

Global welfare-illfare regimes

Cluster, factor and regression analyses of global welfare mixes and wellbeing outcomes

Abstract

Since the seminal work of Esping-Andersen much has been written about welfare regimes and a large number of cross-national analyses have been undertaken. Only recently has the regime framework been extended to the developing world – see Gough and Wood (2004). However, most analyses suffer from two drawbacks. First, most analyses are cross-sectional. The notion of a "regime" implies a temporal consistency that cannot be addressed by cross-sectional analyses. Second, they do not assess how the political framework, the welfare spending mix and the well-being outcomes of these regimes are impacted by extra-territorial factors. This study addresses these shortcomings. First, a cluster analysis of 79 countries across the world identifies wellbeing regimes. These wellbeing clusters are then examined across time (1990 and 2000) to assess if they exhibit a degree of constancy across time and composition that would allow labelling them as stable regimes. Factor analyses examine the distinct composites of these regimes. Regression analyses assess the heuristic superiority of the cluster concept in explaining wellbeing variations. Lastly, the effects of the national and international political economy on wellbeing and equality outcomes are examined.

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“... *the linear scoring approach (more or less power, democracy or spending) contradicts the sociological notion that that power, democracy, or welfare are relationally structured phenomena. By scoring welfare states on spending, we assume that all spending counts equally.... Welfare-state variations ... are ... not linearly distributed, but clustered by regime types*”.

Esping-Anderson (1990:26)

1 Introduction

“The end of history” (Fukuyama 1992) may better be described as the start of a new round of welfare regime debate. In the sharp ideological debates of the cold war, the ideological juxtaposed systems of capitalism and socialism seemed to form coherent, integrated systems. Today the precise design of an “active”, “dynamic” and “sustainable” welfare system that allows for sustainable social justice and sustainable economic growth is highly contested (Esping-Andersen 2002).¹ The, real or perceived threat, of a new wave of economic globalization has spurred interest in the protection of wellbeing rights, dependent and independent of the labour market (Freeman 1994, Greven und Scherrer 1998, Kunz 1999, Langille 1994, Standing 1999, 2002, Windfuhr 1999). Current policy approaches like “flexicurity”² (Abu Sharkh 2007, Auer 2005) highlight the importance of the *ensemble* or regime of welfare provisions.³ United Nation’s bodies are forming new organizational departments on integrated policies to promote wellbeing in development countries. Rather

¹ See European council 2000, Lisbon conclusions.

² This approach is labour market specific and aims to combine the flexibilization of *employment security*--type and length of contract-- with greater *income security*--pay and benefits (Abu Sharkh 2005, Standing 1999, 2002, ILO 2004).

³ The ensemble concept is akin to the argument in the biological sciences that the neuronal *ensemble*, not the single neuron, is needed to understand any development.

than the “end of history”, the turn of the century marked a renewed interest in examining different *welfare or illfare regimes* across the world.⁴

Building on Gough and Wood et al. (2004), Wood and Gough et al. (2004) and Abu Sharkh (2006), this article extends and tests the regime concept originally popularized by Esping Andersen (1990) geographically, conceptually, temporally and methodologically.

Since the seminal work of Esping-Anderson much has been written about welfare regimes. However, most analyses suffer from three drawbacks. However, most analyses suffer from two drawbacks.. First, most analyses are cross-sectional. The notion of a "regime" implies a temporal consistency that cannot be addressed by cross-sectional analyses. Second, they do not assess how the political framework, the welfare spending mix and the well-being outcomes of these regimes are impacted by extra-territorial factors. Above all, very few extend beyond the boundaries of the OECD. In order to adapt the welfare state regime concept to the developing world, some profound adaptations must be made requires, Gough and Wood et al argue (2004), in order to recognize the very different realities across the world. But with these modifications it remains a promising paradigm for developing typologies across the developing as well as the developed world for several reasons. First, it situates modern “welfare states” within a wider welfare mix: governments interact with markets and families to produce and distribute welfare. Second, it pays attention to welfare outcomes, the final impact on human security, need satisfactions and wellbeing. Third, it recognizes that social policy is both shaped by and a shaper of patterns of within the ‘deep structures of political economy: social policy is seen not just as a technical issue but a power issue. However, this increase in geographical scope too often comes with a trade-off in accuracy.

⁴ The term “regime”, as used by Esping-Andersen (1990:2), denotes “that in the relation between state and economy a complex of legal and organizational features are systematically interwoven”.

This study addresses these shortcomings. First, a cluster analysis of 79 countries across the world identifies wellbeing regimes. These wellbeing clusters are then examined across time (1990 and 2000) to assess if they exhibit a degree of constancy across time and composition that would allow labeling them as stable regimes. Factor analyses examine the distinct composites of these regimes. Regression analyses assess the heuristic superiority of the cluster concept in explaining wellbeing variations. Lastly, the effects of the national and international political economy on wellbeing and equality outcomes are examined.

2 Literature discussion

“The relation between the economy and the state and...the effect of such relations on human welfare” has been at the centre of European classical political economy since centuries, both in the tradition of Smith and, juxtaposed, Marx (Gough 1979, 1994:38). In Europe, the state-market-community-nexus was most influentially discussed by Polanyi (1957) and Schumpeter (1976). In the USA, institutional economics stemming from the works of Veblen (1899) emphasizes the endogeneity of the market and the state (Gough 1994).

From these classics, a formidable body of knowledge has spun on the welfare issues. Historically, this literature begins with the first poor laws and community-centred welfare state provision in Anglo-Saxon and continental European countries in the 18th century (Achenbaum 1989, Murswieck 1998). Geographically, welfare research today spans across all continents from Africa (Haarmann & Haarmann 2005, e.g. Namibia) to Latin America (Lavinias 2004, e.g. school feeding programs in Brazil).

However, Esping-Andersen (1990) purports, welfare-*state* studies “have been motivated by theoretical concerns with other phenomena such as power, industrialization, or capitalist contradictions; the welfare state itself has generally received scant conceptual attention”. Instead, welfare regime discussions fall within the broader theoretical trajectories of nation state developments. Current theoretical cross-national research tends to have two

long-term teleological outlooks: one highlights disparity in the tradition of Titmuss (1958, see Esping-Andersen and Korpi 1984, 1986). The other approach emphasizes convergence in the tradition of classical political economists trying to formulate universal, timeless laws (Marshall 1950, Bendix 1964).

In contrast to these long-range ideological considerations stands the mid-range regime concept. As Esping-Anderson (1990:26) demonstrates, there are “qualitatively different arrangements between state, market, and the family”. Regime typologies reject simplistic rankings on one dimension. Esping-Anderson (1990:26) argues, “the welfare-state variations we find are therefore not linearly distributed, but clustered by regime types”.

Esping-Anderson’s (1990) seminal typology still influences current scholarship this (Martin 2004, Wood 2003) and the other side of the Atlantic (Hicks and Kenworthy 2002, Swenson 2004). However, there have been few attempts to quantitatively study if there are further regime types, differing from the categories of liberal, conservative and social democratic, pertaining to other parts of the world. One notable exception are Lee and Ku (2007) who argue that East Asian developmental regimes shows similarity with Esping-Anderson’s (1990) conservative model regarding welfare stratification, while the non-coverage of welfare entitlements is akin to that of the liberal model. One shortcoming of this literature is the underexamination of international factors of wellbeing regimes. One notable exception is Gough and Wood et al (2004) and Gough (2007). Gough (2004, 2007) has typologized welfare regimes across the world within three broad meta-regime types: welfare state regimes, informal security regimes, and insecurity regimes. He (2007: 3) argues: “The second and third types recognise the ways that the insecurity of poor people in the global South typically depends heavily on families, communities and dependent clientelist relations with power brokers.” These family ties extend beyond borders with remittance flows now being more significant than aid. This analysis is an attempt to quantify this insight by

extending the welfare mix variables beyond domestic state spending to include both international state and non-state transfers such as aid and remittances.

This article also argues that the impact of the international level goes beyond resource infusion to include the impact of transnational institutions. The article thus fuses the welfare regime literature with the world society literature. World society scholars have perhaps most comprehensively examined the global sacralisation, spread and, more limited, effect of modern welfare norms. They argue that many core human dimensions of wellbeing and equality have improved dramatically over the last century (Bradley and Ramirez. 1996, Meyer et al. 1992). They show how global institution's blueprints impact the design of nation state structures (Meyer et al. 1997), particularly through internationally linked organizations (e.g. Meyer et al. 1997, Boli 1999, Tsutsui 1998). World society theory researchers demonstrate the leverage of international organizations on the three wellbeing regime dimensions:

- *political economy*: constitutions (Boli 1987), organizational proliferation (Boli and Thomas 1999) and women's suffrage (Ramirez 2000, Ramirez et al. 1997);
- *welfare mix*: welfare policy, including land reform (Thomas and Lauderdale 1988), government structures including science policy organizations, environmental/ecology ministries (Finnemore 1993, Frank et al. 2000);
- *welfare outcomes*: women's share of higher education (Bradley and Ramirez. 1996), mass schooling (Meyer et al. 1992) and structuring of school systems (Meyer et al. 1992); child labour rates (Abu Sharkh 2002).

In the fusion of these literatures some drawbacks of the comparative welfare state regime tradition are addressed. First, this article empirically tests the assertion that "the *world* is obviously composed of distinct regime clusters" (Esping-Anderson 1990: 29, emphasis of Abu Sharkh) by extending the analyses beyond a small N.

The second drawback of much comparative welfare state research that I address is that previous works “propound dynamic, historical arguments” that are “almost always tested with purely cross-sectional data” (Esping-Anderson 1990:114, for a recent exception see Hicks and Kenworthy 2002). As noted, the notion of a "regime" implies a temporal constancy that is often more postulated than shown. The repeated cross-sectional cluster analyses can shed some light on welfare regime “stickiness” currently remaining in the dark.

By moving beyond descriptive cluster analyses, to confirmatory techniques causal arguments regarding the impact of political economy and the welfare mix on wellbeing outcomes can be assessed.

3 Hypotheses

The article tests three main hypotheses associated with the regime notion. The hypotheses play on the idea that regimes clusters characteristics can change absolutely, for example when the rising tide lifts all boats. They can also move relative to each other when some clusters move upstream and others do not. Lastly, their composition can change when large ships sink and smaller life rafts go in different directions.

(1) *Membership constancy*: The regime notion implies membership cluster consistency or a certain *intra-cluster temporal* “stickiness”. Nation states belonging to one cluster in 1990 should belong to the same cluster in 2000. This hypothesis thus suggests cluster-membership invariance or constancy of cluster congregations. E.g. if Bangladesh and Burundi are in the same cluster in 1990, this should remain so in 2000.

(2) *Uniqueness of cluster characteristics*: The regime idea connotes self-reproducing and enforcing cluster characteristics. E.g. if the only difference between countries is their starting point and not their development trajectory, it may make little sense to speak of clusters.

- (3) *Constellation impact:* “Regime” espouses that certain configurations explain more than the sum of their parts. The regime concept rests on the idea that linear scoring approaches do not capture the systemic realities of country well-being systems because welfare-state variations are not linearly distributed, but clustered by regime types. E.g. to analyze the impact of linearly scored and added welfare expenditures explains less than the regime constellations.

4 Variables, definitions, sample and methods

4.1 Operationalization

Building on Wood and Gough (2006), we develop a framework of three components: the welfare mix (resources and expenditure), the wellbeing outcomes (consisting of development and equality components) and the political economy (nationally and internationally).

The welfare mix consists of aid and remittances as well as expenditures on health, education and social security. Wellbeing outcomes are modelled along classic human development type indicators such as life expectancy and the (in)ability to read as well as poverty. They go beyond the typical holy trinity, however, in trying to measure the concepts of perpetrating destitute, inequality and exclusion.

Poverty data uses the somewhat arbitrary cut-off of one dollar a day. Child labour is thus included as another indicator of mass poverty and exclusion from modern days rights such as education. As factor analyses show, child labour loads very highly with other indicators of wellbeing, particularly illiteracy. Conceptually child labour measures not merely poverty but the self-reinforcing, disenfranchising nature of destitution. Child labour does not only indicate temporary poverty but predicts a stunted development of future wellbeing. Lastly, the quality of child labour data is also better across time than that of poverty.

Besides absolute measures of wellbeing, the outcomes include relative measures such as the Gini coefficient; a large body of literature shows that wellbeing is not only contingent upon any absolute measure but on the relative status within society. Female labour force participation was included as a second measure of inequality and inclusion. Factor analyses show that it loads highly with other inequality measure. It also adds gender sensitivity to the inequality analyses.

The political economy is a hybrid of macro-state level factors such as degree of democracy and actor-centered mobilization accounts as well as international organizational embeddedness. Already J.S. Mill and Alexis de Tocqueville analyzed the effect of democracy on welfare states. Rich actor-centered approaches focus on micro-level mobilizations. Barrington Moore's class coalition thesis for the emergence of the modern welfare state led to renewed interest in the "political opportunity structure", a preliminary synthesis of micro- and macro-approaches⁵, in which movements are embedded and that thus shapes social action. World level professionalized movements carrying international norms are embodied by international NGOs.

4.2 Variables

4.2.1 Welfare mix

The welfare mix is conceptualized as the composite of the resource base provided by aid and remittances and the composition of expenditure on key social items.

Aid per capita includes both official development assistance (ODA) and official aid, and is calculated by dividing total aid by the midyear population estimate. Source: Development Assistance Committee of the Organisation for Economic Co-operation and Development, and World Bank population estimates.

⁵ In his study of public protest, Eisinger (1973: 25) defines the political opportunity structure as "a function to the degree to which groups are likely to be able to gain access to power and to manipulate the political system."

Workers' remittances are current transfers by migrants who are employed or intend to remain employed for more than a year in another economy in which they are considered residents. Some developing countries classify workers' remittances as a factor income receipt (and thus as a component of GNI). The World Bank adheres to international guidelines in defining GNI, and its classification of workers' remittances may therefore differ from national practices. This item shows receipts by the reporting country. Data are in current U.S. dollars. Source: International Monetary Fund, Balance of Payments Statistics Yearbook and data files.

GNI (formerly GNP) is the sum of value added by all resident producers plus any product taxes (less subsidies) not included in the valuation of output plus net receipts of primary income (compensation of employees and property income) from abroad. Data are in current U.S. dollars. Source: World Bank national accounts data, and OECD National Accounts data files.

Public expenditure on education consists of public spending on public education plus subsidies to private education at the primary, secondary, and tertiary levels. Source: United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics.

Public health expenditure consists of recurrent and capital spending from government (central and local) budgets, external borrowings and grants (including donations from international agencies and nongovernmental organizations), and social (or compulsory) health insurance funds. Source: World Health Organization, World Health Report and updates and from the OECD for its member countries, supplemented by World Bank poverty assessments and country and sector studies.

Social contributions include social security contributions by employees, employers, and self-employed individuals, and other contributions whose source cannot be determined. They also include actual or imputed contributions to social insurance schemes operated by

governments. Source: International Monetary Fund, Government Finance Statistics Yearbook and data files.

4.2.2 Welfare outcomes

Life expectancy at birth indicates the number of years a newborn infant would live if prevailing patterns of mortality at the time of its birth were to stay the same throughout its life. Source: World Bank staff estimates from various sources including census reports, the United Nations Statistics Division's Population and Vital Statistics Report, country statistical offices, and Demographic and Health Surveys from national sources and Macro International.

Youth illiteracy rate is the percentage of people ages 15-24 who can NOT, with understanding, read and write a short, simple statement on their everyday life. Source: United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics.

Female labor force as a percentage of the total show the extent to which women are active in the labor force. Labor force comprises all people who meet the International Labour Organization's definition of the economically active population. Source: International Labour Organization.

Children 10-14 in the labor force is the share of that age group active in the labor force. Labor force comprises all people who meet the International Labour Organization's definition of the economically active population. Source: International Labour Organization.

Data on the proportion of people living on less than one dollar per person per day is taken from the <http://mdgs.un.org/unsd/mdg/Default.aspx>. (visited Sept. 2006)

Gini index measures the extent to which the distribution of income (or, in some cases, consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution. A Lorenz curve plots the cumulative percentages of total income received against the cumulative number of recipients, starting with the poorest individual or household. The Gini index measures the area between the Lorenz curve and a

hypothetical line of absolute equality, expressed as a percentage of the maximum area under the line. Thus a Gini index of 0 represents perfect equality, while an index of 100 implies perfect inequality. Source: World Bank staff estimates based on primary household survey data obtained from government statistical agencies and World Bank country departments. Data for high-income economies are from the Luxembourg Income Study database.

4.2.3 Political economy

The economic variables are drawn from the World Development Indicators database of the World Bank for the years 1990 and 2000 (WDI edition 2005). The World Bank receives this data from various UN agencies. For the political variables, I draw on social and political data available through the International Politics Center at the Hoover Institute at Stanford University.

Democracy is measured from -10 to 10, with higher values connoting more democracy. Source: Polity IV data series, see <http://www.databanks.sitehosting.net/>

International NGO data was taken from the Yearbook of International Associations.

Protest Index: 0 None Reported 1 Verbal Oppression 2 Symbolic Resistance 3 Small Demonstration (less than 10,000) 4 Medium Demonstration (less than 100,000) 5 Large Demonstration (greater than 100,000). Only the most serious manifestation of rebellion is coded for each of the five-year periods.

Rebellion Index: 0 None reported 1 Political banditry 2 Campaigns of terrorism 3 Local rebellion 4 Small-scale guerrilla activity 5 Intermediate guerrilla activity 6 Large-scale guerrilla activity 7 Protracted civil war 99.

Data on protests and rebellions is taken from the Minorities at Risk (MAR) Project, a university-based research project that monitors and analyzes the status and conflicts of politically-active communal groups in all countries with a current population of at least

500,000. Center for International Development and Conflict Management. Retrieved from <http://www.cidcm.umd.edu/mar/>.

All income and regional classifications were taken from the World Development indicators (edition 2005).

4.3 Sample

In theory this analysis employs a complete sample of the almost 200 UN-member states existing prior to 1989. If a country was part of another country at that time, it is included in the analyses if statistics are available, .e.g., the Baltic states are included. In practice, many smaller states drop out due to the unavailability of data. In order to exclude large numbers of micro-states, countries with less than 3 million people have also been excluded.

The sample is not random. In the strictest sense, it is not even a sample since almost all the nation states of the world are included – provided they report data or let the UN or World Bank “guestimate” data in negotiations with the country. According to an unofficial correspondence with a former World Bank consultant in January 2002, statistics are often “negotiated” between international organizations and the country. Which countries are covered thus becomes a question of why certain countries fail to collect, report or acknowledge data on certain topics.

Countries listed in the World Development Indicator database of the World Bank seem to have missing values because (a) they are very small island states with a presumably insufficient state infrastructure to collect data, e.g. Sao Tome, Dominica, Bahamas, St. Kitts, St Lucia etc. or (b) have civil strife/war like Afghanistan or (c) belong to very rich oil states like Qatar or Kuwait. The variable available most limitedly were from the MAR project on the mobilization base. This yields a total of 79 countries with equivalent data for both 1990

and 2000. Unlike Gough (2004) who excluded the OECD world, this sample embraces North and South.

4.4 Methods

Cluster analysis assesses country regime clusters. Factor analyses examine the distinct composites of these regimes. Regression assess the heuristic utility of the cluster concept in explaining wellbeing variations. Cluster and factor analyses rationales are outline below.

4.4.1 Cluster analyses

A cluster analysis identifies relatively homogeneous groups of cases according to the selected variables based on an algorithm that starts with each case in a separate cluster and combines clusters until all cases form a single cluster (SPSS 2000, Borchert 1998), for recent applications and discussions of clustering see the work of Wolfson et al. (2004) and McKernan et al. (2005). Since this procedure, like most other statistical procedures, is sensitive to the omitted variable bias, care was taken to include all relevant characteristics for the analytical dimensions.

First a hierarchical cluster analyses was conducted. This belongs to the exploratory methods, which has two implications:

(1) The precise number of clusters to some degree lies in the eye of the beholder. For this the reason the author has taken care to display the actual dendrogram to give a sense of the range of solutions as well as the tables assigning the countries to clusters according to the decision of the author. Dendrogram “can be used to assess the cohesiveness of the clusters formed and can provide information about the appropriate number of clusters to keep” (SPSS 2000)

(2) Some observers caution that results should be treated as tentative until confirmed by an independent sample. This is obviously not possible as there just is one world. However, cross-temporal consistency checks could serve a similar purpose as is discussed further down.

While dendrograms provide a useful graphical device to choose the cut-offs for cluster, the final choice of the number of clusters is something of a judgement call. A “dendrogram” is “a visual representation of the steps in a hierarchical clustering solution that shows the clusters being combined and the values of the distance coefficients at each step. Connected vertical lines designate joined cases. The dendrogram rescales the actual distances to numbers between 0 and 25, preserving the ratio of the distances between steps (SPSS 2005).”

Next a K-means cluster analyses was conducted to assess cluster differences. This procedure identifies relatively homogeneous groups of cases based on selected characteristics on a specified number of clusters. The dendrogram suggested a large number of clusters to capture the increasing diversity among countries from 1990 to 2000. A large number of different cluster number specifications were tested. Going beyond 10 did not yield more country clusters, just a larger number of one-country outliers. , see Dudoit and Fridlyand (2002) on criteria for determining the number of clusters. In the end 10 country clusters were retained and the one country outliers, though included in the analyses are not reported in the table.

4.4.2 Factor analyses

Factor analysis identifies a small number of factors that explain most of the variance that is observed in a much larger number of manifest variables; it identifies underlying variables, or factors, that explain the pattern of correlations within a set of observed variables. It is here employed to screen variables and attain factor composites for the subsequent regression analysis (see below).

5 Results

Table 1: Descriptive Statistics Welfare mix and Outcomes 1990

| <i>Concept</i> | <i>Variables</i> | <i>N</i> | <i>Min.</i> | <i>Max.</i> | <i>Mean</i> | <i>Std.</i> |
|----------------|------------------|----------|-------------|-------------|-------------|-------------|
|----------------|------------------|----------|-------------|-------------|-------------|-------------|

| | | | | | | <i>Dev.</i> |
|---------------------------|---|----|-------|--------|-------|-------------|
| | Aid per capita (current US\$) | 79 | .00 | 294.40 | 28.28 | 50.54 |
| | Workers' remittances, receipts (BoP, current US\$)/ GNI(Current US\$) | 79 | .00 | .28 | 0.01 | 0.04 |
| Wellbeing mix | Public spending on health, total (% of GDP) | 79 | .57 | 9.52 | 3.25 | 2.11 |
| | Public spending on education, total (% of GDP) | 79 | .00 | 59.84 | 15.95 | 16.17 |
| | Social contributions (% of revenue) | 79 | 1.24 | 9.89 | 4.51 | 1.69 |
| | Life expectancy at birth (years) | 79 | 40.19 | 77.54 | 66.69 | 9.41 |
| | Illiteracy rate, youth (% aged 15-24) | 79 | .10 | 59.88 | 11.35 | 17.46 |
| Wellbeing outcomes | Labor force, female (% of labor force) | 79 | 17.70 | 50.90 | 39.14 | 7.85 |
| | Labor force, children 10-14 (%) | 79 | .00 | 49.43 | 10.05 | 13.81 |
| | Pop. living w\ less than a 1\$ day | 79 | .00 | 69.20 | 11.79 | 16.61 |
| | Gini coefficient | 79 | 24.70 | 59.25 | 38.81 | 9.04 |
| | Valid N (listwise) | 79 | | | | |

Table 2: Descriptive Statistics Welfare mix and Outcomes 2000

| <i>Concept</i> | <i>Variables</i> | <i>N</i> | <i>Min.</i> | <i>Max.</i> | <i>Mean</i> | <i>Std. Dev.</i> |
|---------------------------|---|----------|-------------|-------------|-------------|------------------|
| | Aid per capita (current US\$) | 79 | -4.21 | 127.21 | 17.90 | 26.20 |
| | Workers' remittances, receipts (BoP, current US\$)/ GNI(Current US\$) | 79 | .00 | .20 | 0.02 | 0.04 |
| Wellbeing mix | Public spending on health, total (% of GDP) | 79 | .64 | 8.27 | 3.67 | 1.94 |
| | Public spending on education, total (% of GDP) | 79 | 1.32 | 9.89 | 4.49 | 1.62 |
| | Social contributions (% of revenue) | 79 | .00 | 57.37 | 15.67 | 15.40 |
| | Life expectancy at birth (years) | 79 | 37.97 | 79.68 | 67.49 | 11.34 |
| | Illiteracy rate, youth (% aged 15-24) | 79 | .10 | 51.57 | 8.17 | 13.83 |
| Wellbeing outcomes | Labor force, female (% of labor force) | 79 | 24.60 | 50.50 | 40.68 | 6.65 |
| | Labor force, children 10-14 (%) | 79 | .00 | 48.50 | 7.99 | 12.44 |
| | Pop. living w\ less than a 1\$ day | 79 | .00 | 69.20 | 11.79 | 16.61 |
| | Gini coefficient | 79 | 24.70 | 59.25 | 38.81 | 9.04 |
| | Valid N (listwise) | 79 | | | | |

Table 1 and 2 show that aid and remittances have decreased while most wellbeing indicators have increased. Considering the short time span of merely ten years, the mean drop in illiteracy and child labour and average rise of life expectancy is dramatic. However, the data also indicate uneven developments.⁶ While the mean life expectancy has risen, the minimum life expectancy has fallen by almost two years. Do these average developments obscure very different development trajectories within clusters? Table 5 take-up this question.

⁶ The poverty and Gini coefficient data show less change but the data tends to be pooled across time and can thus not be expected to reflect changes within a decade adequately.

Table 3: Descriptive Statistics Political and control variables 1990

| | N | Minimum | Maximum | Mean | Std. Dev. |
|------------------------------------|----|---------|---------|------|-----------|
| Rebellions in the 90s | 79 | 0.00 | 7.00 | 2.08 | 1.91 |
| Number of int'l INGOs | 79 | 5.18 | 7.90 | 6.63 | 0.68 |
| Degree of democracy | 79 | -7.00 | 10.00 | 5.65 | 5.07 |
| High income Non-OECD country | 79 | 0.00 | 1.00 | 0.01 | 0.11 |
| Upper middle income country | 79 | 0.00 | 1.00 | 0.14 | 0.35 |
| Lower middle income country | 79 | 0.00 | 1.00 | 0.32 | 0.47 |
| Low income country | 79 | 0.00 | 1.00 | 0.29 | 0.46 |
| Africa | 79 | 0.00 | 1.00 | 0.16 | 0.37 |
| South or Central America | 79 | 0.00 | 1.00 | 0.20 | 0.40 |
| East or south Asia | 79 | 0.00 | 1.00 | 0.15 | 0.36 |
| Middle East & Upper Saharan Africa | 79 | 0.00 | 1.00 | 0.09 | 0.29 |
| Oceania | 79 | 0.00 | 1.00 | 0.01 | 0.11 |
| Valid N (listwise) | 79 | | | | |

The political economy variables indicate both the openness of the political system and the mobilization base. Democracy indicates the permeability of the political opportunity structure. Different variables for protests and general strikes feature the *de facto* mobilization base within societies. Rebellions, though nominally akin to indicating the mobilization base does not load well with other indicators of protest in factor analyses. To employ Hirschman's concepts, protests *voice* discontent within societies, rebellions mark *exit* wishes. Rebellions are thus conceptualized as indicating deep societal rifts. A more classic approach to measure these cleavages may be ethno-linguistic fractionalization. However, a closer look at the Minorities at Risk data reveals that employing % of population speaking the dominant language attains odd results with Canada and Switzerland scoring worse on societal integration than countries disintegration in civil war.

To extend the concept of political economy beyond domestic power politics, the number of international NGOs is included to capture the extent of world society penetration. Income dummies are introduced as control variables for resources available. The regional variables are, albeit very limited, proxies for culture.

Figure 1: Dendrogram 1990 and 2000

| Year 1990 | | | | | | Year 2000 | | | | | | |
|---|---------|-----------------------|---|--------|--------|---|--------------------|-----------------|--------------------|--------|--------|--|
| Dendrogram using Average Linkage (Between Groups) | | | | | | Dendrogram using Average Linkage (Between Groups) | | | | | | |
| Rescaled Distance Cluster | | | | | | Rescaled Distance Cluster | | | | | | |
| Combine | C A S E | 0 | 5 | 10 | 15 | Combine | C A S E | 0 | 5 | 10 | 15 | |
| 20 | 25 | Num | | | | 20 | 25 | Num | | | | |
| Label | Label | Num | + | -----+ | -----+ | Label | Label | Num | + | -----+ | -----+ | |
| Latvia | 149 | ↓↘ | | | | Netherlands | 186 | ↓↘ | | | | |
| Lithuania | 153 | ↓○ | | | | Switzerland | 201 | ↓○ | | | | |
| Belarus | 108 | ↓○ | | | | Austria | 191 | ↓○ | | | | |
| Estonia | 148 | ↓↘↓↘ | | | | Spain | 172 | ↓↘↓↘ | | | | |
| Ukraine | 107 | ↓○↔ | | | | Italy | 184 | ↓○↔ | | | | |
| Russian Federation | 138 | ↓○↔ | | | | Belgium | 185 | ↓↘↔ | | | | |
| Kazakhstan | 117 | ↓↘↔ | | | | Canada | 189 | ↓↘↔ | | | | |
| Moldova | 88 | ↓↘↓○ | | | | United Kingdom | 192 | ↓↘↓○ | | | | |
| Bulgaria | 122 | ↓↘↔ | | | | Portugal | 166 | ↓○↔ | | | | |
| Romania | 126 | ↓↘↓○ | | | | United States | 198 | ↓↘↔=↓↘↓↘ | | | | |
| Tajikistan | 72 | ↓↘↔ | | | | France | 188 | ↓↘↓○↔ | | | | |
| Uruguay | 155 | ↓↘↓○ | | | | Sweden | 194 | ↓↘↔↔ | | | | |
| Belgium | 185 | ↓↘↔ | | | | Croatia | 154 | ↓↘↓↘↔ | | | | |
| Finland | 193 | ↓○↔ | | | | Germany | 190 | ↓↘↓↘↓↘↓↘ | | | | |
| France | 188 | ↓○↔ | | | | Belarus | 108 | ↓↘ | | | | |
| Sweden | 194 | ↓○↔ | | | | Lithuania | 153 | ↓○↔ | | | | |
| Poland | 140 | ↓○↔ | | | | Estonia | 148 | ↓○↔=↓↘ | | | | |
| United Kingdom | 192 | ↓↘↓○ | | | | Latvia | 149 | ↓○↔↔ | | | | |
| United States | 198 | ↓○↔ | | | | Poland | 140 | ↓↘↓↘↔↔ | | | | |
| Canada | 189 | ↓○↔=↓↘ | | | | Finland | 193 | ↓↘↔↔↔ | | | | |
| Netherlands | 186 | ↓○↔↔ | | | | Ukraine | 107 | ↓↘↔=↓↘↔↔ | | | | |
| Switzerland | 201 | ↓○↔↔ | | | | Bulgaria | 122 | ↓○↔↔↔↔=↓↘↓↘↓↘↓↘ | | | | |
| Spain | 172 | ↓○↔↔ | | | | Russian Federation | 138 | ↓↘↓↘↔=↓↘↔↔ | | | | |
| Austria | 191 | ↓○↔↔ | | | | Romania | 126 | ↓↘↔↔↔ | | | | |
| Italy | 184 | ↓○↔↔ | | | | Moldova | 88 | ↓↘↓↘↓↘↔↔ | | | | |
| Greece | 169 | ↓↘↔↔↔ | | | | Denmark | 195 | ↓↘↓↘↔↔ | | | | |
| Portugal | 166 | ↓↘↓↘↔↔ | | | | Norway | 199 | ↓↘↔↔↔ | | | | |
| Croatia | 154 | ↓↘↓↘↓↘↓↘↔ | | | | New Zealand | 180 | ↓↘↓↘↓↘↓↘↓↘↔ | | | | |
| Germany | 190 | ↓↘↓↘↔↔↔ | | | | Israel | 179 | ↓↘↓↘↔ | | | | |
| Denmark | 195 | ↓↘↔↔ | | | | Kazakhstan | 117 | ↓↘↓↘↔ | | | | |
| Norway | 199 | ↓↘↓↘↓↘↔↔ | | | | Korea, Rep. | 163 | ↓↘↓↘↓↘↓↘↔↔ | | | | |
| New Zealand | 180 | ↓↘↔↔ | | | | Tajikistan | 72 | ↓↘↓↘↔ | | | | |
| Jamaica | 143 | ↓↘↓↘↔↔↔ | | | | Indonesia | 74 | ↓↘↓↘↔=↓↘↓↘ | | | | |
| Israel | 179 | ↓↘↓↘↓↘↔↔=↓↘↓↘ | | | | Thailand | 109 | ↓↘↓↘↘↓↘↔↔ | | | | |
| Tunisia | 112 | ↓↘↓↘↔ | | | | Malaysia | 135 | ↓↘↓↘↔=↓↘↔↔ | | | | |
| Costa Rica | 146 | ↓↘↓↘↔↔↔ | | | | China | 60 | ↓↘↓↘↔↔↔ | | | | |
| Argentina | 160 | ↓↘↔=↓↘↔↔↔ | | | | Philippines | 94 | ↓↘↔=↓↘↔↔↔ | | | | |
| Ireland | 175 | ↓↘↓↘↔↔↔↔ | | | | Turkey | 134 | ↓↘↓↘↔↔↔↔ | | | | |
| Brazil | 144 | ↓↘↓↘↓↘↔↔↔↔ | | | | Costa Rica | 146 | ↓↘↓↘↔↔↔↔ | | | | |
| Bolivia | 89 | ↓↘↓↘↔↔↔↔↔ | | | | Argentina | 160 | ↓↘↔=↓↘↓↘↔↔=↓↘↔↔ | | | | |
| Thailand | 109 | ↓↘↓↘↓↘↓↘↓↘↔↔↔ | | | | Uruguay | 155 | ↓↘↓↘↔=↓↘↔↔↔↔ | | | | |
| Kenya | 62 | ↓↘↓↘↔↔↔ | | | | ↔ | Greece | 169 | ↓↘↔↔↔↔↔↔↔ | | | |
| Sri Lanka | 77 | ↓↘↔↔↔ | | | | ↔ | Ireland | 175 | ↓↘↓↘↔↔↔↔↔↔ | | | |
| Turkey | 134 | ↓↘↓↘↔↔↔↔ | | | | ↔ | Paraguay | 113 | ↓↘↔↔↔↔↔ | | | |
| Korea, Rep. | 163 | ↓↘↔=↓○ | | | | ↔ | Mexico | 156 | ↓○↔↔↔↔↔↔↔ | | | |
| China | 60 | ↓↘↓↘↔↔↔↔ | | | | ↔ | Chile | 142 | ↓↘↓↘↔↔↔↔=↓↘↔↔ | | | |
| Indonesia | 74 | ↓↘↔↔↔=↓↘↔ | | | | ↔ | Peru | 120 | ↓↘↔=↓↘↔↔=↓↘↓↘↔↔↔↔ | | | |
| Dominican Republic | 114 | ↓↘↓↘↔↔↔↔↔↔ | | | | ↔ | Iran, Islamic Rep. | 101 | ↓↘↓↘↔=↓○↔↔↔↔ | | | |
| El Salvador | 119 | ↓↘↔↔↔↔↔↔↔ | | | | ↔ | Bolivia | 89 | ↓↘↓↘↓↘↔↔↔↔↔ | | | |
| Philippines | 94 | ↓↘↔↔↔↔↔↔↔ | | | | ↔ | Colombia | 125 | ↓↘↓↘↓↘↔↔↔↔↔↔↔ | | | |
| Malaysia | 135 | ↓○↔↔↔↔↔↔↔ | | | | ↔ | Brazil | 144 | ↓↘↓↘↓↘↓↘↔↔↔↔=↓↘↓↘↔ | | | |
| Chile | 142 | ↓○↔=↓↘↔↔↔ | | | | ↔ | South Africa | 141 | ↓↘↓↘↓↘↓↘↓↘↓↘↓↘↓↘↔↔ | | | |
| Mexico | 156 | ↓○↔↔↔↔↔↔↔ | | | | ↔ | Morocco | 99 | ↓↘↓↘↓↘↓↘↓↘↓↘↔↔↔↔↔ | | | |
| Paraguay | 113 | ↓↘↓↘↔ | | | | ↔ | Tunisia | 112 | ↓↘↓↘↓↘↔↔=↓↘↓↘↔↔↔ | | | |
| Colombia | 125 | ↓○↔↔↔↔↔↔↔ | | | | ↔ | Jamaica | 143 | ↓↘↓↘↓↘↓↘↓↘↓↘↔↔↔↔ | | | |
| Ecuador | 106 | ↓○↔↔↔↔↔↔ | | | | ↔ | Ecuador | 106 | ↓↘↓↘↓↘↔↔↔=↓○↔↔ | | | |
| Peru | 120 | ↓○↔↔↔↔↔↔ | | | | ↔ | Dominican Republic | 114 | ↓↘↔↔=↓↘↓↘↓↘↔↔↔ | | | |
| Iran, Islamic Rep. | 101 | ↓↘↔↔↔↔↔↔ | | | | ↔ | Sri Lanka | 77 | ↓↘↓↘↓↘↔↔↔=↓○↔↔ | | | |
| Honduras | 92 | ↓↘↓↘↔↔↔↔↔↔↔ | | | | ↔ | Honduras | 92 | ↓↘↓↘↓↘↓↘↓↘↓↘↔↔↔↔ | | | |
| South Africa | 141 | ↓↘↔↔↔↔↔↔ | | | | ↔ | El Salvador | 119 | ↓↘↓↘↓↘↓↘↓↘↔=↓○↔↔ | | | |
| Morocco | 99 | ↓↘↓↘↓↘↓↘↓↘↓↘↓↘↓↘↔↔↔↔↔ | | | | ↔ | Nicaragua | 84 | ↓↘↓↘↓↘↓↘↓↘↔ | | | |
| Jordan | 118 | ↓↘↓↘↓↘↓↘↓↘↔↔↔↔ | | | | ↔ | | | | | | |
| Zambia | 63 | ↓↘↓↘↔↔↔ | | | | | | | | | | |
| Zimbabwe | 76 | ↓↘↓↘↓↘↓↘↓↘↔↔↔ | | | | | | | | | | |
| Ghana | 44 | ↓↘↓↘↔↔↔ | | | | | | | | | | |
| Cameroon | 79 | ↓↘↓↘↔↔↔ | | | | | | | | | | |
| Cote d'Ivoire | 83 | ↓↘↔=↓↘↓↘↓↘↔↔↔↔ | | | | | | | | | | |
| India | 57 | ↓↘↓↘↔↔↔↔↔ | | | | | | | | | | |
| Pakistan | 70 | ↓↘↓↘↔↔↔↔↔ | | | | | | | | | | |
| Nepal | 37 | ↓↘↔↔↔↔↔↔ | | | | | | | | | | |
| Bangladesh | 50 | ↓○↔↔↔↔↔↔ | | | | | | | | | | |
| Senegal | 65 | ↓↘↓↘↔↔↔↔=↓↘↓↘↓↘↔↔ | | | | | | | | | | |
| Ethiopia | 28 | ↓↘↔↔↔↔↔↔ | | | | | | | | | | |
| Burundi | 32 | ↓↘↔↔=↓↘↓↘↔↔↔ | | | | | | | | | | |
| Rwanda | 48 | ↓↘↓↘↔↔↔ | | | | | | | | | | |
| Tanzania | 49 | ↓↘↔↔↔↔↔↔ | | | | | | | | | | |
| Mozambique | 33 | ↓↘↓↘↔↔↔↔ | | | | | | | | | | |
| Nicaragua | 84 | ↓↘↓↘↓↘↓↘↓↘↔ | | | | | | | | | | |

Table 4: Cluster memberships

| | Year 1990 |
|---|---|
| Liberal social dem. state welfare regime | Canada, Denmark, Finland, New Zealand Norway, Sweden |
| Corporatist welfare state regime | Austria, Belgium, Costa Rica, Croatia, France, Germany, Italy, Netherlands, Spain, Switzerland |
| Elemental state welfare regime | Belarus, Bulgaria, Estonia, Greece, Ireland Israel, Jamaica, Kazakhstan, Korea, Rep. Latvia, Lithuania, Moldova, Poland, Portugal Romania, Russian Federation, Tajikistan, Ukraine, United Kingdom, United States, Uruguay |
| Productive informal security regime | Argentina, Bolivia, Brazil, Chile, China, Colombia, Ecuador, Honduras, Iran, Islamic Rep., Malaysia, Mexico, Paraguay, Peru Philippines, South Africa, Thailand, Tunisia |
| Depend. informal security regime | Cameroon, Cote d'Ivoire, Dominican Republic, El Salvador, India, Indonesia, Morocco, Pakistan, Sri Lanka, Turkey |
| Poor insecurity regime | Ghana, Kenya, Tanzania, Zambia, Zimbabwe |
| Illiterate insecurity regime | Bangladesh, Burundi, Ethiopia, Mozambique, Nepal, Rwanda, Senegal |

| | Year 2000 |
|---|---|
| Liberal social dem. state welfare regime | Canada, Denmark, Finland, Israel, New Zealand, Norway, Sweden, United Kingdom |
| Corporatist welfare state regime | Austria, Belgium, Croatia, France, Germany, Greece, Italy, Netherlands, Portugal, Spain, Switzerland, United States |
| Elemental state welfare regime | Belarus, Bulgaria, Estonia, Kazakhstan, Korea, Rep., Latvia, Lithuania, Moldova, Poland, Romania, Russian Federation, Tajikistan Ukraine, Uruguay |
| Productive informal security regime | Argentina, Bolivia, Brazil, Chile, China, Colombia, Costa Rica, Iran, Islamic Rep., Ireland, Malaysia, Mexico, Paraguay, Peru, Philippines, South Africa, Thailand, Turkey |
| Depend. informal security regime | Dominican Republic, Ecuador, El Salvador, Honduras, India, Indonesia, Nicaragua, Pakistan, Sri Lanka |
| Poor insecurity regime | Cameroon, Ghana, Tanzania, Zambia, Zimbabwe |
| Illiterate insecurity regime | Bangladesh, Burundi, Cote d'Ivoire, Ethiopia, Kenya, Mozambique, Nepal, Rwanda, Senegal |

Table 5 breaks down the descriptives by cluster to examine the hypothesis of uneven developments and differing development trajectories. Somewhat at odds with the second hypothesis, many wellbeing indicators in the very different clusters have increased. Even the lowest insecurity clusters show substantial improvements in illiteracy and life expectancy. The marked exception is life expectancy in the poverty insecurity cluster, composed of African countries with high AIDS rates.

The informal security regime cluster shows mixed picture with a rise in poverty and inequality but also a dramatic improvement in life expectancy, illiteracy rates and child labour rates. The cluster composed by countries of the former Soviet Union may record the worst development in regard to absolute and relative indicators of wellbeing with both rising poverty and dropping life expectancy.

Table 5: Outcomes by cluster

| Year 1990 | | |
|---|--|-------|
| | Mean | |
| Liberal social dem. state welfare regime | Variables | |
| | Life expectancy at birth (years) | 76.07 |
| | Illiteracy rate, youth (% aged 15-24) | 0.10 |
| | Labor force, female (% of labor force) | 45.48 |
| | Labor force, children 10-14 (%) | 0.00 |
| | Pop. living w\ less than a 1\$ day | 0.00 |
| | Gini coefficient | 28.61 |
| Corporatist welfare state regime | Variables | |
| | Life expectancy at birth (years) | 76.02 |
| | Illiteracy rate, youth (% aged 15-24) | 0.42 |
| | Labor force, female (% of labor force) | 38.53 |
| | Labor force, children 10-14 (%) | 0.73 |
| | Pop. living w\ less than a 1\$ day | 0.40 |
| | Gini coefficient | 32.41 |
| Elemental state welfare regime | Variables | |
| | Life expectancy at birth (years) | 71.74 |
| | Illiteracy rate, youth (% aged 15-24) | 0.77 |
| | Labor force, female (% of labor force) | 44.13 |
| | Labor force, children 10-14 (%) | 0.29 |
| | Pop. living w\ less than a 1\$ day | 3.15 |
| | Gini coefficient | 34.63 |
| Productive informal security regime | Variables | |
| | Life expectancy at birth (years) | 67.39 |
| | Illiteracy rate, youth (% aged 15-24) | 7.04 |
| | Labor force, female (% of labor force) | 32.65 |
| | Labor force, children 10-14 (%) | 8.48 |
| | Pop. living w\ less than a 1\$ day | 9.89 |
| | Gini coefficient | 50.32 |
| Depend. informal security regime | Variables | |
| | Life expectancy at birth (years) | 61.49 |
| | Illiteracy rate, youth (% aged 15-24) | 24.51 |
| | Labor force, female (% of labor force) | 32.52 |
| | Labor force, children 10-14 (%) | 16.29 |
| | Pop. living w\ less than a 1\$ day | 12.49 |
| | Gini coefficient | 40.23 |
| Poor insecurity regime | Variables | |
| | Life expectancy at birth (years) | 53.93 |
| | Illiteracy rate, youth (% aged 15-24) | 14.03 |
| | Labor force, female (% of labor force) | 47.26 |
| | Labor force, children 10-14 (%) | 29.75 |
| | Pop. living w\ less than a 1\$ day | 50.14 |
| | Gini coefficient | 46.17 |
| Illiterate insecurity regime | Variables | 47.16 |
| | Life expectancy at birth (years) | 50.74 |
| | Illiteracy rate, youth (% aged 15-24) | 44.53 |
| | Labor force, female (% of labor force) | 40.91 |
| | Labor force, children 10-14 (%) | 37.13 |
| | Pop. living w\ less than a 1\$ day | 34.51 |
| | Gini coefficient | 47.16 |

| Year 2000 | | |
|---|--|-------|
| | Mean | |
| Liberal social dem. state welfare regime | Variables | |
| | Life expectancy at birth (years) | 78.24 |
| | Illiteracy rate, youth (% aged 15-24) | 0.16 |
| | Labor force, female (% of labor force) | 45.63 |
| | Labor force, children 10-14 (%) | 0.00 |
| | Pop. living w\ less than a 1\$ day | 0.00 |
| | Gini coefficient | 30.39 |
| Corporatist welfare state regime | Variables | |
| | Life expectancy at birth (years) | 77.73 |
| | Illiteracy rate, youth (% aged 15-24) | 0.15 |
| | Labor force, female (% of labor force) | 41.45 |
| | Labor force, children 10-14 (%) | 0.13 |
| | Pop. living w\ less than a 1\$ day | 0.17 |
| | Gini coefficient | 32.69 |
| Elemental state welfare regime | Variables | |
| | Life expectancy at birth (years) | 69.75 |
| | Illiteracy rate, youth (% aged 15-24) | 0.27 |
| | Labor force, female (% of labor force) | 46.96 |
| | Labor force, children 10-14 (%) | 0.07 |
| | Pop. living w\ less than a 1\$ day | 4.59 |
| | Gini coefficient | 33.39 |
| Productive informal security regime | Variables | |
| | Life expectancy at birth (years) | 69.69 |
| | Illiteracy rate, youth (% aged 15-24) | 3.00 |
| | Labor force, female (% of labor force) | 35.80 |
| | Labor force, children 10-14 (%) | 5.24 |
| | Pop. living w\ less than a 1\$ day | 7.98 |
| | Gini coefficient | 49.37 |
| Depend. informal security regime | Variables | |
| | Life expectancy at birth (years) | 67.45 |
| | Illiteracy rate, youth (% aged 15-24) | 15.86 |
| | Labor force, female (% of labor force) | 33.48 |
| | Labor force, children 10-14 (%) | 9.74 |
| | Pop. living w\ less than a 1\$ day | 18.33 |
| | Gini coefficient | 41.72 |
| Poor insecurity regime | Variables | |
| | Life expectancy at birth (years) | 45.85 |
| | Illiteracy rate, youth (% aged 15-24) | 8.60 |
| | Labor force, female (% of labor force) | 45.38 |
| | Labor force, children 10-14 (%) | 22.90 |
| | Pop. living w\ less than a 1\$ day | 49.62 |
| | Gini coefficient | 46.58 |
| Illiterate insecurity regime | Variables | |
| | Life expectancy at birth (years) | 47.97 |
| | Illiteracy rate, youth (% aged 15-24) | 35.65 |
| | Labor force, female (% of labor force) | 43.53 |
| | Labor force, children 10-14 (%) | 35.36 |
| | Pop. living w\ less than a 1\$ day | 33.10 |
| | Gini coefficient | 36.51 |

Table 6: Final Cluster Centres 1990⁷

| | Illiterate insecurity regime | Poor insecurity regime | Depend. informal security regime | Productive informal security regime | Elemental state welfare regime | Corporatist welfare state regime | Liberal social dem. state welfare regime |
|---|------------------------------------|------------------------------|---|--|---|---|--|
| Aid per capita (current US\$) | -0.18 | -0.19 | -0.26 | -0.31 | -0.29 | -0.41 | -0.38 |
| Workers' remittances, receipts (BoP, current US\$)/ GNI(Current US\$) | -0.20 | -0.37 | 0.58 | -0.20 | -0.20 | -0.34 | -0.29 |
| Public spending on health, total (% of GDP) | -0.83 | -0.41 | -0.88 | -0.48 | 0.23 | 1.80 | 1.65 |
| Public spending on education, total (% of GDP) | -0.61 | -0.23 | -0.71 | -0.02 | 0.08 | 1.23 | 0.32 |
| Social contributions (% of revenue) | -0.64 | -0.71 | -0.47 | -0.29 | 1.02 | 0.46 | 2.06 |
| Life expectancy at birth (years) | -1.67 | -1.03 | -0.30 | 0.26 | 0.68 | 1.09 | 1.09 |
| Illiteracy rate, youth (% aged 15-24) | 1.65 | -0.14 | 0.37 | -0.47 | -0.78 | -0.81 | -0.80 |
| Labor force, female (% of labor force) | 0.64 | 0.94 | -0.70 | -0.69 | 0.59 | 0.75 | -0.03 |
| Labor force, children 10- 14 (%) | 1.78 | 1.08 | 0.23 | -0.26 | -0.77 | -0.79 | -0.75 |
| Pop. living w\ less than a 1\$ day | -0.51 | 0.64 | 0.05 | 1.05 | -0.50 | -1.10 | -0.72 |
| Gini coefficient | 1.33 | 2.06 | -0.04 | -0.18 | -0.56 | -0.73 | -0.71 |

The magnitude of the F values from the analysis of variance (ANOVA) performed on each dimension indicated that child labour rates, followed by life expectancy and remittances most discriminated the respective dimension between clusters. Significance test in ANOVA for the k-means clustering suggested that the difference between group variability against the within-group variability was significant at the .001 level for all variables.

⁷ All variables are standardized for the cluster analyses.

The final cluster centers in table 6 and 7 show the relative constellation of each variable to each other in explaining the formed clusters; they show the local minima and maxima of these variables as final cluster centers do not represent a global minimum but local ones. So comparing the two insecurity clusters against each shows that though both have high poverty and illiteracy rates absolutely, they also score very different relative to each other on these dimensions. The difference between the two insecurity regimes is that while the poor cluster has rampant poverty and very low life expectancy, even more markedly so in 2000, it features low illiteracy rates in relation to its overall position, while the illiteracy insecurity cluster has very high illiteracy rates relative to its position. The two insecurity regime clusters stand out relative to all other clusters by having the lowest welfare spending.

The informal security regime, while also low on welfare spending, stands out for the extent of remittance receipt, even more noticeably in 2000 than in 1990. The informal security cluster stands out for the high amount of remittances it receives, helping to explain the superior Wellbeing outcomes despite low expenditure levels.

The chief differentiating variable between the two top clusters, the welfare state clusters, is that the liberal and social democratic regimes spend more on health and education *relative* to the importance of social contributions as part of the revenue.

Tables 6 and 7 also address the issue of inter-clusteral consistency regarding the transfer-expenditure-outcome nexus. Both final center cluster tables suggest that positive wellbeing expenditure is commensurate with welfare state expenditure but also that remittances act as a *de facto* substitute for state spending in regarding to explaining welfare outcomes.

Table 7: Final Cluster Centers 2000⁸

| | Illiterate insecurity regime | Poor insecurity regime | Depend. informal security regime | Productive informal security regime | Elemental state welfare regime | Corporatist welfare state regime | Liberal social dem. state welfare regime |
|---|------------------------------------|------------------------------|---|--|---|---|--|
| Aid per capita (current US\$) | -0.22 | -0.17 | -0.20 | -0.30 | -0.24 | -0.33 | -0.26 |
| Workers' remittances, receipts (BoP, current US\$)/ GNI(Current US\$) | -0.16 | -0.46 | 1.31 | -0.32 | -0.48 | -0.31 | -0.48 |
| Public spending on health, total (% of GDP) | -0.76 | -0.38 | -0.70 | 0.04 | 0.08 | 1.61 | 1.79 |
| Public spending on education, total (% of GDP) | -0.40 | -0.63 | -0.87 | -0.06 | -0.18 | 0.28 | 0.99 |
| Social contributions (% of revenue) | -0.65 | -0.69 | -0.49 | -0.12 | 1.17 | 1.88 | 0.53 |
| Life expectancy at birth (years) | -1.49 | -1.67 | 0.15 | 0.34 | 0.35 | 1.02 | 1.06 |
| Illiteracy rate, youth (% aged 15-24) | 1.37 | -0.22 | 0.21 | -0.55 | -0.71 | -0.72 | -0.72 |
| Labor force, female (% of labor force) | 0.44 | 0.68 | -0.90 | -0.59 | 0.89 | 0.16 | 0.71 |
| Labor force, children 10- 14 (%) | 1.77 | 0.88 | -0.05 | -0.36 | -0.73 | -0.73 | -0.73 |
| Pop. living w\ less than a 1\$ day | 1.11 | 2.03 | 0.29 | -0.29 | -0.48 | -0.72 | -0.73 |
| Gini coefficient | -0.32 | 0.68 | 0.20 | 0.96 | -0.63 | -0.69 | -0.92 |

⁸ All variables are standardized for the cluster analyses.

So is there a linear correlation between welfare spending and outcome? Or are there certain critical cut-offs in expenditure levels? Or is it like hypothesis 3 posits that the configuration of spending is more indicative than the mere sum of spending?

To further test this claim, welfare *outcome* is regressed on cluster dummies and spending compositions. The steps are as follows: first staying with the concept that a configuration of outcomes, a wellbeing regime, is assessed, the dependent variable is not a single indicator. Rather the dependent variable is the well-being factor score attained when performing a factor analyses on all wellbeing variables for 2000. Table 8 shows that two factors are attained, a wellbeing factor and an inequality/integration factor.

Table 8: Rotated Component Matrix(a) year 2000⁹

| | Component | |
|--|-----------|-------|
| Life expectancy at birth (years) | -.938 | -.020 |
| Illiteracy rate, youth (% aged 15-24) | .786 | .128 |
| Labor force, female (% of labor force) | .179 | -.877 |
| Labor force, children 10-14 (%) | .946 | .005 |
| Pop. living w\ less than a 1\$ day | .893 | .016 |
| Gini coefficient | .295 | .785 |

⁹ Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.
a Rotation converged in 3 iterations.

Table 9: Total Variance Explained 2000

| Component | Initial Eigenvalues | | |
|-----------|---------------------|---------------|--------------|
| | Total | % of Variance | Cumulative % |
| 1 | 4.40 | 40.03 | 40.03 |
| 2 | 1.90 | 17.25 | 57.27 |
| 3 | 1.24 | 11.23 | 68.50 |

Next cluster analyses were performed on welfare *mix* variables for 1990. The clusters attained were then converted into a set of cluster dummies. The two factors (multiplied by -1 for better interpretability) were first regressed on the cluster dummies and spending (models 1) and then against political economy variables (models 2).

Table 10: Regressions of wellbeing and inequality factor scores on clusters and political economy

| | Wellbeing factor ¹⁰ | | Equality factor ¹¹ | |
|--|--------------------------------|-----------------|-------------------------------|-----------------|
| | Model 1 | Model 2 | Model 1 | Model 2 |
| Illiterate insecurity regime | -.047 (.474) | | .201+ (.626) | |
| Poor insecurity regime | -4.956* (2.032) | -.659 (.436) | 2.188 (2.683) | -.514 (.765) |
| Depend. informal security regime | -.648 (.668) | | -.145 (.881) | |
| Productive informal security regime | .463 (.383) | | -.402 (.506) | |
| Elemental state welfare regime | -.299 (.374) | | -.220 (.494) | |
| Corporatist state welfare regime | -.136 (.504) | | .011 (.665) | |
| Liberal social dem. state welfare regime | -.078 (.563) | | -.564 (.744) | |
| Aid per capita (current US\$) | -.003 (.002) | | -9.46E-005 (.003) | |
| Workers' remittances, receipts (BoP, current US\$) divided by (Current US\$) | 13.099+ (6.953) | | -10.770 (9.180) | |
| Public spending on health, total (% of GDP) | .032 (.071) | | .129 (.094) | |
| Public spending on education, total (% of GDP) | .218** (.070) | -.007 (.033) | .038 (.093) | .117* (.058) |

¹⁰ Standardized Coefficients

¹¹ Standardized Coefficients

| | | | | |
|-------------------------------------|---------------------|---------------------|------------------|---------------------|
| Social contributions (% of revenue) | .021 (.014) | | .016 (.018) | |
| Rebellions | | -.064** (.022) | | .071+ (.039) |
| International NGOs (logged) | | .418*** (.086) | | -.496** (.151) |
| Degree of democracy | | -.011 (.010) | | .002 (.018) |
| Upper middle income dummy | | .190 (.158) | | -.044 (.277) |
| Lower middle income dummy | | .222 (.166) | | -.195 (.291) |
| Low income country dummy | | -.434* (.218) | | -.058 (.383) |
| Africa | | -1.432*** (.151) | | -1.042*** (.266) |
| South or central America | | -.338** (.129) | | -2.045*** (.226) |
| East or south Asia | | -.365** (.141) | | -.859*** (.247) |
| Middle east & upper Saharan Africa | | .035 (.177) | | -1.962*** (.311) |
| Oceania | | .006 (.256) | | -.218 (.450) |
| Constant | -1.323*** (.274) | -2.063** (.650) | -.620+ (.362) | 3.574** (1.141) |
| R-square | 0.472 | 0.90 | 0.265 | 0.69 |

+ Statistically significant at $p < 0.1$, * Statistically significant at $p < 0.5$, ** Statistically significant at $p < 0.01$, *** Statistically significant at $p < 0.001$

Expenditures, both measured as cluster compositions and linearly, clearly fall short of explaining the whole story of wellbeing variation. Outcomes regarding the heuristic superiority of clusters, as claimed in hypothesis 3, are mixed. Except for the poverty insecurity cluster, cluster membership alone is insignificant in respect to explaining welfare outcomes.

Both the factor analyses and the regression results also suggest that absolute wellbeing measures and inequality are conceptually distinct. Different variables affect these two measures. Education spending had a significantly positive effect on equality and inclusion but not on the wellbeing factor. Rebellions negatively effect wellbeing but are positively associated with equality. All indicators of protest as well as all indicators of legal worker's power such legislation on the legality of wildcat strikes were insignificant in all equations and

therefore not featured here. Democracy likewise had no impact. Number of international NGOs was significantly positive associated with more well-being but also with less equality.

6 Discussion and conclusion

Clearly, clustering the world is an ambitious project that may, in many ways, fall short of its aspirations. Regarding the first hypothesis of intra-cluster consistency, the results show noteworthy membership stability over time. Nation states that belonged to one cluster in 1990 often belong to the same cluster in 2000.

However, the results also suggest that focusing on relative differences in regime memberships and characteristics may obscure more powerful global trends and drivers effecting all clusters as suggested by the world society literature. To illustrate this with three points:

First, independent of cluster membership, there are parallel developments for all clusters across time. Rather than cluster characteristics having remained largely the same across the decade, as suggested by hypothesis two, there are dramatic differences across all outcomes. On a number of education and labour force related indicators, the rising tide has lifted all boats. All countries show better outcomes across time with decreasing child labour and illiteracy rates as well as falling poverty rates with the lowest clusters catching-up fast. The one aberration is life expectancy, which has fallen dramatically in the insecurity clusters.

This suggests a second point: Arguably, this drop in the most important of well-being indicator is not due to specific regime characteristics but by the HIV/AIDS pandemic. Regimes narrowly conceptualized by resource allocation, whether from the state or abroad, may miss the boat when explaining the most impactful global trends.

It is noteworthy, however, when looking at the two insecurity regimes that the regime with more illiteracy has dealt much better with this pandemic. What, if anything, enables a poorer country spending less to show better results? The poverty insecurity regime, consisting

only of African countries, records a more than twice the drop in life expectancy than the illiteracy insecurity regime though the former spends much more on health and education than the latter. The poverty insecurity cluster is also the only regime that had a significant impact when regressing the wellbeing outcomes against the clusters. However, this finding provides limited support for hypothesis three, that cluster constellation explain more than the sum of their parts. Rather than classic regime arguments and measures this finding may be confounded by the spread of AIDS/HIV.

Third, focusing on regimes with the implied continuity of policy may underestimate the extent to which rapid changes occur in short periods of times. While the dendrogram suggested more diversity in 2000 than in 1990, the descriptives suggested that most clusters have moved upward on many wellbeing indicators, except for the states of the former Soviet Union and the uneven developments in the insecurity clusters. The tanker Soviet Union has disintegration into a number of different ships and this new fleet is collectively heading downstream. Somewhat ironically, the former Soviet Union, though ideologically more different in 1990 than 2000, was more similar to the US and UK in 1990 in terms of welfare mix and outcomes than in 2000. The year 2000 marks lower expenditure and well-being level than ten years earlier. The countries that used to inhabit the same cluster with Eastern European countries now have moved-up a cluster. The only exception is South Korea and it is not clear if this is due to endogenous regimes characteristics or external shocks such as the Asian financial crisis. The insecurity regime cluster has increased in size and its distance to the rest of the world is more pronounced. Nonetheless, some key wellbeing indicators, such as illiteracy and child labour, show similar, positive development trajectories to the rest of the world.

In conclusion, the effort to typologize into ideal types easily obscures moving and metamorphosing targets as memberships change and the characteristics of these clusters

exhibit uneven developments due to regime-exogenous factors. The regime notion may also underestimate that different characteristics of welfare regimes, such as wellbeing and equality outcomes and are propelled by different, and sometimes juxtaposing, factors.

The results caution to narrowly apply Western welfare state regimes causalities to explain welfare/illfare regimes in the developing world. Rather, they suggest paying more attention to guns, germs and steal as well as international institutions and their transborder impacts. Rebellions, health pandemics such as HIV/AIDS, the collapse of industries in former empires and international NGOs may explain more than endogenous political economy properties narrowly conceptualized along Western welfare regime trajectories.

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