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Democracy to Decline:

Do democratic changes jeopardize economic growth?

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Abstract

This paper investigates the relationship between political changes towards democracy and sudden growth slowdowns. Expanding the work of Eichengreen, Park and Shin (2013), the paper employs a probit regression analysis of 167 economies and determines that democratic changes are associated with slowdowns, while in certain cases, changes towards autocracy may lessen the likelihood of a slowdown. The results are robust to multiple sensitivity tests and fit with theoretical knowledge regarding the negative effects of democracy on economic performance. Finally, the paper obtains evidence that a country's accumulated history of democracy may be an important determinate of sudden growth slowdowns.

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1. Introduction

Since the end of the Second World War one of the most important economic phenomena has been the rise of East Asia. The economic development of the region has been so extraordinary that a term, the “East Asian Miracle,” was dubbed to refer to the policy successes of its eight highest performing countries: the Republic of Korea, Japan, Hong Kong, Singapore, Indonesia, Malaysia, Thailand and Taiwan (Stiglitz, 1996). If the rise of these eight Asian economies was a miracle, then there might not be a word to describe China’s onslaught of economic growth during the previous three decades. In per capita terms, Chinese GDP was \$1368 (2005 PPP) in 1981 and rose to \$5342 by 2005 (Feenstra et al., 2013). From 2005 to 2011, per capita GDP increased again by approximately 50% to \$8069 (Feenstra et al., 2013). Thus, in just under a third of a century, Chinese per capita GDP has increased nearly sixfold, while total output has increased at an average annual growth rate of 9.7% (World Bank, 2014a, calculation my own). Even more impressive is China’s contribution to global output, which registered at \$4.5 trillion in economic growth during the period of 2007 to 2012, one and half times as much as the United States and Japan combined (Quah, 2012).

Two burning questions emerge from China’s rise to economic might. One, as China continues to develop will it become more democratic? Two, when will China’s rapid economic growth decelerate? Concerning the first question, political scientist Larry Diamond predicts that China will democratize in the next two decades (Diamond, 2012). Diamond bases his argument on modernization theory, which asserts that countries naturally shift towards democracy as they experience economic growth (Lipset, 1994, Inglehart and Welzel, 2009). This transition comes as a result of increases in living standards and education, whereby citizens are more likely to demand democratic institutions (Inglehart and Welzel, 2009). Taiwan and South Korea are perfect cases in favor of modernization theory, as rapid economic growth led to a burgeoning middle class and subsequent preferences for liberal political institutions. Indeed, the correlation between democracy and economic performance is self-evident: of the IMF’s list of 37 advanced economies, all but two –Singapore and China –can be considered liberal democracies (IMF, 2014). Nevertheless, academics in China counter that democracy “institutionalizes gridlock, trivializes decision-making and throws up second-rate presidents,” and Chinese politicians claim that “their model [...] is more efficient

than democracy” (The Economist, 2014a). As for China’s economic growth, the question of a slowdown is more imminent as annual growth has decreased from 9.3% in 2011 to 7.7% in 2012, remaining there through 2013 (World Bank, 2014b). Given this slight decline in annual growth, a more immediate concern for Chinese policy makers is how to maintain high levels of growth in an economy with low levels of domestic consumption and worries about the efficiency of state owned enterprises (The Economist, 2012).

This paper is not about China, but its findings have direct implications for China’s growth and political future, as well as all rapidly growing autocracies. Specifically, I extend the work of economists Barry Eichengreen, Donghyun Park and Kwanho Shin (hence forth, EPS) on sudden growth slowdowns, delving deeper into the relationship between democratic changes and economic performance. In a previous paper titled “Growth Slowdowns Redux: New Evidence on the Middle-Income Trap,” EPS (2013) identify cases where fast growing economies experienced sudden and sharp reductions in their economic growth. They find, inter alia, strong evidence that sudden growth slowdowns are most likely when countries reach the levels of \$11,000 and \$15,000 per capita GDP (in 2005 PPP), and have high investment ratios, undervalued exchange rates and a high dependency ratio. They also find evidence, albeit not as strong, that political changes towards democracy –measured by Polity IV country ratings –are associated with sudden growth slowdowns, however they do not investigate this relationship in detail.

Given the importance of such a relationship for international development initiatives, discourse, and funding, in addition to global politics and economic policy, EPS’s findings merit further exploration. With this in mind, I utilize EPS’s methodology for identifying sudden growth slowdowns and examine exclusively the relationship between political changes and economic growth. Specifically, I expand their model to control for debt levels as well as a proxy for democratic history. Furthermore, I employ Freedom House’s Political Rights and Civil Liberties ratings as measures of democracy, in addition to the Polity IV ratings used in EPS’s analysis, to test the sensitivity of the results. I find considerable evidence across various specifications of the model that political changes towards democracy are positively associated with the occurrence of a sudden growth slowdown. Interestingly, I also discover that political changes from democracy towards autocracy are negatively associated with sudden growth slowdowns, however this only holds for regressions using Polity IV ratings. While these findings are specific to the present methodology, their implications indicate that democratic transitions increase the probability of sudden slowdowns in economic growth.

The remainder of the paper is structured as follows. In section two I expound the theoretical linkages between democracy and economic growth as they influence the specification of the model. In section three I explain the methodology for identifying sudden growth slowdowns, defining political changes, the data used and the model. In section four I review and discuss the results of the regression analysis and sensitivity tests, proposing potential drivers of the association between democracy and sudden growth slowdowns. Section five identifies sources of bias and provides alternate explanations of the results, and section six concludes.

2. Theoretical Linkages between Democracy and Economic Growth

As alluded to in the first section, the connection between democracy and economic performance is contested by politicians and academics alike. For instance, Alberto Alesina (2010) claims that the relationship between political regime and growth has been “extensively studied,” but there is no conclusive evidence that democracies grow faster than dictatorships. In the same light, there is little empirical work that finds “a positive causal relationship between democracy and growth” (Wood, 2014). Nevertheless, there are various channels through which democracy positively and negatively influences economic growth.

The vast literature positively linking democracy to growth draws upon the long run benefits of democratic institutions on policy-making. These benefits generally include constraints on decision-making and policy stability, both of which limit the possibility of political leaders drastically altering the economic environment through unilateral or politically motivated policy choices. For example, Dani Rodrik (2008) argues that democracies “allow greater predictability and stability, are more resilient to shocks, and deliver superior distributional outcomes.” These advantages, asserts Rodrik, facilitate “higher quality growth” (2008). Acemoglu, Johnson, and Robinson (2001) instrument the effect of institutions with data on colonial settler mortality and find evidence that institutional constraints on the executive causally affect economic growth. While their analysis does not specifically center on democracy, the types of institutions that they refer to include property rights, trials by jury, electoral representation and freedom from arbitrary arrest which are common to modern liberal democracies. Such institutions, according to AJR, constrain the arbitrary use of power and therefore favor long run growth. Kapstein and Converse (2008)

argue that democracy enhances political accountability and mitigates conflict between political factions, which fosters policy stability.

Democracy may also affect growth through other indirect channels, such as political stability, reductions in volatility, improvements in governance and promotion of human capital. For instance, Alesina et al. (1996) obtain strong results that political instability, in the form of unconstitutional executive changes, decreases growth. Alesina and Perotti (1996) also find that countries with high levels of income inequality tend to have high political instability, which in turn negatively impacts investment. While Alesina, as mentioned above, claims that there is no causal link between democracy and growth, his findings on political instability relate to democracy through research carried out by Feng (1997), who finds that democracy indirectly increases economic growth through its positive effect on political stability. In this regard, by stabilizing the political environment, democracy promotes higher levels of certainty, which favors investment. Also drawing on the stabilizing effects of democracy, Mobarak (2005) applies a panel regression of 136 economies and concludes that democracy significantly reduces the volatility of economic growth, thus leading to more constant, albeit slower, long-run economic growth.

With regard to governance, Rivera-Batiz (2002) presents evidence that democracies exhibit higher qualities of governance, which results in higher rates of return to capital. His findings, however, indicate that where democracies do not display quality governance, democracy by itself does not have a significant effect on growth. Baum and Lake (2003) discover an indirect effect of democracy on growth through the fostering of human capital in the form of increased health care and years of schooling. Przeworski (2004) also finds that democracies on average have higher levels of total factor productivity, suggesting that democracies are more likely to reap the gains of human capital, which fosters technological advancement. However, Glaeser et al challenge these findings regarding human capital growth in democracies on the grounds that human capital accumulation is just as likely under dictatorships (2004).

Finally, Gerring, Bond, Barndt, and Moreno (2005) and Persson and Tabellini (2005) propose that it is not the current level of democracy that matters for economic growth, but rather the accumulated history of democracy. Both sets of authors create distinct but conceptually similar variables to measure the accumulated stock of democratic capital. Gerring et al posit that the concept of political capital captures multiple characteristics about the quality of a democracy, such as “bureaucratic capacity, low levels of corruption, political consensus, stability, legitimacy, trust, the wisdom and farsightedness of political leaders,”

and that together these characteristics exert a positive causal effect on economic growth (2005). Persson and Tabellini's argument hinges on the fact that with greater levels of democratic capital, the political environment is more stable, which positively impacts income levels and capital accumulation. Both sets of authors find robust evidence that higher levels of democratic capital are associated with higher levels of GDP per capita. Together, their analysis suggests that democracy –especially a long history of democracy –induces higher quality policy-making, which enhances the prospects for economic growth.

Overall, there is a considerable body of literature that connects democracy to increased economic performance. This literature references democracy's stabilizing effects on the political and economic environment, the constraints on political leaders and the higher quality policy-making. It also alludes to other channels, such as improved governance or potentially higher levels of human capital. Nonetheless, democracy's effects on growth are not always seen to be positive. Mancur Olson (1982) first noted that democracies facilitate the emergence of vested interests, which dampen long run growth. Olson's argument is based on the assumption that democracies do not suppress the political right of organization, allowing for a proliferation of special interest groups. Over time these special interest groups organize to achieve policies that benefit themselves, often at the cost of long-term investment. Democracies may also reduce investment by encouraging redistributive policies (Kapstein and Converse, 2008). Where citizens have the right to vote on policies, they are more likely to vote on policies that redistribute income away from elites and to themselves in democracies (Acemoglu and Robinson, 2001). While redistribution may be intrinsically good, too much redistribution impedes saving and discourages private investment.

Other detriments of democracy include the propensity for budget overruns and high levels of debt, which also hinder an economy's prospects for growth (Kapstein and Converse, 2008, *The Economist*, 2014a). These negative consequences stem from the fact that democracies tend to maintain large systems for public service provision. Although these may have positive effects on quality of life –and potentially human capital formation –they also put a drain on fiscal resources. Moreover, democracy can be problematic in achieving fiscal reform or lowering debt levels as “the interests of current voters are pitted against those of future voters” (*The Economist*, 2014b). Following from Olson's theory of collective action (1965), voters who benefit from the provision of specific services are more likely to block reform than voters who do not benefit would support such reform. In this light, dictatorships are more suited to achieving rapid reform of policies because they are not accountable to

voters and can make decisions expediently. The recent experience of economically successful dictatorships gives credence to these claims.

As mentioned in section one, Chinese officials claim that the gridlock of democracies impedes the efficiency of decision-making. Indeed, this aspect of dictatorships might be favorable to short and medium term growth since the regime is capable of subduing opponents of policy decisions that could be growth enhancing. As Kohli (2012) explains in his analysis of the South Korean dictatorship during the 1960's and 70's, "the regime was able to focus narrowly on economic goals without needing to respond to the demands of various groups." Moreover, there is no reason why a growth-conscious dictator could not pursue growth-enhancing policies such as physical capital accumulation, human capital formation and technological diffusion. For instance, Sachs (2012) asserts that authoritarian regimes have implemented economic reforms and facilitated technological inflows, as is the case of China.

To conclude, empirical research indicates that democracy is not necessary for economic development, and under certain circumstances, can be detrimental. Nevertheless, there are also clear economic benefits to democracy, including constraints on decision-making, policy stability, improved governance and potential gains from increases in living standards. The question remains whether fast growing economies that transition to democracy will maintain growth by reaping its benefits or falter in succumbing to its disbenefits.

3. Slowdowns, Democratic Changes and the Model

3.1 The Slowdowns

The concept of a sudden growth slowdown stems from empirical research regarding the middle-income trap, where middle-income countries become trapped at their current income level, and fail to reach the status of high-income economies (see Lin and Rosenblatt, 2012, Im and Rosenblatt, 2013). In spite of varying definitions of the middle-income trap, Latin American countries are a classic example of middle-income trapped economies (Im and Rosenblatt, 2013). A sudden growth slowdown relates to the middle-income trap in that countries that experience sudden growth slowdowns become trapped at a specific level of GDP growth for an extended period of time. Following exactly from EPS (2012, 2013) I define a sudden growth slowdown as an event satisfying the following three criteria:

1. $g_{t,t-n} \geq .035$
2. $g_{t,t-n} - g_{t,t+n} \geq .02$
3. $y_t > 10,000$

Where y_t is per capita GDP in 2005 PPP US dollars at time t , g_t is the annual growth rate at time t and n is a time span of seven years.

Thus, a sudden growth slowdown is an event where a country's economy is growing at a seven-year average annual growth rate of greater than or equal to 3.5%, then for the following seven years the average annual growth declines by at least 2.0%. Only countries with a per capita GDP of greater than \$10,000 qualify as having experienced a sudden growth slowdown. This threshold is to limit the sample to countries that are steadily developing, as opposed to countries that may be caught in a poverty trap (EPS, 2012). A consequence of this definition is that a country like China is not included in the sample because it has yet to reach a per capita GDP of \$10,000, in spite of its high growth. Furthermore, countries that are growing at very high rates, for example 8% or higher, but experience a decline to 6% or lower will be identified as slowdowns. This could be controversial as a growth rate of 6% is still impressive. However, the purpose is to identify cases where fast growing economies experience a significant reduction in growth, and a 2% decline would qualify as such (EPS, 2012). Finally, countries that may be "middle-income trapped," such as many Latin American countries, never experience a sudden growth slowdown because they have failed to maintain a growth rate of 3.5% or higher for at least seven years. While the definition of a sudden growth slowdown is arbitrary, analysis regarding its correlates is robust to modifications in the criteria (Eichengreen, 2011).

For per capita GDP data, I use Penn World Tables 8.0, which contains economic indicators for 167 economies from 1950 to 2011. Following from EPS's analysis, I code the slowdown year and the year before and after, that is $t-1$, t and $t+1$, as 1, and all other years as 0. This moderates imprecision in calculating the exact timing of a slowdown. For example, a slowdown may begin in a country at the end of one year but the decrease in annual growth might not be seen until the following year. By coding in this manner, it is possible to mitigate inconsistencies in GDP calculations and their effect on the identification of slowdowns. The drawback is that certain years might be inadvertently identified as slowdowns when one has not actually occurred. Given the difficulty in determining such events from GDP data, which is subject to its own measurement errors, it is ultimately a judgment call of whether to include

years $t - 1$ and $t + 1$. EPS have chosen to do so, and in order to maintain consistency with their analysis I do the same.

[Table 1](#) in the appendix displays a list of every sudden growth slowdown identified by the methodology. In total, the methodology pinpoints 525 sudden growth slowdowns out of 10,354 observations. These results largely approximate EPS's findings, with slight differences mostly likely a consequence of differences between Penn World Tables 8.0 and 7.1, which the original authors use. Interestingly, nearly every major advanced economy has experienced a sudden growth slowdown, including the US, EU countries, Japan and South Korea. While there could be many reasons for this finding, it suggests that sudden growth slowdowns may be a natural phase in the economic growth process, where countries must extend their technological frontier before continuing to grow. Speaking broadly, many of the slowdowns occurring in the sample emerge in the late 1960's, 70's and 90's and the early 2000's, coinciding with the global economic crises during those time periods. Whether these global shocks caused the slowdowns or triggered downturns in already staggering economies is a topic for further research.

3.2. Democratic Changes

In order to examine the relationship between sudden growth slowdowns and democratic changes, it is necessary to determine an appropriate measure for democracy. There is an extensive literature dedicated to the methodological concerns of quantifying a country's "level" of democracy (Munck and Verkuilen, 2002), however even agreeing on a suitable definition for democracy is difficult (Coppedge et al., 2011). For the purposes of this paper, I define democracy according to Polity IV's definition of institutionalized democracy. As such, democracy is defined as having "institutions and procedures through which citizens can express effective preferences about alternative policies and leaders, [...] institutionalized constraints on the exercise of power by the executive, [...] and] the guarantee of civil liberties to all citizens in their daily lives and in acts of political participation" (Marshall et al., 2013). In keeping with this definition and EPS's analysis, I too utilize Polity IV's Polity2 (hence forth referred to as Polity) variable as my principal measurement of democracy.

The Polity IV rating scheme examines authority characteristics for democratic and autocratic political systems. It can be conceptualized as a spectrum, whereby any state can have various democratic or autocratic authority traits, as opposed to two mutually exclusive

“forms of governance” (Center for Systemic Peace, 2014). The Polity variable employs a 21-point scale of -10 to 10, where -10 represents a full autocracy and 10 a full democracy. The Polity rating is obtained by taking a country’s Democracy score (on a scale of 0-10) and subtracting its Autocracy score (0-10). The Democracy and Autocracy scores are in turn composites of the following sub-measures:

Competitiveness of Executive Recruitment- considers the extent to which processes for choosing an executive are competitive, i.e., competitors have equal opportunity of selection

Openness of Executive Recruitment- considers the extent to which the position of executive is open to all members of the “politically active population” (Marshall et al., 2013)

Executive constraints- considers the extent to which executive decision-making power is constrained by accountability groups (legislative branches, independent judiciaries or political parties)

Competitiveness of Political Participation- considers the extent to which “alternative preferences for policy and leadership can be pursued in the political arena” (Marshall et al., 2013)

Regulation of participation- the extent to which there are “binding rules on when, whether, and how political preferences are expressed” (Marshall et al., 2013)

The Polity IV scheme presents some issues. First, Polity IV defines democracy using the term “institutionalized,” indicating that the characteristics of democracies are rule-based and reflective of long-term institutions, however the ratings used to construct the sub-measures of democracy often fluctuate with the policy decisions of a country’s ruling power (Glaeser et al., 2004). This does not reflect the democratic institutions of a country but rather the outcomes of a government’s decisions. Second, Polity IV’s definition of democracy references the existence of secure civil liberties, however there is no measurement of civil liberties included in any of Polity IV’s variables. This means that a fundamental component of liberal democracy is missing in the Polity measurement. Notwithstanding these disadvantages, Polity IV is one of the most widely used measurement schemes in current empirical research and also provides ratings for a vast range of countries and years.

In order to identify democratic changes, I subtract a country's Polity rating in year t from year $t + 1$. I then create two variables, positive political change –i.e., the democratic change and main variable of interest –as well as its counterfactual, the negative political change. The positive political change variable is coded as 1 if a positive change in the Polity rating has occurred during the previous five years. All other years where no change or a negative change occurred are coded as a 0. The negative political change variable is coded analogously for negative changes in the Polity rating. The purpose of this five-year time span is to allow for lag effects of the political change on the economy. [Table 2](#) maps all sudden growth slowdowns coinciding with positive political changes. Of the 525 sudden growth slowdowns identified, 55 occurred concurrent with positive political changes.

Aside from Polity IV data, I supplement EPS's analysis by using two additional measures of democracy, Freedom House's Political Rights and Civil Liberties ratings. The Freedom House country ratings draw from the Universal Declaration of Human Rights and are based on the assumption that liberal democracies provide the fullest extent of political and civil rights (Freedom House, 2014). Ratings are given to each country on a scale of 1 to 7, where a country with a rating of 1 is considered most free and 7 least free. Country ratings date back to 1972. For the purposes of my analysis, I have inverted the rating system so that a rating of 7 is most free and 1 is least free. This is to ensure consistency across variables in my designation of a positive political change as well as to allow for simplicity in interpreting the coefficient of the Freedom House variables.¹ [Table 3](#) provides an explanation of how both variables are constructed.

In practice, the Political Rights rating is the more precise proxy of the two Freedom House scores because it includes measurements for the openness and contestability of executive and legislative elections (Freedom House, 2014). However, the Civil Liberties rating complements the Political Rights rating by capturing the concept of civil liberties laid out in Polity IV's definition of institutionalized democracy. The disadvantage of these two variables, much like Polity IV, is that their rating takes into account "regime performance" (Keefer, 2009). This means that a regime that is not a democracy but allows for certain political or civil rights would receive ratings similar to democracies ensuring equal provision of those rights. These performance measurements also extend to areas such as the functioning of government in the Political Rights rating, which consider the extent of corruption and the transparency and accountability of government. Hence, the Freedom House ratings do not

¹ For example, without the inversion, a negative sign on the coefficient would signal a change towards greater freedom, and therefore greater democracy.

measure how democratic a country is, but how *well* the country's democratic institutions function. This unfortunately introduces a slight degree of endogeneity into the results since economies are undoubtedly affected by the performance of a democracy, but not necessarily the fact that they are democracies –which is the question of this paper. In spite of these disadvantages, I employ these two variables due to the extensiveness of their use in empirical research and their accessibility. Due to limitations of time and space I do not consider other democracy indicators. I construct the positive and negative political change variables for the Freedom House ratings in the same manner as the Polity rating.

An additional criticism of this methodology is that all positive changes in the polity score, including a change of +1, are counted as a positive political change. This means that changes from -10 to -9 or 9 to 10 in the Polity rating or 4 to 5 in the Freedom House score will be counted, even though substantively they might not represent a significant change in the political landscape. Once again, this is a judgment call. I maintain this coding scheme primarily because the Polity ratings prorate country scores during periods of transition. This means that the change in Polity score from the beginning to the end of the transition is prorated over the number of years of transition. For example, country X has a score of -2 at the start of the transition and finishes with a score of 4. If the transition lasts three years then the corresponding scores would be 0, 2 and 4, amounting to incremental positive changes of +2, even though the total change was +6. If the positive political change variable was only coded to include changes of a threshold, like +3 or +5, then such democratic changes might be lost. Furthermore, positive changes of 1 might be part of a greater reform period in which changes occur over a number of years. By itself such a change might not be empirically relevant, but as part of a whole it would be. In practice, positive changes of 1 only occur 158 times out of 1640 total positive changes in the Polity score –just under 10%.

3.3. Model Specification

[Table 4](#) lists all independent variables used in the analysis. Like EPS, I run probit regressions with the sudden growth slowdown as the dependent variable and positive political change as the principal independent variable of interest. My baseline model is the following:

$$Y_{SGS} = \alpha + \beta_1 \text{Positive Political Change} + \beta_2 \text{Negative Political Change} + \beta_3 Z$$

Where SGS represents the slowdowns, α is the constant, positive and negative political changes are the variables for the change in Polity and Freedom House scores and Z is a vector of control variables. The vector of controls includes per capita GDP and its square, the pre-slowdown growth rate (taken as a seven-year average), the ratio of per capita GDP to the US's per capita GDP and its square. These controls stem directly from EPS's analysis. Each specification is run using the per capita GDP and the ratio variables separately of each other, hence two distinct specifications for each variation of the model. The ratio of per capita GDP to that in the US is intended to control for the rate of catch-up growth in comparison to the leading economy. The squares of the per capita GDP and ratio variables are employed to determine if there is a quadratic relationship between GDP levels and slowdowns. Expanding the analysis, I include two additional variables as part of the control vector Z in my baseline model, public debt as a percentage of GDP and the Democracy Stock variable from Gerring et al's work on political capital referenced in section one.

The inclusion of public debt in the model is warranted due to the correlation between debt, democracy and growth. In section two I noted that democracies have a propensity for high levels of public debt due to the fact that they tend to have large public service provision systems. Furthermore, achieving reform of debt levels is difficult because cutting benefits is politically unpopular, causing debt to accumulate over time. Simultaneously, high debt levels can be detrimental to growth in that they might require heightened levels of taxation to finance the debt or they might induce higher interest rates (Checherita-Westphal and Rother, 2010), either of which is capable of shrinking private investment and thus lowering gross output. In a report for the European Central Bank, Checherita-Westphal and Rother (2010) find that in a panel data set of 12 Euro Area countries, high levels of public debt are significantly associated with reduced growth rates when debt reaches a threshold of approximately 80-90% of GDP. Many Euro Area economies are already above such levels, and all of these countries are democracies. Conversely, Pescatori, Sandri and Simon (2014) do not find evidence of threshold effects of debt on growth, but they do find that higher debt levels are associated with increased economic volatility. With regard to the present analysis, it is possible that an increase in debt levels associated with a change to democracy might result in decreased investment.² If the decrease was substantial, this could cause a drop in output and thus a sudden growth slowdown. Including public debt levels in the model would

² EPS find that high investment ratios are associated with slowdowns, however such a relationship is most likely when growth is being driven primarily by capital accumulation. Whether growth is driven by capital accumulation or is more balanced, a sudden reduction in private investment could result in a slowdown.

control for such an effect and indirectly hold constant economic volatility across countries. Data on public debt is obtained from the IMF's Fiscal Affairs Department (2012).

In addition to a country's debt levels impacting its economic performance, it is likely that a country's democratic history might have a considerable influence on growth as well. Gerring et al (2005) argue that with a greater history of democracy, a country will have a larger stock of political capital. This political capital, or Democracy Stock, is conceptualized as the gains from years of learning about democratic processes, policy-making and the institutionalization of governmental procedures (2005). I contend that such a conceptualization is useful for understanding democracy's effects on growth and is therefore a merited control variable for the model. Specifically, it could be that the actual political change towards democracy is not harmful to growth, but rather the side effects associated with being a new democracy (having limited political capital) are damaging. A variable that encompasses these characteristics would be beneficial to the model. Following from Gerring et al, I construct the democracy stock variable by aggregating a country's Polity rating with a 1% annual depreciation rate, where s is the starting year and t is 2011:

$$\sum_{s=1950}^t Polity \cdot 99^{t-s}$$

The use of a depreciation rate is meant to incorporate the concept of depreciating capital, however Gerring et al's selection of the rate is, once again, arbitrary. The depreciation rate of political capital is not the subject of this paper, so it will not be discussed in detail, but it is worth mentioning that the selection of the rate affects how quickly the stock of democracy accumulates, which would affect overall values for each country. This paper takes the depreciation rate used by Gerring et al as given. Another drawback is that since the Democracy Stock depends on Polity ratings, there are missing values for countries where Polity ratings are absent

In addition, to the aforementioned variables, I introduce a dummy variable for the European Economic Area given the fact that every major European country experienced a slowdown. The sign and significance of the EEA dummy, in addition to its effect on the positive political change variable, will indicate whether there is something systematic about European countries. I also add dummy variables for the oil shocks of 1973 and 1979, the East Asian Financial Crisis of 1997 and the economic downturn of the early 2000's due to

crowding of slowdowns in the years surrounding those dates. This is to determine if the coefficient of the positive political change variable is affected by the inclusion of exogenous shocks. Finally, I introduce country fixed effects to control for country specific time invariant characteristics that could influence the dependent variable.

4. Results and Analysis

[Table 5](#) displays regression results rerunning EPS's baseline model, consisting of the positive and negative changes in Polity score, per capita GDP and its square, the pre-slowdown growth rate and in a separate regression, the ratio of per capita GDP to the US and its square. I find, using updated data from PWT 8.0, that positive political changes are associated with sudden growth slowdowns in both specifications. Coinciding with EPS's results, I find that the positive political change variable is more significant when using the ratio of per capita GDP to that in the US. Differing from EPS's results, I observe that a positive political change is positive and significant at the 10% level, and the coefficient of the negative change variable is negative and significant at the 10% level, providing limited evidence that moves towards autocracy would decrease the probability of a sudden growth slowdown. However do these results hold when other factors like debt levels and democratic history are included in the model?

[Table 6](#) presents results with democracy stock and public debt levels as part of the model, independently and jointly. Some interesting findings emerge. First, when controlling exclusively for a country's level of debt (columns 1 & 2), positive political changes are only positively and significantly associated with slowdowns in the specification using the ratio of per capita GDP to that in the US. Negative changes, however, are significant in both specifications and the sign of the coefficient is negative. Next, holding only the stock of democracy constant, positive changes in both specifications are positively and significantly associated with slowdowns, while negative changes exhibit no significant association. This suggests that at equal levels of democratic capital, per capita GDP and pre-slowdown growth, a change towards democracy increases the likelihood of a sudden growth slowdown. Finally, controlling for debt levels and democratic capital jointly (columns 5 and 6), negative political changes appear to decrease the likelihood of a slowdown, whereas a positive political change appears to increase the likelihood only in specification six, which uses the ratio of per capita GDP to that in the US. Both coefficients are significant at the 5% level.

Next, I substitute the political change variables using Polity as the measure of democracy for those using Freedom House's ratings into my baseline model –thus I include democracy stock and debt levels. [Table 7](#) presents the results with the Political Rights and Civil Liberties ratings displayed separately. A positive change in political rights is associated with an increase in the probability of a sudden growth slowdown, with the coefficient registering as significant at the 10% level in specification one (using per capita GDP) and at the 5% level in specification two (using ratios of per capita GDP). In specification two, a negative change is positively associated with a slowdown, but only at the 10% level. Specifications three and four employ changes in civil liberties, with positive changes entering as positively associated with a slowdown at the 1% level of significance. Negative changes in civil liberties appear to have no effect on the probability of a slowdown.

When comparing the results employing Freedom House measures of democracy with those of the Polity ratings, one must consider the measurement errors inherent in each, especially the former. At face value, the regressions utilizing Freedom House ratings provide stronger evidence that political changes towards democracy heighten the probability of a sudden growth slowdown than the regressions with Polity ratings. However, the Freedom House ratings are subject to a higher degree of bias than the Polity ratings since they consider not only the openness of elections and political participation, but also the functioning of the government. Similarly the Civil Liberties rating does not identify *whether* civil liberties are guaranteed, but *how much* they are respected. Therefore the results do not reflect the impact of institutionalized civil liberties or the existence of open elections on economic growth, but rather the level of respect for civil liberties or the quality of government. These are empirically interesting in their own right but subtly different from the question of whether democracy is good or bad for the economy.

Nevertheless, since the Polity and Freedom House ratings measure democratic institutions on a spectrum they still remain useful in calculating the effect of political changes. Therefore, the coefficients on the Polity and Freedom House variables can be interpreted as a reflection of the detrimental effects of an extension of political rights –that typically accompany a democratic change –on aggregate investment and productivity. On one hand, a change towards competitive elections after a period of dictatorship could add more uncertainty to the policy-making environment. This increased uncertainty would have adverse effects on investment. Furthermore, competitive elections might bring new parties to power, which could install drastic changes to economic and social policy from the prior regime. In such cases, the security of property rights might be lowered as governments

undertake higher levels of redistribution. On the other hand, an expansion of civil liberties could negatively impact social stability, as previously repressed social groups are empowered to express their views through economically disruptive behavior. Alternatively, an expansion of civil rights might also empower labor groups who could engage in strike activity or hold governments hostage for increased wages, lowering productivity. In spite of the weaknesses of the Polity and Freedom House variables, they are capable of capturing and expressing relevant political changes like the ones described above. Therefore, the results can be interpreted as at least suggestive of the potential economic ills of converting to democracy.

4.1. Sensitivity Tests

In the following regressions, I test the sensitivity of the aforementioned results using various dummies. First, given the predominance of European countries having experienced slowdowns, I introduce a dummy variable for the European Economic Area. The selection of European Economic Area countries is based on the fact that this covers the major industrialized and advanced European economies. It also controls for any unobserved characteristics that derive from being part of an integrated social, political and economic union. Therefore, the coefficients of interest are those on the EEA dummy and the political change variables. [Table 8](#) displays the results using all of the democracy proxies. When utilizing Polity ratings, the introduction of the EEA dummy registers as positive and significant at the 5% level in specification one (using per capita GDP), however of the political changes, only the negative change enters as significant and negative. In specification two (using the ratio of per capita GDP) nearly the opposite occurs. The EEA dummy is not significantly different from zero, the coefficient on positive changes is positive and significant at the 5% level, and the negative change remains the same. Specifications three through six utilize the Freedom House measures. In all four, the coefficient on the EEA dummy is positive and significant at the 5% level. Additionally, all positive political changes are significantly associated with the occurrence of a slowdown. Together these results suggest two things. Firstly, the results signal that there is something systematic about European countries in experiencing slowdowns. This is not entirely surprising given that the model will fit to the data, and the data suggest that European countries are prone to slowdowns. This could be due to the heavy fiscal pressures of welfare states or the liberalization of labor unions which make European countries more susceptible to sharp

fluctuations in growth. Secondly, the fact that the coefficients of the positive political change variables remain positive and significant with the inclusion of the EEA dummy hints that the results are not being driven solely by European democracies, but could be representative of broader negative effects of democratic changes.

Continuing, I add dummy variables for global economic shocks to see if these are alternate drivers of slowdowns. Considering the clustering of political changes and slowdowns in the years surrounding 1973, 1979, the late 1990's and early 2000's, I include a dummy variable for the oil crises of 1973 and 1979, the East Asian Financial Crisis of 1997 and a dummy variable the year 2000 and 2001. If these crises are the true drivers of the slowdowns but occurred simultaneously as political changes, then the coefficient of the political change variables would become statistically insignificant. Three broad patterns emerge from the results provided in [Table 9](#). First, all year dummies are intermittently significant and positive throughout the six specifications except for the 1979 dummy, which is significant and positive in all six specifications. This suggests that of the global economic crises, the oil crisis of 1979 appears to be the most significant correlate of slowdowns. Second, the positive political change variable is positive and statistically significant at the 5% level or lower in four of the six specifications, and significant at the 10% level in one other. This signals that political changes towards democracy continue to raise the probability of a slowdown even when controlling for exogenous shocks. Finally, the negative political change variable only enters as negative and significant at the 5% level when using the Polity rating. Thus there is small evidence that political changes away from democracy decrease the likelihood of a slowdown.

As a final sensitivity test, I run the six specifications with country fixed effects. The country fixed effects method controls for unobservable time invariant characteristics of individual countries that could affect the probability of a slowdown. The results are provided in [Table 10](#). Consequently, the only variable of interest that maintains any relationship with slowdowns is the negative political change measured by Polity. The coefficients on both variables are negative and statistically significant at the 1% level. Moreover, the magnitude of the coefficients is substantially larger than in all other models. This relationship does not hold in any other specification except for decreases in civil liberties when the ratio of GDP to that in the US is employed. Positive political changes are not significantly different from zero in any specification. Although the results from this test cannot be interpreted as fully conclusive, they suggest that the relationship between democratic changes and slowdowns

does not hold for all countries, but the relationship with negative changes is more widely applicable.

5. Possible Explanations of the Results

Taken together, the results from the previous quantitative analysis provide sound evidence that there is a relationship between political changes and sudden growth slowdowns. There also appears to be consistent evidence across models that changes towards democracy increase the likelihood of a sudden growth slowdown, whereas changes towards autocracy decrease this likelihood in certain specifications. Notwithstanding measurement errors associated with the Polity and Freedom House ratings that were used to construct the positive political change variables, there are, however, other potential biases of the results.

First and foremost, there are clear issues with endogeneity in the models. It is possible that sudden growth slowdowns cause political unrest, which ultimately leads to a new regime. This could be in the form of a dictatorship that has lost legitimacy from an economic crisis and subsequently converts to democracy, or a fragile democracy that falls victim to a coup d'état. Although economic crises are not a guaranteed cause of regime change, Haggard and Kauffman highlight that “poor economic performance reduces the bargaining power of authoritarian incumbents and increases the strength of oppositions” (1997). These two processes simultaneously diminish the legitimacy of authoritarian regimes, and increase the likelihood of democratic changes. Hence, there is clear potential for endogeneity bias in the obtained results. Simply regressing political changes on slowdowns in [Table 11](#) yields a positive and significant coefficient when positive political changes are the dependent variable but no significant relationship when negative changes are the dependent variable. Considering this fact and what is known about democracy's effects on growth, it is likely that the direction of causality runs in both ways. Moving forward, this endogeneity is accepted as given and I will examine another potential driver of the results.

5.1. Poor and Young Democracies

Up to this point, the disadvantages surrounding the Polity and Freedom House ratings have been widely acknowledged, particularly with regards to measurement error. Given that democracy has the potential to positively and negatively impact an economy via multiple

channels, then it is logical that the functioning or the *quality* of the democracy exerts an equally significant effect. Precisely what makes the Polity and Freedom House ratings imperfect measurements of democracy is the fact that they inadvertently gauge regime performance. In that regard, it might not only be the change to democracy that causes slowdowns, but also the performance of the democracy in the years immediately following the change. If this is the case, then the regression results are influenced by the quality of the democracy after a change and not exclusively by the change itself. To delve deeper into this possibility it is necessary to analyze the characteristics of those countries undergoing democratic change.

Keefer (2009) underlines that poor democracies display higher levels of political instability, which would suggest that they are prone to changes in and out of democracy. Keefer then demonstrates that poor democracies behave almost exactly the same as poor non-democracies in terms of policy choices. Particularly, poor democracies and non-democracies perform systematically lower than non-poor countries –independent of regime type –in terms of macroeconomic policies, investment in human capital, provision of infrastructure, government expenditures, corruption, rule of law and bureaucratic quality (Keefer, 2009). Keefer asserts that the reason for poor democracies' subpar performance is due to the inability of politicians to make credible promises, which causes policies to be targeted at constituencies instead of the public as a whole (Keefer, 2009). Although targeted policy making is likely to have adverse macroeconomic effects, being a poor democracy is ruled out as an explanation of regression results in this analysis. Since sudden growth slowdowns are only identified for countries with per capita GDP of \$10,000 or higher, poor democracies do not enter into the model.

However, it could be that those countries that are undergoing positive political changes in the present methodology are young democracies. Keefer (2007) provides considerable evidence that young democracies underperform in many of the same areas as poor democracies. Again, Keefer attributes this to the difficulty of making credible promises in a new environment where political parties are in their infancy and the institutions of electoral accountability are underdeveloped. Because of this underdevelopment in the political sphere, young democracies are more prone to rent-seeking and targeted good provision. Similarly, Haggard and Kauffman (1997) underscore the obstacles of democratization in that “new democratic governments [must] contend with the persistence of nondemocratic enclaves, the continuing autonomy of the military establishment, and close links between political and business elites.” Together, these factors hinder the consistency in

policy-making and add to uncertainty in the economic environment. Finally, Kapstein and Converse (2008) argue that young democracies are subject to a distinct set of challenges in comparison to older democracies. These include: 1) high levels of poverty and inequality and economic dependence on a small range of commodities 2) problems of political credibility and clientelism 3) institutional weaknesses 4) greater degrees of volatility and fluctuations in economic variables such as inflation and 5) international pressures like foreign aid and trade regulations. Additional characteristics of young democracies are the propensity for redistribution, inducing disinvestment, and Political Budget Cycles (Keefer, 2008). The latter involves the manipulation of fiscal and monetary policies to stimulate economic activity in times of elections; such practices often result in economic volatility and inflation. Considering the various channels through which young democracies can impede economic performance, it is worth taking another look at the data to determine if the age of democracies could be playing a role in the obtained regression results.

5.2. Young Democracies in the Data

[Table 12](#) presents summary statistics of the values of the Polity rating and Democracy Stock for two groups. The first group constitutes all countries that have experienced a positive political change, but the statistics are shown only for years preceding the change. Thus countries like the United States or Saudi Arabia, who have never experienced a positive political change during the years of the sample, are excluded. This is to gain an idea of how democratic or autocratic are the countries experiencing positive changes in the dataset. The second group is comprised of all 55 countries that experienced both positive political changes and slowdowns, and the statistics are taken at the time of the slowdown. This informs the levels of Polity and Democracy Stock of positive change countries at the time of the slowdowns.

The statistics of Group 1 illustrate that prior to the positive political change, the average Polity score of a country undergoing a positive change is -1.23 and the median value is -4. Given the high level of dispersion (the standard deviation is 7.10), the median value is a better indicator of a typical country's level of democracy. This is logical, as democracies are unlikely to become *more* democratic, nevertheless it demonstrates that most countries experiencing political changes began with low levels of democracy. The Democracy Stock score is also informative because it indirectly captures the age of a democracy. By

aggregating the yearly Polity scores for a country, it specifies the number of years a country was democratic or autocratic. Countries that were democratic for longer will naturally have higher levels of democratic capital, and countries that had high quality democracies will have even higher democratic capital stocks. The average Democracy Stock score in Group 1 is -185.73 and the median is -204.69. The fact that these statistics are considerably below zero indicates that the countries experiencing political changes in the data have a clear deficit of democratic capital. This means that once the positive political change occurs politicians have little democratic capital at their disposal, suggesting that those countries are new democracies or have a history of autocracy.

Moving to Group 2, the average and median Polity ratings are 1.39 and 4, respectively. Again there is substantial dispersion among Polity ratings so the median is used as an indicator for a typical country in Group 2. The advantage of the statistics in Group 2 is that they signal the Polity rating and democratic capital at the time of a slowdown for countries that have experienced a political change in the preceding five years. This means that a typical slowdown country that experienced democratic change had a Polity rating of 4 at the time of the slowdown. This implies a considerable difference (-4 to 4) between Polity ratings of the median country in Group 1 and Group 2. The Democracy Stock scores of Group 2 are even more telling. The average Democracy Stock of a slowdown country is 21.48, but the median is -9.81. Given the standard deviation of 158.16, the median value is again indicative of a typical country's democratic capital. Taking the median Polity ratings and Democracy Stock together, a typical country in Group 2 would be newly democratic or approaching democracy, but with a prohibitively low level of democratic capital. In other words, the median country would have a current democracy level of 4 (measured by Polity) but a democratic capital stock of -9.81. These statistics indicate that the median country in the sample of slowdown and positive change episodes is probably a young democracy.

5.3. The Relationship between Democratic History and Slowdowns

To better understand the relationship between democratic history and sudden growth slowdowns, I regress the later on the Democracy Stock variable. [Table 13](#) displays the results. When controlling for per capita GDP and the ratio of per capita GDP to that in the US, Democracy Stock is negatively associated with slowdowns at the 1% level in three of the four specifications. This signals that countries with high levels of democratic capital are less

likely to experience a slowdown, and conversely countries with low levels of democratic capital are more susceptible to slowdowns. To determine whether democratic capital influences the probability of a positive political change, I also regress the Democracy Stock on the positive change variable. The results in [Table 14](#) demonstrate that across all five specifications –which employ per capita GDP, the ratio of per capita GDP to that in the US and debt levels –greater amounts of democratic capital decrease the likelihood of positive political change. These results are significant at the 1% level. As a final robustness check, I rerun both regressions with year dummies of the global economic crises included. The results, in [Table 15](#), remain unchanged.

To summarize, the observations made so far suggest that a major driver of the relationship between sudden growth slowdowns and positive political changes is the fact that the countries that are undergoing political changes to democracy have extremely low levels of democratic capital. This proxy for democratic history coupled with the Polity ratings of countries at the time of slowdowns signals that the median country in the sample of slowdown and positive political change events is likely a young democracy. Considering previous empirical research undertaken by Keefer and other authors, many of the obstacles facing young democracies could be driving the results of the present analysis.

5.4. Omitted Variables

Another source of bias in the results is variables unobserved by the model. These omitted variables are correlated with the independent and dependent variables but not formally controlled for in the regression analysis. Since regime types comprise a multitude of political substructures and actors, there are simply too many variables that can be formally measured within the scope of this paper. Unfortunately, such variables, if associated with democracy and economic slowdowns, would influence the present analysis's results. For example, a transition to democracy might also induce a liberalization of labor organizations, which may lobby for increased wages or more protective labor laws. Such a phenomenon could increase labor costs and lower productivity in the aggregate. This occurred following the democratizations of Spain and Greece, where, amongst numerous economic consequences of the transition, democracy enabled labor groups to obtain increased power vis-à-vis the government resulting in higher labor costs and reduced private investment (Perez-Diaz, 1986, Sanz and Prados de la Escosura, 1995, Alogoskoufis et al., 1995, Bitros, 2012). The potential

negative effect of liberalized labor relations coinciding with democratic changes is consistent with findings by Park (2007) regarding South Korea's transition to democracy in the late 1980's, which also experienced raises in labor costs and a subsequent economic slowdown. Alternatively, the need to consolidate democracy may force governments to cater to diverse interest groups at the expense of sound economic policies that are beneficial in the long term but politically costly in the short term. This was certainly the case in 1970's Spain, where tax subsidies were directed to inefficient firms and wages were increased to garner support for the new democracy (Gunther, 1996). It is probable that many phenomena similar to the examples above occur in conjunction with democratic changes and influence economic output. Formally including such variables in the model would be fruitful for further research.

6. Conclusion

This paper has investigated into further detail the relationship between political changes and sudden growth slowdowns examined by EPS. Notwithstanding limitations to the study, this paper has demonstrated that positive political changes are positively associated with sudden growth slowdowns. This finding remains robust to various measurements of democracy and multiple sensitivity tests. The present research has also found that on occasion negative political changes are negatively associated with sudden growth slowdowns, suggesting that changes towards autocracy decrease the likelihood of slowdowns. When country fixed effects are applied, the relationship between positive changes and slowdowns does not hold, but the relationship with negative changes remains.

Unfortunately, this study is plagued by a considerable degree of endogeneity. It is not possible to completely untangle the causal relationship between political changes and sudden growth slowdowns for various reasons. First, given the complex channels through which democracy and economic performance are interlinked, it is likely that causality is multidirectional. Second, there may be many unobserved variables that influence the coefficients of the political change variables in this study. A third possibility is that the democratic change itself is not the driver of slowdowns, but rather that the countries undergoing democratic changes are young democracies. Indeed, this paper finds that the median country undergoing positive political changes has low levels of democratic capital, which is a proxy for a country's accumulated history of democracy. To take this possible effect into consideration, I controlled for levels of democratic capital, and the inclusion of

this variable did not render the relationship between positive political changes and slowdowns insignificant. However, I have shown that in the dataset, the median country experiencing a positive political change is likely to have low levels of democratic capital. Furthermore, regressing slowdowns on democratic capital and controlling for income and debt levels yields a negative and statistically significant coefficient, signaling that higher levels of democratic capital reduce the likelihood of a slowdown.

In spite of the limitations of endogeneity and the bias towards low democratic capital in the data, the findings are suggestive of negative effects of positive political changes on economic growth in the short to medium term. Whether positive political changes increase the likelihood of sudden growth slowdowns due to the fact that the democracies are young or because of inherent characteristics of democratic government remains to be fully determined, however the evidence provided in this paper suggests that a change to democracy would increase the probability of a slowdown in either case.

Given the confines of this study, research surrounding the relationship between democratic changes and slowdowns can and should be extended in a number of ways. First, the effect of democratic capital should be investigated in further detail, probing different methods to measure and define the concept. Considering the bias towards young democracies with low democratic capital stocks in this dataset, further studies should be undertaken to determine whether political changes or the age of a democracy cause slowdowns. Second, case study analyses can be carried out for countries identified by the methodology. This would facilitate a richer examination of the causal mechanisms between both the independent and dependent variables as well as identify omitted variables for future regression analyses. Spain and Greece are strong candidates due to the clear breaks between autocratic and democratic regimes, and the significance of the EEA dummy variable throughout the regressions. However, countries outside of Europe should also be investigated qualitatively to ensure analytical rigor. Third, additional omitted variables should be sought out and tested. Where data is available, these might include measurements on labor relations, inflation, policy-making during election years and the quality of governance. Finally, a deeper investigation should be undertaken into the effects of negative political changes. This has particular importance for global politics and welfare, as the findings might affect the degree of political rights and the treatment of governments towards their citizens. Specifically, if changes towards autocracy decrease the likelihood of a sudden growth slowdown, leaders in politically fragile countries might be encouraged to restrict democratic rights.

The findings of this paper present important implications for rapidly growing autocracies, particularly China, given the size of its economy and its population. Democracy is widely considered as a universal value (Sen, 1999) and is therefore often the subject of international development and foreign policy initiatives. However, if democratization heightens the probability of suffering a sudden growth slowdown, then what incentive does a country like China, or any country for that matter, have to liberalize its political system? Previous research has demonstrated that democratization carries a considerable amount of political baggage, which strains economic performance. Furthermore, young democracies face distinct economic and political challenges, and most countries undergoing a democratic transition are by definition young democracies. Thus, whether it is the political change or the symptoms of being a new democracy with scant political capital that raise the likelihood of slowdowns, decision-makers in autocratic governments are confronted with a dilemma: to democratize and risk a slowdown or maintain the status quo. As politicians in autocracies are unlikely to support changes to the status quo in either case, the findings of this study provide an increased incentive to resist political change. Consequently, researchers and policy-makers in favor of democracy should engage in further research to determine under what conditions the relationship between democratic changes and slowdowns holds, and how to mitigate the negative externalities of democratization.

Appendix

Table 1. List of Sudden Growth Slowdown Episodes

Country	Slowdown Year	Growth rate $t-7$	Growth rate $t+7$	Difference	Per Capita GDP
Antigua and Barbuda	1987	0.064	0.055	0.009	9190.92
Antigua and Barbuda	1988	0.084	0.038	0.046	10825.88
Antigua and Barbuda	1989	0.087	0.018	0.069	11425.34
Antigua and Barbuda	1990	0.088	0.014	0.074	12010.77
Antigua and Barbuda	1991	0.067	0.012	0.055	11963.63
Antigua and Barbuda	1992	0.066	0.015	0.051	12167.04
Antigua and Barbuda	1993	0.062	0.013	0.050	12758.17
Antigua and Barbuda	1994	0.055	0.006	0.049	13108.55
Antigua and Barbuda	1995	0.038	0.007	0.031	12144.07
Argentina	1995	0.103	0.011	0.092	9078.44
Argentina	1996	0.134	0.005	0.129	11681.26
Argentina	1997	0.139	-0.025	0.164	11775.56
Argentina	1998	0.126	-0.019	0.145	11560.17
Argentina	1999	0.093	-0.007	0.100	10594.16
Argentina	2000	0.068	0.013	0.054	10176.36
Argentina	2001	0.041	0.027	0.013	9364.22
Australia	1968	0.032	0.022	0.010	15775.70
Australia	1969	0.038	0.018	0.019	16599.56
Australia	1970	0.034	0.011	0.023	16750.87
Australia	1972	0.029	0.017	0.012	17490.16
Australia	1973	0.037	0.016	0.022	18647.76
Australia	1974	0.026	0.012	0.015	17863.20

Austria	1972	0.043	0.031	0.012	13770.33
Austria	1973	0.046	0.024	0.022	14508.14
Austria	1974	0.043	0.016	0.027	14796.14
Austria	1975	0.041	0.015	0.026	14862.13
Austria	1976	0.039	0.017	0.023	15276.87
Austria	1977	0.039	0.013	0.026	15896.22
Austria	1978	0.032	0.010	0.021	15906.78
Austria	1994	0.047	0.033	0.015	26138.55
Austria	1995	0.048	0.029	0.019	27471.43
Austria	1996	0.044	0.022	0.021	27985.96
Austria	1997	0.040	0.023	0.018	28965.37
Austria	1998	0.040	0.018	0.022	30628.06
Austria	1999	0.038	0.016	0.022	31812.38
Austria	2000	0.037	0.015	0.022	32914.96
Austria	2001	0.033	0.013	0.020	32194.13
Bahamas	1978	0.009	0.071	-0.063	12252.63
Bahamas	1979	0.059	0.056	0.003	16984.89
Bahamas	1980	0.062	0.008	0.055	16739.48
Bahamas	1981	0.047	0.012	0.035	15378.61
Bahamas	1982	0.063	0.030	0.033	14051.33
Bahamas	1983	0.061	0.039	0.022	12942.05
Bahamas	1984	0.078	0.039	0.039	15456.35
Bahamas	1985	0.071	0.011	0.060	17070.38
Bahamas	1986	0.056	-0.004	0.060	17494.26
Bahamas	1988	0.012	0.000	0.012	17779.17
Bahamas	1989	0.030	0.016	0.014	18935.60
Bahamas	1990	0.039	0.013	0.026	18701.11

Bahamas	1991	0.039	0.026	0.013	17243.76
Bahamas	1997	0.013	0.024	-0.011	20711.01
Bahamas	1998	0.026	0.023	0.004	22630.57
Bahamas	1999	0.046	0.008	0.038	24358.73
Bahamas	2000	0.052	0.001	0.051	24837.23
Bahamas	2001	0.050	-0.008	0.059	24068.00
Bahamas	2002	0.056	-0.017	0.073	25912.78
Bahamas	2003	0.047	-0.029	0.076	24667.35
Bahrain	2002	0.034	0.051	-0.017	18297.27
Bahrain	2003	0.066	0.030	0.036	21599.97
Bahrain	2004	0.089	0.000	0.089	24655.82
Bahrain	2005	0.112	-0.020	0.132	28657.44
Barbados	1968	0.035	0.044	-0.009	10059.02
Barbados	1969	0.046	0.015	0.031	11339.47
Barbados	1970	0.055	0.001	0.054	12535.21
Barbados	1971	0.053	-0.015	0.068	13032.03
Barbados	1972	0.056	-0.013	0.069	12921.01
Barbados	1973	0.061	-0.008	0.069	13433.20
Barbados	1974	0.048	-0.017	0.064	12633.71
Barbados	1975	0.044	-0.015	0.060	13834.64
Barbados	1976	0.015	-0.026	0.041	10813.87
Barbados	1996	0.043	0.035	0.008	19308.08
Barbados	1997	0.041	0.019	0.022	20761.37
Barbados	1998	0.043	0.020	0.024	20963.98
Barbados	1999	0.048	0.024	0.024	22032.76
Barbados	2000	0.053	0.019	0.034	22873.81
Barbados	2001	0.040	0.005	0.035	21530.85

Barbados	2002	0.033	0.010	0.022	21365.17
Belgium	1972	0.043	0.037	0.007	15573.91
Belgium	1973	0.048	0.034	0.015	16700.20
Belgium	1974	0.049	0.017	0.032	17212.44
Belgium	1975	0.042	0.009	0.033	16833.35
Belgium	1976	0.045	0.008	0.037	17881.71
Belgium	1977	0.039	0.001	0.038	18214.36
Belgium	1978	0.036	-0.003	0.039	18889.66
Belgium	1979	0.037	-0.001	0.038	19542.59
Belgium	1999	0.030	0.016	0.014	29682.32
Belgium	2000	0.034	0.016	0.018	31589.38
Belgium	2001	0.034	0.011	0.023	31735.80
Brunei	1976	0.072	0.028	0.044	81926.43
Brunei	1977	0.072	-0.011	0.083	87506.80
Brunei	1978	0.074	-0.023	0.096	95102.46
Brunei	1979	0.092	-0.083	0.175	113348.80
Brunei	1980	0.062	-0.096	0.158	92356.66
Brunei	1981	0.039	-0.093	0.132	81297.13
Canada	1975	0.034	0.012	0.022	19482.55
Canada	1976	0.037	0.016	0.021	20461.77
Canada	1977	0.034	0.016	0.017	20682.85
Canada	1988	0.025	0.014	0.011	26784.21
Canada	1989	0.026	0.009	0.016	27427.37
Canada	1990	0.030	0.011	0.019	26972.52
Canada	1999	0.026	0.020	0.006	31870.40
Canada	2000	0.033	0.014	0.019	33487.43
Canada	2001	0.030	0.008	0.022	33078.24

Chile	1995	0.070	0.009	0.061	9894.88
Chile	1996	0.060	-0.004	0.064	10121.85
Chile	1997	0.052	0.007	0.045	10110.38
Chile	1998	0.049	0.017	0.032	9822.96
Cyprus	1980	0.067	0.049	0.018	10199.48
Cyprus	1981	0.067	0.050	0.017	10199.78
Cyprus	1982	0.088	0.060	0.028	10905.61
Cyprus	1983	0.113	0.058	0.055	11208.75
Cyprus	1984	0.091	0.050	0.041	12452.48
Cyprus	1985	0.067	0.046	0.020	12750.00
Cyprus	1987	0.049	0.042	0.007	14088.71
Cyprus	1988	0.050	0.040	0.011	15036.05
Cyprus	1989	0.060	0.030	0.031	16245.69
Cyprus	1990	0.058	0.021	0.037	17073.42
Cyprus	1991	0.050	0.023	0.028	16506.21
Cyprus	1992	0.046	0.033	0.013	17812.47
Cyprus	1993	0.039	0.029	0.010	17171.48
Denmark	1967	0.045	0.031	0.014	14925.72
Denmark	1968	0.045	0.023	0.022	15672.06
Denmark	1969	0.047	0.025	0.022	16786.95
Denmark	1970	0.042	0.018	0.024	16978.34
Denmark	1971	0.043	0.021	0.022	17269.58
Denmark	1972	0.038	0.022	0.015	17945.47
Denmark	1973	0.039	0.015	0.024	18878.28
Denmark	1974	0.031	0.003	0.027	18034.89
Denmark	1997	0.030	0.022	0.008	28948.96
Denmark	1998	0.033	0.013	0.021	30285.20

Denmark	1999	0.035	0.013	0.022	30977.63
Denmark	2000	0.037	0.016	0.021	32337.08
Denmark	2001	0.038	0.013	0.024	32129.60
Equatorial Guinea	2003	0.462	0.039	0.423	6892.61
Equatorial Guinea	2004	0.454	0.083	0.371	10619.30
Equatorial Guinea	2005	0.363	0.018	0.345	14388.62
Estonia	2002	0.059	0.053	0.006	12876.89
Estonia	2003	0.054	0.050	0.003	13721.98
Estonia	2004	0.075	0.051	0.024	14745.43
Estonia	2005	0.069	0.048	0.021	15830.47
Finland	1969	0.040	0.044	-0.004	12045.42
Finland	1970	0.050	0.029	0.021	13099.40
Finland	1971	0.049	0.020	0.029	13258.12
Finland	1972	0.051	0.029	0.022	14047.28
Finland	1973	0.052	0.026	0.025	15029.35
Finland	1974	0.052	0.017	0.035	15396.08
Finland	1975	0.049	0.015	0.033	15259.90
Finland	1976	0.044	0.017	0.027	15229.28
Finland	1988	0.025	0.016	0.009	20976.48
Finland	1989	0.034	0.007	0.027	22300.58
Finland	1990	0.032	0.011	0.020	22151.39
Finland	1998	0.024	0.028	-0.005	26236.74
Finland	1999	0.041	0.021	0.020	27394.04
Finland	2000	0.054	0.026	0.028	29033.42
Finland	2001	0.057	0.022	0.035	29224.29
Finland	2002	0.051	0.012	0.038	29376.42
Finland	2003	0.036	0.015	0.021	28588.30

France	1972	0.046	0.036	0.011	16002.85
France	1973	0.050	0.030	0.020	17102.89
France	1974	0.047	0.017	0.030	17415.89
France	1975	0.041	0.014	0.027	17344.95
France	1976	0.042	0.013	0.030	18082.90
France	1977	0.038	0.005	0.033	18668.67
France	1978	0.038	0.000	0.039	19549.71
France	1979	0.036	-0.001	0.037	20205.75
France	1999	0.027	0.015	0.011	27423.43
France	2000	0.031	0.017	0.014	28771.65
France	2001	0.036	0.011	0.025	29660.37
France	2002	0.035	0.004	0.031	29976.61
France	2003	0.026	0.006	0.020	28384.06
Gabon	1978	0.085	0.011	0.074	9832.28
Gabon	1979	0.082	-0.027	0.109	10563.25
Gabon	1980	0.103	-0.050	0.153	11875.54
Gabon	1981	0.087	-0.076	0.164	11749.87
Gabon	1982	0.036	-0.036	0.072	10474.57
Gabon	1983	0.046	-0.027	0.073	11218.44
Germany	1973	0.042	0.029	0.013	14786.35
Germany	1974	0.039	0.019	0.021	14828.88
Germany	1975	0.042	0.016	0.026	14933.06
Germany	1976	0.042	0.016	0.026	15689.17
Germany	1977	0.037	0.011	0.026	16268.44
Germany	1991	0.041	0.030	0.011	23390.26
Germany	1992	0.045	0.028	0.017	24237.24
Germany	1993	0.044	0.025	0.019	24262.76

Greece	1971	0.079	0.042	0.037	9209.81
Greece	1972	0.082	0.035	0.047	10087.23
Greece	1973	0.078	0.022	0.057	10858.91
Greece	1974	0.059	0.012	0.047	9986.61
Greece	1975	0.058	0.019	0.040	10386.94
Greece	1976	0.058	0.012	0.045	10974.38
Greece	1977	0.046	0.007	0.038	11165.42
Greece	1978	0.042	0.009	0.033	11817.14
Greece	1979	0.035	0.006	0.028	11988.66
Greece	2001	0.043	0.036	0.007	21314.21
Greece	2002	0.045	0.028	0.017	22563.19
Greece	2003	0.042	0.017	0.025	22977.19
Greece	2004	0.045	0.005	0.040	24091.47
Greece	2005	0.034	-0.001	0.036	23661.84
Hong Kong	1990	0.057	0.050	0.006	21584.44
Hong Kong	1991	0.061	0.037	0.024	22974.30
Hong Kong	1992	0.058	0.026	0.032	24642.18
Hong Kong	1993	0.064	0.024	0.040	26396.68
Hong Kong	1994	0.063	0.014	0.049	27757.35
Hong Kong	1995	0.050	0.011	0.039	27995.16
Hong Kong	1996	0.050	0.011	0.039	29814.52
Hong Kong	1997	0.050	0.008	0.042	30901.22
Hong Kong	1998	0.037	0.010	0.027	28619.76
Hungary	2001	0.042	0.038	0.004	15155.10
Hungary	2002	0.042	0.023	0.019	16143.19
Hungary	2003	0.036	0.019	0.016	16105.24
Hungary	2004	0.040	0.020	0.019	16474.86

Hungary	2005	0.036	0.020	0.016	16500.57
Iceland	1964	0.045	0.058	-0.014	12935.20
Iceland	1965	0.058	0.040	0.019	14176.43
Iceland	1966	0.055	0.044	0.011	14986.71
Iceland	1975	0.041	0.031	0.010	19357.66
Iceland	1976	0.054	0.023	0.031	19570.13
Iceland	1977	0.070	0.033	0.037	22332.94
Iceland	1978	0.063	0.013	0.050	23011.34
Iceland	1979	0.038	0.015	0.023	23174.88
Iceland	1980	0.046	0.028	0.018	24248.18
Iceland	1981	0.034	0.024	0.010	25195.36
Iceland	1982	0.031	0.014	0.018	25885.76
Iceland	1983	0.023	0.009	0.014	22819.17
Iceland	1998	0.024	0.025	-0.001	32630.01
Iceland	1999	0.026	0.016	0.009	33762.63
Iceland	2000	0.032	0.013	0.019	33563.71
Iceland	2001	0.034	0.012	0.022	34149.44
Iceland	2002	0.030	-0.002	0.031	33489.50
Ireland	1977	0.030	0.028	0.002	10141.65
Ireland	1978	0.041	0.025	0.015	11088.86
Ireland	1979	0.038	0.019	0.020	11395.03
Ireland	1997	0.066	0.060	0.006	25279.44
Ireland	1998	0.072	0.050	0.022	28198.73
Ireland	1999	0.079	0.044	0.035	30146.49
Ireland	2000	0.085	0.045	0.040	32496.71
Ireland	2001	0.082	0.025	0.057	33341.47
Ireland	2002	0.080	0.011	0.070	34922.09

Ireland	2003	0.067	0.006	0.061	35165.97
Ireland	2004	0.060	0.007	0.053	35819.15
Ireland	2005	0.050	0.005	0.045	37204.02
Israel	1968	0.054	0.107	-0.053	7381.42
Israel	1969	0.105	0.091	0.013	11088.75
Israel	1970	0.111	0.030	0.081	11729.06
Israel	1971	0.113	0.023	0.090	12729.10
Israel	1972	0.118	0.018	0.099	13967.55
Israel	1973	0.108	0.002	0.106	13828.75
Israel	1974	0.112	0.009	0.102	14087.45
Israel	1975	0.107	0.011	0.096	13726.47
Israel	1976	0.091	0.020	0.071	13777.31
Israel	1995	0.035	0.026	0.009	23040.76
Israel	1996	0.035	0.014	0.022	23941.77
Israel	1997	0.041	0.006	0.036	24473.84
Israel	1998	0.038	0.001	0.037	25151.83
Israel	1999	0.032	-0.003	0.035	25860.05
Israel	2000	0.036	-0.006	0.042	27800.80
Israel	2001	0.034	-0.019	0.053	27574.42
Italy	1975	0.049	0.035	0.014	12788.99
Italy	1976	0.052	0.036	0.016	13861.56
Italy	1977	0.051	0.027	0.024	14556.30
Italy	1978	0.042	0.022	0.020	15380.09
Italy	1979	0.050	0.023	0.027	16638.48
Italy	1980	0.051	0.019	0.032	17528.78
Italy	1981	0.041	0.019	0.022	17124.92
Italy	1999	0.029	0.005	0.024	28804.20

Italy	2000	0.031	0.007	0.023	29575.04
Italy	2001	0.035	0.005	0.029	30231.20
Japan	1969	0.094	0.079	0.014	8819.42
Japan	1970	0.121	0.072	0.049	11451.39
Japan	1971	0.118	0.044	0.074	12022.66
Japan	1972	0.113	0.043	0.070	12944.11
Japan	1973	0.115	0.036	0.079	13771.40
Japan	1974	0.098	0.027	0.071	13225.85
Japan	1975	0.088	0.029	0.059	13520.22
Japan	1976	0.079	0.023	0.056	14193.22
Japan	1977	0.072	0.017	0.055	14970.52
Japan	1978	0.044	0.013	0.031	16057.95
Japan	1979	0.043	0.013	0.031	16782.95
Japan	1980	0.036	0.015	0.021	17075.45
Japan	1989	0.036	0.047	-0.011	22288.66
Japan	1990	0.048	0.038	0.010	23989.23
Japan	1991	0.058	0.025	0.033	25420.38
Japan	1992	0.062	0.017	0.046	26245.96
Japan	1993	0.063	0.015	0.048	26914.77
Japan	1994	0.059	0.013	0.046	27835.54
Japan	1995	0.057	0.009	0.048	29157.22
Japan	1996	0.047	0.004	0.043	29781.22
Japan	1997	0.038	0.004	0.034	29987.98
South Korea	1989	0.099	0.084	0.016	9723.07
South Korea	1990	0.104	0.079	0.025	10678.81
South Korea	1991	0.103	0.062	0.041	11759.84
South Korea	1992	0.100	0.059	0.041	12523.72

South Korea	1993	0.103	0.059	0.045	13502.30
South Korea	1994	0.098	0.053	0.045	14862.67
South Korea	1995	0.093	0.050	0.043	16325.36
South Korea	1996	0.084	0.041	0.042	17167.08
South Korea	1997	0.079	0.040	0.039	17892.96
South Korea	1998	0.062	0.038	0.023	17100.89
Kuwait	1976	0.143	-0.029	0.172	29630.77
Kuwait	1977	0.116	-0.033	0.148	28221.32
Kuwait	1978	0.092	-0.037	0.129	26044.43
Kuwait	1979	0.114	-0.061	0.174	35284.74
Kuwait	1980	0.114	-0.090	0.204	34756.84
Kuwait	1981	0.094	-0.107	0.201	27505.23
Kuwait	1992	0.097	0.275	-0.178	16481.11
Kuwait	1993	0.154	0.084	0.070	22552.10
Kuwait	1994	0.197	0.025	0.172	24459.52
Kuwait	1995	0.193	0.021	0.173	26624.99
Kuwait	1996	0.225	0.033	0.193	29493.82
Kuwait	1997	0.201	0.045	0.155	27651.65
Kuwait	1998	0.204	0.088	0.116	23225.95
Kuwait	1999	0.275	0.131	0.144	24795.95
Latvia	2001	0.031	0.071	-0.040	9947.54
Latvia	2002	0.052	0.050	0.002	10735.68
Latvia	2003	0.058	0.044	0.014	10892.48
Lithuania	2001	0.052	0.070	-0.018	11066.51
Lithuania	2002	0.068	0.044	0.024	11880.27
Lithuania	2003	0.074	0.043	0.031	12794.83
Lithuania	2004	0.070	0.040	0.030	13371.52

Lithuania	2005	0.062	0.039	0.023	13887.33
Luxembourg	1956	0.065	0.025	0.040	14662.64
Luxembourg	1957	0.060	0.020	0.040	14926.28
Luxembourg	1958	0.048	0.019	0.029	14411.04
Luxembourg	1959	0.019	0.023	-0.005	14445.70
Luxembourg	1960	0.022	0.024	-0.003	16604.87
Luxembourg	1961	0.036	0.013	0.023	16310.82
Luxembourg	1962	0.031	0.032	-0.001	15677.98
Luxembourg	1968	0.013	0.039	-0.026	18349.06
Luxembourg	1969	0.032	0.038	-0.006	20823.42
Luxembourg	1970	0.046	0.017	0.028	22242.02
Luxembourg	1971	0.038	0.017	0.021	21121.16
Luxembourg	1972	0.036	0.028	0.007	22281.65
Luxembourg	1973	0.050	0.026	0.024	25039.31
Luxembourg	1974	0.062	0.006	0.056	27394.60
Luxembourg	1975	0.039	-0.006	0.044	22623.10
Luxembourg	1989	0.046	0.045	0.001	36287.82
Luxembourg	1990	0.050	0.035	0.015	37589.30
Luxembourg	1991	0.061	0.039	0.022	40530.59
Luxembourg	1992	0.059	0.048	0.011	40405.04
Luxembourg	2001	0.044	0.035	0.009	60698.16
Luxembourg	2002	0.042	0.027	0.016	62697.15
Luxembourg	2003	0.045	0.028	0.016	64433.43
Luxembourg	2004	0.046	0.026	0.021	66411.24
Luxembourg	2005	0.048	0.025	0.023	69293.53
Macao	1977	0.083	0.065	0.019	9320.60
Macao	1978	0.084	0.051	0.033	10127.61

Macao	1979	0.084	0.046	0.038	10837.85
Macao	1980	0.083	0.055	0.028	11587.59
Macao	1981	0.080	0.056	0.025	12310.22
Macao	1982	0.071	0.051	0.020	12490.47
Macao	1989	0.051	0.051	0.000	18185.52
Macao	1990	0.060	0.044	0.016	19835.11
Macao	1991	0.058	0.023	0.035	20742.29
Macao	1992	0.073	0.015	0.058	24464.56
Macao	1993	0.081	-0.007	0.088	25462.03
Macao	1994	0.076	-0.012	0.088	25752.61
Macao	1995	0.064	-0.004	0.067	26865.83
Macao	1996	0.051	0.007	0.044	26159.13
Macao	1997	0.044	0.041	0.003	25349.38
Malta	1997	0.048	0.045	0.004	15976.09
Malta	1998	0.056	0.029	0.027	17692.56
Malta	1999	0.058	0.018	0.040	19030.94
Malta	2000	0.066	0.016	0.050	20636.45
Malta	2001	0.060	0.011	0.049	20016.45
Malta	2002	0.059	0.016	0.043	20744.18
Malta	2003	0.049	0.015	0.033	20208.96
Malta	2004	0.045	0.022	0.023	19794.25
Mauritius	1994	0.057	0.006	0.051	9985.61
Mauritius	1995	0.053	-0.001	0.054	10878.37
Mauritius	1996	0.062	-0.017	0.079	11967.05
Mauritius	1997	0.051	-0.031	0.082	11257.29
Mauritius	1998	0.042	-0.036	0.078	11290.98
Mauritius	1999	0.027	-0.031	0.058	10598.35

Mexico	1979	0.042	0.002	0.040	9752.14
Mexico	1980	0.047	-0.008	0.054	10645.05
Mexico	1981	0.048	-0.024	0.072	11251.56
Mexico	1982	0.040	-0.030	0.069	10910.11
Mexico	1983	0.027	-0.022	0.048	10078.13
Netherlands	1972	0.046	0.027	0.019	16006.97
Netherlands	1973	0.046	0.026	0.020	17041.26
Netherlands	1974	0.047	0.015	0.033	17581.06
Netherlands	1975	0.042	0.007	0.035	17696.69
Netherlands	1976	0.038	0.005	0.033	18447.37
Netherlands	1977	0.035	0.003	0.033	18721.96
Netherlands	1997	0.036	0.033	0.002	27839.35
Netherlands	1998	0.039	0.025	0.013	29798.37
Netherlands	1999	0.043	0.022	0.021	31633.97
Netherlands	2000	0.050	0.021	0.028	33796.44
Netherlands	2001	0.051	0.016	0.035	34503.14
Netherlands	2002	0.048	0.007	0.041	34774.45
Netherlands	2003	0.037	0.011	0.027	33092.41
New Zealand	1963	0.030	0.015	0.014	13474.92
New Zealand	1964	0.035	0.011	0.024	13904.53
New Zealand	1965	0.038	0.014	0.023	14410.61
New Zealand	1966	0.046	0.020	0.026	15007.36
New Zealand	1967	0.028	0.011	0.018	13826.26
New Zealand	1998	0.026	0.016	0.010	22845.71
New Zealand	1999	0.036	0.015	0.020	24060.14
New Zealand	2000	0.035	0.016	0.020	24233.60
Norway	1979	0.033	0.024	0.009	20171.40

Norway	1980	0.039	0.016	0.022	21732.17
Norway	1981	0.034	0.005	0.029	21952.48
Norway	1999	0.045	0.055	-0.010	33837.86
Norway	2000	0.063	0.051	0.011	38911.71
Norway	2001	0.059	0.040	0.018	38846.76
Oman	1979	0.085	0.045	0.040	7013.70
Oman	1980	0.134	0.045	0.089	10106.52
Oman	1981	0.172	-0.025	0.197	11253.35
Oman	1982	0.143	-0.033	0.176	11210.76
Oman	1983	0.108	-0.015	0.123	10919.17
Oman	1984	0.097	-0.019	0.116	11481.82
Oman	1985	0.093	-0.021	0.114	12327.48
Oman	1986	0.045	-0.032	0.077	8962.47
Poland	1996	0.037	0.037	0.000	9839.10
Poland	1997	0.038	0.038	0.000	10484.20
Poland	1998	0.058	0.032	0.026	11075.70
Poland	1999	0.070	0.031	0.039	11585.08
Poland	2000	0.065	0.038	0.028	11967.19
Poland	2001	0.059	0.039	0.020	12276.47
Portugal	1990	0.050	0.047	0.003	12756.31
Portugal	1991	0.058	0.045	0.013	13344.53
Portugal	1992	0.068	0.047	0.021	13941.17
Portugal	1993	0.063	0.045	0.018	13905.49
Portugal	1997	0.047	0.032	0.015	16997.89
Portugal	1998	0.045	0.026	0.019	18097.78
Portugal	1999	0.047	0.022	0.025	19264.23
Portugal	2000	0.045	0.020	0.025	19823.82

Portugal	2001	0.048	0.016	0.031	20146.64
Portugal	2002	0.041	0.014	0.027	20287.11
Portugal	2003	0.034	0.016	0.018	20070.16
Qatar	2002	0.121	0.102	0.019	47192.67
Qatar	2003	0.169	0.121	0.048	68588.71
Qatar	2004	0.184	0.086	0.098	78596.04
Qatar	2005	0.175	0.077	0.098	90724.27
Saudi Arabia	1976	0.148	-0.034	0.182	27369.71
Saudi Arabia	1977	0.122	-0.069	0.191	26407.50
Saudi Arabia	1978	0.096	-0.088	0.184	24222.01
Saudi Arabia	1979	0.071	-0.082	0.153	23715.69
Saudi Arabia	1980	0.061	-0.090	0.151	24636.10
Singapore	1979	0.070	0.051	0.019	10069.24
Singapore	1980	0.069	0.048	0.022	11147.39
Singapore	1981	0.068	0.042	0.025	11946.76
Singapore	1982	0.069	0.043	0.026	12880.11
Singapore	1983	0.079	0.046	0.032	13996.61
Singapore	1984	0.078	0.042	0.036	14715.84
Singapore	1985	0.065	0.040	0.025	13875.88
Singapore	1994	0.069	0.055	0.014	23201.80
Singapore	1995	0.071	0.053	0.018	24964.56
Singapore	1996	0.069	0.046	0.023	26250.49
Singapore	1997	0.072	0.062	0.009	28894.70
Singapore	2003	0.046	0.052	-0.006	35234.09
Singapore	2004	0.062	0.052	0.010	41650.33
Singapore	2005	0.062	0.034	0.029	45749.81
Spain	1971	0.052	0.037	0.016	9940.79

Spain	1972	0.056	0.033	0.024	10677.80
Spain	1973	0.059	0.024	0.034	11352.97
Spain	1974	0.051	0.008	0.044	11503.49
Spain	1975	0.046	0.002	0.044	11536.52
Spain	1976	0.044	-0.002	0.045	11959.10
Spain	1977	0.037	-0.008	0.045	12335.08
Spain	1978	0.037	-0.013	0.050	12718.64
Spain	1979	0.033	-0.008	0.041	12835.27
Spain	2001	0.050	0.031	0.019	24894.74
Spain	2002	0.049	0.023	0.027	25741.49
Spain	2003	0.041	0.016	0.025	25597.81
Spain	2004	0.041	0.015	0.026	26387.69
Spain	2005	0.036	0.013	0.022	26954.90
St. Kitts & Nevis	1993	0.061	0.035	0.026	9290.08
St. Kitts & Nevis	1994	0.050	0.021	0.029	10011.69
St. Kitts & Nevis	1995	0.041	0.018	0.023	10068.64
St. Kitts & Nevis	1996	0.047	0.015	0.032	10788.82
St. Kitts & Nevis	1997	0.039	0.016	0.023	10922.58
St. Kitts & Nevis	1998	0.036	0.024	0.012	11138.73
St. Kitts & Nevis	1999	0.042	0.019	0.022	12070.05
St. Kitts & Nevis	2000	0.035	0.010	0.026	11814.20
Sweden	1969	0.034	0.026	0.008	15583.98
Sweden	1970	0.037	0.016	0.022	16515.69
Sweden	1971	0.032	0.008	0.024	16477.71
Sweden	1988	0.026	0.019	0.007	22519.39
Sweden	1989	0.032	0.016	0.016	23422.78
Sweden	1990	0.033	0.017	0.016	23638.51

Sweden	1998	0.023	0.021	0.002	28188.34
Sweden	1999	0.033	0.020	0.013	30149.66
Sweden	2000	0.041	0.020	0.021	31800.44
Sweden	2001	0.044	0.013	0.031	31454.39
Sweden	2002	0.037	0.007	0.031	31542.87
Taiwan	1991	0.073	0.057	0.016	16000.68
Taiwan	1992	0.069	0.051	0.018	16882.28
Taiwan	1993	0.073	0.050	0.023	17891.80
Taiwan	1994	0.062	0.038	0.025	18979.61
Taiwan	1995	0.057	0.035	0.022	19864.51
Taiwan	1996	0.061	0.031	0.030	20998.91
Taiwan	1997	0.058	0.028	0.030	22269.09
Taiwan	1998	0.057	0.024	0.034	23190.18
Taiwan	1999	0.051	0.021	0.030	23898.44
Taiwan	2000	0.050	0.021	0.029	24882.20
Taiwan	2001	0.038	0.009	0.029	23941.62
Trinidad & Tobago	1974	0.075	0.092	-0.017	14154.77
Trinidad & Tobago	1975	0.068	0.038	0.030	14525.46
Trinidad & Tobago	1976	0.077	0.018	0.059	16087.00
Trinidad & Tobago	1977	0.077	-0.004	0.081	16620.19
Trinidad & Tobago	1978	0.086	-0.011	0.096	17120.60
Trinidad & Tobago	1979	0.104	-0.035	0.139	19015.49
Trinidad & Tobago	1980	0.108	-0.062	0.170	21266.47
Trinidad & Tobago	1981	0.092	-0.084	0.176	20496.42
Trinidad & Tobago	1982	0.038	-0.088	0.125	18727.85
Trinidad & Tobago	1983	0.018	-0.070	0.088	16195.35
Trinidad & Tobago	2003	0.048	0.083	-0.034	12216.38

Trinidad & Tobago	2004	0.071	0.069	0.001	14135.35
Trinidad & Tobago	2005	0.073	0.057	0.016	14390.66
United Kingdom	1998	0.035	0.029	0.006	27366.53
United Kingdom	1999	0.042	0.025	0.017	28709.39
United Kingdom	2000	0.048	0.021	0.027	30119.66
United Kingdom	2001	0.049	0.011	0.038	31038.50
United Kingdom	2002	0.045	0.001	0.044	31337.15
United Kingdom	2003	0.042	0.005	0.037	31504.88
United Kingdom	2004	0.040	0.003	0.037	32599.65
United States	1967	0.032	0.021	0.011	19412.34
United States	1968	0.036	0.018	0.019	20188.24
United States	1969	0.038	0.019	0.020	20667.18
Uruguay	1995	0.030	-0.029	0.059	10332.63
Uruguay	1996	0.037	-0.029	0.067	10913.51
Uruguay	1997	0.036	-0.032	0.068	10860.66
Uruguay	1998	0.040	-0.027	0.067	10947.58
Uruguay	1999	0.027	-0.024	0.051	10230.64

Table 2. List of Sudden Growth Slowdowns Concurrent with Positive Political Changes (measured by Polity)

Country	Slowdown Year	Growth rate $t-7$	Growth rate $t+7$	Difference	Per Capita GDP
Argentina	1999	0.093	-0.007	0.100	10594.16
Argentina	2000	0.068	0.013	0.054	10176.36
Argentina	2001	0.041	0.027	0.013	9364.22
Bahrain	2002	0.034	0.051	-0.017	18297.27
Bahrain	2003	0.066	0.030	0.036	21599.97
Bahrain	2004	0.089	0.000	0.089	24655.82
Bahrain	2005	0.112	-0.020	0.132	28657.44
Estonia	2002	0.059	0.053	0.006	12876.89
Estonia	2003	0.054	0.050	0.003	13721.98
Estonia	2004	0.075	0.051	0.024	14745.43
France	1972	0.046	0.036	0.011	16002.85
France	1973	0.050	0.030	0.020	17102.89
Greece	1974	0.059	0.012	0.047	9986.61
Greece	1975	0.058	0.019	0.040	10386.94
Greece	1976	0.058	0.012	0.045	10974.38
Greece	1977	0.046	0.007	0.038	11165.42
Greece	1978	0.042	0.009	0.033	11817.14
Greece	1979	0.035	0.006	0.028	11988.66
Israel	1999	0.032	-0.003	0.035	25860.05
Israel	2000	0.036	-0.006	0.042	27800.80
Israel	2001	0.034	-0.019	0.053	27574.42
South Korea	1989	0.099	0.084	0.016	9723.07
South Korea	1990	0.104	0.079	0.025	10678.81
South Korea	1991	0.103	0.062	0.041	11759.84

South Korea	1992	0.100	0.059	0.041	12523.72
South Korea	1998	0.062	0.038	0.023	17100.89
Kuwait	1981	0.094	-0.107	0.201	27505.23
Kuwait	1992	0.097	0.275	-0.178	16481.11
Kuwait	1993	0.154	0.084	0.070	22552.10
Kuwait	1994	0.197	0.025	0.172	24459.52
Kuwait	1995	0.193	0.021	0.173	26624.99
Kuwait	1996	0.225	0.033	0.193	29493.82
Mexico	1979	0.042	0.002	0.040	9752.14
Mexico	1980	0.047	-0.008	0.054	10645.05
Mexico	1981	0.048	-0.024	0.072	11251.56
Poland	1996	0.037	0.037	0.000	9839.10
Poland	1997	0.038	0.038	0.000	10484.20
Poland	1998	0.058	0.032	0.026	11075.70
Poland	1999	0.070	0.031	0.039	11585.08
Spain	1975	0.046	0.002	0.044	11536.52
Spain	1976	0.044	-0.002	0.045	11959.10
Spain	1977	0.037	-0.008	0.045	12335.08
Spain	1978	0.037	-0.013	0.050	12718.64
Spain	1979	0.033	-0.008	0.041	12835.27
Taiwan	1991	0.073	0.057	0.016	16000.68
Taiwan	1992	0.069	0.051	0.018	16882.28
Taiwan	1993	0.073	0.050	0.023	17891.80
Taiwan	1994	0.062	0.038	0.025	18979.61
Taiwan	1995	0.057	0.035	0.022	19864.51
Taiwan	1996	0.061	0.031	0.030	20998.91
Taiwan	1997	0.058	0.028	0.030	22269.09

Taiwan	1998	0.057	0.024	0.034	23190.18
Taiwan	1999	0.051	0.021	0.030	23898.44
Taiwan	2000	0.050	0.021	0.029	24882.20
Taiwan	2001	0.038	0.009	0.029	23941.62

Table 3. Construction of Political Rights and Civil Liberties Ratings

Political Rights	Civil Liberties
<u>Electoral Process</u> - considers the extent to which elections for executive and legislative branches are open, contestable and fair. It also measures the freedom and fairness of the electoral framework	<u>Freedom of Expression and belief</u> - considers the extent of media, religious and academic freedom, as well as the freedom of private discussion in open spaces
<u>Political Pluralism and participation</u> - considers the right to organize in political parties, the political system's openness to multiple parties, the freedom of political choice (from certain groups such as the military or elites) and the political and electoral rights of minorities.	<u>Associational and organizational rights</u> - considers the extent of freedom of assembly and protest, in addition to the freedom of NGOs, professional organizations and trade unions
<u>Functioning of Government</u> - measures the extent to which elected officials determine policies, the pervasiveness of corruption, and the accountability and transparency of government policy-making	<u>Rule of Law</u> - considers the independence of the judiciary, the equality of application of the legal system to different segments of the population, and freedom from political terror, imprisonment, torture, war and insurgency
	<u>Personal Autonomy and individual rights</u> - considers the freedom of travel, employment, and education; the right to own property and form businesses; social freedoms such as gender or marital equality; and the equality of economic opportunity

Source: Freedom in the World
2014 Methodology

Table 4. Description of Independent Variables

Positive Political Change	
• poschPOLITY:	Positive change in Polity rating
• poschPR:	Positive change in Freedom House's Political Rights rating
• poschCL:	Positive change in Freedom House's Civil Liberties rating
Negative Political Change	
• negchPOLITY:	Negative change in Polity rating
• negchPR:	Negative change in Freedom House's Political Rights rating
• negchCL:	Negative change in Freedom House's Civil Liberties rating
Control Vector Z	
• pcGDP:	Per capita GDP
• pcGDP ² :	Per capita GDP squared
• Ratio:	Ratio of a country's per capita GDP to the US's per capita GDP
• Ratio ² :	Square of Ratio
• Pre-SGS growth:	Average growth rate during the seven years prior to slowdown
• Debt % of GDP:	Debt percentage of GDP
• Democracy Stock:	The accumulated years of democracy with an annual 1% depreciation rate Calculated as $\sum_{s=1950}^t \text{Polity} \cdot 99^{t-s}$
Additional controls	
• EEA:	Dummy variable for countries belonging to the European Economic Area
• D ₁₉₇₃ and D ₁₉₇₉ :	Dummy variables for the oil shocks of 1973 and 1979
• D ₁₉₉₇ :	Dummy variable for the East Asian Financial Crisis
• D ₂₀₀₀ and D ₂₀₀₁ :	Dummy variables for the global economic downturn of the early 2000's.
• Country fixed effects	

Table 5. EPS's Baseline Model

	SGS	
	(1)	(2)
poschPOLITY	0.181* (0.0988)	0.392*** (0.107)
negchPOLITY	-0.335* (0.202)	-0.358 (0.218)
pcGDP	0.000151*** (7.96e-06)	
pcGDP ²	-1.87e-09*** (1.41e-10)	
Ratio		6.556*** (0.413)
Ratio ²		-3.260*** (0.278)
Pre-SGS growth	14.07*** (0.846)	15.25*** (0.919)
Observations	5,122	5,122

Standard errors in parentheses

*** Significant at 1% level, ** Significant at 5% level, * Significant at 10% level

Table 6. My Baseline Model

	SGS					
	(1)	(2)	(3)	(4)	(5)	(6)
poschPOLITY	0.0775 (0.109)	0.267** (0.115)	0.208** (0.0994)	0.411*** (0.108)	0.0983 (0.109)	0.281** (0.116)
negchPOLITY	-0.803*** (0.310)	-0.753** (0.299)	-0.268 (0.202)	-0.292 (0.218)	-0.711** (0.302)	-0.673** (0.295)
pcGDP	0.000146*** (8.68e-06)		0.000139*** (8.64e-06)		0.000139*** (9.30e-06)	
pcGDP ²	-1.80e-09*** (1.51e-10)		-1.71e-09*** (1.50e-10)		-1.70e-09*** (1.59e-10)	
Ratio		6.118*** (0.420)		6.222*** (0.434)		5.885*** (0.440)
Ratio ²		-3.096*** (0.284)		-3.082*** (0.287)		-2.972*** (0.293)
Pre-SGS growth	13.57*** (0.893)	14.60*** (0.940)	14.68*** (0.876)	15.73*** (0.946)	13.96*** (0.916)	14.93*** (0.963)
Debt % of GDP	-0.00719*** (0.00137)	-0.00393*** (0.00125)			-0.00715*** (0.00137)	-0.00401*** (0.00125)
Democracy Stock			0.0216*** (0.00639)	0.0165** (0.00669)	0.0150** (0.00678)	0.0124* (0.00700)
Observations	4,276	4,276	5,122	5,122	4,276	4,276

Standard errors in parentheses

*** Significant at 1% level, ** Significant at 5% level, * Significant at 10% level

Table 7. Measuring the effect of democracy on slowdowns with Freedom House ratings

	SGS			
	(1)	(2)	(3)	(4)
poschPR	0.191*	0.210**		
	(0.0989)	(0.103)		
negchPR	0.114	0.213*		
	(0.119)	(0.125)		
poschCL			0.246***	0.344***
			(0.0935)	(0.0984)
negchCL			-0.0723	-0.0501
			(0.118)	(0.122)
pcGDP	0.000132***		0.000130***	
	(9.62e-06)		(9.63e-06)	
pcGDP ²	-1.57e-09***		-1.57e-09***	
	(1.62e-10)		(1.63e-10)	
Ratio		5.993***		5.978***
		(0.441)		(0.442)
Ratio ²		-3.069***		-3.079***
		(0.295)		(0.297)
Pre-SGS growth	13.16***	13.99***	12.98***	13.73***
	(0.922)	(0.964)	(0.922)	(0.965)
Debt % of GDP	-0.00673***	-0.00541***	-0.00681***	-0.00572***
	(0.00143)	(0.00142)	(0.00145)	(0.00144)
Democracy Stock	0.0200***	0.0194***	0.0185**	0.0172**
	(0.00719)	(0.00735)	(0.00719)	(0.00736)
Observations	3,579	3,579	3,579	3,579

Standard errors in parentheses

*** Significant at 1% level, ** Significant at 5% level, * Significant at 10% level

Table 8. Baseline model with EEA Dummy

	SGS					
	(1)	(2)	(3)	(4)	(5)	(6)
poschPOLITY	0.112 (0.109)	0.289** (0.116)				
negchPOLITY	-0.702** (0.303)	-0.674** (0.297)				
poschPR			0.228** (0.0998)	0.242** (0.104)		
negchPR			0.182 (0.121)	0.271** (0.127)		
poschCL					0.219** (0.0943)	0.319*** (0.0992)
negchCL					-0.0346 (0.118)	-0.0219 (0.123)
pcGDP	0.000135*** (9.55e-06)		0.000125*** (9.98e-06)		0.000124*** (1.00e-05)	
pcGDP2	-1.65e-09*** (1.61e-10)		-1.49e-09*** (1.65e-10)		-1.49e-09*** (1.67e-10)	
Ratio		5.763*** (0.451)		5.755*** (0.453)		5.762*** (0.456)
Ratio ²		-2.904*** (0.297)		-2.943*** (0.300)		-2.971*** (0.303)
Pre-SGS growth	14.06*** (0.920)	14.97*** (0.964)	13.28*** (0.924)	14.05*** (0.964)	13.08*** (0.924)	13.77*** (0.964)
Debt % of GDP	-0.00681*** (0.00137)	-0.00383*** (0.00125)	-0.00618*** (0.00143)	-0.00500*** (0.00142)	-0.00639*** (0.00145)	-0.00546*** (0.00145)
Democracy Stock	0.0111 (0.00707)	0.00973 (0.00725)	0.0113 (0.00764)	0.0116 (0.00782)	0.0116 (0.00763)	0.0118 (0.00783)
EEA	0.163**	0.119	0.339***	0.291***	0.262***	0.193**

	(0.0822)	(0.0813)	(0.0957)	(0.0965)	(0.0943)	(0.0953)
Observations	4,276	4,276	3,579	3,579	3,579	3,579

Standard errors in parentheses

*** Significant at 1% level, ** Significant at 5% level, * Significant at 10% level

Table 9. Exogenous Shocks

	SGS					
	(1)	(2)	(3)	(4)	(5)	(6)
poschPOLITY	0.0960 (0.111)	0.250** (0.117)				
negchPOLITY	-0.734** (0.307)	-0.680** (0.301)				
poschPR			0.199** (0.100)	0.200* (0.104)		
negchPR			0.131 (0.120)	0.222* (0.126)		
poschCL					0.268*** (0.0945)	0.375*** (0.0995)
negchCL					-0.0756 (0.120)	-0.0565 (0.124)
pcGDP	0.000139*** (9.36e-06)		0.000133*** (9.69e-06)		0.000132*** (9.71e-06)	
pcGDP ²	-1.69e-09*** (1.59e-10)		-1.58e-09*** (1.62e-10)		-1.58e-09*** (1.63e-10)	
Ratio		5.966*** (0.441)		6.050*** (0.440)		6.081*** (0.444)
Ratio ²		-3.023*** (0.292)		-3.098*** (0.295)		-3.128*** (0.298)

Pre-SGS growth	13.90*** (0.924)	14.65*** (0.968)	13.12*** (0.929)	13.74*** (0.967)	12.91*** (0.929)	13.47*** (0.969)
Debt % of GDP	-0.00704*** (0.00138)	-0.00446*** (0.00130)	-0.00642*** (0.00144)	-0.00561*** (0.00145)	-0.00656*** (0.00146)	-0.00597*** (0.00148)
Democracy Stock	0.0159** (0.00683)	0.0120* (0.00703)	0.0208*** (0.00725)	0.0187** (0.00739)	0.0191*** (0.00724)	0.0166** (0.00739)
D ₁₉₇₃	0.438* (0.234)	0.261 (0.246)	0.460** (0.230)	0.153 (0.245)	0.438* (0.230)	0.149 (0.245)
D ₁₉₇₉	0.608*** (0.210)	0.565*** (0.217)	0.593*** (0.209)	0.424* (0.219)	0.596*** (0.210)	0.426* (0.219)
D ₁₉₉₇	0.188 (0.202)	0.471** (0.203)	0.125 (0.204)	0.302 (0.208)	0.199 (0.203)	0.391* (0.208)
D ₂₀₀₀	0.0499 (0.196)	0.426** (0.196)	0.0913 (0.194)	0.371* (0.196)	0.117 (0.193)	0.401** (0.196)
D ₂₀₀₁	0.229 (0.182)	0.605*** (0.183)	0.274 (0.181)	0.560*** (0.183)	0.296* (0.180)	0.583*** (0.183)
Observations	4,276	4,276	3,579	3,579	3,579	3,579

Standard errors in parentheses

*** Significant at 1% level, ** Significant at 5% level, * Significant at 10% level

Table 10. Baseline Model with Country Fixed Effects

	SGS					
	(1)	(2)	(3)	(4)	(5)	(6)
poschPOLITY	-0.266 (0.237)	0.200 (0.234)				
negchPOLITY	-2.141*** (0.756)	-2.052*** (0.772)				
poschPR			0.216 (0.234)	0.223 (0.237)		
negchPR			0.00825 (0.357)	-0.0563 (0.355)		
poschCL					0.0758 (0.182)	0.187 (0.183)
negchCL					-0.383 (0.238)	-0.537** (0.246)
pcGDP	0.000379*** (4.13e-05)		0.000151*** (5.44e-05)		0.000144*** (5.45e-05)	
pcGDP ²	-3.74e-09*** (4.79e-10)		-1.32e-09** (6.13e-10)		-1.27e-09** (6.11e-10)	
Ratio		19.36*** (2.328)		10.40*** (3.292)		11.36*** (3.311)
Ratio ²		-6.906*** (1.323)		-3.719** (1.596)		-4.068** (1.606)
Pre-SGS growth	58.25*** (5.138)	61.01*** (5.368)	67.05*** (6.272)	65.61*** (6.420)	66.82*** (6.238)	65.13*** (6.394)
Debt % of GDP	-0.0130*** (0.00373)	-0.0150*** (0.00389)	-0.0209*** (0.00504)	-0.0210*** (0.00505)	-0.0210*** (0.00492)	-0.0207*** (0.00494)
Democracy Stock	-0.00880*** (0.00177)	0.00283*** (0.000860)	-0.000790 (0.00245)	0.00366*** (0.00140)	-0.000641 (0.00247)	0.00340** (0.00138)

Observations	1,148	1,148	794	794	794	794
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Standard errors in parentheses

*** Significant at 1% level, ** Significant at 5% level, * Significant at 10% level

Table 11. Endogeneity Test: Political changes regressed on slowdowns

	Positive Political Change		Negative Political Change	
	(1)	(2)	(3)	(4)
SGS	0.293** (0.133)	0.403*** (0.140)	-0.104 (0.450)	-0.635 (0.389)
pcGDP	-1.51e-05 (1.62e-05)		0.000103* (5.55e-05)	
pcGDP ²	-1.06e-09* (6.40e-10)		-1.87e-08*** (4.97e-09)	
Ratio		1.830*** (0.630)		-0.710 (0.899)
Ratio ²		-4.886*** (0.861)		-3.548** (1.423)
Pre-SGS growth	-5.678*** (1.059)	-5.368*** (1.066)	-4.526*** (1.380)	-3.828*** (1.365)
Democracy Stock	-0.00195*** (0.000208)	-0.00145*** (0.000212)	0.00102*** (0.000283)	0.000951*** (0.000268)
Debt % of GDP	0.00196** (0.000808)	0.00198** (0.000828)	-0.00372*** (0.00139)	-0.00498*** (0.00141)
Observations	2,262	2,262	2,262	2,262

Standard errors in parentheses

*** Significant at 1% level, ** Significant at 5% level, * Significant at 10% level

Table 12. Descriptive Statistics for countries experiencing positive political changes

		Mean	Median	Standard Deviation	Minimum	Maximum
Group 1	Polity score for positive change countries <i>prior</i> to the change	-1.23	-4	7.10	-10	10
	Democracy Stock positive change countries <i>prior</i> to the change	-185.73	-204.69	60.94	-291.84	-77.83
Group 2	Polity scores for countries experiencing positive change and an SGS <i>at time of SGS</i>	1.39	4	7.78	-10	10
	Democracy Stock for countries experiencing positive change and an SGS <i>at time of SGS</i>	21.48	-9.81	158.16	-231.51	374.36

Table 13. Slowdowns regressed on Democratic History

	(1)	(2)	SGS (3)	(4)	(5)
Democracy Stock	0.00183*** (0.000174)	-0.00163*** (0.000261)	-0.000952*** (0.000253)	-0.00139*** (0.000307)	-0.000368 (0.000308)
pcGDP		0.000175*** (1.17e-05)		0.000172*** (1.31e-05)	
pcGDP ²		-2.15e-09*** (2.11e-10)		-2.14e-09*** (2.28e-10)	
Ratio			6.136*** (0.508)		5.751*** (0.530)
Ratio ²			-3.088*** (0.360)		-3.139*** (0.380)
Debt % of GDP				-0.00824*** (0.00162)	-0.00578*** (0.00156)
Observations	2,887	2,887	2,887	2,334	2,334

Standard errors in parentheses

*** Significant at 1% level, ** Significant at 5% level, * Significant at 10% level

Table 14. Positive Political Changes regressed on Democratic History

	Positive Political Changes (measured by Polity)				
	(1)	(2)	(3)	(4)	(5)
Democracy Stock	-0.00214*** (0.000135)	-0.00175*** (0.000184)	-0.00130*** (0.000189)	-0.00197*** (0.000208)	-0.00148*** (0.000212)
pcGDP		3.17e-06 (1.46e-05)		-9.79e-06 (1.60e-05)	
pcGDP ²		-1.48e-09** (5.99e-10)		-1.09e-09* (6.35e-10)	
Ratio			2.033*** (0.546)		1.967*** (0.627)
Ratio ²			-4.683*** (0.752)		-4.791*** (0.853)
Pre-SGS growth		-3.948*** (0.821)	-3.785*** (0.833)	-5.112*** (1.027)	-4.638*** (1.035)
Debt % of GDP				0.00183** (0.000803)	0.00187** (0.000824)
Observations	3,629	2,761	2,761	2,262	2,262

Standard errors in parentheses

*** Significant at 1% level, ** Significant at 5% level, * Significant at 10% level

Table 15. SGS and Positive Changes regressed on Democratic History with year dummies

	SGS		Positive Political Change (Polity)	
	(1)	(2)	(3)	(4)
Democracy Stock	-0.00127*** (0.000310)	-0.000585* (0.000312)	-0.00170*** (0.000179)	-0.00131*** (0.000181)
pcGDP	0.000171*** (1.31e-05)		-3.28e-05** (1.35e-05)	
pcGDP ²	-2.18e-09*** (2.28e-10)		-4.75e-10 (5.12e-10)	
Ratio		6.357*** (0.556)		0.920 (0.570)
Ratio ²		-3.487*** (0.391)		-3.781*** (0.784)
Debt % of GDP	-0.00877*** (0.00168)	-0.00689*** (0.00166)	0.00212*** (0.000762)	0.00222*** (0.000784)
D ₁₉₇₃	0.666*** (0.242)	0.512** (0.249)	-0.180 (0.217)	-0.113 (0.223)
D ₁₉₇₉	0.519** (0.247)	0.476* (0.251)	0.161 (0.206)	0.185 (0.212)
D ₁₉₉₇	0.348 (0.221)	0.718*** (0.221)	0.0413 (0.206)	-0.0481 (0.206)
D ₂₀₀₀	0.712*** (0.214)	1.185*** (0.214)	0.428** (0.197)	0.305 (0.196)
D ₂₀₀₁	0.835*** (0.209)	1.304*** (0.209)	0.263 (0.196)	0.137 (0.195)
Observations	2,334	2,334	2,773	2,773

Standard errors in parentheses

*** Significant at 1% level, ** Significant at 5% level, * Significant at 10% level

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