

ECONOMIC LIBERALIZATIONS AROUND THE WORLD SINCE 1970: SHOCK THERAPY VERSUS GRADUALISM

Kerianne N. Lawson and Robert A. Lawson

Since 1970 many countries have engaged in economic liberalization. They have lowered taxes, deregulated, removed barriers to international trade, reduced corruption, improved monetary stability, and privatized state-owned enterprises. While it is generally held that economic liberalization has improved economic performance (see, e.g., de Haan et al. 2006; Hall and Lawson 2014), there is still debate over how quickly reforms should be implemented. In particular, the question is whether the reforms should be enacted quickly via shock therapy or gradually.

This article examines 77 countries with the most significant economic liberalizations since 1970, as measured by changes in the Economic Freedom of the World (EFW) index. Measures of both the speed and comprehensiveness of the reforms are presented. Our empirical evidence suggests that faster reforming nations economically outperformed slower reformers. We do not find evidence that more comprehensive reforms, as opposed to more narrowly targeted reforms, had much of an impact on ensuing economic growth.

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Shock Therapy Versus Gradualism

Jeffrey Sachs (2012) explains and defends his participation in the use of shock therapy (aka “Big Bang”) reforms in Bolivia, Poland, and Russia. He compared his approach to that of an emergency room doctor facing a patient on the verge of death from multiple ailments. In his view, treating the patient quickly, even rashly, is the only way to save the patient’s life. In addition, given the speed with which distributional coalitions (Olson 1965) may form to disrupt or derail any reform process, a fast reform may be the only politically viable option. During a crisis period, such as that facing the nations Sachs dealt with, there is often only a short political window during which reforms can take place. This idea seems to be the motivation for Milton Friedman’s (1962: ix) famous dictum: “Only a crisis—real or perceived—produces real change.”

Despite Sachs’s arguments, the consensus seems to be that the Big Bang approach, especially as it applied to Poland and Russia, was a failure, though it isn’t clear if it was a failure of the reforms to work economically or a failure of political will to see them through (Marangos 2003; Hall and Elliott 1999; Rutland 2013). In contrast, other scholars have pointed to the slower-paced reforms enacted in China, and the economic success that has followed, as evidence in favor of gradualism (e.g., Liew 1995).

One interesting thesis, which we shall explore in this article, is the idea that there was a big difference in the character of reforms undertaken in the Big Bang nations compared with gradual reformers. In comparing Russia with China, Kazakevitch and Smyth (2005: 69) argue that the Big Bang reforms tended to be top-down, macroeconomic reforms such as monetary and financial stabilization, and that those reforms did not reach down to a microeconomic level that would foster “genuine market forces and competition.”¹

Perhaps it was not so much that the reforms were too fast in Poland and Russia, but that the reforms were too narrow. Perhaps China’s reforms have not succeeded because they were slow, but because they were broad and both macro- and microeconomic in nature. If fast reforms tend to be narrow, and if slow reforms tend to

¹In support of this general idea, Bolen and Sobel (2020) show that countries with more balanced levels of economic freedom across the areas have better growth.

be broad, it may be hard distinguishing one from the other without a larger sample of countries to draw inferences from. The main purpose of this article is to examine this question.

Measuring Economic Liberalization

Our measure of economic reform will be based on the Economic Freedom of the World (EFW) index (Gwartney et al. 2018), which is one of the most widely used measures of the consistency of a nation's policies and institutions with free-market capitalism. It currently generates a 0–10 rating, with higher ratings indicating greater economic freedom, for 162 nations for 2016. Data are available annually back to 2000 and in five-year intervals back to 1970, though the sample of countries gets smaller as you go back in time.

There is little question that we have seen a worldwide shift toward freer markets over the past 40 years or so. Among the 102 nations with EFW ratings in both 1980 and 2016, the average developed nation's rating increased to 7.71 from 6.43 (equivalent to 0.99 standard units), and the average developing nation's rating rose to 6.65 from 4.91 (1.35 standard units).² In fact, only one country, Venezuela, experienced any meaningful decrease in the EFW index over this period.³ The bottom line is that there has been a wave of market liberalization going on in almost all corners of the globe over the past several decades, and this liberalization was most emphatically not just about the breakup of the Soviet Union and Eastern Bloc. These events as well as the Reagan and Thatcher revolutions were emblematic of a much wider global phenomenon.⁴

Our first task is to identify and characterize the countries with the biggest economic liberalizations since 1970. To that end, we first identified every country that experienced a 2 unit or more increase in the EFW index rating over any time period between 1970 and 2016. Then we identified the shortest time period over which this

²The EFW index's "Panel Dataset" is used exclusively throughout this article.

³Venezuela's rating fell by a whopping 3.59 units, and its ranking fell from 15th to dead last out of the 102 economies with continuous data since 1980. Ironically, the only other economy to exhibit a decline of any magnitude was top-rated Hong Kong, whose rating fell by a trivial 0.10 units.

⁴Grier and Grier (2020) offer an interesting examination of the determinants of various liberalizations over the past several decades.

2 unit change took place. For example, suppose a country had the following data points: 2000: 3.0; 2001: 3.5; 2002: 4.5; 2003: 5.2; 2004: 5.4. The 2000–03 period of time, three years, would be the fastest 2 unit (or more) increase in the EFW rating.⁵

Table 1 shows the 77 countries whose EFW rating increased by 2 units (or more), the time period during which their reforms took place, the starting and ending EFW index values, and the standard deviation of the changes in the five subareas of the EFW index; the latter will be explained below. The list is sorted based on how fast the reform process took.

There are some limitations to this approach that should be acknowledged. First, the EFW index is available only in five-year intervals from 1970 to 2000 so the reform lengths can only be 5, 10, 15, . . . , 30 years in length during these years. This obviously adds some imprecision to the reform length in the earlier years versus the post-2000 period, after which the data become available annually. Second, many countries may have been reforming before they were incorporated to the EFW index. This is especially true of the former communist nations, most of which were not added until 1995 or, in some cases, even much later. We know many began reforming immediately after the breakup of the Soviet Union in 1991, but we may not be able to capture these reforms here. As an example, Georgia does not even appear on the list in Table 1, even though it is widely regarded as one of the biggest (and fastest) reforming nations (Lawson, Grier, and Absher 2019; Burakova and Lawson 2014)—because Georgia doesn't appear in the EFW index until 2003, which is after some reforms had already taken place. Likewise, it is possible some countries are in the midst of a 2 unit increase in the EFW index at the end of the period under study, but would not be yet counted as a reforming nation with this measure. Third, some reforming countries may have continued reforming after the initial 2 point increase occurred, while others may have backslid some. This particular slicing of the data does not distinguish among these countries.⁶

⁵No country can appear twice on this list. If a country experienced a 2 unit change over more than one time period of the same length, then the time period with the smallest EFW index change was selected to be the country's reform period.

⁶Sobel (2017) provides a more in-depth discussion of some of these issues. Of particular interest to this paper, he did not find evidence that faster reforming nations had any greater tendency to slide backwards relative to slower reforming nations.

TABLE 1
LENGTH, TIMING, AND STANDARD DEVIATION OF REFORMS FOR THE 77 COUNTRIES EXPERIENCING A
2 UNIT INCREASE IN THE EFW INDEX, 1970–2016

Country	Reform Length	Reform Began	Reform Ended	Pre-Reform EFW	Post-Reform EFW	Standard Deviation of Reforms
Argentina	5	1990	1995	4.20	6.74	1.95
El Salvador	5	1990	1995	4.51	7.19	0.97
Nicaragua	5	1990	1995	2.79	5.84	1.86
Peru	5	1990	1995	4.02	6.57	1.40
Rwanda	5	1995	2000	3.87	6.03	1.58
Uganda	5	1990	1995	2.77	4.99	1.78
Latvia	6	1995	2001	5.38	7.51	2.54
Zambia	6	1995	2001	4.43	6.49	2.79
Zimbabwe	6	2006	2012	2.98	5.07	2.37
Romania	7	1995	2002	3.85	6.31	2.17
Ukraine	7	1995	2002	3.34	5.42	2.31
Bulgaria	8	1995	2003	4.72	6.78	2.92
Slovak Rep	9	1995	2004	5.41	7.52	1.71
Bolivia	10	1985	1995	3.41	6.50	3.14
Chile	10	1975	1985	3.53	5.70	2.84
Dominican Rep.	10	1990	2000	4.30	6.74	2.07

(Continued)

TABLE 1 (*Continued*)
 LENGTH, TIMING, AND STANDARD DEVIATION OF REFORMS FOR THE 77 COUNTRIES EXPERIENCING A
 2 UNIT INCREASE IN THE EFW INDEX, 1970–2016

Country	Reform Length	Reform Began	Reform Ended	Pre-Reform EFW	Post-Reform EFW	Standard Deviation of Reforms
Egypt	10	1990	2000	4.31	6.35	1.86
Ghana	10	1980	1990	3.03	5.14	2.19
Guatemala	10	1985	1995	4.75	7.01	2.34
Hungary	10	1990	2000	4.99	7.00	1.54
Iceland	10	1985	1995	5.47	7.61	2.65
Israel	10	1985	1995	3.96	5.97	2.38
Jamaica	10	1990	2000	5.37	7.42	1.70
New Zealand	10	1985	1995	6.10	8.68	1.12
Nigeria	10	1990	2000	3.37	5.38	1.43
Paraguay	10	1985	1995	4.59	6.61	1.82
Philippines	10	1985	1995	4.95	7.14	1.19
Poland	10	1990	2000	3.47	6.54	1.86
Portugal	10	1985	1995	5.20	7.23	1.08
Tanzania	10	1985	1995	3.52	5.56	2.63
Trinidad & Tob.	10	1985	1995	4.59	6.97	2.17
Albania	11	1995	2006	5.04	7.14	2.49
Lithuania	12	1995	2007	5.53	7.53	2.87
Congo, Dem. R.	14	1995	2009	3.40	5.40	3.57

(Continued)

TABLE 1 (*Continued*)
 LENGTH, TIMING, AND STANDARD DEVIATION OF REFORMS FOR THE 77 COUNTRIES EXPERIENCING A
 2 UNIT INCREASE IN THE EFW INDEX, 1970–2016

Country	Reform Length	Reform Began	Reform Ended	Pre-Reform EFW	Post-Reform EFW	Standard Deviation of Reforms
Slovenia	14	1995	2009	5.02	7.02	2.89
Bangladesh	15	1980	1995	3.29	5.34	1.05
Brazil	15	1985	2000	2.96	5.89	2.59
Costa Rica	15	1985	2000	4.93	7.36	1.64
Italy	15	1985	2000	5.43	7.46	0.96
Madagascar	15	1995	2010	4.31	6.40	1.92
Malta	15	1990	2005	5.49	7.59	0.97
Mauritius	15	1980	1995	4.59	7.27	2.33
Russia	15	1995	2010	4.54	6.54	3.12
South Africa	15	1985	2000	4.90	6.98	1.16
Syria	15	1985	2000	3.32	5.48	1.21
Turkey	15	1980	1995	3.70	5.88	1.97
United Kingdom	15	1975	1990	5.76	7.86	1.81
Algeria	16	1990	2006	3.63	5.68	2.16
Croatia	16	1995	2011	4.87	6.91	2.46
Guinea-Bissau	16	1990	2006	3.17	5.29	2.59
Iran	16	1985	2001	3.72	5.96	1.97

(Continued)

TABLE 1 (*Continued*)
 LENGTH, TIMING, AND STANDARD DEVIATION OF REFORMS FOR THE 77 COUNTRIES EXPERIENCING A
 2 UNIT INCREASE IN THE EFW INDEX, 1970–2016

Country	Reform Length	Reform Began	Reform Ended	Pre-Reform EFW	Post-Reform EFW	Standard Deviation of Reforms
Mexico	17	1985	2002	4.60	6.69	2.01
Sierra Leone	17	1990	2007	3.79	5.96	3.21
Burundi	18	1995	2013	3.89	5.98	2.09
Greece	18	1985	2003	5.10	7.39	1.20
Cyprus	19	1985	2004	5.58	7.61	1.04
Botswana	20	1980	2000	5.09	7.19	1.07
China	20	1980	2000	3.86	5.89	1.82
Indonesia	20	1970	1990	4.21	6.22	1.50
Ireland	20	1975	1995	5.77	8.01	1.01
Pakistan	20	1975	1995	3.62	5.74	0.66
Spain	20	1980	2000	5.61	7.67	0.97
Sweden	20	1980	2000	5.52	7.56	0.52
Korea, South	21	1985	2006	5.57	7.65	1.20
Kuwait	21	1980	2001	4.98	7.16	3.51
Panama	21	1980	2001	5.50	7.53	1.32
Jordan	23	1990	2013	5.62	7.66	0.71
Kenya	23	1980	2003	4.83	6.87	1.69

(Continued)

TABLE 1 (*Continued*)
 LENGTH, TIMING, AND STANDARD DEVIATION OF REFORMS FOR THE 77 COUNTRIES EXPERIENCING A
 2 UNIT INCREASE IN THE EFW INDEX, 1970–2016

Country	Reform Length	Reform Began	Reform Ended	Pre-Reform EFW	Post-Reform EFW	Standard Deviation of Reforms
Australia	25	1975	2000	5.85	7.99	1.18
Austria	25	1975	2000	5.81	7.86	0.60
Ecuador	25	1970	1995	3.92	6.24	2.01
Tunisia	26	1985	2011	4.85	6.97	1.44
Norway	27	1980	2007	5.71	7.71	1.12
India	28	1975	2003	4.36	6.39	1.07
Morocco	30	1980	2010	4.37	6.38	1.44
Togo	33	1980	2013	3.84	6.23	1.78
Taiwan	39	1975	2014	5.71	7.74	0.60

SOURCE: Authors' calculations based on data from Gwartney et al. (2018).

Despite these criticisms, the approach taken here to identify the time period during which a country experienced a 2 point change in the index is a reasonably simple and neutral approach to identifying reforming nations across the board.

Table 2 reports descriptive statistics for the variables in Table 1 (as well as for some additional variables used in the empirical analysis below). The average length of time for a country to improve its EFW rating was about 15 years—with the fastest period being 5 years and the slowest 39.

A number of countries reformed very quickly. The economic liberalizations of Argentina, El Salvador, Nicaragua, Peru, Rwanda, and Uganda took only 5 years to increase by 2 points on the EFW index. They all did so between 1990 and 1995, except for Rwanda, which did so between 1995–2000. Similarly, most of the formerly communist nations reformed quickly in the early- and mid-1990s as they underwent the “Big Bang” or shock therapy market reforms. Latvia, Lithuania, Romania, Ukraine, Bulgaria and Slovak Republic all gained 2 points or more in under a decade, beginning in 1995. Despite all the talk of shock therapy in Poland and Russia, our data say that it took 10 years and 15 years, respectively. Poland, though not Russia, did receive an EFW rating in 1990 so this is not an artifact of not having complete data in Poland’s case at least.

At the other end of the spectrum, it took Taiwan a full 39 years (1975–2014) to garner a 2 point increase in the EFW rating. In fact, a number of the world’s most celebrated liberalizations also took the slow approach to the liberalization race. China (1980–2000), Botswana (1980–2000), Ireland (1975–95), and Sweden (1980–2000) took 20 years to accomplish the task. South Korea (1985–2006) took 21 years and India took 28 years (1975–2003).

The final column of Table 1 reports the standard deviation of the changes in the five sub-areas of the EFW index. The five areas are: (1) Size of Government; (2) Property Rights and the Legal System; (3) Sound Money; (4) Freedom to Trade Internationally; and (5) Regulation of Credit, Labor, and Business. The Size of Government area, which reflects fiscal policy, and the Sound Money area, which reflects monetary policy, are mostly macroeconomic in nature, though each as microeconomic importance as well. The other areas, especially the Property Rights and Regulation areas are more microeconomic. The Trade area is more of a combination of both.

TABLE 2
DESCRIPTIVE STATISTICS

Variable	Obs.	Mean	Std. Dev.	Min.	Max.
Reform Length	77	14.94	7.12	5.00	39.00
Pre-reform EFW	77	4.50	0.89	2.77	6.10
Post-reform EFW	77	6.69	0.85	4.99	8.68
Change in EFW	77	2.19	0.26	2.00	3.09
Standard Deviation of Reforms	77	1.83	0.73	0.52	3.57
Growth Rates, Reform Period Plus 5	77	0.0241	0.0181	-0.0097	0.0860
Pre-reform GDP Per Capita	73	6,845	8,989	263	48,538
Education Spending (%GDP)	76	3.51	1.56	0.70	8.70
Investment (%GDP)	71	20.43	6.53	5.08	34.52

This standard deviation found in Table 1 is a measure of how narrow (or conversely how broad) the liberalization process was. If a country increased its score exactly 2 points in each of the five areas, this would yield a standard deviation of 0, indicating that the reform process was perfectly across the board. A high standard deviation would indicate that the critical improvements were occurring in just one or perhaps two areas. The average value for this measure was 1.83, with a minimum value of 0.52 (Sweden) and a maximum value of 3.57 (Democratic Republic of Congo). Countries like Sweden experienced nearly across-the-board increases in the EFW areas, while countries like the Democratic Republic of Congo really improved only in one of the areas. In fact, the latter country's Sound Money area rating increased by over 8 points as the country exited a hyperinflation period, while the other areas saw little change.

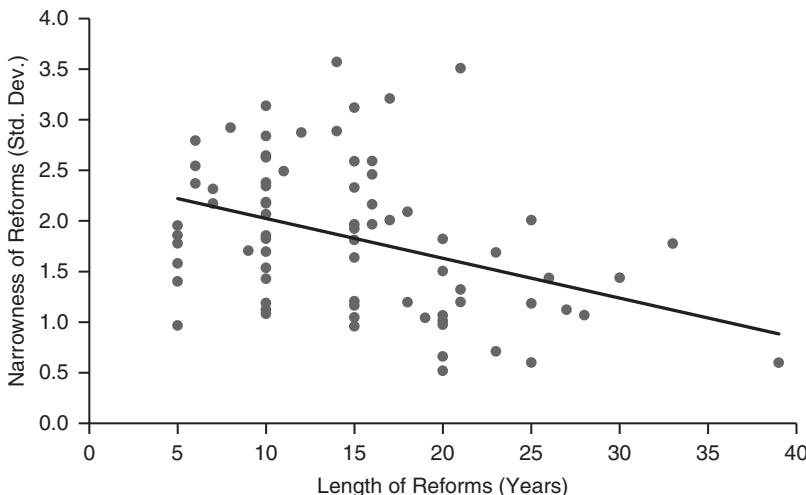
Of particular note is Russia, whose standard deviation measure of 3.12 was the 5th highest among the 77 countries in the sample. Russia's reforms were in fact not very comprehensive according to this measure. In looking at the underlying data, essentially all of the increase in Russia's rating was a result of a 7.22 increase in the Sound Money area and a 2.28 increase in the Regulation area. In contrast, China's reforms were more comprehensive. Its standard deviation of 1.82 was about average for the sample, and was the result of solid increases in three of the five areas of the EFW index (Sound Money 1.94, International Trade 4.05, and Regulation 2.68).

One question worth asking is whether or not countries that reformed more quickly also did so in just a few areas? The answer is yes. Figure 1 shows a clear negative relationship between the reform length (horizontal axis) and the narrowness of the reforms (vertical axis). Thus, as we suspected, *countries that took a long time to reform tended to enact a more comprehensive set of reforms*.

Regression Analysis

Having identified the 77 countries that undertook significant economic liberalizations over the past five decades, the next step is to evaluate their relative economic performance. For each country, we have obtained the average annual growth rate in real, per capita GDP over the reform period plus five years. For example, Argentina's

FIGURE 1
NEGATIVE RELATIONSHIP BETWEEN LENGTH AND
NARROWNESS OF REFORMS



NOTE: The estimated regression line is $Y = 2.41 - 0.04 \times rID$. The t-stat on the beta coefficient is 23.57.

reforms occurred from 1990–95, so the growth rate for Argentina was calculated for 1990–2000.⁷

As shown in Table 2, the average growth rate of these reforming nations during their reform periods (plus 5 years) was 2.41 percent, which is a very solid growth rate in real, per capita terms. The economic success was not guaranteed however with several (all African) nations experiencing slight negative growth rates. As expected, China's growth rate, at 8.6 percent per year, was the highest in the sample.

Which reforming nations did better? Table 3 reports the results of three OLS regressions. The dependent variable is the growth rate of the reforming country over its reform period plus five additional years. As explanatory variables, we have three standard control variables: (1) GDP per capita (measured in ppp US\$) at the beginning of the reform period; (2) gross investment to GDP at the beginning of the period; and (3) education spending relative to GDP at the

⁷Some countries had small adjustments to this rule because of data availability. For example, Taiwan's reform period ends in 2014. We used the 2017 ending point for the growth rate calculation, since 2019 is obviously not yet available.

TABLE 3
ECONOMIC GROWTH AMONG LIBERALIZING NATIONS:
2 EFW UNIT CHANGES

Dependent Variable: Average Annual Growth, Reform Period Plus 5 Years

Variable	(1)	(2)	(3)
Reform Length	-0.00113*** (3.04)		-0.00106*** (2.77)
Standard Deviation of Reforms		0.00530 (1.40)	0.00304 (0.83)
Pre-reform EFW	0.00641* (1.75)	0.00633 (1.56)	0.0746* (1.92)
Change in EFW	0.00456 (0.47)	0.00320 (0.31)	-0.00320 (0.32)
Pre-reform GDP Per Capita (Logged)	-0.00291 (1.22)	-0.00167 (0.68)	-0.0304 (1.27)
Education Spending (%GDP)	0.00003 (0.02)	0.00031 (0.19)	-0.00009 (0.06)
Investment (%GDP)	0.00078* (1.88)	0.00045 (1.08)	0.00082* (1.97)
Adjusted R-Squared	0.093	0.012	0.088
Number of Observations	67	67	67

NOTE: t-statistics in parentheses.

beginning of the period. The level of income at the beginning of the period is expected to be negatively related to growth as growth rates are expected converge (or regress to the mean) with poorer countries growing more rapidly than richer countries. The latter two control variables are intended to control for investments in physical and human capital; both are expected to be positively related to growth.⁸

⁸We lose some observations because of missing data among some of the control variables. Data were obtained from the World Bank's World Development Indicators online databank. Because the specification is a cross section, fixed or random effects could not be included. As a test of robustness, the coefficient standard errors were clustered by the decade of the end of the reforms, but the results were qualitatively similar to the ones presented here.

The two main variables of interest are: (1) number of years it took to reform by 2 points on the EFW index; and (2) the standard deviation of the reforms. In addition, we have included the level of the EFW index at the beginning of the reform period and the change in the EFW score during the reform period. Gwartney et al. (2006) have shown that the *level* of the EFW index is correlated with growth. Others, however, have debated whether EFW level variable should be included along with the *change* in the EFW index (Cole and Lawson 2007; De Haan and Sturm 2006; De Haan and Sturm 2007; Lawson 2006; Lawson and Murphy 2018). We see no harm in including it here as a control variable. We do not really expect much from the EFW change variable, as all of the countries in the sample have reformed by at least 2 points and there is not much variation above that level.

Turning to Table 3, the first regression runs the reform length without the standard deviation of the reforms; the second regression runs the standard deviation of the reforms without the reform length; and the third regression runs both. The same controls are used in all three regressions.

The overall explanatory power of the models is quite weak throughout, which is perhaps not too surprising given the similarities among these countries as reforming nations. The control variables, more or less, perform as expected. The coefficient on the level of the EFW at the beginning of the period is generally positive indicating that more economically free countries generally grew faster independent of the reforms, while the change in EFW is insignificant. The initial level of GDP per capita is negatively related to growth, as expected, though it is insignificant. Investment in physical capital is positive as expected, though human capital investment is not.

Of the two variables of interest, we find that the reform length is negatively related to growth, while the standard deviation of the reforms is insignificant statistically (though positive). A seven-year longer reform period, which is about one standard deviation, corresponds to about 0.8 percent in lower annualized growth. Thus, this is evidence in support of Jeffrey Sach's view that faster reforms are preferred over slower ones. Finally, contra the argument advanced by Kazakevitch and Smyth (2005), there is no strong evidence here to support the view that broader or more microeconomic reforms are better than more narrow macroeconomic reforms.

TABLE 4
ECONOMIC GROWTH AMONG LIBERALIZING NATIONS:
1 EFW UNIT CHANGES

Dependent Variable: Average Annual Growth, Reform Period Plus 5 Years

Variable	(1)	(2)	(3)
Reform Length	−0.00099 (1.48)		−0.00089 (1.41)
Standard Deviation of Reforms		0.00420 (1.00)	0.00382 (0.92)
Pre-reform EFW	0.00897*** (2.99)	0.00857*** (2.85)	0.00944*** (3.10)
Change in EFW	0.00713 (0.97)	0.00644 (0.85)	0.00553 (0.73)
Pre-reform GDP Per Capita (Logged)	−0.00242 (1.19)	−0.00243 (1.19)	−0.00247 (1.22)
Education Spending (%GDP)	−0.00012 (0.12)	−0.0005 (0.28)	−0.00045 (0.27)
Investment (%GDP)	0.00023 (0.57)	0.00006 (0.14)	0.00017 (0.43)
Adjusted R-Squared	0.054	0.039	0.052
Number of Observations	79	79	79

NOTE: t-statistics in parentheses.

Robustness Checks

As a robustness check, we considered countries that experienced a 1, 1.5, and 2.5 point increase in EFW rating.⁹ Using the same regression analysis as we did with countries that had a 2 point increase, we see similar results in these specifications presented in Tables 4 and 5. These results support our findings in Table 3 and suggest that it was not simply the 2 point increase that mattered for our results; rather, any meaningful increase in the EFW rating can

⁹We do not include the table of regression results for the countries with a 2.5 increase in EFW rating. This specification had 46 observations and while the signs of the coefficients did not change from the previous three regression tables, it did not yield any significant results.

TABLE 5
ECONOMIC GROWTH AMONG LIBERALIZING NATIONS:
1.5 EFW UNIT CHANGES

Dependent Variable: Average Annual Growth, Reform Period Plus 5 Years

Variable	(1)	(2)	(3)
Reform Length	-0.00112** (2.26)		-0.00098** (1.93)
Standard Deviation of Reforms		0.00612** (1.74)	0.00464 (1.31)
Pre-reform EFW	0.00976*** (2.74)	0.00716*** (2.20)	0.01018*** (2.86)
Change in EFW	0.00408 (0.50)	0.00482 (0.58)	0.00524 (0.64)
Pre-reform GDP	-0.00187 Per Capita (Logged) (0.83)	-0.00080 (0.35)	-0.00165 (0.73)
Education Spending (%GDP)	-0.00073 (0.51)	-0.00109 (0.75)	-0.00092 (0.64)
Investment (%GDP)	0.00024 (0.56)	0.00006 (0.15)	0.00023 (0.56)
Adjusted R-Squared	0.050	0.026	0.059
Number of Observations	85	85	85

NOTE: t-statistics in parentheses.

represent an economic liberalization. When looking at our two variables of interest, the reform length remains significant and negative throughout, indicating that countries with faster reforms tended to grow more quickly than those with slower reforms. Likewise, the standard deviation of the reforms did not seem to be related to growth. This result means that the nature of the reform, or how comprehensive the reform was, did not have any meaningful impact on growth.

Conclusion

Although there is something of a consensus that economic liberalization works to deliver faster growth rates, there is less agreement on whether reforms should be undertaken quickly or

slowly, or if they need to be across the board or can be done more narrowly. Using the Economic Freedom of the World (EFW) index, we have identified 77 countries undertaking significant economic reforms since 1970. We find that countries that reformed more quickly grew more rapidly relative to slower reforming nations during and just after the period of their reforms. We did not find that broad macro- and microeconomic reforms were more growth enhancing than large but more narrowly targeted macroeconomic reforms.

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