Analysing the Productive and Protective Dimensions of Welfare: Looking Beyond the OECD

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Abstract:

Several theorists have argued that social policy in East Asia can be seen as representing a distinctive welfare ideal type based around 'productive welfare'. However, we have contested such claims in earlier work (Hudson and Kühner, 2009) and, in common with theorists such as Castells, have suggested that some of the OECD welfare states have a distinct bias towards the 'productive' rather than 'protective' dimensions of welfare. In this paper, we build on our earlier work, utilising fuzzy set ideal type analysis (FSITA) to explore the balance between 'productive' and protective' dimensions of welfare state activity. Here we extend our analysis beyond the OECD, incorporating a range of nations on the 'fringe' of the OECD from Latin America, East Asia and the non-OECD parts of Europe. In so doing, we contest simple notions of welfare regimes aligning with regional blocks. Primarily, however, we highlight the advantages of the 'diversity orientated' approach to data analysis that fuzzy set methods facilitate in comparison with standard quantitative techniques. In particular, we utilize FSITA to avoid data availability and reliability issues that have plagued quantitatively informed classifications of global welfare regimes. Not least, we argue FSITA allows for the contextualisation of cases in a way that is sealed to quantitatively driven, comparative research. Thus, we argue FSITA has an important role to play in attempts to extend the inclusiveness of the 'welfare modelling business' in a manner that reflects diverse and highly significant cases beyond the Western lens that dominates the literature.

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1. The Challenges of Classifying Welfare States

The welfare state modelling literature has been fundamentally shaped by Esping-Andersen (1990). Via extensive analysis of data and, especially, through the development of an innovative decommodification index he identified a trichotomy of ideal types: a comprehensive, state led, strongly protective social democratic regime; a safety-net based weakly protective liberal democratic regime; a social insurance based corporatist/conservative regime. Subsequent debate (see Abrahamson, 1999; Arts and Gelissen, 2002; Powell and Barrientos, 2011) has focused intensively on whether Esping-Andersen correctly allocated nations to his three ideal types and, indeed, on whether there are more than three regimes. But, while early critiques of Esping-Andersen's thesis tended to be grounded in theoretical concerns or observations about particular cases, social divisions or specific policy areas (e.g. Bonoli, 1997; Castles and Mitchell, 1993; Ferrara, 1996; Goodin et al., 1999; Jones, 1993, Kwon, 1997; Lewis, 1992), more recent critiques have brought methodological issues to the fore as well. Scruggs and Allen (2006) have provided arguably the most direct *critique* of Esping-Andersen's methods to date as they suggest that his use of standard deviations from the mean to calculate his decommodification index can create "unjustified discontinuities in scoring" (Scruggs and Allan, 2006: 58). Instead, they favour standardized Z-scores that show how far an original score deviates from the respective mean on a continuous scale for the computation of 'overall welfare generosity scores. Similarly, Room (2000) deploys Z-scores in developing a prototype 'human investment regimes' index that captures the productive intent of welfare. While useful for ranking nations, index measures can prove more problematic in terms of classifying them into different types. A more sophisticated alternative comes through cluster analysis. Powell and Barrientos (2004) utilize this technique to allocate nations to welfare types on the basis of data similar to Esping-Andersen's but with new components such as the welfare mix and active labour market policy (ALMP) spending added in for good measure. Cluster analysis is a powerful for welfare regime analysis because it groups countries in such a way that the degree of statistical association between two nations is maximal if they belong to the same group and minimal otherwise. In yet a different, but related approach, Shalev (2007: 291) utilizes factor analysis, a data reduction procedure, which he dubs the 'cousin' of cluster analysis, for his exploration of welfare types.

What all of the above techniques have in common is that they rely on mean averages, standard deviations and a linear understanding of relationships between variables that can mask important elements of cross-national diversity. In particular, they are prone to outlier effects: if a country is exceptionally strong or weak in one dimension this can have an undesirable impact on its classification; this is a particular problem for the calculation of additive indices, but the problem hampers cluster and factor analysis too. Moreover, while useful for identifying statistical patterns in the data, the approaches find it difficult to identify or pay due regard to, important conceptual issues signified by the data. This can result in countries being allocated to ideal types in ways that fail to capture the true meaning of underlying data (Hudson and Kühner, 2008, 2010).

Fuzzy-set ideal type analysis (FSITA) can overcome these issues. Firstly, it does not allow for compensation effects to mask the real extent of diversity. If a welfare state is 'weak' in one area, it cannot 'make up' for this by being 'very strong' in another area. Secondly, the approach allows for the simultaneous analysis and measurement of multiple dimensions and handles these dimensions in a manner that emphasises, rather than ameliorates, difference: fuzzy logic allows us to classify nations on the basis of multiple,

even conflicting, components. Finally, by forcing us to think about the links between data and concepts, FSITA offers a bridge between quantitative and qualitative approaches. In particular, by recognising that not all variation matters, FSITA avoids the distorting effects of extreme values that can thwart some quantitative analyses. These advantages have been well established in the growing fuzzy-set literature (see: e.g. Kvist 2007).

The aim of this paper is to show that the diversity-oriented approach offered by FSITA has a further strength particularly for attempts to broaden the sample of countries included in typologies beyond the OECD. Since Esping-Andersen's original work was published there have been lively discussions highlighting characteristics of welfare policies in East Asia (see Holliday, 2000, Holliday, 2005; Holliday & Wilding, 2003; Kwon 1997, Kwon & Holliday, 2007), Central and Eastern Europe and Latin America and considerable debate about how they might relate to the 'three worlds of welfare' thesis. One can distinguish two broad approaches in this emerging 'global welfare regimes debate': one literature that focuses on single regions exclusively and mainly tries to draw out regional differences in welfare types (Central and Eastern Europe: Fenger 2007, Bohle and Greskovits 2007; Latin America: Martinez Franzoni 2008, Filgueria 1998); and, in contrast, more general approaches that include countries across all continents, and that often end up emphasizing similarities within regions over cross-continental variation (Abu Shark and Gough 2010, Rudra 2007, Gough and Wood 2004, Wood and Gough 2006, Barrientos 2009).

How, then, can FSITA offer advantages in the global welfare regimes debate? Our answer to this question will begin by briefly outlining the substantive premise of FSITA and methodological challenge it addresses (Section 2). Subsequently, we show what we believe are the core advantages it has offered us in our attempts to classify welfare regimes in high-income countries based on their protective and productive intent (Section 3). This will lead us back to a methodological debate about how, more generally, FSITA can help us move beyond common data availability and outlier issues that have hampered the relatively young '*global* welfare modelling business'. In particular, we will demonstrate that FSITA allows comparative social policy analysts to utilise their substantive knowledge not just of concepts and cases but also of *data sources* (Section 4). Thus, we present a classification of welfare states in 55 high and higher-middle income countries across all continents by utilizing different measures and fuzzy-set calibrations based on different country contexts (Section 5). We round off the paper by discussing the findings our method produces before offering an assessment of the strengths and limitations of the approach (Section 6).

2. Beyond the OECD: Utilising FSITA

FSITA has its origins in fuzzy set social science (Ragin, 2000). Its starting point is that cases are best understood as distinct and differing configurations of multiple, conceptually rooted, dimensions. Given this, the first practical step for those undertaking FSITA is to specify the key conceptual dimensions that are the focus of analysis and then proceed by viewing each of these dimensions as a 'set' in which the cases can have varying degrees of membership. Sets are 'fuzzy' because in the real world 'crisp' boundaries are rare occurrences: FSITA reflects this by analysing cases on the basis of their graded, partial memberships of sets.

The operationalisation of FSITA proceeds by assigning each case a score between 0 (full non-membership) and 1 (full membership) for each set being examined. Rather than simply rescaling raw data via arithmetic computation, it allows researchers to reconsider their quantitative and qualitative data from a conceptual viewpoint (Ragin 2007). FSITA thus differs from traditional quantitative approaches as it requires researchers to *calibrate* individual variables on the basis of 'external, dependably known standards' and is not content with using 'very crude but passive' mean averages and standard deviations which depend highly on characteristics of individual samples (Ragin 2008: 77). In short, FSITA demands that researchers consider how raw data relates to verbal descriptors of their concepts and to specify qualitative breakpoints at the top (fully in) and bottom (fully out) of their sets (see Kvist, 1999, 2006 and 2007). Ragin (2000) outlines numerous techniques for specifying the values between these two breakpoints. For FSITA the scores for each fuzzy set are essential. What is equally important is how *multiple* dimensions are combined. Two key principles of logic are utilised to analyse combinations of sets: logical NOT (the negation principle) and logical AND (the intersection or minimum principle). Together, these two principles can be used to calculate all possible combinations of the multiple fuzzy sets being analysed.

In contrast, more systematic studies contributing to the global welfare regimes debate have relied heavily on cluster analysis (see *Table 1*), a method that has considerable weaknesses in its power to allocate welfare systems to ideal types, particularly when conceptually distinct components are being analysed as part of the welfare mix (Hudson and Kühner 2010). More than this, it also cannot be used in a fashion that combines quantitative and qualitative data. It is, therefore, reliant on the use of (rare) data sources that cover a wide sample of nations. Other studies, have relied heavily on case studies of a small number of nations so have lacked any systematic comparison of the author's chosen region with other regions of the world – this has been a particular issues for some discussions of East Asian welfare regimes but has hampered analyses of other regions too (see e.g. Holliday 2000, Aspalter 2006, Barrientos 2009). In both camps, methodological weaknesses have limited the scope and depth of the work: in the former a need to have simple and widely available variables that cover each case restrict the depth and quality of data, while for the latter detailed case study knowledge of a limited number of nations restricts the breadth of the study.

Table 1 somewhere here

FSITA can overcome these limitations precisely because it allows substantive knowledge to be used in a broad way when constructing sets. Potentially this enables comparative social policy analysts to exploit the advantages of quantitative indicators – the breadth of coverage that comes from summary measures – with the advantages of case knowledge – additional context that may be needed to interpret simple indicators. However, to date much of the comparative social policy work utilising fuzzy set methods has proceeded on a cautious basis whereby sets are constructed on the basis of single quantitative indicators but with substantive knowledge used to inform cut off points (see e.g. Ragin 2000, Pennings 2005, Kvist 2007; more generally see also Vis 2008, Vis 2009). This is an approach to FSITA that follows quantitative analysis norms as closely as possible. It also shares some of the limitations, therefore, of standard quantitative methods, not least that a commonly available indicator that covers each case in the sample is needed for each set.

However, the social policy researcher's substantive knowledge about cases – and, indeed, about statistical indicators – often tells us that a good measure for a set in one case may

not be a good measure for the same set in another case. This is particularly so when samples are made up of a large range of countries in which key contexts vary widely. Standard quantitative methods offer us no clear route for combining these kinds of alternative measures into a single study, instead pushing analysts to examine different groups in separate studies. With FSITA, however, this is possible, though we will not pretend that this is easy, straightforward, or even uncontroversial. Indeed, such an approach perhaps pushes the credibility of the method to its limits. In particular, albeit comparatively less severe than in pure macro quantitative approaches, a trade-off remains between the ambition to include in the analysis an increased number of cases and the ability to weight the significance of historical case study evidence and numerical indices equally when calibrating sets. Researchers will continue to rely on information made available by international organisations such as the OECD, IMF and World Bank. Conceptual and methodological issues have been discussed for some of these sources in more detail than for others (see e.g. DeDeken and Kittel 2007). Indeed, researchers that have experienced shaking heads and other expressions of disbelief by colleagues particularly in middle income countries in regards to how their country is represented in these common international databases may wonder how much these can really teach us beyond the highest income countries. While we argue that FSITA is a powerful tool in alleviating such data availability and reliability issues; it cannot and not should be seen as a panacea. There will always be a certain cost attached to assuming a moderate-N, 'bird's eye' perspective of analysis.

3. Productive and Protective Welfare Types Revisited

The potential of FSITA in practice is best illustrated by means of an example. Here we draw on our recent classification of welfare states on the basis of their protective and productive dimensions (see Hudson and Kühner, 2009). We have already noted most attempts to classify welfare states into ideal types follow Esping-Andersen's lead by emphasising the protective intent of social security programmes. More recently, however, this focus on social rights has been challenged. Indeed, Evans and Cerny (2003; Cerny and Evans, 1999) suggest the welfare state has been replaced by a 'competition state', with traditional income protections being gradually dismantled in favour of social investment policies such as education and training that can boost economic competitiveness. Jessop (2000) similarly argues that we have seen the death of the old style 'Keynesian Welfare National State' and the rise of the 'Schumpeterian Workfare Post-National Regime' in which the state constrains social rights in the face of an increasingly competitive global economy. Giddens has forcefully argued that the emergence of globalised knowledge based economy requires greater emphasis on the human investment functions of welfare (Giddens 2006). Meanwhile, Castells and Himmanen (2002) have argued that some welfare states have adapted their structures in light of the emerging informational society. They point to different models found in the two leading 'informational societies': a largely free-market approach with social protections kept to a minimum in the USA, which contrasts with the approach in Finland which has adapted its strongly interventionist social policy frameworks in a manner that both maintains strong social protection and encourages the modernisation of its economy. All these perspectives place or add an emphasis on the 'productive' dimensions of welfare that invest in human capital.

One of the thorniest questions within both welfare regime analysis and this wider discourse on 'productive welfare' has been how best to classify East Asian states. Indeed,

an early criticism of Esping-Andersen's work was that it had misunderstood - and therefore misclassified – Japan, the only East Asian nation included in his typology (Esping-Andersen, 1997). While, as Esping-Andersen (1999) acknowledges, all classifications rely on simplified ideal types that cannot fully capture the complex reality of actual welfare regimes, several theorists – most notably Holliday (Holliday, 2000; Holliday, 2005; Holliday & Wilding, 2003; Kwon & Holliday, 2007) - have argued that social policy regimes in East Asia can be seen as distinct from the three welfare regimes types articulated by Esping-Andersen because of their *productive* – rather than protective - intent. This is a bold claim that presents a direct challenge to dominant approaches in the welfare modelling business[2].

In order to address these above debates, we (Hudson and Kühner, 2009) used FSITA to classify welfare states on the basis of four key components: two reflecting the key protective dimensions found in employment and income protection programmes; and two reflecting productive dimensions found in education and active labour market programmes (ALMPs). Table 2 summarises the variables, data sources and cut-off points we used.

Table 2 somewhere here

These four conceptually rooted dimensions were translated into four fuzzy sets that logically combine to sixteen types. Four of these are 'pure' ideal types. Countries which score high on each of the four fuzzy sets – education investment, training investment, income protection and employment protection – combine both productive and protective elements successfully and constitute the *productive-protective ideal type*. Countries that score high on both productive sets (education and training investment), but do not make it into the protective sets are *purely productive ideal types*. Equally, *purely protective ideal types* score high on income and employment protection but perform less well in education and training investment. *Weak ideal types* score low on both protective and productive fuzzy sets. The remaining types are hybrids; these are also relevant. *Weak productive-protective types* each score high only on one of the respective productive and protective fuzzy set variables – i.e. these cases show high education investment paired with either high income or high employment protection or high training investment with either high income or employment protection. Those countries that score high on both productive sets and also on one of the two protective fuzzy sets are labelled *productive-plus types*. If a country only scores high on one of the productive and none of the protective countries, they were labelled *weak productive*. Equally, those countries with high scores on both protective and one additional productive fuzzy set are labelled *protective-plus types*. *Weak protective types* score high on only one of the two protective fuzzy set variables.

Our findings for 2003 (see Hudson and Kühner 2009) suggest that Finland was at the cross-over point for the productive-protective ideal type, which is interesting since it matched Castells and Himanens' (2002) thesis of the Finnish model being closest to what they call an 'informational welfare state'. Further support for their thesis comes from the USA – which they regard as an unbalanced informational welfare state - being placed strongly within the pure productive set, where it is joined by New Zealand. Both Belgium and Germany were members of the pure protective set, reflecting the corporatist

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[2] Some authors have used the notion of 'productive' welfare to denote government policies aimed at extending formal labour markets (see e.g. Rudra 2007, Barrientos 2009). 'Productive' welfare policies in this sense, i.e. policies promoting labour commodification, are only loosely related to the use of the term in this paper.

orientation of their welfare arrangements. Meanwhile Australia, along with the UK (which is at the cross-over point), were placed within the weak set according to the data, hinting that these two nations steer a mid-course between the American and European traditions – offering a cut down version of each model – rather than sharing the same features as the USA as suggested by most typologies. All four Scandinavian countries were – at least – very close to combining productive and protective elements similar to Finland. This is an important finding, for it is at odds with Holliday's (2000) argument that protective and productive features are mutually exclusive and the basis of different welfare state types. Contrary to Holliday's (2000) suggestion that a focus on productive welfare forms the basis of an East Asian model, neither of the two included East-Asian countries actually qualifies as a purely productive ideal-type.

4. Beyond the OECD?

Although there is more to be said about the classifications identified above, we believe that, fuzzy set ideal type analysis produced a robust set of groupings that stand up well to more detailed case based scrutiny (see Hudson and Kühner, 2009 for a fuller discussion). A further strength of the approach lies in how the method combines indicators for different dimensions (Hudson and Kühner, 2010): the 'dependent variable problem' is no longer only a problem of conceptualisation and indicator operationalisation for as analysts have increasingly acknowledged the multidimensional character of welfare states, it has also become an issue of choosing the most appropriate methodological technique to determine country membership of theoretically-informed ideal-types. Statistical methods rooted in averaging processes (e.g. indices, cluster analysis, factor analysis) work well when dealing with a single component of welfare, but they struggle to cope with more complex pictures of welfare that highlight multiple, *conceptually distinct and 'antithetical'*, components of welfare. Fuzzy set ideal type analysis, meanwhile, excels in offering just such an analysis because distinct and conceptually rooted sets are its starting point. Weakness in one area cannot be compensated for by strength in another with fuzzy set approaches.

However, our operationalisation of the fuzzy set ideal type analysis was cautious in our initial study (Hudson and Kühner, 2009), following quantitative norms to a large degree. In particular, we drew our set memberships entirely on the basis of OECD statistical information – albeit using substantive knowledge to help inform cut-off points for each set. A more radical approach would depart from these quantitative norms, using qualitative data to supplement or even replace quantitative data in determining set memberships. We believe that this ability to utilise data of different types – and, consequently, from different sources – is another strength that fuzzy set ideal type analysis can bring to the welfare modelling business and, crucially, one that can help us undertake analysis *beyond the OECD* nations. There are a number of reasons for wishing to extend the analysis of welfare models beyond the high-income countries but the barriers to so doing are not insubstantial. Chief amongst them is a significant practical hurdle: detailed and comparable quantitative data on welfare state activity is hard to come by for non-OECD nations. Whilst a growing number of international organisations now publish data relating to non-OECD nations (e.g. UNDP, WB, IMF, ILO), this data is much less detailed, patchier in terms of the availability of indicators and often restricted to very general measures. On top of this, the dependent variable problem is magnified when countries operating in very different contexts are compared, a problem illustrated well by the UNDP Human Development Index which provides a reasonable comparison

of nations in broad terms but is too crude an instrument to provide fine-grained judgements on the differences of well-being between the richest nations of the world. We believe that fuzzy set ideal type analysis is strongly placed to address these challenges and proceed now to offer such an analysis.

5. Beyond the OECD: Calibration of Sets

We initially looked at a total of 81 nations classified by the World Bank as upper-middle and high-income and with a total population over 500,000. However, data availability restricted our data sample even within these parameters: 21 of these 81 countries did not report or only insufficiently report to the *International Monetary Fund's Government Financial Statistics* database, our source for education, health and social security spending figures[3]. Another five countries were not covered in the ILO data (2010) or did not provide information needed for our analysis. This left us with a total of 55 countries with a complete set of data, adding to the 30 OECD nations a further 25 countries that are on the cusp of the OECD's level of wealth but excluding very small island states.

Within this sample there is still a significant variation in the context in which social policy operates and for the purposes of our argument we have drawn a broad distinction between those nations that the ILO (2010) classify as having highly commodified labour markets and those with less commodifed labour markets – the latter being those with more than 20 per cent of workers in non-wage (i.e. informal) employment. This distinction becomes important methodologically: as a first, admittedly crude, step some nations will be treated to different membership tests for a set on this basis and we organize our findings with reference to the levels of commodification too.[4]

Table 3 somewhere here

In calibrating our sets the starting point was, where possible, to use the same data sources and cut off points that we utilised in our original study of OECD nations. However, as we had to draw on different data sources and less fine grained measures for the non-OECD nations, a process for 'matching' the new cases with our OECD cases needed to be developed. Whilst we could have used the less fine grained measures for OECD cases too, dropping nuanced measures for less nuanced measures for those cases seemed counterintuitive. Instead, we decided to align the non-OECD data with the OECD data by: (i) cross-referencing OECD cases appearing in both samples to determine where set boundaries might fall in the two data sources; (ii) simplifying the fuzzy set scores for our sets, using a six-point scale rather than a continuous scale to reflect the less fine grained nature of our scores; and, (iii) using the OECD data to determine scores for OECD cases whilst using the alternative data sources for our other cases. This process – which we explain in more detail for each set below - allowed us to determine meaningful membership of each of our four sets with somewhat patchy data and, using the scores for these sets, plot membership of the cases into our original productive-protective ideal types.

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[3] In Hudson and Kühner (2009) we utilized OECD data to compute the education investment indicator. Full details of the data sources used for each set in this paper can be found in the Appendix, table A2.

[4] As was highlighted by a referee of the Compasss working paper series, this makes a crisp distinction between countries above and below the 20 per cent mark and essentially exaggerates the difference between a country A with say a non-wage working population of 19 per cent and a country B with 21 per cent. One could certainly think of more sophisticated ways to take country contexts into account. This rather crude example is merely meant to illustrate the methodological point we are trying to make here.

For our *employment protection set*, we supplemented the data from the OECD Employment Protection Legislation index used in our original study with data from the World Bank Rigidity of Employment Index (REI). The latter relates to 2008 and was published in 2010; we also took the opportunity of updating the EPL data for our OECD nations. Though ostensibly measuring the same activity, i.e. the strength of employment protection, the specifics of the EPL and REI vary considerably in practice. This required us to cross-reference the two data sources using key cases found in both data sets and via visual examinations of scatterplots of the indicators for these common cases (i.e. nations in both data sets). The key reference cases for transformation of the REI data to a six-point fuzzy set calibrated with our EPL based set were as follows:

- 1 (Fully in): Just above Spain
- 0.8 (Mostly but not fully in): Just below Norway
- 0.6 (More or less in): Just below Korea
- 0.4 (More or less out): just above Denmark
- 0.2 (Mostly but not fully out): just above Canada
- 0 (Fully out): at or below the USA

Table 4 summarises the calibrated cut off points for the REI data. Given the simplified six-point fuzzy set used for this data rather than the continuous scale variable used in our initial study – a reflection of the less precise approach to constructing the set – we also recoded the EPL based continuous variable into a six point set and Table 4 outlines the protocol for this too.

Table 4 somewhere here

Following this initial calibration, we cross-referenced the generated set scores with case study knowledge in order to assess their veracity. A key question for us here – especially crucial given the different data sources – was whether the set memberships are constructed in a fashion that respects the differences between the countries with high and low levels of labour market commodification. Our conclusion was some caution needs to be injected into interpreting this set: the level of informal employment in some cases creates a very different context for employment regulation policies. The REI captures data from the largest city(ies) in each nation and only looks at the rules for SMEs - this automatically places the focus on the rules for those in formal employment in urban areas. Obviously this needs to be borne in mind when interpreting ideal type memberships for the set does not capture the level of protection for the whole nation. Nonetheless, our view is that the differing data sources automatically build in a fair relaxation of the test for joining the employment protection set for nations with low levels of labour market commodification: if, as for the OECD nations, data covered the whole nation, this would automatically exclude virtually all of the non-OECD nations from the set. Indeed, we are examining the balance of welfare between productive and protective welfare rather than the efficacy of welfare in each nation.

For the *education investment* set we used the percentage of total welfare spending accounted for by education. We also utilised the same cut-off points for our sets (25% fully in; 15% fully out). The measure was calculated using World Bank data for the 2004-6 period. Though slight variations exist between the accounting practices of the OECD and World Bank, these are not of an order to require cross-referencing between common cases in order to calibrate the different data sources. While there could be a problem in utilising

the same measures for all cases – the education share will tend to be higher in less mature, developmental welfare systems - ultimately, as mentioned above, this set is about policy makers' intent in terms of where they place the balance of their spending efforts. It is therefore still valid, although we stress that it tells us little about the effectiveness of policy, which is not the focus of our analysis here. The final stage in terms of constructing this set was to convert data from a continuous scale to a six point set in order to simplify the analysis. Here we followed the approach used for transforming our EPL set.

We faced considerable challenges with the *income protection* set. The key issue here is that we used a very strict measure of protective intent in our original study, examining the income replacement rates of benefits provided to a long term unemployed single worker with no children (Hudson and Kühner, 2009). The extensive data provided by the OECD on the tax and benefit systems of its members allows for very fine grained analysis of social supports of this kind. No comparable measure exists outside of the OECD. However, as with the employment protection set, it seems unlikely that such a measure would provide a fair test of protective intent for lower income nations and/or those with less mature welfare systems: indeed, our substantive knowledge would lead us to conclude it is not.

Following the approach we used in a subsequent study (Hudson and Kühner, 2011), a second best measure - Botero et al's (2003) unemployment sub-index of their social security index – was considered. However, though arguably the most comprehensive index available, it is rather dated, examining the picture in 1997 for most countries in its sample. Cross referencing data from Botero et al's index with data from the OECD pointed to some significant inconsistencies and case knowledge of those inconsistencies lead us to conclude that the depth of reform in some nations since 1997 rendered usage of Botero et al's data problematic.

This left us with very limited options: in the absence of an authoritative data source that was up-to-date we could not simply utilise quantitative indicators. Equally the large number of cases in our sample of 51 nations precluded a very detailed case study analysis of each system. A compromise position involved consulting the US Social Security Administration's (2010) *Social Security Systems Throughout the World,* supplemented with coverage data from the ILO (2010). The SSA database carries detailed descriptions of the programme rules for a very large sample of social security systems across the globe and has informed other studies using fuzzy sets (see e.g. Vis 2009). Data was extracted from these accounts of key dimensions of each nation's system of support for the unemployed. Given that only mature welfare states tend to offer extensive support for the long term unemployed, here we focused on support for the unemployed in general, examining the coverage of unemployment protection schemes, the length and size of contributions to a scheme required in order to qualify for unemployment benefits and the level of income replaced by benefits. Table 5 lists the programme features examined on this basis and how they were scored. Summaries of the programme data and scores for each case can be found in the statistical Appendix to this paper.

Table 5 somewhere here

We collected OECD data on replacement rates for long term unemployed single average wage production works with no children for those nations where this is possible but updated for 2008 (Netherlands 2007; Cyprus 2007). This data was fuzzified into a continuous scale set using the cut-off points of 20% (fully out) and 70% (fully in), as

with our initial study, but then transformed into a six-point scale as with the other sets described above. The latest version of the OECD's *Benefits and Wages* included data for some non-OECD cases; in such instances, determining which measure of set membership to use (i.e. OECD or SSA) was informed by ILO data on the degree of labour market commodification, with the SSA data used to allocate set scores for those with less commodified labour markets.

Finally, for the *training investment* set we again utilised updated data for the OECD nations, drawing on the latest statistics for 2005-7 from OECD and similar data from EUROSTAT for non-OECD EU members. However, a reclassification of this data into new headings meant we could not follow the approach used in our initial study fully: spending under the headings of 'Training' and 'Supported employment and rehabilitation' were included as productive; other elements (Labour market services; Training; Job rotation and job sharing; Employment incentives; Direct job creation; Start-up incentives) as non-productive. We used the same anchors as in our original study, calculating 'productive' ALMP spending as a share of total ALMP spending and with 20% being fully out of the set and 80% fully in.

For other nations, however, the challenge of assigning set membership was very difficult indeed. The data provided by the OECD is very fine grained and allows us to disaggregate total ALMP spending into different components. The ability to disaggregate in specific components is instrumental since we are interested not in the total amount spend on ALMPs, but in comparing the weight of spending within the ALMP budget. *Eurostat* data allows us to expand the scope of analysis beyond OECD countries by offering this kind of data for a number of Central and Eastern European countries. However, data availability beyond these two groups of countries is limited. The ADB (2008b) includes data on labour market spending, but does not break these down into single components. Labour market training spending is not provided for most of the countries in East Asia. Other databases, such as the ILO Key Indicators of Labour Markets (KILM), and large-scale assessment studies of ALMPs in developing and transitional countries (see Lehman and Kluve 2008, Betcherman et al. 2004) do not provide systematic ALMP spending data that goes beyond those offered by the OECD/Eurostat. Clearly this lack of data is problematic for our analysis and, in order to address the questions of global welfare regimes by way of including a wider sample of countries, we only have the choice between the two strategies proposed in Hudson and Kühner (2011). We accept that these strategies may be seen as contentious by some readers and therefore would argue that our findings should only be seen as tentative at this point.

The first, and in a way preferable, option is to use qualitative knowledge of the cases to allocate scores for each nation with missing ALMP statistics. But this approach is by no means an easy way out. Our ambition is to add these nations to our original classification. Therefore, scores assigned on the basis of our qualitative knowledge must be meaningful when compared to scores in our original study of 23 nations. Also, as the number of cases increases in our sample, it gets more and more challenging to accumulate the qualitative knowledge necessary to assign set membership in a confident manner. Our review of available data and cross-national studies of ALMPs (e.g. ADB, 2008; Benson & Zhu, 2005; Betcherman et al, 2001; ILO, 2001, 2005, 2008) suggested that Korea is likely to have the most extensive set of ALMPs in our sample of seven East Asian regimes and, possibly, Japan to have the second most extensive. We thus concluded that if this broad view of little tradition of training based ALMPs in the

region, with Korea as the leader here, is correct, then we could score Korea as just out of the set and place the other East Asian cases alongside Japan as fully out of the set.

Table 6 somewhere here

The picture is more complicated for non-OECD countries beyond East Asia. ALMPs have gained significance in Central and Eastern Europe as well as in Latin America recently but both the extent and focus of ALMPs vary (Betcherman et al. 2004). Consequently, it is extremely difficult to assign membership scores for the LMT set without further systematic statistical evidence or qualitative knowledge of the included Central European and Latin American cases. So, we are forced to present our analysis in two stages: first, using all four dimensions – including the crude interpretation of labour market training investment for the OECD and East Asian tigers; and second, omitting the LMT dimension from the analysis for the entire sample of countries. The latter is a very crude solution in particular, since it does not chime well with our theoretical identification of the four fuzzy sets. Either way, this simplified approach produces a property space based on just three dimensions; Table 6 outlines this model.

6. Beyond the OECD: Findings.

Using the above methods, our findings (see Table 7) using the updated and extended data are in line with our earlier challenge to Holiday (2000). It is again the United States and New Zealand, and not the East Asian countries that are placed most firmly in the purely productive type. Korea joins the productive-protective set – i.e. rather than subordinating protective to productive welfare functions, it manages to combine both to a significant extent. Japan now joins the group of 'weak' countries. China and Hong Kong are both placed in the weak protective-productive set – albeit with different set membership. They are very different in terms of their employment protection legislation scores: while Hong Kong is fully out of this set, China is mostly but not fully in. At the same time, China is more or less out of the income protection set, mainly because relatively generous unemployment protection only reaches a very small proportion of the unemployed (ILO 2010). Finally, Malaysia and Singapore remain closest to the purely productive ideal type. Indeed, Singapore is the only country next to the United States that is fully in the education investment set and fully out of both the income and employment protection legislation sets.

Table 7 somewhere here

There are some important changes, for theoretical reasons, in the country memberships of the OECD nations when using the updated data. These findings suggest that more detailed case studies may be warranted to understand these changes more fully – and indeed to test the robustness of the country classifications as well as the chosen data and cut-off points across the four sets: Finland was situated at the cross-over point for the productive-protective ideal type for the 2003 data (Hudson and Kühner 2009). After losing its membership of the income protection and education investment set, it is now merely a member of the weak-productive-protective type - alongside a fairly diverse group of countries, namely Greece, Ireland, Lithuania, Slovenia, Romania and the afore-mentioned China and Hong Kong. Similarly, while being very close to the productive-protective ideal type in 2003, Sweden was more or less out of both the income protection and education investment set in 2008 too. By reducing its LMT budget by almost a third and by raising the money spent on employment incentives at the same

time, the OECD data suggests that Sweden has shifted its approach to ALMPs. There are still a number of countries that manage to combine, or are very close to combining, both productive and protective forms of welfare, namely Denmark and Norway - joined this time by a group of more unlikely candidates Poland, Mexico and Turkey all of which, however, have been assigned membership scores on the basis of there relatively high informal markets. Austria kept its place in the protective-plus ideal type. Meanwhile, the Netherlands, due to increases in the relative share of education spending, has moved right to the crossover of the productive-protective ideal-type. Belgium remains the only purely protective country as Germany joins the weak protective set after changes in unemployment protection really came into effect since 2005.

Table 8 somewhere here

The three-dimension model confirms studies underlining regional variation of welfare systems; our preliminary findings would argue against classifications that are oriented along broad geographical units. Similar to above, these findings maybe helpful to suggesting ensuing case study analyses: The Russian Federation joins Latvia in the productive-protective ideal type; Kazakhstan joins the productive-protective (income set), while Lithuania, Poland and Romania are now all firmly in the productive-protective (EPL) set. Croatia is the most protective country in our sample – fully in the employment and almost fully in the income protection set while at the same time fully out of the education investment set. Bulgaria joins the weak ideal type. As for the Latin American nations, Venezuela is fully in the employment protection and education investment set, while the Dominican Republic joins the purely productive countries. Chile and Mexico scores similarly across the three dimensions and join the productive-protective (EPL) ideal-type. Brazil features equally high employment protection legislation scores as Chile and Mexico, but fails to match the relative levels of education investment. Uruguay shows very different characteristics yet again: it also fails to join the education investment set, but is more or less in the income protection set. Employment protection is much weaker in Uruguay compared to Chile, Mexico and Brazil. Argentina and Colombia are members of the weak ideal-type: Argentina is fully out of the education investment set and more or less out of the income and employment protection sets; Colombia is more or less out of the employment protection and education set. It is almost fully out of the income protection set.

7. Conclusions: FSITA and Global Welfare Types

What, then, has our attempt to utilise FSITA for an analysis of welfare in some 55 cases shown? While we have not had the space here to analyse in great detail the implications of our classification for each particular case, we hope, in substantive terms, that at the very least we have underlined still further the view that welfare state types do not simply interface with regional blocs when it comes to the balance between productive and protective dimensions of welfare. We find diversity within Europe, within East Asia and within South America. Likewise there is no clear division between nations with highly or less highly commodified labour markets. As for the productive welfarism argument, there is strong evidence that East Asia is not the exemplar of this approach. Nevertheless, as the main focus of this paper has been about the potential of FSITA methods, and indeed in the face of the preliminary character of these results, we will refrain from the temptation to further analyse our findings.

Data quality and availability typically becomes more of an issue, the more one wants to capture cases outside of the high-income OECD. In the light of this, interesting cases are

still being excluded from analysis too often; studies are still too often forced to revert to what could be labelled 'lowest common denominator' indicators to ensure inclusion of a wide-as-possible country sample. By way of using our recent work on the productive and protective dimensions of welfare we have shown FSITA can overcome some of these issues by providing researchers with the opportunity to combine quantitative statistics and qualitative knowledge of cases systematically as basis for the assignment of membership scores. By doing so, we have demonstrated FSITA allows for careful contextualisation of cases and as such utilizing different types of quantitative evidence might not always be born out of necessity, but may be called for on theoretical grounds.

As a consequence, FSITA has considerable advantages in allowing us to broaden the sample of countries analysed. For some time it has been clear that comparative social policy analysts have been constrained by data availability issues in their efforts to create typologies that go beyond the OECD. The restricting factor here – the choice between using the best possible data but constricting the analysis only to high income countries or using measures that are of lower quality in order to expand the sample of cases - can be transcended through the use of FSITA as we have shown here. We do not pretend that such an approach is straightforward or without problems of its own, but if we are serious about expanding the analysis of welfare state types beyond the OECD then it seems foolish to make the first step in such an approach the abandonment of the best datasets available to social policy analysts. Instead, calibrating data from multiple sources by cross-referencing common cases in these sources and, in so doing, referring back to substantive knowledge of countries, data sources and concepts offers a more nuanced way forward. Crucially, such an approach allows us to assign membership scores to different countries in different ways. Whilst this may be contentious – and certainly transgresses the norms of quantitative research – it is worth stressing here that countries are concepts too[5] and if the researcher's substantive knowledge suggests clear differences in context mean that key concepts need to measured differently in some cases compared to others then why should this be disallowed?

Finally the big picture issue is that the methodological advantages we outline here offer the potential for significant theoretical development in the welfare typology debate. This debate itself is now at a mature stage and two decades after Esping-Andersen's (1990) seminal book it seems odd that despite major changes in the world order much of the welfare modelling research still fails to encompass the far larger group of nations that can be presumed to be 'welfare capitalist' states than was case in the 1980s. Pragmatic and very human constraints relating to the availability of quantitative data on the one hand and limits to the number of cases individuals can have deeper qualitative knowledge about have been the constraining factors here. But this seems an increasingly feeble argument in the contemporary world. Peter Baldwin (1996: 29) is dismissive of the welfare modelling business, arguing that 'Typologizing (...) is the lowest form of intellectual endeavour, parallel to the works of bean-counters and bookkeepers'. Perhaps this is so when purely quantitative approaches take us away from exploring the cases themselves. Because FSITA still allows us to be frugal in our data collection compared to the very detailed historical analyses of cases Baldwin favours, we can gain some of the contemporary relevance that the work of Baldwin or Esping-Andersen lacks. China has a dozen cities with populations that exceed that of Finland and the population of Brazil's largest city, São Paulo, exceeds that of 20 EU member states. If there is a purpose to

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[5] More specifically, rather than being uniform in nature, there are qualitatively important differences in the ways different countries/nation states may be conceptualised and this can be a significant factor that a researcher may need to take into account when constructing their theories and/or designing frameworks for analysis.

typologising, surely, it is to help us to learn more about key cases and to help us in developing robust theories about the pressures welfare systems face and how they respond to them. Finding appropriate methodological tools for allowing us to look beyond the OECD in our typologising seems essential if our typologies are to retain their theoretical purchase.

References

Abu Sharkh, M. and Gough, I. (2010) 'Global Welfare Regimes: A Cluster Analysis', *Global Social Policy*, 10 (1): 27-58.

Abrahamson, P. (1999) 'The welfare modelling business', *Social Policy and Administration*, 33, 394–415.

ADB (2008) *Education and Skills: Strategies for Accelerated Development in Asia and the Pacific.* Manila: ADB.

Arts, W. and Gelissen, J. (2002) 'Three worlds of welfare capitalism or more? A state-of-the-art report', *Journal of European Social Policy*, 12: 137–58.

Aspalter, C. (2006) 'The East Asian Welfare Model', International Journal of Social Welfare, Vol. 15, 290-301.

Baldwin, P. (1996) 'Can we define a European welfare state model?', in: Greve, Bent (ed.) Comparative Welfare Systems, London: Macmillan, 29-44.

Barrientos, A. (2009) 'Labour markets and the (hyphenated) welfare regime in Latin America', *Economy and Society*, 38 (1): 87-108.

Benson, J and Zhu, Y (Eds.) (2005) *Unemployment in Asia.* London: Routledge.

Betcherman, G, Dar, A, Luinstra, A and Ogawa, M (2001) 'Active Labour Market Policies: Issues for East Asia' in Betcherman, G and Islam, R (Eds) *East Asian Labour Markets and the Economic Crisis.* Geneva & Washington, ILO & World Bank, p295-344.

Betcherman, G., Olivas, K., Dar, A. (2004) *Impacts of Active Labor Market Programs: New Evidence from Evaluations with Particular Attention to Developing and Transition Countries*, Social Protection Discussion Paper Series, No. 0402, World Bank.

Bohle, D. and Greskovits, B. (2007) 'Neoliberalism, Embedded Neoliberalism and Neocorporatism: Towards Transnational Capitalism in Central-Eastern Europe,' *West European Politics*, 30 (3): 443 – 466.

Bonoli, G. (1997) 'Classifying Welfare States: a Two-dimension Approach', *Journal of Social Policy*, 26 (3): 351 – 372.

Botero, J, Djankov, S, La Porta, R, Lopez-de-Silanes, F and Shliefer, A (2003) 'The Regulation of Labor', National Bureau of Economic Research Working Paper 9756, http://www.nber.org/papers/w9756

Castells M. and Himanen P. (2002) *The Information Society and the Welfare State: the Finnish Model.* Oxford: Oxford University Press.

Castles, F. and Mitchell, D (1993) 'Worlds of Welfare and Families of Nations', in F. Castles (ed.) *Families of Nations: Patterns of Public Policy in Western Democracies*, Aldershot: Dartmouth.

Cerny, P. and Evans, M. (1999) *New Labour, Globalization, and the Competition State.* Working Paper No. 70, Center for European Studies, Harvard University.

DeDeken, J. and Kittel, B. (2007) 'Social Expenditures Under Scrutiny: The Problems of Using Aggregate Spending Data for Assessing Welfare State Dynamics' in Clasen, J. and Siegel, N. A. (eds.) *Investigating Welfare State Change: The 'Dependent Variable Problem' in Comparative Analysis,* Cheltenham: Edward Elgar.

Esping-Andersen, G. (1990) *The Three Worlds of Welfare Capitalism.* Oxford: Polity Press.

Evans M. & Cerny P. (2003) 'Globalisation and Social Policy', in N. Ellison and C. Pierson (eds) *Developments in British Social Policy 2.* Basingstoke: Palgrave.

Fenger, H. J. M. (2007) 'Welfare regimes in Central and Eastern Europe: Incorporating Post-Communist Countries in a Welfare Regime Typology', *Contemporary Issues and Ideas in Social Sciences,* http://journal.ciiss.net/index.php/ciiss/article/viewPDFInterstitial/45/37

Ferrera (1996) 'The Southern Model of Welfare in Social Europe', *Journal of European Social Policy,* 6 (1): 17 – 37.

Filgueira, F. (1998) 'El nuevo modelo de prestaciones sociales en América Latina: residualismo y ciudadanía estratificada' in Brian Roberts (ed,) *Ciudadanía y política social.* San José: FLACSO/SSRC. 71–116.

Giddens, A. (2006) *Europe in the Global Age.* Cambridge: Polity Press.

Goodin, R, Headey, R, Muffels, R and Dirven, HJ (1999) *The Real Worlds of Welfare Capitalism.* Cambridge: Cambridge University Press.

Gough, I. and Wood, G. (eds.) (2004) *Insecurity and Welfare Regimes in Asia, Africa, and Latin America: Social Policy in Developmental Contexts,* Cambridge University Press: Cambridge.

Holliday, I. (2000) 'Productivist Welfare Capitalism: Social Policy in East Asia', *Political Studies* 48 (4): 706-723.

Holliday, I. (2005) 'East Asian Social Policy in the Wake of the Financial Crisis: Farewell to Productivism?', *Policy and Politics,* 33, 145–162.

Holliday, I. and Wilding, P. (Eds.) (2003) *Welfare Capitalism in East Asia.* London: Palgrave.

Hudson, J. and Kühner, S. (2009) 'Towards Productive Welfare? A Comparative Analysis of 23 Countries', Journal of European Social Policy, (19) 1: 34-46

Hudson, J. and Kühner, S. (2010) 'Beyond the Dependent Variable Problem: The Methodological Challenges of Capturing Productive and Protective Dimensions of Social Policy', *Social Policy and Society,* 9 (2): 167-179.

Hudson, J and Kühner, S. (2011 forthcoming) 'Analyzing the Productive Dimensions of Welfare: Looking Beyond East Asia' in Hwang, G-J (Ed) *New Welfare States in East Asia: Global Challenges and Restructuring.* London: Edward Elgar.

ILO (2001) 'Active Labour Market Policies in East Asia and South East Asia: What Has Been Done and What Can Be Done?', Paper prepared for the World Bank-ILO-JMOL-PDOLE Seminar on Labour Market Policies: their implications for East and South East Asia, Manila, 1-2 March 2001

ILO (2003) *Lifelong Learning in Asia and the Pacific.* Geneva: ILO.

ILO (2005) *Active labour market policies around the world: coping with the consequences of globalization.* Geneva: ILO.

ILO (2008) *Major Skills Challenges Facing SKILLS-AP Member Countries in 2008 and Strategies to Address Them.* Bankok: ILO.

ILO (2010) *World Social Security Report. Providing coverage in times of crisis and beyond*, Social Security Department, ILO: Geneva.

Jessop, B. (2000) 'From the KWNS to the SWPR' in: G.Lewis, S.Gewirtz, and J.Clarke (Eds) *Rethinking Social Policy.* Sage, London.

Jones, C. (1993) 'The Pacific Challenge: Confucian Welfare States' in Jones, C. (Ed) *New Perspectives on the Welfare State in Europe.* London: Routledge.

Kvist, J. (1999) 'Welfare Reform in the Nordic Countries in the 1990s: Using Fuzzy-Set Theory to Assess Conformity to Ideal Types', *Journal of European Social Policy*, 9 (3), 231-252.

Kvist, J. (2006) 'Diversity, Ideal Types and Fuzzy sets in Comparative Welfare State Research' in Rihoux, B. and Grimm, H. (eds.) *Innovative Comparative Methods for Policy Analysis: Beyond the Quantitative-Qualitative Divide.* New York: Springer.

Kvist, J. (2007) 'Fuzzy Set Ideal Type Analysis', Journal of Business Research, 60 (5), 474-481.

Kwon, H. (1997) 'Beyond European welfare regimes: comparative perspectives on East Asian welfare systems', *Journal of Social Policy*, 26 (4), 467-84.

Kwon, S. and Holliday, I. (2007) 'The Korean Welfare State: a Paradox of Expansion in an Era of Globalisation and Economic Crisis', *International Journal of Social Welfare* 16: 242-248.

Lewis, J. (1992) 'Gender and the development of welfare regimes', *Journal of European Social Policy*, 2 (3): 159 – 173.

Martinez Franzoni, J. (2008) Welfare Regimes in Latin America: Capturing Constellations on Markets, Families and Policies, *Latin American Politics and Society*, 50 (2): 67-100.

Midgley, J. and Tang, K-l. (2001) 'Social Policy, Economic Growth and Developmental Welfare', *International Journal of Social Welfare* 10: 244-252.

Orenstein, M. A. and Haas, M. R. (2005) 'Globalization and the Development of Welfare States in Central and Eastern Europe' in Glatzer, M. and Rueschemeyer, D. (eds.) *Globalization and the Future of the Welfare State*, Pittsburgh: University of Pittsburgh Press.

Pennings, P. (2005) 'The Diversity and Causality of Welfare State Reforms Explored with Fuzzy-Sets', Quality and Quantity, Vol. 39, 317-339.

Powell, M. and Barrientos, A. (2004) 'Welfare Regimes and the Welfare Mix', *European Journal of Political Research* 43: 83-105.

Powell, M. and Barrientos, A. (2011) 'An Audit of the Welfare Modelling Business', *Social Policy and Administration*, Vol. 45, No.1, 69-84.

Ragin, C. (2000) *Fuzzy-Set Social Science.* University of Chicago Press: Chicago.

Ragin, C. (2007) *Fuzzy Sets: Calibration versus Measurement*, Compasss Working Paper WP2007-44.

Ragin, C. (2008) *Redesigning Social Inquiry: Fuzzy Sets and Beyond.* University of Chicago Press: Chicago.

Ragin, C. C., Rubinson, C., Schaefer, D., Anderson, S., Williams, E. and Giesel, H. (2006) *User's Guide to Fuzzy-set/Qualitative Comparative Analysis*, Department of Sociology, University of Arizona (www.compasss.org)

Room, G. (2000) 'Commodification and Decommodification: a Developmental Critique', *Policy & Politics*, 28: 331–51.

Room, G. (2002) 'Education and Welfare: Recalibrating the European Debate', *Policy Studies* 23: 37-50.

Rudra, N. (2007) Welfare States in Developing Countries: Unique or Universal? The Journal of Politics, 69 (2): 378–396.

Scruggs, L. and Allan, J. (2006) 'Welfare-state decommodification in 18 OECD countries: a replication and revision', *Journal of European Social Policy*, 16: 55–72.

Shalev, M. (2007) 'Limits and Alternatives to Multiple Regression in Comparative Research', *Comparative Social Research*, 24: 261-308.

Vis, Barbara (2008) The Direction and Scope of Social Policy Change: Regime Specific or Radical Shift Towards Workfare?, *Journal of Comparative Policy Analysis*, Vol. 10, Nr. 2, 151-169.

Vis, Barbara, (2009) Governments and Unpopular Social Policy Reform: Biting the Bullet or Steering Clear?, *European Journal of Political Research*, 48(1): 31-57 (2009)

Barbara Vis (2010) *The Politics of Risk-Taking: Welfare State Reform in Advanced Democracies.* Amsterdam: Amsterdam University Press

Wood, Geof and Gough, Ian (2006) 'A Comparative Welfare Regime Approach to Global Social Policy', *World Development*, 34 (10): 1696-1712.

Table 1. Typologies of global welfare – an overview

Study	Types of welfare	Dimensions	Extraction method
Fenger (2007)	*Eastern and Western Europe:* (a) conservative-corporatist type; (b) social-democratic type; (c) liberal type; (d) former-USSR type; (e) post-communist European type; (f) developing welfare states type	Characteristics of governmental programmes; Social situation; political participation	Hierarchical cluster analysis; n=30; 19 indicators used
Martinez-Franzoni (2008)	*Latin America:* (a) state-targeted type; (b) state-stratified type; (c) informal-familialist	Commodification; decommodification; defamiliarization; performance	Hierarchical cluster analysis; n=18; 19 indicators used
Wood and Gough (2006)	*Asia, Eastern Europe, Latin America and Africa:* (a) actual or potential welfare state regimes; (b) more effective informal security regimes; (c) less effective informal security regimes; (d) externally dependent insecurity regimes	HDI; public spending; international flows of aid and remittances	K-means cluster analysis; n=56; 3 indicators used
Rudra (2007)	*Asia, Eastern Europe, Latin America and Africa:* (a) productive; (b) dual; (c) protective	Commodification; decommodification	Hierarchical cluster analysis; n=32; 10 indicators used
Abu Sharkh and Gough (2010)	*Asia, Eastern Europe, Latin America and Africa:* (a) proto welfare state regimes; (b) successful informal security regimes; (c) failing informal security regimes; (d) failing informal security regimes; (e) insecurity regimes	Governmental and public responsibility for social resources; state 'throughputs'; official aid and remittances from overseas migrants	Hierarchical and k-means cluster analysis; n=65; 8 indicators used

Table 2. Productive – Protective Indicators (1994-2003)

Dimension	Indicator	Fully In	Fully Out	Data Sources
Education Investment	Public education spending as a share of total public social and education spending	25%	15%	*OECD Education at a Glance; OECD Social Expenditure Database*
Training Investment	Training component of ALMP budgets as a share of the total ALMP budget	80%	20%	*OECD Social Expenditure Database*
Income Protection	Net replacement rate of benefits (including social assistance payments) for a single, long-term unemployed worker without any children at average production worker wage	70%	20%	*OECD Tax and Benefit Models*
Employment Protection	OECD Employment Protection Legislation Index (EPL) (version 1)	3.0	0.5	*OECD Employment Outlook*

Table 3. Country Sample

Argentina	Denmark	Kazakhstan	Serbia
Australia	Dominican Republic	Korea	Singapore
Austria	Estonia	Latvia	Slovak Republic
Belarus	Finland	Lithuania	Slovenia
Belgium	France	Malaysia	South Africa
Brazil	Germany	Mexico	Spain
Bulgaria	Greece	Netherlands	Sweden
Canada	Hong Kong, SAR	New Zealand	Switzerland
Chile	Hungary	Norway	Turkey
China	Ireland	Panama	United Kingdom
Colombia	Israel	Poland	United States
Croatia	Italy	Portugal	Uruguay
Cyprus	Jamaica	Romania	Venezuela
Czech Republic	Japan	Russian Federation	

Table 4. Set Membership Scores for Employment Protection Set

Score in new set	Score in REI	Score in original EPL set
1 (Fully in)	50	0.9 to 1
.8 (Mostly but not fully in)	44	0.7 to < 0.9
.6 (More or less in)	38	0.5 to <0.7
.4 (More or less out)	8	0.3 to <0.5
.2 (Mostly but not fully out)	6	0.1 to <0.3
0 (Fully out)	0	0.00 to <0.1

Table 5. Coding SSA Data into Income Protection Set

Dimension	Scoring[6]
Coverage [7]	0 points for coverage under 20% (or no benefit) .1 points for coverage between 20% to 40% .2 points for coverage over 40%
Qualifying Period	0 if more than 12 months or no benefit .1 points if > 6 and up to 12 months .2 points if up to 6 months .3 points if no qualify period
Duration	0 if less than 6 months or no benefit .1 points if 6 – <12 months or lump sum .2 points if 12 months or more.
Benefit Level[8]	0 points if no benefit .1 if means tested OR pegged to (or below) minimum wage or lump sum .3 if earnings related but up to 50% (- .1 if also means tested) .4 if earnings related but more than 50% (- .1 if also means tested)

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[6] In creating an index from SSA data the following scores guide us - they combine together to form a maximum that could exceed 1.0 - reflecting that there may be different routes to becoming a full member of the set – but 1.0 is, obviously, the maximum possible score. The points listed in this column are used to code up the programme descriptions and then added together and matched against the 6 point scale, with rounding down to the nearest point on the scale used (so a score of 0.7 becomes 0.6 for example).

[7] We should expect (*pace* Barrientos) countries with weakly commodified labour markets to have informal welfare regimes that have low levels of benefit coverage. However, nations serious about improving the protective intent of their systems should be moving away from this – so we examine coverage for this reason. Here we use ILO data to cross reference

[8] Higher points and easier scoring in this category reflect its increased importance *pace* Esping-Andersen's DI.

Table 6. Three Dimensions Model

Ideal Type Label	Characteristics	Model[9]
Productive (P)	membership of the education investment (EI) set only	EI ● ~EP ● ~IP
Productive Protective (PP)	membership of the education investment (EI), employment protection (EP) sets and income protection (IP) sets	EI ● EP ● IP
Productive Plus Employment Protection (PEP)	membership of the education investment and employment protection sets, non-membership of the income protection set	EI ● EP ● ~IP
Productive Plus Income Protection (PIP)	membership of the education investment and income protection sets, non-membership of the employment protection set	EI ● ~EP ● IP
Not Productive (N)	non-membership of the education investment set	~EI

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[9] In Boolean logic ● denotes AND while ~ denotes OR (see Ragin, 2000)

Table 7. Fuzzy set ideal type country memberships, 2005-2008

Productive-Protective:
Netherlands; Korea

Productive Plus:
Denmark, Estonia, Norway;
Poland, Mexico, Turkey

Protective Plus:
Austria, Latvia, *Netherlands*

Productive:
New Zealand, United States

Weak Productive-Protective:
Cyprus, Finland, Greece, Hong Kong, Ireland, Lithuania, Slovenia; *China, Romania*

Protective:
Belgium

Weak Productive:
Hungary, Slovak Republic, Singapore, Canada; *Malaysia*

Weak Protective:
Czech Republic, France, Germany, Italy, Spain, Sweden; *Portugal*

Weak:
Australia, Bulgaria, Japan, United Kingdom

Notes: Less commodified countries, i.e. countries with >20 per cent of non-wage workers of total employment, in Italics. Strictly interpreted, the Netherlands should be in the protective plus set, but under our original cut-off points for our 2009 study it would be borderline for the productive protective set so we have indicated that here.
See Appendix Table A1 and Table A2 for fuzzy- set membership scores for each country and data sources.

Table 8. Three dimension fuzzy set ideal type country memberships, 2005-2008.

	Productive-Protective: Latvia, Russian Federation, Netherlands; *Korea, Venezuela* Purely Productive: Canada, Hungary, Israel, New Zealand, Singapore, Slovak Republic, South Africa, United States; *Dominican Republic, Jamaica, Malaysia*	
Productive-Protective (Income): Denmark, Hong Kong, Ireland; *Belarus; Kazakhstan*	Purely Protective: Austria, Belgium; *Croatia*	Productive-Protective (EPL): Cyprus, Estonia, Lithuania, Norway, Slovenia; *Chile, China, Mexico, Panama, Poland, Romania, Turkey*
Weak Protective (Income): Switzerland; *Uruguay*		Weak Protective (EPL): Czech Republic, Finland, France, Germany, Greece, Italy, Spain, Sweden; *Brazil, Portugal, Serbia*
	Weak: Australia, Bulgaria, Japan, United Kingdom; *Argentina, Colombia*	

Notes: Less commodified countries, i.e. countries with >20 per cent of non-wage workers of total employment, in Italics.
See Appendix Table A1 for fuzzy- set membership scores for each country and data sources.

Appendices

Table A1. Fuzzy-set membership by country, 2005-2008.

	Income Protection (2008)	Employment Protection (2008)	Education Investment (2007)	Training Investment (2005)	Percentage of non-wage workers of total employment
Argentina	*0.4*	*0.4*	*0*	*-*	*20-40*
Australia	0.2	0.2	0.4	0	<20
Austria	0.6	0.6	0.2	0.6	<20
Belarus	*0.8*	*0.4*	*1*	*-*	*20-40*
Belgium	0.6	0.6	0.4	0.2	<20
Brazil	*0.4*	*1*	*0.4*	*-*	*20-40*
Bulgaria	0	0.4	0.4	0	<20
Canada	0	0.2	0.6	0.2	<20
Chile	*0.2*	*0.8*	*1*	*-*	*20-40*
China	*0.4*	*0.8*	*1*	*0*	*20-40*
Colombia	*0.4*	*0.4*	*0.4*	*-*	*>40*
Croatia	*0.8*	*1*	*0*	*-*	*20-40*
Cyprus	0.4	0.6	1	0	<20
Czech Republic	0.2	0.6	0.2	0	<20
Denmark	0.8	0.4	0.8	0.6	<20
Dominican Republic	*0*	*0.4*	*1*	*-*	*>40*
Estonia	0	1	0.6	0.6	<20
Finland	0.4	0.6	0.4	0.6	<20
France	0.2	1	0.2	0.4	<20
Germany	0.4	0.6	0	0.4	<20
Greece	0	0.8	0	0.6	..
Hong Kong, China	0.6	0	1	0	..
Hungary	0	0.4	0.6	0	<20
Ireland	0.6	0.2	0.6	0.4	<20
Israel	0.4	0.4	1	-	..
Italy	0	0.6	0	0.2	<20
Jamaica	*0*	*0*	*1*	*-*	*>40*
Japan	0.4	0.4	0.2	0	<20
Kazakhstan	*0.6*	*0.4*	*1*	*-*	*20-40*
Korea	*0.6*	*0.6*	*1*	*0.6*	*20-40*
Latvia	0.6	0.6	1	0.2 (2007)	<20
Lithuania	0	0.6	1	0	<20
Malaysia	*0*	*0.4*	*1*	*0*	*20-40*
Mexico	*0.2*	*1*	*1*	*0.6*	*20-40*
Netherlands	0.6	0.6	0.4 (0.49)	0.6	<20
New Zealand	*0.4*	*0.4*	*1*	*0.6*	*20-40*
Norway	0.4	0.8	0.8	0.8	<20
Panama	*0*	*1*	*1*	*-*	*20-40*
Poland	*0.4*	*0.6*	*0.6*	*0.6*	*20-40*
Portugal	*0*	*1*	*0.4*	*0.4*	*20-40*
Romania	*0.2*	*0.8*	*0.6*	*0*	*20-40*
Russian Federation	0.8	0.6	0.8	-	<20
Serbia	*0.4*	*0.6*	*0*	*-*	*20-40*

Singapore	0	0	1	0	<20
Slovak Republic	0	0.4	0.6	0	<20
Slovenia	0.2	0.8	0.8	*0*	<20
South Africa	0.4	0.4	1	-	<20
Spain	0	1	0.2	0	<20
Sweden	0.4	0.6	0.4	0.4	<20
Switzerland	0.6	0.2	0.4	0.8	<20
Turkey	*0.2*	*1*	*1*	*1*	*>40*
United Kingdom	0.4	0.2	0.4	0	<20
United States	0	0	1	0.8	<20
Uruguay	*0.6*	*0.4*	*0*	*-*	*20-40*
Venezuela	*0.6*	*1*	*1*	*-*	*>40*

Table A2. Data Sources

Variable	Notes	Sources
Education investment Total government education spending as share of total education, health and social security spending	Argentina, Chile, Croatia, Dominican Republic, Korea, Malaysia, Mexico, Panama, Sweden, Turkey, Uruguay, Venezuela: Consolidated central government spending (includes social security funds); China: Budgetary central PLUS state spending. All data for 2004-2006, except Bulgaria (1998), Malaysia (1995), Mexico (2000), Sweden (1998), Turkey (1998).	IMF Government Finance Stastitics; accessed through Economic and Social Data Service (ESDS) International portal, Accessed through at: http://www.esds.ac.uk/
Training investment Labour market training PLUS supported employment as percentage of total ALMP spending	2005-2007	OECD Social Expenditure Database, accessed through OECD portal at: http://www.oecd.org; Eurostat Labour Market Policy Database, accessed through Eurostat portal at: http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home
Income protection: Net replacement rates for long-term single unemployed with no children; earning average production worker (APW) wage; after tax and including unemployment benefits, social assistance, family and housing benefits in the 60th month of benefit receipt	2008, except Netherlands and Cyprus (2007)	OECD Tax Benefit Models, accessed at: http://www.oecd.org
Employment protection: Overall Employment Protection Legislation Index (EPL Version 1); Rigidity of Employment Index	2008	OECD Employment Outlook; accessed through OECD portal at: http://www.oecd.org World Bank, Doing Business Project, accessed through World Bank statistics portal at: http://data.worldbank.org/

Statistical Annex SA1. Income Protection Set Underlying Data

	Coverage	Months of contributions/employment required to qualify for unemployment benefits	Percentage of the salary covered by unemployment benefits	Index scores
Argentina	Private-sector employees, temporary and casual workers; exclusions: self-employed, household workers, public-sector employees, and teachers in private institutions. ILO: 8.7% covered by CUB	6 months of contributions in the 3 years before unemployment; 90 days in the 12 months before unemployment for temporary workers	50% of insured's best wage in the 6 months before unemployment. The benefit is paid for 4 months if the insured has 12 to 23 months of contributions; for 8 months with 24 to 35 months; for 12 months with 36 months or more.	Coverage: 0 Qualifying period: 0.2 Duration: 0 Benefit level: 0.3 SCORE: 0.4
Brazil:	Persons employed in formal private sector, household workers, survivors of slave labour, and fishermen; exclusions: self-employed persons. ILO: 7% covered by CUB	Benefit varies according to whether the insured had 6 months to 11 months of coverage, 12 months to 23 months of coverage, or 24 months or more of coverage in the last 36 months; paid for 3 to 5 months, depending on the insured's duration of coverage; under special conditions, the benefit may be extended for an additional 2 months.	Means-tested; monthly benefit according to average earnings in the last 3 months of employment: 80% of average earnings is paid with average earnings up to 767.60 reais; plus 50% of earnings between 767.61 reais and 1,279.46 reais.	Coverage: 0 Qualifying period: 0.2 Duration: 0 Benefit level: 0.3 SCORE: 0.4
Bulgaria	Employed persons. ILO: 21% NCUB	The insured must have at least 9 months of coverage.	The benefit is equal to 60% of the insured's average earnings in the last 9 months. The duration of benefit entitlement varies according to the length of the coverage period. The benefit is paid for up to 4 months with 3 years of coverage; for up to 12 months with more than 25 years of coverage.	Coverage: 0.2 Qual: 0.1 Duration: 0.0 Benefit: 0.4 SCORE: 0.6
Chile	(A) Employed persons; exclusions: persons younger than age 18, household workers, apprentices, pensioners (unless partially disabled), self-employed persons, civil servants, and armed forces personnel. (B) Individual severance account: mandatory coverage for employed persons hired on	(A) Insured must be involuntarily unemployed with at least 12 months or 52 weeks of contributions in the previous 2 years (B) Insured must be involuntarily unemployed with at least 12 months of contributions; insured persons with fixed-term contracts must have at least 6 months of contributions since they first joined the system or since the individual account was last fully drawn down.	(A) For the first 90 days, 17,338 pesos a month; between 91 days and 180 days, 11,500 pesos a month; between 181 days and 360 days, 8,669 pesos a month. (B) Benefit depends on individual account balance plus accrued interest. Decreases each month and lasts from 1 to 5 months depending on the length of the contribution period.	Coverage: 0.1 Qualifying period: 0.1 Duration: 0 Benefit levels: 0.1 SCORE 0.2

	or after October 2, 2002; voluntary coverage for employed persons hired prior to October 2, 2002. ILO: 20.1% covered by CUB			
China	All employees of urban enterprises and institutions. ILO: 12.9% covered by CUB	Must have at least 1 year in covered employment; be involuntarily employed; not be receiving old-age benefits; be registered at, and regularly reporting to, a local employment-service agency; and be actively seeking employment. The benefit may cease or be suspended for refusing a suitable job offer.	Benefit amount set by local governments at a level higher than the local public assistance benefit but lower than the local minimum wage. Benefit paid for up to 1 year with less than 5 years of coverage, for up to 1.5 years with 5 or more but less than 10 years of coverage, or for up to 2 years with 10 or more years of coverage.	Coverage: 0 Qualifying period: 0.1 Duration: 0.2 Benefit levels: 0.1 SCORE: 0.4
Colombia	All private-sector employees, including persons working less than 20 days with earnings lower than the legal monthly minimum wage; voluntary coverage for public-sector employees and self-employed persons. ILO: ..	The insured must be unemployed or retired	The benefit is equal to 1 monthly wage for each year of employment; a reduced benefit is paid for less than a year of employment. (The insured may make authorized partial withdrawals from the individual account to meet specified contingencies)	Coverage: 0.1 Qualifying period: 0.1 Duration: 0.1 Benefit levels: 0.1 SCORE: 0.4
Croatia	Employed persons with insurance coverage based on an employment contract, including public-sector employees, civil servants, military and police personnel, and judiciary officers: exclusions: self-employed persons and farmers. Unemployment assistance: paid to unemployed persons who participate in vocational training ILO: 28.6% covered by CUB	The insured must be between ages 15 and 65 with at least 9 months of employment in the last 24 months; Unemployed workers with at least 35 years (men) or 30 years (women) of employment are covered until they are reemployed.	The benefit is equal to the insured's average wage in the last 3 months. The benefit is paid for between 78 and 390 days, depending on the duration of previous employment; unemployment assistance: 976.60 kunas a month is paid	Coverage: 0.1 Qualifying period: 0.1 Duration: 0.2 Benefit levels: 0.4 SCORE: 0.8
Dominican Republic	None	..	..	0

Hong Kong	All residents of Hong Kong. ILO: 25.2% covered by NCUB	Persons between ages 15 and 59 with at least 7 years of residence, including 1 year of continuous residence immediately before claiming the benefit. There are no requirements for length of residence for Hong Kong residents younger than age 18. Benefits are income-tested and asset-tested on an individual basis if living alone; if living with other family members, the total income and assets of all family members are taken into account for determining eligibility.	HK$1,675 a month for a person living alone or HK$1,200 to HK$1,490 a month if living with other family members, depending on the number of family members; plus special grants to meet the specific individual needs of recipients.	Coverage: 0.1 Qualifying period: 0.3 Benefit level: 0.1 Duration: 0.2 SCORE: 0.6
Israel	Employed persons residing permanently or temporarily in Israel aged 20 (under certain circumstances, aged 18) to the retirement age for the earnings-tested old-age pension for men (age 66.7, rising gradually to age 67). ILO: 26.6% covered by CUB	Regular employee: Must have at least 360 days of contributions in the last 540 days before unemployment. Daily employee: Must have at least 300 days of contributions in the last 540 days before unemployment. The maximum duration of payment varies according to the category of beneficiary, from 50 to 175 days.	A daily benefit is paid equal to between 20% and 80% of the insured's average daily wage in the last 75 days of work before unemployment.	Coverage: 0.1 Qualifying period: 0.1 Benefit level: 0.3 Duration: 0.0 SCORE: 0.4
Jamaica	None	..	..	SCORE: 0
Kazakhstan	Employed persons between age 16 and the pensionable age. ILO: 5% covered by CUB	Must be registered at an employment office and able and willing to work Also paid to students who register as unemployed in the 12 months after graduation.	The minimum benefit is 100% of the minimum wage. The benefit is paid monthly for up to 6 calendar months. Dependent's supplement: 10% of the unemployment benefit is paid for each dependent.	Coverage: 0 Qual: 0.2 Duration: 0.1 Benefit: 0.3 SCORE: 0.6
Korea	All employees younger than age 65; exclusions: persons working less than 60 hours a month or less than 15 hours a week, family labour, and self-employed persons. ILO: 37.2%	Must have at least 6 months of coverage during the last 18 months, be registered at an employment security office, and be capable of and available for work.	The benefit is equal to half of the insured's average daily earnings during the 3 months immediately before unemployment. The benefit is paid after a 7-day waiting period for up to 90 days to those with between 6 and 12 months of coverage; for up to 240 days with more than 10 years of coverage or aged 50 or older or disabled	Coverage: 0.1 Qual: 0.2 Duration: 0 Benefit: 0.3 SCORE: 0.6
Latvia	Employed persons; active	The insured must have at least 1 year of	The monthly benefit varies according to the length	Coverage: 0.2

	military personnel and their spouses; persons residing in Latvia caring for a child younger than 18 months; and recipients of the child rearing allowance, child care benefit, sickness benefit, or maternity benefit; exclusions: self-employed persons. ILO: 34.8% CUB	contributions, including 12 months in the last 18 months before unemployment, and be registered at the state employment office. Special conditions apply to persons caring for a child younger than 18 months, persons caring for a disabled child younger than age 16, formerly disabled persons who have regained the capacity to work, and persons in military service.	of the coverage period and the duration of unemployment. The benefit is equal to 50% of the insured's average earnings in the last 6 months with 1 to 9 years of coverage, 55% with 10 to 19 years, 60% with 20 to 29 years, and 65% with 30 years or more. The benefit is paid for a maximum duration of 9 months in any 12 month period and the benefit decreases over time	Qual: 0 Duration: 0.1 Benefit level: 0.3 SCORE: 0.6
Malaysia	None	..	..	0
Mexico	ILO: 7.5% in CUB	Unemployed persons with at least 5 years of service may withdraw an amount equal to 90 days of their average earnings in the last 250 weeks of contributions or 11% of the individual account balance, whichever is lower.	Unemployed persons with 3 to 5 years of service and at least 12 bi-monthly contributions to the Social Security Institute may withdraw an amount equal to 30 days of their covered earnings for contribution calculation purposes, up to 10 times the legal monthly minimum wage in Mexico City. The legal minimum daily wage in Mexico City is 54.80 pesos.	Coverage: 0 Qual: 0.1 Duration: 0.1 Benefit: 0.1 SCORE: 0.2
Panama	None	..	..	..
Poland	Employed persons. ILO: 18.4	The insured must be older than age 18, registered with the employment bureau, able and ready to work, and involuntarily unemployed and must not have received any redundancy pay or compensation. The insured's earnings must have been at least equal to the minimum wage during at least 365 days in the 18-monthperiod before unemployment (periods of military service, parental leave, and receipt of allowances are credited toward the 365-day period). Preretirement benefit: The insured is unemployed, eligible to receive the unemployment benefit, and aged 63 with at least 25 years of coverage (men) or aged 58 with at least 20 years of coverage (women); involuntarily unemployed and aged 60 with at least 25 years of coverage (men) or aged 55 with at least 20 years of coverage	The benefit is a flat-rate base amount (538.30 zlotys) for those with between 5 and 20 years of employment; 80% of the base amount is paid with less than 5 years; 120% of the base amount is paid with more than 20 years. The benefit is paid for 6 to 18 months, depending on the unemployment rate in the region Preretirement benefit: The benefit is equal to 90% of the old-age pension paid at age 65 (men) or age 60 (women).	Coverage: 0 Qual: 0.1 Duration: 0.2 Benefit: 0.1 SCORE: 0.4 Preretirement benefit: Qual: 0 Duration: 0.2 Benefit: 0.4 SCORE: 0.6

		(women); or any age and involuntarily unemployed with at least 40 contributory or noncontributory years of coverage (men) or at least 35 contributory or noncontributory years of coverage (women).		
Romania	Employed persons with individual labor contracts; civil servants; military personnel; certain officials within the executive, legislative, and judicial authorities; craft cooperative members; young graduates; and any worker (excluding farmers) with annual earnings equal to at least nine times the national average wage (9,693 new lei) ILO: 24% CUB	The insured must have at least 12 months of contributions in the last 24 months before unemployment and be involuntarily unemployed, registered at the local labor office, and actively seeking work. First-time jobseekers older than age 18 with no independent income who have not found employment 60 days after the end of their school or university studies (30 days after the end of military service) are also eligible.	The benefit is equal to 75% of the national monthly minimum wage and is paid for 3 months if the insured has at least 5 years of contributions; 9 months with more than 5 years; 12 months with more than 10 years. A supplement is paid with at least 3 years of contributions. The maximum supplement is paid for 20 years of more of contributions. Graduate first-time jobseekers receive 50% of the national monthly minimum wage for up to 6 months.	Coverage: 0.1 Qual: 0 Duration: 0 Benefit: 0.1 SCORE: 0.2
Russia	Citizens between ages 16 and 59 (men) or ages 16 and 54 (women). ILO: 23.4%	Must be registered at an employment office, have 26 weeks of full-time employment in the last 12 months (or the 26-week equivalent for part-time employment), and be able and willing to work	Benefits are calculated as a percentage of previous average wages and are paid for up to 12 months. The benefits decrease over time: 75% of the previous average monthly wage is paid for the first 3 months; 60% for the next 4 months; and 45% for the last 5 months.	Coverage: 0.1 Qualifying: 0.2 Duration: 0.2 Benefit level: 0.4 SCORE: 0.8
Singapore	None	..	..	0
South Africa	All employees working for more than 24 hours a month, including household and seasonal workers and employees in national and provincial governments; exclusions: self-employed persons; government employees and employees who work fewer than 24 hours a month. ILO: 10.8%	The insured's entitlement to the benefit increases at a rate of 1 day of benefits for every 6 completed days of employment, up to 238 days in the 4-yearperiod before the date of application for the benefit. The insured must have at least 13 weeks of contributions during the last 52 weeks and be capable of and available for work.	Benefit varies between 38% and 58% of average earnings in the last 6 months, depending on the insured's period of service, and is paid for up to 8 weeks.	Coverage: 0 Qualifying: 0.2 Duration: 0 Benefit levels: 0.3 SCORE: 0.4

Turkey	Employees (including foreign nationals) aged 18 or older working under a service contract in the public or private sector and certain other specified groups. Exclusions: Civil servants, workers in agriculture and forestry, household workers, military personnel, students, and self-employed persons. ILO: 12.7% CUB	Must have at least 600 days of contributions in the 3 years before unemployment, including the last 120 days of employment.	The minimum daily benefit is equal to 50% of average daily earnings, based on the last 4 months of earnings. The benefit is paid for 180 days to an insured worker with at least 600 days of contributions; for 240 days with at least 900 days of contributions; and 300 days with at least 1,080 days of contributions. The monthly benefit must not be higher than the minimum wage for the industry in which the insured worked.	Coverage: 0 Qual: 0.1 Duration: 0.1 Benefit: 0.1 SCORE: 0.2
Uruguay	Private-sector employees in industry and commerce, rural workers, and household workers. Exclusions: Self-employed persons. ILO: 12.5% NCUB	The insured must have at least 6 months of work in the 12-month period before unemployment; workers who are paid at irregular intervals must have at least 5 months of work and have earned at least 8,892 pesos in the 12-month period before unemployment began	For full unemployment, workers who are paid monthly or at irregular intervals receive a monthly benefit of 50% of average earnings in the 6 months before unemployment; a monthly benefit of 12 days of earnings before unemployment for workers who are paid daily. Partial unemployment benefit: The monthly benefit is 12 days of earnings before partial unemployment, minus the value of current monthly earnings. Dependent's supplement: 20% of the benefit.	Coverage: 0 Qual: 0.2 Duration: 0.1 Benefit levels: 0.3 SCORE: 0.6
Venezuela	Private- and public-sector employees, members of cooperatives, household and custodial workers, self-employed persons, and apprentices	The insured must have at least 12 months of contributions in the 24 months before unemployment began and must be available for training or suitable employment.	The benefit is 60% of the insured's average monthly earnings in the last 12 months and is paid for up to 5 months.	Coverage: 0.1 Qual: 0.1 Duration: 0 Benefit : 0.4 SCORE: 0.6