

The Welfare State, Inequality and Social Capital

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Preface

The basic theorem of the neoclassical economic theory argues that well functioning markets mediate equilibrium between demand and supply and that this is the best possible way to fulfil the needs of the people. This thinking is one of the cornerstones of the modern era and of the age of enlightenment. The theory is very consistent and it is supported by the huge economic success of capitalism over the last two centuries. According to this thinking it is necessary that risks determine the behaviour of the actors in the market. Any insurance against risks creates moral hazard; i.e., people do not behave in a way required by the markets. So, the orthodox supporter of neoclassical theory denies any commercial or social insurance as Nicolas Barr, for one, has shown in his famous texts (see e.g. Barr 1992).

One of the core ideas of the welfare state is to provide cover against risks. François Ewald goes so far as to argue in his well-known texts that the welfare state as a whole can be interpreted as a social insurance system (see e.g. Ewald 1986). The insurance is the reason for the welfare state.

Hence, there is a fundamental contradiction in how the orthodox supporters of the neoclassical economic theory and the supporters of the welfare state see the position of the risk.

In our paper we study a hypothesis that supports the idea that the risks should be covered by the welfare state. This hypothesis argues that the welfare state increases equality between people by covering risks and by equalising opportunities and the income distribution. The core of our hypothesis is that the equality created by the welfare state is positively interrelated with generalised trust between the people and with bridging social capital. This interrelation diminishes risks and it is interrelated with the well-being of the people. We find empirical evidence supporting or – to be more cautious – not denying our hypothesis.

It is possible that the negative implications attached by the neoclassical theory to the social protections against risks are a result of their having emerged in an era where mass manufacturing was hegemonic in the economy. The tasks of the employees were exactly determined and individualised. In the postmodern era, employees need social skills and creativity in interaction. Therefore, generalised trust and bridging social capital are increasingly important in the economy of today.

We do not deal in our article with the above historical changes but rather with the role of today's social policy and of equality, and with their relationship to social capital and well-being. We believe those interrelations to be of utmost importance considering the role of risk in present-day society.

1. Introduction

Public discussion over the welfare state continues apace, with arguments both in favour of and against it. While the question is ultimately a normative one, many of the arguments presented can only be substantiated by empirical evidence. In this study, we explore some of the views and positions on the welfare state and seek to justify them by reference to international empirical comparisons.

One of our objectives is to analyse statistically how the interdependencies between different forms of social capital and the levels of public social expenditure change as other features of the welfare state are introduced into the analysis. This approach was prompted by the finding suggesting that trust between citizens and community-mindedness are strongest in the Nordic countries and weakest in countries where the level of social security is lowest. We seek to test empirically whether this finding stands up to analysis in a broader setting. We do not compare welfare effort or the level of social protection directly with the different forms of social capital, but rather proceed through a series of intermediary steps. First, we analyse the statistical dependence between the level of social expenditure, income differences and inequality in a number of welfare states. We also look at intergenerational income mobility in different countries. As one of the indicators of inequality, we use people's subjective views of their ability to influence the decision-making that affects their lives. This allows us not only to look at the indicators of social inequality but also to build into the study some sense of people's control over their lives. Second, we analyse the connections between inequality and different forms of social capital. The results produced by this two-stage approach can be used to evaluate the argument that an extensive social security system with high rates of coverage makes grassroot community-minded efforts unnecessary. We are also interested in the links between general well-being – as analysed on a number of indicators – and the chain of dependencies mentioned above. The subjective views of individual citizens are relevant to this analysis. We conclude with a discussion of how successful social policies can be used to influence public attitudes to support the allocation of resources towards social policy, thus returning to the point from which we started, i.e., how social policy can be used to reduce inequality in a way that benefits society as a whole.

The topics we address have been examined from a variety of perspectives in previous studies. Our contribution is to introduce a theoretical framework which most of the foregoing research has lacked. The theoretical background of this study is the so-called "model of welfare production". There are obvious connections between the welfare production model and comparative welfare state research. We have modified the model by combining its stage-by-stage approach with the idea of a virtuous circle. Thus modified, the model allows us to test a number of well-known hypotheses empirically. By examining changes in inequality, we seek empirical evidence for the crowding-out hypothesis, which asserts that the allocation of public resources into social policy displaces other forms of social capital. While this hypothesis can be tested in a number of ways, we explore it indirectly by reference to social inequality. Crowding out can also be viewed in the sense that a social security system with a high rate of coverage reduces the need for civic activity. Hence, the crowding-out question is, in a wider sense, linked to the evaluation of the beneficial qualities of universal social security. Yet recent studies do not support the crowding-out hypothesis. Another major topic of interest in this study is to discover whether a virtuous circle exists in the first place. We use four successive stages for testing its existence. Finally, we highlight to what extent the framework constructed in this study lends itself to the analysis of different welfare stage regimes.

The crowding-out hypothesis, social capital and welfare state regimes have all been examined in previous research. The Dutch researchers van Oorschot and Arts (2005) and Kumlin and

Rothstein (2005) of Sweden have looked at the crowding-out aspects of the welfare state, while two Finnish studies by Lehtonen and Kääriäinen (2005, 2006) examine the links between different forms of social capital and welfare state typologies. Of particular relevance to this study is the research of Rothstein and Uslaner (2005), which highlights the relevance of inequality to social trust and the scope of coverage of social policy measures.

In this study, we see the connections between the individual factors as arising from the notion that different societies allocate different amounts of resources to the production of welfare. In practical terms, social policy can be manifested as public expenditure on social security or on other welfare items such as education. At the same time, social policy processes can also be reflected in the institutional features of social security systems, such as replacement rates or coverage levels, which can lessen dependence on the labour market. The assumption here is that the allocation of inputs to social security can have an impact on social inequality. Inequality can materialise not only in economic terms, but also as a differential ability to shape one's own life and to enjoy freedom of choice, or as differences in people's potential for social mobility and for overcoming their innate social and economic hurdles.

Our analysis proceeds by incorporating a range of factors which have been found to have a positive impact on well-being. They include trust and community-mindedness, which are essential to the assessment of social capital in the welfare states compared here. This is because we work from the assumption that there is an inverse dependence between inequality and social capital. Countries where generalised trust and community-minded values are strong usually show less inequality than countries where the opposite is the case. This view is supported by Rothstein and Uslaner (2005).

Proceeding further, we assume that just as public expenditure on health and social protection and on education directly affects people's well-being, social capital, too, has an effect, albeit an indirect one. According to research (Frizell 2006), a decrease in inequality is reflected, in terms of social expenditure, as reduced public spending on health care. On the other hand, a decrease in inequality and an increase in social capital create motivation in society to invest in human capital. More education ultimately contributes to higher productivity. The process described above influences the functioning of society. Increased productivity is directly linked to GDP growth. These positive effects not only appear as better public health and higher productivity, but are also reflected in various welfare indicators. Countries whose populations are more satisfied with their lives display higher levels of social capital than countries where there is greater dissatisfaction. Together, these factors produce more resources for society to allocate to social security and generate public support for the social policies which are enacted.

Yet, the dependencies described above are clearly not quite this simple. Our main addition to the analysis by Lehtonen and Kääriäinen (2005, 2006), which concerns social capital and the classification of welfare states, is to introduce inequality and the functioning of society into the mix.

It would perhaps be useful to examine this step-by-step thought structure in a suitable theoretical framework which would allow us to make comparisons on the basis of empirical data. Once such framework is the model framework of welfare production referred to above, which proceeds from various input factors, via processes of production, to outputs and finally to actual welfare effects. We bring into this sequence a new perspective which allows us to combine the starting and ending points of the sequence in a way that makes the process continuous and self-reinforcing. This can be achieved by joining the idea of a virtuous circle to the model of welfare production.

We proceed as follows: First, we clarify the concepts of "model of welfare production" and "virtuous circle" as used in this context, while developing the underlying thinking on society. Then we merge the abovementioned concepts in order to operationalise the process in the spirit of comparative welfare state research.

By presenting the available data, we proceed to empirical analysis, which is followed by the step-by-step analysis described above designed to test certain hypotheses. In conclusion, we evaluate the empirical results and outline ideas for further research.

2. The model of welfare production and the virtuous circle

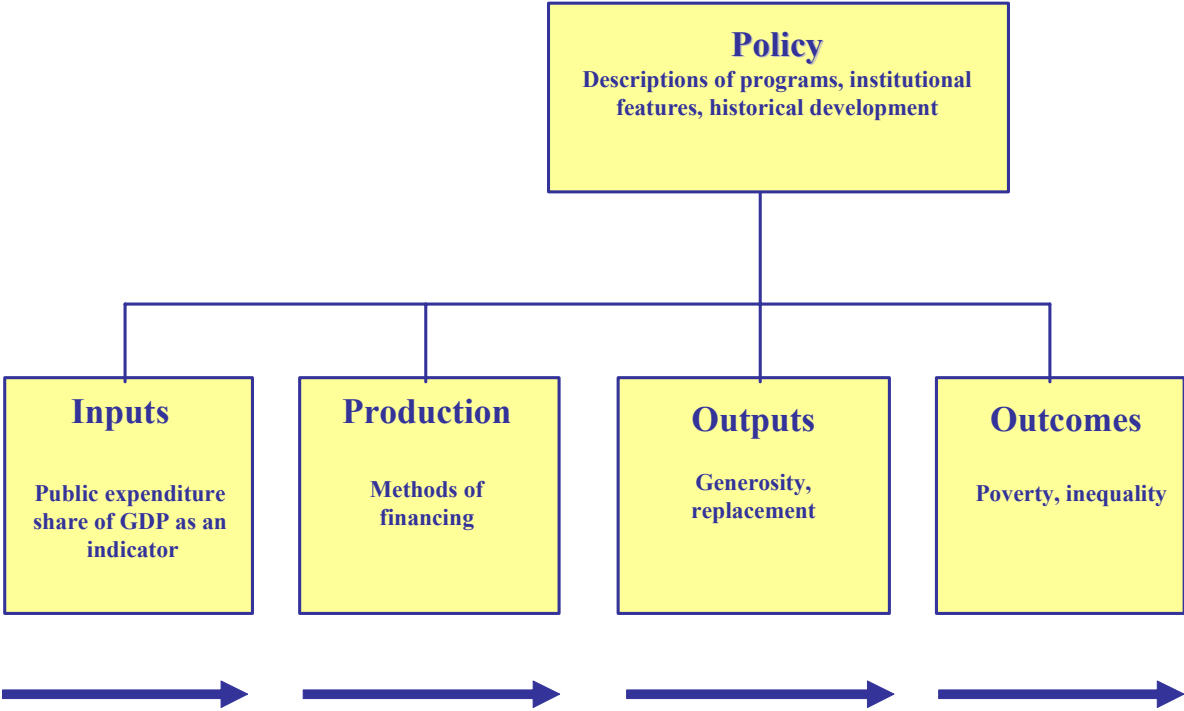
In order to perform a country-by-country comparison of various features of social security systems both in terms of the resources they require and the type of institutions that implement them as well as from the perspective of the citizens, we need a theoretical framework – a model that allows both macro- and microlevel analysis. For this, we turn to the model of welfare production designed by Hill and Bramley (1986). In this model, effectiveness and efficacy both factor into the process of production in which inputs are translated into outputs. Together with some other factors, these outputs then influence the well-being of society and of individual citizens. Mitchell (1991) aligned the comparative welfare state research approach with this model, and Hagfors et al. (2003) used it as the structural underpinning of their study on the economic security of pensioners. Kuivalainen (2004) used the model to compare the income protection systems of six countries. The idea in this model is to proceed by stages through the process of welfare production. A rough outline of the model is presented in Figure 1, in which the model is applied to the comparison of social security systems.

By virtue of its structure, the model of welfare production makes it possible to undertake systematic classifications in comparative welfare state research (see Mitchell 1991, 153–199). In Figure 1, the topmost box represents politics, including descriptions of social security systems at the general level and the institutional features and historical trends of such systems. The extensive studies of the features of Western welfare states conducted by P. Flora (1986) have been seen as representative examples of this approach. Moving on to the actual process of production, the first issue we encounter is the amount and the type of resources used for the implementation of social policy. Comparisons focusing on this aspect represent a resource-centred approach that looks at the issue from the welfare effort perspective. In Figure 1, this approach is represented by the box entitled "inputs". A typical example is to use the ratio of public expenditure to GDP as an aggregate indicator of resource use, as is done in Wilensky (2002). The next box in Figure 1 is labelled "production". It refers to a number of different structures related to welfare state typologies and regimes, such as the methods by which social policy programmes are funded and what objectives they are designed to pursue. Esping-Andersen's studies (1990, 1999) are one example of such an approach.

In comparative welfare state research, social security systems are described in terms of their institutional features, such as their coverage and generosity (represented by various replacement rates). In Figure 1, such an approach would be placed in the box entitled "outputs". The research conducted by W. Korpi and J. Palme (1998) using the SCIP data is a good example of this approach. At the end of the sequence of processes that makes up the model of welfare production are the outcomes which manifest themselves as poverty or inequality and as factors with a broader impact on well-being. From the wide range of studies

focusing on outcomes, we can point to the welfare state research based on data from the Luxembourg Income Study, such as Smeeding, O’Higging and Rainwater (1990). As we noted earlier, the following is a rough schematic representation of the model of welfare production. It will be used, as applicable, in the analysis that follows.

Figure 1. Schematic representation of the model of welfare production.



Source: Modified from Figure 10.1 in Mitchell 1991, 156.

Another central concept in this study is the virtuous circle. We use it here to refer to the propensity of actions with positive effects to function in a self-reinforcing manner. In the welfare state context, this means that to the extent that a welfare effort has a positive effect on well-being and the reduction of inequality, the citizens are willing to maintain and even to intensify such an effort. Reference to this idea is made in such documents as the 2006 World Development (chapter 6, page 108). The virtuous circle is represented schematically in Figure 2.

In Figure 2, the virtuous circle is portrayed as a construct consisting of two concentric circles. This is central to the purposes of our study. The inner circle can be seen as a kind of core which reflects indirect effects to the outer circle. The key components of the welfare state located on the outer circle have a more direct effect on general welfare. Our purpose in this study is to concentrate on the functioning of the inner circle, without ignoring the significance of the outer circle to the practice of social policy in the welfare state.

In order to provide a comprehensive picture, we present the core circle as a set of coordinates on whose axes we place the key variables and which divides the core into four quadrants, which we refer to as steps. On one axis, we place the variables representing welfare effort, and on the other, the variables representing inequality. This allows us to examine, within the first quadrant, the links between inequality and the practice of social policy. The grey arrows on the axes stand for the direction which corresponds to our view of the virtuous circle. An

increase in welfare effort results in a decrease in inequality. Here already we see an indirect effect that impacts on the outer circle. Recent research has shown that a decrease in inequality has a positive effect on public health, which in turn leads to lower spending on health care (Frizell 2006). Furthermore, Rothstein and Uslaner (2005) have found that a decrease in inequality has a causal relationship with public trust that runs from inequality to trust but not vice versa. Through greater trust, a decrease in inequality, then, appears to produce an increase in social capital. Assuming that empirical counterparts exist for the variables in the first and fourth quadrants, it should be possible to test the aforementioned crowding-out hypothesis.

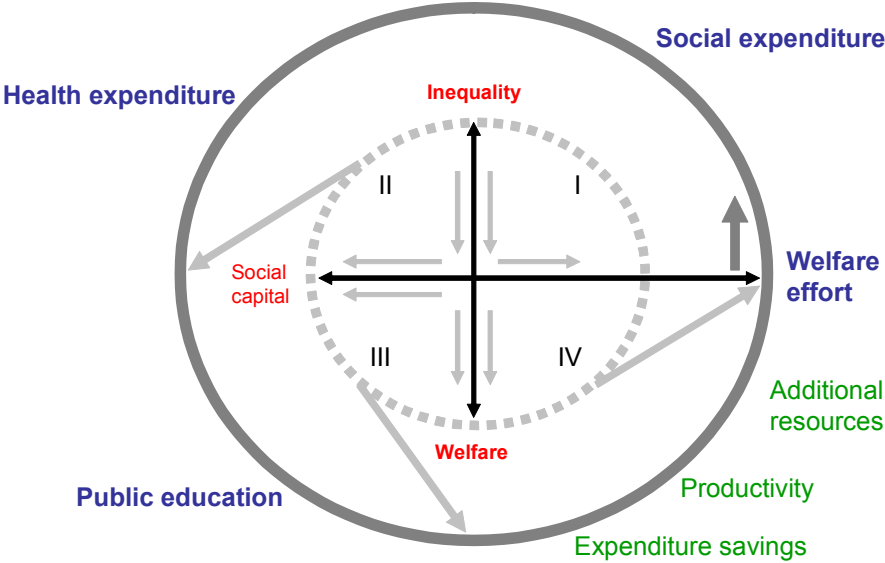
As we move on to the third quadrant (or step), we begin from the assumption that social capital has increased in the preceding stages. The effects that bear on the outer circle now stem from the dynamic whereby societies which build up social capital through community-mindedness are also positively inclined to the accumulation of human capital.¹ This has a positive effect on education spending and, consequently, on productivity.² The starting assumption for the fourth quadrant is that social capital and well-being achieved in society are positively correlated. A similar correlation is assumed to obtain in the fourth quadrant, based on the idea that the level of well-being that exists in society and the way it is distributed contribute to more positive public attitudes towards the development of social security. Increased well-being is a product partly of greater social capital and of increased allocation of public resources to social policy. Well-being is impacted by a kind of bifurcation effect where progression on one axis coincides with progression on the other, and where the area demarcated by the axes grows. The education-driven productivity increase and the drop in health and social expenditures as a result of reduced inequality, along with the positive public attitudes, lead to the allocation of additional resources to social policy. Thus, we have come full circle, but – thanks to the bifurcation effect – now occupy the outer sphere of the virtuous circle. In Figure 2, we see that the inner circle has in a way shoved the outer circle away from the core.

In this study, we compare only welfare states with an advanced level of social protection. In the case of countries with less advanced social systems, it can be assumed that, given an inauspicious starting position, the virtuous circle may not become activated at all. A small input into social protection may not produce a decrease in inequality, which in turn may cause public trust to weaken (or at least not to strengthen). Where trust is weak, universal systems that would hold the potential to reduce inequality may not be created at all. This may lead to a lack of broad and unified support for inputs into social protection, creating a situation which Rothstein and Uslaner (2005) refer to as ‘social trap’.

¹ On the link between human capital and inequality, see Esping-Andersen’s (2004) ideas about the dependence between education and earnings.

² A concept that approaches the one we use here is ‘system intelligence’, in which community-mindedness plays a central role and which can lead to a kind of superproductivity. This comes down to how even relatively small inputs into system intelligence can have significant consequences. On estimation methods for superproductivity, see Hämäläinen and Saarinen 2006. What is meant by this is a kind of invisible emotional capital or system intelligence resource, an accumulation of which can lead to nonlinear quantum leaps to a state of positive spin contributing to greater inspiration and innovativeness and thereby to greater productivity (Fisher 2006).

Figure 2. The virtuous circle.



3. Operation of the virtuous circle in the theoretical framework of welfare production

We have now outlined the theoretical framework of welfare production and the operation of the virtuous circle. Yet in order to proceed beyond assumptions we must make an attempt to operationalise them. For this, we combine two concepts in a way that produces a continuous process chain, in which the individual stages can be tested using empirical data. The model construct thus produced is presented in Figure 3. In it we can see the discrete elements comprising the model of welfare production, namely politics and inputs, the production process, outputs, and outcomes. The Figure also depicts the four steps of progression on the virtuous circle.

In the box on the left we have politics. Welfare effort is described there by reference to the level of decommodification representing the institutional character of social security systems. This indicates the social protection assured to individual citizens against various risks, regardless of their status in the labour market. The second indicator is the ratio of net public social expenditure to GDP. It portrays the level of net income transfers between the public sector and households. After addition of public expenditure on education to the indicator, we have an indicator that encompasses all of the central categories of welfare expenditure (health, social protection and education).

Inequality is presented, along with social capital, in the output box. As we proceed from input factors to outputs, we come to the first point at which inputs and inequality are compared against each other. As the indicator of inequality, we use the Gini Index, the customary yardstick of inequality measured in terms of income. The ability of citizens to improve their circumstances is represented by their subjective views of their freedom of choice, while the

significance of social background for inequality is described by intergenerational income mobility. There are, then, both short- and long-term indicators of inequality.

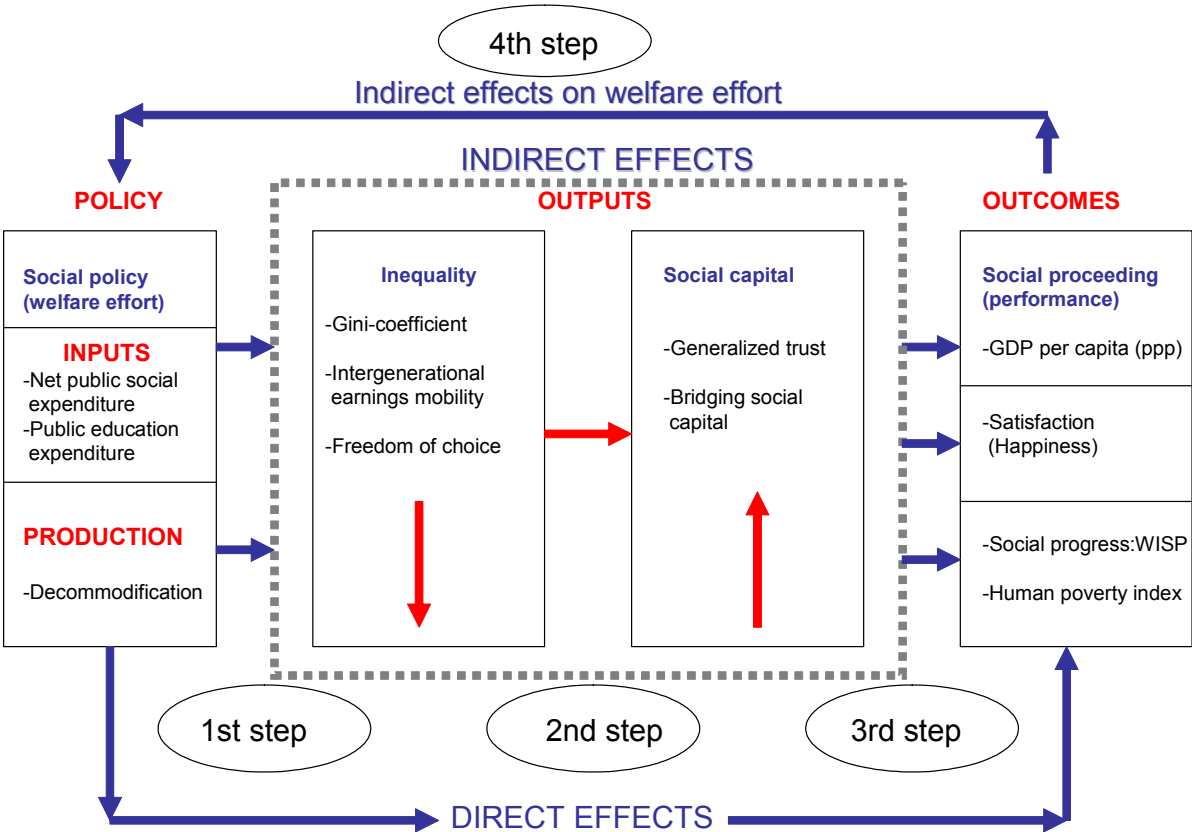
A second-stage empirical measurement is performed within the output box, focusing on the interdependence of the factors representing inequality and the variables of social capital. This corresponds to the fourth quadrant of the virtuous circle, where inverse dependence is the starting assumption. Namely, a decrease in equality is assumed to produce an increase in social capital. With regard to inequality and generalised trust, this output has been demonstrated by Rothstein and Uslaner (2005), who see the causality as running from inequality to public trust and not vice versa. The link between various indicators of inequality and community bridging social capital is also evaluated empirically. Notwithstanding the causal relationship described above, it can be assumed that in the output box the causalities are simultaneous, mutually reinforcing and produce – mainly through the accumulation of social capital – positive indirect effects on well-being along the virtuous circle. Testing of the crowding-out hypothesis referred to above is carried out indirectly via inequality by analysing the dependencies in the first two stages.

The purpose of the third stage is to assess the link between social capital and indicators of well-being in this model. People's subjective satisfaction with their lives, the second indicator of social performance and per-capita GDP (a measure of economic success) should be positively correlated with social capital assuming that the principle of the virtuous circle holds. This is evaluated empirically.

In the model of welfare production, this is where the story ends. To determine the existence of the virtuous circle, we carry out a further fourth step of analysis, where we look at the connections that people's subjective views of well-being and concrete indicators of well-being have with the amount of resources allocated to social policy. Under the virtuous circle hypothesis, the former should have a positive effect on the latter. Here too, causality is difficult to evaluate, but since we are dealing with a circle and we came to the indicators of well-being by way of inequality and social capital, a positive correlation can be seen as proof of the existence of the virtuous circle. In principle, the fourth step of analysis can be used to examine indirectly the existence of social capital and of different welfare state typologies and regimes. Direct comparisons of this have been performed by Lehtonen and Kääriäinen (2005, 2006).

We will proceed in the manner of Figure 3 by presenting the variables used at each stage of analysis. For details on the actual data used, we refer to the Literature section. For each of the four steps of analysis, we highlight the correlations between the individual variables and present selected dispersion diagrams of relevant dependencies.

Figure 3. Operationalisation of the virtuous circle in the theoretical framework of welfare production.



4. Data

Our data covers 23 welfare states. The data can be grouped as in Figure 3, where we first see two indicators of welfare effort. They are followed by four variables of inequality. Social capital is measured with two variables and inequality with four different indicators. Appendix Table 2 sets out state by state and variable by variable the observations that are available for each indicator. There is considerable variation in this regard. The only data available for all of the 23 countries concerned GDP and subjective satisfaction. Data about income inequality were available from 21 countries. On most of the variables, data were only available from 14–18 countries. Intergenerational income mobility data were only available from 8 countries. Naturally, the differential availability of data makes the comparison more difficult as the number of variables included in the comparison increases. There was significantly less data available from non-European countries than from European welfare states.

4.1. Welfare effort

The amount of resources dedicated to the implementation of social policy is naturally of great import to the welfare state. We begin with the calculations of net social expenditure made by W. Adema under the auspices of the OECD (Adema and Ladaique 2005). These calculations are based on the understanding that total social expenditure is exclusive of income transfers

returned to the public sector in the form of taxes and charges. Net social expenditure varies by country, because social income transfers may or may not be treated as taxable income. Tax deductions and direct subsidies to public services also are not included in net social expenditure. Adema's calculations accommodate also private social expenditure, which varies significantly from country to country. This study focuses primarily on public-sector social protection. Hence, we refer to net public social expenditure. Adema's data, which are from 2001, comprises 19 of the 21 countries included in this study. (Adema and Ladaique 2005, Appendix Table 3.)

Recognising that social expenditure – as defined by Adema – includes spending on social income transfers and social and health services, we have decided to broaden our concept of social expenditure by including the ratio of public expenditure on education to GDP in the net public social expenditure/GDP ratio. The data on all of the 23 countries studied come from the United Nations' Human Development Report for 2006. The data were collected in the early 2000s. The report includes an admonition to use the data with caution owing to the unsystematic way in which they may have been recorded by UNESCO.

The aggregate government welfare effort is analysed by means of an indicator composed of two variables. France, with the second highest net public social expenditure and relatively high level of spending on education, has the highest score (31.2%). Other countries with a high welfare effort are Germany, Denmark and Sweden. Germany in particular has a high level of net public social expenditure but lags behind on education spending. The ratio of public spending on education to GDP is especially high in Denmark, Iceland, Norway and Sweden. Along with France, the total welfare effort is highest in the Nordic countries. The lowest welfare effort is seen in Ireland, which comes last in terms of the GDP ratios of both net public social expenditure and spending on education (16.5%). Ireland ranked lowest on net public social expenditure and second to lowest (before Japan) on education spending. Non-European countries placed in the middle in the welfare effort ranking.

We also analyse the composition of the welfare effort of the individual countries by means of the index of decommodification. Developed by Esping-Andersen (1990), the index was modified and recalculated by L. Scruggs (see Scruggs and Allan 2005), who has published an index of decommodification for the years 1971–2002. Scruggs himself refers to the index as an "indicator of generosity". The index describes the degree of universality and the replacement rate of social security systems. Here, we use the term "index of decommodification". It refers to the degree to which social security systems allow benefit recipients to subsist without participating in the labour market. We use 2002 figures, which are available for 18 countries. The highest score on the index of decommodification was achieved by Norway (37.3). Belgium, Germany, Denmark, Finland, the Netherlands and Sweden also clear the 30 mark. Most countries place between 20 and 30, with only Australia and the United States remaining below 20 (17.9 and 18.1, respectively).

4.2. Indicators of inequality

We use three different variables to represent social inequality. Traditional income inequality is represented by the Gini Index, which is based on a database maintained by the WIDER Institute of the United Nations University (UNU-WIDER World Income Inequality Database, Version 2.0 a, June 2005). The index takes values ranging between 0 and 100, with a higher index score denoting a higher rate of inequality. The country index scores have been calculated on the basis of household disposable income (unscaled). Unless dictated otherwise by data availability, the index scores represent the situation at the turn of the millennium.

WIDER has performed corrective calculations on the index scores as required (see WIID 2a, User Guide and Data Sources).

Based on the definition of income used here and the Gini Index score, the highest level of income disparity is seen in the United States (39.4). Income disparity is high also in Portugal, the United Kingdom and New Zealand. It is lowest in Denmark (22.0), in Finland (25.5) and in Sweden (25.7). Austria and the Netherlands also have a low income disparity score.

Our second measure of inequality differs from the previous one in that it does not describe income inequality as such but rather inequality in terms of the extent to which prevailing social circumstances determine one's course in life. Another difference is that this indicator covers a longer period of time than just one year. We use the intergenerational income elasticity (β), which represents the degree to which sons' earnings depend on their fathers' earnings. Income elasticity is derived from a model where the sons' level of earnings is explained by their fathers' level of earnings in a bilogarithmic regression.³ We interpret the elasticity to mean that its complement describes the possibility of mobility in aggregate. Hence, we use the index $(1-\beta)$. Elasticity data is available for 8 countries. Jäntti et al. (2006) calculate elasticity scores for 6 of them. Their data have been standardised and are therefore significantly better for cross-country comparisons than meta-analyses performed with the use of a variety of methods and data. The income elasticity scores calculated for the Nordic countries, the United Kingdom and the United States are based on standardised data. The greatest elasticity (and thus the smallest mobility) is seen in the United States (0.52) and in the United Kingdom (0.31). The Nordic countries have low scores on the β parameter. Denmark is lowest (0.07) and is followed by Norway and Sweden (under 20) and by Sweden (over 20). The remaining two countries are Canada and Germany, both with average levels of income elasticity. The calculations for these two countries are based on metadata (Corak 2004), and may therefore not be comparable with the calculations of Jäntti et al. Different studies have come up with a range of different elasticity scores for the United States, for instance, which are not mutually comparable.

Other empirically estimated father-son income elasticities that are not relevant to this study include those calculated for such countries as Malaysia (0.26) and South Africa (0.44). Income elasticities have also been estimated for a number of other countries, including Nepal, Pakistan and Peru. (See Grawe 2004, 70–83.)

Our third indicator of inequality concerns the limitations imposed on individual freedom of choice. It is based on people's subjective views of their status and is similar to the Power Distance Index of G. Hofstede, which represents the ability of individuals to influence the decision-making concerning themselves, mainly in relation to their supervisors and managers. Unfortunately, Hofstede's indexes are based on data which are outdated for the purposes of this study (see Hofstede 2001).

The indicator used here consists of two parts derived from the basic data for the World Value Survey 1999/2001 (Inglehart et al. 2002). First, we look at a question which asks respondents to estimate, on a scale of 1–10, their ability to influence the course of their lives. The second question concerns the respondents' view of their ability to influence the decision-making that affects their own work. The scale is again 1–10. In the index we use, the share of those who

³ Rather than income mobility, income elasticity mainly describes the persistence of incomes. Countries with the same level of income elasticity may exhibit different levels of elasticity in the bottom or top range of the distribution. The analysis can be supplemented by quintile-based transition matrices and indicators calculated from them. (See Jäntti et al. 2006.) In the United States, no transition is seen from the lowest quintile up or the highest quintile down.

answered 1–6 to each of the questions is multiplied with itself and then squared (geometric mean). We choose the geometric mean because we do not expect the answers to be distributed normally. The degree of freedom of choice is equal to $(N_1 + N_2)^{0.5}$ where N_1 is the share of those who answered 1–6 to the first question and N_2 the share of those who answered 1–6 to the second question.⁴ These index scores are available for 16 countries. The availability is affected by the fact that the second question was not posed in all of the countries. For example, the United States, where the indicator based on the first question showed a high degree of freedom of choice, is not included because the second question was not posed at all.

According to the indicator, residents of the Nordic countries experienced the least limitations on freedom of choice. Denmark had the lowest score (23.9%). The Netherlands was level with the Nordic countries. The share of respondents who experienced limitations on their freedom of choice was highest in France (46.5%). High scores were also seen in Mediterranean countries (Spain, Italy and Portugal).

4.3. Indicators of social capital

As we noted above, inequality has been found to have an effect on social capital. As the indicators of social capital in the second stage of the virtuous circle, we chose generalised public trust and bridging social capital. Both were constructed by Lehtonen and Kääriäinen (2005, Table 1; 2006, Tables 2 and 4). Other dimensions of social capital such as the bonding social capital identified by Lehtonen and Kääriäinen, informal social assistance or the diverse forms of social capital described by Oorschot and Arts (2005), are not addressed here.

Our decision to concentrate on bridging social capital and generalised public trust is supported by the key writings developing the concept of social capital (Putnam 1993 and 2000; Woolcock 2000). It should be added that our framework, which combines social capital and inequality, makes an important contribution to the debate on social capital. We share the mainstream conception of social capital as an integrative force which adds to the common good. The link between social capital and equality which we identify suggests that social capital is partly a result of policies aimed at bridging social cleavages.

Lehtonen and Kääriäinen create aggregate indexes for 14 countries using data from the International Social Survey Programme for the year 2001. The indicator of social capital is based on respondents' answers to questions relating to their participation in various voluntary organisations over the past year. The aggregate variable of generalised trust was built around three statements. They concern the feelings of complete trust in other people and, at the other extreme, of exploitation by others.

The score for bridging social capital is highest in New Zealand (2.14). Other countries with a high score include Norway, France and Finland, each exceeding 2.00. The lowest score for bridging social capital was seen in Italy and Spain (1.35 and 1.20 respectively). Generalised trust was highest in Denmark (3.03), followed by Switzerland and Australia. Relative low scores were seen in Germany, Austria and Italy.

⁴ **Question 1:** Some people feel they have completely free choice and control over their lives, while other people feel that what they do has no real effect on what happens to them. Please use this scale where 1 means "none at all" and 10 means "a great deal" to indicate how much freedom of choice and control you feel you have over the way your life turns out.

Question 2: How free are you to make decisions in your job? Please use this card to indicate how much decision-making freedom you feel you have. 1 "none at all" 10 "a great deal".

4.4. Indicators of well-being

Moving on along the virtuous circle, we now come to indicators of well-being. Here, we use four indicators representing general well-being from a variety of perspectives. The first is GDP, a representation of economic resources. The second and third are traditional social indicators combining a range of economic and social factors. The fourth indicator, based on survey data, represents subjective well-being. The range of possible alternatives is extensive (see e.g. Vogel and Wolf 2004 and Saari and Sailas 2006; for a review of well-being indicators see Boarini et al. 2006).

We use per-capita GDP figures adjusted for purchasing power parity, which we have obtained from the OECD Economic Outlook for each of the 23 countries. The highest level of income was seen in Luxembourg, followed by the United States, Switzerland, Canada and Norway. The lowest income levels were seen in Greece and Portugal.

As our second indicator of well-being, we use the WISP Index created by R. Estes of the University of Pennsylvania (Weighted Index of Social Progress 2000), which comprises 10 different sectors and a total of 40 variables. The sectors cover such areas as education, health, income disparity, demographic structure, political rights, cultural diversity and welfare effort. A WISP score has been calculated for 17 of the countries included in this study. The subindexes represent the degree of social progress achieved by the countries studied as of the 1990s. The highest WISP scores are seen in Denmark and Sweden (both 107), in Norway (104) and in Finland (101). Greece and Portugal achieve a score of 90. The lowest score (85) is seen in the United States. This can be explained by the emphasis WISP places on income disparity and the status of public services.

Another widely used social indicator is the United Nations' Human Poverty Index (HPI). HPI scores are available for 18 of the countries included in this study. The HPI index consists of four dimensions, the first of which is the probability at birth of not surviving to age 60. The second dimension stands for the ratio of people lacking literacy skills to the working-age population and the third for the ratio of the long-term unemployed to the labour force. The fourth dimension represents the population share of people with below 50% of median income. Ranked according to their HPI scores, the top five countries are Sweden (6.5), Norway, the Netherlands, Finland and Denmark. The bottom five among the 18 countries compared includes Australia, the United Kingdom, Ireland, the United States and Italy (29.9). With second-lowest United States at 15.4, Italy stands in stark contrast to the other countries.

The fourth indicator of general well-being is a subjective measure based on 2001 data from the World Value Survey (Inglehart 2004) consisting of representative samples of the population. In the surveys underlying this measure, the respondents were asked about satisfaction with their lives, among other questions. Life satisfaction is often interpreted as synonymous with happiness. The answers were scored on a scale of 1–10, where 1 was completely dissatisfied and 10 fully satisfied. Here we have constructed an index representing the number of respondents who answered 8, 9 or 10. Again, the indicator represents life satisfaction or happiness. Scores were obtained for all of the 23 countries included in this study. The highest proportion of those satisfied with their lives was seen in Denmark (77%), followed by Iceland (74%), Finland (73%), Switzerland (72%) and Ireland (also 72%). The lowest share of people satisfied with their lives was seen in Japan (36%). Relatively low satisfaction scores of under 50% were obtained also for the Mediterranean countries.

5. Step-by-step analysis

Next, we will go through steps 1–4 of the virtuous circle presented in Figure 3, using the data described above. For each of the steps, we tabulate correlation coefficients for paired variables and present a selection of dispersion diagrams of regression lines that represent linear dependence. Pearson’s correlation coefficients for each of the variables are presented in Appendix Table 1. Due to the dearth of observations and other factors, we did not perform proper causality tests. The question of causality, then, will have to remain unanswered for now. The results concerning the statistical significance of the bidirectional t-test are presented in the Appendix Table below the Pearson coefficients.

5.1. Welfare effort and inequality

In the first stage (or step), we look at the interdependencies between variables representing welfare effort and inequality. In the horizontal columns of Table 1 we have the variables of welfare effort and in the vertical columns three indicators of inequality. The correlation coefficients displayed in the Table provide a general picture of the correlation between the variables as it relates to all of the countries studied, but says nothing about the possible causal nature of the dependencies.

Table 1. Welfare effort and inequality. Pearson’s correlations.

	Gini Index	Generational income mobility	Restrictions on freedom of choice
Welfare effort	–0.442 0.060	0.430 0.288	–0.066 0.831
Decommodification	–0.719 0.001	0.818 0.013	–0.795 0.003

There is a distinct negative dependence between welfare effort and income inequality, which is statistically significant at the 10% level. Welfare effort has a positive sign in regard to intergenerational income mobility – as one would expect – but the coefficient is not statistically significant. According to the coefficient, freedom of choice seems to increase with greater welfare effort, but the number of observations is not large enough to confirm this finding statistically. Representing independence from the labour market, the index of decommodification receives a statistically highly significant correlation coefficient in regard to all of the variables of inequality. Correlations with the Gini Index (negative), with income mobility (positive) and limitations on freedom of choice (negative) are of the expected signs.

Dispersion diagrams allow us to look at the situation as it pertains to individual countries and groups of countries. In Figure 4, we arrange the countries first according to their scores in the decommodification index and in terms of the limitations on freedom of choice. Data on these two variables are available for 11 of the countries.

As in all of our dispersion diagrams, the Nordic countries are coloured in red and the other countries in blue. The regression line in Figure 4 is clearly downward sloping. As the coverage and replacement rate of a social security system increases, the limitations on freedom of choice decrease. The countries with a high decommodification score (Finland, Sweden, the Netherlands and Denmark) have the least amount of limitations of freedom of choice.

In Figure 5, we have on the horizontal axis the welfare effort and on the vertical axis the Gini Index scores (representing the degree of income disparity) in 18 countries. According to the line of regression, the dependence is negative. The Nordic countries are located at points where the welfare effort is high and income differences small. This group also includes Belgium, France, Germany and Austria, and possibly the Netherlands. The United States stands apart in terms of its diminutive welfare effort and large income disparity. Ireland differs from the rest mainly on account of the low level of the welfare effort.

Figure 4. Decommodification and limitations on freedom of choice in 11 countries.

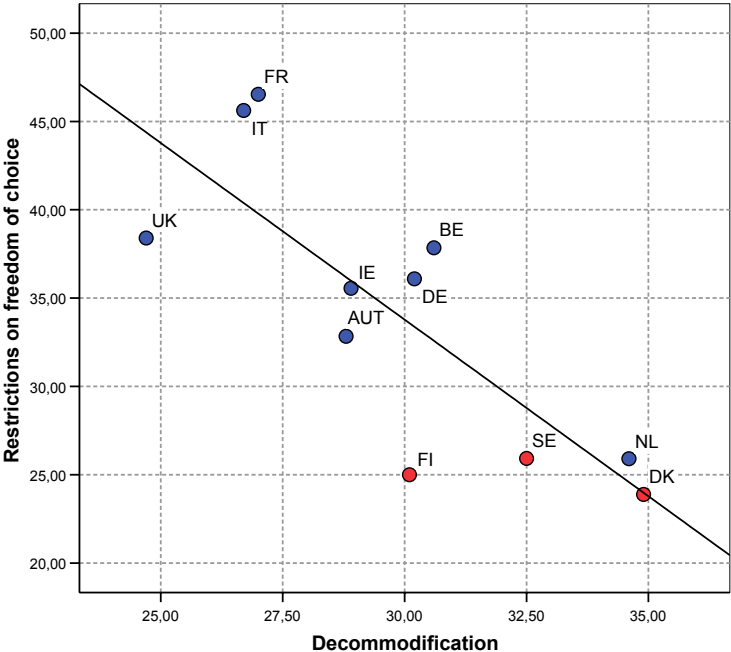
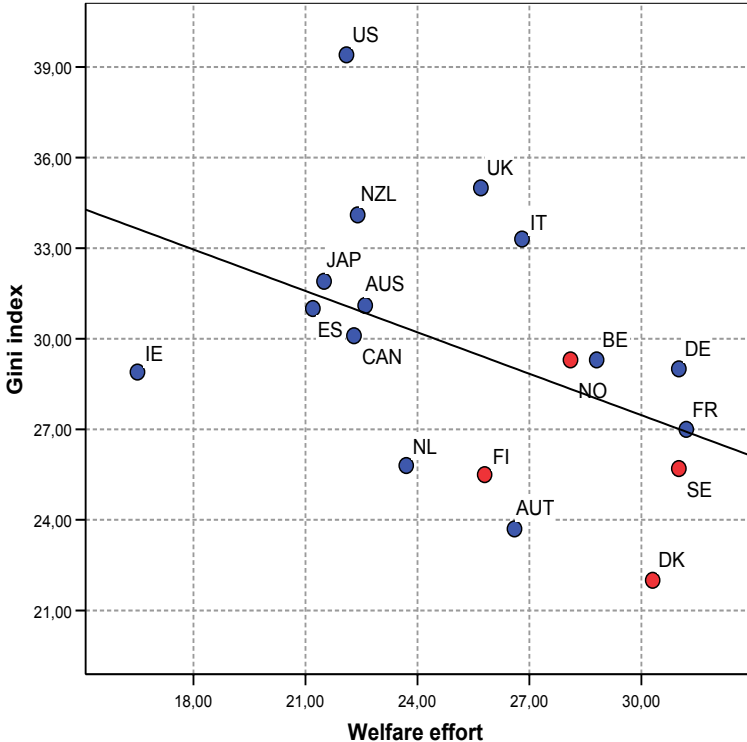
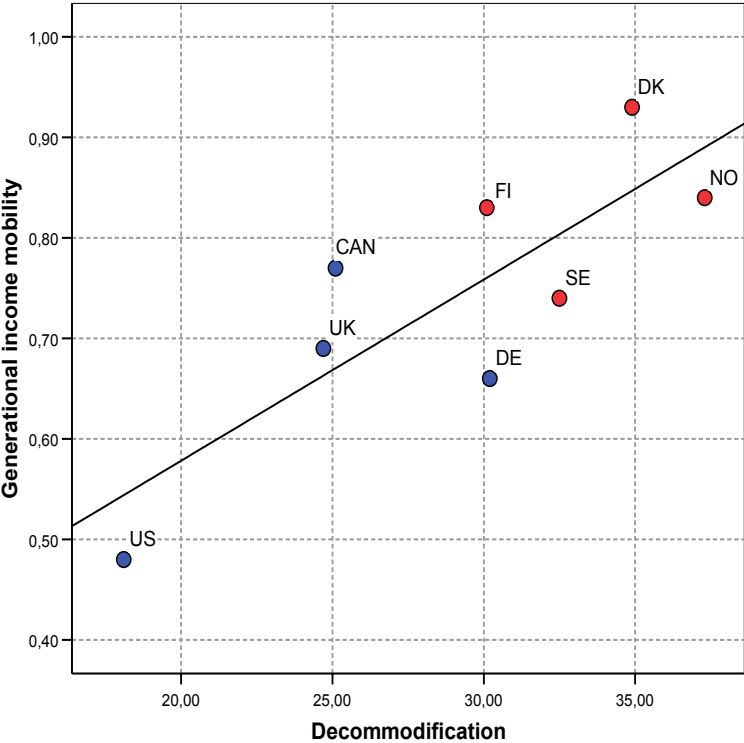


Figure 5. Welfare effort and Gini Index scores in 18 countries.



In Figure 6, we have on the horizontal index the decommodification index scores and on the vertical axis the intergenerational income mobility. Here, the line of regression is upward sloping, which can be interpreted as meaning that in countries with a high level of decommodification, parental social status – here expressed mainly as the level of earnings – is not strongly inherited. Studies (Jäntti et al. 2006) indicate that income mobility is possible in countries with a high level of decommodification. At the same time, these same studies report considerable income elasticity at the bottom and top ends of the income distribution (the United States), which seems to apply also to the level of decommodification. While the number of observations is not large, we can see that the Nordic countries are all grouped in the upper right corner, where both income mobility and the level of decommodification are high.

Figure 6. Decommodification and intergenerational income mobility scores in 8 countries.



5.2. Inequality and social capital

Next we look at the second stage of progression on the virtual circle. In Table, we present the correlation coefficients between three indicators of inequality and the forms of social capital. The Gini Index on line 1 correlates negatively with both of the social capital variables. However, the coefficients do not pass the statistical significance test. Intergenerational income persistence is positively correlated with both bridging social capital and generalised trust. The coefficient of correlation with trust, in particular, is statistically satisfactory. Limitations on freedom of choice are negatively correlated with the social capital variables. Again, the dependence is statistically more robust with trust than with bridging social capital. According to Table 2, the interdependence between the indicators of inequality and social capital is in line with the finding of Rothstein and Uslaner (2005) that inequality and trust have a negative dependence and that the causal relationship runs from inequality to trust. The finding by Rothstein and Uslaner is based on a substantially larger group of countries than the one used in this study.

Table 2. Inequality and social capital.

	General trust	Bridging social capital
Gini Index	-0.230	-0.085
	0.450	0.783
Generational income mobility	0.740	0.589
	0.057	0.164
Restrictions on freedom of choice	-0.571	-0.407
	0.139	0.316

The interdependencies between inequality and social capital in terms of a number of variables are presented in Figures 7, 8, and 9. Just as in the preceding dispersion diagrams, they present a line of regression between the variables, and show the Nordic countries as a separate group. In the Figures, the measures of inequality are on the horizontal axis and the measures of social capital on the vertical axis. In Figure 7, inequality is represented by the Gini Index and social capital by generalised trust. The countries are rather widely dispersed, and while the line of regression is downward sloping, its statistical significance is not particularly convincing. Still, the Figure does show the way the Nordic countries congregate in an area characterised by small income differences and a high level of trust. Austria and to some extent Germany both have relatively small income differences but a low level of trust.

Figure 7. Gini Index and trust scores in 13 countries.

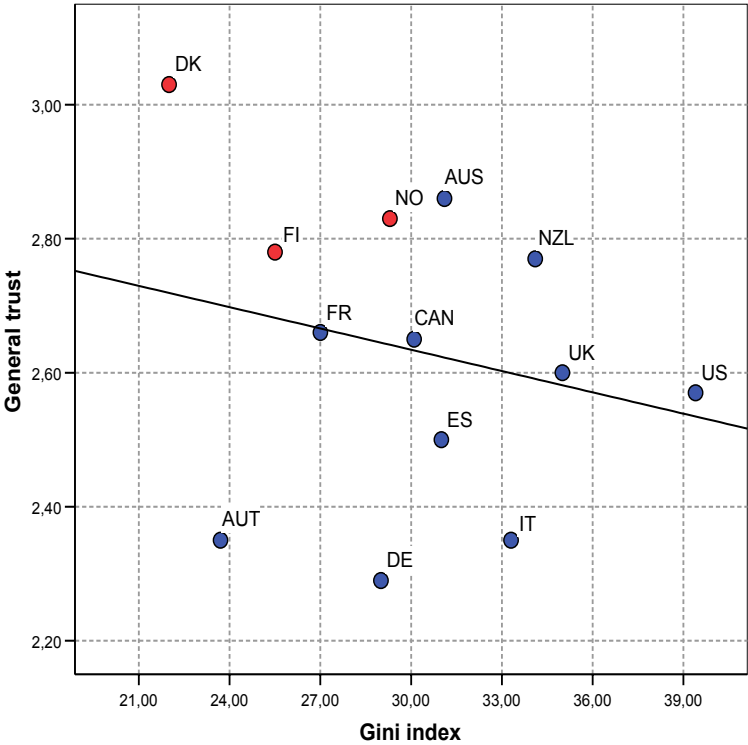


Figure 8 looks at the link between inequality and social capital from a difference perspective. On the horizontal axis, we have the degree of limitation on freedom of choice and on the vertical axis, bridging social capital. Again, we find that the dependence appears to be negative, but cannot be verified as such due to the small number of observations. In countries with a high degree of limitations on freedom of choice (e.g. Mediterranean countries such as Italy and Spain), little social capital has accumulated, whereas the opposite is the case in the Nordic countries (Finland and Denmark). France diverges clearly from this in that it has the greatest accumulation of bridging social capital despite a high degree of limitations on freedom of choice.

Figure 8. Freedom of choice and bridging social capital in 8 countries.

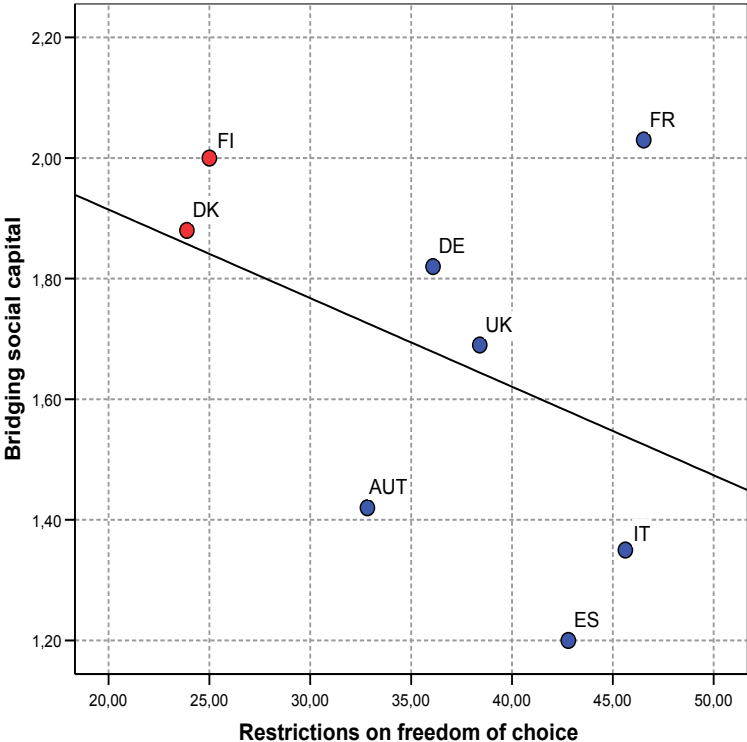


Figure 9. Intergenerational mobility and bridging social capital in 7 countries.

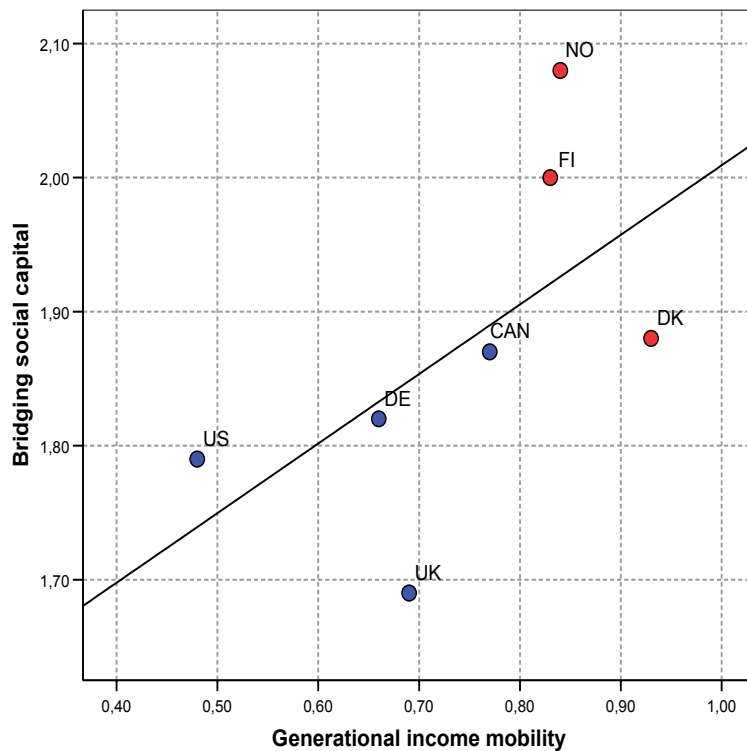


Figure 9 presents a third example of the relationship between inequality and social capital. There we have on the horizontal axis intergenerational income mobility and on the vertical axis, bridging social capital. Only a small number of observations are available for these variables. Nevertheless, we can see that the line of regression is upward sloping, suggesting a positive dependence between these variables. We noted earlier that Jäntti et al. (2006) identified a difference between the Nordic countries and both the United States and the United Kingdom in terms of intergenerational income mobility. Figure 9 now indicates that these countries differ also in terms of bridging social capital. Social mobility, estimated by means of the level of community-mindedness and income disparity, differs from one group of countries to another. In the Nordic countries, both are at a high level.

5.3 Indirect welfare effects

As we saw in Figure 2, general well-being is influenced directly by public spending on education, social welfare and health. Besides these direct effects in the outer sphere of the virtuous circle, the process is reinforced by the different forms of social capital. Next, using the same procedure as above, we look at the connections between social capital and indicators of general well-being. The correlations in Table 3 are complemented by the selected dispersion diagrams presented in Figures 10, 11 and 12.

In Table 3, we have the two forms of social capital in the rows and the four indicators of well-being in the columns. On the whole, the correlation coefficients have the expected signs. The dependence between social capital and the Human Poverty Index score is negative and that between the other indicators of well-being, positive. The existence of trust is one of the prerequisites for the creation of a universal social security system, as Rothstein and Uslaner (2005) observe. This is seen not only as a decrease in the HPI score but also as an increase in

the WISP score, in which public welfare services are one of the subindexes. The decrease in income differences, another WISP subindex, is associated with trust. While the coefficient of correlation between social capital and GDP receives a positive sign, the coefficients of the WISP index or GDP and social capital are not statistically significant given the data we have. By contrast, the fourth indicator – satisfaction with life – correlates quite positively with the two forms of social capital, and these correlation coefficients are statistically significant. Life satisfaction is high in societies where there is general trust in other people and active participation in civic affairs.

Table 3. Social capital and general well-being.

	HPI-index	WISP-index	GDP/capita	Satisfaction to life
General trust	-0.545	0.256	0.220	0.612
	0.067	0.448	0.449	0.020
Bridging social capital	-0.573	0.222	0.176	0.571
	0.051	0.512	0.547	0.033

Figure 10 is a dispersion diagram in which the countries studied are placed both according to the accumulation of bridging social capital and their WISP scores. The line of regression is upward sloping. The United States is differentiated by its low WISP score. The Nordic countries are located in the top right corner where bridging social capital and social progress as measured by the WISP index are high.

Figure 11, with bridging social capital still on the horizontal axis but satisfaction with life now on the vertical axis, presents a similar picture. The line of regression indicates that the dependence is positive, perhaps even more so than in the preceding Figure. It appears that subjective satisfaction with life is more common in countries where bridging social capital is high than in countries where this is not the case. The former group is represented by Denmark, Sweden and Norway and the latter group by Italy and Spain.

Figure 10. Accumulation of bridging social capital and WISP scores in 11 countries.

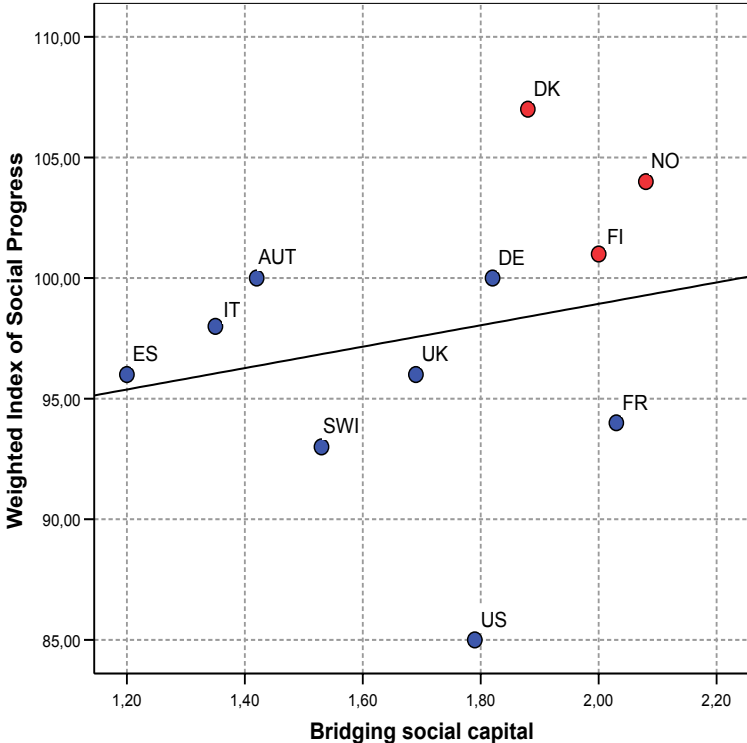


Figure 11. Accumulation of bridging social capital and satisfaction with life.

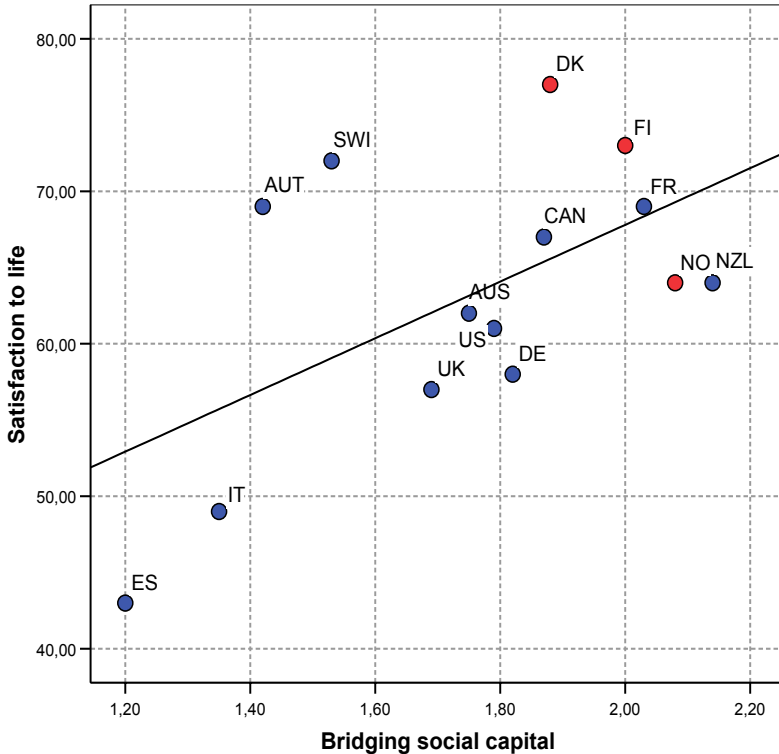
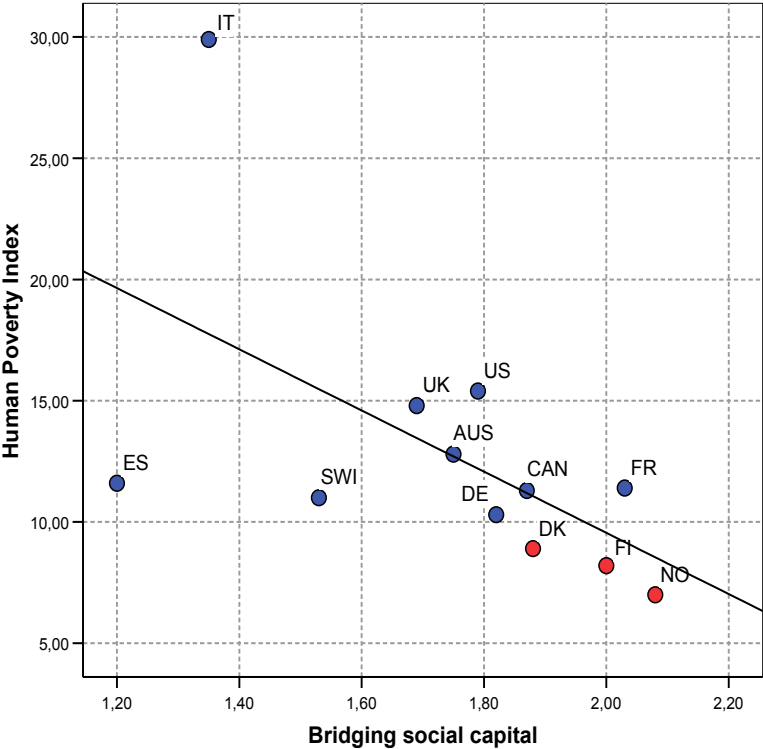


Figure 12. Accumulation of bridging social capital and HPI scores.



Thirdly, we present Figure 12, where we once again have bridging social capital on the horizontal axis but HPI scores on the vertical axis.. The line of regression is downward sloping. Low HPI scores are seen in the Nordic countries, which also have a high level of bridging social capital. Despite its low level of social capital, Spain does not have a high HPI score. Italy stands out as an exception due to its high HPI score. Finally, it is worth noting that additional analyses based on the available data did not reveal any dependence between GDP and social capital, which is in line with the earlier finding that in higher-income countries, a further increase in the income level does not appear to have a beneficial effect on people’s satisfaction with life or happiness.

5.4. The circle closes

We have now come to the fourth stage of the virtuous circle, in which we seek to discover whether there is a dependence between general well-being and the welfare effort required to produce it. It may be assumed that such dependence would be simultaneous and that the causal relationship would be bidirectional. Assuming that our hypothesis of a virtuous circle works, a decrease in inequality and an increase in social capital should contribute to a growth in well-being. This should produce a greater willingness in society to allocate more resources to the development of social security systems that can help to reduce inequality, leading to progression on the virtuous circle. In this work we have proceeded from inequality and social capital to indicators of well-being. Our assumption, therefore, is that there is a positive dependence between the indicators of well-being and welfare effort and that an increase in one variable will cause an increase in the other variable as well, taking us to a higher sphere on the virtuous circle. In Table 4, we have in the rows the four indicators of well-being and in the columns the variables representing welfare effort.

As a general observation, it can be noted that the correlation coefficients for the HPI Index have the expected signs. This is true of the WISP Index as well. The coefficient for GDP, however, does not have the expected sign, while the indicator of life satisfaction does. The well-being indicators correlate more with the index of decommodification than with the welfare effort. The dependence between the WISP Index and the index of decommodification is the most robust one in terms of its statistical significance. The negative coefficient of correlation for GDP is not statistically significant for either of the variables of welfare effort. Confirmation of the direction of causality would require simultaneous calculations based on a wider range of observations, which are not available to us. On the whole, a positive dependence can be said to exist between the WISP index and welfare effort. The inverse dependence of the HPI Index and the positive dependence of the indicator of life satisfaction are statistically more significant in relation to the index of decommodification than to the net public social expenditure.

Table 4. General well-being and the welfare effort.

	Welfare effort	Decommodification
HPI-index	-0.218 0.418	-0.391 0.135
WISP-index	0.583 0.029	0.791 0.001
GDP/capita	-0.076 0.757	-0.152 0.546
Satisfaction to life	0.208 0.392	0.351 0.153

Similarly to what we did earlier, we now present some dispersion diagrams of the relationships between selected pairs of variables. The indicators of well-being are on the horizontal axis and the variables representing welfare effort are on the vertical axis. In Figure 13, we have on the horizontal axis the WISP scores and on the vertical axis the welfare effort represented by the social expenditure.

Being upward sloping, the line of regression indicates a positive dependence. Especially in the Nordic countries, there appears to be a clear dependence between social development and welfare effort. The WISP Index does not appear to have an effect on the welfare effort that would be manifested as high social expenditure. What may be lurking in the background is the differential ability of different types of systems to generate an impact on well-being. An observation to this effect can be made between Finland and the United Kingdom. The United States and Ireland stand out due to their low level of public social expenditure.

Figure 14 presents a dispersion diagram with the WISP Index on the horizontal axis and the index of decommodification on the vertical axis. There appears to be a distinct positive dependence between the variables. The Nordic countries again place in the top right corner of

the diagram. However, Finland is located at some remove from the other Nordic countries. The United States lies at the other opposite of the dispersion.

Figure 13. The WISP Index and welfare effort in 14 countries.

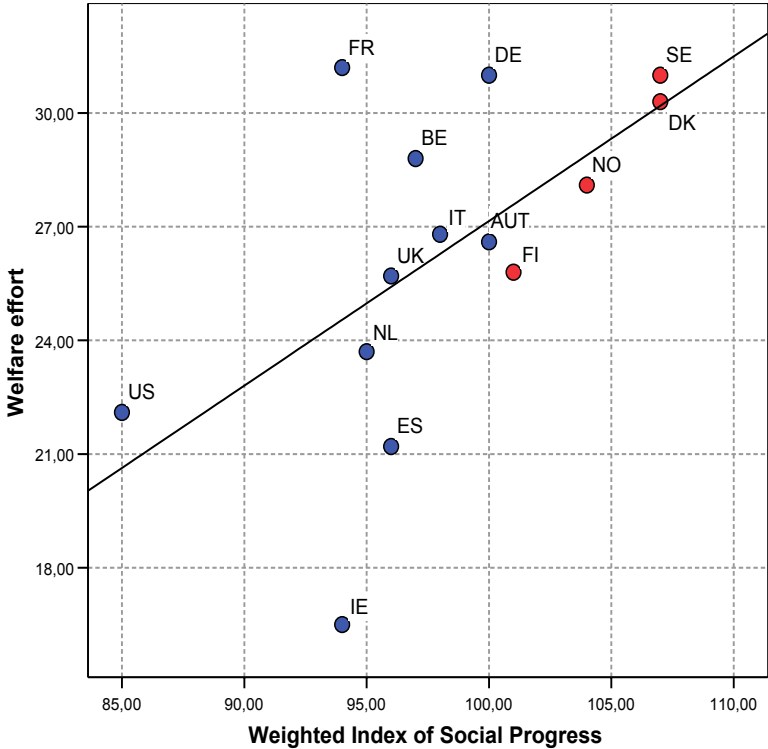
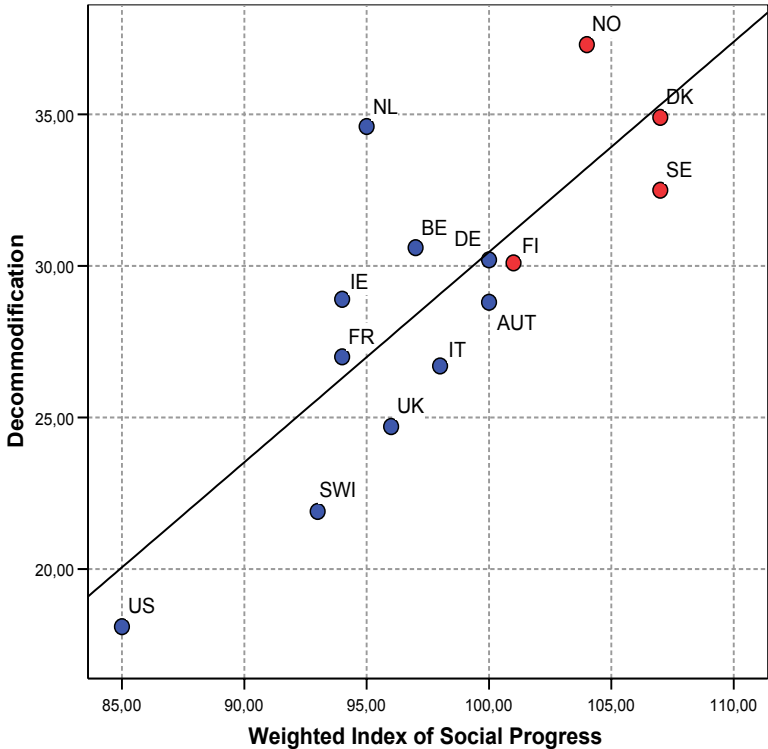
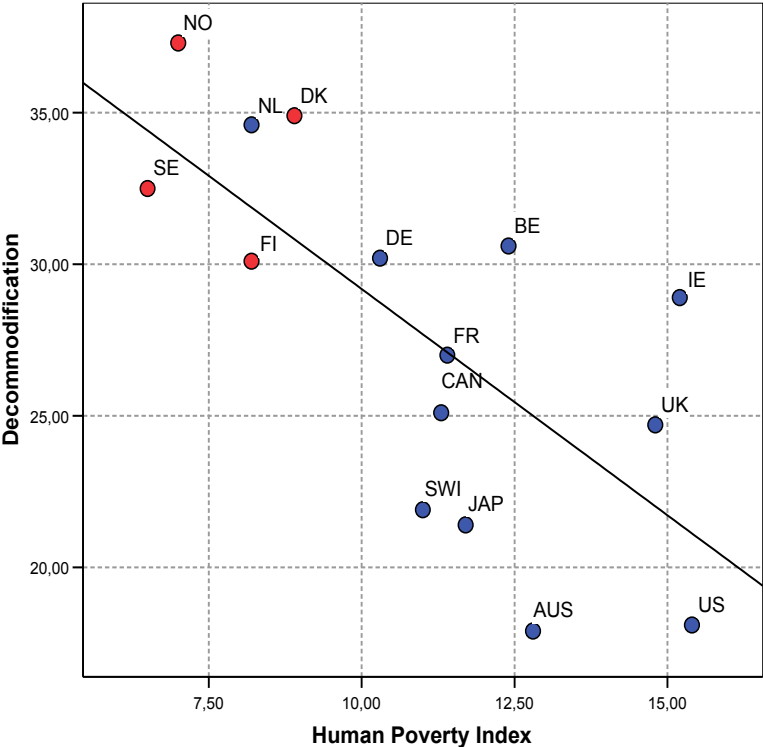


Figure 14. The WISP Index and decommodification in 14 countries.



While the dependence appeared positive in Figures 13 and 14, the following Figures assume an inverse dependence between the indicator of well-being and the indicators representing the welfare effort. In Figure 15, we have on the horizontal index the HPI Index and on the vertical axis the index of decommodification.

Figure 15. The HPI Index and decommodification in 15 countries.

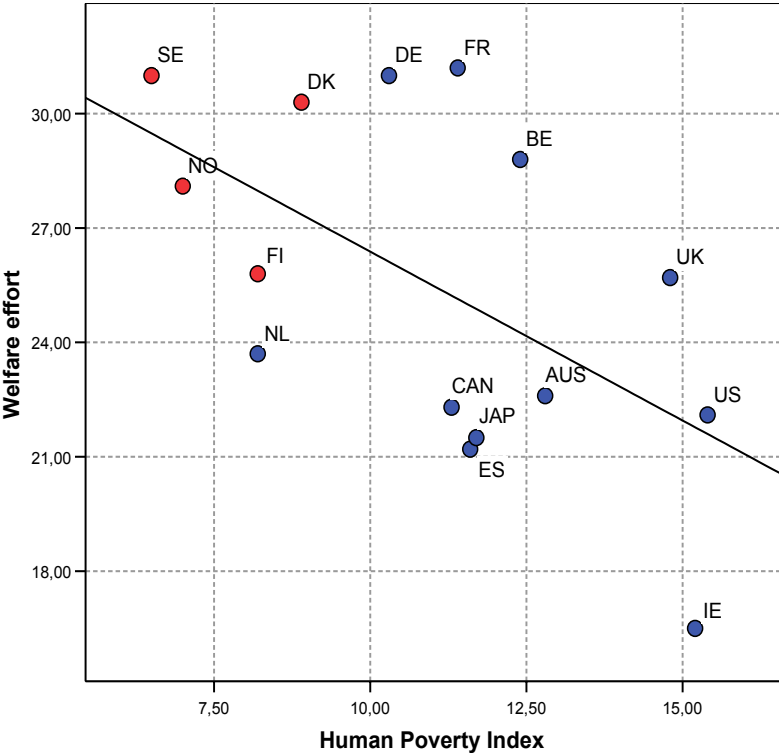


Judging from the downward sloping line of regression, there is a clear negative linear dependence between the variables. The Nordic countries and the Netherlands form a distinct group in the upper left corner of the diagram, in an area where the HPI score is low, social security coverage is extensive and the replacement rates are quite generous. Australia and the United States (and possibly the United Kingdom and Japan as well) represent the opposite extreme.

Finally, we present Figure 16, in which the countries are placed according to their HPI scores and their level of welfare effort. Here, as expected, the dependence appears to be negative. As can be seen from the cases of Sweden, Denmark, Germany and France in Figure 16, the HPI score has little effect either way given a sufficiently high level of social protection. An observation to this effect can also be made between Finland and the United Kingdom. This may be explained by the universality of the welfare state in the Nordic countries, which, at a comparable level of expenditure, can be presumed to produce a better outcome for society as a whole. In order to provide a conclusive answer to this, we would possibly have to include other factors than merely the welfare effort in the analysis.

The tables and figures presented are based on a relatively small range of countries. Therefore, our findings should be treated with caution and should be considered as a kind of baseline description. Nonetheless, sometimes even relatively unsophisticated methods can help to identify phenomena that can serve as useful starting points for more sophisticated, yet not necessarily more fruitful follow-up analyses.

Figure 16.The HPI Index and welfare effort in 15 countries.



6. Conclusions

This study takes its inspiration from the findings of previous research about social capital and the welfare state. We are interested in the connections between social capital, general well-being and the resources expended to produce it. To the extent that the earlier research deals with social capital and welfare state regimes, we have included social inequality here as a background factor. Further, insofar as the earlier research addresses the links between welfare effort, inequality and the forms of social capital, we have incorporated the model of welfare production into the study design as a unifying framework, and have combined it with an approach based on the idea of a virtuous circle.

To compare the countries for which data were available, we used several variables representing the welfare effort, inequality, social capital and general well-being. In many cases, the number of observations was insufficient to allow us to present convincing proof. Still, we think that it is possible to draw some preliminary conclusions even on the basis of the simplified analysis outlined here. One such conclusion concerns the crowding-out hypothesis mentioned in the beginning of this study, which asserts that public social expenditure and other welfare spending crowd out the community-mindedness and trust that exists in society.

In the theoretical framework we have constructed, this hypothesis can be tested using the first two stages of the virtuous circle. For the crowding-out hypothesis to be discarded, it would be necessary to find, in the first stage, an inverse dependence between inequality and the public resources allocated to social policy. In the second stage, we would have to discover an inverse dependence between inequality and social capital. The findings for the first stage, reported in

section 5.1., do, indeed, indicate such inverse dependences. The second-stage findings reported in section 5.2. show an inverse dependence between inequality and social capital. Together, these findings lead to the conclusion that the crowding-out hypothesis must be discarded.

In order to verify the operation of a virtuous circle, we added a third stage, in which we examined the dependence between social capital and indicators of well-being. Our general observation in section 5.3. was that there is a positive dependence between social capital and general well-being. In the fourth stage, we analysed the links between the indicators of well-being and the welfare effort. A positive dependence was found to exist between them. While we did not test for causality, a virtuous circle can be considered to exist as long as a kind of bifurcation phenomenon obtains between the variables. Acting in unison, these factors bring about a transition to the outer sphere of the virtuous circle. (Causality, endogeneity and problems of identification when using cross-sectional data have been addressed by R. Hjerppe, 2003. Causality assessments have been criticised by S. Durlauf, 2002.)

After the first exploratory analyses performed in this study, we can now consider possible avenues for follow-up research. One factor that constrained this study was the small number of countries included in the study. This was due to the relatively wide range of indicators we used. In the future, we should seek to broaden and to deepen, in quantitative, qualitative and temporal terms, the range of data used. A larger number of observations would allow us to perform causality tests for each of the stages described above and thereby to assess the functioning of the virtuous circle.

The connections between inequality, social capital and different welfare state typologies are one potential topic for future study. Even in today's increasingly globalised world, universal social security systems and the other dimensions of the welfare state have a significant impact on such economic factors as productivity and competitiveness. The question about how best to promote social capital and education, and thereby increase human capital and productivity, remains relevant. Questions like this can be implanted into the study framework we presented above, as can questions concerning the demographic structure (e.g., the impact of aging on the financing of health provision). In our virtuous circle, we were able to identify solutions that could have an indirect positive impact on such problems of health financing.

REFERENCES

- Adema W, Ladaïque M. Net social expenditure, 2005 Edition. More comprehensive measures of social support. OECD Social, Employment and Migration Working Papers No. 29. Available at: <http://www.oecd.org/els/workingpapers>.
- Barr N. economic theory and the welfare state: A survey and interpretation. *Journal of Economic Literature*, Vol. 30: 741–803, June 1992.
- Boarini R, Johansson A, d’Ercole M. Alternative measures of well-being. OECD Social, Employment and Migration Working Papers. OECD 2006. Available at: <http://www.oecd.org/els/workingpapers>.
- Corak M, ed. *Generational income mobility in North America and Europe*. Cambridge University Press, Cambridge, UK 2004.
- Durlauf S. On the empirics of social capital. *The Economic Journal*, Vol. 122 (483) November 2002.
- Esping-Andersen G. *The three worlds of welfare capitalism*. Polity Press, Cambridge, 1990.
- Esping-Andersen G. *Social foundations of postindustrial economies*. Oxford University Press, Oxford, 1999.
- Esping-Andersen G. Unequal opportunities and the mechanism of social inheritance. In: Corak M, ed. *Generational income mobility in North America and Europe*. Cambridge University Press, Cambridge, UK 2004.
- Estes R. Weighted index of social progress. Available at: http://www.everything2.com/index.pl?node_id1497987.
- Ewald F. *L’État providence*. Éditions Grasset & Fasquelle, Paris, 1986.
- Fisher M. Positiivisten tunteiden ja asenteiden vaikutus vuorovaikutussuhteissamme. In: Hämäläinen R, Saarinen E, toim. *Systeemiäly 2006*. Helsinki University of Technology, System Analysis Laboratory Research Reports B 26, Helsinki, June 2006.
- Flora P, ed. *Growth to limits. The Western European welfare states since World War II*. Walter de Gruyter, New York, 1986.
- Frizell J. Does inequality kill? On the relation between income inequality and health. Presented at the 4th Annual ESPAnet Conference, Bremen, 21–23 September, 2006.
- Grawe N. Intergenerational mobility for whom? The experience of high- and low-earning sons in international perspective. In: Corak M, ed. *Generational income mobility in North America and Europe*. Cambridge University Press, Cambridge, UK 2004.
- Hagfors R, Hellsten K, Ilmakunnas S, Uusitalo H. Eläkeläisten vaiherikas 1990-luku: Johdanto ja yhteenveto. In: Hagfors R, Hellsten K, Ilmakunnas S, Uusitalo H. *Eläkeläisten toimeentulo 1990-luvulla. Eläketurvakeskuksen tutkimuksia 2003:1*, Helsinki, 2003.

- Hill M, Bramley G. Analysing social policy. Basil Blackwell, Oxford, 1986.
- Hjerppe R. Social capital and economic growth revisited. Valtion taloudellinen tutkimuskeskus, Keskustelualoitteita 307, Helsinki, 2003.
- Hofstede G. Culture's consequences. Second edition. Sage Publications, California, 2001.
- Human Development Report 2006. [Retrieved at 15.12.2006.] Available at: <http://hdr.undp.org/hdr2006/statistics/indicators/99.html>.
- Hämäläinen R, Saarinen E, toim. Systeemiäly 2006. Helsinki University of Technology, System Analysis Laboratory Research Reports B 26, Helsinki, June 2006.
- Inglehart R, et al. World Values Surveys and European Values Surveys, 1999–2001 [electronic data]. ICPSR version. Ann Arbor, MI, Institute for Social Research [producer], 2002. Ann Arbor, MI: Inter University Consortium for Political and Social Research [deliver], 2004. Tampere : Yhteiskuntatieteellinen tietoaarkisto [deliver], 2004.
- Jäntti M, Bratsber B, Røed K, Raaum O, Naylor R, Österbacka E, Björklund A, Eriksson T. American exceptionalism in a new light: A comparison of intergenerational earnings mobility in the Nordic Countries, the United Kingdom and the United States. IZA, Discussion Paper No. 1938, January 2006.
- Korpi W, Palme J. The paradox of redistribution. American Sociological Review, Vol. 63 (5) 1998.
- Kuivalainen S. A comparative study on last resort social assistance schemes in six European Countries. Stakes, Research Report 146, Helsinki, 2004.
- Kumlin S, Rothstein B. Making and breaking social capital: The impact of welfare state institutions. Comparative Political Studies, (38), May 2005.
- Lehtonen H, Kääriäinen J. Hyvinvointivaltiot ja sosiaalisen pääoman ulottuvuudet. In: Jokivuori P, toim. Sosiaalisen pääoman kentät. Minervakustannus, Jyväskylä, 2005.
- Lehtonen H, Kääriäinen J. The variety of social capital in welfare state regimes – A comparative study of 21 countries. European Societies, Vol. 8 (1) 2006.
- Mitchell D. Income transfers in ten welfare states. Revision of the author's thesis (doctoral) – Australian National University, SPRU University of York, Avebury, Aldershot. 1991.
- OECD. Economic outlook 77. [Retrieved at 15.3.2005.] Available at: <http://www.oecd.org>.
- van Oorschot W, Arts W. The social capital of European welfare states: the crowding out hypothesis revisited. Journal of European Social Policy, Vol. 15 (1) 2005.
- Putnam R. Making democracy work. Civic traditions in modern Italy. Princeton University Press, Princeton, NJ, 1993.
- Putnam R. Bowling alone: The collapse and revival of American community. Simon & Schuster, New York, 2000.

Rothstein B, Uslaner E. All for all. Equality, corruption, and social trust. *World Politics*, (58), October 2005.

Saari J, Sailas R. Suomi – moniulotteinen menestyjä. *Hyvinvointikatsaus* 2, 2006.

Scruggs L, Allan J. Welfare state decommodification in eighteen OECD countries: A replication and revision. [Retrieved at 28.9.2005.] Available at: <http://www.sp.uconn.edu/~scruggs/wp.htm>.

Smeeding T, O'Higgins M, Rainwater L. Poverty, inequality and income distribution in comparative perspective. Harvester Wheatsheaf, Hertfordshire, 1990.

UNU-WIDER World Income Inequality Database. V 2,0a, June 2005. Available at: <http://www.wider.unu.edu/wiid-introduction-2005-1.htm>.

Vogel J, Wolf M. Index för internationella välfärdsjämförelser: Sverige i täten. *Välfärd* Nr 1, 2004.

Wilensky H. Rich democracies. Political economy, public policy and performance. University of California Press, California, 2002.

Woolcock M. Social capital: The state of the notion. In: Kajanoja J, Simpura J, eds. *Social capital. Global and local perspectives*. Government Institute for Economic Research, Helsinki, 2000.

World Bank. World Development Report 2006. Available at: [www.worldbank.org/].

Appendix Table 1. Pearson's correlations.

Correlations

		Welfare effort	Decommodification	Gini index	Generational income mobility	Restrictions on freedom of choice	General trust	Bridging social capital	Human Poverty Index	Weighted Index of Social Progress	Per capita purchasing power parity GDP	Satisfaction to life
Welfare effort	Pearson Correlation	1	,512*	-,442	,430	-,066	-,033	,257	-,218	,583*	-,076	,208
	Sig. (2-tailed)		,036	,066	,288	,831	,915	,397	,418	,029	,757	,392
	N	19	17	18	8	13	13	13	16	14	19	19
Decommodification	Pearson Correlation	,512*	1	-,719**	,818*	-,795**	,059	,249	-,391	,791**	-,152	,351
	Sig. (2-tailed)	,036		,001	,013	,003	,849	,412	,135	,001	,546	,153
	N	17	18	17	8	11	13	13	16	14	18	18
Gini index	Pearson Correlation	-,442	-,719**	1	-,863**	,629*	-,230	-,085	,558*	-,744**	-,221	-,597**
	Sig. (2-tailed)	,066	,001		,006	,012	,450	,783	,020	,001	,337	,004
	N	18	17	21	8	15	13	13	17	16	21	21
Generational income mobility	Pearson Correlation	,430	,818*	-,863**	1	-,830	,740	,589	-,716*	,868*	-,433	,735*
	Sig. (2-tailed)	,288	,013	,006		,082	,057	,164	,046	,011	,283	,038
	N	8	8	8	8	5	7	7	8	7	8	8
Restrictions on freedom of choice	Pearson Correlation	-,066	-,795**	,629*	-,830	1	-,571	-,407	,610*	-,622*	-,114	-,627**
	Sig. (2-tailed)	,831	,003	,012	,082		,139	,316	,035	,017	,673	,009
	N	13	11	15	5	16	8	8	12	14	16	16
General trust	Pearson Correlation	-,033	,059	-,230	,740	-,571	1	,498	-,545	,256	,220	,612*
	Sig. (2-tailed)	,915	,849	,450	,057	,139		,070	,067	,448	,449	,020
	N	13	13	13	7	8	14	14	12	11	14	14
Bridging social capital	Pearson Correlation	,257	,249	-,085	,589	-,407	,498	1	-,573	,222	,176	,571*
	Sig. (2-tailed)	,397	,412	,783	,164	,316	,070		,051	,512	,547	,033
	N	13	13	13	7	8	14	14	12	11	14	14
Human Poverty Index	Pearson Correlation	-,218	-,391	,558*	-,716*	,610*	-,545	-,573	1	-,365	-,090	-,369
	Sig. (2-tailed)	,418	,135	,020	,046	,035	,067	,051		,199	,721	,132
	N	16	16	17	8	12	12	12	18	14	18	18
Weighted Index of Social Progress	Pearson Correlation	,583*	,791**	-,744**	,868*	-,622*	,256	,222	-,365	1	,045	,389
	Sig. (2-tailed)	,029	,001	,001	,011	,017	,448	,512	,199		,864	,123
	N	14	14	16	7	14	11	11	14	17	17	17
Per capita purchasing power parity GDP	Pearson Correlation	-,076	-,152	-,221	-,433	-,114	,220	,176	-,090	,045	1	,439*
	Sig. (2-tailed)	,757	,546	,337	,283	,673	,449	,547	,721	,864		,036
	N	19	18	21	8	16	14	14	18	17	23	23
Satisfaction to life	Pearson Correlation	,208	,351	-,597**	,735*	-,627**	,612*	,571*	-,369	,389	,439*	1
	Sig. (2-tailed)	,392	,153	,004	,038	,009	,020	,033	,132	,123	,036	
	N	19	18	21	8	16	14	14	18	17	23	23

*. Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Appendix Table 2. Data by country and variable.

State	Welfare effort	Decom-modification	Gini Index	Generational income mobility	Restrictions on freedom of choice	Generalised trust	Bridging social capital	Human poverty index	Weighted index of social progress	Satisfaction with life	Per capita ppp GDP
AUS	X	X	X			X	X	X		X	X
AUT	X	X	X		X	X	X		X	X	X
BEL	X	X	X		X			X	X	X	X
CAN	X	X	X	X		X	X	X		X	X
DK	X	X	X	X	X	X	X	X	X	X	X
FI	X	X	X	X	X	X	X	X	X	X	X
FRA	X	X	X		X	X	X	X	X	X	X
GER	X	X	X	X	X	X	X	X	X	X	X
ICE	X				X					X	X
IRE	X	X			X			X	X	X	X
ITA	X	X	X		X	X	X	X	X	X	X
JAP	X	X	X					X		X	X
NL	X	X	X		X			X	X	X	X
NZL	X	X	X			X	X			X	X
NOR	X	X	X	X		X	X	X	X	X	X
POR			X		X				X	X	X
SPE	X		X		X	X	X	X	X	X	X
SWE	X	X	X	X	X			X	X	X	X
SWI		X	X			X	X	X	X	X	X
UK	X	X	X	X	X	X	X	X	X	X	X
US	X	X	X	X		X	X	X	X	X	X
LUX			X		X			X		X	X
GRC			X		X				X	X	X
N = 23	19	18	21	8	16	14	14	18	17	23	23