POVERTY, PROPERTY RIGHTS, AND HUMAN WELL-BEING: A CROSS-NATIONAL STUDY
Seth W. Norton

Frank Knight identified property rights as the essential ingredient for economic progress. In his classic work, *Risk, Uncertainty and Profit*, Knight (1971: 319) states:

> Let us begin with the relation of capital in the sense of material goods to the fundamental structure of society. The facts of progress will be seen to have an intimate connection with the very institution of private property. In an unprogressive society private property in the modern sense of the term need not exist. The social justification of private ownership is that the coupling of control of resources with enjoyment of the fruits of their use is supposed to give an incentive to use the goods effectively in production.

Well before the modern development of the economics of property rights led to a similar conclusion, Knight asserted that property rights are the essential prerequisite for economic progress. I build on that simple premise and examine the incidence of poverty among the poorer nations of the world with respect to the presence or attenuation of property rights.

Property Rights and Economic Growth

Property rights are an essential prerequisite for growth. The economic theory of property rights suggests that economic growth requires a government to establish property rights so that economic agents can contract with minimal transaction costs and thus increase economic wealth for citizens of that country (North 1981, Eggertsson 1990: 317).

Property rights exist at the nation-state level, as nations establish basic legal rules and procedures for defining and settling ownership

claims, and at the most disaggregated levels, as enterprising economic agents attempt to maximize their own wealth within the nation-state. Part of that entrepreneurial behavior entails the development of contracts and commercial norms that further define property rights (Smith 1992, North 1981: 18).

These two dimensions of property rights formation are not independent. The ability of entrepreneurs to contract creatively and effectively—facilitating market exchange and creating firms or hybrid organizational forms—is largely dependent on the property rights configuration at the nation-state level. If the political regime facilitates contracting via private property rights, then wealth-maximizing behavior through detailed specification of property rights and the resultant economic growth are more likely. If the political regime retards contracting via private property, then wealth maximizing behavior through the entrepreneurial specification of property rights and the attendant economic growth will likewise be less likely.

In recent years, empirical evidence consistent with the proposition that well-specified aggregate property rights enhance growth has emerged. Studies by Gerald Scully (1988 and 1992), Robert Barro (1991), Barro and Xavier Sala-i-Martin (1995), Stephen Knack and Philip Keefer (1995), Knack (1996), and Keefer and Knack (1997) show that measures of well-defined property rights, the rule of law, and public policies that do not attenuate property rights at the nation-state level tend to generate economic growth and wealth accumulation.

The Case of Poor Countries

It is sometimes argued that the link between property rights and growth is merely a coincidence because rich countries are more likely to have well-specified property rights. For example, suppose the rich countries of the world attained their wealth by economic exploitation of the poor countries or even by luck. Suppose further that the citizens of those richer states prefer well-specified property rights to favor their own well-being over the poorer members of their own countries. In such a case, property rights might be interpreted as the driving force behind the economic gains to the rich countries when in fact they would be only a coincidence. In short, the relationship between property rights and economic performance may be a statistical artifact.

To show that property rights are crucial to economic progress and human well-being, an examination of the poorer countries of the world is in order. If it can be shown that property rights are an important determinant of economic progress in poorer countries, then the case

for a nexus between property rights and economic progress would be substantially buttressed.

Measures of Property Rights

James Gwartney, Robert Lawson, and Walter Block (1996) provide a comprehensive analysis of property rights at the nation-state level. In addition, they provide numerical rankings of the degree of specification of property rights across nations for the 1975–95 period. Their study has two clear advantages over previous cross-national studies of property rights. First, the authors focus on ''protective rights''— provisions that owners are free to do as they will with their own property—as opposed to ''intrusive rights''—provisions that ''guarantee'' some scarce good such as food or health care to the citizenry.[1] Because intrusive rights are actually rights to scarce goods, their provision to the citizenry as a whole may entail tax policies or other public policies that attenuate protective rights.

Second, Gwartney, Lawson, and Block note that a number of public policies attenuate private property rights. For example, rent controls inhibit the sale of property at prices at which the market would otherwise permit the owner to sell. Similarly, inflation is a form of theft since it reduces the value of money. In short, Gwartney, Lawson, and Block show that well-specified property rights at the nation-state level are the essence of economic freedom.

Kim Holmes, Bryan Johnson, and Melanie Kirkpatrick (1997) also provide a comprehensive study of cross-national property rights. Their study, published by the Heritage Foundation, provides the basis to verify the validity of the Gwartney, Lawson, and Block findings. More important, the Heritage study can be used to examine the relative predictive ability of narrow versus broad interpretations of property rights.

In the present paper, I use the Gwartney and Lawson (1997) revision of the Gwartney, Lawson, and Block (1996) rankings because the Gwartney-Lawson study contains better estimates of the property rights measures. Table 1 shows the property rights measures used in Gwartney and Lawson and in the Heritage study.[2] ''Heritage Narrow'' is the single category ranking for the protection of private property

---

[1]For a description of intrusive rights across countries, see Gastil (1987) and Humana (1982). For criticisms of intrusive rights, see Scully (1992) and Gwartney, Lawson, and Block (1996: 1–7).

[2]I use the Gwartney and Lawson (1997) summary measures averaged for 1990 and 1995 because those years are closest to the years I use for the dependent poverty and deprivation variables in the regression analysis below.

TABLE 1
PROPERTY RIGHTS MEASURES

	Mean	Std. Dev.	Mini- mum	Maxi- mum	Proportion
Gwartney-Lawson	5.01	1.38	2.00	9.30	
Strong Rights					.266
Weak Rights					.294
Heritage Narrow	2.71	1.17	1.0	5.00	
Strong Rights					.200
Weak Rights					.233
Heritage Broad	3.10	.77	1.25	5.00	
Strong Rights					.280
Weak Rights					.300

NOTES: N = 109 for the Gwartney-Lawson data; N = 150 for the Heritage data. "Heritage Narrow" is the single category ranking for protection of private property. "Heritage Broad" is a ranking on 10 categories that reflect the existence versus attenuation of property rights. Property rights are stronger as the Gwartney-Lawson numbers increase; property rights are stronger as the Heritage numbers decrease. Proportion refers to the number of countries in the "strong rights" or "weak rights" category divided by the number of countries in the sample.
SOURCES: Gwartney and Lawson (1997); Holmes, Johnson, and Kirkpatrick (1997).

and "Heritage Broad" is a ranking based on 10 categories that reflect the strength or weakness of private property rights. The Gwartney-Lawson rankings identify better specified property rights with increasing values, while the Heritage rankings identify better specified property rights with decreasing values. Thus, under the Gwartney-Lawson measure, Hong Kong, which has very strong property rights, receives a score of 9.3. Under the Heritage-Narrow and Heritage-Broad rankings, however, Hong Kong receives scores of 1.0 and 1.25, respectively. In contrast, Iran has weak property rights as evidenced by a 3.05 on the Gwartney-Lawson index and 5.0 and 4.7 on the Heritage measures. Pakistan has neither strong nor weak property rights. Its Gwartney-Lawson index is 4.45 and its Heritage measures are 2.0 and 3.1.[3]

Because both the Gwartney-Lawson and Heritage measures are rankings or combinations of rankings, the use of ordinary least squares (OLS) on those measures is, strictly speaking, inappropriate. There-

[3]The correlation between the Gwartney-Lawson index and the Heritage-Narrow index is −.587, while the correlation between the Gwartney-Lawson index and the Heritage-Broad index is −.768. The correlation between the two Heritage measures is .838.

fore, categorical or "dummy" variables representing "Strong Rights" and "Weak Rights" are created representing the approximately 20 to 30 percent of the strongest and weakest rankings for the countries in each study. The exact proportions used in defining the dummy variables are shown in Table 1. The dummy variables can be used as independent variables in OLS regressions with poverty measures as dependent variables.

Measures of Poverty

The United Nations *Human Development Report* (1997) views poverty in the cross-national context as a multifaceted concept. Poverty entails not only the lack of basic necessities but also the denial of basic opportunities and choices that permit human development. Accordingly, the United Nations provides two separate measures of poverty.

The Human Development Index (HDI) measures human capabilities in three areas—a long and healthy life, knowledge, and a healthy standard of living. The HDI focuses on the "progress in a community as a whole" (United Nations 1997: 20). The HDI provides a useful metric to compare human well-being across nations.

The Human Poverty Index (HPI) provides a metric to compare the well-being of "the most deprived people in the community" (United Nations 1997: 20). The HPI differs from other measures of human well-being such as GDP or the HDI by taking a "deprivational perspective" (United Nations 1997: 20)—concentrating on the status of the poor people of the world. The United Nations views this measure as a tool for advocacy and as a planning tool to identify areas in need of antipoverty policies.

The Human Poverty Index is constructed according to a complex set of formulas. The components are similar to those in the HDI including three basic dimensions of well-being-longevity, knowledge, and a decent living standard. However, using the deprivational approach, the HPI entails different measures. The first dimension is measured by the number of people in the population not expected to survive to age 40. The second dimension is measured by the proportion of adults who are illiterate and therefore excluded from the world of reading and communication. The third dimension is a composite of three variables—the percentage of people without access to health services, the percentage of people without access to safe water, and the percentage of malnourished (underweight) children under the age of five.

The HPI measure is far from ideal. It is at best an incomplete measure of deprivation and must be viewed as somewhat arbitrary. Moreover, data quality on these measures may be weaker for poor countries (Blomström, Lipsey, and Zejan 1994).

Empirical Analysis

Table 2 presents a simple picture of the role of property rights and the state of humanity. The data in Table 2 show the Gwartney-Lawson and Heritage measures of property rights and the levels of human development as measured by the HDI. Recall that Gwartney and Lawson use increasing values to indicate better specified property rights while Heritage uses decreasing values.

The data in Table 2 show that better specified property rights are associated with higher levels of human development. Because the HDI is closely related to income, these results are not surprising. They indicate that poverty is more likely in regimes where property rights are not well-specified. However, because the HDI does not entail a "deprivational" perspective, the data in Table 2 may not tell us much about the "situation and progress of the most deprived

TABLE 2

PROPERTY RIGHTS AND HUMAN DEVELOPMENT

Human Development Index	Property Rights Measures		
	Gwartney-Lawson	Heritage Narrow	Heritage Broad
High	5.86	1.86	2.56
	(1.17)	(1.02)	(.699)
	49	56	56
Medium	4.53	3.09	3.35
	(1.38)	(0.97)	(0.68)
	32	55	55
Low	3.98	3.43	3.55
	(0.49)	(0.77)	(0.39)
	27	37	37

NOTES: The first number is the mean. The numbers in parentheses are standard deviations. "Heritage Narrow" is the single category ranking for protection of private property. "Heritage Broad" is a ranking on 10 categories that reflect the existence versus attenuation of property rights. The last number refers to the size of the subsample. For a description of the property rights measures, see Table 1. The Human Development Index is from the United Nations *Human Development Report* (1997).

people in the community'' (United Nations 1997: 20). Accordingly, examination of the HPI is appropriate.

The HPI is restricted to nation-states primarily in the medium and low categories of the United Nations' HDI highlighted in Table 2. To obtain some understanding of the effects of property rights on the well-being of impoverished people, I regress the HPI on the strong and weak dummy variables for the respective property rights measures described in Table 1.[4] The results of these estimates are shown in Table 3. Recall that the effects of poverty get worse as the HPI rises.

The data in Table 3 show that property rights have a strong influence on the well-being of the world's most impoverished people. Where property rights are strong, the HPI is reduced substantially. For the Gwartney-Lawson measures, the weak rights coefficient is also quite robust and positive, indicating that weak rights are associated with greater deprivation for the world's impoverished. To interpret those estimates, note that ''on average'' the HPI is about 28. However, in countries with strong property rights, the HPI is about 15 $(28-13)$, while in countries with weak rights, the HPI is about 38 $(28+10)$. The coefficients for the Heritage-Narrow and Heritage-Broad weak property rights measures are also positive but only marginally significant. In summary, there is compelling evidence that strong property rights significantly reduce the deprivation of the world's most impoverished people and there is some evidence that weak property rights increase the deprivation of those people.

The interpretation of Table 3, however, is complicated by the use of the HPI. Accordingly, the components of the HPI for this sample of poor countries are regressed on the property rights measures and reported in Table 4.

The data in Table 4 are similar to the estimates in Table 3 except for the access to health care measure where the property rights measures appear to be irrelevant. In all other cases, property rights clearly affect human well-being. In most cases strong property rights reduce deprivation and in several cases weak property rights amplify human deprivation. Moreover, the weakest results are for the no access to health care variable. That measure is clearly an input measure of well-being rather than an output measure. More important, whatever its merits, the health care measure seems to be largely irrelevant to the

---

[4]In the regressions, I use H.L. White's (1980) heteroskedasticity-consistent covariance matrix because the heteroskedasticity may be important across countries. However, the standard errors do not differ much from the OLS standard errors. I also performed Tobit estimates for all the dependent variables because they might be censored. The results were nearly equivalent to the OLS and White estimates.

TABLE 3

REGRESSION ESTIMATES OF HUMAN POVERTY INDEX ON PROPERTY RIGHTS MEASURES

Measure	Constant	Regression Coefficient		Adjusted R-squared	F-statistic	N
		Strong Rights	Weak Rights			
Gwartney-Lawson	28.33 (9.50)	−13.23 (−3.53)	10.06 (2.57)	.32	14.02	57
Heritage Narrow	30.00 (12.96)	−20.04 (−5.37)	6.57 (1.86)	.16	7.61	72
Heritage Broad	30.42 (13.75)	−17.95 (−4.98)	6.56 (1.84)	.20	9.84	72

NOTES: "Heritage Narrow" refers to the single property rights ranking; "Heritage Broad" refers to the 10 measures of economic freedom as property rights; the Human Poverty Index is from the United Nations Human Development Report (1997); t-values are in parentheses.

TABLE 4

PROPERTY RIGHTS AND COMPONENTS OF THE HUMAN POVERTY INDEX

Poverty Measure	Sample	Constant	Regression Coefficients		Adjusted R-squared	F-statistic	N
			Strong Rights	Weak Rights			
Death Rate before Age 40	GL	17.37 (7.64)	−8.00 (−3.00)	9.03 (2.71)	.26	10.90	56
	HN	19.38 (11.40)	−13.88 (−5.70)	5.86 (2.08)	.15	7.41	71
	HB	19.69 (11.32)	−13.83 (−6.54)	6.14 (2.24)	.24	11.80	71
No Access to Health Service	GL	29.57 (5.96)	−9.68 (−1.40)	2.42 (0.34)	.00	1.08	47
	HN	28.82 (8.02)	−17.07 (−2.52)	1.07 (0.20)	.00	1.35	63
	HB	28.50 (7.73)	−9.17 (−1.01)	1.81 (0.22)	.00	0.61	63
No Access to Safe Water	GL	32.28 (7.10)	−12.28 (−1.74)	8.96 (1.41)	.10	3.79	54
	HN	34.85 (10.75)	−28.32 (−6.62)	4.65 (0.91)	.10	4.63	69
	HB	34.65 (10.01)	−19.20 (−2.94)	5.57 (1.07)	.09	4.18	69

(continued next page)

TABLE 4
PROPERTY RIGHTS AND COMPONENTS OF THE HUMAN POVERTY INDEX (continued)

Poverty Measure	Sample	Constant	Regression Coefficients		Adjusted R-squared	F-statistic	N
			Strong Rights	Weak Rights			
Adult Illiteracy	GL	30.55 (7.37)	−17.83 (−3.47)	12.34 (2.19)	.28	11.26	55
	HN	31.75 (9.00)	−21.31 (−4.10)	7.80 (1.45)	.09	4.25	67
	HB	32.56 (8.70)	−21.64 (−4.76)	7.69 (1.42)	.14	6.55	67
Underweight Children under Age 5	GL	18.91 (9.03)	−3.50 (−0.91)	8.52 (2.35)	.12	4.61	56
	HN	20.65 (11.18)	−7.65 (−1.48)	8.61 (2.62)	.10	5.03	70
	HB	20.14 (11.66)	−5.86 (−1.21)	9.64 (3.00)	.14	6.75	70

NOTES: GL refers to Gwartney and Lawson (1997); HN refers to Heritage Narrow; HB refers to Heritage Broad; the deprivation measures are from the United Nations Human Development Report (1997); death rate before age 40 is the proportion of a country's population not expected to survive to age 40; the other measures are the percentage in each category for each country; t-values are in parentheses.

mortality measure—the proportion of the population expected to die before age 40—where property rights profoundly affect the outcome.

Table 4 shows that the proportion of people not expected to live to age 40 is about 6 to 9 percent for regimes with strong property rights and more than 25 percent for regimes with weak property rights.[5] In the case of adult illiteracy, where people are deprived of the benefits of knowledge and communication associated with literacy, the illiterate adult proportion of poor countries is about 13 percent in regimes with strong property rights and about 43 percent in those regimes with weak property rights, using the Gwartney-Lawson measures. The proportion of a country's citizenry without access to safe water is reduced from about 35 percent to about 6.5 percent, using the Heritage-Narrow measure for strong property rights. Even in the case of the percentage of children that are undernourished, where the property rights measures only seem to have a statistically significant effect in regimes where property rights are weak, the economic significance of those effects is palpable. In general, for the poor countries of the world, about 20 percent of the children under five years of age are undernourished. However, in those poor countries of the world where property rights are weak, about 27 to 29 percent are undernourished. The difference must be significant to those children and to their families.

Conclusion

Previous research shows that property rights are required for economic development and growth. That relationship, however, does not directly address the well-being of the world's poorest inhabitants. My results indicate that the very measures developed by the United Nations to quantify human deprivation are sensitive to the cross-national specification of property rights. I show unequivocally that well-specified property rights enhance the well-being of the world's poorest inhabitants. Thus, my results are consistent with Knight's

---

[5]The regression equation is:

$$\text{Death Rate} = \beta_0 - \beta_1 \text{STRONG RIGHTS} + \beta_2 \text{WEAK RIGHTS},$$

where β_0 is a constant across all countries, β_1 is the coefficient for countries with strong rights (20–30 percent of countries based on the Gwartney-Lawson and Heritage rankings) and β_2 is the coefficient for countries with weak rights (20–30 percent of countries based on the same rankings). The coefficients are categorical or "dummy variables," similar to a constant term for the group of countries that they represent. For example, for the Heritage Narrow estimates, the constant term is 19 percent, but subtracting 13.88 (the β_1 estimate) means the percentage not surviving to age 40 is about 5.5 in countries with strong property rights while adding 5.86 (the β_2 estimate) means the percentage not surviving is about 25 percent in countries with weak property rights.

observations that (1) progress has an intimate connection with the institution of private property, and (2) the connection is generally evident regardless of the measure of property rights. In particular, the institution of private property is closely linked with the well-being of the poorest members of the world community.

The fact that these results are generally more robust in the cases where the Gwartney-Lawson measures of property rights are used also merits attention. Those measures are the most comprehensive and the most subtle in recognizing the centrality of property rights and their attenuation or absence. The measures are especially sensitive to the attenuation of protective property rights by some regimes insisting on providing intrusive rights that really are not property rights but the attenuation of property rights via efforts to redistribute wealth.

In his Nobel Lecture, Theodore W. Schultz (1980: 639) pointed out that because most people of the world are poor, understanding the economics of poor people means understanding most of the economics that really matters. In that light, the critical finding of this paper is that strong property rights tend to reduce the deprivation of the world's poorest people while weak property rights tend to amplify the deprivation of the world's poorest people.

References

Barro, R.J. (1991) "Economic Growth in a Cross Section of Countries." *Quarterly Journal of Economics* 106: 407–43.

Barro, R.J., and Sala-i-Martin, X. (1995) *Economic Growth*. New York: McGraw-Hill.

Blomström, M.; Lipsey, R.E.; and Zejan, M. (1994) "What Explains the Growth of Developing Countries?" In W.J. Baumol, R.R. Nelson, and E.N. Wolf, (eds.) *Convergence of Productivity*. Oxford: Oxford University Press.

Eggertsson, T. (1990) *Economic Behavior and Institutions*. Cambridge: Cambridge University Press.

Gastil, R.D. (1987) *Freedom in the World*. Westport, Conn.: Greenwood Press.

Gwartney, J.; Lawson, R.; and Block, W. (1996) *Economic Freedom in the World: 1975–1995*. Vancouver, B.C.: Fraser Institute.

Gwartney, J., and Lawson, R. (1997) *Economic Freedom in the World: 1997*. Vancouver, B.C.: Fraser Institute.

Holmes, K.R.; Johnson, B.T.; and Kirkpatrick, M. (1997) *1997 Index of Economic Freedom.* Washington, D.C.: Heritage Foundation and Dow Jones.

Humana, C. (1982) *World Human Rights Guide*. New York: Pica

Keefer, P., and Knack, S. (1997) "Why Don't Poor Countries Catch-Up? A Cross-National Test of Institutional Explanations." *Economic Inquiry* 35: 590–602.

Knack, S. (1996) ''Institutions and the Convergence Hypothesis: The Cross-National Evidence.'' *Public Choice* 87: 207–28.

Knack, S., and Keefer, P. (1995) ''Institutions and Economic Performance: Cross-Country Tests Using Alternative Institutional Measures.'' *Economics and Politics* 7: 207–27.

Knight, F.H. (1971) *Risk, Uncertainty and Profit.* Chicago: University of Chicago Press.

North, D.C. (1981) *Structure and Change in Economic History.* New York: W.W. Norton.

Schultz, T.W. (1980) ''Nobel Lecture: The Economics of Being Poor.'' *Journal of Political Economy* 88: 639–51.

Scully, G.W. (1988) ''The Institutional Framework and Economic Development.'' *Journal of Political Economy* 96: 652–62.

Scully, G.W. (1992) *Constitutional Environments and Economic Growth.* Princeton: Princeton University Press.

Smith, V. (1992) ''Economic Principles in the Emergence of Humankind.'' *Economic Inquiry* 30: 1–13.

United Nations (1997) *Human Development Report.* New York: Oxford University Press.

White, H.L. (1980) ''A Heteroskedasticity-Consistent Covariance Matrix Estimator and a Direct Test for Heteroskedasticity.'' *Econometrica* 48: 817–38.