# A Comment on "Measuring Economic Freedom: A Comparison of Two Major Sources"

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**Abstract**
Do social scientists have the tools to measure the effects of free economic institutions? Ram (2014) raises concerns regarding the reliability of the two major sources that measure economic freedom. This comment shows that there is little reason to be any more alarmed about our ability to measure economic freedom than about our ability to measure other aspects of institutional quality, such as democracy.

## I. Introduction
Does economic freedom enhance or diminish human well-being? Economists disagree about whether governments should intervene in economies to tax, subsidize, redistribute, and regulate. Our ability to empirically test the overall impact of economic freedom on outcomes associated with well-being is essential for resolving this disagreement. But measures of economic freedom must be trustworthy for these tests to be useful and persuasive. Ram (2014) finds evidence that the two major indexes measuring economic freedom, the Fraser Institute's Economic Freedom of the World Annual Report (Gwartney, Lawson, and Hall 2013) and the Heritage Foundation's Index of Economic Freedom (Miller, Holmes, and Kim 2014), are unreliable. He demonstrates that the two indexes diverge in several countries. Ram also shows that the freedom indexes diverge when used to explain the United Nations Development Programme's Human Development Index (HDI).

The Fraser and Heritage indexes are a subgenre of indexes measuring institutional quality across countries. These indexes are more closely correlated to each other than they are to indexes with other definitions of institutional quality. In fact, they are more closely related to one another than are the two indexes measuring free

political institutions. Given the high correlation between the two economic freedom indexes, these two indexes are closely related, regardless of the exceptions Ram identifies.

Furthermore, the Fraser and Heritage indexes do not diverge more than the measures of free political institutions when used to explain the HDI. However, the Fraser index performs better than the Heritage index both when they are used in regressions by themselves and when all measures of institutional quality are used as independent variables together. The apparent inconsistency Ram finds may thus better be interpreted as limitations of the Heritage index. Regardless, the freedom indexes are no worse than the other measures in terms of similarity, so why has Ram singled out the economic freedom measures?

A broader perspective of indexes suggests that Ram has identified imperfections in social scientists' ability to measure the quality of institutions, but this imperfection has little to do with measures of economic freedom per se. Perhaps these diagnostics, when generalized, convey the limitations of the Heritage index specifically. Ram's central conclusion, that "researchers, policy-makers and other users are urged to exercise caution in drawing strong conclusions on the basis of ratings from either source," is unsupported in light of these other comparisons.

## II. Measures of Economic Freedom versus Other Measures of Institutional Quality

The preeminent importance of institutions for economic outcomes is well understood (Rodrik, Subramanian, and Trebbi 2004). The index produced by the Fraser Institute, which emphasizes liberal economic institutions, is one way of measuring institutional quality. Though the measure is well-cited (Hall and Lawson 2014), there are alternatives. The Heritage index is another measure focusing on economic freedom. But perhaps the most famous institutional measures are the Polity IV dataset (Marshall and Cole 2011) and Freedom House's index (2014),[1] both of which emphasize political freedom. Last, the Worldwide Governance Indicators project (Kaufmann, Kraay, and Mastruzzi 2013) may be thought of as measuring a combination of

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[1] The two components of the Freedom House index are added together to form the single value for the index. Additionally, Freedom House's index differs from the others referenced here. In all other indexes, larger index values correspond to better institutions. In Freedom House's, the scale is reversed. To simplify all comparisons, the signs are reversed throughout this paper.

economic and political freedom. These three latter indexes have a number of high-profile citations, for instance Glaeser et. al. (2004) and Acemoglu et al. (2008). Table 1 provides summary statistics of the five institutional measures.

**Table 1. Summary Statistics for Measures of Institutional Quality**

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| Fraser Institute | 152 | 6.823 | 0.858 | 3.930 | 8.970 |
| Heritage Foundation | 177 | 60.614 | 10.500 | 28.714 | 90.143 |
| Freedom House | 195 | 6.610 | 3.941 | 2 | 14 |
| Polity IV | 163 | 4.049 | 6.193 | −10 | 10 |
| Worldwide Governance Indicators | 195 | −0.065 | 0.911 | −2.287 | 1.864 |

**Table 2. Correlation Matrix for Measures of Institutional Quality**

|  | Fraser | Heritage | FH | Polity IV | WGI |
|---|---|---|---|---|---|
| Fraser | 1.0000 | | | | |
| Heritage | 0.8786 | 1.0000 | | | |
| Freedom House | 0.5275 | 0.5630 | 1.0000 | | |
| Polity IV | 0.3530 | 0.3666 | 0.8531 | 1.0000 | |
| WGI | 0.7710 | 0.8453 | 0.7848 | 0.5242 | 1.0000 |

Criticisms of measures of economic freedom should be couched in terms of how well the measures perform in comparison to other prominent measures of institutions. If the Fraser index and the Heritage index are no worse in correlating with one another than indexes of other types of institutional quality are at measuring one another, then Fraser and Heritage should not be singled out for their limitations. The correlation matrix, found in table 2, offers evidence of how closely related the Fraser index and the Heritage index typically are. Their correlation coefficient, 0.8786, is the closest amongst all pairs, narrowly beating out Polity IV and Freedom

House. In this sense, Fraser and Heritage are measuring the "same thing."

Less than 23 percent of the variation in the Fraser index is unexplained by the Heritage index. Meanwhile, Heritage and Fraser use differing methodologies and weights in constructing their indexes. Heritage publishes its index well ahead of Fraser's, and the authors make several subjective adjustments; Fraser only uses "hard" data from third-party sources. Heritage also incorporates data on corruption, while Fraser does not. Correlations much higher than this would almost be disconcerting, as such differences in methodology should produce some number of disagreements. By reporting differences in rankings instead of correlations, Ram obscures how similar Fraser and Heritage are despite their disparate methodologies. And despite these qualitative differences, they are still more similar than the other measures of institutional quality are to one another.

## III. Relationship with the Human Development Index

Another method for comparing the efficacy of measures of institutional quality is to compare how consistently they predict outcome variables. Erratic results suggest that caution is warranted. Ram tests two such outcome variables, performing regressions using the HDI (UNDP 2013), including and excluding income, as dependent variables.[2] He then compares the coefficients of Heritage and Fraser in regressions controlling for the log of real income and shows them to differ. Furthermore, the Heritage index loses statistical significance upon including robust standard errors.

However, if we reproduce this method with the three other measures and control for the log of real GDP per capita, Polity IV and Freedom House perform no better than Fraser and Heritage, as table 3 shows.[3] When income is excluded from the HDI, as in the second set of regressions in table 3, the coefficients of Fraser and Heritage are more similar than the coefficients of Polity IV and Freedom House. But in each specification, the Heritage index is less effective than the other measures in predicting the outcome variable; in the first its coefficient is the smallest and in the second it fails to achieve statistical significance. Yet in terms of *similarity of results*, the economic freedom indexes are no worse than the alternative

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[2] The latter of these regressions makes more sense econometrically, since income is used as a control variable.

[3] Again, all are normalized and the sign of Freedom House is reversed.

measures of institutional quality. Ram's diagnostic shows that his concerns apply to international measures of institutions, not narrowly to measures of economic freedom.

**Table 3. Various Regressions on the Human Development Index, Using Measures of Institutional Quality**

| Measure | LHS | C | LRGDP | Index | $R^2$ |
|---|---|---|---|---|---|
| Fraser | HDI | −0.1347* | 0.0948* | 0.0258* | 0.8919 |
| | | (0.0376) | (0.0044) | (0.0075) | |
| Heritage | HDI | −0.1809* | 0.1002* | 0.0113* | 0.8669 |
| | | (0.0469) | (0.0056) | (0.0089) | |
| FH | HDI | −0.1763* | 0.0995* | 0.0201* | 0.8706 |
| | | (0.0359) | (0.0042) | (0.0072) | |
| Polity IV | HDI | −0.2088* | 0.1029* | 0.0163* | 0.8677 |
| | | (0.0313) | (0.0036) | (0.0065) | |
| WGI | HDI | −0.1421* | 0.0954* | 0.0207* | 0.8673 |
| | | (0.0596) | (0.0071) | (0.0109) | |
| Fraser | HDI | −0.0089 | 0.0841* | 0.0320* | 0.7731 |
| | Nonincome | (0.0533) | (0.0061) | (0.0104) | |
| Heritage | HDI | −0.0612 | 0.0903* | 0.0129 | 0.7254 |
| | Nonincome | (0.0690) | (0.0082) | (0.0129) | |
| FH | HDI | −0.0387 | 0.0874* | 0.0306* | 0.7420 |
| | Nonincome | (0.0513) | (0.0060) | (0.0102) | |
| Polity IV | HDI | −0.1065* | 0.0928* | 0.0041* | 0.7399 |
| | Nonincome | (0.418) | (0.0051) | (0.0015) | |
| WGI | HDI | 0.0126 | 0.0813* | 0.0310* | 0.7331 |
| | Nonincome | (0.0854) | (0.0101) | (0.0152) | |

*Note*: * denotes confidence at the 95 percent level. Robust standard errors are employed.

A natural extension of Ram's analysis is the inclusion of all indexes, along with the log of real GDP, as independent variables explaining the HDI. Obviously, this test is a high bar to clear considering multicollinearity. The Fraser index performs well, while Heritage performs unevenly. Heritage and Freedom House are both statistically insignificant in explaining HDI inclusive and exclusive of income. Polity IV fades in and out of statistical significance, as does WGI, though WGI's coefficient is in the "wrong" (!) direction. Table 4 shows these results. In this extension as well, the economic freedom indexes do not perform worse in terms of similarity than do other institutional measures.

**Table 4. Using Measures of Institutional Quality Together to Predict the Human Development Index**

| LHS | (1)<br>HDI | (2)<br>HDI<br>nonincome |
|---|---|---|
| Fraser | 0.0416* | 0.0505* |
| | (0.0112) | (0.0158) |
| Heritage | –0.0112 | –0.0162 |
| | (0.0126) | (0.0177) |
| Freedom House | –0.0098 | –0.0047 |
| | (0.0148) | (0.0213) |
| Polity IV | 0.0187 | 0.0338* |
| | (0.0111) | (0.0165) |
| Kaufmann | –0.0357* | –0.0384 |
| | (0.0153) | (0.0219) |
| LRGDP | 0.1051* | 0.0961* |
| | (0.0057) | (0.0083) |
| C | –0.2234* | –0.1139* |
| | (0.0492) | (0.0714) |
| $R^2$ | 0.9040 | 0.8002 |
| n | 141 | 141 |

*Note*: * denotes significance at the 95 percent level. Robust standard errors are employed.

## IV. Conclusion

The concerns that Ram raises regarding economic freedom indexes also apply to the other measures of institutional quality. The two major measures of economic freedom are at least as correlated as the two major measures of political freedom. Tests relating these institutional measures to the Human Development Index are inconclusive; at worst they cast doubt on the efficacy of the Heritage index in particular. Ultimately, there should be no greater doubts about our ability to measure economic freedom than about our ability to measure democracy or other amorphous institutional variables. Their amorphousness is the entire reason why an index is necessary to measure them, after all.

The Heritage index and the Fraser index should still be used as robustness checks for one another as applicable, but the same could be said for Polity IV and Freedom House. But this is already known; among those who work with freedom indexes it is almost a cliché to expect a referee to request such a robustness check. Each index is also a clear improvement over other variables, such as "openness," used to proxy economic liberalization. Advancing our understanding of the importance of economic institutions relative to political institutions, human capital, and geography is critical, and asymmetric

caution only impedes that goal. One may openly caution the use of many variables that economists take for granted, such as GDP, the unemployment rate, or happiness data, for their tenuous assumptions, arbitrary choices, and contradictions. But Ram offers little reason why measures of economic freedom deserve special caution in comparison.

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