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Financing welfare regimes: mapping heterogeneous revenue structures

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This article studies how the composition of public revenues in terms of sources (such as taxation, social insurance contributions, mineral rents, foreign aid) is associated with different welfare regimes and social policy outcomes. It is divided into two halves: a review of literature and research, and a cross-national data analysis. The first half reviews literature on the emergence of tax and revenue systems in the West, and on the relevance of these frameworks and findings to developing countries. The second half uses cluster analysis to identify groups of developing countries with contrasting revenue systems in 2000, and then compares these with our previous analysis of welfare regimes in the global South. We conclude that higher tax or revenue levels are not associated with more advanced or effective welfare systems. It is only the scope of social security contributions that correlates with proto-welfare states in the developing world.

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Key words: taxation, state revenues, welfare regimes, developing countries, cluster analysis

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Introduction

This article studies how the composition of public revenues in terms of sources (such as taxation, social insurance contributions, mineral rents, foreign aid) is associated with different welfare regimes and social policy outcomes. It is divided into two halves: the development of a model of the determinants of welfare and revenue systems, and a cross-national data analysis to test the model.

The first half applies an earlier conceptual model to explain the development of social policies and welfare states in the 'West', in particular Europe, in terms of the '5 I's': industrialisation, interests, institutions, ideas and the international environment. The strengths and weaknesses of the model are then considered when applied to the very different terrain of the developing world. In this article, we further apply the model to the emergence of fiscal systems of taxation and state revenues – again identifying parallels and differences in the ability of this framework to explain fiscal systems in the South compared with the North. It is not our intention to provide a systematic review of the factors affecting state revenue structures, which would require a much longer article. Rather, we consider the effectiveness of the extant '5 I's' model to shed light on cross-national patterns in welfare and fiscal systems.

In the second part, we turn to quantitative cross-national evidence. We summarise our earlier analysis of welfare regimes in developing countries, and then go on to apply the data to state revenue sources. In both cases, we use cluster analysis based on data for 2000. Finally, we present our findings on the relationship between welfare regimes and state revenue structures. The conclusion asks: is there a relationship among specific revenue structures, regime types and welfare outcomes across the global South? It also adds qualifications and cautions about interpreting this type of analysis.

The determinants of welfare and revenue systems

Gough (2008) reviewed theories of Western welfare states and considered their relevance or otherwise for understanding social policies in the developing world (see also Gough & Therborn, 2010). There is a long history of case studies and comparative research into social programmes across the Organisation for Economic Co-operation and Development (OECD) world which can be drawn on, for example Castles et al. (2010), Saunders (2009), Uusitalo (1984) and Wilensky (1975). On such a basis, Gough developed a model of policy making that identified five determinants of social policy. These were labelled the '5 I's':

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- *Industrialisation*: industrialisation, social structures, demography and development.
- *Interests*: collective actors, parties and power resources.
- *Institutions*: states, constitutions, democracy, political systems.
- *Ideas*: culture, ideologies and epistemic communities.
- *International influences*: war, economic links and dependencies, international organisations and networks.

Gough then considered the model's relevance to understanding social policy across the developing world and came to very different conclusions. In the words of Gough and Therborn (2010: 711):

> First, the developmental paths of European welfare states are not likely to be repeated. Second, an array of social programmes already exists in the global South, but they do not yet coalesce into an alternative 'social policy model'. Third, these programmes are likely to expand in favoured locations, but they will move forward along their own paths.

Our first task in this article is to apply this approach to research on the financing of welfare systems. Does the '5 I's' model illuminate the structure and policies of tax states as well as the structure and policies of welfare states? And if so, can it do any better in understanding the financing regimes of the developing world? To answer these questions, we draw predominantly on the volume edited by Bräutigam, Fjeldstad and Moore (2008), where similar conceptual categories were deployed. We consider each in turn.

Finance systems in developing countries

Industrialisation and development. The association of greater proportionate tax revenues with higher levels of economic development is a robust finding across both time and space – a relationship first noticed by Adolf Wagner in the 19th century and named after him. 'Official tax-collectors in richer countries, and especially in countries with a relatively small agricultural sector, succeed in capturing higher proportions of national income for the government' (Moore, 2008: 40). However, there is still much variation in tax revenue unaccounted for by income per head, and the reasons for the relationship are disputed. Wagner himself, and several social policy scholars, explained it in terms of the industrial society fostering new needs and demands for public services. Others credited the spread of the formal economy, which enables records to be kept and taxes to be collected in a more uniform and bureaucratic way (Ardant, 1975; Brewer, 1989). There is, in fact, no contradiction between these two explanations, which can be subsumed within a 'modernisation' framework.

Economic development, as well as expanding tax revenues, also brings with it a shift in the nature of taxation: 'from levying taxes on specific items (salt, tobacco, carriages, individuals) to levying them according to accounting categories (income, sales, turnover valued-added, profits)' (Moore, 2008: 40). Moore claimed that in the developed world, this was accompanied by a shift from coercion to contract in the tax relationship. Coercive taxation is characterised by arbitrary assessment, coercive collection and the absence of any representation for tax payers in tax policy decisions. Contract taxation is characterised by ' "revenue bargaining" – the exchange of tax revenues (for the state) for institutionalized influence over public policy (for citizens)' (Moore, 2008: 36). This is an idealised picture, even for advanced democratic countries, and certainly cannot be applied or assumed in the global South. Rather, interests and institutions, the second and third factors in our model, assume a powerful role in mediating the relationship between economic development and tax revenues.

Interests. That the pattern of taxes normally reflects the interests of the powerful is perhaps too obvious a point to make, though it has rarely been subjected to scholarly investigation (Bräutigam, 2008). Similarly, the ability of taxes that are perceived to be unjust or coercive to foster tax rebellions is a part of the historical record, from the Roman Empire to the poll tax revolt against the Thatcher government in Britain. Thus, there is a complex link among interest groups, perceived interests and the tax system. The direction of causality is difficult to disentangle. For example, there is an interesting debate over the extent to which undemocratic governments imposing tax hikes fosters demands for democratic reforms. Ross (2004) argued that if an undemocratic government raises the tax burden without a commensurate increase in desired services, then citizens tend to press for greater representation. Lieberman (2003) researched the ways that race and class determine bargaining power over taxes and public expenditures in Brazil and South Africa. He noted how a cross-class alliance among whites in South Africa fostered higher income tax levels and higher benefit levels (for whites) – a pattern we shall observe below.

Institutions. The role of taxation in building states is a common theme among students of the state, before and after Schumpeter. For Levi (1988: 1), 'The history of state revenue production is the history of the evolution of the state'. Michael Mann's immense historical study of power emphasised the role of tax-raising powers (Mann, 1993: notably chapter 11). Bräutigam

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(2008: 1) wrote: 'Taxation may play the central role in building and sustaining the power of states, and shaping their ties to society'. Though theoretical explanations of this relationship differ, all agree that the administrative, fiscal and institutional capacity of governments to pursue public goals both engenders and reflects tax-raising powers. Here, the parallels between institutional determinants of the welfare state and the tax state are very strong.

Yet, more detailed studies of political institutions reveal different associations with tax levels. Gerring, Thacker and Moreno (2005) found that countries with 'centripetal' constitutions (political systems that were unitary rather than federal, parliamentary rather than presidential, and list proportional rather than first-past-the-post), could collect higher levels of taxes (cited in Bräutigam, 2008: 10–11). Steinmo (1993) related the differences in tax systems among Sweden, the USA and Britain according to features of their constitutions, electoral rules etc. The extent of variability among global South states is likely to be greater still.

Furthermore, the impact of democracy on tax revenues is disputed for developing countries. Fauvelle-Aymar (1999) found that autocracies have higher levels of taxation than democracies, whereas Thies (2004) found the opposite. This is similar to the contradictory findings on the links between democracy and the origins of social policies (Gough, 2008).

Ideas. The influence of culture, dominant ideas and policy learning also features in the literature on tax systems. For example, cultural values have an independent effect, as when public spiritedness or cultures of giving, such as zakat, foster a greater willingness to pay taxes. Tax compliance is affected by the perceived legitimacy of the government. This merges into a more instrumental account of tax compliance. Countries with sizeable shadow economies or informal sectors have lower tax morale, as people in the formal sector can more easily observe large numbers of others escaping the tax net (Alm & Torgler, 2004). Levi's finding in some European countries that a belief in the welfare state makes people more willing to pay taxes reminds us again of the close link between tax states and welfare states – if only in the most developed European welfare states (Levi, 1988). The emergence of 'revenue bargaining' cements this link. However, the widespread acceptance of the need to pay taxes may rest on a prior 'political settlement' between major interest groups, such as the broad 'Keynesian' agreement between capital and labour in Western Europe after the Second World War. Dominant ideas will in part reflect dominant interests.

International influences. The impact of war on the development of the European tax state is prominent and much researched. According to Tilly (1985), war made the modern state; it requires both administrative capacities and taxes. For this reason, preparation for war and war fighting has also fostered popular demands for accountability and for parliaments to represent the tax payers. Thies (2005) extended this argument to the existence of external threats to a state and also to internal threats from rival elites. Peacock and Wiseman's (1961) 'plateau' effect then argued that wartime levels of taxation and spending will frequently persist into peacetime.

Aside from war, international influence is the arena, claimed Moore (2008), where the past fiscal history of Europe and the OECD offers the fewest lessons to the developing world. Unlike the core OECD states, countries in the developing world today exist in a transformed international environment that profoundly reduces their dependence on domestic tax payers for revenue. This is for four main reasons. First, many developing countries are in receipt of large non-tax revenues from natural resources, which are in demand because of the emergence of a global economy. This provides these governments with natural resource rents and reduces their reliance on taxation (Hinojosa et al., 2010). Second, for many other poor countries, foreign aid from donors provides a second external revenue stream. Both of these large revenue streams 'were not available to governments when the OECD countries were comparably poor' (Moore, 2008: 34). Many have argued that these streams create a 'resource curse' and 'aid dependency', respectively. In turn, they argue, this fosters patronage, waste and graft, and renders governments illegitimate, ineffective and unaccountable.

Third, reliance on external revenues undermines the social contract and revenue bargaining, and encourages middle-class exit into private and overseas welfare markets. 'Unless the middle class is also catered for by state provision, good quality social provision can't be sustained' (Deacon, 2007: 172). But to bind in the middle classes, if not the elite, requires a willingness to pay taxes, which is undermined if taxation of mineral wealth, or aid or other grants from abroad weakens this social bond, or if private options are easily available. 'The proposition is that the dependence of governments on broad taxation for revenue is good for the quality of governance' (Moore, 2008: 34). Finally, the International Monetary Fund (IMF) and other intergovernmental organisations (IGOs) have played an unprecedented role in guiding and enforcing harsh fiscal policies in the developing world, with no parallel in the 'emerging market economies' of the North in the 19th and 20th centuries.

We can draw a mixed conclusion from this survey for the prospects for effective, sustainable and non-coercive taxes in the developing world. On the one

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hand, economic and political development is likely to foster less coercive taxation and greater revenues. 'Coercive taxation is especially likely where ruling elites are unrestrained by their subjects . . . ; economies are poor, rural, agrarian and subsistence' (Moore, 2008: 62). On the other hand, the absence of clearly represented interest groups and political settlements, the permeability of political institutions, the reliance on rents and aid, the intrusion of the IMF and the resultant 'dependent learning' all undermine the development of effective governance via revenue bargaining and the ability to raise sustainable tax revenues.

Welfare systems and fiscal systems

How do these findings compare with those of the origins and development of welfare systems? What are the implications for the development of tax states and welfare states in the developing world? Again, we consider the 5 I's in turn.

First, the development and industrialisation explanation holds some truth: both tax and social spending shares are associated with levels of national income per head. This can be explained from both the spending side (to meet new 'social needs' and demographical pressures) and the revenue side (the ability of states to more effectively levy taxes in emerging market economies). However, this relationship leaves much variation unexplained and is mediated by other factors. Furthermore, it is severely qualified in today's developing world by several factors. First, the pervasive dualism of developing economies – the gulf between major cities and rural areas, and the extensive spatial inequalities – is beyond comparison with Europe now *and* Europe a century ago. The role of families and households in attempting to mitigate risk and secure welfare is also far more extensive in the developing world than in the developed countries. Finally, the international economic environment is very different and, in general, less benign than the post-war period of Western welfare states.

Second, the role of countervailing interests and 'pressures from below' in shaping welfare and tax systems is more complex and indeterminate than the history of the West records. This is partly the result of the dualisms and fragmentation noted above. In addition, trade unions and labour-based political organisations have been squeezed between repression and deregulation, and are thus much weaker than their counterparts in post-war Western welfare states. Moreover, business and financial interests exert more structural and agency power. The ability of other collective 'horizontal' sources of identity and mobilisation to substitute for this is unproven. None of this rules out an emerging collective interest in expanding rights-based welfare, but it makes it less likely.

Third, the role of the welfare state and the tax state in European state building has some parallels in developing countries with effective states, such as in East Asia. Here, one might expect to see the parallel expansion of state social programmes, spending and taxation. However, in poorer world regions, the state-building process has been stalled by a variety of factors, including the intervention of powerful external actors. A welfare state must presuppose a minimal Weberian state. Similarly, 'democracy' has an ambiguous effect on the tax welfare state; the conflicting evidence points to an undetermined relationship mediated by other factors.

Fourth, the cultural variety of the developing world exceeds that which is found within the homelands of the welfare state, and its import is still not fully understood. Quite new ideas supportive of an *active* state have emerged, notably that of the 'developmental state' in Japan and East Asia, but this does not usually entail an extensive *tax and welfare* state. In much of the world, dualist economies and clientelist politics foster low tax morale and undermine willingness to pay taxes and use public services. Finally, the dominant ideology of neo-liberalism has, over the past three decades, blocked indigenous welfarist ideas and imposed 'dependent learning'.

Fifth, the global environment has utterly changed since the first industrial transformations in the 19th and the first three quarters of the 20th century. Here, the ability of European history to offer any useful lessons is most severely tested. The developing world today is enmeshed in a network of economic relationships with powerful financial and corporate actors exerting structural power, is part of a world society of intergovernmental institutions with powers to constrain and sometimes control Southern governments, and is subject to ruling ideas and ideologies promulgated by powerful epistemic communities, including that of economists. Globalisation has provided in certain countries streams of rent and aid monies not available to Western countries in their modernisation phase, which can undermine the scope for domestic taxation and domestic welfare institutions. For the past three decades, the diverse domestic roads to the institution we now label 'the welfare state' were replaced by a global one-size-fits-all road, mapped and laid down outside the countries concerned, though this neo-liberal model is now slowly breaking up.

All these contrasts constrain the emergence of tax and social policies in the developing world – and the lessons that can be learned from the earlier histories in the West. To deal with this variety, complexity and underdetermination, we go on to develop a distinctive conceptual framework and methodology in the remainder of this article.

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Welfare and revenue regimes in the developing world: an empirical cluster analysis

Welfare regime clusters

One underlying lesson from European social policy is the importance of path dependency: how, once established, patterns or constellations of social policies tend to reproduce and are rather impervious to radical change, short of encountering a major crisis or external intervention. Esping-Andersen (1990) argued this most forcefully in his influential framework of welfare state regimes, which has received considerable empirical confirmation. Gough and Wood extended this framework to identify a wider range of 'welfare' regimes (distinguished from welfare state regimes) across the developing world (Gough, 2004; Gough et al., 2004; Wood & Gough, 2006). The regime concept rests on the idea that linear scoring approaches do not capture the systemic realities of country welfare or illfare systems:

> The linear scoring approach (more or less power, democracy, or spending) contradicts the sociological notion that power, democracy, or welfare are relationally structured phenomena . . . Welfare-state variations . . . are not linearly distributed, but clustered by regime types. (Esping-Andersen, 1990: 26)

The appropriate method for testing this hypothesis, we argue, is cluster analysis. This is not a form of multivariate analysis but a sophisticated descriptive technique for assigning a large number of observations into a smaller number of groups. In a recent article, we used cluster analysis to map the welfare regimes of 65 non-OECD countries in 1990 and 2000 (Abu Sharkh & Gough, 2010). Full details of the methodology, techniques and data sources are provided there and in Gough and Abu Sharkh (2010), but we summarise them here.

We use two clustering techniques in sequence. We begin with dendograms generated by hierarchical cluster analysis and observe the number of major clusters these identify. At the next stage, we turn to K-means cluster analysis (KCA), using the previous analysis to specify numbers of clusters in advance. Following numerous trials, we settle on ten clusters, of which two comprise single countries, leaving us with eight. In presenting our results, we go on to order the resulting clusters by comparing the *distances between final cluster centres*, generated by KCA, starting with the cluster that most resembles OECD welfare states, which we label A. Most remote from this cluster are clusters G and H.

Our data sets exclude the OECD world; these rich countries are sufficiently distinct that their inclusion can diminish discrimination within the rest of the world. In order to avoid large numbers of smaller states, we also exclude countries with a population of less than 3 million people. This left potentially 127 countries and a final tally of 65 countries with sufficient data. For the welfare regime analysis, we sought data on four pairs of variables: government welfare spending (public spending on education and health as a share of gross domestic product [GDP] and social security contributions as a share of total government revenues); public service delivery (immunisation against measles and secondary school enrolment of females); the scale of external transfers (official aid and remittances from overseas migrants); and welfare outcomes (life expectancy at birth and the illiteracy rate of young people aged 15–24 years).

Table 1 presents our main findings. Countries in cluster A exhibit some characteristics of Western welfare states and may be labelled *proto-welfare states*. These countries share in common relatively extensive state commitments to welfare provision and relatively effective delivery of services plus moderately extensive social security programmes and superior welfare outcomes (by, it must be stressed, the standards of the non-OECD world). Apart from Israel and Costa Rica, this cluster comprises two distinct geographical zones and historical antecedents: the countries of the former Soviet Union and its bloc members, and the relatively industrialised countries of southern South America. Both developed European-style forms of social protection policies in the middle of the 20th century, and both suffered degradation of these in the late 20th century through the external imposition of neo-liberal programmes.

Cluster B exhibits the second-best level of welfare outcomes and social service outputs alongside low levels of state social spending (and low reliance on external flows of aid and remittances). This interesting combination suggests that security and illfare are mitigated by fast-growing average incomes and/or by other domestic, non-state informal institutions. This combination is found in three major world regions: (a) China and most countries in East Asia from Korea through Thailand to Sri Lanka (except Indonesia, which dropped out of this cluster in 2000, having suffered most from the 1997 crisis); (b) the remaining larger countries of South and Central America not in cluster A; and (c) some countries in Western Asia (Iran, Turkey and Tajikistan). Countries in this group are mainly but not always low–middle income, with high growth rates, but are relatively undemocratic and unequal. They include some countries that have achieved historic reductions in poverty levels. One notable finding is that this cluster includes most countries of externally induced, reactive modernisation.

Cluster C is mainly distinguished by great reliance on remittances from abroad, which account for 9 per cent of

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Table 1. Cluster means and country membership, 2000.

Cluster identifier	A	B	C	D	E	F	G	H
No. of countries	14	16	7	5	5	7	5	4
Aid per capita/GNI	0.81	2.08	2.98	2.59	6.22	3.96	12.05	27.19
Workers' remittances/GNI	0.64	0.66	9.20	0.03	0.34	1.54	2.30	0.99
Public expenditure on health + education/GDP	9.35	6.77	5.77	8.63	4.35	4.80	5.44	5.17
Social contributions/total revenue	29.46	7.06	6.78	1.05	1.72	1.19	1.29	0.43
School enrolment, secondary, female (% gross)	91.99	76.05	63.64	59.70	29.70	28.27	12.39	14.00
Immunisation, measles (% of children <12 months)	90.50	89.19	92.86	76.40	62.80	65.14	58.40	78.75
Life expectancy at birth, total (years)	72.32	69.57	70.30	44.17	53.74	56.90	46.32	41.30
Illiteracy rate, youth total (% aged 15–24)	1.28	2.20	13.39	7.29	6.65	35.57	48.21	27.42
	Argentina	Bolivia	Dominican Republic	Botswana	Cameroon	Bangladesh	Benin	Mozambique
	Belarus	Chile	Ecuador	Kenya	Congo, Rep.	Cote d'Ivoire	Burundi	Guinea-Bissau
	Brazil	China	El Salvador	Namibia	Ghana	India	Ethiopia	Rwanda
	Bulgaria	Colombia	Jamaica	South Africa	Indonesia	Nepal	Mali	Zambia
	Costa Rica	Iran	Morocco	Zimbabwe	Tanzania	Pakistan	Senegal	
	Croatia	Kazakhstan	Nicaragua			Papua New Guinea		
	Estonia	Korea, Rep.	Sri Lanka			Togo		
	Israel	Malaysia						
	Lithuania	Mexico						
	Poland	Moldova						
	Romania	Paraguay						
	Tunisia	Peru						
	Ukraine	The Philippines						
	Uruguay	Tajikistan						
		Thailand						
		Turkey						

Source: see Gough with Abu Sharkh (2010).
GDP = gross domestic product; GNI = gross national income.

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gross national income on average and which constitute an informal functional alternative to public transfers. It comprises small countries in the Caribbean and Central America, plus Ecuador, Morocco and Sri Lanka.

In southern and eastern Africa (South Africa, Namibia, Botswana, Zimbabwe and Kenya), a distinct cluster D exhibits relatively extensive public social policy (in both expenditures, and outreach and literacy levels) but with poor health outcomes, due in large part to the human immunodeficiency virus–acquired immune deficiency syndrome (HIV–AIDS) pandemic.

Cluster F, with at its core the countries of the Indian subcontinent – India, Pakistan, Bangladesh and Nepal – exhibits high levels of illiteracy and low numbers of females in secondary education. These are by no means ‘failed states’: India is proclaimed as a future economic giant. Moreover, they boast a plethora of targeted social programmes and informal security mechanisms. However, the absence of effective schooling, health and social protection policies, coupled with highly gendered outcomes, according to such indicators as the population sex ratio, betokens high levels of insecurity among the mass of the population.

Clusters G and H, mainly countries in sub-Saharan Africa, exhibit low and, in some cases, falling life expectancy alongside relatively weak states with low levels of public responsibility, indicated both by spending levels and social outputs, and higher dependence on overseas aid. The prevalence of poverty is also high and persistent.

Thus, at the turn of the century, we find a highly variegated pattern of welfare and illfare systems across the global South. We conclude that different groups of countries in the developing world face divergent threats to human wellbeing and divergent potentials for social policies to mitigate these. In Central and parts of Eastern Europe, and parts of South America, despite serious erosion of their post-war welfare systems, we see a potential for new forms of social citizenship. In much of East and South-East Asia, much of Latin America, Iran, Turkey and possibly other parts of the Middle East and North Africa (MENA) region, we find distinctive, different yet moderately effective informal welfare systems alongside small state sectors. In the Indian subcontinent, there is a plethora of formal and informal programmes, but with little realisation in terms of spending, delivery or welfare outcomes. In much of sub-Saharan Africa, what social programmes there are have been eroded and submerged beneath a rising tide of human need; this remains a zone of high insecurity and illfare.

Revenue structures: a cluster analysis

The relative size of total government revenues as a share of GDP has changed very little over the past decade and a half, taking the developing world as a whole. But there exists tremendous heterogeneity of tax and revenue levels, even within the usual categories of countries, such as region or income level, or dependence on oil and minerals. Again, to grasp this heterogeneity, we use the same two-stage cluster analysis.

We distinguish the following major categories of government revenues: total government revenue = taxes + social security contributions + other government revenues (notably oil and mineral rents) + aid and grants from IGOs and foreign governments.

To begin with, we undertake a cluster analysis of the four government revenues in the identity above, the results of which are presented in Table 2. The full outputs for this clustering are shown in Gough and Abu Sharkh (2010). The analysis identifies four clusters of countries where one form of revenue is dominant and a fifth where this is not the case.

This reveals the following. First, countries with relatively high levels of *social security* contributions are geographically clustered among the ex-communist countries in Eastern Europe and the ex-Soviet Union: all are in this cluster except for Tajikistan and Kazakhstan. In addition, there are three countries in Latin America – Uruguay, Brazil and Costa Rica – with relatively extensive social security contributions, which thereby stand apart from the rest of the continent.

Second, the cluster with substantial *tax* revenues is unexpectedly limited to just two world regions: the MENA, and southern and eastern Africa. Of the countries for which we have data, every MENA country is in this group except Yemen and Iran, and every country in southern and eastern Africa except Botswana. (In all these three other cases, ‘other revenues’ dominate.)

Third, three of the four countries in the small country cluster defined by high reliance on ‘other revenues’ appear in Hinojosa et al.’s list of mineral-rich countries 2010; their export dependence ratios are Yemen (94%), Botswana (87%) and Iran (83%).

Fourth, a greater relative reliance on overseas *aid* is mainly a feature of central and western sub-Saharan Africa; six of the nine countries in this region for which we have data fall into this cluster.

Lastly, the largest cluster comprises countries with no dominant source of government revenue. This includes all countries in East Asia and South Asia, and the bulk of countries in Latin America. This is clearly a very heterogeneous group of countries, requiring further disaggregation (see below).

Welfare regimes and revenue structures

How do the welfare regime clusters map onto the new data on revenue structures presented above? To answer

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Table 2. Revenue clusters: tax, social security, other revenues and aid.

High taxation/GDP	High social security/GDP	High other revenue/GDP	High aid/GDP	No dominant revenue source: all shares below average
Kenya	Moldova	Yemen, Republic	Ethiopia	Nepal
Israel	Belarus	Botswana*	Burundi	Argentina
Jamaica	Brazil	Congo, Republic	Ghana	Bangladesh
Jordan	Bulgaria	Iran, Islamic Republic	Nicaragua	Bolivia
Morocco	Costa Rica		Rwanda	Cameroon
Namibia	Croatia		Senegal	Chile
Papua New Guinea	Estonia		Tajikistan	China
South Africa	Lithuania		Zambia	Columbia
Tunisia	Romania			Cote d'Ivoire
Turkey	Ukraine			Dominican Republic
Zimbabwe	Uruguay			Ecuador
				El Salvador
				India
				Indonesia
				Kazakhstan
				Korea, Republic
				Malaysia
				Mexico
				Pakistan
				Paraguay
				Peru
				The Philippines
				Sri Lanka
				Thailand

Notes: 59 countries, k-means cluster, k = 6.
Source: Gough with Abu Sharkh M (2010).
* Originally a separate single-country cluster.
GPD = gross domestic product.

this, we first present the mean level of tax and revenue shares for each country grouped according to our welfare regime clusters in Table 3. Table 4 summarises the mean values for the clusters together with their standard deviations. Further detail including box plots is provided in Abu Sharkh and Gough (2010). We summarise these beginning with the broadest category – total state revenues – and then break this down in the constituent revenue streams.

Total state revenues. This includes all revenue sources embracing aid, revenues from oil and minerals, all forms of taxes etc. There is a clear distinction here between welfare regimes A and D, and all other countries. The proto-welfare states of cluster A are associated with greater government revenues, between 25 and 35 per cent of GDP, as would be expected. Israel and Croatia are outliers with revenues over 40 per cent of GDP, and Argentina is an outlier with 14 per cent of GDP. But the anomalous high-spending/low-security regime D in southern Africa also records high revenues, with Botswana showing revenues equal to 45 per cent of GDP.

Regime B records considerably lower revenue shares, averaging 18 per cent of GDP (with China being a notable outlier with 7% of GDP). The average is similar to that of regime E, comprising Indonesia and four countries in central Africa. The lowest revenue shares are found in regime F, centred on the Indian subcontinent – but the three percentage-point difference between it and regime B is small compared with the wide differences in welfare outcomes.

Government tax revenues. If we restrict our attention to tax revenues, then our welfare regime clusters discriminate more poorly still. However, there is one exception: regime D now records by far the highest mean tax share, exceeding the tax take of regime A countries by six percentage points. The proto-welfare states in cluster A record the second highest mean tax share of 17 per cent of GDP, with Israel and Croatia again featuring as high tax outliers.

However, there is a considerable overlap in tax takes between cluster A and clusters B and C. In cluster B, there is considerable variation, with Turkey (20% of GDP), Chile (17%) and Korea (16%) recording tax revenues higher than many in cluster A: the Gough–Wood label of 'informal security regime' does not do full justice to such countries. At the other extreme, China records a remarkably low tax take of 7 per cent of GDP. Regimes E, F and H exhibit tax levels lower or equal to those in B, with considerable overlap. Thus, whatever it is that explains the superior welfare outcomes in cluster B, it is not their tax shares (though, of

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Table 3. Shares of state revenue in GDP, by welfare regime.

	Total revenue	Non-tax revenue	Tax revenue	Of which:	
				Income tax	Social security contributions
A					
Argentina*	14	4.2	9.8	1.8	2.8
Belarus*	28.7	12.1	16.6	3.2	10.2
Brazil	24.3	12.1	12.2	5.1	8.5
Bulgaria	33.7	15.4	18.3	3.8	9.0
Costa Rica	20.9	8.8	12.1	2.7	7.0
Croatia	41.7	15.5	26.2	3.8	13.5
Estonia	28.3	12.3	16	3.5	9.6
Israel	42.8	11.8	31	14.3	6.6
Lithuania*	26	11.4	14.6	2.9	9.4
Poland	32.3	15.9	16.4	4.8	9.8
Romania	25.7	14	11.7	2.4	9.6
Tunisia	29.2	7.9	21.3	6.0	5.0
Ukraine	26.8	12.7	14.1	3.3	8.2
Uruguay	28	11.3	16.7	4.2	8.1
Cluster mean	28.7	11.8	16.9	4.4	8.4
SD	7.5	3.2	5.8	3.1	2.5
B					
Bolivia**	18.4	5.2	13.2	1.2	1.6
Chile**	21.8	5.2	16.6	4.3	1.5
China	7.1	0.3	6.8	0.6	0.0
Colombia**	18.2	4.9	13.3	5.1	0.0
Iran, Islamic Rep.**	23.5	17.1	6.4	3.2	2.7
Kazakhstan**	11.3	1.1	10.2	2.7	0.0
Korea, Rep.	23.3	7.2	16.1	6.1	3.1
Malaysia	19.2	4.9	14.3	7.9	0.2
Mexico*	14.8	3.1	11.7	5.0	1.5
Moldova	24.5	9.8	14.7	0.8	5.6
Paraguay	15.6	5.7	9.9	1.8	1.1
Peru**	17.2	4.9	12.3	3.3	1.2
The Philippines	15.2	1.5	13.7	6.0	0.0
Tajikistan**	10.6	2.9	7.7	0.3	2.1
Thailand	19.5	4.1	15.4	5.6	0.8
Turkey	23.7	3.5	20.2	9.5	0.0
Cluster mean	17.7	5.1	12.7	4.0	1.3
SD	5.1	4.0	3.8	2.7	1.5
C					
Dominican Rep.	16.8	2	14.8	3.0	0.8
Ecuador**	14.1	1.7	12.4		0.0
El Salvador	16	5.3	10.7		2.4
Jamaica**	33.2	8.5	24.7	10.3	1.3
Morocco	29.7	6.2	23.5	7.1	2.6
Nicaragua	18.4	4.6	13.8	2.0	2.5
Sri Lanka	16.8	2.3	14.5	2.1	0.3
Cluster mean	20.7	4.4	16.3	4.9	1.4
SD	7.5	2.5	5.5	3.7	1.1
D					
Botswana**	45.3	30.2	15.1		0.0
Kenya*	20.1	1.3	18.8	5.1	0.0
Namibia*	32.7	2.7	30	10.4	0.2
South Africa*	26.4	2.4	24	13.6	0.5
Zimbabwe*	29.5	3.1	26.4	12.5	0.8
Cluster mean	30.8	7.9	22.9	10.4	0.3
SD	9.3	12.5	5.9	3.8	0.3
E					
Cameroon**	11.2	2.7	8.5		0.4
Congo, Rep.**	32.3	23.1	9.2		1.0
Ghana**	18	1.3	16.7		0.0
Indonesia*	18.2	4.4	13.8		0.4
Tanzania	0				0.0
Cluster mean	19.9	7.9	12.1		0.4
SD	8.9	10.2	3.9		0.4

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Table 3. *Continued*

	Total revenue	Non-tax revenue	Tax revenue	Of which: Income tax	Social security contributions
F					
Bangladesh	9.8	2.2	7.6	1.1	0.0
Cote d'Ivoire	16.6	2	14.6	3.8	1.4
India	12	3	9	3.2	0.0
Nepal	10.6	1.9	8.7	1.6	0.0
Pakistan	14	3.8	10.2	2.7	0.0
Papua New Guinea**	24.8	5.4	19.4	7.7	0.0
Togo					0.0
Cluster mean	14.6	3.1	11.6	3.4	0.2
SD	5.6	1.4	4.5	2.4	0.6
G					
Benin					0.0
Burundi	17.9	2.5	15.4		1.2
Ethiopia	18.5	5.3	13.2		0.0
Mali					0.0
Senegal*	18.1	0.8	17.3		0.0
Cluster mean	18.2	2.9	15.3		0.3
SD	0.3	2.3	2.1		0.6
H					
Mozambique**					
Guinea-Bissau**					
Rwanda*	1.5	9.1			0.2
Zambia**	0.7	18.4			0.0
Cluster mean	1.1	13.75			0.1

Sources and notes: see Gough with Abu Sharkh (2010).
Country** = over 30% dependence of exports on either minerals/ores, or fuels, or both.
Country* = 10–29% dependence of exports on either minerals/ores, or fuels, or both.
Source: Hinojosa et al. (2008), Tables 1a, 1b, 1c.
GPD = gross domestic product; SD = standard deviation.

Table 4. Welfare regimes: mean revenue sources.

Cluster identifier	A	B	C	D	E	F	G	H
No. of countries	14	16	7	5	5	7	5	4
Tax/GDP	16.9	12.7	16.3	22.9	12.1	11.6	15.3	
Non-tax revenue/GDP	11.8	5.1	4.4	7.9	7.9	3.1	2.9	
Total revenue/GDP	28.7	17.8	20.7	30.8	20.0	14.7	18.2	
Income tax	4.4	4.0	4.9	10.4		3.4		
Social contributions	8.4	1.3	1.4	0.3	0.4	0.2	0.3	
Income tax + social contributions	12.8	5.3	6.3	10.7		3.6		
Tax/GDP (SD)	5.8	3.8	5.5	5.9	3.9	4.5	2.1	
Non-tax revenue/GDP (SD)	3.2	4.0	2.5	12.5	10.2	1.4	2.3	
Total revenue/GDP (SD)	7.5	5.1	7.5	9.3	8.9	5.6	0.3	

Source: Gough with Abu Sharkh (2010).
GPD = gross domestic product.

course, the absolute amounts of tax raised per head are higher).

Income tax revenues. When we narrow our focus further to revenues from income tax, the mean levels of all the welfare regime clusters from A to F reveal remarkably few differences (ranging between 3 and 5% of GDP), apart from cluster D, where income taxation averages 10 per cent of GDP. However, the standard deviations are everywhere high, suggesting that factors other than government income tax capacity are critical in discriminating between our welfare regimes (as we would expect).

Social security contributions. When we turn to revenues from social security contributions, the proto-welfare states of cluster A stand out with the average share exceeding 8 per cent of GDP. In all other regimes, their share is trivial. Here, there is a clear link between welfare regime characteristics and one particular

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revenue source, as theories of welfare state financing would predict.

State mineral revenues. Finally, Table 3 also picks out those countries that are dependent on oil and mineral revenues. Simply eyeballing the table reveals little pattern; countries with high mineral revenues are scattered across every welfare regime except for cluster A. The fact that none of the proto-welfare states are heavily mineral dependent is worthy of further investigation. But outside this cluster, there is no clear evidence of either a 'resource curse' or a resource bonanza effect on welfare systems and welfare outcomes.

Conclusions and cautions

The literature review suggests that the '5 I's' explanatory model of welfare states in the West also applies to the development of Western tax states and fiscal systems. However, it has less purchase in understanding welfare and revenue systems in the developing world. In the global South, the pattern of industrialisation, interest formation and representation, institutional development, ideational influences and the entire international environment are very different: more complex, variegated and heterogeneous. Consequently, their ability to explain welfare and revenue systems is more indeterminate.

This report recognises this heterogeneity by using cluster analysis to identify patterns in welfare regimes and revenue systems across the developing world. It has analysed data for 65 non-OECD countries (excluding micro-states) for the year 2000, covering welfare regimes, revenue structures and the relationship between the two.

The hypothesis that higher tax levels would be associated with greater state effectiveness in meeting welfare/security needs is not clearly borne out by this cluster analysis. It is only the scope of *social security contributions* that appears to correlate with proto-welfare states in the developing world. Here, there is evidence of a link between a specific revenue source and proto-welfare state regimes. Moreover, this cluster relies very little on revenues from minerals and oil. Apart from Israel and Costa Rica, this cluster comprises two distinct geographical zones and historical antecedents: the countries of the former Soviet Union and its bloc members, and the relatively industrialised countries of southern South America.

The fast-developing countries of East Asia and some other middle-income countries in Latin America and the MENA region present an interesting anomalous picture in 2000. They exhibit relatively low shares of government revenue, taxes, income taxes and social security contributions, yet record relatively good social outputs and welfare outcomes. This suggests that security and illfare are mitigated by fast-growing average incomes and/or by other domestic, non-state informal institutions. A notable finding is that this cluster includes most countries of externally induced, reactive modernisation (Therborn's fourth route to modernity), where states have been forced over longer periods to adjust to outside developmental pressures (Therborn, 1992). This may indicate the presence of 'developmental states' with considerable infrastructure and steering capacity, but which have not prioritised traditional social policies. Here, one might expect to see new forms of collective management of risk emerge. Indeed, this can already be seen in some of the outliers in this group, such as Korea and Chile (and China).

In contrast to this pattern, we observe a small group of countries in southern–eastern Africa with high spending and high tax revenues, but with poor welfare outcomes. This combination partly reflects the damaging effects of AIDS over the previous decade, but not entirely. Other world regions display low tax and expenditure levels, poor or ineffective social outputs, and low welfare outcomes. In the case of much of sub-Saharan Africa, this partly reflects the impact of the HIV–AIDS pandemic; further analysis of poverty outcomes is required to assess whether this is the major explanation. In the case of India and South Asia, wide gender differences and poor literacy rates are coupled with ineffective social programmes, notwithstanding high rates of economic growth.

Finally, in interpreting these findings, several caveats and limitations should be borne in mind. Data available for a large number of countries are rarely capable of catching the detail we require to map either welfare regimes or state revenue systems. Our expenditure, output and outcome measures all centre on health and education; there are, as of yet, no reliable, regularly collected data on social protection expenditures across the developing world, let alone more subtle measures of mandation and tax expenditures. For example, social protection systems need not entail heavy state expenditures or revenues; they can be mandated by governments but administered privately, and the mandated contributions of employers and employees may not figure as government revenues. Countries like Chile and Korea with such programmes are not picked up and therefore appear in the low-spending cluster B. Nor will social protection necessarily be picked up by social insurance contributions – there has been a trend in recent years to expand social assistance and conditional cash transfers. Again, we cannot even monitor regularised market provision across the world, enabling us to distinguish non-mandatory private insurance and out-of-pocket payments. The paucity of international data on social protection and welfare programmes is remarkable. Finally, the data we have used all refer to

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the year 2000: many new and expanded social programmes have emerged since then that do not figure here.

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