

## **Economic Freedom, Democracy and the Quality of Life**

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## **Abstract**

Many empirical studies indicate that economic freedom in society is positively correlated with prosperity and growth while democracy exhibits mixed correlations. However, these studies do not control for the possible interaction of these two types of freedoms or their respective influences on social welfare. This empirical analysis examines the interaction of economic freedom and democracy on measures of health, education and disease prevention in society. The results imply that greater economic freedom consistently enhances these welfare measures, even among more democratic countries. Democracy has a smaller positive influence that disappears for many welfare measures in countries with more economic freedoms.

**Key words:** *Economic Freedom, Democracy, Institutions, Social Welfare*

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## 1. INTRODUCTION

Most social scientists would agree that economic freedoms and political rights each have an intrinsic value in enhancing the well-being of individuals within any society. Most would also agree that there are, at least potentially, some benefits that can be created by allowing the democratic exercise of political rights in society to create public policy that partially constrains the individual economic freedoms of the marketplace in order to create opportunities for improving the welfare of all. For example, taxes could be imposed on individuals to provide public goods or employ beneficial public policy.

Referring to all types of freedoms in society, Amartya Sen (1999) argues that every society faces a trade-off between adopting those institutions that preserve the innate freedoms exercised by individuals to enhance their well-being, and adopting those institutions that partially constrain these innate freedoms to produce opportunities for all individuals to enhance their well-being by exercising newly created freedoms. However, Tullock (1967) long ago described the potential for rent seeking activity by democratic governments in the design and implementation of public policy, benefiting only the few in society at the expense of the many. Ultimately, some democratically determined policies tend to predominantly create opportunities for the benefit of the many in society while other such policies predominantly provide benefits for only the few.

Subsequently, there is little consensus in the growth and development literature regarding the appropriate amount of individual economic freedoms in society to curtail at the behest of the democratic expression of political rights. For example, Bauer (1997) has long criticized public policies in developing countries that strive for greater socio-economic equality through income redistribution and market regulation. He believes that

restricting individual economic freedoms stifles the very entrepreneurial *processes* that are necessary for creating prosperity. Stiglitz (2002), on the other hand, argues that “market friendly” institutions often usurp the dignity and well-being of laborers who are ultimately treated as pawns within the profit maximization calculus of society’s elite capitalists. He believes individual economic freedoms are necessarily subservient to democratically determined public policies aimed at equalizing socio-economic *outcomes*.

In order to properly assess the merits of these arguments, it would be useful to know some pertinent empirical information. We must assess the extent to which the exercise of economic freedoms by individuals interacting within the market institution has promoted well-being in society, so that we can estimate the opportunity cost of constraining these freedoms. We must also assess the extent to which the exercise of greater democratic freedoms has promoted well-being in society, so that we can estimate the benefits of broadening the expression of individual political rights. Finally, to accurately assess the trade-off of benefits between these two types of freedoms, we must determine whether democratic freedoms in society have been used to create public policy that has predominantly complemented or diminished those benefits arising from individual economic freedoms in society.

The following empirical analysis examines the simultaneous influence of economic freedom and democracy on various non-monetary measures of well-being in society. First, contemporary perspectives within the growth and development literature on the impact that each freedom type has on prosperity and social welfare are briefly explored, followed by an examination of how each type of freedom has been measured and applied by contemporary cross-country studies within the literature. Next, a fixed-

effects specification using a balanced panel data set of up to 104 countries and up to five years of observations for each country is introduced, which is designed to simultaneously estimate the net impact of economic freedom and democracy on various measure of well-being in society reflecting the areas of health, education and disease prevention.

The conclusion summarizes the empirical results, which imply that economic freedoms in society have a relatively large, beneficial influence on all six of the measures of well-being examined. This influence is diminished somewhat in the presence of a relatively robust democracy in society, but remains statistically significant and beneficial for all six measures examined. The presence of democracy in society is found to have a relatively smaller, beneficial influence on five of the six measures of well-being, and even a statistically significant, detrimental impact on one measure (life expectancy). Additionally, in the presence of relatively high levels of economic freedom in society, those beneficial influences stemming from democracy are often diminished to the point that the influence is statistically distinguishable from zero for only three of the five remaining welfare measures. These results imply that countries favoring the expansion of democratic expression of political rights in society—particularly those countries with relatively high levels of economic freedom—will likely yield *less improvement* in the quality of life in society than an equivalent increase in individual economic freedoms.

## 2. PERSPECTIVES ON THE EFFICIENCY OF MARKETS AND THE EFFECTIVENESS OF DEMOCRACY

Soon after Samuelson (1954) first formalized how government provision of pure public goods could maximize social welfare in society, many development and growth

studies integrated his theory into variations of Solow's (1956) seminal growth model to justify a more centralized approach for allocating the productive resources of developing countries seeking to increase economic growth and enhance the quality of life in society. Recognizing the inherent opportunity cost of lost individual economic freedoms in any centrally planned economy, Buchanan and Tullock (1962) were among the first to formalize how considerable economic inefficiencies can arise from democratically determined economic policies. Yet, the ongoing debate over the appropriate scope of private versus public resource allocation in society seemed to suffer from a lack of compatible methodologies with which to reconcile the issue: Most development models *assumed* that democratically determined economic policies could be designed and implemented to supply valuable public goods and efficient economic policies, whereas most public choice models illustrated the significant economic inefficiencies of centralized democratic economic policies without formalizing a *viable*, real-world alternative for supplying valuable public goods and employing beneficial public policies.

Perhaps the unsatisfying progress in this debate influenced North's (1990) efforts to refocus the field of institutional economics and Buchanan's (1990) efforts to cultivate the field of constitutional economics. Each field of inquiry seeks to better understand how the various institutions of society impact well-being by influencing the interactions of individuals, whether these institutions evolve naturally or by design, respectively. A key objective in each field is to discover the optimal set of "rules of the game" under which individuals will interact in a way that promotes both material prosperity and well-being in society. Economic freedoms are often thought of as a set of rules that predominantly govern the interactions of individuals within the institution of the marketplace; political

rights are often thought of as another set of rules that predominantly govern the interactions of individuals under the political institutions of society (these terms are more fully developed in the next section). However, the following discussion seeks to show that their respective impacts on human well-being in society may not be so neatly compartmentalized.

It is widely accepted in the neoclassical economics literature that a decentralized market institution is effective for promoting the efficient allocation of resources in the absence of Pigouvian externalities. However, is the market institution *effective* at enhancing the tangible measures of individual well-being in society apart from increasing the level of material prosperity? Friedman (1962) and Hayek (1988) both argue that centralizing resource allocation decisions—even within democratic societies—diminishes the scope of opportunities available for both consumers and producers in society to adapt and thrive within a dynamic economic environment. They argue that the decentralized market process, utilizing an unfettered market pricing system, spontaneously generates the proper incentive structure for voluntary human interaction that yields more than just a larger aggregate output for the finite level of productive resources in society (economic efficiency). They argue that the market also generates a more diverse set of opportunities for consumers who are seeking out useful alternative products and services to optimally adjust their consumption patterns (consumer flexibility), as well as a greater set of incentives for motivating producers to willingly accept more risk in seeking out and committing to alternate production technologies (producer innovation), allowing both groups to better adapt to a dynamic local and world economy.

An implication of Hayek's and Friedman's claim is that those societies with

relatively higher levels of individual economic freedoms that enhance the effectiveness of the marketplace to act as an efficient resource allocation institution should not only exhibit greater prosperity for their resource endowments, the individuals within these societies should also be better able to: 1) exploit a greater selection of edifying consumer choices that enable them to live longer, healthier lives, 2) attain higher levels of human capital to empower them for exploiting a greater set of potentially profitable productive activities, and 3) leverage their increased material prosperity into a relatively higher level of public goods provision for a safer, more productive living environment for all in society to enjoy.

It is also widely accepted in the neoclassical economics literature that a representative democracy is an effective institution for generating public policies that enhance the well-being of individuals in society by effectively addressing the inequitable allocation of social benefits. These inequities arise from the Pigouvian externalities that plague some areas of the marketplace in society when individual rights over the use of potentially productive resources are insufficiently defined or protected to exploit efficient trade opportunities in the marketplace. However, is a representative democracy *efficient* at allocating the social benefits arising from productive resource use in society?

Wittman (1989) and Stiglitz (1989) both discuss how competition between political parties operating within a representative democracy can potentially create a Pareto efficient collection of public policy proposals that maximize the number of individuals in the electorate whose preferences are reflected in allocation of these unassigned social benefits. For example, as competing political parties try to earn the support of a majority of voters in the electorate, they create differentiated party platforms

that maximize the number of options for assigning social benefits across the electorate. Also, each party develops a brand identity that can be attributed to their chosen candidates such that voters can more easily discern a given candidate's stance on relevant policy issues, thereby lowering the voter's cost for consistently expressing their preferences across elections and over time. Further, political parties find it in their own best interest to actively seek out and disseminate information to the electorate about any inefficient proposals for social benefit assignments to be found in the opposing party's platform or any bi-partisan efficiency gains that could be exploited from decreasing the transactions costs associated with political trades of specific benefits allocations.

In this way, Wittman and Stiglitz describe how a representative democracy lowers the transaction costs of political exchange, creating an efficient, Coasian style assignment of social benefits across the electorate. Just as economic freedoms could be expected to generate tangible social benefits via the marketplace, a representative democracy that allows for the greater expression of political rights by the electorate can also be expected to allow individuals to be better able to exploit a greater selection of edifying public policy choices that enable them to: 1) live longer, healthier lives, 2) attain higher levels of human capital, and 3) generate a higher level of public goods provision for a safer, more productive living environment for all in society to enjoy.

However, the debate over exactly where the institutional boundary governing the voluntary interaction of individuals in the marketplace should end and the power of public policy to govern their interaction should begin appears to be unsettled. The debate revolves around the *perceived* existence of either positive externalities (anything from supplying pure public goods like national defense to promoting a balanced growth policy)

or negative externalities (anything from abating pollution and crime to decreasing income inequality) that might affect well-being in society. Before this tradeoff can be properly examined, it is necessary to consider which individual freedoms are being traded.

### 3. MEASURING ECONOMIC FREEDOM AND DEMOCRACY

What are the various aspects of economic freedoms that enable the market institution to promote social welfare? Hayek (1988, pg. 34) believes that David Hume (1886) was the first to formally identify those institutional characteristics necessary for promoting cooperative and socially beneficial behavior among individuals engaged in economic activity: the stability of possession and its transference by mutual consent (the recognition of the private property rights of individuals to own productive resources), along with the consistent assurance of the performance of any promises made between individuals (the application of consistent rule of law for governing private transactions, rather than relying on capricious statutory regulation). Indeed, Baumol (2002) has argued that those societies respecting private property rights and operating under the rule of law are more innovative in adapting new technologies and production processes in response to significant changes in their economic environment. Friedman (1962) agreed with these two major institutional characteristics of economic freedom and added two more: the maintenance of a stable money supply in the economy (allowing the market price system to become an effective conveyance of relevant market information) and the openness of markets to competition (both domestic and foreign competition, and in both capital and goods markets) to ensure maximum consumer choice and optimum producer innovation.

Gwartney, Lawson and Block (1996) were among the first to systematically

quantify in each country those tangible characteristics reflecting various aspects of these basic categories of economic freedoms and aggregate them into a single index of economic freedom, herein referred to as the EFI. Appendix A contains their list of the specific measures of institutional characteristics that comprise the EFI. This index has been created for over 120 countries and has been updated every five years starting in 1975, and then annually starting in 2000. The EFI value for each country ranges from 1.0 (the least economic freedoms) to 10.0 (the greatest economic freedoms). Many studies using this index have found empirical support for the argument that societies adopting institutions that retain higher levels of economic freedoms have achieved higher levels of material prosperity and economic growth (for a thorough survey, see Berggren [2003]).

What are those aspects of political rights exercised by individuals within a democracy that promote social welfare? In Gastil's (1987) seminal work analyzing the varying degree of political freedoms across countries, he identified numerous institutional characteristics that enhance the ability of individuals in society to achieve an effective democratic representation in public policy formation. His list included many specific characteristics that can be generalized into three basic categories: 1) the ability of the population to choose, through a free and fair election processes, the head of state and other government leaders who can exercise true political power in society, 2) the ability of the population to select from a slate of candidates from competing political parties that promote truly diverse set of public policy options, and 3) the ability of the elected government to establish public policy free from the undue influences of the military, religious hierarchies, or other powerful, groups, either internal or external to society.

Freedom House, a non-profit, political economy research institute, has adopted

Gastil's list of those institutions that promote democracy in society and aggregates their tangible measures into an index measuring a political rights in society, herein referred to as the PRI. Appendix B contains a list of those specific sets of institutional characteristics that comprise the PRI. This index has been calculated annually for over 150 countries each year spanning the last three decades. The PRI value for each country ranges from 1.0 (the most possible political rights) to 7.0 (the least possible political rights). In order to directly compare the magnitude of the net impact for both the EFI and the PRI on the dependent variables used in the following analysis, the PRI has been converted for this analysis to a scale of 1.0 (the least possible political rights) to 10 (the most possible political rights), matching the scale and directional value of the EFI. Empirical studies have found mixed support for the argument that societies with stronger democratic institutions create public policy that achieves higher levels of prosperity and growth (for a good survey, see Przeworski and Limongi [1993] and Mulligan, et. al. [2004]).

#### 4. THE INTERDEPENDENT INFLUENCE OF ECONOMIC FREEDOM AND DEMOCRACY ON THE QUALITY OF LIFE

These basic institutional characteristics for each type of freedom do not necessarily reveal any direct conflict between the exercise of greater political rights by individuals in the electorate via a stronger democracy and the exercise of greater economic freedoms by individuals in a society through the institution of the marketplace. However, it is still possible for the beneficial influence on social well-being arising from the existing level of economic freedom in society to be either reinforced or curtailed by democratically determined public policy. The net impact of such public policies on well-

being can be either beneficial (such as supplying more Samuelson's public goods) or detrimental (such as creating more of Tullock's rent seeking activities). However, few empirical studies investigating the influence of either economic freedom or democracy on prosperity and growth in society have looked at their simultaneous, interactive influence (although Dawson [1998] looked at both simultaneously, he did not appear to allow for their simultaneous interaction).

It would appear that a sort of *bifurcation* persists in the prevailing treatment of these two institutional freedoms, such that the level of economic freedom exercised by individuals interacting in the marketplace is primarily assumed to explain differences in material prosperity while the level of political rights exercised through democratic government is assumed to primarily explain differences in the non-monetary measures of well-being. For example, North's (1990) work illustrated how market-based institutions in society are superior for achieving prosperity relative to centralized economic planning, yet he gave little attention to democracy's specific role in the development or hindrance of the decentralized market institutions. Wittman (1989) and Stiglitz (1989) each offered rigorous arguments for democracy being as inherently efficient at producing effective public policies in society as the market is inherently effective at producing efficient resource allocations, but both gave little attention to whether democratically determined public policy constrains the abilities of market institutions to promote human well-being in society. Indeed, Fukuyama (1992) made the famous proclamation that we are now observing the beginning of "the end of history," explaining how nations today overwhelmingly embrace democracy as the optimal institution for creating public policy that best reflects the public interest (social equity) and markets as the optimal institution

for allocating scarce resources (economic efficiency).

The persistence of this bifurcated approach over time is notable, given that prominent economists such as Friedman (1962) long ago warned, “it is widely believed that politics and economics are separate and largely unconnected; that individual freedom is a political problem and material welfare is an economic problem...” He called such beliefs “a delusion,” stating that there is an “intimate connection between economics and politics,” further warning that the income and wealth redistribution temptations facing all democratic governments places the economic freedoms of individuals in constant peril of erosion. Rather than democracy being the optimal expression of political freedom in society, Friedman felt that greater individual economic freedom was an “indispensable means toward the achievement of political freedom (pp 7-8).”

Schumpeter (1950) also saw the institutions of capitalism and democracy in society as interdependent and ultimately antagonistic (see Samuels’ [1985] insightful critique of Schumpeter’s theories), though for different reasons. He viewed democracy in capitalist societies as a political process dominated by elite, entrepreneurial capitalists. He predicted that the success of capitalist institutions—mostly stemming from the capitalist’s push for market-friendly public policies—would eventually develop efficient mass production industrial processes that would ultimately displace the elite’s historically important element of entrepreneurship in sustaining economic activity vital to society. The political powers of elite capitalists would wane as their source of economic rents diminished, and Schumpeter saw democracy as the institutional vehicle that would allow capitalism to sow its own demise and precipitate the onset of the institutions of socialism that are so restrictive of individual economic freedoms.

In response to this apparent theoretical bifurcation in the literature, Holcombe (2002) raises the theoretical question: Can any society *simultaneously* achieve the fullest possible expression of individual economic freedoms to be exercised in the marketplace along with the fullest possible expression of political rights to be exercised through democracy? He argues that increasing the scope of democracy to employ public policy over the interaction individuals in society to reflect the fullest possible expression of individual political rights must eventually encroach upon individuals' economic freedoms, thereby reducing their tangible benefits to society. Conversely, restraining public policy from encroaching on any aspect of individual economic freedoms, such as reallocating income or wealth in society, would prevent the fullest expression of the political rights of individuals who might desire to address the inequality of socio-economic outcomes. The implication of Holcombe's analysis is that the maximum empowerment of political rights to be exercised through the largest possible scope of democratic freedoms in society is not without the necessary opportunity cost of forgone benefits to human well-being resulting from fewer and less potent economic freedoms.

## 5. THE EMPIRICAL ANALYSIS

Now that we have a modest ability to measure the prevailing level of these two types of freedoms in society through the EFI and PRI values for each country, the philosophical debate about the appropriate curtailment of individual economic freedoms in society through democratically determined public policy generates some interesting empirical questions to be investigated: What is the net impact of economic freedoms in society on various measures of well-being, controlling for the influences arising from the

relative strength of democracy in society? What is the net impact of the strength of democracy in society on measures of well-being, controlling for the influences arising from the relative level of economic freedoms in society? Of those countries that have more strongly embraced democracy, have these societies predominantly used their expanded political rights to complement or constrain the ability of individual economic freedoms to enhance well-being in society?

This type of empirical inquiry requires a sample of countries with enough variation in the level of both types of freedom to reveal their respective correlation with the measures of welfare in society. Figure 1 reveals the EFI and PRI values for an ad hoc collection of twenty countries to illustrate how societies around the world exhibit varying combinations of the level of economic freedoms and the strength of democracy, respectively. The data expressed in this graph reflects the average of six years of EFI values and PRI values, respectively (1975, 1980, 1985, 1990, 1995 and 2000), for which both types of index data is available. The dashed lines represent the range of one standard deviation above and below the mean for each type of freedom index, as calculated from the full sample of 121 countries that have both EFI and PRI values. Not all 121 countries are used in the following panel data analysis due to social welfare data limitations.

*(Figure 1 here)*

Figure 1 reveals that the U.S. and Japan have maintained relatively high levels of both economic freedoms and political rights in society while Algeria and Burundi have maintained relatively low levels of both types of freedoms. However, countries such as Singapore and Bahrain have chosen to preserve relatively higher levels of individual economic freedoms while allowing relatively limited political rights to its citizens.

Conversely, countries such as Argentina and Ukraine have (more recently) allowed relatively greater political rights to its citizens while allowing relatively limited individual economic freedoms.

This figure is intended primarily for illustration purposes. Therefore, it does not fully reflect any brief but significant institutional changes that may have occurred in a particular country (such as with Argentina) and may reflect only those years following a significant and lasting institutional change (such as with Ukraine) over the 25 year time span from which these freedom index values were taken. These data points do reveal that there appears to be sufficient variation between the levels of these two types of freedoms across countries (the correlation coefficient of the average EFI and PRI values in the overall sample of 121 countries is + 0.576) such that an empirical investigation of their interactive effects on social welfare might be estimated.

Equation 1 is used in six separate fixed effects regression equations. Each equation uses this same set of right hand side variables to explain a different dependent variable reflecting a given measure of human well-being in society. This specification includes the level of the economic freedom index (EFI) and the level of the re-scaled political rights index (PRI) for each country.

$$\text{Eq. 1 } Y = \beta_1 \text{EFI} + \beta_2(\text{EFI} * \text{HIGHPRI}) + \beta_3 \text{PRI} + \beta_4(\text{PRI} * \text{HIGHEFI}) + \varepsilon$$

This specification is also designed to reflect any interaction that might occur when the level of one type of freedom in society occurs in the presence of relatively high level of the other type of freedom. For example, if a country exhibits a relatively strong democracy for allowing the political rights of citizens to exert a greater voice in public policy formation, then such public policies can either promote (via Samuelson's public

goods) or hinder (via Tullock's rent seeking) the level of human well-being arising from individual economic freedoms. Likewise, if a society exhibits greater economic freedoms to increase the effectiveness of the market institution to efficiently allocate resources in society, such resource allocations can either promote (via Hayek's and Friedman's greater opportunities for innovation and adaptability) or diminish (via Stiglitz's "elitist" capitalism) the level of human well-being arising from the greater democratic expression of individual political rights.

Therefore, dummy variables are included in the specification reflecting those countries with a relatively high degree of the opposite type of freedom. Specifically, HIGHPRI takes on a value of one if the level of political rights is relatively high, such that the PRI for that country is among the top third (most free) of the entire sample of 121 countries, and takes on a value of zero otherwise. Similarly, HIGHEFI takes on value of one if the level of economic freedoms is relatively high, such that the EFI value is among the top third (most free) of the entire sample of 121 countries, and takes on a value of zero otherwise. Each dummy variable is interacted with the opposite freedom type.

In this way the net influence of economic freedoms on each dependent variable for countries with relatively strong democracies can be determined by summing the values of  $\beta_1$  and  $\beta_2$ . Likewise, the net influence of democracy for countries with relatively strong economic freedoms can be determined by summing the values of  $\beta_3$  and  $\beta_4$ . The magnitude of the influence exerted by both types of freedoms can be directly compared because the two indexes are scaled identically. Furthermore, assuming that the joint significance of each pair of coefficient estimates is established, the case where the coefficient pair produce estimates of *opposing* signs, this would support the hypothesis

that there is an opportunity cost to well-being in society for choosing to enhance the effectiveness of one type of freedom at the expense of the other type of freedom.

Each fixed-effects regression equation employs a balanced data set using various years from the sample 1980, 1985, 1990, 1995, and 2000 (the year 1975 was not included due to insufficient social welfare data) and is estimated using a Weighted Least Squares methodology. The country sample used for each regression equation contains all possible countries for which the World Bank (2004) has data for the dependent variable and for which an EFI and PRI value have been assigned. Missing data for various countries made it necessary to choose the sample years for each regression equation that would generate the greatest number of countries while still retaining a balanced data set. A list of countries used in each of the six regression equations appears in Appendix C.

The dependent variable used in each equation expresses the level of well-being from one of three different areas of social welfare: Health, Education, and Disease Prevention. The category of Health is represented in two equations, one with the dependent variable LIFE (years of life expectancy at birth for the total population) and the other with the dependent variable MORT (child mortality rate per 1000 children five years old or younger). The category of Education is reflected in two equations, one with the dependent variable LIT (adult literacy rates as a percent of the whole population) and the other with GRADE5 (percent of total population attaining at least a 5<sup>th</sup> grade education). The category of Disease Prevention is also reflected in two equations, one with the dependent variable WATER (percent of the total population with access to improved water sources) and the other with SHOTS (percent of two year-old children having received adequate vaccination for diphtheria, pertussis and tetanus—DPT shots).

## 6. THE EMPIRICAL RESULTS

Table 1 reports the empirical results of the six separate regression equations designed to reveal the net influence of the economic freedom index and the political rights index on the value of the six different measures of well-being in society. In all six equations a Wald test confirmed that the variable pair EFI and EFI\*HIGHPRI were jointly significant and the variable pair PRI and PRI\*HIGHEFI were jointly significant at the 5% level. These coefficient estimates allow us to calculate the net influence of economic freedoms and political rights on measures of well-being in society, but the calculations will differ between those countries that exhibit relatively low levels of each type of freedom and those that exhibit relatively high levels of each type of freedom.

*(Table 1 here)*

It should be noted that per-capita income was not included as an independent variable, as the fixed effects specification should sufficiently account for the cross-country variation of any such omitted explanatory variable. However, all six equations were also estimated with the log value of real, per-capita income included as an independent variable and are reported in Appendix D. Comparing Table 1 with the table in Appendix D reveals that each pair of freedom variables was still significant at the 5% level or higher, that all variables retained the same sign, and that the ratio of all their relative magnitudes remained generally unchanged.

Among those countries with relatively *low* levels of freedoms, would enhancing the expression of individual political rights over public policy through expanded democratic freedoms likely enhance well-being in society more than adopting greater

economic freedoms for individuals interacting in the marketplace? These statistical results suggest not. The appropriate coefficient estimates reported in Table 1 can be used to calculate the net influence of a one standard deviation increase in each freedom index on the value of the dependent variable for all six equations.

For example, consider the SHOTS regression. When the coefficient estimate for EFI (9.58) is multiplied by the value of one standard deviation of EFI from that specific sample (1.27), the resulting product reveals the expected net impact (12.15) that such an increase in economic freedoms will have on the dependent variable DPT. Likewise, when the coefficient estimate for PRI (0.714) is multiplied by the value of one standard deviation of PRI from that specific sample (3.06), the resulting product reveals the expected net impact (2.18) that an equivalent increase in political freedoms will have on the dependent variable SHOTS.

Table 2 reveals the same calculations for each equation. These results show that among those countries with relatively low levels of both types of freedom, a given increase in the EFI is nearly six times more effective at improving both the literacy rate of adults and the DPT inoculation rate of infants in society than a similar increase in the PRI (noting that the political rights index in the LIT equation was significant only at the 6% level, rather than the traditional 5% level). Likewise, a given increase in the EFI is over twice as effective at reducing the mortality rate of young children as an equivalent increase in political rights. A higher value for PRI appears to actually *decrease* the years of life expectancy at birth in these societies. Only primary school completion rates are expected to receive greater benefit from a given increase in the PRI relative to an equivalent increase in EFI. Clearly, if a government currently allows relatively low levels

of economic and democratic freedoms to be exercised by its citizens, yet it desires to adopt those institutional structures that would have the maximum positive influence on the level of well-being in society, these results imply that this government should favor adopting those institutions that increase individual economic freedoms more heavily than increasing the scope of democratically determined public policy in society.

*(Table 2 here)*

Among those countries with relatively *high* levels of both freedoms, would enhancing the expression of individual political rights over public policy through expanded democratic freedoms likely enhance well-being in society more than adopting greater economic freedoms for individuals interacting in the marketplace? Again, these results suggest otherwise. Table 3 sums the value of both coefficient estimate pairs for each freedom type from Table 1 to calculate the net influence of a one standard deviation increase to the index of each type of freedom on the value of the dependent variable for each equation. A Wald test reveals that while the *sum* of the coefficient estimates for EFI and EFI\*HIGHPRI are statistically different from zero at the 5% level, the sum of the coefficient estimates for PRI and PRI\*HIGHEFI was statistically different from zero at the 5% level for only the LIFE, MORT, GRADE5, and WATER equations. With the exception of the LIFE equation, the coefficient pairs for those countries exhibiting high levels of the opposite type of freedom consistently produced estimates of opposing signs.

*(Table 3 here)*

The results from Table 3 reveal that the net impact of economic freedom is slightly lower in the presence of a strong democracy, but still remains statistically significant and beneficial to all six measures of well-being examined. However, of the

five equations where democracy previously exhibited a beneficial impact on the dependent variable, this influence remained significantly different from zero in only three of these five equations: MORT, GRADE5, and WATER. While the negative impact of the PRI on life expectancy worsened in the presence of higher levels of EFI, a Wald test reveals that the net impact on both adult literacy rates and childhood inoculation rates were statistically indistinguishable from zero at the 5% level (these results are generally duplicated in the statistical results reported in Appendix D as well.)

Furthermore, whenever the net influence of the PRI retains a statistically significant, beneficial impact on the dependent variable, it exhibits a *lower* net impact than the EFI for two of these three measures of well-being. Among countries with relatively high levels of freedoms, a given increase in the EFI is nearly five times more effective at improving childhood mortality rates and over twice more effective at improving access to clean water than an equivalent increase in the PRI. Only in primary school completion rates does an increase in PRI have approximately 70% more impact than a similar increase in the EFI.

It is puzzling that when a democracy provides a greater scope of political rights to be exercised over public policy in countries with relatively high existing economic freedoms, this appears to decrease the literacy rates of adults but increase their likelihood of completing primary school. However, it should be noted that the sample of countries covered in these two equations are different and that GRADE5 is not an indicator of primary school quality. Ultimately, if those democratic governments that currently allow a greater scope of political rights to be exercised over public policy desire to adopt new institutional structures that have the maximum benefit on the well-being of its citizen's,

these results imply that such governments should favor adopting those institutions that increase individual economic freedoms rather than those that further expand the democratic expression of political rights over individual lives in society.

## 7. CONCLUSION

There appears to be little consensus in the growth and development literature regarding the appropriate tradeoff between adopting those institutions that allow for greater individual economic freedoms in the marketplace versus broadening the scope of democracy to allow greater expression of individual political rights over public policy. In light of this debate, it becomes an interesting empirical question as to how much each type of freedom influences the various measures of human well-being in society, as well as whether expansion of each type of freedom helps or hinders the ability of the other to improve well-being in society. Such knowledge would allow those countries hoping to improve the quality of life for its citizens to know which type of freedom to promote at the potential expense of the other.

Commonly employed country indexes reflecting the level of economic freedoms and the level of political rights in society are each used in a fixed-effects, panel data analysis for explaining observed variation in the level of well-being across countries. This empirical investigation estimates the net impact of each type of freedom on six different measures of human well-being reflecting the degree of health, human capital and disease prevention while allowing for the possible interaction of each type of freedom to affect the other's ability to improve these measures. The goal of this analysis is to reveal any opportunity cost of lost well-being in society when governments adopt

institutions that favor expanding one type of freedom over the other.

These statistical results indicate that a given increase in the level of economic freedoms in society would improve all six measures of human well-being examined, regardless of the strength of democracy in allowing the expression of individual political rights over public policy in society. However, an equivalent increase in the level of democratic political rights improved just five of the six well-being measures for those countries with relatively low levels of economic freedoms, and only three of the six well-being measures in countries with relatively high levels of economic freedoms. Further, when an increase in democracy does exhibit a beneficial impact on the well-being measures examined, such an increase has a smaller impact than an equivalent increase in economic freedom for all well-being measures excluding primary school completion, regardless of the existing level of democratic freedoms in society.

Setting aside any consideration for the *intrinsic* benefits that both political rights and economic freedoms provide for all, the tangible measures of well-being in society could hypothetically be maximized by adopting those institutions that give greater scope to the type of freedom that yields the highest net positive impact. From this perspective, these empirical results would imply that expanding the economic freedoms of individuals in a society would increase most human welfare measures to a much greater extent than an equivalent expansion of democratic freedom. This implication applies to all countries but is particularly true for those countries with relatively strong democracies.

Many development studies assume that the provision of public goods and edifying economic policy via democratically determined public policy is more effective at improving the tangible, non-monetary qualities of life in society than increasing the level of

material prosperity in society through greater economic efficiency in the marketplace. The evidence herein implies that political rights exercised by individuals in those democratic societies with relatively high levels of economic freedoms have been used less for providing edifying public goods and economic policies and more for pursuing rent seeking activities that benefit the few at the expense of the many. It also implies that any if government that currently allows limited economic and democratic freedoms to its citizens chooses to permit a greater expression of political rights on public policy formation via a broader scope of democracy, rather than the greater expression of individual economic freedoms through the marketplace, such action will likely produce a *smaller* impact on improving the quality of life for its citizens.

Other implications from these empirical results are more subtle. For example, many contemporary empirical studies in the development literature claim that societies with greater equality in socio-economic status within their society appear to exhibit higher values of various well-being measures (see World Bank [2006]). They often use this statistical correlation as evidence to encourage developing governments to give greater public voice to the centralized re-allocation of resources within their economy, further restricting the economic freedoms of individuals in the marketplace. However, the empirical results herein imply that such advice could be misleading. Allowing for a stronger democratic expression of political rights over individual lives in society will not necessarily result in producing welfare enhancing public policies that will benefit well-being more than a similar increase in individual economic freedoms in society. Further more, it is possible that those countries with less socio-economic equality may exhibit lower levels of economic freedom than those countries with more socio-economic equality,

such that the observed gains in well-being measures among the latter group of countries may be correlated with greater economic freedoms and not with stronger democracies. However, the specific analysis of socio-economic inequality and institutional measures of both types of freedom are a topic for other empirical studies.

One possible interpretation of these results might be to conclude that governments with more democratic freedoms are not quite as capable of generating public policy that effectively supplies public goods and edifying public policies, as has been assumed in many previous theoretical studies in the growth and development literature. The apparent superior ability of economic freedoms to promote non-material measures of well-being in society could be the result of heightened entrepreneurial activity occurring in decentralized markets that produces more consumer flexibility and greater producer innovation in ways that directly benefit the quality of life in society, as claimed by Friedman (1962) and Hayek (1988). While this statistical analysis does not directly test this specific hypothesis, it does support the general idea that adopting greater freedoms to be exercised by individuals voluntarily interacting in the marketplace is a superior strategy for increasing the quality of life in society relative to adopting a stronger democracy in society. The empirical evidence herein appears to support Bauer's (1957) belief that maximizing economic freedoms ultimately maximizes the opportunity for enhancing human welfare in any society:

“I regard the extension of the range of choice, that is, an increase in the range of effective alternatives open to people, as the principal objective and criterion for economic development; and I judge (public policy) principally by its probable effects on the range of alternatives open to individuals (pg. 113).”

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**Table 1. Panel Data Analysis Results**

Category:	HEALTH		EDUCATION		DISEASE PREVENTION	
	#1	#2	#3	#4	#5	#6
<b>Equation No:</b>	<b>LIFE</b>	<b>MORT</b>	<b>LIT</b>	<b>GRADE5</b>	<b>WATER</b>	<b>SHOTS</b>
<b>Well-Being Measure:</b>						
<b>Mean Dep. Var.</b>	65.5 yrs.	71.3 per 1000	72.2%	85.1%	79.45%	75.3%
<b>No. of Countries</b>	105	94	68	24	66	68
<b>Sample Years Used</b>	85, 90, 95, 00	85, 90, 95, 00	'80, '85, '90, '95, '00	85, 90, 95, 00	90, 00	90, 00
<b>No. of Total Obs.</b>	420	364	340	96	132	136
<b>EFI (<math>\beta_1</math>)</b>	1.288** (0.073)	-14.842** (0.429)	3.857** (0.228)	2.531** (0.507)	3.357** (0.173)	9.578** (0.657)
<b>EFI*HIGHPRI (<math>\beta_2</math>)</b>	0.117* (0.050)	1.206** (0.243)	-0.215* (0.098)	-1.109** (0.365)	-0.570** (0.134)	-1.030** (0.420)
<b>PRI (<math>\beta_3</math>)</b>	-0.170** (0.043)	-2.877** (0.303)	0.240 (0.127)	1.294** (0.434)	1.180** (0.025)	0.714** (0.345)
<b>PRI*HIGHEFI (<math>\beta_4</math>)</b>	-0.099** (0.020)	1.724** (0.140)	-0.381** (0.060)	-0.283* (0.126)	-0.516** (0.023)	-0.727** (0.130)
<b>Unweighted Adj. R-squared</b>	0.96	0.96	0.95	0.86	0.93	0.64
<b>Unweighted Std. Error of Regression</b>	2.29	17.16	5.22	5.57	4.82	22.98

- \* denotes a 5% level of significance and \*\* denotes a 1% level of significance.
- Wald tests confirm that EFI and EFI\*HIGHPRI were jointly significant at the 5% level of confidence in all six regressions.
- Wald tests confirm that PR and PRI\*HIGHEFI were jointly significant at the 5% level of confidence in all six regressions.

**Table 2. The Net Impact of Each Freedom Type for Low Freedom Countries**

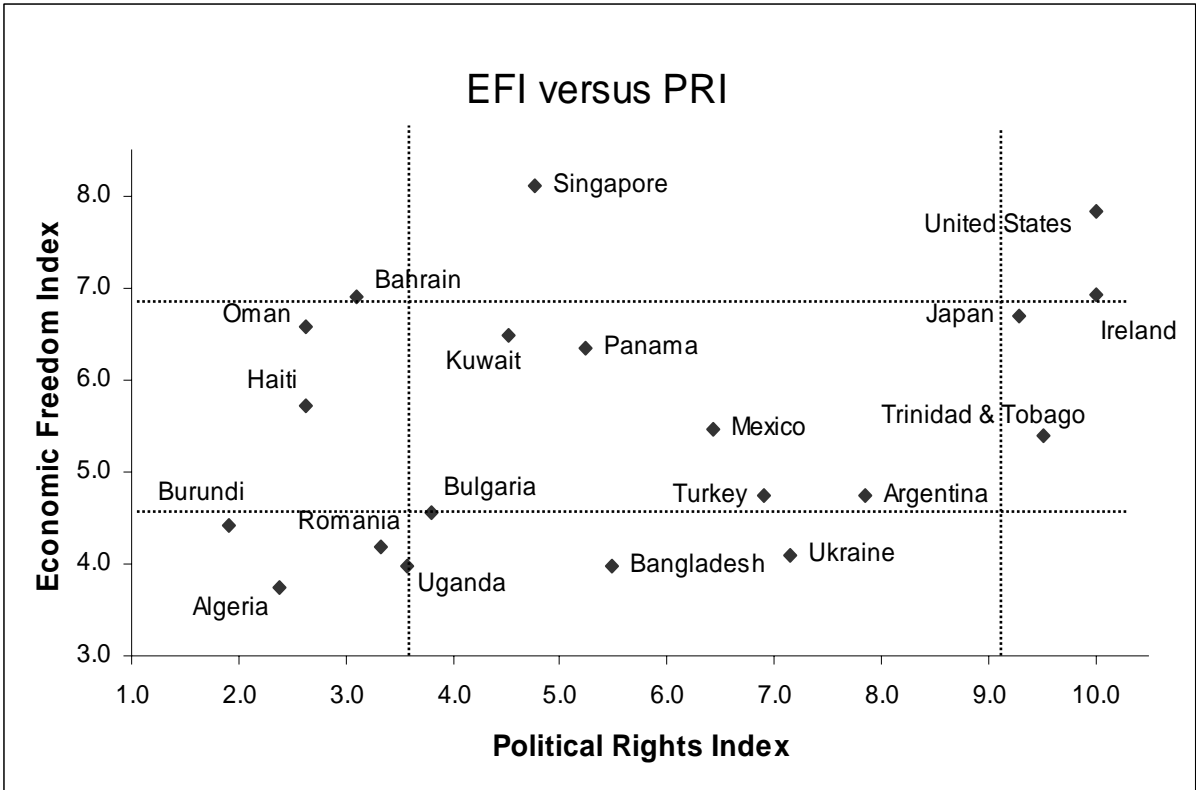
<b>Dep. Variable</b>	<b>LIFE</b>	<b>MORT</b>	<b>LIT</b>	<b>GRADE5</b>	<b>WATER</b>	<b>SHOTS</b>
Net Impact of a one standard deviation increase in Economic Freedom	1.63	-18.86	4.96	3.16	4.21	12.15
Net Impact of a one standard deviation increase in Political Freedom	-0.52	-8.80	0.72*	3.89	3.43	2.18
One sample standard deviation for EFI	1.27	1.27	1.29	1.25	1.26	1.27
One sample standard deviation for PRI	3.06	3.06	3.01	3.01	2.90	3.06
Mean of the Dependent Variable	65.5 yrs.	71.3 per 1000 births	72.2%	85.1%	79.5%	72.5%

\* This impact calculation is based on a coefficient estimate with only a 6% significance level.

**Table 3. The Net Impact of Each Freedom Type for High Freedom Countries**

<b>Dep. Variable</b>	<b>LIFE</b>	<b>MORT</b>	<b>LIT</b>	<b>GRADE5</b>	<b>WATER</b>	<b>SHOTS</b>
Net Impact of a one standard deviation increase in Economic Freedom	1.78	-17.33	4.68	1.78	4.14	10.84
Net Impact of a one standard deviation increase in Political Freedom	-0.82	-3.53	-0.42*	3.04	1.93	-0.04*
One sample standard deviation for EFI	1.27	1.27	1.29	1.25	1.26	1.27
One sample standard deviation for PRI	3.06	3.06	3.01	3.01	2.90	3.06
Mean of the Dependent Variable	65.5 yrs.	71.3 per 1000 births	72.2%	85.1%	79.5%	72.5%

\* denotes that these net impact calculations are not distinguishable from zero.



**Figure 1. Economic Freedom Index versus Political Rights Index**

## Appendix A

The Economic Freedom of the World Index (EFI) was designed by James Gwartney and Robert Lawson and is published periodically (annually since the year 2000) by the Fraser Institute. The index ranges from 1 (the least amount of economic freedom) to 10 (the highest amount of economic freedom). The latest index was published in 2003 and can be found at: [www.freetheworld.com/](http://www.freetheworld.com/). Gwartney and Lawson use empirically observed values from within these seven categories to derive an index representing a relative measure of economic freedom. The following is an abbreviated description of the five major components and their respective subcomponents that are used to derive the EFI.

1. *Size of a country's government (relative to the whole economy):*
  - a. Expenditures as a percentage of total consumption
  - b. Transfers and subsidies as a percentage of GDP
  - c. Government enterprises and investment as a percent of total investment
  - d. Top marginal income tax rate
2. *The country's legal structure (rule of law) and security of property rights:*
  - a. Evidence of judicial independence
  - b. Evidence of impartial courts
  - c. Protection of intellectual property
  - d. Military interference in the rule of law
  - e. Integrity of the legal system
3. *Access to sound money*
  - a. Average annual growth rate of money supply less average growth rate of GDP
  - b. Inflation rate
  - c. Inflation rate variability
  - d. Freedom to own foreign currency
4. *Freedom to trade internationally*
  - a. Taxes on international trade
  - b. Regulatory trade barriers
  - c. Actual versus expected size of the of trade sector of the economy
  - d. Difference between official and actual currency exchange rates

- e. Extent of international capital market controls
- 5. *Regulation of Credit, Labor and Business*
  - a. Credit market regulations: interest rate controls, privatization of banks, etc.
  - b. Labor market regulations: wage restrictions, hiring/firing restrictions, military conscription, etc.
  - c. Business regulations: price controls, licensing restrictions, etc.

## **Appendix B**

The political rights index (PRI) is published annually by The Freedom House and supporting material can be found on-line at: [www.freedomhouse.org/](http://www.freedomhouse.org/). This index is based on a scale of 1 (the greatest amount of freedom) to 7 (the least amount of political freedom). The following is an abbreviated description of the seven major components used to derive the PRI. The *political rights index* is determined by aggregating expert survey results regarding the relative level of political rights within a country, based on the following criteria:

- 1) Is the head of state freely elected through a free and fair electoral process?
- 2) Are there legislative representatives elected through a free and fair electoral process?
- 3) Are there fair electoral laws, equal campaigning opportunities, fair polling, and honest tabulation of ballots?
- 4) Are the voters allowed to endow their freely elected representatives with real power?
- 5) Do the people have the right to organize in different political parties and is the system open to the rise and fall of these parties?
- 6) Is there a significant opposition vote and a realistic possibility for the opposition to increase its support or gain power through elections?
- 7) Are the people free from domination by the military, foreign powers, totalitarian parties, religious Hierarchies, economic oligarchies, or any other powerful groups?

## Appendix C

Country	Eq. Nos.	Country	Eq. Nos.	Country	Eq. Nos.
Algeria	1,2,3,4,6	Gabon	1,2,6	Nigeria	1,2,3,5,6
Argentina	1,2,3,6	Germany	1,2,6	Norway	1,2,5,6
Australia	1,2,5,6	Ghana	1,2,3,5,6	Oman	1,4,5,6
Austria	1,2,5,6	Greece	1,2,3,6	Pakistan	1,2,5,6
The Bahamas	1,2,6	Guatemala	1,2,3,5,6	Panama	1,2,3,6
Bahrain	1,2,3,4,6	Haiti	1,2,3,5,6	Pap. N. Guinea	1,5,6
Bangladesh	1,2,3,5,6	Honduras	1,2,3,5,6	Paraguay	1,2,3,4,5,6
Barbados	1,2,3,6	Hungary	1,2,3,5,6	Peru	1,2,3,5,6
Belgium	1,2,6	Iceland	1,6	Philippines	1,2,3,5,6
Belize	1,6	India	1,2,3,5,6	Poland	6
Benin	1,2,3,6	Indonesia	1,2,3,4,5,6	Portugal	1,2,3,6
Bolivia	1,2,3,5,6	Iran	1,2,3,6	Romania	1,6
Botswana	1,2,3,4,5,6	Ireland	1,2,6	Senegal	1,2,3,5,6
Brazil	1,2,3,5,6	Israel	1,2,3,6	Sierra Leone	1,2
Bulgaria	1,6	Italy	1,2,3,6	Singapore	1,2,3,5,6
Burundi	1,2,3,5,6	Jamaica	1,2,3,5,6	South Africa	1,3,5,6
Cameroon	1,2,3,5,6	Japan	1,2,6	South Korea	1,4,6
Canada	1,2,5,6	Jordan	1,2,3,5,6	Spain	1,2,3,6
Cent. African Rep.	1,5,6	Kenya	1,2,3,5,6	Sri Lanka	1,2,3,5,6
Chad	1	Kuwait	1,2,3,6	Sweden	1,5,6
Chile	1,2,3,5,6	Luxembourg	1,2,3,6	Switzerland	1,5,6
China	1,2,3,5,6	Madagascar	1,2,5,6	Tanzania	5,6
Colombia	1,2,3,4,5,6	Malawi	1,2,5,6	Syria	1,2,3,4,6
Congo, Dem. Rep.	1,2,6	Malaysia	1,3,6	Thailand	1,2,3,5,6
Congo, Rep. of	1,2,3,6	Mali	1,2,3,4,5,6	Togo	1,2,3,4,5,6
Costa Rica	1,2,3,4,6	Malta	1,2,3,4,5,6	Trin. and Tobago	1,2,3,5,6
Cote d'Ivoire	1,2,4,5,6	Mauritius	1,2,3,4,5,6	Tunisia	1,2,3,4,5,6
Cyprus	1,2,3,5,6	Mexico	1,2,3,4,5,6	Turkey	1,2,3,5,6
Denmark	1,2,6	Morocco	1,2,3,4,5,6	Uganda	1,6
Dominican Rep.	1,2,3,5,6	Namibia	5	Unit. Arab Emir.	1,2,3,4,6
Ecuador	1,2,3,5,6	Myanmar	1,2,3,6	United Kingdom	1,2,5,6
Egypt, Arab Rep.	1,2,5,6	Nepal	1,2,3,5,6	United States	1,2,5
El Salvador	1,2,3,5,6	Netherlands	1,2,3,5,6	Uruguay	1,2,3,4,6
Fiji	1,2,6	New Zealand	1,2,6	Venezuela, RB	1,2,3,4,6
Finland	1,2,4,5,6	Nicaragua	1,2,4,5,6	Zambia	1,2,3,5,6
France	1,2,6	Niger	1,2,3,4,5,6	Zimbabwe	1,2,3,5,6

Countries were only excluded from an equation only if there was insufficient data to maintain a balanced data set. All balanced datasets for each equation were determined by choosing the combination of years and countries that would generate the most observations.

Appendix D. Table 1 Analysis Results including Real GDP per capita

Category:	HEALTH		EDUCATION		DISEASE PREVENTION	
Equation No:	#1	#2	#3	#4	#5	#6
Well-Being Measure:	LIFE	MORT	LIT	GRADE5	WATER	SHOTS
Mean Dep. Var.	65.5 yrs.	71.3 per 1000	72.2%	85.1%	79.45%	75.3%
No. of Countries	105	94	68	24	66	68
Sample Years Used	85, 90, 95, 00	85, 90, 95, 00	'80, '85, '90, '95, '00	85, 90, 95, 00	90, 00	90, 00
No. of Total Obs.	420	364	340	96	132	136
<b>EFI (<math>\beta_1</math>)</b>	0.723** (0.056)	-13.467** (0.583)	3.545** (0.267)	2.383** (0.607)	3.213** (0.177)	8.676** (0.769)
<b>EFI*HIGHPRI (<math>\beta_2</math>)</b>	0.048 (0.037)	1.385** (0.189)	-0.296** (0.108)	-1.228** (0.376)	-0.741** (0.139)	-1.378** (0.468)
<b>PRI (<math>\beta_3</math>)</b>	-0.091** (0.027)	-3.02** (0.291)	0.278* (0.137)	1.283** (0.447)	1.366** (0.053)	1.050** (0.411)
<b>PRI*HIGHEFI (<math>\beta_4</math>)</b>	-0.085** (0.010)	1.509** (0.152)	-0.367** (0.064)	-0.322** (0.122)	-0.478** (.064)	-0.787** (0.150)
<b>Log(GDP) (<math>\beta_5</math>)</b>	3.975** (0.156)	-3.292** (1.137)	3.377** (0.749)	2.527 (1.879)	2.693** (0.802)	14.665** (2.264)
<b>Unweighted Adj. R-squared</b>	0.96	0.95	0.95	0.86	0.93	0.68
<b>Unweighted Std. Error of Regression</b>	2.22	17.23	5.21	5.59	4.81	13.23

- \* denotes a 5% level of significance and \*\* denotes a 1% level of significance.
- Wald tests confirm that EFI and EFI\*HIGHPRI were jointly significant at the 5% level of confidence in all six regressions.
- Wald tests confirm that PR and PRI\*HIGHEFI were jointly significant at the 5% level of confidence in all six regressions.