

# Institutions and Economic Outcomes: A Dominance-Based Analysis of Causality and Multivariate Welfare with Discrete and Continuous Variables

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## Abstract

One of the central issues in welfare economics is the measurement of overall wellbeing and, to this end, the interaction between institutions (polity) and growth is paramount. Individual welfare depends on both economic and political factors but the continuous nature of economic variables combined with the discrete nature of political ones renders conventional multivariate techniques problematic. In this paper, we propose a multivariate dominance test based on the comparison of mixtures of continuous and discrete distributions to examine changes in welfare. Our results suggest that, while economic growth exerted a positive impact from 1960 to 2000, declines in polity over the earlier part of this period were sufficient to produce a decline in overall wellbeing until the mid-1970s. Subsequent increases in polity then reversed the trend and, ultimately, wellbeing in 2000 was higher than that in 1960. To be sure, economic and political variables are correlated and the dominance of polity in our multivariate results is consistent with the conjecture that this correlation is predominantly due to a causal link from polity to growth. While the development literature is rife with debates over whether it is institutions that cause growth or growth that causes institutions, we argue that the relevant question is not which hypothesis is correct but, rather, which hypothesis dominates. Since standard regression techniques have difficulty capturing non-linear dependence, especially when one of the variables is an index with limited variation, we propose a causality dominance test to examine this aspect of the growth-institutions nexus and indeed find evidence that the causal effects of polity on growth dominate those of growth on polity, particularly when the data are population weighted.