Economic Freedom, Property Rights, and the Informal Underground Economy

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> AYdifferent property rights create their own specific incentives and transaction costs. In turn, those incentives and transaction costs have specific and predictable effects on human behavior.@ Svetozar Pejovich (1995, 65)

Property rights

The role played by property rights was recognized by Adam Smith (1776) although not fully integrated into his works. He treated property rights as if they were endogenously developed in response to changes in value that could be captured by buyers and sellers. This is particularly illustrated in the evolution of land tenure systems (Gay, 1977). His approach to property rights was widely seeded in his economics (1776) and in ethics (Smith 1763).

Property rights are central to providing signals about opportunities for buyers and sellers to seek Agood deals.@ In a system of decentralized knowledge, the proper incentive flowing from private property rights compel participants to be engaged. They are compelled to be engaged in the search for alternatives, creating value and capturing value in a market setting. As Alchian (1988) observed, APrivate property rights are assignments of rights to choose inescapably incompatible uses.@ Thus, the basic coordination and production are directed by the pursuit of self-love Ato promote an end that was no part of their original intention,@ as Smith (1776) claimed.

As Feulner (2002, 5) indicated AThe economic effects of secure property rights and a well functioning legal system are reasonably straightforward. Since people act basically in their own self-interest, they tend to undertake hard work and investments only if they have a reasonable probability of enjoying the fruits of their efforts. Thus, if property rights are less secure B for example, because of high crime rates or high tax rates B people tend to work less and to invest less.@ In other words, the security and property rights are underpinnings of longer term growth.

With particular reference to the arguments advanced in this paper, secure private property rights promotes growth and access to the more formal, or monetized economy. Security of rights in use, exchange, and transfer of those rights encourages one to create value and capture it. Another way of saying this is that one can Acash in@ on your diligence, sweat, and good luck. To the extent that private property rights are weakened one would expect to find more energy and activity devoted to avoiding formal markets and being in the underground economy (also known as the informal economy).

The argument was well made by Alchian (1987) with regard to economic theory and private property rights. AFor the decentralized coordination of productive specialization to work well, according to the well known principles of comparative advantage, in a society with diffused knowledge, people must have secure, alienable private property rights in productive resources and products tradeable at mutually agreeable prices at low costs of negotiating reliable contractual transactions.@ The decentralized nature of information with the private property rights incentives means the Aability to coordinate diffused information results in increased availability of more highly valued goods as well as those becoming less costly to produce.@ In the exchange process the Aamount of rights to goods one is willing to trade, and in which private property rights are held, is the measure of valueY It probably would not be disputed that stronger property rights are more valuable than (sic) weaker rights, that is a seller of a good would insist on larger amounts of a good with weaker private property rights than if private property rights to the goods were stronger.@ Weaker private property rights affect the level and value of trade as well as whether it occurs within an explicit market or within an underground economy. There can be an alternative framework for productions and exchange to occur outside the traditional markets.

Exchange and production moves beyond the long arm of the law when detection and enforcement costs are Ahigh@ and rights to private property are less secure. As Ekelund and Tollison (1981) illustrated in medieval Europe, economic activity moved beyond the cartel position held by merchants in the walled cities. The search for rent creation and rent extraction underpinned much of the medieval economic activity in England and France. Property rights played an important role to understand economic growth, institutional change and rent-seeking. As Ekelund and Tollison (1997) emphasized AThe security of property rights is one important key, but the institutional sources of property rights alterations is even more basic to the story.@ They conclude AOur view is thus a reassertion of Smith=s primitive analysis of mercantilism. It isYan elaboration ofYa crucial link between rent-seeking agents, property rights alterations, and fundamental institutional change.@

The role of government and markets is often widely misunderstood. Clark and Lee (2004) argued well with regard to issues of global warming. They explained the silent partnership of individuals and markets in contrast to credit-claiming politicians and bureaus seeking larger budgets. AThe >problem= with the market is not that it is inferior to government in dealing with global warming, but that it handles issues effectively without requiring large government funding of organized groups and without concentrating power in the hands of a few experts. Instead, the market mobilizes the actions of millions of people to solve the problems indirectly by means of marginal and, for the most part, mundane adjustments for which, no matter how effective they may be, politicians and bureaucrats can take no credit.@ Government actions may be necessary to support property rights and other aspects of market failure. However such actions are often used too quickly and automatically.

In this paper we examine a variety of different economies. They reflect different social, political and economic systems. Our comparisons reflect the differences in economic freedom, property rights and prosperity. In the words of Demsetz (1998) AYthe fundamental economic difference between social systems is in the treatment they accord property rights....@

The informal economy

Defining the informal economy or underground economy is not as easy as one would think. It includes both legal and illegal transactions. The most generally accepted definition is Amarket Bbased production of goods and services whether legal of illegal that escapes detection in the official estimates of GDP@ (Smith, 1994). When trying to gain a reasonable consensus definition, Ait becomes clear that the informal economy includes unreported income from the production of legal goods and services either from monetary or barter economic activities which would generally be taxable were they reported to the state@ (Schneider, 2002). To further examine this Aunderground economy@ phenomenon one can see the impact that taxes have upon the size of this informal economy. Tax avoidance, evasion, and even compliance are important to its size (Fiege 1989).

An excellent taxonomy of the underground or informal economy (the terms are used interchangeably in this paper) is provided by Lippert and Walker (1997). For clarification, there are illegal activities which involve monetary transactions (trade with stolen goods; drug dealing and manufacturing; prostitution; gambling; smuggling and fraud). There are also illegal activities with non-monetary transactions (barter of drugs, stolen goods, smuggling, etc.; produce or growing drugs for own use; theft for own use) Other common underground practices involve legal activities with monetary transactions for 1) tax evasion (unreported income from self-employment; wages , salaries and assets from unreported work from legal goods and services) as well as for 2) tax avoidance (employee discounts and fringe benefits) To this must also be added legal activities with non-monetary transactions for 1) tax evasion (barter of legal goods and services) and 2)tax avoidance (do it yourself and neighbor help) (Lippert and Walker, 1997).

Needless to say, it is a tremendously difficult job to accurately estimate this underground economy. We believe that the best (most accurate) estimate is provided by Frederick Schneider in his World

Bank (2002) study entitled ASize and Measurement of the Informal Economy in 110 Countries Around the World.@

The Heritage Foundation Index of Economic Freedom

As a freedom measure for this paper, the authors used The Heritage Foundation=s Index of Economic Freedom (Heritage Foundation, 2003). There are A50 independent variables divided into 10 broad factors of economic freedomY grouped into the following categories: Trade policy, Fiscal burden of government, Government intervention into the economy, Monetary policy, Capital flows and foreign investment, Banking and finance, Wages and prices, Property rights, Regulation, and Black market.@ In this paper, the authors limited the analysis to the overall combined score of the 10 factors and the individual freedom entitled Property Rights. Further description of the economic freedom entitled Property Rights concerns certain general variable characteristics: Afreedom from government influence over the judicial system, commercial code defining contracts, sanctioning of foreign arbitration of property, corruption within the judiciary, delays in receiving judicial decisions and property@ (Heritage Foundation, 2003). Obviously the belief is that the accumulation of private property lies at the base of the market system and additionally this right of private property must be protected by the government through an effective court system. This corresponds to the view held by ex-Treasury Secretary Paul O=Neill (2002).

According to Feulner (2002), AAll 50 of these variables are examined to measure and to determine both the absolute level of economic freedom in 161 countries as well as the relative economic freedom of one country to another.@

Economic freedom, property rights, and economic development

> AA property right is a socially enforced right to select uses of an economic good. A private property right is one assigned to a specific person and is alienable in exchange for similar rights over other goods@ (Alchian, 1987).

The pertinent question is AJust how do these property rights influence economic development?@ AAdam Smith believed that economic development would follow if government provided >law honest, peace, and easy taxes=@ (Kindelberger, 1977). In other words, the law was designed to protect private property and therefore allow for economic development. President Ronald Reagan once referred to the Amagic of the market place@ in economic development, but as is evident, the marketplace requires the protection of private property rights for its efficient operation, along with the economic freedom to participate in the market system. In the economic development literature, when looking for an analytical agreement there have developed two free market Aconsensuses.@ The Washington consensus calls for Asecure property rights@ and the Santiago consensus calls for Athe protection of property rights@ (Todaro and Smith, 2004). Protection of property rights is important in economic development. In the United States the rights to private property and to participate in the market place are guaranteed by the U.S. Constitution, which many other countries have tried to copy with varying degrees of success.

The relationship between economic freedom (in association with property rights) and economic development can best be summed up by the former editor of the *Wall Street Journal*, Robert L. Bartley in his foreword to the 1998 *Index of Economic Freedom* A[M]ore and more of the world has come to the conclusion that you can=t fight the markets; you have to join them. The catchword of the new era is market opening B lowering of barriers to trade abolition of restraints on the movement of capital, the privatization of enterprises the government previously deigned to run. If you allow the markets to work freely and openly, we now (or once again) see clearly, they will serve you with prosperity and progress@ (*Wall Street Journal*, 2003). To measure economic development on an international level, the most widely used variable is Gross Domestic Income per capita (GDI) (World Bank, 2002). The authors use the GDI per capita as a measure of economic development in this paper.

Economic freedom, economic development and the underground economy

Assuming that there is a statistically identifiable relationship between economic freedom and economic development the next task is to statistically identify the relationship between economic development and the underground economy. In other words, as a country=s economy grows are the individual citizens more or less prone to engage in tax avoidance or tax evasion (either monetary or non-monetary transactions)? The authors of this paper believe that there is a recognizable and statistically discernable relationship between the four variables of economic freedom, economic development, the underground economy, and property rights. To test these relationships we obtained the international data for: 1) the overall index of economic freedom score, or IEF; 2) Gross Domestic Income per capita or GDI; 3) the measurement of the informal economy or IUE, and, 4) the economic freedom index entitled property rights index or PRI. We hypothesize: 1) that the more economic freedom then the greater the GDI per capita; and, 2) the greater the GDI per capita then the less the participation in the informal economy; and, (3) the greater are the property rights then the greater is the GDI per capita.

The data

The data set for this project was complied from three different sources as discussed previously. However, due to the non-comparability of these sources, only a maximum of 110 observations (individual countries) were available for statistical analysis. The following table presents some summary statistics for the three variables (GDI Gross Domestic Income per person, EFI Economic Freedom Index, IUE Informal or Underground Economy estimate, and PRI, Property Rights Index) used in the models.

Table 1

	N	Min	Max	Mean	Std. Dev.
GDI	110	100	37,930	6,431.55	9,683.9
EFI	109	1.5	4.4	2.92	0.62
IUE	93	3.0	67.1	32.25	13.92
PRI	109	1.0	5.0	3.1	1.8

The models

To address the hypotheses, the following three general linear models are formulated:

$$GDI = f\{ EFI \} \qquad \text{I}$$
$$IUE = f\{ GDI \} \qquad \text{II}$$
$$GDI = f\{ PRI \} \qquad \text{III}$$

The results of the first three models are presented in Table 2.

Table 2

(I) GDI = 40034	- 11435.4 EFI	R^2 = 0.53 [d.f.= 107]	
t = 12.98	t = -11.10	F = 123.18	
(Pr > t , 0.0001)	(Pr > t, 0.0001)	(Pr > F, 0.0001)	
(II) IUE = 39.16	- 0.00093 GDI	R^2 = 0.46	[d.f.= 92]
t = 29.88	t = -8.95	F = 80.05	
(Pr > t , 0.0001)	(Pr > t, 0.0001)	(Pr > F, 0.0001)	
(III) GDI = 26342.7	- 6559.2 PRI	R^2 = 0.61	[d.f.= 107]
t = 16.01	t = -12.89	F = 166.07	
(Pr > t , 0.0001)	(Pr > t, 0.0001)	(Pr > F, 0.0001)	

The regression results for the first model indicate that as freedom increases there is a corresponding increase in the Gross Domestic Income per capita for the 108 countries tested. Notice that the way the freedom index is calibrated, the lower score (in this case
-11435.4) is associated with more freedom so that the negative coefficient associated with the dependent variable in model the results of Model I can be interpreted as essentially a double negative. As the EFI value decreases (and hence the amount of freedom increases), then the GDI value increases. This supports the hypotheses that a positive correlation exists between economic freedom and a country=s economic well being as measured by the

variable GDI per capita. In this first model we measure an R^2 of 0.56 which can be interpreted to mean that over half of the variation in the amount of GDI per capita is accounted for by variation in the EFI. Or, stated differently, 56% of the variation in the amount of economic well-being existing within these 108 countries can be accounted for by looking at the variation in the amount of freedom enjoyed by the people within that country.

The regression results for the second model tell a similar story; as economic activity increases there is less tendency for individuals within a country to engage in informal or underground activity. Notice that in the second model=s regression results the coefficient for the variable GDI per capita is negative, while at the same time remember that the variable IUE is the percent of the economy that is NOT part of the official economic activity. Here we have another case of a double negative in that as the GDI value decreases the larger is the IUE value. Remember that higher IUE values represent more non-official economic activity. Stated another way, as the economic activity of a country increases there is a tendency for individuals NOT to avoid the mainstream or to engage in informal or underground economic activity. This connection is measured with an R^2 of 0.46 for the 93 countries that were used to test this model.

The third and final regression model addresses the question of whether or not property rights are a driver of economic activity, or specifically whether or not there is a statistically significant relationship between the level of property rights enjoyed by the citizens of a country and the level of gross domestic income per capita generated in that country. Once again the sign of the coefficient for the independent variable (PRI) requires careful interpretation. A smaller index value is associated with a higher level of property rights. Therefore, the negative sign in the model indicates as the index for property rights gets smaller, there is a greater tendency for the GDI value to increase. Stated succinctly, there is a statistically significant relationship detected between increased levels of property rights enjoyed by the citizens of a country and their standard of living if gross domestic income per capita is an accurate proxy for it. What is also important about the results of this third model is in comparison to the first model where an Aoverall@ index of freedom was used to statistically explain changes in GDI. Recall that in the first model, the R^2 was 0.53 while in the third model which employed the property rights index the R^2 was 0.61 which suggests that the property rights component of the Economic Freedom Index was robust.

Conclusions

The authors are pleased to report that we have concluded that economic theory once again has predicted that markets, supported but not encumbered by excessive government activity, lead to better conditions for the human population over which they hold sway. Specifically, we have tested three models with modern statistics and have determined that as people enjoy greater economic freedom, they increase the economic conditions in which they live, and as these conditions improve people tend to Aplay more and more@ by the rules. Humans will improve their lot if allowed to do so. It is simply amazing how often governments prevent this from occurring.

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