The Nature and Significance of Increasing "Economic Freedom" Around the World
A skeptical view

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Abstract

The recent and substantial increase in economic freedom, as measured by the Heritage Foundation's index is examined in terms of the index's specific components. The dominant component across a highly diverse set of nations where economic freedom so measured has increased substantially—Monetary Policy—is represented simply by the degree of domestic inflation. It is argued that such "improvement" in economic freedom is as much or more the result of the broad and often harsh forces of globalization, as it is a response to independent domestic policy. In addition, the impact of the level of and changes in the Heritage index are considered with respect to other measures of economic, political and civic well-being. While there are significant relationships among these several measures in terms of levels (as distinct from

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changes), it cannot be inferred that changes in the Heritage index have a causal impact on other aspects of freedom.

Freedom is on the march.

— Harry S. Truman (May, 1960)
— Ronald W. Reagan (January 1987)
— George H. W. Bush (April, 1992)
— William J. Clinton (August, 2000)
— George W. Bush (frequently)

Economic freedom is ...an indispensable means toward the achievement of political freedom.

— Milton Friedman (1962, 8)

Introduction

One might think that a "march" getting underway close to a half century ago would have lost some steam. This is not the case, as the increasing frequency with which the assertion is made attests. Indeed, the evidence is consistent with some interpretations of the concept, the fall of communism across Eastern and Central Europe in the late 1980s being a case in point. A widely cited version of such freedom, the Heritage Foundation's *Index of Economic Freedom* (Miles, Feulner, and O'Grady 2004: henceforth, MFO), has been offered as evidence of the extent to which nations have traveled on their march to freedom.

Heritage, a highly visible and self-acknowledged conservative think-tank, in company with the *Wall Street Journal* has sought to quantify the extent of "economic freedom" across the nations of the world. Indeed, the Heritage index has been offered as compelling evidence in support of the "march." As the core issue of this paper, I will argue that the index offers nothing of the sort. Indeed, as will be seen, rather than providing evidence of the independent efforts of individual nations, the index provides much more of an indication of the global forces confronting the nations of the world. The difficulty with the way in which the index (and others like it) has been used lies in the naïve way in which weights have been assigned—equally—to the index's several components. An essential and unique aspect of the analysis to follow focuses specifically on this question, with results very much at odds with the Heritage-type conclusions. The extent to which such freedom impacts other desirable human objectives will also be considered. Before doing so, however, it will be useful to say more about the concepts themselves.

The term “economic freedom” has come to have a well-defined and distinct meaning as compared with other specific aspects of human well being, be they social or political. The former flows from the notions of “negative” and “positive” freedoms set forth initially by Isaiah Berlin (1958). For Berlin, negative freedom exists when “I am normally free to the degree to which no human interferes with my activity,” while positive freedom “derives from the wish on the part of the individual to *be his own master*” (Berlin 1958, 7, 16). Read “government” for “no human,” and one has the full spirit of “economic freedom” as it is presently used. The extent to which such freedom is a prerequisite for or inimical to other worthy human desires, including being a “master of one’s fate” remains in dispute. Milton Friedman (1962) long argued that economic freedom—minimal government—is a necessary condition for the latter, a position at odds with much of contemporary liberal thought. In addition to the dual concepts stimulated by Berlin, a third variant entered into contemporary discourse. I refer to the Freedom House concepts of freedom, namely political rights and civil liberties, which will be discussed below.

Precise and uniform definitions of any of the particular concepts of “freedom” vary with the user, and often with the particular empirical content employed. Consistent with the Freedom House notion, Harold Meyerson (2007, A13) has conflated political freedom with democratic change, in seeing such change as “a sphere where people can deliberate and decide on more than their coffee.” Such a “sphere” is certainly what is guaranteed in the first amendment of the U.S. Constitution, wherein “Congress shall make no law … abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the government for a redress of grievances.”

Beyond the philosophical and definitional issues, there remains the question of one’s ability to provide empirical meaning to the concepts in questions. In the first instance, as indicated in the Appendix below, these indices consist of a combination of several variables, themselves essentially qualitative in nature. A notable exception is the UN Human Development index, where the three components are each well-defined quantitative measures.

A further and perhaps more serious issue is the weighting of each of the indices’ components. There is no scientific way to attach weights if there is no agreement on the relative value of the respective components. A moment's glance at the variety of attributes listed in the Appendix makes clear the difficulty if not impossibility inherent in establishing the "appropriate" weighting. This, if nothing else, best explains, as noted below, the equal weighting utilized in the creation of the respective indices.

Despite these inherent and insolvable measurement problems, as indicated above, the indices are standard fare in the political and economic debates of our time. And however imperfect, the Heritage index is a reasonable proxy for minimal government per se. The real difficulty arises in analyzing *changes* in the index. This has to do with the weights given to the index components. According to the authors, an analysis of alternative weighting schemes suggests that equal weighting "provide[s] an accurate measure of economic freedom" (MFO, 42). That is to say, "all 10 of the factors are equally important ... [in] achieving economic freedom" (MFO, 20). This clearly implies that changes in the index are the result of more or less balanced improvement in *all dimensions* of the index, a conclusion not supported in any explicit form in the voluminous report. Nor, as will be shown below, is such an assertion supported in reality.

The analysis to follow will clearly show that the actual source(s) of change have been driven primarily by a single factor, "monetary policy," a factor having less to do with a nation's internal policy decisions than with external global economic forces. In addition, I will also explore the extent to which both the level and changes in the Heritage index carry with it implications regarding other forms of freedom—political and civic—along with other relevant aspects of economic well-being. Indeed, the evidence suggests little if any relationship between the Heritage measure of economic freedom and other central aspects of a nation's well-being.

A Brief Review of the Literature

The Heritage/WSJ index is not the only "evidence" cited regarding the extent, change and impact of "economic" freedom among nations. It has congenial competition with the Fraser Institute's Economic Freedom Index. The latter has also been utilized extensively over the past several years. Described as the "most ambitions attempt to quantify economic freedom" (Berggren 2003, 1), the Fraser index provides data as of 1970, 25 years in advance of Heritage. However, as compared with the latter, the Fraser coverage is for obvious reasons far more sparse in the early years, collected periodically rather than annually, and, most significantly for purposes here, it excludes the former communist nations. It is precisely with regard to the latter group that the Heritage index has shown the most substantial change.

As will be seen below, abstracting from the broader coverage—Fraser in years, Heritage in countries—the two indices have much in common. Thus, the conclusions one might draw from most any analysis will differ little with the use of one index over the other.

With respect to the broader significance of economic freedom, Milton Friedman (1962, 9) argued long ago that economic freedom (a "free market" in his terms) was a necessary condition for political freedom. "Necessary," perhaps, but surely not sufficient, as Charles Lindblom indicated in his major work, *Politics and Markets* (1977). Here he lists indicates the significant number of countries with free markets *absent political freedoms*. And further, Lindblom suggests that the causal relationship between political and economic freedoms (with private property foremost among the latter) may be the reverse of what Friedman implies.

While the vast majority of recent research efforts have, as indicated by Berggren, focused on the (presumed and generally confirmed) positive impact of economic freedom on economic growth, its impact on income equality and in particular on political freedom has also received some modest consideration. As noted in the introduction, nowhere in Berggren's review is the question of equal weighting of the index components discussed. And the results of his review are far from conclusive. Indeed, the evidence suggests little if any causal relationship. For example, while Scully (2002, 90) argues that economic freedom "has the attribute of increasing the rate of economic progress and improving the distribution of market income," he recognizes that "this finding is not without controversy." Scully cites Berggren (1999, 217), who argues that while the introduction of significant economic freedom (including lower taxes, less regulation, and the opening of markets) may well increase inequality in the short run, this adverse impact is likely to be short lived: "economic freedom and equality seem to have evolved on rather friendly terms, and they are clearly not foes, in a longer temporal perspective."

With regard to elements of democracy, Farr, Lord, and Wolfenbarger (1998) find little if any "link" between *political* and economic freedom across both "industrial" and "non-industrial" nations. And unlike economic freedom, political freedom seems to have little impact on economic well-being. They write: "The lack of support from the empirical evidence for a significant relationship between political freedom and economic well-being may be due to the fact that enhancements to political and civil liberties take considerable time to blossom in ways that could eventually lead to higher levels of economic well-being" (Farr, Lord, and Wolfenbarger 1998, 255).

Wu and Davis (1999, 57) offer an alternative in arguing that political freedom "is … the fruit of economic development," and that "democracy without a high degree of economic freedom cannot achieve high economic growth," a conclusion with which De Haan and Sturm (2003) differ. Using several measures of democracy, including the Freedom House values for political rights and civil liberties, the latter authors find a strong and robust relationship between levels of democracy (however measured) and economic freedom, concluding that "although it is sometimes suggested that democracy may hamper liberalization, our results *clearly* suggest otherwise (De Haan and Sturm 2003, 561, emphasis added).

In addition to the mixed conclusions regarding the impact of economic freedom per se, to which we return below, the concept of economic freedom itself is inherently imprecise, and was noted above. The next section is intended to add some modest degree of clarity regarding the content of such freedom.

The Sources of Increasing (and Decreasing) Economic Freedom

Heritage highlights a subset of nations (11) having experienced the greatest increase in economic freedom. While no criteria were given for the particular list, there is a way to characterize substantial increases in a nation's position within Heritage's own terminology. Heritage uses a 5-point scale for each of the 10 broad concepts (equally weighted) that go into the final index. It is this index that establishes the degree of economic freedom extant in each country. Economic freedom is seen as declining as the index value increases. Nations with scores between 1 and 1.99 are considered "free." The remaining three categories—"mostly free," "mostly unfree," and "repressed"—range from 2–2.99, 3–3.99, and 4-5 respectively. Thus, any country whose index has decreased by 0.5 points or more will have at least a 50/50 chance of moving to a higher level of freedom; if not, then from the lower to the upper half of the existing designation and thus having a new category as its "closest neighbor." Granted, the scaling itself is inherently arbitrary (two countries whose index differed by as little as 0.01 points are characterized as having differing qualitative levels of freedom), but a movement of at least half a point on a scale of 1–5 (minimum of 12.5 percent change) would seem to be a measurable increase in economic freedom. It is this movement in the index that is used as the criterion in defining nations where economic freedom has increased (declined) *significantly*.

Over the period since 1995 the Heritage index moved by at least half a point in 48 nations. All but 4 of these experienced an increase in economic freedom. Significant increases in economic freedom came to countries as diverse as Cuba, Sweden, Rwanda, and Armenia. The countries listed in Table 1 have been grouped into four categories: communist, developed, developing, and former communist. As can be seen, the first two categories have relatively few entrants, but the distinctions are worth recognizing nonetheless.

Overall, the index increased by an average of 0.80 of a point, no small move on the 5-point Heritage index, with little difference among the relatively few communist and developed nations and the developing nations (0.77, 0.72, and 0.76 respectively). Among the 13 former communist nations, the index declined by close to a full point (0.90). This is not the only difference that we will observe for these particular nations.

What is of interest here is not so much this substantial magnitude, but rather, the sources of change. While Heritage considers each of its broad attributes "*equally important,*" this is simply not the case for the countries under consideration. Indeed, as evidenced by the data in Table 2, the ten Heritage factors differ significantly in their contribution to the increasing overall level of economic freedom. These differences exist both across and within the four country categories. There are significant similarities as well.

In regard to the latter, changes in Monetary Policy have been quite large among all countries, from the 4 developed to the 2 communist nations, Cuba and Vietnam. And save for these 2 nations, two other factors have added to the change in the freedom index in a fairly significant way everywhere; these are reductions in government "intervention" and involvement in "banking." Beyond these three factors, the nations under consideration have taken measurably divergent paths on their march to economic freedom. For example, reductions in the "fiscal burden" have been substantial only among the former communist countries, while substantial changes (improvements) in "foreign investment," "property rights" and the "informal market" occur only among the developed group. And it is among these 4 countries where improvement in "trade" lags behind the changes elsewhere. Finally, in only one case is there a modest deterioration in economic freedom, namely the decline in "property rights" among developing nations.

Table 1: The Selected Countries

2004 Rank	Country	Value Start	Value End	Change Points	Change %	First recorded
			Communist			
144	Cuba	4.95	4.08	-0.87	-17.58%	1995
141	Vietnam	4.6	3.93	-0.67	-14.57%	1995
avg.		**4.78**	**4.01**	**-0.77**	**-16.08%**	
			Developed			
37	Malta	3.44	2.51	-0.93	-27.03%	1995
12	Sweden	2.63	1.9	-0.73	-27.76%	1995
14	Cyprus	2.64	1.95	-0.69	-26.14%	1996
29	Israel	2.9	2.36	-0.54	-18.62%	1995
avg.		**2.90**	**2.18**	**-0.72**	**-24.89%**	
			Former Communist			
106	Azerbaijan	4.78	3.39	-1.39	-29.08%	1996
99	Bosnia	4.61	3.3	-1.31	-28.42%	1998
22	Lithuania	3.5	2.19	-1.31	-37.43%	1996
44	Armenia	3.69	2.63	-1.06	-28.73%	1996
79	Moldova	4.1	3.09	-1.01	-24.63%	1995
52	Slovenia	3.74	2.75	-0.99	-26.47%	1996
29	Latvia	3.24	2.36	-0.88	-27.16%	1996
91	Georgia	3.94	3.19	-0.75	-19.04%	1996
56	Poland	3.46	2.81	-0.65	-18.79%	1995
6	Estonia	2.4	1.76	-0.64	-26.67%	1995
103	Kyrgyzstan	4	3.36	-0.64	-16.00%	1998
117	Ukraine	4.05	3.49	-0.56	-13.83%	1995
132	Kazakhstan	4.23	3.7	-0.53	-12.53%	1998
avg.		**3.82**	**2.92**	**-0.90**	**-23.75%**	
			Developing			
103	Rwanda	4.6	3.36	-1.24	-26.96%	1997
67	Nicaragua	4.08	2.94	-1.14	-27.94%	1995
95	Mozambique	4.39	3.28	-1.11	-25.28%	1995
137	Haiti	4.79	3.78	-1.01	-21.09%	1995
52	Mauritania	3.93	2.94	-0.99	-25.19%	1996
39	Botswana	3.38	2.55	-0.83	-24.56%	1995
111	Niger	4.25	3.43	-0.82	-19.29%	1996
72	Senegal	3.81	3	-0.81	-21.26%	1996

Table 1 (continued)

2004 Rank	Country	Value Start	Value End	Change Points	Change %	First recorded
63	Cambodia	3.68	2.9	-0.78	-21.20%	1997
58	Peru	3.59	2.83	-0.76	-21.17%	1995
33	Barbados	3.15	2.41	-0.74	-23.49%	1996
60	Cape Verde	3.6	2.86	-0.74	-20.56%	1996
124	Chad	4.24	3.54	-0.7	-16.51%	1997
24	El Salvador	2.94	2.24	-0.7	-23.81%	1995
13	Chile	2.6	1.91	-0.69	-26.54%	1995
95	Burkina Faso	3.96	3.28	-0.68	-17.17%	1996
41	Bolivia	3.21	2.59	-0.62	-19.31%	1995
140	Guinea-Bissau	4.5	3.9	-0.6	-13.33%	1999
86	Madagascar	3.74	3.14	-0.6	-16.04%	1995
63	Mongolia	3.5	2.9	-0.6	-17.14%	1995
130	Equatorial Guinea	4.47	3.9	-0.57	-12.75%	1999
101	Ethiopia	3.9	3.33	-0.57	-14.62%	1995
83	Guyana	3.7	3.13	-0.57	-15.41%	1995
148	Iran	4.79	4.26	-0.53	-11.06%	1996
98	Tanzania	3.79	3.29	-0.5	-13.19%	1995
avg.		**3.86**	**3.10**	**-0.76**	**-19.79**	

Source: Heritage Foundation

On the other hand, several factors have had little if any impact in most of the 44 nations considered here. These are the "fiscal burden," "foreign investment," "property rights," "regulation," and the "informal market." Thus, Heritage's assertion regarding the "*equal importance"* of all factors in achieving economic freedom is inconsistent with the evidence available among those nations experiencing the greatest increase in the freedom index over the recent past. Nor should one really expect otherwise.

Nations whose history, politics, social and cultural traditions are as diverse as those included here can hardly be expected to follow similar paths on their respective paths toward economic freedom. While it is beyond the scope of this paper to analyze in any detail

Table 2. Percentage Changes in Components of Heritage Index

	Trade	Fiscal Burden	Gov't. Inter-vention	Mone-tary Policy	Foreign Invest-ment
Communist (2)	20	9.5	5.6	80	11.1
Former Communist (13)	29.4	24.5	40.2	56.3	7
Developing (25)	20	7.77	29.7	31.6	9.7
Developed (4)	9.1	5.6	41.7	55.6	28.6
AWOL (4)	0	2.9*	40*	18.6	52*

	Bank-ing	Wages & Prices	Property Rights	Regu-lation	Informal Mkt.	Overall Index
Communist (2)	0	11.1	0	10	1	16.1
Former Communist (13)	28.9	20.5	2.2	2.1	8.5	23.6
Developing (25)	25	16.1	2.9*	5.1	71	19.9
Developed (4)	27.3	27.3	50	0	42.3	24.9
AWOL (4)	42.9*	43.5*	52*	40*	18.2*	23*

Source: Heritage Foundation

* Indicates increase (deterioration) in Index.

these significant differences, a brief descriptive commentary on changes among the two largest groups of nations is illustrative.

Developing nations made up the largest number under consideration, 25, an indication in part of the changes taking place throughout the world. Nations from South America, Asia, the Middle East, and Africa are included in this list. With such diversity (as is the case across all of the nations in our sample), the patterns found in a South American Peru do indeed differ from Sub-Saharan Burkina Faso or Rwanda.

However, these countries are all moving, in their own way, towards greater economic freedom. Lower scores for Monetary Policy, Government Intervention and Banking and Trade constraints dominate, with improvements of 43, 25, and 20 percent respectively. There have been less-significant movements in most of the other categories. The only anomaly for this group is the very modest (2.9%) *deterioration* in Property Rights.

Chile is the only nation in the group ranking with other "free" nations (index less than 2.00) Among the others, despite substantial increases in economic freedom, Iran remains "repressed," with the remaining nations ranging rather uniformly over the two mid-categories, "mostly unfree" (9) to "mostly free" (10).

The collapse of the Soviet Union in the late 1980s is reflected vividly in the changes among the 13 former communist nations. They were in effect "throwing off" the many aspects of their "unfree" economies. Again, these nations had the largest increase in economic freedom, a result of improvement across a number of the factors making up the index. Despite the breadth and depth of change, little movement occurred in Foreign Investment, Property Rights, Regulation, or Informal Markets. In all, however, the dramatic economic changes allowed Estonia, Latvia, Lithuania, Poland, and Slovenia, to join the European Union in 2004.

Among the nations that experienced a change of at least a half point in the Heritage index, 4 experienced a *decrease* in economic freedom. Argentina, Malaysia, Nigeria and Venezuela combined saw their Heritage index increase from 3.00 to 3.69, a deterioration of 23 percent, moving the group very close to the "repressed" category. Data for the 4 nations marching in the wrong direction, the AWOL group, are given in Table 2. Needless to say, for the index to *increase*, there must be a deterioration in the several components constituting economic freedom. And this is the case. With only two exceptions, the deterioration is substantial across all aspects save for the Informal Market. Perhaps most interesting beyond these changes is the contrary movement of two of the ten factors, Fiscal Burden and Monetary Policy. The improvement is minimal in the former, but not so regarding the latter. And it is this "variable," Monetary Policy, which is of significant import in the overall reduction in the Heritage index.

A Uniquely Dominant Factor

The most consistent factor across all of the nations considered has been the impact of Heritage's Monetary Policy measure. Not only have changes here been uniformly the largest in each the four diverse country groupings, but as noted above, it is this factor alone that has shown *improvement* among the 4 nations in which economic freedom has *declined*. In other words, independent of a nation's history, culture, stage of development, political and economic system, and movement toward or away from greater economic freedom, "improvement" in "Monetary Policy" has dominated the other Heritage components. Half of the countries in our sample had a substantial decrease (improvement) in their monetary-policy index of either 3 or 4 points. Only 6 had no change, and the lone exception (to prove the rule) was Equatorial Guinea, where the index increased from 2 to 3.

There is a second unique attribute embodied in the monetary measure. That is the fact that Heritage uses a *single* variable, the "average inflation rate from 1993 to 2002," in calculating the Monetary Policy score (MFO, 59). Among the other nine measures, none contain fewer than 3 variables and the Informal Market scale contains 7. In effect, the factor with the consistently largest impact on the overall index is treated in the most simplistic manner. That is, a low rate of inflation is assumed to be a measure of the independence of the *nation's* monetary authority. It is not immediately obvious why, given the great diversity among the nations under consideration, it is here where the march to economic freedom receives its strongest support. Equally perplexing is the fact that a similar *independent* policy would seem to exist in the 4 nations where in all other aspects, economic freedom declined significantly.

There is an explanation consistent with the multi-faceted diversity extant among the nations under consideration. Its source lies in the phenomenon we know of as "globalization, " that is, the "dramatic integration of countries and peoples of the world" (Stiglitz 2002, 9). Trade among nations has been a reality long before Adam Smith discovered its virtues. However, never before has the "integration" of individual nation-states had such a profound and limiting effect on national autonomy. The impact of globalization, as it proceeds today, is felt across cultural, social, religious and political boundaries. Hardly an element of national identity remains isolated from its sweep. The most profound impact remains in the economic sphere, and in particular with respect to domestic wage and price determination. And it is here where an alternative and more reasonable explanation for changes in the Heritage index lies.

The specific Heritage measure that dominates its overall change in "economic freedom" has little if anything to do with the *independence* of each nation's monetary authority, and is more aptly seen as an indication of its *dependence* on factors beyond "local" policy control.

William Greider (1997, 24, emphasis added) makes the point explicitly: "National governments *and their central banks* discover from these episodes that private finance capital, once it is in motion collectively, can sometimes veto the counterweight of governments, even when the leading governments act in concert."

The essence of the argument focuses on the flow of financial capital on a global and unprecedented scale. To a greater and greater extent, national governments and their central banks have found themselves beholden to the private wealth holders whose loyalty transcends national identification, belonging first and foremost to their returns on capital. And it is the sovereign *debt holders'* antipathy towards inflationary pressures that puts a virtual strait-jacket on individual central banks. This is a perspective shared across the ideological spectrum, as indicated in the vivid description offered by Jerry L. Jordan (2001, 44, emphasis added): "[these] global market participants represent a class of stateless voters, roaming the world's economies seeking the best wealth-creating institutions. They represent an *irresistible force.*"

For many nations of the world, the pound of flesh required, a low- if not zero- inflation "policy," takes precedent over any particular domestic priority, be it the reduction in poverty, unemployment, or other policies carrying a redistributive overtone.

And just as the nation's monetary "authority" finds itself bound by forces beyond its boundaries, so too do its workers, however they might be represented at the bargaining table. While disagreement abounds over the impact of globalization on changes in world and national income equality (see Lee 2002, Lindert and Williamson 2001, and Slaughter and Swagel 1997 for competing perspectives), there is clear-cut evidence pointing to an obvious decline in wages, both absolute and real. In addition to creating a less than sympathetic monetary authority, the free flow of capital, both financial and real, has harnessed labor's strength across the world. For example, Mishel, Bernstein, and Allegretto (2005, 393) find increases in real wages of 1.1, 0.9 and 0.5 percent for the periods 1979–89, 1989–2000 and 2000–03 across all OECD nations.

These broad wage movements across the trading nations of the world are fully consistent with the equally modest (if non-existent) pressure on prices. This is particularly the case for the past 15 years, when inflation across the nations of the world was virtually absent. Since 1990, the Cleveland Fed's index of "world inflation" has been in excess of 1 percent in only four years, and in excess of 2 percent in two of those years; from 1999 through 2006 it has not exceeded 0.05 percent. (Federal Reserve Bank of Cleveland, 2007) In a world of sovereign nations it is unlikely that a coordinated policy among central banks, be they truly independent or not, could be so well coordinated as to produce such a result. At a minimum, as Greider (1997, 42) suggests, intra-nation price and wage changes have been "collectively" determined to a greater and greater extent by the decisions of private individuals and firms operating in a global milieu. This is not to say that national institutions, including the central banking authority, are totally impotent. One can grant some residual degree of autonomy. However, what can be rejected is the Heritage implication that the most significant of their freedom factors—simply the degree of domestic inflation—has, over the recent years, had much if anything to do with a nation's conscious desire for greater economic freedom.

The latter assertion is supported (strengthened) in considering changes that have taken place in economic freedom as measured by the Fraser Institute. The Fraser index has, as noted above, been more widely used—despite its exclusion of Eastern bloc nations—in large part because of it earlier starting date (1975 versus 1995 for Heritage). There are other ostensibly significant differences in the two indices. As compared with Heritage, Fraser compresses a large number of qualitative and quantitative components into five broad components of economic freedom. Illustrative of the latter is the way in which each of the organizations accounts for central bank autonomy; Heritage's "Monetary Policy" and Fraser's "Access to Sound Money" are similar in intent, and yet Heritage's total reliance on the recent rate of inflation stands in contrast to the four attributes utilized by Fraser. Nevertheless, the impact of the Fraser notion of "sound money" differs little from the more simplistic "Monetary Policy."

The extent to which each of the five Fraser components has shifted over the recent past is given in Table 3. With but a single exception—the legal environment—changes in each component have, as with Heritage, been in the direction of increasing economic freedom. This is true when we use only the Heritage sample of countries, as well as when we use the entire Fraser list. More striking, and consistent with the "globalization" vs. "central bank autonomy" argument, is the fact that it is in the area of "sound money" where economic freedom has gotten its biggest lift. Indeed, for the period since 1995, "sound money" has dwarfed the other four Fraser attributes. Over the more extended period, since 1990, the other components have had

Table 3: Percentage Changes in Fraser Index Components

	Component					
	Size*	Legal	Money	Trade	Regula-tion	Overall
			Heritage Nations			
2002/1995	5.5	-7.5	50	1.6	11.8	12.8
2002/1990	11.7	6.5	48	16.9	26.6	24
			All Fraser Nations			
2002/1995	5.3	-6.7	23	3	5.3	6.7
2002/1990	11.3	3.6	29	15.3	15.7	14.3

Source: Fraser Institute (2004)

* See Appendix for full designation of each component.

relatively larger impact on the overall level of economic freedom. But throughout, none approach the "sound money" factor. These results, while quite stark among the nations leading the march to freedom, hold across all of the nations included in the Fraser list. As with movements in the Heritage index, this result is fully consistent with the notion that broader, extra-national forces have played a significant role in the internal circumstances of all nations during this recent era in which "globalization" has been so pervasive.

Partners in the March to Freedom

The second issue that flows from the movement towards economic freedom, however facilitated, concerns the impact of increasing economic freedom on other desirable human objectives. That is, to what extent does the evidence support Milton Friedman's assertion quoted at the outset—to the effect that an increase in economic freedom is a necessary condition for advances in other aspects of freedom? There is a substantial literature dealing precisely with this assertion. At times the discussion turns on the relationship between the concepts of "positive" and "negative" freedom discussed in the introduction.

The Heritage- and Fraser-type indices deal essentially with "negative" freedom. That is, the freedom to pursue one's own self-defined interests requires a minimum of government interference, precisely the way in which the Heritage index is conceived—"freedom from" the coercive hand of government. On the other hand, "positive" freedom requires a good bit of government's "helping" hand.

The specific question considered here is the extent to which the documented march toward ever-increasing economic freedom, especially among those nations where this trend has been the greatest, has been accompanied by improvements in other aspects of human well-being.

In the first instance one might consider other aspects of economic life, specifically growth and equality, along with broader social aspects of well-being. United Nations' data will be useful in such an exploration. Equally relevant are other "non-economic" aspects, including the quality of civil and political life. That is, on the assumption that economic freedom is a necessary condition for advances elsewhere in society, one may reasonably ask if it is a sufficient condition as well. Data permitting such an analysis exist here as well. Specifically, the annual publication of Freedom House, *Freedom in the World*, provides measures of both political rights and civil liberties in much the same way as Heritage does for economic freedom. A brief illustrative characterization for each of these measures—UN and Freedom House—is given in the Appendix.

Regression results of this analysis are given in Tables 4 and 5. In Table 4 the level of the 2004 Heritage index is one of the independent variables; the change in the index is used in Table 5. Dummy variables are used to characterize the distinct differences among the 44 nations in our sample. Dependent variables include the United Nations' Human Development Index as a measure of overall well being; the UN-provided Gini coefficient as a measure of equality; and the Freedom House measures of political rights and civil liberties.

As should be expected, the level of the Heritage Index as of 2004 has no independent impact on the Human Development Index (Table 4, column 1) after accounting for the components that make up the index (life expectancy, education and gross national income). However, the Heritage index is significant related to each of these components (columns 2, 3 and 4). Indeed, the coefficient on the Heritage Index is significant in all but the changes in HDI and Civil Liberties. Thus, if one is inclined to argue causality rather than association, the level of economic freedom among our sample of nations has a desirable

Table 4. Regression Results for Level of Economic Freedom, 2004

	1	2	3	4	5	6	7	8	9	10	11
	HDI	Life	Edu	GNI	PPP	Gini	Δ HDI	Pol	Δ Pol	Civil	Δ Civil
Intercept	-0.15	80.27	1.08	10888.1	16136.9	50.39	38.27	-4.45	-2.14	-2.96	0.64
Heritage 2004	0.01	-7.84	-0.15	-3006.2	-4011	-5.24	15.22	2.78	0.61	2.09	0.05
t-ratio	0.83	***2.97***	***2.96***	***2.75***	***3.44***	***2.04***	1.57	***7.73***	**1.97**	***7.03***	0.27
Developed	-0.02	15.73	0.16	16410.4	16189.5	-13.63	4.92	-0.1	0.81	-0.11	0.53
t-ratio	0.05	***2.93***	1.65	***7.39***	***6.83***	1.38	0.25	0.14	1.28	0.19	0.27
Former Communist	-0.02	14.19	0.27	1664.68	3784.42	-14.96	-5.59	0.06	0.35	0.29	0.49
t-ratio	***0.89***	***4.62***	***4.76***	1.31	***2.79***	***4.53***	0.48	0.14	0.97	0.82	***2.17***
Communist	0.03	23.95	0.37	1839.75	2312.05	-7.37	-21.72	0.83	-0.31	1.06	-0.07
t-ratio	0.9	***3.45***	***2.89***	0.64	0.76	0.99	0.86	0.88	0.38	1.34	0.13
Life expectancy	0.01					0.24					
t-ratio	***8.6***					1.56					
Education Index	0.41					-3.65					
t-ratio	***9.12***					***2.05***					
GNI	0.00004					-0.0004					
t-ratio	***3.01***					1.17					
R^2	0.97	0.53	0.47	0.64	0.70	0.51	0.00	0.67	0.01	0.65	0.06
F	161.4	13.02	10.76	25.9	26.38	6.11	0.8	23.73	1.11	20.81	1.7

t-ratio in ***bold italics***: significant at less than 0.05. *t*-ratio in **bold**: significant at less than 0.10.

Table 5. Regression Results for Impact of Change in Economic Freedom

	1	2	3	4	5	6	7	8	9	10	11
	HDI	Life	Edu	GNI	PPP	Gini	Δ HDI	Pol	Δ Pol	Civil	Δ Civil
Intercept	-0.11	58.71	0.07	2998.44	4899.41	29.97	22.77	3.56	0.66	3.3	-0.82
Δ Heritage 2004	0	3.72	0.14	995.3	1623.02	0.05	18.18	-0.22	1.17	-0.35	0.45
t-ratio	0.07	0.56	1.12	0.36	0.55	0.01	0.8	0.16	1.63	0.34	1.1
Developed	-0.02	22.88	0.3	19165.7	19855.7	-17.97	-9.81	-2.72	0.21	-2.05	0.49
t-ratio	0.43	***4.34***	***3.05***	***8.88***	***8.27***	**1.72**	0.55	***2.64***	0.35	***2.58***	1.42
Former Communist	-0.01	16.17	0.32	2359.62	4754.58	-16.66	-5.73	-0.52	0.41	0.23	0.41
t-ratio	0.72	***4.64***	***4.98***	1.66	3	***4.65***	0.48	0.45	1.09	0.43	1.8
Communist	-0.02	16.96	2.25	-844.07	-1264.7	-12.98	-7.81	3.28	0.26	2.94	-0.03
t-ratio	0.57	***2.36***	1.85	0.29	0.39	**1.74**	0.31	***2.34***	0.33	***2.71***	0.06
Life expectancy	0.01					0.28					
t-ratio	***8.51***					1.59					
Education Index	0.05					0.07					
t-ratio	***8.89***					0					
GNI	4E-06					-1E-04					
t-ratio	***2.86***					0.4					
R^2	0.97	0.43	0.38	0.64	0.61	0.54	0	0.19	0	0.22	0.06
F	158.31	8.97	7.53	20.21	18.17	4.79	0.8	3.57	0.8	3.97	0.8

t-ratio in ***bold italics***: significant at less than 0.05. *t*-ratio in **bold**: significant at less than 0.10.

impact on a nation's health, education, income, equality and levels of political rights and civil liberties. This result is consistent with some of the literature noted above.

The country dummy variables indicate that the individual components of economic well-being are generally significantly higher among the developed nations, a result that is not surprising. On the other hand, with one interesting exception, the country dummy variables are insignificant with respect to political rights and civil liberties. The exception is with respect to civil liberties, where, among the former communist countries, the level of civil liberties is less than the other nations in our sample. Again, this is not a particularly surprising result, given the extent and speed with which free-market institutions have supplanted state ownership throughout much of this part of the world.

None of this is to deny the close association between economic freedom and other freedoms, be they civil or political. The simple correlation between the Heritage index and the Freedom House measures are highly significant. What cannot be inferred from these relationships is causality. The movements—in effect revolutionary—toward economic, political and civic freedoms occurred across these nations in such a way as to preclude distinguishing between "dependent" and "independent" variables. The unique historical, political and cultural traditions provide a better understanding of the particular way in which nations embark upon and continue their respective journeys, ideally towards freedom in the broadest sense. In his extended discussion of the collapse of communism across Eastern European nations, Stokes (1993, 255, emphasis added) writes as follows:

> because of their differing historical memories, the manner in which they extracted themselves from communism, the initial decisions they made, and the varying quality of their leaderships, each country is implementing these principles [of political democracy and market economics] in a slightly different way. Indeed, the *variety of responses* is one of the strengths of the process underway in Eastern Europe.

A different story emerges when testing for the impact of *changes* in the Heritage Index. As is evident in Table 5, the coefficient on changes in economic freedom is not significant (at the 10 percent level) in any of the equations. There appears to be no relationship at all between changes in the index and changes in the HDI and in Civil

Liberties. The relationship does approach significance (0.11) with respect to Political Rights. The country dummy variables again seem reasonable. That is, the developed countries have greater degrees of political rights and civil liberties with the reverse being the case in the two communist countries in our sample. However, there is no significant relationship with regard to changes in either of these two measures.

Conclusion

The march toward economic freedom over recent past has been both broad and, among several nations across the world, substantial. The analysis above has focused on the nature of these changes among 44 diverse nations, ranging from those under communist rule to the most industrialized, with large numbers of developing and former communist nations making up the bulk of the sample.

The authors of the Heritage index used in the analysis have suggested that the ten broad categories that constitute the index are essentially of equal importance. This is simply not the case. The recent substantial movement to greater economic freedom among the nations considered has occurred in a variety of ways. With one significant exception, the factors involved have been as diverse as the nations themselves. Nor is such a result surprising, given the enormous diversity of circumstances confronting each of the countries.

The one exception is that the single factor which has *dominated uniformly* among all nations tells us as much about the external pressures nations confront as it does about the independent choices they make. That factor, Heritage's "Monetary Policy," is uniquely determined by a single attribute, the nation's recent rate of inflation. This conclusion also holds, and is further strengthened, when considering an alternative measure used by the Fraser Institute. It is not a difficult case to make: the external pressures on wages and prices imposed via global competition has as much if not more to do with domestic inflation than does the willful policy of the central bank. In other words, the recent and significant improvements in the economic freedom index among nations, be it the Heritage or Fraser version, has had less to do with national will and sovereignty than with immutable global forces.

A second aspect of the analysis concerned the extent to which the rapid changes in economic freedom (from whatever source) stimulated or at least were accompanied by changes in other aspects of a nation's wellbeing. These aspects include the United Nations' Human Development Index, the degree of inequality as measured by the nation's Gini coefficient, and the degree of and changes in political rights and civil liberties as measured by Freedom House.

While there is no independent relationship between the level of economic freedom and the HDI, the freedom index is significantly related to variables measuring health, education, income, inequality, the level and changes in political rights and in the level of civil liberties. As discussed in the literature review above, with the exception of the causal/mutual reinforcing relationship between economic freedom and economic growth, the fact of correlation provides little evidence regarding the direction, or the existence, of causation.

The latter reservations are supported with respect to the impact of the changes in the degree of economic freedom. With one exception, changes in the Heritage index turn out to be insignificant in all of the equations. The one exception is the relationship between changes in the index and changes in political rights across the 44 nations; here the positive relationship approaches the usual standard of statistical significance. Again, however, causality is not to be assumed and, as discussed above, the relationship between economic freedom and political rights is likely to be one of mutual support.

In sum, the precise meaning of economic freedom, particularly as it has spread over the past several years, is not fully obvious. The extent to which inflation has ebbed across all nations, coupled with the fact that this factor has dominated the changes in indices measuring economic freedom, raises an interesting question. That is, the extent to which the substantial march toward economic freedom been the result of conscious and internally determined forces is less than obvious. A reasonable alternative, or at least companion explanation, is that all nations have to one degree or another been caught up in the extra-national force most often referred to as "globalization." And to the extent that this is true, a significant rise in oil prices could well lead to a decline in "economic freedom," at least as construed by the indices used in such measurement.

In addition, save for the impact on economic growth per se, there is little evidence suggesting that the level or change in the index of economic freedom has had a causal impact on other equally (if not more) desirable aspects of human life.

References

Ali, A. M. 2003. Institutional Differences as Sources of Growth Differences, *Atlantic Economic Journal* 32:4 (Dec.), 348-64, http://web4.infotrac.galegroup.com/itw/infomark/498/583/7076566w4/.

Berggren, N. 1999. Economic Freedom and Equality: Friends or foes?, *Public Choice* 100, 203–23.

________. 2003. The Benefits of Economic Freedom: A survey, *Independent Review* 8:2, 193(19) (Fall), http://web4.infotrac.galegroup.com/itw/infomark/887/757/ 70709672w4/.

Berlin, I. 1958. *Two Concepts of Liberty,* Oxford University Press.

Chanda, N. 2004. Movement of Jobs to Low-Wage Countries is Unstoppable, *Yale Global Online* (Feb.), http://yaleglobal.yale.edu/display. article?id=3231.

De Haan, J. and C. L. J. Siermann. 1998. Further Evidence on the Relationship between Economic Freedom and Economic Growth, *Public Choice* 95, 363–80. http://www.globalissues.org/TradeRelated/Debt.asp.

De Haan, J. and J.-E. Sturm. 2003. Does More Democracy Lead to Greater Economic Freedom?: New evidence for developing countries, *European Journal of Political Economy* 19, 547–63.

Easton, S. T. and M. A. Walker. 1997. Income, Growth, and Economic Freedom, *American Economic Review* 87:2 (May), 328–32.

Farr, W. K., R. A. Lord, and J. L. Wolfenbarger. 1998. Economic Freedom, Political Well-Being: A causality analysis, *Cato Journal*, 18 (Fall), 247–61.

Federal Reserve Bank of Cleveland, *Inflation Center,* http://www.clevelandfed.org/research/Inflation/World-Inflation/Index.cfm.

Freedom House. 2004, *Freedom in the World, 2004.* Washington, DC: Heritage Foundation and Dow Jones & Company.

Friedman, M. 1962. *Capitalism and Freedom.* Chicago: Univ. of Chicago Press.

Greider, W. 1997. *One World, Ready or Not.* New York: Touchstone.

Gwantrey, J. D. and R. A. Lawson. 2004. *Economic Freedom of the World, 2004 Annual Report* (July). Vancouver: Fraser Institute.

Gwartney, J. D., R. A. Lawson, and J. R. Clark. 2005. Economic Freedom of the World, 2002, *Independent Review* 9:4, 573–94, http://web4.infotrac.galegroup.com/itw/infomark/347/937/70710296w4/.

Hanke, S. H. and S. J. K. Walters. 1997. Economic Freedom, Prosperity, and Equality: A survey, *Cato Journal* 17, 117–46, http://cato.org/pubs/journal/cj17n2-1.html.

Jordan, J. L. 2001. Money, Central Banking, and Monetary Policy in the Global Financial Arena, *The Independent Review* (Summer), 41–57.

Kaun, D. E. 2002. What Does Economic Freedom Buy?, *Journal of Socio-Economics* 31, 371–90.

Lee, M. 2002. The Global Divide, *Behind the Numbers* 4:2 (Apr. 18), Canadian Centre for Policy Alternatives, www.networkideas.org/featart/apr2002/The_Global_Divide.pdf.

Lindblom, C. E. 1977. *Politics and Markets*. New York: Basic Books.

Lindert, P. and J. G. Williamson. 2001. Does Globalization Make the World More Unequal?, NBER Working Paper 8228 (Apr.), Washington: National Bureau of Economic Research.

Lynch, A. 1998. The Year in Context, *Nations in Transit*, http://www.freedomhouse.org/nit98/lynch.html.

Magdoff, F. 2002. The New Face of Capitalism: Slow growth, excess capital, and a mountain of debt, *Monthly Review* 53:11, http://www.monthlyreview.org/0402editr.htm.

Meyerson, H. 2007. Democracy's Enemies, *The American Prospect* (April 5).

Miles, M. A., E. J. Feulner, Jr., and M. A. O'Grady. 2004. *2004 Index of Economic Freedom*. Washington, DC: Heritage Foundation and Dow Jones & Company.

Mishel, L. , J. Bernstein, and S. Allegretto. 2005. *The State of Working America 2004/2005*. Washington: Economic Policy Institute.

Rasell, M. and T. Nasirdinov. 2004. The New Polity—Is Democracy a far-off Dream or Plausible Reality?, Central European Union, Graduate Conference (May 12–15), http://www.gradconf.ceu.hu/program_workshops.htm.

Scully, G. A. 2002. Economic Freedom, Government Policy and the Trade-off between Equity and Economic Growth, *Public Choice* 113, 77–96.

Shah, A. 2005. Third World Debt Undermines Development: Causes of the debt crisis, *Global Issues*, http://www.globalissues.org/TradeRelated/Debt.asp.

Slaughter, M. J. and P. Swagel. 1997. Does Globalization Lower Wages and Export Jobs?, *Economic Issues* 11. Washington: International Monetary Fund.

Stiglitz, J. E. 2002. *Globalization and its Discontents*. New York: W. W. Norton.

Stokes, G. 1993. *The Walls Came Tumbling Down*. Oxford: Oxford Univ. Press.

United Nations Development Programme. 2004. *Human Development Report, 2004*, http://hdr.undp.org/reports/global/2004/.

Wu, W. and O. Davis. 1999. The Two Freedoms, Economic Growth and Development: An empirical study, *Public Choice* 11, 39–64.

Appendix: Concepts Used in the Analysis

1. Heritage Factors (Making Up the Economic Freedom Index)

trade policy

A government that has a minimum amount of intervention in the flow of foreign commerce has a trade policy that allows for greater economic freedom. The first variable is "Weighted average tariff rate," where a 1 is a rate of less or equal to 4 percent and a 5 is a rate greater than 19 percent. The second variable is "Non-tariff barriers" and the third is "Corruption in the customs service."

fiscal burden of government

The greater the amount of money that a government expects individuals and companies to pay to fund government expenditures lead to a worse score in this category. The first variable is the "Top marginal income tax rate," where a score of 1 means that the top marginal income tax rate is less than 10 percent and a 5 means that the top marginal income tax rate is equal to or greater than 50 percent. The second variable is the "Corporate Tax Grading Scale" where a 1 is a top marginal corporate tax rate less than 15 percent and a 5 is a top marginal corporate tax rate equal or greater than 36 percent. The third variable is the "Year-to-year change in government expenditures as a percentage of GDP," where 1 means that the level of government expenditures is equal to or greater than –4 percent and 5 means that the level of government expenditures is greater than 3 percent.

government intervention in the economy

A government that uses a significant amount of resources and exerts a lot of control of resources through ownership of industry will have a worse score. The first variable is "Government consumption as a percentage," where a 1 is less than or equal to 5 percent of GDP and a 5 is greater than 40 percent of GDP. The second variable is the "Government ownership of businesses and industries" and the third is the

"Economic output produced by the government." The fourth variable is the "Share of government revenues from state-owned enterprises and government ownership of property" where a score of 1 is less than or equal to 5 percent of GDP and a 5 is greater than 40 percent of GDP.

monetary policy

Monetary Policy shapes the value of a nation's currency. If monetary policy is stable, investment and savings are easier to make and thus, allows for more economic freedom. The only variable in this category is the "Average inflation rate from 1993 to 2002" where a score of 1 means weighted inflation less than or equal to 3 percent and a score of 5 means weighted inflation greater than 20 percent.

capital flows and foreign investment grading scale

If a country allows easily capital flow and open foreign investment, it has greater economic freedom because it facilitates economic expansion. A score of 1 is defined as "Open and impartial treatment of foreign investment; accessible foreign investment code; almost no restrictions on foreign investments expect for fields related to national; no restrictions on capital transactions." A score of 5 is defined as "Government seeks actively to prevent foreign investment and prohibits all capital flows; widespread corruption."

banking and finance

In a country where the banking and finance systems are controlled by the government, there is less of an opportunity for those institutions to operate freely, thus the higher the score. A score of 1 is defined as "Negligible government involvement in the financial sector; very few restrictions on foreign financial institutions; banks may engage in all types of financial services." A score of 5 is defined "Financial institutions in chaos; banks operate on primitive basis; most credit controlled by government and goes only to state-owned enterprises; corruption widespread."

wages and prices grading scale

If the market is allowed to set its own wages, then it leads to more economic freedom. A score of 1 is defined as "The market sets prices of goods and services, and either the country does not have a minimum wage or the evidence indicates that the minimum wage applies to a small portion of the work force and is therefore not relevant in wage setting. The government may participate in collective bargaining as long as it does not impose those wage agreements on other sectors or on workers that are not immediate parties to the agreement." A score of 5 is defined as "Wages and prices of goods and services are almost completely controlled by the government."

property rights
To be able to accumulate property and guarantee ownership of it is an important component of economic freedom. A score of 1 is defined as "Private property guaranteed by the government; court system efficiently enforces contracts; justice system punishes those who unlawfully confiscate private property; corruption newly nonexistent and expropriation unlikely." A score of 5 is defined as "Private property outlawed or not protected; almost all property belongs to the state; country in such chaos (for example, because of ongoing war) that property protection is nonexistent; judiciary so corrupt that property is not effectively protected; expropriation frequent."

regulation
When there is a lot of regulation, businesses will have a difficult time to operate freely. Thus, countries with less regulation have better scores. A score of 1 is defined as "Existing regulations straightforward and applied uniformly to all businesses; regulations not much of a burden for business; corruption nearly nonexistent." A score of 5 is defined as "Government impedes the creation of new businesses; corruption widespread; regulations applied randomly."

informal market
Countries that have a high amount of economic activity taking place will have a poor score in this category. A score of 1 is defined as a "Country has a free market economy with informal market in such things as drugs and weapons." A score of 5 is defined as a "Country's informal market is larger than its formal economy."

2. Fraser Factors (Making Up the Economic Freedom Index)

size of government: expenditures, taxes, and enterprises

General government consumption spending as a percentage of total consumption;

Transfers and subsidies as a percentage of GDP;

Government enterprises and investment as a percentage of total investment; and
Top marginal tax rate (and income threshold at which it applies)

legal structure and security of property rights
Judicial independence;
Impartial courts;
Protection of intellectual property; and
Military interference in rule of law and the political process.

access to sound money
Average annual growth of money supply in last five years minus annual growth in real GDP in last ten years;
Standard inflation variability during the last five years;
Recent inflation rate; and
Freedom to own foreign currency bank accounts domestically and abroad.

freedom to trade internationally
Taxes on international trade;
Regulatory trade barriers;
Actual size of trade sector compared to expected size;
Difference between official exchange rate and black-market rate; and
International capital market controls.

regulation of credit, labor, and business
Credit market regulations;
Labor market regulations; and
Business regulations.

3. Freedom House Concepts of Political Rights and Civil Liberties (Maximum Levels)

political rights: maximum level obtained where there are "free and fair elections. Those who are elected rule, there are competitive parties or other political groupings, and the opposition plays an important role and has actual power. Minority groups have reasonable self-government or can participate in the government through informal consensus" (Freedom House 2004, 714).

civil liberties: maximum level obtained in countries where there is "freedom of expression, assembly, association, education, and religion. They [countries] are distinguished by an establishment and generally equitable system of rule of law" (Freedom House 2004, 715).

4. United Nations Variables

components of Human Development Index (HDI)

Life expectancy at birth;

Combined gross enrollment ratio for primary, secondary and tertiary schools, % 2001/2002; and

GDP per capita (PPP US $, 2002).