A Granger Causality Test of the Hayek-Friedman Hypothesis: Must Political Freedom and Economic Freedom Coexist?

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Throughout their careers both Frederick von Hayek and Milton Friedman preached the unequaled virtues of freedom of choice. Their support of free-market economies was persistent throughout their lives. Their thoughts and positions on this matter had been clearly and consistently made clear. It remains for others who follow to assess their relative positions and evaluate their contributions to the discussion of the role of economic capitalism in a political state. This paper offers an empirical examination of the Hayek-Friedman Hypothesis which argues that societies with high levels of political freedom must also have high levels of economic freedom. Granger-causality tests are performed to identify directionality between levels of economic freedom and two separate, distinct measures of political freedom.

INTRODUCTION

It should be made clear from the outset that the Hayek-Friedman Hypothesis (hereafter HFH) argues that politically free nations will exhibit a high degree of economic freedom. However, the diametric is not necessarily the case. That is, a nation may possess pronounced economic freedom yet its citizenry may enjoy very little political freedom. Perhaps Hong Kong serves as the best example. While under British domain Hong Kong thrived as a commercially free environment and today continues to enjoy considerable economic freedom. On July 1, 1997, the transfer of sovereignty from United Kingdom to the People's Republic of China occurred, officially ending 156 years of British colonial rule. In accordance with the Sino-British Joint Declaration, Hong Kong operates under the principle of "one country, two systems." Although Hong Kong still enjoys a pronounced degree of economic autonomy, it exists only as a Special Administrative Region of the People's Republic of China and its laws are subject to the interpretation of the Standing Committee of the National People's Congress.

Certain oil-rich nations in the Middle East also illustrate this principle. Many of these nation-states function in a relative free and open economy, but fail to enjoy even some of the most basic fundamental democratic principles.

HFH specifically states that politically free nations will invariably benefit from economic freedom. However, it offers no assurance that an economically free country will ensure political freedom. The purpose of this paper is to test the HFH as to whether political liberties promote economic freedom or whether the "Hong Kong Principle" is an abnormality in that a feed-back occurs whereby economic freedom precipitates political autonomy thereby assuring their co-existence.

It might seem odd to argue that any attempt to examine the concept of freedom could be well-served by first providing a clear definition of freedom. Many of us might think that freedom and the principles it advocates are already well-defined and offer no ambiguities or source of confusion. However, even a

cursory preview of the vast literature on the subject reveals a broad spectrum of perceptions and connotations as to the nature and character of freedom. Competing philosophies often differ in their interpretation as to just what freedom is.

On the one hand, we can find those assessments of freedom that focus on, "freedom from…". This approach places greatest emphasis on the protection of civil liberties from unreasonable external constraints, force or coercion imposed by others whoever they may be. In this sense individuals are removed from dangers imposed by the yoke of central authority. This form of freedom is often referred to as "negative liberty" in that it represents the absence of external constraints. Greater "negative freedom" simply means fewer restrictions on possible action. As an illustration, capitalism, as it is generally understood and practiced in the United States, falls under this realm. It relies heavily on the freedom from government interference in commercial affairs.

Political freedoms that might be classified as negative liberties are exemplified by freedom from unwarranted prosecution and undue search and seizure. The absence of physical coercive interference or invasion of an individual's person and property also serve as illustrations.

Negative economic liberties include freedom from undue taxation and market restrictions imposed by oppressive competition. Tariffs serve as a fine example of a violation of negative economic liberty.

On the other hand, there prevails the concept of "freedom to…". Considered to be "positive liberty," this condition permits agents to behave in accord with their own will. That is, they have the freedom to… In principle it insures that individuals are free to achieve self-realization. Positive liberty is the right of an individual to pursue his or her own fundamental purposes – to control his or her own private life.

Political freedoms that foster positive liberties would include the right to vote, the right to form political parties and freedom to ensure majority rule. The right to own and bear arms as well as freedom of expression and assembly are associative political freedoms. Freedom of religion and the right to legal due process also serve as illustrations.

Positive economic freedoms span all rights to pursue commercial goals and to use private property for commercial gain and the right to sell one's labor. To exercise positive liberty individuals must be free of internal constraints and having the power and resources to fulfill one's own potential based on his or her abilities, goals and desires. Where might the right to an education be classified in this philosophical taxonomy?

Isaiah Berlin (1969) is recognized as providing a distinction between positive and negative freedoms. Berlin described a statement such as "I am slave to no man" as one of negative liberty in that it refers to the freedom from another individual's direct interference. He contrasted this with a positive freedom epitomized by a statement such as "I am my own master", which lays claim to a freedom to choose one's own pursuits in life.

Taylor's (1979) classification also adds to the distinction. Taylor noted that negative freedom is an opportunity-based concept. It prevails if a person is not enslaved by external forces and has equal access to society's resources. Positive freedom is an exercise-based concept in that an individual is free to exercise his or her own personal will. To illustrate, a powerful figure in his own profession may possess a good deal of negative liberty due to his position of authority. No one can externally impose upon him restrictions and constraints in his behavior. Yet he may enjoy very little positive liberty as a result of an idiomatic weakness such as drug addiction. Due to this internal malady he is no longer his own master and is unable to direct his own life to achieve his maximum good.

These distinctions are of paramount importance to an analysis of HFH. The very essence of the hypothesis relies most heavily on a clear distinction between political freedom and economic freedom. Just as fundamental is the contrast offered by the philosophical dichotomy inherent in any discussion of "positive" liberties and "negative" liberties. It is only with a firm grasp of the metaphysical differences presented by these concepts that any appreciation of the hypothesis could possibly be attained. The importance of the principles upon which the hypothesis is based is fundamental to any appreciable understanding.

BEHIND THE PRINCIPLES

The volume of literature expounding the principles upon which the HFH is based is enormous. It would take many lifetimes to even attempt a simple exposure to the vast wealth of research, philosophical thought, conjectured paradigms and rationalist teachings devoted to the support of political, social and economic liberty. A plentitude of bright, insightful minds have contributed to the body of thought, both pro and con, defining the essence of libertarian thought. Some have even won the Nobel Prize for their efforts including both von Hayek in 1974 and Friedman in 1976.

In his seminal work, The Road to Serfdom (1944), Frederick von Hayek (b.1899–d.1992), the noted Austrian- born economist and philosopher, raged against the tyranny of government control and central planning. He staunchly argued that the abandonment of individualism and classical liberalism invariably leads to socialist and fascist oppression and to the "serfdom of the individual." Even today The Road to Serfdom is among the most influential and popular expositions of market libertarianism and remains a popular and influential work in contemporary politico-economic discourse.

von Hayek is perhaps best known for his defense of classical liberalism and free-market capitalism against the invasion of socialist and collectivist thought. Worried by the centralized tendencies that sprung from the war efforts to direct the economy in those dire times, von Hayek feared that their use after the war would persist into the future. His response to this potential disaster was to voice even more forcefully the redemption of the free and open economy characterized by classical liberalism.

Classical liberalism is portrayed as the philosophical bent advocating limited government direction, support for the liberty of individuals and, perhaps above all, free markets. The term is most often used to describe the belief in the primacy of economic freedom and minimal government. The classical liberal perspective is that individual well-being, prosperity and social harmony are fostered by as much liberty as possible and as little government as necessary.

Classical liberalism should be distinguished from social liberalism. The latter holds that the concept of liberalism should also reflect social values and justice. It stipulates that the legitimate role of the state includes sponsorship of employment programs, health care, educational concerns and many other welfare issues in the promotion and expansion of civil rights. This far exceeds the limits imposed by classical liberalism. The similarity in terms juxtaposed against the extreme dichotomy in principles has often been the source of considerable confusion. However, the distinction is clearly definable and presents an unmistakable discord in the role the state should play in the lives of the citizens.

The rise of social liberalism occurred near the end of the nineteenth century when flagging economic conditions around the globe prompted awareness of the social ills brought on by poverty and unemployment. The deprivation found in the modern industrial cities was a call for government intervention. Political reaction against the ills brought on by industrialization and laissez-faire capitalism could no longer be avoided. Some form of centralized direction became, many felt, necessary. Government intervention became a much more widely accepted and appealing principle allowing what became known as "creeping Socialism."

von Hayek acknowledged that socialism might mitigate certain social ills in its effort to pursue equality and justice, but it does so through the twin evils of restraint and servitude. Democracy, on the other hand, seeks equality within liberty and proves superior because it permits corrections without coerciveness or imposition of authority. He asserted that economic control permitted jurisdiction over all sectors of the human life. It is the control of the means for all human ends. Socialism, he maintained, would inevitably lead to totalitarianism.

In much of his writings, Gordon Tullock, a now retired professor of law and economics at the George Mason University School of Law, argued that the Hayek-Friedman prediction of totalitarian governments, especially as they might develop in Western Europe, did not occur. Tullock is best known for his work in public choice theory along with his colleague, James Buchanan (1962). Tullock persisted that the basic problem with The Road to Serfdom was that it offered predictions that turned out to be false. He used the example of Sweden to illustrate. At the time of writing, the government controlled 63% of the nation's

GNP. However, the steady advance of government in Sweden, as well as other nations, had not led to any loss of market freedom.

Milton Friedman's (b.1912-d.2006) opus, Capitalism and Freedom (1962), serves as the source of much of his political and economic thought. Friedman once said, "If you want to see Capitalism in action, go to Hong Kong" (Ingdahl, 2007, p 2). In 1990 Friedman proclaimed that Hong Kong was perhaps the best example of a free-market economy (p 34).

Friedman argued that economic freedom was an essential component of total freedom. He asserted that any centralized control over economic activities was always associated with political repression. Repressive political leaders were ever fearful of the threat to their coercive domination that a free and open economy presented. Strong market forces are able to protect people from the control, both politically and economically, of repressive regimes.

Although more known for his contributions to monetarism and his quantity theory of money, for which he won the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel, his relentless support of free markets made him an icon to all who revered the free enterprise system. While serving with the National Bureau of Economic Research he distinguished himself in a work he co-authored with Simon Kuznets, "Income from the Independent Professional Practice" (1945). In it was argued that state licensing procedures limited entry into the medical profession, thereby allowing doctors to charge higher fees than they would be able to if competition were more open. Considered somewhat of a radical position at the time, it demonstrates his commitment to free enterprise.

Friedman argued that economic freedom was an essential aspect of progress and prosperity. The role of government in a liberal society should be only to enforce law and order, protect property rights and promote healthy competition. The government should also have control over money, as has long been recognized in the constitution. Yet he remained quite critical of the Federal Reserve System. He adamantly asserted that the Federal Reserve failed miserably in its role of economic stabilizer and proposed that it pursue a consistent rule to increase the money supply by 3% to 5% annually.

Throughout his career Friedman continued his opposition to all forms of state licensure. The ultimate aim of such programs is to restrict competition and impede the opportunity for free-market participation. As noted above, he even applied this notion to the medical profession, insisting that there was no liberal justification for licensing doctors and to do so resulted in inferior care and a medical cartel.

METHODOLOGICAL FOUNDATION

Testing the HFH obviously requires data that cardinally measure both the level of economic freedom in the nation as well as the degree of political liberty enjoyed by the citizenry. Data on economic measures are provided by Professor James Gwartney and his colleagues at the Fraser Institute. Professor Gwartney holds the Gus A. Stavros Eminent Scholar Chair at Florida State University where he directs the Stavros Center for the Advancement of Free Enterprise and Economic Education. Working with others at the Fraser Institute in Vancouver, Canada, Gwartney has provided reliable information on measures of economic freedom for over 100 countries dating back to 1975 in the Economic Freedom of the World: Annual Report (hereafter, EFW) (Gwartney , et al., 2011) . These data have made possible studies designed to measure the impact of the prevailing levels of economic freedom in these nations. The data are updated each year in annual reports and provide the base for this study.

Gwartney and those working with the EFW state that

> *individuals have economic freedom when (a) property they acquire without the use of force, fraud, or theft is protected from physical invasion by others and (b) they are free to use, exchange, or give their property to another as long as their actions do not violate the identical rights of others.*

Further, they point out that the key ingredients of economic freedom are:
- personal choice

- voluntary exchange coordinated by markets
- freedom to enter and compete in markets, and
- protection of persons and their property from aggression by others

In essence, economic freedom is defined as the right of private individuals to use private property to engage in private commercial exchange without interference from central forces. Based on this description, EFW indices are developed as measures of the degree of economic freedom prevailing across the globe.

The EFW provides a wealth of data that serves as the foundation for many studies in this general field. The construction of the index is based on three important methodological principles. First, objective components are always chosen in preference to those that require value judgments. This minimizes bias and results in viable comparisons over time and across nations. Second, the data used to construct the index ratings are taken from external sources such as the International Monetary Fund, The World Bank and the World Economic Forum. Data provided internally within the nation under study are used only when international sources are not available. Finally, the EFW reports provide information as to how the data are collected, collated and parsed.

Each annual report also clearly indicates the structure of the EFW index. The index measures the degree of economic freedom in five major areas. They are: 1) Size of Government: Expenditures, Taxes, Enterprises; 2) Legal Structure and Security of Property Rights; 3) Access to Sound Money; 4) Freedom to Trade Internationally and 5) Regulation of Credit, Labor, And Business.

Within the five major areas there are 23 components serving as index variables. The components are averaged, and the mean component ratings themselves are then averaged to derive an overall summary rating for each country. Using the criteria shown in Table 1, Gwartney, et al. ranked 141 countries on a scale of 0 to 10. The higher the rankings are the greater the degree of freedom existing in that country. A more complete description can be obtained from the current annual report available free of charge from the website maintained by the Fraser Institute.

The remaining variables were obtained from Freedom House, a U.S.-based non-governmental organization (NGO) that conducts research and advocacy on democracy, political freedom and human rights. Freedom House produces annual scores representing the levels of both political rights and civil liberties on a scale ranging from 1(most free) to 7 (least free). Nations are scored on several questions. Principal among them is whether the head of state and other chief authorities are elected through free and fair democratic processes. The roles, if any, of trade unions and professional organizations are also scrutinized. Freedom House states that the rights and liberties that form the basis of the survey are derived in large part from the Universal Declaration of Human Rights.

The UDHR was adopted by the United Nations General Assembly on December 10, 1948 as a result of the unfortunate experiences suffered during the Second World War. It is designed to prevent autocracies suffered during that conflict. It contains an International Bill of Human Rights intended to protect the peoples of all nations from authoritarian abuse. Depending on the ratings, the nations are then classified as "Free", "Partly Free", or "Not Free". Freedom house refers to this categorization as a nation's "Status."

Canada received the highest rating for both political rights and civil liberties recording a "1" in both cases. North Korea scored the lowest ratings of "7" for both measures.

Notice that the measure of political freedom recorded by Freedom House is structured such that higher values indicate less freedom while elevated levels of economic freedom provided by the Fraser Institute identify greater degrees of freedom. A negative binary correlation coefficient between these two measures would therefore suggest that nations with greater economic freedom also enjoy greater political freedom. That is, a negative correlation would indicate a positive relationship between degrees of economic freedom and political freedom.

METHODOLOGY

While it is generally recognized that the statistical techniques of regression and correlation cannot identify cause-and-effect association, Granger (1969) has provided researchers with a most useful tool to distinguish suspected causal relationships. The distinction between Granger-causality and the causal factors in the more traditional sense must be kept in mind. Granger-causality simply notes the order of occurrence. It is based on the premise that if changes in one variable are repeatedly followed by changes in a second variable, the first variable may be Granger-causing changes in the second. The central focus is on whether lagged values of one variable can explain changes in a second variable. It can clearly be seen from this that timing is the critical issue. Granger-causality thereby provides a method to address the age old question, which came first, the chicken or the egg.

The Granger methodology tests the hypothesis that one time-series variable is useful in forecasting another. The null hypothesis that no causality exists can be rejected if it can be shown through a series of t-tests and F-tests that lagged values of one variable, X, combined with the lagged values of a second variable, Y, prove statistically significant . It is then concluded that X Granger-causes Y.

The Granger test requires that two regression models must be estimated based on the premise that there prevails two time-series variables, X and Y, and evidence is sought as to a potential causal relationship running directionally from X to Y and, alternatively from Y to X. Assuming that we first want to test for X-to-Y causality, the first model regresses the current value of Y on lagged values of itself. If there are to be j-lagged values of Y, the proper specification is expressed as

$$Y_t = \alpha_0 + \sum_{i=1}^{j} \beta_i Y_{t-j} + \varepsilon_t \qquad (1)$$

This specification excludes any reference to the other variable of interest, X. It is referred to as the restricted model in that the absence of the lagged X-values implies that the beta coefficients for X are restricted to zero and play no role in the determination of current values of Y. Hence, they are not included in the restricted model.

The second model incorporates lagged values of X in an explanatory role. It can be expressed as

$$Y_t = \lambda_0 + \sum_{i=1}^{j} \Omega_i Y_{t-j} + \sum_{i=1}^{m} \delta_i X_{t-m} + \nu_t \qquad (2)$$

This is referred to as the unrestricted model in that by including *m* lagged terms for X it is alleged that the coefficients of X, δ_i, are not zero, but offer additional information regarding changes in Y. In effect, the procedure tests whether, after controlling for the lagged values of Y, do the lagged values of X add significantly to the explanatory power of the model.   The null hypothesis to be tested holds that the coefficients of X are indeed zero:

Ho: $\delta_1 = \delta_2 = \ldots = \delta_k = 0$

If the null is not rejected based on a partial F-test, it may be concluded that causality from X to Y does not prevail.

Of course, when each model is estimated a sum of the squared errors, SSE, will be reported. There will occur a SSE_R for the restricted model and a SSE_U for the unrestricted model.

Each test for directionality is based on an F-test shown as

$$F_{test} = \frac{\frac{SSE_R - SSE_U}{m}}{\frac{SSE_U}{n-k}}$$

(3)

where n is the number of observations in the unrestricted model (which may or may not be equal to the number of observations in the restricted model because of the potential for missing data), m is the number of lagged terms for the X-variable and k is the number of parameters to be estimated in the unrestricted model. Thus, m is the degrees of freedom for the numerator and n-k is the degrees of freedom for the denominator. The critical F-value is $F_{\alpha, m, n-k}$.

A symmetrical procedure is then performed in which the X-values and Y-values are reversed as they appear in Equations (1) and (2). This tests for directional causality running from Y to X.

If two variables are being tested, X and Y, there are four possible outcomes. Causation may be unilateral from X to Y, it may be unilateral from Y to X, it may be bilateral (endogenous) or there may be no causality in either direction. A more complete discussion of the Granger test can be found in standard econometrics texts (see Webster Chapter 11, 2013).

In applying the Granger causality tests an important issue focuses on the number of lags that should be used. Given the mechanics inherent in the regression process the number of lags chosen for the model can have a crucial impact on the outcome and the conclusions derived by the researcher. Much of the research relying on Granger-causality tests seems quite cavalier in its approach to lag selection. In many cases this all-important decision is based on data availability and/or mere convenience. Model specification and its final selection are all too often determined on the basis of R^2 and adjusted R^2 after considerable trial and error. Such random and haphazard methodology leads to questionable results and is difficult to defend. It is easy to overfit the model due to the tendency to inflate the coefficient of determination and at the same time reduce both the standard error and the residual sum of squares by adding more lagged values. This practice will likely introduce multicollinearity into the model and thereby precipitate all the problems that it creates.

There are several prescribed methods best suited to determine the proper number of lags. Most notably among them is that developed by Akaike (1974) termed "an information criterion" or (AIC). It provides a means of model selection and relies on the concept of information entropy in that it measures how information within a given model is used to describe reality.

The AIC criterion is calculated as

$$AIC = e^{2k/n} \frac{\sum_{i-1}^{n} \hat{\varepsilon}_i^2}{n} = e^{2k/n} \frac{SSR}{n}$$

(4)

or, alternatively,

$$AIC = 2k - 2\ln[L]$$

(5)

where k is the number of right-hand side variables including a constant term and L is the maximized value of the likelihood function for the estimated model. Given a set of models under comparison, the desired model is the one with the minimum AIC. It can be seen from Equation (4) that as k increases so does the expression $e^{2k/n}$. As an increasing function of the number of estimated parameters, it carries a higher penalty for overfitting than does the adjusted coefficient of determination. The AIC evaluates a model on the basis of how closely its fitted levels estimate the true levels of the regression based on expected values. Many modern software packages allow the option to calculate the AIC. On the basis of this methodology a total of nine lags was chosen for all tests. Since the most recent data available on economic freedom from the Fraser Institute is for 2009 as contained in the 2011 Economic Freedom of the World Annual Report, the years 2001 through 2009 are used in the analysis with 2009 serving as the response.

RESULTS

The data were systematized in such a manner so that a total of 102 nations could be included in each econometric procedure. This required not only that the nations in each data source (Fraser Institute and Freedom House) be matched up but also that there were no missing values in any of the nine years it used in the analysis.

Simple bivariate correlations are calculated for the relationships between economic freedom and political rights and between economic freedom and civil liberties for all nine years under consideration. The abridged results for the years 2005 to 2009 are displayed in Table 2. The years 2001 to 2004 reported are in similar fashion. As noted earlier, negative values represent a positive relationship between economic freedom and both measures of political freedom (political rights and civil liberties) as measured by Freedom House. This is because Freedom House gave nations with more political freedom a lower rating while the Fraser Institute assigns a higher rating to nations with greater economic freedom.

It can clearly be seen that, as indicated by the negative correlation coefficients in the table, a positive relationship exists in all years between economic freedom and both measures of political freedom. Economic freedom is positively associated with the levels of political rights prevailing within a nation and with the extent of civil liberties that exist around the globe. In every case the p-value reported to be virtually zero. The lowest correlation of 0.45 (ignoring the negative sign) was reported to be between economic freedom and the political rights in the first year reported of 2005. The strongest correlation was found to be 0.65 and occurred between economic freedom and civil liberties in 2009 – the last year included in the study.

Perhaps even more evocative is the unmistakable and unbroken upward trend in both correlation measures. Table 2 reveals that the correlations between economic freedom and political rights and between economic freedom and civil liberties have continued to strengthen with no abatement over the time period in question. This suggests, perhaps, a pronounced world-wide movement toward greater degrees of autonomy, independence and sovereignty among the world's people. This proposition offers ripe opportunity for further research designed to compare national autonomy and trends in the principles of popular sovereignty over time.

However, these strong correlations do not indicate causality in either direction. Such evidence can be obtained only through the Granger test. In total, four pairs of models are estimated. Each consists of a restricted and unrestricted model in accord with Equations (1) and (2). The first set is designed to test whether economic freedom Granger-causes political rights. The level of political rights in 2009 is regressed on past values of itself for the years 2001 through 2008. This constitutes the restricted model. The unrestricted model then incorporates values for economic freedom for the years 2001 through 2009. This provides the unrestricted model. The sums of the squared errors are collected and an F-value is computed as per Equation (3). This is compared to a critical F-value to determine whether the hypothesis as stipulated earlier should or should not be rejected.

An identical treatment is then provided using civil liberties as the response variable. Again, both an unrestricted and a restricted model are estimated thereby providing the F-value. This is compared to the critical F-value to determine if economic freedom Granger-causes civil liberties within a nation.

Symmetrical models are estimated in which economic freedom is treated as the dependent variable. The first Granger-test is designed to establish whether political rights Granger-clause economic freedom. Both restricted and unrestricted models are necessary to obtain the requisite F-value. The same two structural forms are then estimated in which civil liberties is substituted as the right-hand variable. This allows the test to determine if economic freedom is Granger-caused by the presence of civil liberties.

Dummy variables were created for the three levels of Status (Free, Not Free, Partly Free). However, their inclusion in the Granger tests as control variables proved statistically insignificant and they were therefore abandoned in further analysis.

Table 3 contains the results of all four hypotheses tests. Recall that in each case the null hypothesis is that the coefficients for all lagged values of the independent variable are all zero. The hypothesis under examination is that the tested variable adds nothing to the explanatory power of the model.

The first test is intended to determine if economic freedom Granger-causes a rise in political rights with in the nation. The question under study is whether the populace in a nation enjoying pronounced levels of economic freedom will, over time, acquire strengthened political control. The first line in Table 3 indicates that the null hypothesis should not be rejected at any acceptable level of significance. The F-value of 1.292 produces a p-value of 0.254. It must be concluded that a free economic system will not result in the attainment of political rights for the nation's general population. As noted earlier, Hong Kong represents the archetypal example.

The second test asks whether economic freedom can Granger-cause intensify civil liberties within a nation-state. The answer here is somewhat mixed. The F-value of 1.831 is associated with a p-value of 0.075. Although the statistical values are somewhat beyond normally excepted limits, there is still some support for the argument that economic freedom encourages peoples' civil liberties.

As a true test of the HFH hypothesis, the directionality of the analysis is reversed and the levels of economic freedom serve as the response variable. The third test in Table 3 contains the results. Testing whether economic freedom can be Granger-caused by the presence of political rights) results in the rejection of the null. A p-value of 0.003 clearly adds support to the von Hayek-Friedman argument. Nations exhibiting political sovereignty report higher levels of economic freedom.

The fourth and final test is also quite unequivocal. Clearly, the p-value of 0.000 indisputably offers substantial support for the HFH contention. Based on the time sequence inherent in the Granger test methodology, internal actions within nations strongly suggest that market-based economies are supported and encouraged under regimes characterized by principles of civil liberty.

SUMMARY AND CONCLUSION

Clear support is provided for the HFH attesting to the propensity for politically free nations imbued with civil liberty to encourage the growth and development of economic freedoms. It can be taken from the evidence presented here that political and civil liberties have simultaneously expanded with market-based economies. This suggests that economic and political freedoms are indeed linked.

The noted Austrian school economist, Ludwig von Mises (b.1881 – d. 1973), long argued that economic and political freedom were mutually dependent (1951). He insisted that the idea political freedom can be preserved in the absence of economic freedom, and vice versa, it is an illusion. Political freedom is the corollary of economic freedom, he insisted. He claimed that it was no accident that a change of capitalism became also the age of government by the people.

At the least, it appears that a minimal degree of economic freedom must prevail if the nation is to experience any perceived the level of political rights or civil liberties. It can be taken from this analysis that not only does economic freedom require some degree of governmental liberation, but that economic freedom can also spur political emancipation.

TABLE 1
THE AREAS, COMPONENTS, AND SUB-COMPONENTS OF THE EFW INDEX

1 Size of Government: Expenditures, Taxes, and Enterprises
      A General government consumption spending as a percentage of total consumption
      B Transfers and subsidies as a percentage of GDP
      C Government enterprises and investment
      D Top marginal tax rate
            i Top marginal income tax rate
            ii Top marginal income and payroll tax rates

2 Legal Structure and Security of Property Rights
       A Judicial independence
       B Impartial courts
       C Protection of property rights
       D Military interference in rule of law and the political process
       E Integrity of the legal system
       G Regulatory restrictions on the sale of real property
3 Access to Sound Money
       A Money growth
       B Standard deviation of inflation
       Inflation: Most recent year
       D Freedom to own foreign currency bank accounts
4 Freedom to Trade Internationally
       A Taxes on international trade
               i Revenues from trade taxes (% of trade sector)
               ii Mean tariff rate
               iii Standard deviation of tariff rates
       B Regulatory trade barriers
               i Non-tariff trade barriers
               ii Compliance cost of importing & exporting
       C Size of trade sector relative to expected
               D Black-market exchange rates
       E International capital market controls
               i Foreign ownership / investment restrictions
               ii Capital controls
5 Regulation of Credit, Labor, and Business
       A Credit market regulations
               i Ownership of banks
               ii Foreign bank competition
               iii Private sector credit
               iv Interest rate controls / negative real interest rates
       B Labor market regulations
               i Hiring regulations and minimum wage
               ii Hiring and firing regulations
               iii Centralized collective bargaining
               iv Hours regulations
               v Mandated cost of worker dismissal
               vi Conscription
       C Business regulations
               i Price controls
               ii Administrative requirements
               iii Bureaucracy costs
               iv Starting a business
               v Extra payments / bribes / favoritism
               vi Licensing restrictions
               vii Cost of tax compliance

TABLE 2
CORRELATIONS BETWEEN MEASURES OF ECONOMIC FREEDOM AND MEASURES

	Years				
	2005	2006	2007	2008	2009
Correlations					
Between Economic Freedom And Political Rights	-0.45	− 0.47	− 0.48	− 0.49	− 0.52
Between Economic Freedom and Civil Liberties	-0.51	− 0.53	− 0.55	− 0.61	− 0.65

TABLE 3
A TEST OF THE HYPOTHESES

	F-value	p-value
Hypothesis:		
(1) Does Economic Freedom Granger Cause Political Rights?	1.292	0.254
(2) Does Economic Freedom Granger Cause Civil Liberties?	1.831	0.075
(3) Do Political Rights Granger Cause Economic Freedom?	3.101	0.003
(4) Do Civil Liberties Granger Cause Economic Freedom?	5.393	0.000

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