96	Sri Lanka	0.12	
1	Singapore	2.50		96	St. Lucia	0.12	
1	Spain (IDC)	2.50		96	Tajikistan	0.12	Up
1	Sweden (IDC)	2.50		96	Tonga	0.12	Up
1	Switzerland (IDC)	2.50		96	Turkey	0.12	Up
1	Trinidad and Tobago	2.50		107	Madagascar	-0.09	
1	Uganda	2.50		107	Russian Federation	-0.09	
1	United Arab Emirates	2.50		107	Thailand	-0.09	Up
1	United Kingdom (IDC)	2.50		110	Nigeria	-0.50	
1	Uruguay	2.50		111	Venezuela, RB	-0.76	Down
1	Yemen, Rep.	2.50		112	Argentina	-0.78	
1	Zambia	2.50		113	Albania	-1.14	
57	Bahrain	2.23		113	Algeria	-1.14	
				113	Aruba	-1.14	
				113	Bangladesh	-1.14	
				113	Barbados	-1.14	

Ranking	Country Name	KAOPEN	Change in KAOPEN	
113	Belarus	-1.14	Down	
113	Belize	-1.14		
113	Benin	-1.14		
113	Bhutan	-1.14		
113	Burkina Faso	-1.14		
113	Cameroon	-1.14		
113	Cape Verde	-1.14		
113	Central African Republic	-1.14		
113	Chad	-1.14		
113	China	-1.14		
113	Comoros	-1.14		
113	Congo, Rep.	-1.14		
113	Cote d'Ivoire	-1.14		
113	Equatorial Guinea	-1.14		
113	Ethiopia	-1.14		
113	Fiji	-1.14		
113	Gabon	-1.14		
113	Ghana	-1.14		
113	Grenada	-1.14		
113	Guinea-Bissau	-1.14		
113	Iceland (IDC)	-1.14		Down
113	India	-1.14		
113	Kazakhstan	-1.14		
113	Lao PDR	-1.14		
113	Lesotho	-1.14		
113	Libya	-1.14		
113	Mali	-1.14		
113	Mauritania	-1.14		
113	Moldova	-1.14		
113	Morocco	-1.14		
113	Mozambique	-1.14		
113	Namibia	-1.14		
113	Nepal	-1.14		
113	Niger	-1.14		
113	Pakistan	-1.14		
113	Rwanda	-1.14		
113	Samoa	-1.14		
113	Senegal	-1.14		
113	Solomon Islands	-1.14		
113	South Africa	-1.14		
113	St. Kitts and Nevis	-1.14		
113	St. Vincent and the Grenadines	-1.14		
113	Swaziland	-1.14		
113	Tanzania	-1.14		
113	Togo	-1.14		
113	Tunisia	-1.14		
113	Turkmenistan	-1.14	Up	
113	Ukraine	-1.14		
113	Uzbekistan	-1.14	Up	
167	Somalia	-1.56		
168	Angola	-1.83		
168	Bahamas, The	-1.83		
168	Burundi	-1.83		
168	Eritrea	-1.83		
168	Guinea	-1.83		
168	Malawi	-1.83		
168	Myanmar	-1.83		
168	Suriname	-1.83		
168	Syrian Arab Republic	-1.83		
168	Zimbabwe	-1.83		

Table 3: Countries that increased KAOPEN

	Ranking	Country Name	Change in KAOPEN	KAOPEN (2008)
1	57	Seychelles	+2.30	2.23
2	92	Azerbaijan	+1.52	0.65
3	1	Bosnia and Herzegovina	+1.25	2.50
4	65	Sao Tome and Principe	+1.25	1.81
5	76	Colombia	+1.25	1.17
6	76	Dominica	+1.25	1.17
7	76	Honduras	+1.25	1.17
8	76	Malaysia	+1.25	1.17
9	96	Sierra Leone	+1.25	0.12
10	96	Tajikistan	+1.25	0.12
11	96	Tonga	+1.25	0.12
12	96	Turkey	+1.25	0.12
13	107	Thailand	+1.05	-0.09
14	113	Turkmenistan	+0.70	-1.14
15	1	Cyprus	+0.27	2.50
16	1	Malta (IDC)	+0.27	2.50
17	63	Dominican Republic	+0.27	1.97
18	71	Mongolia	+0.27	1.43
19	94	Iraq	+0.27	0.38
20	95	Korea, Rep.	+0.27	0.18
21	66	Kyrgyz Republic	+0.27	1.70
22	92	Papua New Guinea	+0.27	0.65
23	167	Somalia	+0.27	-1.56

Table 4: Countries that decreased KAOPEN

	Ranking	Country Name	Change in KAOPEN	KAOPEN (2008)
1	113	Iceland (IDC)	-2.30	-1.14
2	113	Belarus	-1.05	-1.14
3	57	Chile	-0.27	2.23
4	57	Lithuania	-0.27	2.23
5	57	Slovenia	-0.27	2.23
6	57	United States (IDC)	-0.27	2.23
7	75	Paraguay	-0.27	1.18
8	63	Jamaica	-0.27	1.97
9	90	Bolivia	-0.27	0.92
10	91	Brazil	-0.27	0.71
11	111	Venezuela, RB	-0.27	-0.76

Figure 1: Development of *KAOPEN* for Different Income Groups

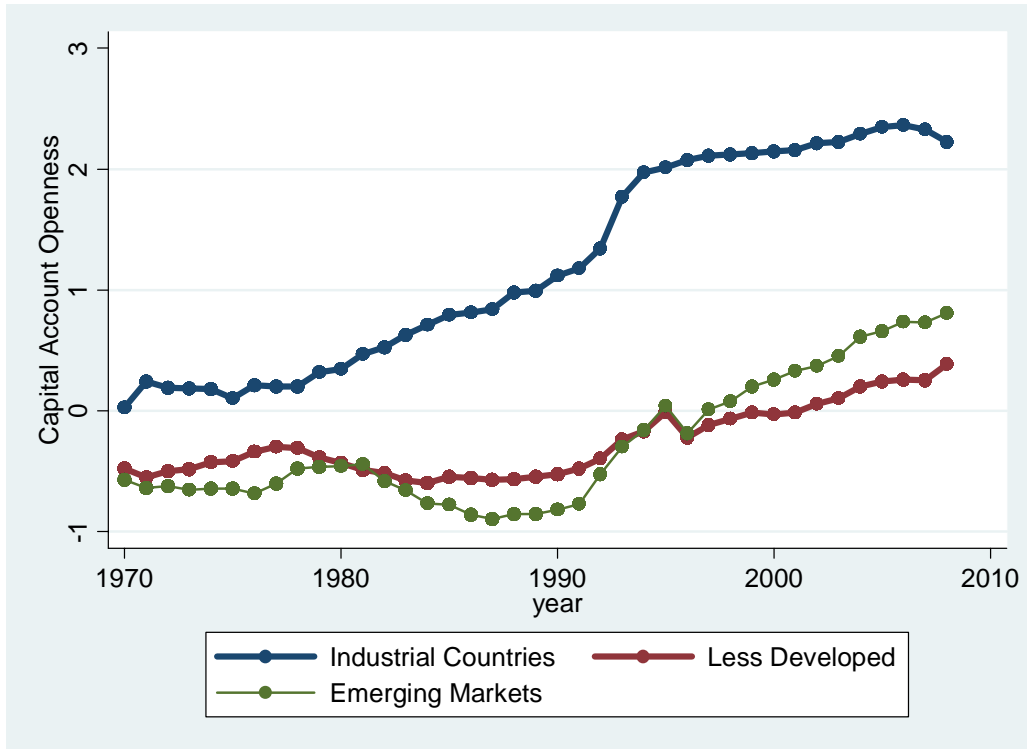
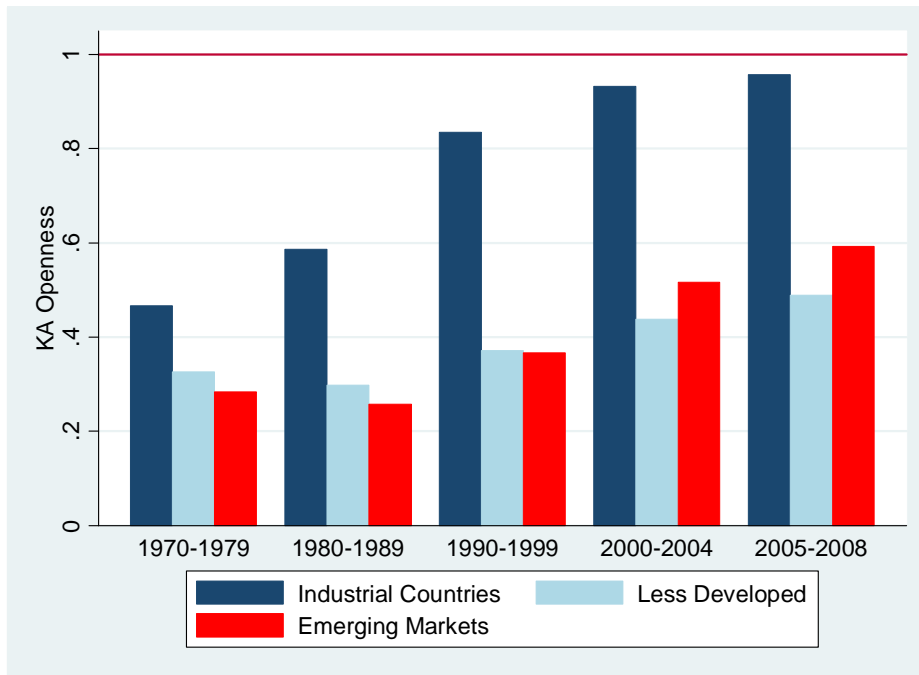
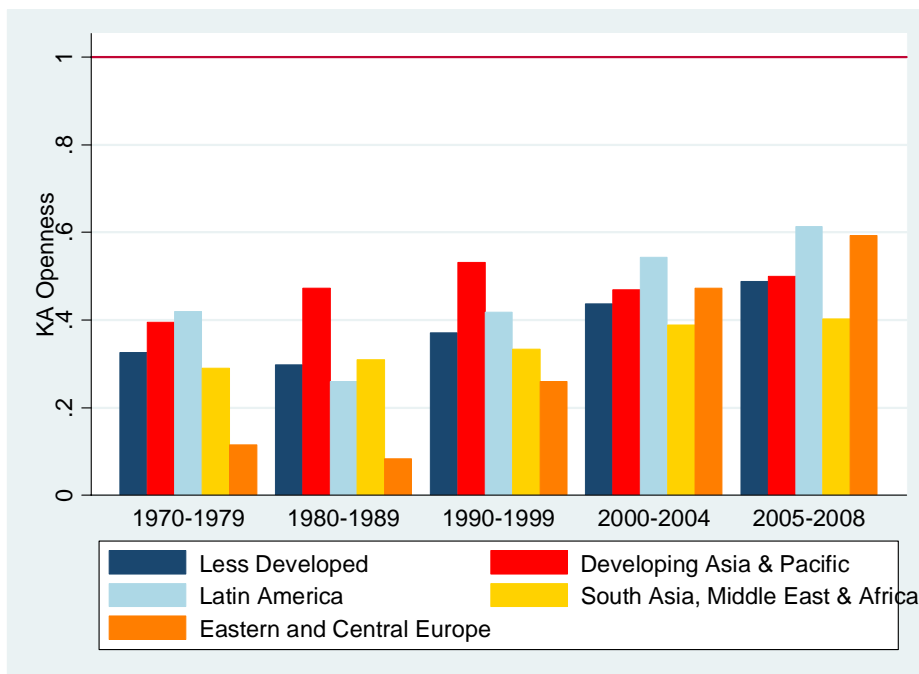


Figure 2: Comparison of *KAOPEN* Across Different Income Groups



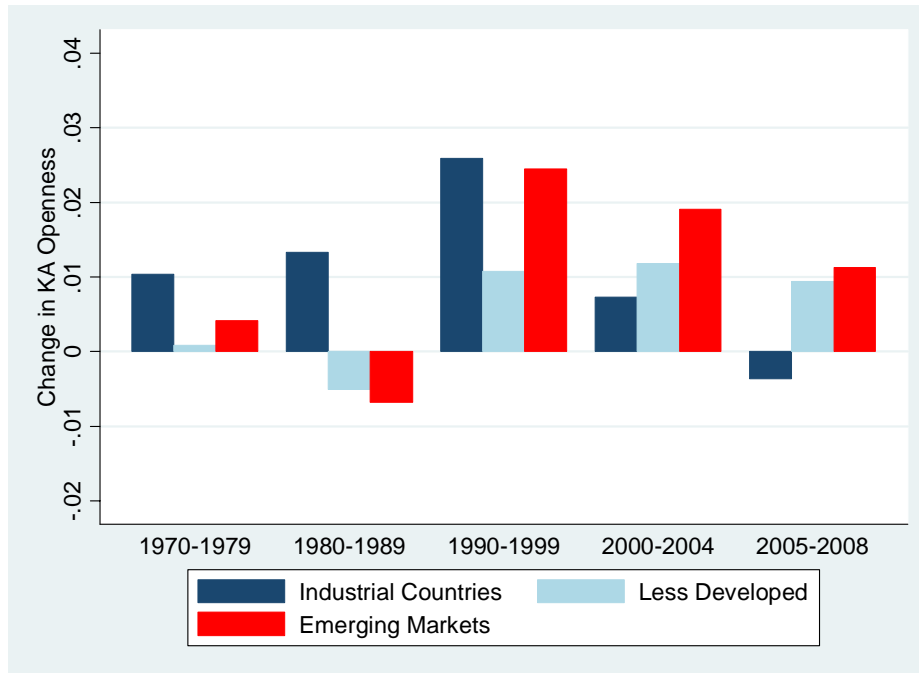
Note: The maximal value of *KAOPEN* is indexed as 1.00.

Figure 3: Comparison of *KAOPEN* of Developing Countries Across Different Regions



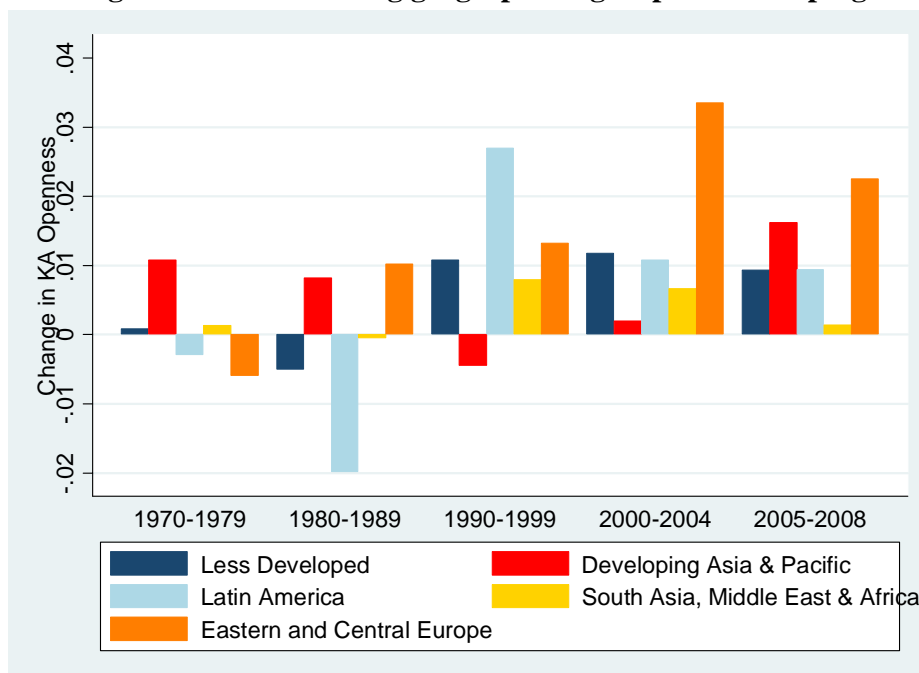
Note: The maximal value of *KAOPEN* is indexed as 1.00.

Figure 4: Change in *KAOPEN* among different income groups



Note: The change in *KAOPEN* is shown as the change in the normalized *KAOPEN* (max=1.00).

Figure 5: Change in *KAOPEN* among geographical groups of developing countries



Note: The change in *KAOPEN* is shown as the change in the normalized *KAOPEN* (max=1.00).