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The European Single Currency Project and the concept of convergence for European Welfare States: the ideal and the reality

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Abstract

Using a country comparative case based methodology that combines the methods of Cluster Analysis and Qualitative Comparative Analysis (QCA) this research examines whether there is any quantitative evidence that countries who are members of the Euro currency have experienced a convergence of the outputs and outcome of the European Welfare State for Euro member countries. The analysis concludes there is little evidence of a holistic Euro based convergence of either welfare outputs or outcome. It is argued that outputs such as full employment, equity of health care provision, poverty reduction and educational attainment might reasonably be expected to converge in the longer term, but only if the Euro crisis results in a much more planned and coordinated interventionist policy approach to the macro political economy. An outcome, however, such as subjective well-being, is potentially influenced by other historical and cultural factors and is only partially determined by macro political economic policy.

Introduction

The European Currency Project was launched in 1999 and shared by eleven countries: Belgium, Germany, Ireland, Spain, France, Italy, Luxembourg, the Netherlands, Austria, Portugal and Finland. At that, time the currency was for non-cash based transactions and accounting purposes. National currencies remained for cash transactions. Greece joined the currency in 2001. Euro coins and bank notes went into circulation on 1 January 2002. The Euro has never been the currency of all European Union (EU) Member States.

A number of smaller and succession countries have joined the Euro since 2002. Solvenia in 2007, Cyprus and Malta in 2008, Slovakia in 2009, Estonia in 2011, and most recently Latvia, in 2014. The introduction of new countries as members during the Financial Crisis of 2007 onwards occurred despite considerable anxiety amongst politicians and financiers that the currency might fail causing the nations involved to return to their own sovereign currencies.

The 1992 Maastricht Treaty (Treaty on the formation of the European Union) articulated the reasons for establishing a single currency and the core conditions for its function. A central concept of this treaty is the aim of 'convergence'. The concept of convergence is defined in the treaty as primarily about economic and market conditions. It seeks to achieve a single and open market, with the free movement of people, capital, goods and services. This shared approach to markets and marketization is a primary ideology of the treaty, evidenced by the specific convergence criteria. For example, one of the criteria requires member countries to control price inflation and to keep inflation within specified mathematical boundaries relative to other members.

With the primacy driver of European cooperation being economic markets, one political and academic concern about consequences of market cooperation was 'social dumping' or a 'race to the

bottom' (Albert and Standing, 2000), whereby economic convergence resulted in an average of, or below average level of welfare attainment, rather than excelling to replicate the best national examples of welfare states and their outputs in poorer nations. For this reason, the primacy of economic cooperation has been consecutive with the secondary development of the articulation of shared values as human rights and the political and legal institutions to achieve some political and legal cooperation.

After Maastricht, the negotiation of European Union treaties also raised further important considerations about the convergence of politics and state, including the welfare state. At the core of this was an argument that successful economic and monetary union is dependent upon a similar degree of political union and an integration of state functions. This topic was politically contested during the negotiation and the ratification of the Maastricht Treaty, and explains why some countries were reluctant to ratify all elements of the treaty and did not join the single currency. For example, when some countries put ratification of the treaty to a referendum, the changes were opposed or not conclusive in achieving public support. In Denmark, the population initially rejected ratification, which eventually led to a second vote and partial ratification. In France, a referendum only secured agreement for ratification by a small margin. Further evidence of the difficulties of achieving political union was evident from the difficulties ratifying the 2004 Lisbon Treaty. Section 2, Articles III-209 to 219 of this treaty attempted to articulate some clear shared social policy goals for the Union. These include the improvement of working conditions and health and safety at work (including for migrant workers), social security and social protection for the unemployed, the combating of social exclusion including the social integration of those not in the labour market and equal employment rights for women and men.

The debate about the level of political and state convergence that is needed to ensure economic convergence has become further contested during the global Financial Crisis post 2007 and the so called 'Euro Crisis' of 2010. This later crisis saw very high levels of government debt in some

countries using the Euro, after the global Financial Crisis. The consequence was that they could not meet debt obligations without emergency financial support from the European Central Bank (ECB), European Union (EU) and International Monetary Fund (IMF). A resulting fear was that a Euro member country might leave the agreement and restart its own currency, thus triggering a crisis of confidence in the Euro and its eventual demise. The ECB, EU and IMF agreed to keep the vulnerable countries solvent if they imposed austerity measures that required increased taxes and public expenditure cuts. The Financial Crisis saw some divergence of social welfare outputs in Euro currencies, for example, Greece experienced a rapid increase in relative poverty when compared to other Euro member countries (OECD, 2013).

After the Maastricht Treaty, some convergence of public policy was attempted via the establishment of the European Structural Fund. This fund is a pool of national monetary resources and aims to redistribute wealth from richer to poorer areas to reduce differences in prosperity and to improve economic and social cohesion across the EU. One element of this is the European Social Fund, which focuses primarily on increasing employment and developing employability skills, reinforcing the primary economic market agenda of the EU but also linking full employment and skilled employment with the development and growth of a strong welfare state.

Previous Convergence Research and Evidence

The definition of welfare convergence is multifaceted and there are debates about how it should be measured and operationalised in research. Greve (2015: 195) and Bennett (1991: 218) identify the different dimensions of policy convergence and that measures could include looking for similarities in different elements of policy. This could include policy goals, content, instruments, and outcomes. The focus in this paper is predominantly on the results of policy, that is outputs and outcome, rather than exploring convergence of processes within institutions (Martinsen, 2005).

The concept of convergence needs to be applied to a specified time period. Therefore researchers like Bouget (2003) have examined the trajectory of country social policies and their outputs over time. 'In comparative research, therefore, the essential theoretical dimension is temporal rather than spatial' (Bennett, 1991: 219). A long term, historical study of Western Europe, by Tomka (2003) concluded that in the period 1918-1990 there was a clear evidence of welfare state convergence after 1945 and particularly between 1950-70.

Greve (2015) observes that policy goals and outcomes may become similar without the related policy institutions and structures necessarily converging. He argues that between 2000-2010 there has been a slight convergence of the output of welfare spending in European Member states based on the evidence of the Coefficient of Variance (COV), with most of this convergence occurring toward the end of the decade.

Alsasua, et al (2007) contribute some important sub definitions and additional categorization to the understanding of social policy convergence. In a quantitative study examining the degree of the convergence of social protection benefits in Europe over the fourteen years immediately before the establishment of a single currency area, they applied the concepts of σ convergence and β convergence. These definitions have been previously used in economic research (Barro, 1991; Barro and Sala-i-Martin, X, 1992). Economists argued that σ convergence examines variance over time and its dispersal, and β convergence examines the ability of the lowest cases in the distribution to achieve more rapid growth than other cases. σ convergence is typically measured by the Coefficient of Variation (CoV). β convergence has been argued by Caminada et al (2010: 539) to be best measured by linear regression where a negative β coefficient is evidence of convergence and higher negative coefficient scores demonstrate a fast rate of poor countries converging towards the rich.

After the application of these two sub concepts of convergence to welfare indicators, Alsasua et al (2007: 300) conclude:

'β convergence is a necessary but not a sufficient condition for σ convergence… β

convergence can lead to a weak decrease, or even an increase, in dispersion.'

In Alsasua et al's study of β convergence in European social protection levels between 1985 and

1999 they concluded that countries that started from lower levels of protection did progress at a

higher rate than those countries with already higher levels, therefore achieving some relative catch

up in the level of provision. Alsasua et al's (2007) work is typical of quantitative studies that attempt

to achieve a degree of controlled empirical robustness by examining one output variable in isolation.

In their case, this was for social projection expenditure. Caminada et al's (2010) more recent study

used a wider range of welfare outputs and concluded (p551):

'The convergence of EU welfare states has been stronger than in other OECD countries,

indicating a specific EU trend...We still find a quite strong convergence of social expenditure

in EU countries over a long period.'

They found less conclusive evidence about the convergence of poverty rates and attempted to use a

robust range of measures including relative poverty compared to average income and the 'poverty

gap' as a difference between rich and poor. Their broad study, examining a range of social indicators,

raises concerns about the overall ability of a policy focused on monetary rather than political union

to deliver convergence across a wide range of social welfare targets.

Two further conceptual sub categorizations of convergence are proposed by Alsasua, et al (2007):

absolute and conditional. Conditional convergence accepts that other economic and social variables

will be partially related to the welfare variable under examination. For example, differences

between countries in their employed and non-employed population, as proportions of the total

population. The percentages of the population aged above and below normal employed 'working'

age can influence what is observed with important social welfare outputs. Differences in the

proportion of the ageing population would be the most obvious example of this conditional effect on welfare outputs.

A study of 16 OECD countries by Achterberg and Yerkes (2009) concluded that there was no trend towards welfare retrenchment from the strongest performing states but also no evidence of a general convergence across all 16 nations. Instead they concluded there was evidence of convergence amongst some countries and in part this was to do with an 'Europeanisation' of welfare policy. This implies that intercontinental cooperation and agreements are one important potential source of convergence. Likewise, Starke, Obinger and Castles (2008) concluded from a study of OECD nations that while there was some evidence of welfare state convergence, it was limited in its scope, and dependent upon the aspects of welfare being examined. Similarly, they found no conclusive evidence of a 'race to the bottom' or an 'Americanisation' of social policy. The hypothesis that economic globalization accompanied by financial liberalization would cause a weakening of the most progressive welfare states in Europe is challenged by a number of scholars (Hay, 2006). For example, having compared social protection payments, Bouget (2003:690) concludes 'the analysis of long term trends in social protection shows that the period of retrenchment of social policy has not entailed a final race to the bottom.' More recently, Schmitt and Starke (2011) argued from a study of 21 OECD countries between 1980 and 2005 that there was strong evidence of the convergence of social expenditure, especially within the European Union, and when conditional factors were controlled for.

The introduction of the Euro achieved by the European Currency project after 2000 offered the potential for greater convergence in welfare outputs across the single currency area, if it was to be assumed that economic and social welfare outputs were likely to be at least partially correlated. Not all European Union member countries were too partake in the currency union, with Denmark, Sweden, The Czech Republic, and the UK, remained outside the single currency. Bertarelli et al

(2014) examined fiscal convergence amongst EU countries from 1991 to 2008 and concluded a rapid convergence of government deficit as a percentage of GDP occurred in the nineties and then slowed in the noughties. In contrast, after the implementation of the Euro they found evidence of convergence in total government revenue and spending as a percentage of GDP, but their analysis did not extend into the considerable disruptions of the post 2007 Financial Crisis. Previous research by the author has suggested that the crisis resulted in a considerable economic divergence for some outlier Euro currency member countries (Haynes, 2014). Borsi and Metiu (2013) examined evidence of income per capita convergence in the EU. They found no conclusive evidence of real income convergence, but concluded that regional country groups converged to different income levels over the longer term. This clustering was not necessarily related to Euro currency membership. The main observation was a South-East versus North- West division of European economies by the mid-1990s. De Haan et al (2007) concluded that there was evidence the economic business cycles in Euro area countries had converged in the 1990s, partly because of join planning and cooperation, before these nations finally moved to share a single currency.

Methods

The research in this paper uses an integrated macro political economy method. This is different to the previous economic approach of σ and β convergence. Alternative methodological approaches that use case based methods (Byrne and Ragin, 2009) such as cluster analysis and QCA can mitigate arbitrary variable separations and allow more reflection on the overlapping nature of country clusters and the movement of countries between groupings over time.

The method used is a case based method founded on the realism that the country as a case is sensitive to numerous and simultaneous macro-economic and social and economic interactions (Ragin, 1987). Therefore, the emphasis is on combining macro variables in a grand narrative, to give

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authenticity to the country case, rather than controlling for independent effects on an individual and dependent social welfare output variable. The methodology for this approach is developed from the theoretical arguments of Ragin, (1987), Rihoux (2006) and Byrne and Ragin (2009) about the importance of a synthesis of the country as a case, and the resulting combined methods innovations that were articulated and developed in the last two decades that allow country cases to be systematically compared (Rihoux, and Ragin, 2009; Byrne and Ragin, 2009).

Cluster analysis promotes the analysis of dynamic patterns. For example, it encourages the focus on country states that are placed on the periphery of specific clusters, the migration of cluster patterns and memberships over time, and the fact that cluster membership will change depending on the specific variables included or excluded in the analysis and modelling used. QCA allows for theorizing about the changing effects of variable influences on cluster group membership.

Measuring outputs and outcome

The seminal and contemporary historical account of national welfare outputs was defined by Esping-Andersen (1990) who concentrated on the ability of states to decommodify (that is to remove a citizen's dependency on the market place), with regard to income protection. He also referred to the state's ability to reduce social stratification and increase the degree of state welfare provision as when compared with welfare provided by the family and market place. Decommodification was measured by ranking comparative quantitative data about social protection benefits, including: pensions, unemployment and sickness. Several researchers have deconstructed his historical approach and indicated its limitations. For example, Bambra (2006) noted that the additive and averaging nature of his approach resulted in some arbitrary separation points between his comparable groupings of nations.

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Outputs are defined in this paper as the immediate achievement of a policy or organizational process. In contrast, outcomes are the longer term benefits of policy and organizational interventions. In the international social policy literature welfare state outputs have been predominantly defined in relation to achieving full employment, reducing wage inequality, and the ability of national citizens to replace income from employment when unable to do paid work (so, for example, income replacement rates available when a citizen is unemployed, sick or retired). For the purpose of this article, the attainment of material benefits such as an adequate level of earned or replacement income is argued to be an output of the welfare state. Other outputs of importance are taken to be educational attainment (because education attainment has become increasingly linked to employability and the relative level of income a citizen can earn), and access to health care outputs (because ill health is linked with an inability to take employment that will maximize income). Concurrent with these definitions of output is the concept of relative poverty of income: that is the deprivation of an adequate relative income and therefore the inability to take part in full in society and as an active citizen.

Welfare outcome

In recent years, research and literature on welfare states and comparative differences between them has diversified to include measures of social and psychological outcome over material outputs (Allin & Hand, 2014: Eurofound, 2013). For example, well-being, as a state of mind and collective experience, has been linked not only to education and income, but also to cultural and community experiences and holistic concepts where individual and social experiences are combine into experiential measurements such as 'happiness' and overall 'quality of life'. Deeming and Hayes (2012) have operationalized well-being as an outcome of national welfare states using international data in the World Values Survey (http://www.worldvaluessurvey.org) and computing from the self-reported happiness variable in that dataset. Following the work of Stiglitiz, Sen and Fitoussi (2010) to

find an alternative national indicator to GDP growth, there has been a growing interest in the

European Union and European Commission in measuring citizen well being.

Welfare outcome is defined in this paper as a synthesis of human experience that is linked to a

citizen's overall experience and quality of life. In other previous research, such as that published by

the World Health Organisation (WHO) well being might include the length of a life, as measured by

an age standardized mortality rate, or another quality of life indicators such as reduced morbidity

rates. In the last decade, however, there has been much interest in the social science community in

measuring the overall subjective happiness and well-being of an individual citizen (Allin and Hand,

2014). Eurostat also now compiles a nation indicator for the European Commission, entitled:

subjective well-being. This is the welfare outcome indicator used in this research study. It is taken

from the European Quality of Life Survey 2012 (Eurofound, 2013), where the summary question

asked is: taking all things together, how happy would you say you are?

Variables used

The welfare outputs used have been collated by Eurostat for the European Commission and measure

citizen welfare experiences of employment, poverty of income and degree of income protection,

education attainment and meeting health needs.

All variables selected for this research study are taken from the European Commission, Eurostat

database (http://epp.eurostat.ec.europa.eu). The variables used to measure welfare state output

performance are: the annual percentage of the working age population who are employed, the

annual total expenditure on social protection per head of the population in Euros, the annual risk of

poverty (using the cut-off point of 40% of median equivalised income), annual percentage of the

working age population who have achieved attainment in upper secondary or tertiary education ,

and the annual percentage of the population reporting unmet needs for medical education due to it being either too expensive ,or too far to travel or because of a waiting list.

The output variables are analysed and compared to examine three time periods: firstly, immediately after the implementation of the Euro (2002), secondly, the middle of the decade (2006), and thirdly, immediately after the Financial Crisis (2012).

A descriptive analysis is computed before the multivariate analysis. This analysis compares the Coefficient of Variance (CoV) for all the variables at the three different time periods used in the research, to see if the CoV is reducing. A reduction in the CoV across the three time periods would provide some evidence of convergence in the countries sharing the Euro currency. A disadvantage of using the CoV is that it cannot be used with negative values or where the standard deviation is a greater value than the mean average (thereby indicating the mean average is not a useful measure of central tendency).

Analysis and Modelling

The multi variate analysis uses a combined method of Cluster Analysis and Qualitative Comparative Analysis (QCA). This mixed method has been demonstrated and justified in detail in previous publications (see for example, Haynes, 2012; Haynes, 2014). Cluster analysis is a case based method that establishes mathematical patterns between cases rather than establishing a linear or probability based average outcome (Aldenderfer and Blashfield, 1984). A hierarchical and agglomerative cluster method is used (Haynes, 2014). The computer programme SPSS V22 is used for the Cluster calculations and it measures case proximity based on the variable scores available in order to gather the countries into logical groupings, moving up through a hierarchical structure from a maximum number of group separations towards maxmising the agglomeration and reducing the final number of groups. The resulting hierarchy is visualized in a Cluster Dendogram. This is a figurative computer

output where the maximum number of groupings can be seen on the lefthandside of the diagram. The computer then reduces the groupings according to similarity, as the modelling progresses from the left to right hand side of the page. The variable scores are standardised in the Cluster Analysis so that any different variances and scales within individual variable scores do not have a disproportionate effect on the final cluster model.

The advantages of combining the methods of Cluster Analysis and QCA for comparing county based quantitative indicators is that Cluster Analysis first provides the best method for exploring scale data patterns, without reductions of the data scales. Thus the maximum amount of available information is included in the analysis. In addition, QCA then provides a better method for theorising from the resulting cluster data patterns, given that the resulting groups in Cluster Analysis are produced from a matrices algorithm that does not provide much possibility for exploring the relative impact of individual variables on cluster formulation. In the combination of the two methods, crisp set QCA (Ragin, 1987; Rihoux and Ragin 2009) is used to explore the variable influences on the resulting clusters. With crisp set QCA, variables are divided at a threshold score (the median) and then variables are labelled with scores of 0 and 1, where 0 is below threshold and 1 is above threshold.

Qualitative Comparative Analysis (QCA) is now a well-established method for theorising about the relationship between countries as cases when examining macro political and policy influences and their outcomes (Rihoux, 2006). The cluster based QCA tables used in this research do not have an outcome variable but derive their grouping variables from the cluster set memberships evidenced in the Cluster Analysis.   The exception to this is the final and separate example of QCA used at the end of this research is to explore the influence of recent national welfare outputs on country average scores for the 2012 holistic outcome measure of subjective well-being. In this final example, a separate outcome variable is used. The final QCA model in table 7 is typical of a conventional

approach to crisp set QCA when is is not conjoined with Cluster Analysis (Rihoux and De Meur, 2009).

Three time periods are used in order to look for evidence of convergence in output performance over time. The first time period examines the starting implementation of the Euro currency. All variables used are measured in 2002, apart from the unmet health need data that was only first available in 2005. The second time period examines the height of European economic growth before the financial crisis and subsequent recession. All variables used are taken from 2006, apart from unmet health need data that is taken from 2007. The third and final time period used is post the financial crisis of 2007, with the data measurements being taken from the year 2012.

Research Questions

1. Using a case based aggregation of variables, has the implementation of the Euro currency resulted in the convergence of welfare outputs for member countries?

2. When applying a crisp set QCA modelling technique is there an association between countries with strong welfare state output provision and an above average national subjective well-being score?

Results

All the descriptive tables (1-3) across the three time periods analysed have separate calculations for the Euro 12, the six countries that joined the currency later, and the total Euro 18.

Table 1 shows descriptive statistics (mean, standard deviation and CoV) for time period 1, immediately after the Euro currency was launched. At this time (2002-2005) the additional six countries were not Euro members and so it is not surprising to find key differences when comparing their mean scores with the other 12. From the six countries that were to join later, the proportion of the population employed was marginally lower (66.73%), expenditure on social protection per head was notably lower (€1753.5), a higher proportion of the population were at risk of poverty (5.13%), while higher levels of secondary and tertiary educational attainment were evidence (69.28%), but there were slightly higher reported levels of unmet health need (6.75%).

insert table 1 here

Continuing with table 2 to examine the second time period 2006-7, there is some marginal evidence of convergence in some variables when comparing CoV scores in table 1 with table 2. The CoV reductions across the 18 countries are: percentage employed (reduced from 0.08 to 0.07), social protection (reduces from 0.64 to 0.62), risk of poverty (reduces from 0.46 to 0.44), and educational attainment (reduces from 0.33 to 0.28). CoV cannot be computed for unmet health need due to high variation (standard deviation is larger than the mean). In the first few years of the implementation of the Euro currency there is some evidence of welfare convergence amongst the future Euro 18 countries.

insert table 2 here

Finally, when examining the CoV scores for the 18 Euro countries in table 3 for the last time period, after the 2007 Financial Crisis, only educational attainment continues to reduce its CoV score across all three time periods (table 3,), it reducing further to 0.23.

insert table 3 here

The descriptives do not provide strong and conclusive evidence for social welfare convergence amongst the 18 Euro member countries during the decade under examination.

Cluster and QCA Models

Clusters Analysis is used to construct a model that groups countries that are similar together using a matrix analysis as outlined in the methods section above. Data is entered separately at each of the three time periods. This creates cluster patterns of similarity and difference and it is possible to see how cluster group membership changes over time.The clusters are represented by dendrogram figures that show their hierarchical construction during each time period studied. The first hierarchy of cluster groups produced for each time phase it taken from the dendrogram and entered into a QCA crisp set table, where the variables are binary groupings of ones and zeros that represent above and below threshold variable scores. This allows an examination of the dominant variable influences on each cluster. Where a cluster of countries all share the same threshold score, this is indicated in bold text on the QCA table. Such a feature is referred to by QCA theorists as a 'Primary Implicant'.

Figure 1 and table 4 represent the first time period. In figure 4, cluster one, shows northern and central European countries that are united by high social protection scores. These are Belgium, France, Austria, Finland, Netherlands. Ireland, Cyprus and Slovenia are located nearby in cluster two, but are united by high employment, low social protection and low relative poverty and high educational attainment. Outliers from these first two clusters are Luxembourg and Germany that in the QCA demonstrate some similarity with each other: high employment, high social protection and low relative poverty. Cluster three comprises of Estonia and Slovenia, sharing low employment, low social protection, high relative poverty, high educational attainment and high unmet health needs. Cluster four is the three southern European countries of Greece, Spain and Italy. They share the characteristics of low employment, high relative poverty, and low educational achievement. Malta

and Portugal are also loosely linked with this cluster and share the characteristic of low educational attainment, but the two countries also share low social protection.   Latvia is an outlier with low employment; low social protection, high relative poverty, high educational attainment and high unmet health needs. So at the outset of the European currency implementation, some diversity is evident in the welfare state outputs of the 18 countries who later share the Euro currency.

insert figure 1 and table 4 here

In the second time phase (figure 2 and table 5) a large core cluster has resulted as also   evidenced in the QCA table 5. Cluster One is united by low relative poverty and high educational attainment, suggesting some convergence in relative poverty reduction. Cluster two links the three southern European countries of Greece, Italy and Spain. This group shows the opposite QCA primary implicants to cluster one; high relative poverty and low educational attainment. Cluster three is comprised of Portugal and Malta who share low social protection and low educational attainment. Finally the emerging new east European states of Estonia and Latvia share high employment, low social protection, high relative poverty, high educational attainment and high unmet health needs.

insert figure 2 and table 5 here

The final cluster analysis and QCA for time period 3 (figure 3, table 6) shows the comparison of welfare state outputs after the Financial Crisis of 2007. Cluster one is a slightly smaller group of central and northern European nations (when compared to the previous mid-decade cluster in figure 5) who have shared the Euro since its inception. The countries are: Belgium, France, Ireland, Austria, Germany, Netherlands, Finland and Luxembourg. This core cluster shows some evidence of maintained convergence with high social protection, low relative poverty and high educational attainment. Only one country has high unmet health needs (Finland) and the rest score low on this indicator.

However the other Euro countries do not share this welfare convergence. Cluster two, while in some proximity to Cluster one, and sharing the characteristics of low relative poverty and high educational attainment, has a low social protection score. The countries here are: Slovakia, Slovenia and Cyprus. Malta and Portugal remain together in Cluster 3 and they now share an additional characteristic of low employment. The other two clusters in the dendrogram remain the same as in the mid-decade model (figure 2 and table 6). There is no overall synthesis of evidence at the end of the decade that welfare state convergence has occurred amongst the Euro 18.

insert figure 3 and table 6 here

The first welfare state cluster membership does progress from a membership of six to eight countries during the decade of Euro currency membership (comparing table 4 with table 6), but an examination of the overall welfare Cluster and QCA modelling evidence suggests this is do with the consolidation of Germany and Luxembourg into a strong welfare cluster and the movement on its periphery of Slovakia. Slovenia and Cyprus have welfare states that do not strengthen to the same degree. Even when these three countries are incorporated into this core grouping in the mid-decade model, the QCA scores show them to be relatively weak on social protection. Much more substantive as a finding is the fact that southern and eastern European countries that have joined the Euro, sit outside of the core welfare groupings.

Perhaps the biggest surprise in this analysis is the position of Italy that never enters the core European and strongest Euro based welfare cluster. In Esping-Andersen's (1990) originally typology of welfare states Italy was grouped with Central European countries in the Bismarck tradition, like France and Germany. This tradition was based on an argument of a relatively strong degree of welfare support provided in conjunction with state regulated employment and labour market activity. This kept wages and benefits relatively equal when compared to some other countries that had less regulated and unionised labour markets. Neo liberal market policies that developed in the US and UK from the 1980s and spread more widely are known to have dismantled the relative

degree of protection associated with these labour policies and later political trends and policy

changes have also had a welfare retrenchment effect in Italy. For Ferrera (2005), the key difference

of southern welfare states is their large informal economies, a lack of stable and permanent income,

a lack of a minimum income or wage level, a similar lack of a universal right to a replacement

income, and all this with an associated over dependence on the family for care, and a smaller

proportion of women in formal paid employment when compared to central and northern Europe.

Nearly twenty years ago the IMF (Rostagno and Utili, 1998) concluded that Italian Social Income

Protection policy was dysfunctional and only succeeding in targeting 25% of its expenditure at those

in relative poverty. Much redistribution was argued to be occurring amongst those who already had

average and middle incomes.

The final model (table 7) uses a crisp set QCA approach to explaining the outcome variable of above

and below the average country score for subjective well-being. The same social welfare variable

thresholds are used from table 6 and figure 3 for the final social welfare model in table 7. In this

model there are no crisp set primary implicants shared by all the countries with the outcome of

above average subjective well-being scores. The EU countries with above average subjective well-

being scores are: Austria, France, Germany, Luxembourg, Netherlands, Belgium, Ireland, Cyprus,

Finland and Spain. Therefore, all the members of Cluster 1 from figure 3 (from the founding Euro

group) that in Table 7 share several economic and social welfare similarities including high social

protection, low relative poverty and high educational attainment, also share above average scores

for subjective well-being. However there are two other countries not in the welfare cluster 1 from

figure 3that still achieve above average well being scores: Cyprus and Spain, this despite the fact

they share the same primary implicant of low social protection. So there are some different variable

patterns that achieve these above average subjective well-being scores. This second route to the

same higher than average well being scores is an example of what Ragin (1987) refers to as

configurational complexity in causation. The fact that cluster one welfare state countries (table 6) all achieve above average well-being outcome scores suggests a strong welfare state does increase the chances of higher subjective well-being, but the outcomes for Cyprus and Spain indicate that other cultural factors, perhaps to do with community, culture and family, can mitigate to some extent the limitations of a weaker welfare state.

Insert table 7 here

Discussion

If the Euro currency has not expanded beyond its 12 founder members after 2007, there would be a stronger case based on the evidence in this research that economic and welfare convergence had occurred as a result of the currency alignment. Nevertheless, even within that beginning group, a separate cluster is evident that appears to have experienced more economic and social convergence on the basis of the data used. The notably exceptions are the southern European countries Portugal, Spain, Italy and Greece. There is evidence that these four countries have failed to converge in the economic and welfare state direction alongside the other countries.

There were considerable debates about the ability of southern European countries to achieve economic and social convergence at the outset, before the arrival of the Financial Crisis (Lynn, 2011). The Crisis brought evidence of divergence rather than convergence, especially given the movement of Italy further away from its traditional European partners of France and Germany. It now looks increasingly similar to its southern European neighbours. The planned and coordinated European Currency area, shared by the Euro members has shown that it can achieve a degree of economic and social welfare convergence for those at its northern and central geographical core and these are the countries who have found it easier to adhere to the economic convergence criteria . But the southern European members have found this difficult during the crisis and have required

intervention to support growing levels of government debt. It will clearly take many years and much macro political economic coordination and integration to get to the point where the 18 Euro members share more similar welfare outputs. Economists like Krugman (2013) suggest it will involve a much greater interventionist approach, in terms of central European bank lending and structural interventions and flows of state expenditure to the poorer nations and their poorest regions. He has also argued, that even taking into account the considerable wealth, income and welfare outcome differences of the different States within the United States of America, the differences between European countries and regions are even greater and demand might much more planned and coordinated interventions of redistribution.

This research has also shown that a subjective welfare outcome like well-being does not necessarily correlate with national social welfare performance. Spain has shown itself to be the exception in this regard with low comparative social welfare output scores, but an above average national score for subjective well being. This suggests that in some cases subjective well being may be independent of political and economic interventions, and is this because of historical, geographical and culture contexts that influence citizen well being. Despite this Spanish exceptionalism, Greece, Portugal and Italy all experience below average national well being scores, in association with their low scores on social welfare outputs.

Conclusion

Previous studies on social welfare convergence have focused on changes in specific variables over time ,either in terms of reductions in differences when compared to comparator countries or increasing similarities and catching up from relatively poorer countries. This has raised issues about which variables to focus on and in the main the priority has been social expenditure levels, social protection in the form of income protection and replacement, and relative poverty. There has been

less focus on educational attainment, despite the fact that increased skills are linked with policies of social investment in education and training that are believed will lead to increases in employment and higher relative wages in the competitive global economy. There have also been few attempts to integrate health outputs with understanding of social welfare convergence. In this study, a holistic approach was taken to country case, and a case based method used that tries to incorporate a broader range of welfare indicators. The focus then is less on variables and more on the general similarity and differences of the countries included. The results from this approach illustrate the divergence of southern European countries from other Euro members, a matter that is at the core of the current debate about the impact of the financial crisis. This study provides further evidence that a more major interventionist and structural approach to European redistribution of wealth and income will be necessary if these large differences are to be overcome and real welfare convergence achieved. Present policies make this look unlikely. On the basis of present evidence it would seem that the most likely path is that southern European countries' welfare outputs will further diverge from those of central and northern Europe.

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Tables and Figures

Table 1 Descriptive Data for Social Welfare Indicators, Euro 18, time period 1

| | Time Period 1 | | | | | | | | |
| | Euro 18 | | | Euro 12 | | | Euro later entry 6 | | |
	Mean	St Dev	CoV	Mean	St Dev	CoV	Mean	St Dev	CoV
Social Welfare Data									
Percentage Employed 2002	67.79	5.17	0.08	68.31	5.01	0.07	66.73	5.8	0.09
Total expenditure on social protection per head of population. ECU/EUR 2002	5199.7	3305.38	0.64	6922.8	2581.1	0.37	1753.5	1055.27	0.60
Risk of Poverty 2005 At risk of poverty rate (cut-off point: 40% of median equivalised income)	4.7	2.14	0.46	4.49	2.15	0.48	5.13	2.23	0.43
Upper secondary or tertiary educational attainment, age group 25-64, (%) 2002	62.64	20.49	0.33	59.32	17.36	0.29	69.28	26.18	0.38
Self-reported unmet needs for medical examination, by sex, age and reason (%) 2005	3.68	4.44	*	2.73	2.63	0.96	5.57	6.75	*

Note *not possible to compute CoV

Table 2 Descriptive Data for Social Welfare Indicators, Euro 18, time period 2

| | Time Period 2 | | | | | | | | |
| | Euro 18 | | | Euro 12 | | | Euro later entry 6 | | |
	Mean	St Dev	CoV	Mean	St Dev	CoV	Mean	St Dev	CoV
Social Welfare Data									
Percentage Employed 2006	70.18	4.97	0.07	70.22	3.97	0.06	70.1	7	0.10
Total expenditure on social protection per head of population. ECU/EUR 2006	5778.48	3585.38	0.62	7631.65	2827.59	0.37	2072.13	1179.21	0.57

	Mean	St Dev	CoV	Mean	St Dev	CoV	Mean	St Dev	CoV
Risk of Poverty 2006 At risk of poverty rate (cut-off point: 40% of median equivalised income)	4.73	2.1	0.44	4.67	2.19	0.47	4.85	2.11	0.44
Upper secondary or tertiary educational attainment, age group 25-64, (%) 2006	67.15	18.62	0.28	64.12	15.64	0.24	73.23	23.96	0.33
Self-reported unmet needs for medical examination, by sex, age and reason (%) 2007	3.15	3.72	*	2.46	2.95	*	4.53	4.95	*

Note *not possible to compute CoV

Table 3 Descriptive Data for Social Welfare Indicators, Euro 18, time period 3

	Time Period 3								
	Euro 18			Euro 12			Euro later entry 6		
	Mean	St Dev	CoV	Mean	St Dev	CoV	Mean	St Dev	CoV
Social Welfare Data									
Percentage Employed 2012	68.03	6.06	0.09	68.13	7.2	0.11	67.83	3.31	0.05
Total expenditure on social protection per head of population. ECU/EUR 2012	6554.76	4035.71	0.62	8615.46	3243.24	0.38	2433.36	1288.47	0.53
Risk of Poverty 2012 At risk of poverty rate (cut-off point: 40% of median equivalised income)	5.1	2.64	0.52	5.28	2.91	0.55	4.75	2.2	0.46
Upper secondary or tertiary educational attainment, age group 25-64, (%) 2012	72.84	16.47	0.23	69.98	14.25	0.20	78.57	20.43	0.26
Self-reported unmet needs for medical examination, by sex, age and reason (%) 2012	3.27	3.34	*	2.62	2.37	0.90	4.58	4.74	1.03

Note *not possible to compute CoV

Figure 1 Cluster Exploratory Model. Social Welfare Data Time Period 1

Dendrogram using Average Linkage (Between Groups)
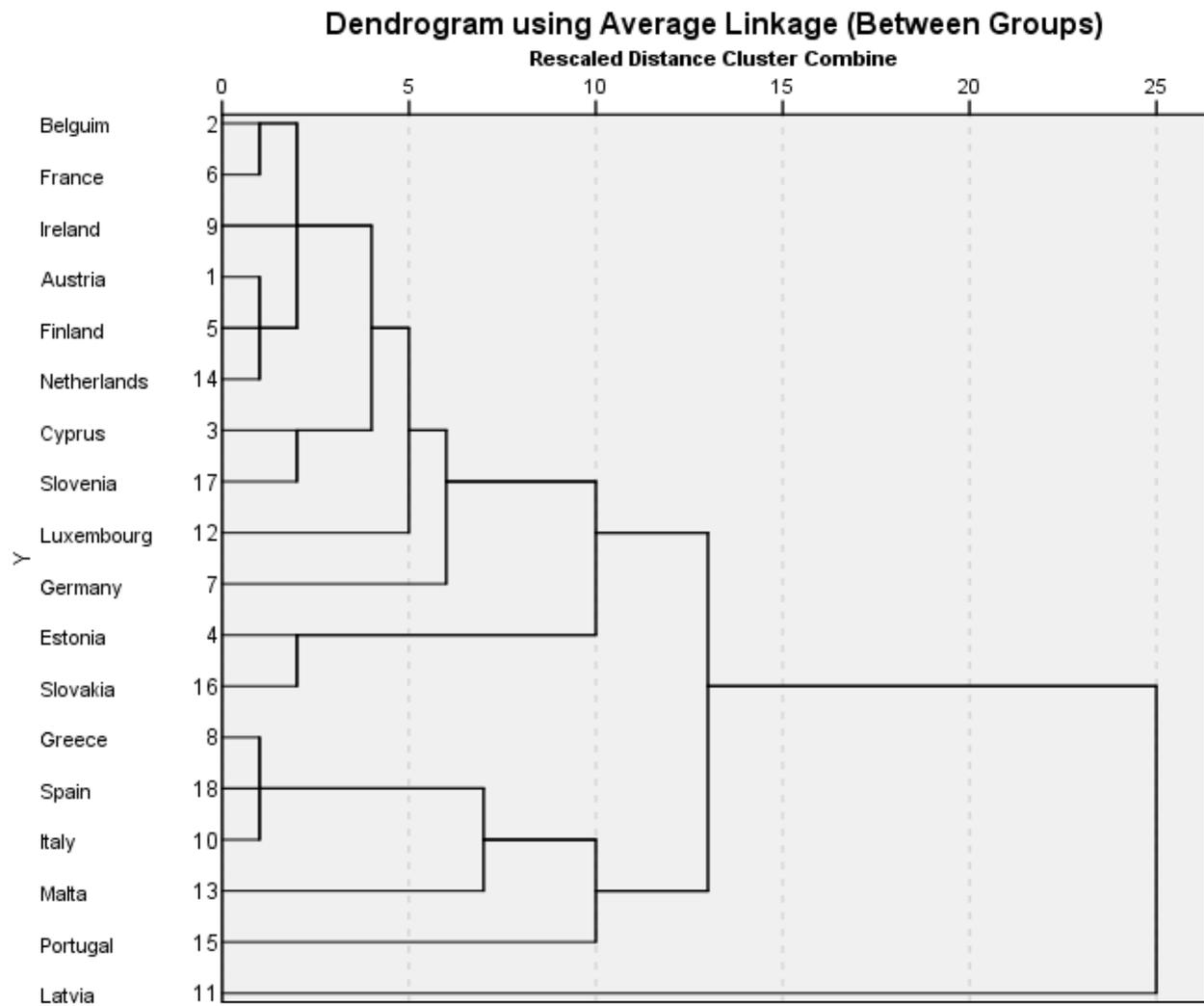
Table 4   QCA Truth Table for Figure 4

v1:	Employ2002		v2:	SProtect2002
v3:	RPoverty2005		v4:	Education2002
v5:	Health2005			
id:	Country			

v1	v2	v3	v4	v5	id
Cluster 1					
0	**1**	0	0	0	Belgium
1	**1**	0	1	0	France
1	**1**	1	0	0	Ireland
1	**1**	0	1	0	Austria
1	**1**	0	1	1	Finland
1	**1**	0	1	0	Netherlands
Cluster 2					
1	**0**	**0**	**1**	1	Cyprus
1	**0**	**0**	**1**	0	Slovenia
Partial Outliers					
1	**1**	**0**	0	0	Luxembourg
1	**1**	**0**	1	1	Germany
Cluster 3					
0	**0**	**1**	**1**	**1**	Estonia
0	**0**	**1**	**1**	**1**	Slovakia
Cluster 4					
0	0	**1**	**0**	1	Greece
0	0	**1**	**0**	0	Spain
0	1	**1**	**0**	1	Italy
Cluster 5					
0	**0**	0	0	0	Malta
1	**0**	1	0	1	Portugal
0	**0**	1	1	1	Latvia

Figure 2 Cluster Exploratory Model. Social Welfare Data Time Period 2

Dendrogram using Average Linkage (Between Groups)
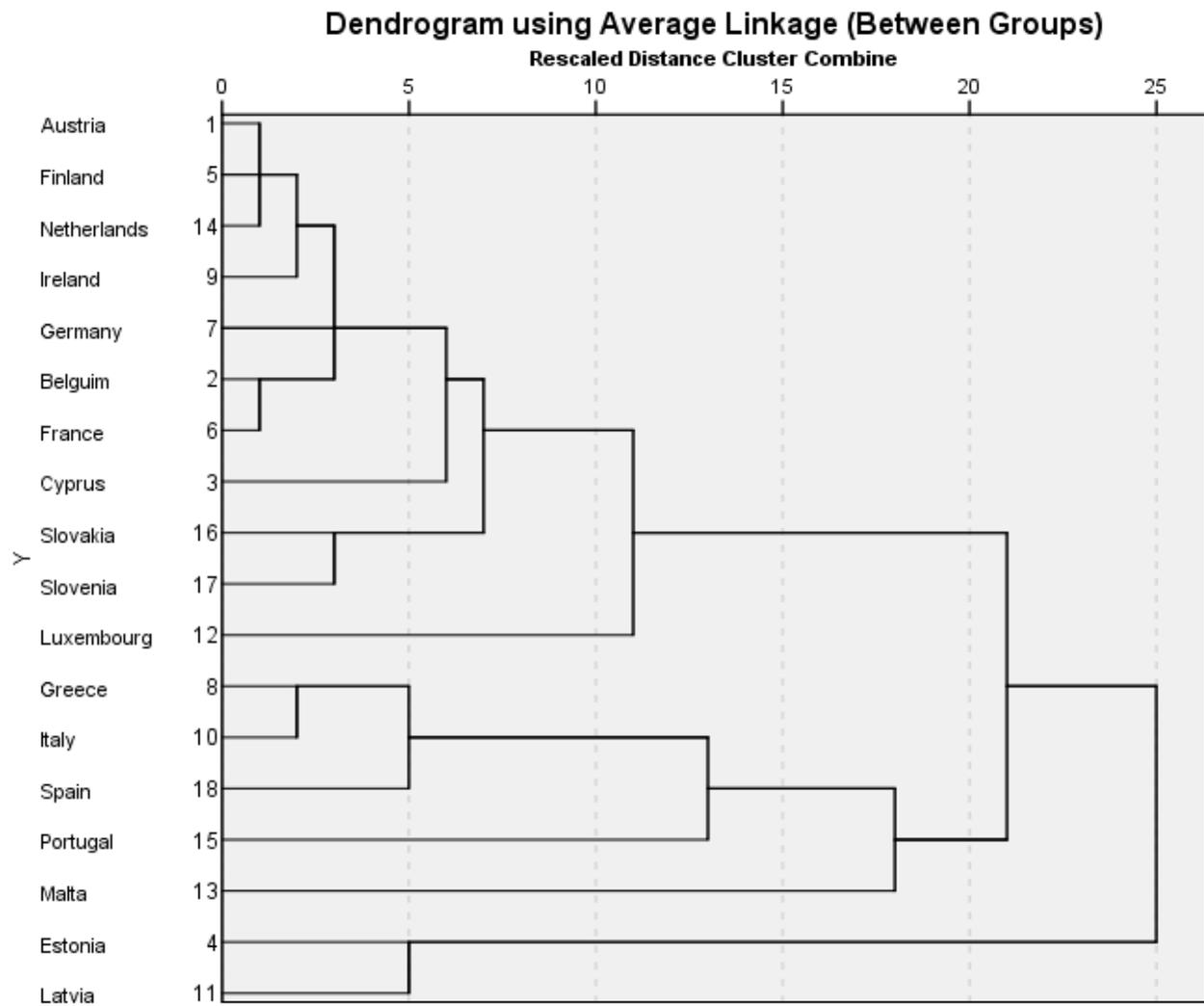
Table 5   QCA Truth Table for Figure 5

v1:	Employ2006		v2:	SProtect2006	
v3:	RPoverty2006		v4:	Education2006	
v5:	Health2007				
id:	Country				

v1	v2	v3	v4	v5	id
Cluster 1					
1	1	**0**	**1**	0	Austria
1	1	**0**	**1**	0	Finland
1	1	**0**	**1**	0	Netherlands
1	1	**0**	**1**	1	Ireland
1	1	**0**	**1**	1	Germany
0	1	**0**	**1**	0	Belgium
1	1	**0**	**1**	0	France
1	0	**0**	**1**	1	Cyprus
0	0	**0**	**1**	0	Slovakia
1	0	**0**	**1**	0	Slovenia
1	1	**0**	**1**	0	Luxembourg
Cluster 2					
0	0	**1**	**0**	1	Greece
0	1	**1**	**0**	1	Italy
1	0	**1**	**0**	0	Spain
Cluster 3					
1	**0**	1	**0**	1	Portugal
0	**0**	0	**0**	0	Malta
Cluster 4					
1	0	**1**	**1**	**1**	Estonia
1	0	**1**	**1**	**1**	Latvia

Figure 3 Cluster Exploratory Model. Social Welfare Data Time Period 3

Dendrogram using Average Linkage (Between Groups)
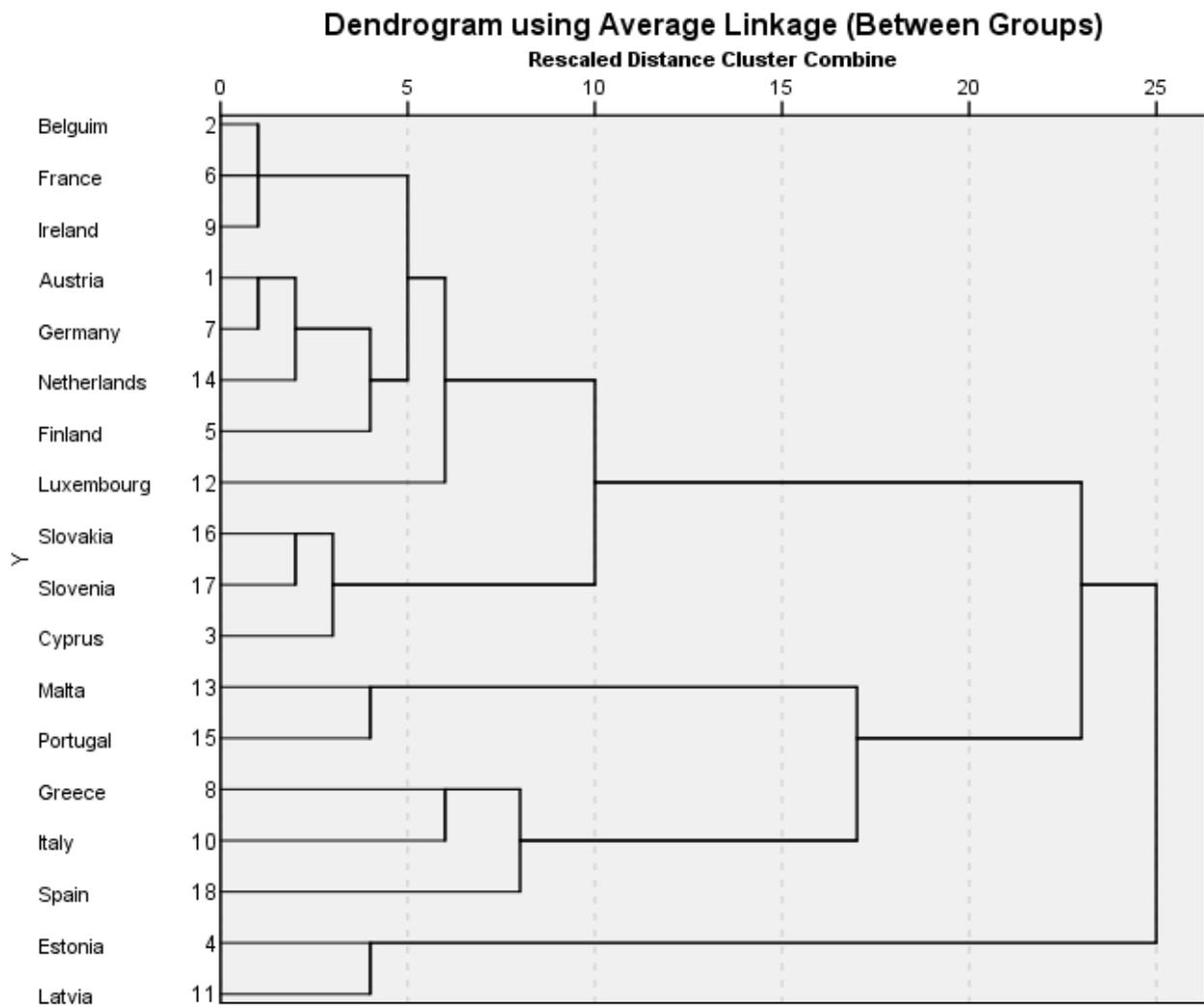
Table 6   QCA Truth Table for Figure 6

v1:	Employ2012	v2:	SProtect2011		
v3:	RPoverty2012	v4:	Education2012		
v5:	Health2012				
id:	Country				

v1	v2	v3	v4	v5	id
Cluster 1					
0	**1**	**0**	**1**	0	Belgium
1	**1**	**0**	**1**	0	France
0	**1**	**0**	**1**	0	Ireland
1	**1**	**0**	**1**	0	Austria
1	**1**	**0**	**1**	0	Germany
1	**1**	**0**	**1**	0	Netherlands
1	**1**	**0**	**1**	1	Finland
1	**1**	**0**	**1**	0	Luxembourg
Cluster 2					
0	**0**	**0**	**1**	0	Slovakia
1	**0**	**0**	**1**	0	Slovenia
1	**0**	**0**	**1**	1	Cyprus
Cluster 3					
0	**0**	0	**0**	0	Malta
0	**0**	1	**0**	1	Portugal
Cluster 4					
0	0	**1**	**0**	1	Greece
0	1	**1**	**0**	1	Italy
0	0	**1**	**0**	0	Spain
Cluster 5					
1	**0**	**1**	**1**	**1**	Estonia
1	**0**	**1**	**1**	**1**	Latvia

Table 7 Truth Table with Outcome variable:
the relationship between social welfare outputs and subjective well being

v1:	Employ2012		v2:	SProtect2011		
v3:	RPoverty2012		v4:	Education2012		
v5:	Health2012					

Outcome   Subjective Well Being 2012   id: Country

v1	v2	v3	v4	v5	O	id
1	1	0	1	0	1	Austria,France,Germany,Luxembourg,Netherlands
0	1	0	1	0	1	Belgium,Ireland
1	0	0	1	1	1	Cyprus
1	1	0	1	1	1	Finland
0	0	1	0	0	1	Spain
1	0	1	1	1	0	Estonia,Latvia
0	0	1	0	1	0	Greece,Portugal
0	1	1	0	1	0	Italy
0	0	0	0	0	0	Malta
0	0	0	1	0	0	Slovakia
1	0	0	1	0	0	Slovenia

Result: Explanation of above average subjective welfare scores

SPROTECT2011 * rpoverty2012 * EDUCATION2012 * health2012 +
EMPLOY2012 * rpoverty2012 * EDUCATION2012 * HEALTH2012 +
employ2012 * sprotect2011 * RPOVERTY2012 * education2012 * health2012
(Austria,France,Germany,Luxembourg,Netherlands+Belgium,Ireland)
(Cyprus+Finland)   (Spain)

Computed with Tosmana software