INVESTMENT AND INSTABILITY

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Abstract: Although recent research has repeatedly found a negative association between investment and socio-political instability (SPI), the existence and direction of causality between these two variables has not yet been investigated. We construct an index of SPI for non-overlapping five-year periods between 1960 and 1995 for a sample of 98 developing countries. We use the Granger causality framework and report Anderson-Hsiao-Arellano instrumental variable estimates. Our main finding is that, for the full sample, there is a robust causal relationship going from SPI to investment, and it is positive. In other words, we find that an increase in the level of SPI Granger causes an increase in investment. We argue that three reasons may explain this result: one is that SPI delays investment, another is that it destroys at least part of the capital stock, and the third is that SPI causes changes in government and in government policies that are beneficial in the long run.

Abstrakt: Ackoli soucasný výzkum opakovane nalezl negativní závislosti mezi investicemi a socio-politickou nestabilitou (SPN), existence a smer kauzálních vztahu mezi temito dvema promennými nebyly doposud zkoumány. Pro vzorek 98 rozvojových zemí jsme zkonstruovali index SPN pro nepresahující petiletá období z let 1960 a 1995. Naše práce pouzívá Grangeruv postup pro overení existence kauzálních vztahu. Náš hlavní poznatek je, ze existuje robustní kauzální vztah od SPN k investicím. Tento vztah je pozitivní, jinými slovy, vzrust úrovne SPN Grangerove zpusobí vzrust investic. Tento výsledek lze vysvetlit tremi duvody: za prvé, SPN zpozduje investování, za druhé, SPN znehodnotí alespon cást kapitálu, a za tretí, SPN zpusobuje takové zmeny ve vláde a vládní politice, které jsou prínosem z dlouhodobého hlediska.

Keywords: political instability, aggregate investment, Granger causality.

JEL classification: O40, E23, D72.

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I. Introduction

Socio-political instability (hereafter, SPI) is generally thought of as fueling social unrest, which in turn disrupts productive activities and increases uncertainty in the economy. By doing so, it undermines the incentives for the accumulation of physical capital and reduces the rate of economic growth. This is not only strikingly intuitive, but it is also a hypothesis that has been repeatedly confirmed in recent econometric studies.[1] Surprisingly, however, a number of theoretical contributions from the investment literature have recently highlighted the conditions under which uncertainty has a *positive* effect on the aggregate rate of investment.[2] Such a rare event in economics (a broad empirical consensus coupled with wide theoretical disagreement) calls for, *inter alia*, a re-examination of the evidence and, in particular, for a closer look at what this empirical literature has been leaving aside. One such overlooked issue is the existence and direction of a causal relationship between SPI and the accumulation of physical capital. That is the objective of this paper.

We offer two additional motivations. The first is that, although the negative relationship between SPI and economic growth has been elevated to the status of a "stylized fact,"[3] the empirical literature upon which this judgement is based has been criticized as atheoretical. The main reason for this criticism is the mounting number of explanatory variables selected in a rather ad hoc manner. Despite not fully agreeing with this

[1] See, among others, Gupta (1990), Perrotti (1994), Alesina, Ozler, Roubini and Swagel (1996), Alesina and Perrotti (1996), and Ades and Chua (1997).

[2] See, among others, Caballero (1991), Dixit and Pindyck (1994), and Abel and Eberly (1995). For an excellent survey, see Serven (1997). Notice that some of these conditions are especially strong in developing countries, like imperfect competition and sizable adjustment costs. In contrast, it should be noted that the theoretical literature on SPI is still at a very early stage. On the latter, see, e.g., Robinson (1994) and Benhabib and Rustichini (1996).

[3] Distilling the lessons from this literature, Mankiw lists among its robust findings that "political instability, as measured by the frequency of revolutions, coups, or wars, is negatively *associated* with growth" (1995, 302, italics added). Another assessment of what has been learned from such studies is the following "stylized fact" from Persson and Tabellini's chapter for the *Handbook of Macroeconomics*: "Political instability, as measured by more frequent regime changes, or political unrest and violence, is significantly and negatively correlated with growth in cross-country data" (forthcoming, 78).

characterization, we believe that studies that emphasize sensitivity and causality issues are the most necessary.[4]

The third and last motivating factor is that in a recent paper Campos and Nugent (1998) failed to find evidence of a causal relationship between SPI and economic growth, using panel data for a large sample of developing countries. One possible explanation for this rather surprising result is that the major effect of SPI on growth is indirect, operating mainly through investment.

The objective of this paper is to investigate the existence of a causal relationship between SPI and investment. To do so, we construct an index of SPI for non-overlapping five-year periods between 1960 and 1995 for 98 developing countries. The index is based on the number of political assassinations, revolutions and of successful *coups d'Etat.*[5] We use the Granger causality framework and report Anderson-Hsiao-Arellano instrumental variable estimates.

Our main conclusion is that, for the full sample, there is indeed a (robust) causal relationship going from SPI to the rate of investment, and it is positive. In other words, an increase in the level of SPI Granger causes an increase in investment. We argue that three reasons may explain this result: that SPI delays investment, that SPI destroys at least partly the capital stock, and that SPI causes changes in government and in government policies that are beneficial in the long run.[6]

The paper is organized as follows. In the next section (section II) we discuss methodological and data issues, including the construction of our SPI index. In section III we

[4] Durlauf and Quah summarize this literature and find that "in addition to the four variables suggested by the augmented Solow-Swan model (initial income and the rates of human capital investment, physical capital investment, and population growth), [different studies have used a total of] 36 different categories of variables and 87 specific examples" (1998, 45).

[5] This is the standard way of measuring SPI. See footnote 3.

[6] Formalizations of these three explanations can be found in Abel and Eberly (1995), Hirshleifer (1987), and Robinson and Acemoglu (1996), respectively. The "delay explanation" implies that the effect of uncertainty on the time-phasing of investment is to push it from current to future periods, an effect which would be picked up in the Granger causality testing as a causal and positive relation from SPI to growth.

present our Granger causality results and, in section IV, subject them to various sensitivity analyses. Section V presents our major conclusions and suggestions for further research.

II. Data and methodology

This section has two objectives. The first is to present the data used to construct our SPI index. The second is to discuss the conceptual and econometric advantages (as well as the limitations) of the Granger causality framework.

For our measure of SPI, we wish to be as consistent as possible with the other studies in this field.[7] Hence, we draw upon three indicators: number of political assassinations, revolutions and successful *coups d'Etat*.[8] The first is measured as the yearly number of assassinations per million people, and it is important because it differs from the two other variables in that it adds a component of magnitude to an index of SPI phenomena that otherwise would solely capture their frequency.

Most studies on this topic choose a cross-sectional design based on 25-year periods. This not only seems far too long for capturing instability, but it clearly hinders the study of causality. On the other hand, annual data would seem too short in duration to reflect underlying factors other than mere productive time lost due to the disruptive influences themselves. For these reasons, in this study we settle on five-year, non-overlapping periods, where the observations on SPI are the averages over each five-year interval.

In accordance with most of the literature, we use the method of principal components to construct our SPI index. We believe this method is the best one because it minimizes the inherent arbitrariness in the aggregation procedure. For our index of SPI, the weights resulting from this procedure are 0.3162 for assassinations, 0.6909 for revolutions, and 0.6502 for coups.

[7] See footnote 1.
[8] The data source is Barro and Lee (1993).

The data on investment rates are the average share of investment in GDP, by five-year period and by country, from Summers and Heston (1994). For SPI and investment, time series data covering the period 1960-1995 are collected for an unbalanced panel of 98 developing countries listed in the Appendix.[9] Included are 14 countries from Asia, 20 from Latin America, 16 from the Middle East and North Africa and 38 from Sub-Sahara Africa.

We should note, at the outset, that using the data and sample described above we were able to replicate the negative contemporaneous relationship between SPI and investment found in most of the literature. In other words, our OLS regressions of investment on SPI show that the coefficients on the latter are all negative and statistically significant at the 10 percent level, for the sample as a whole as well as for the four separate regions considered below, with the exception of Latin America. Yet we understand these results as suggesting only association, and hence as being rather far from revealing anything useful about the existence and direction of a causal relationship.[10]

Let us now turn to the methodology we selected to investigate the existence and direction of a causal relationship between socio-political instability (SPI), on the one hand, and the accumulation of physical capital, on the other. We use the Granger causality framework since it has endured the test of time and because of its elegance and strong intuitive appeal, namely, the notion that an event in the future cannot cause one in the past.[11]

Consider two time series, x_t and y_t. Series x_t is said to Granger cause series y_t if, in a regression of y_t on lagged y's and lagged x's, the coefficients of the lagged x's are jointly

[9] The reason for choosing an unbalanced panel was to keep the exercise as comparable to the rest of the literature as possible. The sample we use differs from other studies' by very few countries.

[10] Not surprisingly, we find that, for these results, it is irrelevant which variable we put in the right-hand side (investment or SPI).

[11] Recall Granger's remark that "causation is a non-symmetric relationship, and there are various ways in which asymmetry can be introduced, the most important which are controllability, a relevant theory, outside knowledge, and temporal priority" (1987, 49). For discussion see, e.g., Hsiao (1979), and Zellner (1988).

significantly different from zero. More formally, in

$$y_t = a + \sum_{i=1}^{m} b_i \quad y_{t-i} + \sum_{i=1}^{n} g_i \quad x_{t-i} + u_t$$

x is said to Granger cause *y* if the g_i are jointly significantly different from zero (an F-test). Notice that, if only one lag on the variable *x* is used, the test for existence of a causal relationship in the Granger sense reduces to one for the significance of the coefficient on *x* (a *t*-test).

There are two critical issues that have to be addressed in conducting Granger causality tests.[12] The first concerns the length and frequency of the time lags. On their length, Granger admonishes that "using data measured over intervals much wider than actual causal lags can also destroy causal interpretation" (Granger, 1987, 49). The use of five-year periods is short enough to allow us to investigate the effects of lagged variables and hence to undertake proper (Granger) causality tests, and yet is also long enough to be meaningful for studying the long-run effects of SPI on investment, and vice versa. As for their frequency, there are a number of tests to determine the "optimal number of lags," but because ours is a short panel we used a grid procedure to evaluate the robustness of the results presented below.[13]

The second issue to be dealt with lies in the information set. The Granger test depends on the assumption that the cause contains unique information about the effect, in the sense that it is exhaustive and not available elsewhere. If the information set underlying the test is composed solely of two series, both of which may be affected by a third variable, the test can be rendered useless.[14] In what follows, we present Granger causality results that are unaffected, after enlarged by a variable that potentially can play this disruptive role (namely, the initial level of real income per capita).

[12] We do not know of other studies that use the Granger framework in this context. However, some examples of recent studies that use Granger causality, in different contexts, are Bahmani-Oskooee et al. (1991), Blomstrom et al. (1996), Conte and Darrat (1988), Masih and Masih (1995), and Oxley (1994).

[13] We tried two lags, instead of one as reported throughout this paper. Our main conclusions are unaffected.

Finally, in this context we also have to be attentive to the econometric issue that arises from the inclusion of the lagged dependent variable. This is referred to in the econometric literature as the dynamic panel data problem.[15] It is well established that this lagged variable is correlated with the error term by construction, rendering the OLS estimator biased and inconsistent. To tackle this problem, in this paper we use the instrumental variable approach pioneered by Anderson and Hsiao (1982). This solution requires first-differencing all variables and using the second lag differences as instruments.[16] We now turn to the results.

III. Empirical results

We present the results obtained for the causality patterns between SPI and investment in Tables 1 and 2.[17] Because of the dynamic panel data problem, we selected the instrumental variable approach proposed by Anderson and Hsiao (1982), and followed Arellano's recommendation (1989) to use the levels as instruments (for the sake of efficiency) instead of the first-differences. The reader should be reminded, however, that in these as well as in all subsequent results presented in this study, all variables are first differences. As such, it is the change in investment rates between successive five-year periods that are regressed on the first differences in the SPI indexes. This helps to explain why the reported values of the adjusted R^2 are generally low.[18]

In Table 1 we ask whether SPI Granger causes investment. For our complete sample of 98 developing countries there is indeed such a causal relationship as indicated by the statistical significance of the effect of the lagged SPI term on the investment rate for the

[14] See Harvey for a discussion of this issue (1990).
[15] For discussion see, e.g., Hsiao (1986), Sevestre and Trognon (1992), and Baltagi (1995).
[16] In fact the results presented below follow Arellano's recommendation (1989) to use as instruments, not the lagged differences, but the lagged levels. Notice, however, that our results are not sensitive to this choice of instruments. The results are available from the authors upon request.
[17] Throughout the paper, we use the term "x Granger causes y" as an abbreviation for "past x values show a statistically significant effect on current values of y, given the past history of y."
[18] In a previous version of this paper, we also reported OLS results and find them to be broadly consistent with the IV estimates reported here.

current period. Strikingly, it shows that the relationship is positive rather than negative. While, as noted above, this is not inconsistent with theory —which is essentially ambiguous on the sign of the relationship— it is certainly inconsistent with the vast majority of empirical studies to date. Although the coefficients of the lagged SPI term are no longer significant in the regional sub-samples, they remain consistently positive and do not oscillate very far from the value of 0.5 obtained for the full sample.

Table 1.
Does SPI Granger cause investment?
(Endogenous variable is ΔINV_t)

	ΔINV_{t-1}	ΔSPI_{t-1}	Adj. R^2	N
All LDCs	.893647 *** (3.62041)	.502752 ** (2.12038)	-.001812	323
Asia	.509661 * (1.91667)	.589710 (1.38880)	-.014944	49
Latin America	.985997 *** (3.12381)	.323442 (.729824)	.006367	83
Middle East & North Africa	.482033 (1.46367)	.542963 (.753546)	-.009984	53
Sub-Saharan Africa	.950372 *** (2.82225)	.398886 (1.17682)	-.004967	138

Notes: All variables are in first-differences (Δ); five-year averages, between 1960-1995, and t-statistics are in parentheses. Instrumental variables estimates shown (Anderson-Hsiao-Arellano). *SPI* is the measure of social and political instability described in the text, and *INV* is the investment as a share of GDP. N is the number of observations.
* Statistically significant at the 10 percent level.
** Statistically significant at the 5 percent level.
*** Statistically significant at the 1 percent level.

In Table 2 we turn to the reverse question, that is, to whether investment Granger causes SPI. In this case, there is clearly no causal relationship in either the full sample or any

of the regions. The coefficient is essentially zero for the full sample and is between a positive 0.053 and a negative 0.01 in the sub-regions.

Table 2.
Does investment Granger cause SPI?
(Endogenous variable is ΔSPI_t)

	ΔSPI_{t-1}	ΔINV_{t-1}	Adj. R^2	N
All LDCs	.179173 (1.60772)	.009473 (.427063)	.111006	232
Asia	.242095 (.721596)	.052338 (.836329)	.060637	36
Latin America	.050252 (.225079)	-.006459 (-.127577)	.072611	62
Middle East & North Africa	.188081 (1.26888)	.014092 (.427949)	-.001590	37
Sub-Saharan Africa	.216226 (1.05233)	-.000037 (-.000973)	.164646	97

Notes: All variables are in first-differences (Δ); five-year averages, between 1960-1995, and t-statistics are in parentheses. Instrumental variables estimates shown (Anderson-Hsiao-Arellano). *SPI* is the measure of social and political instability described in the text, and *INV* is the investment as a share of GDP. N is the number of observations.
* Statistically significant at the 10 percent level.
** Statistically significant at the 5 percent level.
*** Statistically significant at the 1 percent level.

In sum, the main result of this exercise is that there is a Granger causality relationship going from SPI to investment, and it is positive. This obtains for our full sample, but not for any of the four regional sub-samples. Although one could easily blame this incongruency on the small number of observations (in each region), we prefer a different possibility. We strongly suspect that this relationship has a different time profile in different regions. In other words, we conjecture that the length of the lag structure required for a change in sign differs from one region to another. For example, could it be that in Africa it would require a lag length of two years to the relationship to change sign while in East Asia it would need, say,

seven years?[19] Before exploring further along these lines, we think it imperative to provide reasonable assurance that these results are robust. This is the objective of the next section.

IV. Sensitivity analysis

The most critical issue in applying the Granger framework concerns the content of the information set. In particular, the issue revolves around whether omitted variables might exist that could affect both investment rates and SPI, thereby giving rise to potentially serious biases in Granger causality results.[20] The most natural candidate for such an omitted variable is the initial level of real per capita income. In Tables 3 and 4, therefore, we wish to evaluate how and to what extent including a control for the initial level of real GDP per capita would affect the results of the causality tests reported above. More specifically, our hypothesis is that, in a given country, both the level of SPI and the investment rate would be negatively related to the omitted initial level of income per capita. Hence, in the results reported in Tables 3 and 4, we might expect to find negative effects of initial levels of income on both investment and SPI.

[19] It would be important to investigate under which lag length a causal relationship will appear (that is, whether using one, two, three or four-year lag lengths would change our conclusions). Gupta (1990) has an annual series for a similar SPI index but only until 1982. He also mentioned (via personal communication) that the updating of these series (until 1995) is not yet ready. We thus decided to leave this crucial exercise for future work.

[20] Although we only report the results for dealing with the issue of the information set (because we deem it the most crucial), a number of other modifications of the results presented in the previous section were also studied. First, our grid procedure for choosing the number of lags involved including two lags, instead of one as reported throughout. Second, we follow Arellano's recommendation (1989) of using as instruments, not the lagged differences, but the lagged levels. Third, these Granger causality results from OLS are broadly consistent with the IV estimates reported here. All these are not reported for the sake of space, but are available from the authors upon request.

Table 3.
Controlling for initial income,
does SPI Granger cause Investment?
(Endogenous variable is ΔINV_t)

	ΔINV_{t-1}	ΔSPI_{t-1}	$\Delta GDP0_{t-1}$	Adj. R^2	N
All LDCs	.1.0908*** (4.02819)	.570358** (2.26743)	-.000765 (-1.27153)	-.005594	318
Asia	.479503 (1.38807)	.566251 (1.34604)	-.000996 (-.785538)	-.043232	49
Latin America	.875797*** (3.12665)	.325820 (.788490)	-.001764 * (-1.90024)	-.011370	83
Middle East & North Africa	.591943 (1.15719)	.884785 (1.13967)	.000595 (.649242)	.012302	49
Sub-Saharan Africa	1.01528*** (3.03117)	.416341 (1.17973)	.000427 (.357729)	-.012951	137

Notes: All variables are in first-differences (Δ); five-year averages, between 1960-1995, and t-statistics are in parentheses. Instrumental variables estimates shown (Anderson-Hsiao-Arellano). *SPI* is the measure of social and political instability described in the text, *GDP0* is level of initial per capita income, and *INV* is the investment as a share of GDP. N is the number of observations.

* Statistically significant at the 10 percent level.

** Statistically significant at the 5 percent level.

*** Statistically significant at the 1 percent level.

From the results of these tables it can clearly be seen that the effects of initial level of GDP per capita term are generally negative. They are, however, generally not statistically significant. The closest case to statistical significance is the effect of initial income in the equation for investment for the Latin America sub-sample in Table 4 where this coefficient is significant at the 10 percent level.

Of greater importance, however, is the fact that the inclusion of this variable has little effect on the results of the causality tests. There is still, in Table 4, no causality going from investment rates to SPI as shown (for the regions), and there is still a causal relation for the full sample going from SPI to investment. Indeed, the size of the coefficient and its level of significance are slightly increased by the inclusion of the control. Similarly, there is a slight

increase in the coefficients of the lagged SPI term in most of the sub-samples. Once again, and still in contrast to much of the existing empirical literature on the relation between SPI and investment, the direction of the causal relationship is positive. Because we can only speculate about the possible reasons for this result, we leave these speculations for the next section.

Table 4.
Controlling for initial income,
does investment Granger cause SPI?
(Endogenous variable is ΔSPI_t)

	ΔSPI_{t-1}	ΔINV_{t-1}	$\Delta GDP0_{t-1}$	Adj. R^2	N
All LDCs	.166307 (1.51044)	.013304 (.538796)	-.000091 (-.535246)	.096659	229
Asia	.313547 (.873603)	.070839 (.950382)	-.000274 (-.497368)	.011435	36
Latin America	.043146 (.191834)	.002559 (.048111)	-.000232 (-.618292)	-.027902	62
Middle East & North Africa	.154136 (.989875)	.032343 (.620861)	-.000155 (-.717280)	-.037359	35
Sub-Saharan Africa	.177278 (.923239)	-.001221 (-.032562)	.000097 (.246857)	.153467	96

Notes: All variables are in first-differences (Δ); five-year averages, between 1960-1995, and t-statistics are in parentheses. Instrumental variables estimates shown (Anderson-Hsiao-Arellano). *LBSPI* is lower-bound SPI, *UBSPI* is upper-bound SPI, and *GDP0* is level of initial per capita income, and *INV* is the investment as a share of GDP. N is the number of observations.
* Statistically significant at the 10 percent level.
** Statistically significant at the 5 percent level.
*** Statistically significant at the 1 percent level.

V. Conclusions

The objective of this paper was to investigate the existence (and direction) of a causal relationship between SPI and investment. We construct an index of SPI (based on the number

of political assassinations, revolutions and successful *coups d'Etat*) for non-overlapping five-year periods between 1960 and 1995 for 98 developing countries. We use the Granger causality framework with Anderson-Hsiao-Arellano instrumental variable estimates. We find that the evidence in support of the popular hypothesis that a high level of SPI can cause a decrease in the rate of investment is much weaker than generally believed. Despite verifying the negative contemporaneous relationship between SPI and the investment rate, we find rather compelling evidence of a robust positive causal relationship going from SPI to the investment rate.

One important policy implication that can be derived from these results is that there seems to be less reason to believe that SPI, by itself, constitutes such a severe barrier to medium or long-term economic growth and investment, as has often been advocated. The negative effects seem to be limited to the short run and offset by the present finding of a positive effect on investment over the medium term. Certainly, the results strongly contradict the notion that lower levels of SPI should be achieved at virtually any cost.[21]

The findings of this paper also leave many questions unanswered and raise new ones that should be pursued in future research. First, in view of the fact that there could be several alternative explanations for the observed positive relationship between SPI and investment, it would be highly desirable to try to narrow down their range. Can this result be because SPI delays investment (Abel and Eberly, 1995)? Can it be because SPI destroys at least partly the capital stock (Hirshleifer, 1987)? Or is it because SPI causes changes in government and in government policies that are beneficial in the long run (Robinson and Acemoglu, 1996)? Which one of these is the most important reason? Does the relative importance of these explanations vary by region or time frame?

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[21] Recall that a common justification given by dictators during their first days in office is that they are needed to halt the chaos, which presumably characterized the previously existent democratic regime, because the cost of this instability is the disruption of productive activities with subsequent output and welfare losses.

Second, we have seen a sharp inconsistency between the existing results, that reveal a negative contemporaneous relationship between SPI and the investment rate, and our own findings of a positive and causal relationship going from SPI to the investment rate when the observations are for non-overlapping five year periods. This raises the following question: At what frequencies and lag lengths does the relationship change from negative and non-causal to one that is positive and causal? As noted before, this is one of the most important questions we leave unanswered. As soon as reliable data are available, attention should focus on this question.

Third, there would seem to be considerable scope for efforts to identify additional omitted variables, especially those of an institutional nature, which might be related to both the SPI measure and the rate of investment. Numerous institutional variables may be relevant, like the fairness and effectiveness of the judicial system, the stability of property rights, and the quality of the bureaucracy. Indeed, in a cross-sectional framework Keefer and Knack (1995) find that once these are taken into account, the negative effect of SPI on growth vanishes. Another important candidate for such an omitted variable role, following Persson and Tabellini (1992, 1994) and Alesina and Perotti (1996), might be the level of income inequality. It should be noted, however, that the data (on income distribution and institutions) needed for these "enlargements" of our Granger tests is mostly unavailable.

Fourth, considering that the current traditional measure of SPI is rather coarse (i.e., is sensitive only to major disruptions such as political assassinations, revolutions and civil wars), it might be useful to experiment with somewhat finer measures of more ordinary instances of political as well as of policy instability. By constructing such measures, one could then determine whether the results presented above still hold.

Finally, we also believe that it would be valuable to experiment with different causality frameworks, which can accommodate different lag structures as well as richer

information sets (Hsiao, 1979; Geweke et al., 1983). In addition, future work in the causality context should be more attentive to the myriad of econometric issues involved in dealing with an unbalanced dynamic short panel (Baltagi, 1995).

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Appendix
Sample of 98 developing countries
(Number of countries in parentheses)

Asia (14): Bangladesh, China, Indonesia, India, South Korea, Laos, Malaysia, Myanmar, Pakistan, Philippines, Singapore, Sri Lanka, Taiwan, and Thailand.

Latin America (20): Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Peru, Paraguay, Trinidad and Tobago, Uruguay, and Venezuela.

Middle East and North Africa (16): Algeria, Bahrain, Cyprus, Egypt, Iran, Iraq, Jordan, Kuwait, Morocco, Oman, Saudi Arabia, Syria, Tunisia, Turkey, United Arab Emirates, and Yemen.

Sub-Saharan Africa (38): Angola, Burundi, Benin, Burkina Faso, Botswana, Cameroon, Central Africa Republic, Chad, Congo, Ethiopia, Gabon, Ghana, Guinea, Guinea Bissau, Ivory Coast, Kenya, Liberia, Lesotho, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Niger, Nigeria, Rwanda, Sudan, Senegal, Sierra Leone, Somalia, South Africa, Togo, Tanzania, Uganda, Zaire, Zambia, and Zimbabwe.