# CHAPTER 8

# SOCIAL JUSTICE, WELL-BEING, AND ECONOMIC ORGANIZATION

# ONLINE APPENDIX

Coordinating Lead Authors: 1 Gianluca Grimalda and Kalle Moene

Lead Authors:<sup>2</sup> Fernando Filgueira, Marc Fleurbaey, Katherine Gibson, Carol Graham, Rubén Lo Vuolo, Reema Nanavaty, Hiroshi Ono, John Roemer, and Alain Trannoy

<sup>&</sup>lt;sup>1</sup> **Affiliations**: GG: Kiel Institute for the World Economy, Germany; KM: University of Oslo, Norway.

<sup>&</sup>lt;sup>2</sup> **Affiliations**: FF: CIESU, Uruguay; MF: Princeton University, USA; KG: Western Sidney University, Australia; CG: Brookings, USA; RLV: Centro Interdisciplinario para el Estudio de Políticas Públicas, Argentina; RN: SEWA, India; HO: Hitotsubashi University, Japan and Texas A&M University, USA; JR: Yale University, USA; AT: AMSE & EHESS, France.

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#### A8.1 A review of empirical studies on perceptions of distributive justice

Empirical investigations examining which principles individuals use when judging the fairness of a given earnings distribution have flourished in the last decades. This strand of research comprises both "vignette studies," where individuals are asked to rate the fairness of different hypothetical situations, and experimental studies, where individuals are asked to assess an actual allocation of earnings administered in a laboratory (or, in some cases, in real life) and propose a redistribution scheme from richer to poorer participants. In spite of the differences that naturally arise across studies, the overwhelming consensus is that most people are indeed sensitive to individual relative responsibility in producing their earnings. First of all, full equalization of outcomes generally attracts little support when individuals are asked to evaluate earnings allocations. In the context of vignette studies (Schokkaert and Capeau, 1991; Konow, 1996), individuals would abide by an egalitarian principle only in the special case when those variables that are normally relevant for individual responsibility are perceived as having been equally applied. In survey studies, only between 3% and 7% of US respondents are in favor of complete or near equality of income (McCloskey and Zaller, 1984; Kluegel and Smith, 1986).

Interestingly, very few people seem to adopt the well-known "difference principle" inspired by John Rawls, which prescribes the maximization of the position of the least advantaged members of society (see Chapter 2, section 2.4.3.4). In a seminal experiment that purportedly reproduced Rawls's original position, only one group out of 81 opted for the difference principle (Frohlich et al., 1987). Similar results were achieved by Konow (2003) and Schildberg-Hörisch (2010). In an experiment devised to compare the attractiveness of different principles of justice, individuals seemed to reach consensus on a mixed rule, which prescribes granting a minimum income to everyone, upon which the utilitarian rule prescribing the maximization of expected income is applied—the so-called Boulding hybrid principle (Boulding, 1962; Frohlich et al., 1987; Konow, 2003; Traub et al., 2005).

Second, and perhaps most importantly, many individuals are willing to reward individual effort or abilities when these are conducive to greater earnings. The amount of redistribution requested by experiment participants is considerably higher when luck, rather than individual effort, determines earnings (Durante et al., 2014), and individuals are willing to reward more those people who *chose* to work more (Konow, 2003; Cappelen et al., 2010). Cappelen et al.'s (2007) pioneering study supports the view that people's compliance with redistributive criteria cannot be reduced to a unique principle. Around 38% of participants

can be classified, in the authors' words, as "liberal egalitarians." Those are people who compensate for inequalities caused by factors beyond one's control—such as random differences in the wage rates—but do not compensate for inequalities that are caused by people's choice—such as how much effort they put into the task. Nonetheless, a nonnegligible portion of participants—about 18%—are classified as pure libertarians, who do not compensate for differences in luck. Perhaps surprisingly, the largest category in this experiment is formed by strict egalitarians, who pursue full income equalization. This contrasts with the evidence reported above for US samples.

Arguably, the observed difference in compliance with egalitarian principles between experiments is partly due to differences in the experimental design, but also partly to the participants' nationality. Cappelen et al.'s (2007) experiment was conducted in Norway, where egalitarian norms are, arguably, embedded in the national culture. In a still unpublished work, Almås et al., (2016) replicate the same experiment in Norway and the US, finding a proportion of strict egalitarians in Norway more than twice as high as in the US. By contrast, libertarians are more than twice as numerous in the US as in Norway. Grimalda et al. (2018) also find a larger share of egalitarians in Norway and of libertarians in the US. Interestingly, German participants behave in the same way as Norwegian, while Italians, perhaps surprisingly, behave similarly to US participants. Other personality traits are consistent with this clustering. Comparative experimental studies are still in their infancy. Existing studies, nevertheless, clearly show the relevance of significant cultural differences across countries. The evidence is consistent with the diffusion of a cooperative social ethos in the Nordic countries, and more individualistic values in the US, thus confirming our argument of Chapter 8: section 8.3.2.2.

Differences in the way people assess inequality in their societies also emerge in survey studies. Osberg and Smeeding (2006) find, in general, gross underestimation of the extent of income inequality in each of the countries being surveyed, where perceived inequality is measured by the ratio of the estimated earnings of firm CEOs to estimated earnings of production workers. Such underestimation is largest in the US—partly because actual inequality is largest in the US. Most importantly, opinions differ widely across countries on the extent to which people at the top end of the income scale are entitled to earn in comparison to people at the bottom. The acceptable ratio of top earnings to bottom earnings can vary from an average value of 12.3 in Japan to one of 3.1 for Spain.

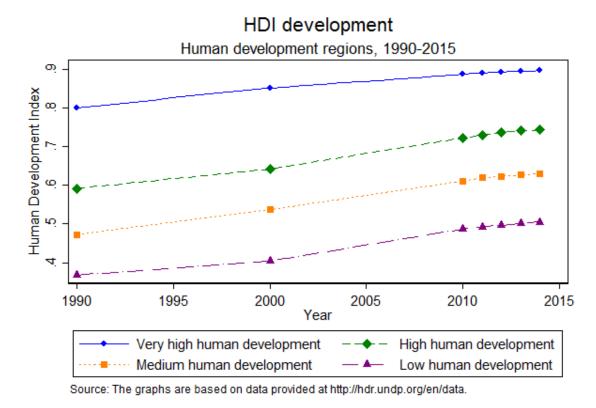
Given that many people in each country show a general tendency to hold people responsible for their choices, but not for the effects of luck, an interesting empirical question is where exactly individuals place the "responsibility cut" (see Chapter 2:section 2.4.3.3). The evidence on this aspect is scant, but seems to support a "meritocratic" view, according to which individuals' natural talents in performing certain tasks are seen as valid entitlements to acquiring larger earnings (Konow, 2003). Strictly speaking, this goes against the responsibility principle, because natural talents should be better seen as results of luck rather than choice. Meritocracy attributes people an entitlement to reap the benefits from all the attributes of their person, but not those of random events external to their person.

Few studies assess how people react to relative need. In one of these studies, Cappelen et al. (2013) find that individual needs are important factors in people's propensity to redistribute. In particular, willingness to transfer resources by individuals living in rich countries toward individuals living in poor countries is higher than the share of income given as foreign aid. Nonetheless, factors other than needs, such as individual merit, appear to be even more relevant in explaining preferences for redistribution. Overall, their evidence suggests that perceptions of international justice might differ from perceptions of national justice. Cross-country empirical evidence is still in its infancy; therefore we need more research to check the robustness of these findings.

A final word of caution is in order. Most of the studies reported above come from what Joseph Henrich et al. (2010) famously called WEIRD samples, where WEIRD stands for Western Educated Industrialized Rich and Democratic samples. It is estimated that as much as 90% of experimental psychology research is carried out with Western university students. The few seminal comparative studies show large differences in attitudes towards distribution and cooperation (e.g. Henrich et al. 2010; Buchan et al., 2009). Understanding the relationship between inherited culture and individual preferences worldwide is a fascinating enterprise that requires more research.

# A8.2 Additional analysis of evolution of objective well-being and income concentration A8.2.1 The Human Development Index

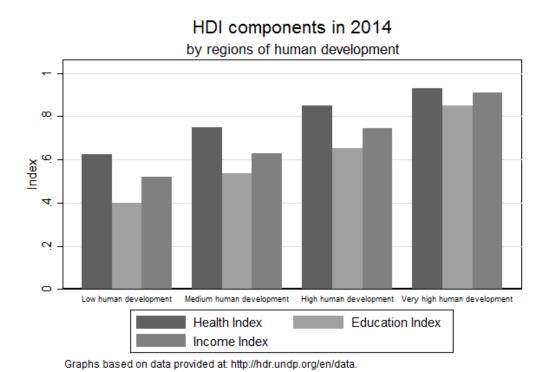
Figure A8.1 shows the evolution of the Human Development Index (HDI) from 1990 to 2015 for different groups of countries. Countries classified as having "Very high human development"—namely, HDI above 0.8 in 2015—include mainly Western European countries, the US, Canada and similarly developed countries. Countries belonging to the group of "High human development"—HDI between 0.7 and 0.8 in 2015—are, for example, the Russian Federation, China and most countries in Latin America. India, some African countries and Central Asia have typically a "Medium human development"—HDI of 0.55-0.7 in 2015. Finally, countries with "Low human development" – namely, HDI below 0.55 in 2015—are mostly Sub-Saharan African countries.



**Figure A8.1**. The evolution of the Human Development Index (HDI) by group of countries (1990-2015)

The graph tells a mixed story. On the one hand, a steady trend of increasing HDI characterizes all four groups. The rate of growth of HDI seems even to accelerate, through rather modestly, after the year 2000. Nonetheless, the gap between these four groups, and in particular between the very high and low human development groups have decreased only

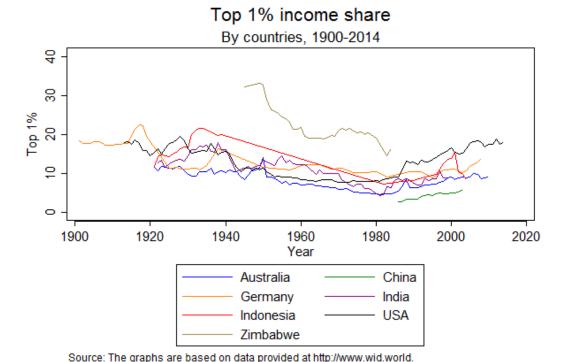
marginally. In 1990 the gap equaled 0.433 of the index scale, whereas the gap was only 0.391 in 2015. A reduction of less than 10% of the gap after 25 years of constant global effort to reduce between-country disparities seem quite a modest improvement. Figure A8.2 reports the HDI score in 2014 broken down by each of the three components and group of countries. Education is the component where the gap for low human development countries is the largest.



**Figure A8.2**: Human Development Index score per group of country and sub-indicator

# A8.2.2 Income concentration at the top of the distribution

Another common approach to measuring economic cleavages uses the share of total income possessed by the top 1% in the income distribution. Figure A8.3 shows the evolution of the top 1% income share for a selected sample of countries.



**Figure A8.3**. Evolution of the top 1 % income share by countries, 1990—2016

While the Gini index appears to evolve in different ways in different countries (see Chapter 8: Figure 8.4), the evolution of the top 1% income share shows remarkable similarities among the countries considered. Inequality experienced a decreasing trend up from the beginning of the 20<sup>th</sup> century until the 1980s, which was then reversed. Interestingly, countries for which complete coverage is not available—namely, China and Zimbabwe—show a trend that is similar to that of other countries for the period in which data are available. Such a "great U-turn" in inequality during the 20<sup>th</sup> century also holds for the share of wealth owned by the top 1% (Piketty, 2014). It is also interesting to note that China is still the country with the lowest share of income accruing to the top 1% in comparison to other countries in this group. At the other end, Zimbabwe stands out as the country with the highest level of income for the top 1%, although data are not available after 1984.

Table A8.1 shows data for income concentration for selected countries in different instances of time. Data for income concentration are broadly consistent with those for wealth concentration (Chapter 8: Table 8.1). While income concentration is today higher in the US than in European countries, the opposite was true in 1910. It is striking that the structure of income concentration today in the US is exactly the same as that of Europe in 1910. Nordic

countries in the 1970s-1980s experienced what are the lowest levels of income concentration since records began. Income accruing to the richest top 10% in Nordic countries was 25% in that period, as opposed to 50% in the US in 2010. The poorest half would earn 30% of total income in Nordic countries in the 1970s-1980s, as opposed to a share of 30% for the US poorest half in 2010.

#### Concentration of income in selected countries

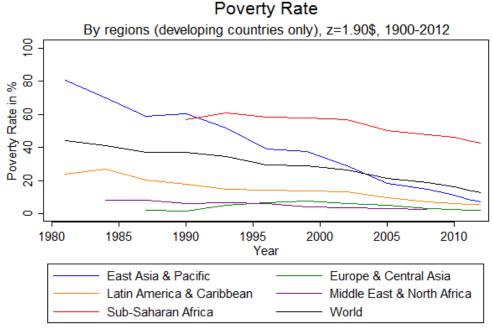
	(1)	(2)	(3)	(4)	(5)
	Europe 1910	US 1910	Nordic countries 1970s- 1980s	Europe 2010	US 2010
Upper class (top 10%)	50%	40%	25%	35%	50%
"Dominant" (top centile)	20%	18%	7%	10%	20%
"Well-to-do" (2nd-10th percentiles)	30%	22%	18%	25%	30%
Middle class (50th-10th percentiles)	30%	Not available	45%	40%	30%
Lower class (100th–50th percentiles)	20%	Not available	30%	25%	20%
Corresponding Gini coefficient	0.49		0.26	0.36	0.49

**Table A8.1**: Concentration of income in selected countries

Source: Piketty (2014)

#### **A8.2.3** Poverty rate

Figure A8.4 shows the evolution of poverty rates over time, defined by the share of citizens with income below 1.90 US Dollars per day. Incomes have been expressed in purchasing power parity (PPP). That is, national incomes have been adjusted for differences in price levels across different countries, to ensure that the PPP-adjusted income of 1.90 USD dollars has the same purchasing power of goods in different countries. It is noticeable that poverty rates have decreased steadily from the 1980s, from levels of around 40% to around 15%. Nonetheless, Sub-Saharan Africa is the region where progress has been the most sluggish. Still 50% of the people appear to fall below the poverty line in 2014 in this region. As mentioned in Chapter 4: Section 4.4.1.1, the absolute number of people living in poverty in Sub-Saharan Africa has actually increased over the period, standing at 400 million people according to the latest available statistics.



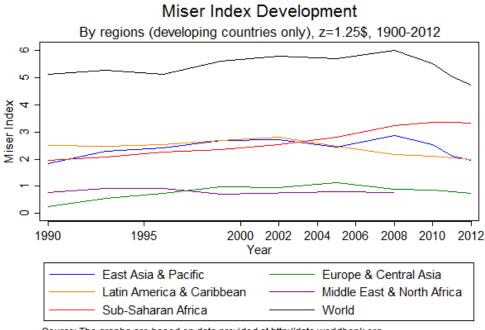
Source: The graphs are based on data provided at http://data.worldbank.org.

**Figure A8.4**: Evolution of poverty rates for the world and for regions

#### A8.2.4 The Miser index

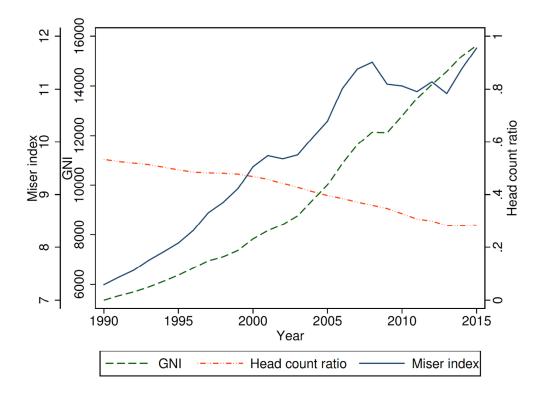
A useful measure combining information on both inequality and poverty is the Miser index, capturing to what extent poverty is unnecessary (Lind and Moene, 2011). The index is derived from a set of axioms. It can be expressed as the product of the share of a country's population that lives below the poverty line, and the gap between the average income of the non-poor and the average income of the poor. It turns out to be the group-based Gini coefficient between the poor and the non-poor expressed in absolute terms (Lind and Moene, 2011). It is illustrated in Figure 8.5A where the units on the vertical axis is dollars per person (per day).

Figure 8.5A shows the evolution of the Miser index from 1990 to 2014 for the shamelessly low poverty line of 1.25\$ in purchasing power parity. The different lines indicate various geographical regions. The exposition is limited to developing countries that have a non-negligible share of people living below the poverty line. Using the index we can rank countries according to their miserliness. On the top twenty list we find India and China in addition to highly in-egalitarian middle-income countries in Latin America. On top of the list, however, we find South-Africa as the most miserly country in the world.



Source: The graphs are based on data provided at http://data.worldbank.org.

Figure 8.5A: Evolution of the Miser Index



**Figure 8.5B** the Miser index for the world with poverty line of 2\$ a day.

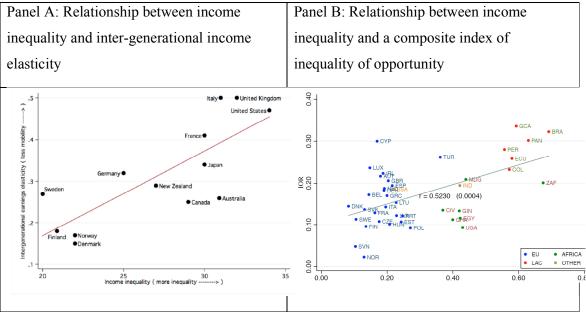
Figure 8.5A shows a steady increase of the Miser index for all regions from 1990 until 2005. Since then, the Miser index has gone somewhat down for all regions except for Sub-Saharan African countries, where the index has continued to grow. Why is the Miser index for the world as a whole higher than the index for each region listed? The explanation is simple: when the entire world is responsible for all the poor people in world, we include some rather rich countries that do not themselves have significant levels of extreme poverty. So we add incomes that can be used to alleviate poverty, making the actual poverty in the world even more unnecessary. Hence, the world is more miserly than the other regions in figure 8.5A.

In Figure 8.5B, we illustrate the effects of a higher poverty line (set equal to 2 PPP dollars per day) and we compute the index over a longer time span that reaches 2015. The index shifts upwards in terms of the unit of measure on the vertical axis, because the poverty line is set higher. The world GNI has doubled three times from 1990 to today. In comparison, the decline in the head count measure of world poverty is modest. This graph shows that the Miser index rose dramatically between 1990 and 2008 and experienced a decline between 2008 and 2012. The further rise after 2012 implies that the miserliness of the world now is at the same high level as the most miserly country in the world, South Africa.

#### A8.2.5 Indicators of inequality of opportunity

Equality of opportunity is central in the debate on distributive justice (see Chapter 2, section 2.4; Chapter 3, section 3.5.1.3; Chapter 8, section 8.2.1.2). The debate over how to best measure "opportunity" is wide-ranging. In spite of its limitations, many studies use the inter-generational elasticity of income. This measures the correlation between a person's permanent income and that of their parents. This measure has the merit of assessing how much a person's permanent income gets transmitted across generations, thus offering an evaluation of how much chance a person from lower economic strata has to climb up the economic ladder. It is however a rather imperfect measure of opportunity, both because it overlooks other non-economic aspects of opportunity, and because it looks at the final outcomes of being endowed with opportunities rather than at the initial stage of distribution of opportunities. Recently, new composite indicators of opportunities have been created which take into account both the availability of specific services (such as education, but also electricity and water resources) to children living in a certain society (or in a specific group of that society), and the distribution of a well-being indicator (such as income, earnings, or consumption) available to individuals belonging to specific groups of the society (see Brunori

et al., 2013). Figure A8.6 reports two charts detailing the existence of a strong correlation between measures of income inequality and both the inter-generational income elasticity (Panel A) and a composite index of inequality of opportunity (Panel B). Although these charts cannot disentangle causality, they highlight how certain economic systems appear capable of ensuring social justice under several different domains (see also Chapter 3, section 3.3.2.4).



**Figure A8.6**: Relationship between income inequality, inequality of opportunity and intergenerational mobility elasticity

**Source**: Brunori et al., (2013) for Panel A; Corak (2013) for Panel B. IOR is an index of inequality of economic opportunity, as reported in Brunori et al. (2013).

# A8.3 Further notes on subjective well-being

#### A8.3.1 Hedonic and evaluative metrics

Researchers of happiness studies increasingly agree on two distinct dimensions of well-being: the hedonic and the experienced and evaluative. The former assesses respondent's moods and affect as they go through their daily experiences. Are they, for example, smiling or worried, happy or anxious when they are at work, commuting, with family and friends, or in other activities? Daily recall questions in large N surveys, such as "did you smile frequently yesterday?" correlate quite closely with more detailed measures, such as those which ask respondents to de-construct the previous day's activities and assess their moods at each particular juncture. That allows for much larger-scale usage of these metrics than was originally possible. Evaluative metrics, meanwhile, which have been used in large-scale surveys for much longer, assess respondents' satisfaction with their lives as a whole—across various domains of well-being and over the life course. The most common questions used are: "generally speaking, how satisfied are you with your life as a whole?" and the Cantril ladder question, which asks respondents to place themselves on an 11 step ladder, where 0 is the worst possible life they can imagine and 10 is the best possible life they can imagine.

Hedonic metrics are better suited for assessing the quality of lives and associated interventions designed to improve people's short-term experiences. Evaluative metrics are better for assessing respondents' capabilities and opportunities (in the spirit of Amartya Sen; see Chapter 2, section 2.3.1.1). Evaluative metrics correlate more closely with income than do hedonic metrics, not because income is equivalent to happiness or well-being, but because those respondents with more income have more ability to control their lives and to choose the kinds of lives that they want to lead. Evaluative metrics implicitly include the eudemonic or Aristotelian dimension of well-being, which is the ability to lead a meaningful or purposeful life. Some surveys, such as the well-being module in the British Office of National Statistics (ONS) annual survey (2013), explicitly include a eudemonic question. The ONS survey asks respondents to assess how much purpose or meaning they have in their lives, on the same 0-10 scale as the life satisfaction question therein. Answers to this question typically correlate closely but not perfectly with life satisfaction responses.

## A8.3.2 Methodological controversies over the Easterlin paradox

The evidence supporting the Easterlin Paradox (Chapter 8: section 8.2.3) has been extensively analyzed and also called into question by some. Stevenson and Wolfers (2008) used large scale data—primarily from the Gallup World Poll—to show a stronger log-linear relationship between per capita income and average levels of national happiness. In a subsequent paper they also show a stronger relationship between economic growth and happiness than Easterlin does (Sacks et al. 2010). While they claim to de-bunk the paradox, much of the discrepancy is in the questions that are used to measure well-being in the first instance, and in the time frame and sample of countries that are used in the second.

The question that is used to measure life satisfaction in the Gallup World Poll is the Cantril ladder question (see previous section). While most of the correlates of more open-ended life satisfaction questions and the ladder question are very similar, the coefficient on income is stronger at both the individual and country level. This is not surprising, as the ladder question introduces a relative frame. Graham et al. (2010) find that the ladder question correlates much more closely with income within and across countries than does life satisfaction in general, and much more so than hedonic measures of well-being, such as 'smiling yesterday.' Kahneman and Deaton (2010) find similar patterns for the U.S. Even Stevenson and Wolfers find much less significance in the correlations between life satisfaction and general happiness questions and income in their cross-country and longitudinal study. Moreover, Stevenson and Wolfers's data only cover the 2005-2013 period, while Easterlin's data goes back several decades.

Another criticism is that well-being scales are top-coded, while GDP scores are not. If the index of well-being, so the argument goes, has an upper bound at 10 and starts, say, at 5, it is hardly surprising that the index cannot keep pace with the fact that GDP per capita has increased threefold. Yet there is significant evidence that people adapt their answers to the scales, so that the distribution of 1-5 scales are not much different from 1-10 scales, suggesting that there is not a significant percent of respondents seeking to put themselves in a higher category. At the same time, there is equally significant evidence that people adapt to higher and higher levels of income, particularly if incomes in general are rising at the same time. As such, there is basic consensus in the literature that the top coding of the well-being variables does not change this debate in a significant manner.

# A8.3.3 The beneficial effect of happiness

Recent research has explored the reverse channel of causality: What does well-being cause? Early economics research found that individuals with higher levels of life satisfaction performed better in later years in the labor market and health arenas (Graham, Eggers, and Sukhtankar, 2004). This has been confirmed in many other studies (Diener et al., 2005). DeNeve and Oswald (2012) used a large U.S. representative panel to show that young adults who reported higher life satisfaction or positive affect grew up to earn significantly higher levels of income later in life. They used twins and siblings as comparison controls and accounted for factors such as intelligence and health, as well as the human capacity to imagine later socioeconomic outcomes and anticipate the resulting feelings in current well-being.

Experimental studies have also been used to avoid the possibility of endogeneity problems. If cher and Zarghamee (2011) isolated the effects of mild positive affect in reducing time preferences over money and in the ability to delay gratification. Oswald et al. (2015) showed that positive affect induced by video-clips resulted in subjects putting forth a greater quantity of output (10-12%). They also found that bad moods induced by bereavement or illness in the subjects' families had a negative effect on productivity.

De Neve et al. (2013) conducted a general review of the existing research on SWB and positive outcomes. They found that there were benefits in the health arena such as improved cardiovascular health, immune and endocrine systems, recovery speed, survival, and longevity; lowered risk of heart disease, stroke, and infection; and healthier behaviors. In the income and social arenas the studies found increased productivity, creativity, cognitive flexibility, cooperation, and collaboration; better peer-rated, financial, and organizational performance; reduced absenteeism; higher income; reduced consumption and increased savings; increased employment, pro-social behavior (altruism, volunteering), and sociability; better social relationships and networks; reduced risk-taking; longer-term time preferences and delayed gratification. As the "science" of well-being measurement has developed, these metrics are increasingly being used to complement objective metrics of progress based on income, health and education status, and similar indicators.

SWB metrics provide a new lens into the determinants of well-being, and into the relationship between social justice and well-being. Graham and Nikolova (2015), for example,

find that respondents who are limited in their means and capabilities can report to be very happy, simply because they have adapted to adverse circumstances (as in Sen's (1999) "happy slaves" critique). Yet when asked more framed evaluative questions, such as the Cantril ladder question (see Appendix: section 8.3.1), these same respondents will score significantly lower. Along the same lines, very poor respondents with poor norms of health often report to be satisfied with their health, while those with better norms of health and higher expectations have lower scores. Respondents in Kenya are as satisfied with their health as those in the US, and respondents in Guatemala are more satisfied with their health than those in Chile, even though objective indicators in both the US and Chile are significantly better than those in Kenya and Guatemala.

### A8.4 An ethical and empirical perspective on technological innovations

In this section we want to offer a philosophical perspective on the relationship between objective well-being (OWB), social justice, and innovation. Innovation plays a central stage in the analysis of Chapter 8, particularly in section 8.4.1. Innovation is the capacity of a society to shift forward the frontier of its production potential. On Schumpeter's account, innovation should be understood in terms of creative destruction and should be seen as a basic component of capitalist systems. Innovation is in itself a public good. Public economics define pure public goods as those that are non-excludable and non-rival in consumption, such as scientific discoveries or public health programs. An innovation is characterized by non-rivalry and *partial* excludability, and as such is an *impure* public good. Excludability is ultimately guaranteed by the patent system that grants the innovator temporary exclusive access to reap the benefits of the innovation. Nonetheless, the public good aspect of non-rivalry calls for the innovation to be publicly available, in order to maximize aggregate welfare.

One angle from which to look at how societies manage innovation policy from a normative standpoint is the self-ownership property that is common to libertarian approaches to social justice (see Chapter 2: section 2.4.3.1). Nozick's (1974) view that individuals have a right to self-ownership entails that individuals are legitimated to receive both the rewards for their talents and skills and the results of their labor when labor is mixed with the exploitation of natural resources. Nozick bases this argument on John Locke's idea that in a "state of nature," i.e. a hypothetical human society that precedes the establishment of political and social institutions, it would be legitimate for an individual to claim the results of her labor combined with natural resources, provided that other individuals were left with a sufficient amount of resources to produce goods for themselves. According to this "Lockean proviso," as Nozick calls it, it appears legitimate that the financial returns from innovations are privately appropriated. One can rightfully argue that when Bill Gates founded Microsoft, or Steve Jobs founded Apple, they did not deprive others of the necessary resources to produce analogous goods or inventions.

Such a libertarian ethical view can be nonetheless countered from different perspectives. One of them is ethical. According to an alternative libertarian view to Nozick's, natural resources are not seen as privately appropriable, but rather as common properties to which every member of a society can lay a claim (see Chapter 2: section 2.4.3.1). Inasmuch as technological

innovations use natural resources, rather than just labor and human ingenuity, every person in a society would then be entitled to reap its benefits. The question of how much benefits should be redistributed to the whole of the society may be the subject of debate and of empirical analysis. One may argue that the fruits of an invention could be shared between the inventor and society according to the relative value of the inventor's labor and that of natural resources being used. It may of course be empirically very difficult to quantify this ratio with certainty, but the principle that society would be entitled to reap the benefits from an invention would still stand.

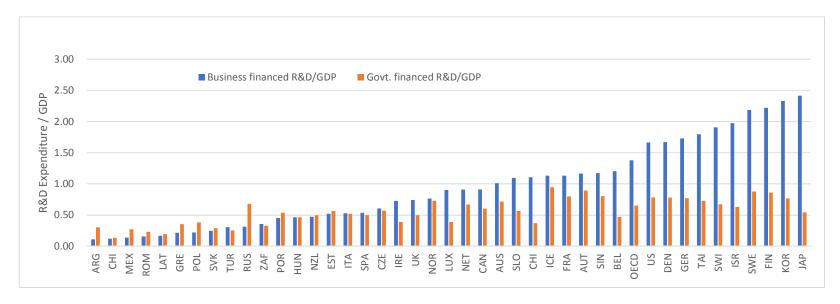
A second counter-argument to the Nozickian libertarian claim is empirical. This rests on the consideration that in reality the state has had a leading role in technological advancement (see Chapter 6: section 6.2.3; Chapter 7: section 7.2.5). In her book, *The Entrepreneurial State*, Mazzuccato (2011) challenges the view that the most recent string of technological innovations, from the so-called "knowledge economy" to biotechnologies, are the results of free market-based entrepreneurial activity. While much narrative regarding innovation achievements is that free markets permitted entrepreneurs' unleashing of their creative genius, the reality is that governments had a fundamental role in leading the initial stages of such a process. For instance, the algorithm that led to Google's success was made possible by a grant from the National Science Foundation, the main governmental funding research body in the US. Molecular antibodies, which paved the way for biotechnology, were discovered in public laboratories in the UK (Mazzuccato, 2011: 19). Mazzuccato's conclusion is that governments had a fundamental leading role in bringing about innovations in recent history, ultimately because it is possible for governments to take risks that would be a priori unprofitable to private firms. For this reason, she strongly recommends that governments continue having an active entrepreneurial role in leading technological progress. Acknowledging governments' role in innovations obviously strengthens the claim that the society as a whole should receive a fair share of the financial returns from innovations.

The above analysis shows that ethical arguments may serve to support different claims about the way the benefits from technological innovations are shared within a society. The US society seems to adhere to a rather extreme form of libertarianism, whereby innovators are left free to receive the financial returns from their activities, even when the government had a crucial role in setting up the R&D activities that led to such innovations. Not acknowledging the government's role is factually wrong. Advocating a smaller, or *minimal*, role to the government

in the managing of innovation activities, and in the economy as a whole, may in fact be counterproductive, as claimed by Mazzuccato (2011).

Alternative models of technology management are indeed possible. The Nordic model arguably provides for a larger government role not only in the management of technological policy, but also in the way it shares the returns stemming from technology in the society. In the Nordic model, the private sector is committed to reinvesting its profits in R&D, because only high innovation rates make it possible to maintain high wages and export competitiveness in global markets. In fact, according to OECD data, all Nordic countries—with the exception of Norway—have *both* a larger share of publicly financed R&D (as a share of GDP) than the US *and* a larger business-financed R&D share than the US, as well as having some of the highest levels of R&D investment in the whole OECD area (Figure A8.7). This evidence also demonstrates that public investment in R&D does *not* crowd out private investment. In fact, this is generally true at the level of the whole OECD area, as the relationship between publicly-funded and privately-funded R&D is positive (see Figure A8.8). This data suggests that public R&D may act as a stimulus, rather than a drag, to private R&D, and that the state can indeed have an active role to advance a country's technological frontier.

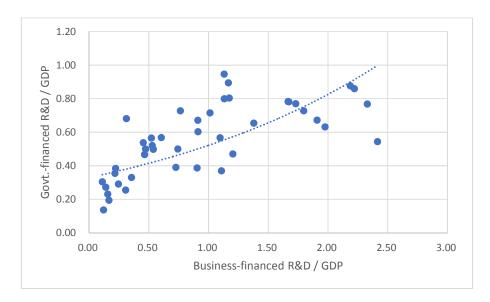
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**Figure A8.7**: Business-financed and government-financed R&D expenditures as a percentage of GDP (average levels for 2000-2016 period)

**Source**: OECD Online database (Accessed 15-8-17)

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**Figure A8.8**: Scatterplot of business-financed and government-financed R&D expenditures as a percentage of GDP

**Source**: OECD Online database (Accessed 15-8-17)

#### A8.5 Additional notes on variety of capitalisms

Modern capitalism may be defined as a system of competition and cooperation that through markets and hierarchies determine the production of value, innovations in how we produce such value, distribution of value and innovations in how we distribute such value. Both competition and cooperation are critical dynamics for capitalism to work and both can either contribute or limit well-being and social justice. When competition replaces power and status-based systems of allocation, it increases systemic efficiency and equality. When cooperation among few firms is used to collude and fix prices or limit new players in the game, it can increase inequality and negatively affect efficiency. When competition leads to the extension of positional goods and allows for wage dispersion to increase manifold, both inequality and efficiency will eventually suffer. When cooperation permits wage moderation and compression in exchange for social protection and active labor market policies, both equality and innovation can flourish.

The institutions regulating capitalism and the institutional players that operate in capitalist societies are the critical ingredients that allow and foster certain types of cooperation and competition and inhibit other forms. The state—but also other institutions and institutional players such as families, religious institutions, trade unions and corporations—has a definite impact in the way societies produce and distribute value and innovate.

First and foremost, no economic system represents pure market system. All market systems and economic systems with markets are regulated by the state and have other forms of production and allocation that have nothing to do with markets (family, religion, corporative associations). There are no unregulated markets, there are only differently regulated markets. There are no pure capitalist economies: all economies carry a major part of production and allocation outside of market forces. Besides families (see chapter 17), the state remains the most important player besides markets. States not only redistribute market income, they also regulate the dynamics that affect labor market income.

Moreover, the idea that economic systems would converge to deregulated liberal capitalism, purportedly the most efficient model for increasing aggregate welfare, is disproved by reality. This is shown most clearly in the following Table A8.1, which reports the Gini coefficients before and after taxation for groups of countries. Not only the final levels of inequality are very different, but also the fall in the Gini coefficients from before to after taxation varies massively across groups of countries. At one extreme, the Gini

coefficient falls the most—33 percentage points—in Ireland as an effect of tax and transfers. At the other extreme, the Gini index only falls by 3 percentage points in Mexico and by 4 percentage points on average in Latin America.

	Market	Inequality after	
	Income Inequality	Transfers and Taxes	% Gini decrease
FIN	0,42	0,26	0,38
DNK	0,40	0,25	0,37
NOR	0,38	0,26	0,30
ISL	0,34	0,25	0,27
SWE	0,38	0,28	0,27
Average Nordic	0,38	0,26	0,32
IRL	0,53	0,32	0,41
GBR	0,47	0,35	0,25
AUS	0,43	0,33	0,25
CAN	0,41	0,33	0,21
NZL	0,42	0,33	0,21
USA	0,47	0,39	0,18
Average Anglo Saxon	0,46	0,34	0,25
GRC	0,51	0,35	0,31
PRT	0,50	0,34	0,31
ESP	0,48	0,35	0,27
ITA	0,44	0,33	0,26
Average Southern			
Mediterranean	0,48	0,34	0,29
CHL	0,49	0,47	0,05
MEX	0,48	0,46	0,03
Average Latin			
America	0,48	0,47	0,04
JPN	0,38	0,32	0,15
KOR	0,31	0,28	0,08
Average Asia	0,34	0,30	0,12

 Table A8.2: Income inequality before and after taxation and transfer

#### A8.6 Productivity and social justice: lessons from the Nordic model for Latin America

The turn of the century has shown advances in social outcomes and public policies that for the first time provide a true window of opportunity for more productive and egalitarian societies in Latin America. Decreasing poverty, lowering income inequality, improved and expanded employment, and access to transfers and services to popular sectors are indeed welcomed changes.

These outcomes have been dependent on five critical allies, some structural, some contingent and some policy-dependent. In the first place, Latin American countries have benefitted from rising commodities prices in their exports, both in terms of growth and employment. Secondly, as a positive legacy of the Washington Consensus era, prices have in most cases remained stable. Therefore, gains in wages and transfers were not undermined by inflation. Thirdly, the state has increased its fiscal capacity and commitment to social policy, almost doubling real social per-capita expenditure in 15 years. Fourthly, the demographic transition places most countries squarely within the demographic bonus when combined dependency ratios are lowest. Finally, education access, completion, and credentials have improved in most countries of the region, allowing for enhanced opportunity and increased productivity.

Yet these five allies are likely to lose steam in the next couple of decades. First, growth will struggle to remain positive, but will in the best scenario be well below the levels seen in the past decade. The employment growth that accompanied economic growth will face bottlenecks if the trade-off between production and reproduction (wage work and household care and work) is not confronted. Secondly, most economies are facing increased inflationary pressures and the bonus that the first retreat of inflation provided to distributional outcomes will cease. Thirdly, with the present tax structures and productivity levels, social expenditure will not be able to increase at the rate of the last 15 years. Fourthly, the easy phase of the demographic transition (when dependency rates are going down) is likely to end in most countries around 2025. Dependency rates will remain in some cases low for a couple of decades, but will no longer diminish year after year. In other countries dependency rates will start to increase, led by the growth of the older cohorts. Some countries in the region will face the European dilemma of high dependency rates but with a lower GDP per-capita, namely, a weaker fiscal state and a more unequal society. Investing in younger cohorts, women and children thus becomes a necessity and a complex distributional challenge, given the fact that the lion's share goes usually to contributory—yet deficit-ridden—pension

systems that mostly cover the formal worker and are based on the idea of a male breadwinner model. Finally, while the "soft targets" of expanded education have been achieved (for both primary and secondary schools), the "tough targets" remain a challenge: extended coverage in early childhood, completion of high school, quality improvement, and actual reduction of inequality of outcomes in learning.

There are five fault lines in Latin American social regimes that make these problems a major threat to the sustainability of both social and economic development. Firstly, women's incorporation into the labor market remains low and stratified. This places a bottleneck in terms of the gains that can be made, both in terms of productivity and equality, by the secular trends of women's incorporation into the labor market. If the region is not able to overcome the 20% point gap with other developed countries for female labor force participation, and, if that gap is due mostly to the fact that women from lower income strata cannot balance reproductive and productive work, then both equality and growth will suffer. The absence of a robust state-led care system for early childhood and the persistence of a patriarchal distribution of care burdens undermines a route to development that is both more efficient and egalitarian. Secondly, Latin America remains a region with stark contrasts between insiders and outsiders in terms of the informal/formal labor markets and access to social protection and cash transfer systems. The political economy underpinning this distinction contributes to an expansionary monetary and fiscal policy in growth contexts that mainly benefits insiders and promotes inflationary pressures, led by wages and social spending geared at insiders that are keen on protecting private wages and unwilling to be taxed for redistributive public and collective goods and insurance. Thirdly, and partly dependent on the second fault line, the region's middle class and new emergent class is not willing to increase taxation, since the quality of public goods and collective social services are not perceived as adequate for a race to middle class status. Fourthly, the pattern of fertility in Latin America shows some of the worst patterns expected in social terms. Countries move quite quickly into low fertility scenarios, but do so based on a low-low fertility of the middle classes and a still moderately high fertility of the poor. Thus the demographic transition in the region is fast, but not convergent. Most of the biological reproduction of society is left to the poor. This is partly due to the absence of universal social services and care systems for early childhood. Fifth: In a region that polarizes its fertility among income lines, it would be important to count on a state that equalizes opportunity early on and through the educational system. This is not the case. In contrast with OECD countries in which 50% of what children consume is

provided by the state and 50% by the family of origin, in Latin America the data from the NTA project shows that only 25% of children's consumption is financed by the state while 75% is financed by their family. In addition, regarding further educational attainment, PISA tests show that European countries' results are determined by family background to a far lesser extent than in Latin American countries. Thus, in the most unequal region of the world with diminishing but non-convergent fertility rates, where insiders have the upper hand in the political economic game of redistribution, the state is unable to equalize opportunity and promote equality. In that failure, there is also a productivity failure, since underinvesting in the poor hampers the expansion of the productivity frontier.

In this context, the possibility of a new social citizenship and social investment model should be called for to tackle these challenges. Such a system would be based on extensive public goods provision, expansion of merit goods and universality of entitlements. Yet it is not enough that elites are no longer able to control the political and economic domain through status enclosure and authoritarianism. In order to craft truly universal social policies, narrow corporatism and restricted targeting—and the political economy they sustain—have to be confronted as well. Contributory models based on formal wages and targeted social policies based on need will not disappear, but they have to take the back seat to a model of basic universalism where access to quality public and collective goods is truly universal, and entitlements in transfers and services are not dependent on need nor labor formality.

There are also five positive developments regarding these challenges. Firstly, there is a marked increase in non-contributory systems of cash transfers both in terms of pensions and child-family transfers. Secondly, there has been an important growth in public spending and access to education and educational achievement. Thirdly, policies regarding early childhood care and parental leave show a timid yet consistent advance. Fourthly, contributory models are being redefined in a fashion that attacks its contributory nature. Eligibility criteria are modified, making it more lax, and the notion of equity based on contribution is being positively subverted by floors and ceilings. Finally, urban public goods such as security and public transport services have gained renewed importance as the emergent sectors enter the distributional arena.

Yet, these five positive developments are neither robust nor sustainable. They have been fueled by the commodity boom and the rise of the emergent and middle classes. A coalition that is willing to forgo private spending power in order to gain quality of life

through collective services is needed. Such coalition is in the wings of these political, economic, and social epochal changes, but not, by far, guaranteed.

For this to happen, at least three major changes or levers of change have to be put in place: 1) A new fiscal contract that expands the tax base and at the same time redefines the drivers of the expansion of social public spending (from a cash transfer old age contributory model to citizen-based services and cash transfers geared to women and child welfare); 2) The reforms of state civil service and the expansion and reforms in health care, education and care systems, increasing quality, efficiency and equity, and attacking both pure market oriented models and corporatist appropriation of the social service machinery; 3) The defense of collective and public goods. Collective goods such as urban transport and public spaces and public goods such as security have to be a priority, risking otherwise a continuous urban segregation that undermines equality and social cohesion.

Family transfers, care systems, full time schools, expanded leave at birth for both parents, and strong investment towards security, public urban services and collective recreational services are the operational expression of this major thrust that is needed. Limits on subsidies for contributory stratified pension and health insurance systems and private education, as well as on privatized systems of social insurance and urban mobility (through subsidies on gasoline and segregated urban developments) are part of what has to be confronted.

If this is achieved, then a popular-middle class alliance can be forged—a distributional coalition that will in turn give political support and economic feasibility to a path of prosperity and increased equality of opportunity and outcome. If not, the political systems in the region will keep on swinging between failed populist, state-led "Robin Hood"-like incorporation attempts on the one hand and state-bashing, technocratic closure of democracy, on the other hand.

#### A8.7 Values, development, and cultural change

#### A8.7.1 Modernization and cultural change

The analysis of institutional and political change carried out in Chapter 8, section 8.4 is to be complemented by an analysis of cultural and value change. There are many reasons to do so. Firstly, a growing body of literature points to norms of cooperation and reciprocity that become established in a society as instrumental to both economic development and social cohesion (Knack and Keefer, 1997). Many economic enterprises would be impossible without mutual trust between the founders of economic initiatives, because trust acts as a "lubricant of the economic system" (Arrow, 1974). Putnam (2000) popularized the term "social capital" to stress the role that such social norms have in propelling economic development. Such norms of cooperation are ultimately associated with specific cultural traits, and studying their evolution is therefore important. Secondly, there exists a two-way relationship between cultural traits and social systems. As illustrated in Chapter 8, section 8.3.2.2, we see the emergence of a "cooperative social ethos", which is to replace the "individualistic ethos" now widespread in Western societies, as a fundamental step to establish more just societies. Finally, recent influential work by Acemoglu and Robinson (2013) sees socio-economic institutions as crucial for economic development, and attribute a merely ancillary role to culture. A long tradition of thought would even posit that culture is ultimately determined by the economic and political structure characterizing a society. We believe that this approach is too narrow and unidirectional. It may well be the case that culture has an important role in permitting some institutional arrangements to flourish and in leading others to wither. Most likely, culture and institutions mutually influence each other and co-determine economic development, which in turn feeds back into the former. The purpose of this section is to offer a concise account of these issues.

We draw on the World Value Survey (WVS), which, starting in 1981, has collected information on moral values, attitudes toward society, and cultural and social norms of citizens from about one hundred countries. The message that emerges from the analysis of these data, according to Inglehart and Baker (2000) and Inglehart and Welzel (2005), is surprisingly simple. It is at the same time a story of continuity and change.

Country-level cultural diversity can be accounted for by two simple dimensions. First, the "traditional values" dimension emphasizes the relevance, in the respondent's life, of religion, paternalism in a child's education, preference for large families and rejection of

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abortion, euthanasia and suicide. Moreover, nationalism and authoritarianism in politics are accepted rather a-critically. The waning of traditional values leads to the contextual emergence of "secular-rational" values, which are characterized by opposing views on the items just described.

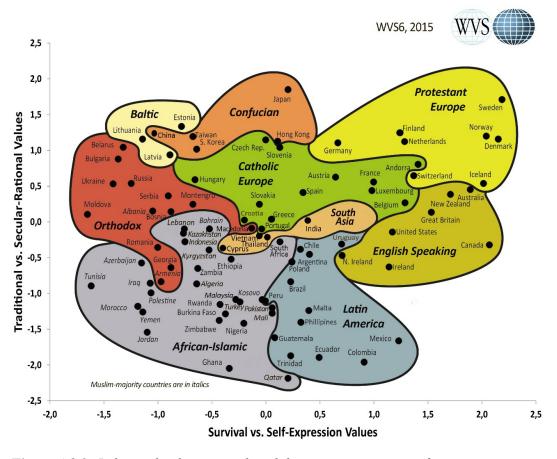
Second, the "survival values" dimension emphasizes the relevance, in the respondent's life, of economic and physical security for the individual and her household. Such a dimension is associated with existential insecurity caused by foreigners or cultural change, intolerance toward homosexuals and other out-groups, insistence on traditional gender roles, and support of political authoritarianism. People scoring high on the survival dimension are generally little trusting of others and unhappy with their lives. At the opposite side of this dimension lies the emphasis on "self-expression," which favors the replacement of concerns for one's own material survival with the willingness to express one's own individuality and autonomy, the tolerance toward out-groups and cultural change, the acceptance of non-traditional roles for women, and the embracement of civic activism. Trust of others and high levels of subjective well-being contribute to the self-expression dimension. Such two dimensions correlate with a large array of other cultural and attitudes indicators, which denotes a surprising coherence across cultural traits.

Economic development exerts a massive effect on cultural change across the two dimensions described above. A first cultural shift takes place as society switches from agriculture to manufacturing. This shift is associated with the waning of the traditional dimension and the emergence of secular-rational values. A second cultural shift takes place as a society ends its industrialization phase and becomes predominantly post-industrial. This second shift is associated with the waning of the survival dimension in favor of the self-expression dimension, accompanied by a strong demand for a country's democratization. More individuals require democratic institutions. As survival is no longer an immediate worry for most individuals, people are more likely to choose forms of political institutions that are able to safeguard individual rights, rather than national interests.

A country's cultural traits, as determined by its religious roots and political history, show strong degrees of persistence over time. The religious creed that has historically characterized a country, its political experience, and its specific historical trajectory exerts a long-lasting influence on its cultural traits. Several cultural areas can be identified according to this analysis: African-Islamic, Orthodox, Baltic, Confucian, South Asia, Latin America, Protestant Europe, Catholic Europe, and English-Speaking.

The pattern is shown in Figure A8.9 below. Scandinavian countries stand out as being those with the highest levels of secular values and self-expression. While English-speaking countries such as the US have comparable levels of self-expression to the Protestant Europe area, they rank significantly lower under the secular dimension. At the opposite extreme of the chart there lie African-Islamic countries, where both traditional and survival values are widespread. Catholic Europe and South Asia show intermediate levels for both indicators. Finally, Confucian, Baltic and Orthodox countries tend to show high levels of secularity and relatively low levels of self-expression, while on the contrary Latin America ranks relatively high on self-expression but low on secularity. Overall, it is striking that these cultural areas identify rather homogenous clusters of countries. It is also interesting to note that countries having multiple religious confessions form unitary cultural wholes. For instance, Catholic Germans score at virtually identical levels as Protestant Germans under both the secular and the self-expression dimensions. (Inglehart and Baker, 2000). Germany stands in fact "at the border" with Catholic Europe in the map.

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**Figure A8.9**: Relationship between cultural dimensions per group of countries

Source: World Value Survey website.

The longitudinal analysis of these two indicators shows that countries experiencing economic development tend to shift from the southwest corner toward the northeast corner, as described above. Nevertheless, the process is path dependent, in the sense that a country's starting point constrains the direction of cultural change. Rather than countries converging toward common cultural values, it is more appropriate to talk about countries moving in parallel toward progressively higher secularism and self-expression.

Cross-country experimental evidence confirms that economic development is relevant not only for cultural change but also for the individual propensity to cooperate with one another. Propensity to cooperate is highest among the most globalized individuals living in the most globalized countries (Buchan et al., 2009). Since globalization is a close correlate of economic development and modernization, this evidence supports the view that economic progress goes hand-in-hand with behavioral norms that are functional to that very economic development. Experimental research has nonetheless also ascertained that culture maintains a considerable role in determining patterns of cooperation. Various locations used in a large-scale experimental study on patterns of cooperation (Hermann, Thoni and Gächter, 2008) cluster almost perfectly into the cultural areas identified by Inglehart and Welzel (2005).

The general picture that emerges from this analysis is one that vindicates both Marxist theories of modernity and Weber's claim of cultural determinism. Marx is proved right in predicting that the industrial revolution would have affected the cultural ethos of most societies embracing it. At the same time, Weber was also right in claiming the relevance of culture for socio-economic development. Inglehart and Welzel (2005) stress that these processes are probabilistic rather than deterministic.

#### A8.7.2 Can trust and cooperation be instilled in a society from outside?

If culture is so important in enhancing cooperation among individuals, can cultural or institutional change from outside shape the social ethos in a direction conducive to social progress? Even if no culture can claim superiority over others, Inglehart and colleagues note that the transition from survival to self-expression values is in itself a form of social progress, because it permits individuals to become autonomous in the pursuit of their life plans.

Drawing on Sen (2001), they call this process one of *human development*, because it permits the empowerment of individuals in their choices and in their life.

Non-Governmental Organizations have, for instance, advocated the necessity to instill forms of cultural change in connection with development aid programs. So-called

community-driven development (CDD) programs seek to foster involvement of communities into the decisional process leading to the provision of public goods. In doing so, these programs also aim to create new social ties among community members, fostering social cohesion, trust, reciprocity and cooperation (Gossa, 2013, Putnam, 2000). CDD may be built on participatory processes rather than authority relations (King et al., 2010; Casey et al., 2012; Mansuri and Rao, 2013; Avdeenko & Gilligan, 2015). The World Bank provided on average 1.3 billion USD per year in loans to CDD programs over the last decade (IDA 2009).

Nevertheless, studies that have sought to assess the effectiveness of CDD programs doubt their capacity to bring about positive results. Wong (2012) reviewed 14 CDD programs and found no appreciable impact on local social capital. Investigations on CCD programs in post-conflict countries found no effects—neither in Sudan (Avdeenko and Gilligan 2015) nor in Sierra Leone (Casey et al. 2012)—and only limited effects in Liberia and the Philippines, respectively (Fearon et al. 2009 and Labonne and Chase 2011). Likewise, both international and governmental interventions had no effect on fostering social cooperation across Indian villages (Krishna 2007). Conversely, social capital was indeed created by homegrown initiatives rather than external interventions. Overall, these findings seem to corroborate Elinor Ostrom's view (2000) that social capital can be nurtured by self-organized locals, while external intervention has little or no impact.<sup>3</sup>

A more optimistic perspective comes from Ostrom (2000). Her main argument is that national and international authorities need to engage with local communities to make social capital emerge from within the community, rather than being instilled from outside. In this respect, providing opportunities for a community to become active and make decisions on specific projects financed from the outside, as many CDD programs do, may be an intelligent strategy.

For these programs to be successful, local stakeholders must be given "voice and real responsibility" and not only be involved in short-term projects where they are largely "directed" by external authorities. In this case, social capital becomes nothing more than a "shallow fad" (Ostrom, 2000: 201). Initiatives to mold a social ethos conducive to economic development and effective social progress must come from below.

<sup>&</sup>lt;sup>3</sup> "Only the crumbling remains of poorly maintained ... facilities are left today in many countries for all the billions invested. There is a serious need to rethink the overemphasis on physical capital alone. The recent groundswell of attention in the development literature on social capital is a refreshing and needed change" (Ostrom, 2000: 172-3).

Another possibility is to actively promote cultural exchanges across communities or countries. International fairs, events portraying typical aspects of a certain culture—such as, for instance, the Chinese new Year for Westerners—student exchange programs, the diffusion of culture-specific artworks, produces or services, or even tourism, are all examples of such cultural exchanges. This approach would have the merit of increasing people's awareness that alternative models of societal organization, ways to solve collective action problems, or simply different ways of thinking, exist, and may be more effective in addressing the challenges with which a society may be faced. Cultural exchanges should be framed as a way to let social capital emerge from a bottom-up rather than a top-down approach.

All in all, the existing empirical evidence on CDD indicates that attempts to increase social capital from outside have not been successful. On the contrary, more attention should be devoted to Ostrom's perspective of self-organization, whereby communities are granted more autonomy to enhance cooperative values and set their own goals.

#### A8.8 Economic development, culture and cooperation: Experimental evidence

Cross-country experimental evidence confirms that economic development is relevant not only for cultural change but also for individual behavior in social interactions. We here focus on cooperation among individuals, because, as noted above, the propensity to cooperate with one another is a main indicator of the social ethos that seems to have been so important for the success of Nordic countries. Cooperation can come in different forms. We consider here a situation analogous to the "tragedy of the commons" scenario described by Hardin (1968), where an individual's action space is the degree to which a common resource is exploited, and cooperation entails restraining from the exploitation that would be optimal from the individual point of view. That is, cooperators sacrifice their own material interests for the group's greater good. The conclusion reached by Hardin is a pessimistic one. In the absence of an agency forcing individuals to restrain their own actions, the outcome will be the depletion of the common resource. Nevertheless, cooperation is widespread in human societies. Having a dense social network can facilitate cooperation. Interactions become frequent and personalized, therefore the long-run incentives to comply with cooperative norms outweigh the short-term interest to exploit the resource to the maximum possible degree. Moreover, with dense social networks individuals can acquire a reputation for complying with the cooperative norm. Individuals normally favorably reward others for

having a positive social image, so that cooperation can still be in one's own long-term self-interest (Bolton et al., 2002; Seinen and Schram, 2006; Engelmann and Fischbacher, 2009). Nonetheless, individuals cooperate even in ephemeral situations where future encounters can be ruled out and when the possibility of building reputation is absent (Buchan et al., 2009). This type of cooperation can be considered altruistic, because one's own material resources are sacrificed to benefit others. It is on this most difficult to achieve type of interaction—cooperation with unknown others—that we focus here.

Buchan et al. (2009) investigated the propensity to cooperate with unknown others in experimental interactions involving adults from six different countries: the US, Italy, Russia, Argentina, South Africa and Iran. The main research question was to understand the extent to which globalization, understood as large-scale interconnectedness with others in the economic, social, and cultural domains, is correlated with propensity to cooperate with others. Groups included some individuals from the same locality as the individual, and other individuals from other, unspecified, countries. Participants were endowed with some money, and could have either kept their money for their personal account or give the money to the group account, in which case the individual would lose out but others would benefit. The rules of the game were such that if every individual gave their money to the group account, everyone would be better off in comparison to the situation of none giving. Yet, an individual could make even more money by keeping her endowment to herself, hoping to free ride on others' contributions to the group account. Globalization was measured at the country-level, following the Globalization Index developed at the Centre for the Study of Regionalisation and Globalisation. A measure of individual globalization was also constructed out of the participants' responses to a post-experiment questionnaire. Such an index sought to measure the frequency and scope of inter-personal connections that individuals had through their participation in global networks, such as the Internet, global mass media, and multi-national retail. Interactions were "one-shot." The game was only played once, thus there was no interest to build a reputation or to construct a positive social image in the face of others. Difference in cooperative behavior across countries can truly be interpreted as reflecting individual compliance with country-specific cultural or moral norms, backed by trust in others or an obligation to give to global others.

The results were clear-cut. Country-level and individual-level measures of globalization went hand-in-hand in increasing individual propensity to cooperate with unknown others. Highest levels of cooperation were achieved by most globalized individuals

living in the most globalized countries, and *vice versa*. Average cooperation rates ranged from 75% of the endowment in the US to 50% of the endowment in Iran. Interestingly, developing a global social identity (Buchan et al., 2011) appeared to be a mediating factor in the relationship between participation in global networks and cooperation. By global identity we mean one's identification with the global community in terms of attachment, closeness, and perception that the individual is a member of such a community. Typically, highly globalized individuals had also developed a strong sense of global identity. Globalization is a construct that is strongly correlated to economic development, which featured so prominently in the analyses based on the WVS illustrated in section A8.7.1. This study thus suggests that not only are cultural attitudes and values shaped by economic development, but so is individual behavior, and in particular individuals' propensity to cooperate with one another.

The experimental cross-national study conducted by Herrmann, Thöni and Gächter (HTG) (2008) also found a close association between people's propensity to cooperate worldwide and the results stemming from WVS analyses, but this time with regard to the cultural aspect rather than the economic development aspect. HTG focused on cooperation problems involving co-nationals only—university students in this case, coming from 17 different countries. The key research question was to study how cooperation rates may be increased if individuals participating in a cooperation problem similar to the one described above are given the possibility to "punish" each other. Punishment is costly to individuals. An individual must give up part of her endowment to reduce the earnings of another individual. Punishment is also anonymous and more costly for the individual being punished than the punisher, in a ratio of 3:1. Another key difference to Buchan et al. (2009) was given by the fact that interactions were repeated in this case over ten rounds.

HTG found substantial variation across countries in the capacity of groups to achieve high cooperation rates *without* punishment. In nearly all cases, however, a pattern of decreasing cooperation was observed in all locations. Cooperation rates normally started at around 50% of the endowment and gradually decreased to approach 10-15% in the last round. This result is not new and had emerged in nearly all problems of cooperation studied before. It had been explained in terms of either learning the "equilibrium" of the game, or in terms of the application of a reciprocity norm. What HTG observed in the cooperation problems *with* the possibility of punishment is nonetheless very different. In approximately half of the locations, introducing the possibility of punishment was capable of maintaining cooperation at fairly high levels. The reason is as follows. A portion of cooperators were willing to spend

some of their endowment to punish those who did not cooperate. What is more, defectors, i.e. individuals disposed to free ride on others, realized that they could be punished with high probability if they did not cooperate. It was then in their own interest to cooperate. In other words, individuals used punishment to endogenously enforce the cooperative norm. This result was not new. Fehr and Gächter (2002) had demonstrated the increase in efficiency in cooperation given by the introduction of punishment some years before.

The discovery of HTG was, however, that the possibility of enforcing cooperation through punishment is *not* universal. It only occurs in half of the locations being surveyed. In the other half introducing punishment is actually detrimental. The reason is that people who are punished refuse to "behave themselves" afterward. Rather, they typically seek revenge against the person who (they believe) punished them previously. The punishment option therefore triggers a feud of retaliation and vengeance. Cooperation does not increase but rather remains stable. But the amount of resources spent on punishment dramatically decreases overall efficiency. This result is in itself ground-breaking and revealing of the relevance that culture has in shaping individual behavior. This so-called anti-social punishment has been found in a variety of societies (Beckman et al. 2002) and even in nonindustrialized societies (Grimalda et al. 2016). Nevertheless, in a subsequent study, Gächter et al. (2010) were also able to pin down the specific cultural characteristics that are associated with such behavior. HTG demonstrated that the locations in which punishment works to enforce cooperative norms belong to three of the cultural areas identified by Inglehart and colleagues—namely, Protestant Europe, English-speaking countries and Confucian countries. The areas where punishment does *not* work belong to Orthodox, Islamic, and Mediterranean<sup>4</sup> countries. Importantly, the authors find little within-group variation, but sizable betweengroup variation, with respect to the cultural areas so identified.

These results point to the wide variety of culture-specific patterns of cooperation across the globe, and confirm that cooperation achieves much higher efficiency in specific cultural areas in comparison to others. It is still an open question why this is the case and which evolutionary processes have led to these outcomes.

<sup>&</sup>lt;sup>4</sup> It can be noticed that the category of "Mediterranean" country that HTG introduced does not match Inglehart's original classification. In fact, the two countries comprising the "Mediterranean" group in HTG are Greece and Turkey. The former should then be subsumed into the "Orthodox" category, while Turkey has been included in the Islamic category. Nothing relevant of HTG's conclusions would be lost applying this alternative classification.

### A8.9 The Science and Technology Studies perspective

A Science and Technology Studies perspective shifts focus from a normative discussion of how justice and equality ought to be conceived to the concrete practices by which they have been achieved. Social justice is thus analyzed in terms of the processes by which ethical concerns for equity become embedded in co-evolving "configurations that work" (Rip and Kemp 1998:387) in specific contexts. These configurations, or sociotechnical assemblages, are comprised of practices, collective norms, shared expectations, theories, laws, accounting techniques, machinery, built environments, rules of ownership and access, IP, market mechanisms, financial instruments, commons management and taxation regimes. The STS perspective employed here asks what can be learned by examining the diversity of path-dependent processes involved in practically enacting and achieving social justice in two regional contexts—the State of Kerala in India (see Appendix, section A8.1) and the Mondragon community in the Basque region of Spain (see Chapter 8, section 8.4.4.3).

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#### A8.10 The case of Kerala

This case-study focuses on how self-management can implement gender justice at a regional scale, in the state of Kerala in India. Kerala has 33 million inhabitants. The population consists of 60% Hindus, 20% Muslims and 20% Christians. While poor by standard measures of per capita income, the population is rich by other measures.

The average life expectancy is 73 years for males and 75 years for females, comparable with that of the US (and some 10 years higher than for India as a whole). Some 94% of births are attended by health professionals and the infant death rate is lower than that for African-Americans in Washington DC. The total fertility rate is two births per woman and the population growth rate is below replacement level. Compare this to the 1950s, when Kerala had the highest population growth rate in India. These demographic changes have been achieved without the coercive state practices pursued in China or the rest of India, which have reduced population growth but seen the rise of abnormal female to male sex ratios. In India as a whole, this ratio is 91 women to 100 men. In Kerala, for every 100 men there are 109 women (Gibson-Graham, Cameron and Healy, 2013).

In the State of Kerala and, prior to the 1950s, in the princely states of Travancore and Cochin there has been a history of investment in mechanisms that produce social justice. Governments have prioritized land reform, food security, and mass health and education programs targeted to the poor, women, scheduled castes, and rural residents. What explains this longstanding commitment to investing in social advancement in a society where ethnic diversity might easily have been a barrier to public goods provision?

An STS (see section A8.9) perspective helps shed light on the configurations at work here. As with the Mondragón case (see Chapter 8, section 8.4.4.3), there are antecedent associations and networks that sowed the seeds of an egalitarian discourse in Kerala in the early 19<sup>th</sup> century. Christian Protestant missionaries preached the "equality of humans before God…[and] questioned the creedal bedrock of caste" (Singh 2010: 290). They made education available to lower castes and women, and though the numbers educated were small, there were enough "politicized, economically mobile members of lower castes with an English education" to fuel leadership of a sub-nationalist movement against 'foreign' (i.e. non-Malayali Brahmin) ruling elites.

The late 19<sup>th</sup> and early 20<sup>th</sup> century movement to consolidate all Malayali speaking regions into a single state used signature campaigns, petitions, and public rallies to generate

popular support. These technologies helped generate a "Kerala-wide consciousness of shared community" (Chiriyankandath 1993:650 quoted in Singh, 2010: 284). Since the State of Kerala was formed in 1956, state governments, many of them Communist-led, have vigorously pursued social policy with a "pronounced redistributive emphasis" (Singh 2010:287).

The shared community has informed mass programs of volunteer action. In 1989-91 the Total Literacy Campaign recruited 350,000 volunteer teachers to target rural illiteracy. Volunteers learned from doctors how to match 50,000 pairs of donated eyeglasses to recipients with bad eyesight. The effect of this concerted effort is an official literacy rate today of 90%. Throughout the decades, women's literacy has been particularly targeted. When women are literate it is more likely that *all* children, not just boys, are also literate. And when women are educated the transition from high to low population rates is much more likely to occur.

An unfortunate consequence of the better wages and conditions achieved by workers in Kerala is that factories have moved to cheaper regions in India. There are high rates of unemployment and underemployment. Many educated Keralites seek employment overseas. Physical health across the board has improved dramatically, but mental health problems remain, including high suicide rates. Though mainstream economists are unhappy with Kerala's low rate of economic growth, others are intrigued by the experiments with a non-mainstream kind of economic growth being pursued here. Can the stabilized population and commitment to fairness and redistribution be ingredients for a low wage future built around a good life?

In Mararikulam, one of Kerala's poorest areas, some 15,000 neighborhood savings groups, each made up of between 20 to 40 women, are transforming themselves from credit associations to production cooperatives. Small amounts of money saved by 17,000 women have yielded enough to capitalize a range of producer cooperatives making soap, school items, coconut coir products, and food. In 2002, 30,000 women took the Maari soap pledge to buy locally produced Maari soap rather than imported brands. And in 2008, 300 representatives from 100 local governments in Kerala signed the "Mararikulam Declaration for Self-Sufficiency in Vegetable Production." They pledged to support women's participation in organic vegetable farming and diversified crop production to achieve food security in the foreseeable future. A new sociotechnical assemblage is forming in which the production of relatively low-tech products that serve daily needs is backed by a complex

network of financial instruments and consumer commitment still motivated by a sense of shared community.

### A8.11 The Self-Employed Women Association (SEWA) model: Further description of activities

This section details further activities carried out in relation to the Self-Employed Women Association (SEWA), illustrated in Chapter 8, section 8.4.4.4.

SEWA Bank was founded in 1974 after 4000 poor self-employed women contributed share capital of Rupees (Rs.) 10 each. They registered the Mahila SEWA Cooperative Bank under dual control of the Reserve Bank of India and the State Government. Since its inception, the SEWA Bank has been bringing affordable and customized financial products to the informal sector that is otherwise excluded from the formal banking setup. So far, SEWA Bank and SEWA's District Associations (members' own economic institutions at the district level) have given loans amounting to a total of over Rs. 100 crores (\$15 million), freeing grassroots women from the clutches of exploitative moneylenders and helping them invest in productive activities. The total deposits of grassroots women (as well as savings groups) with SEWA Bank amounts to over Rs. 172 crores (\$26 million).

The SEWA Manager School (SMS) was born in 2005, an all-women organization dedicated to providing training and skill building programs to micro-entrepreneurs in the informal sector. SMS began by providing a range of managerial trainings to grassroots executives and managers to help them prepare business plans for their respective economic organizations and drive them towards sustainability and profitability. Over time, the curriculum has expanded to a wide range of technical, vocational, managerial and leadership skills. Today, SMS is a professional skilling organization with relevant and effective training modules and an efficient technology-driven delivery mechanism. Since its inception, SMS has trained over 1.5 million people in various subjects. Key to the SMS model is its cadre of 5000 master trainers, drawn from grassroots members and trained in technical, managerial and pedagogical skills. These trainers also function as local resource persons for microentrepreneurs, effectively providing them handholding support.

The Rural Distribution Network (RUDI) is SEWA's pioneering initiative to find a sustainable local-economy-based solution to address food security through an institutional model managed by poor informal sector women. RUDI, as the name suggests, is a predominantly rural distribution chain, which procures farm produce from marginal farmers at market prices, processes them, and sells them in the villages at affordable prices. The supply chain employs hundreds of poor women, with women involved at every stage of the chain. The management is handled by the women themselves. RUDI also stands for a brand

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that has come to signify affordability and high quality. SEWA has piloted RUDI in several of the districts in Gujarat and has found it to be a model immensely successful in addressing food security concerns among rural households. Today, RUDI has organically grown to a point where it now reaches over a million rural households annually with packaged agriproducts worth over Rs. 3 Crore (\$450,000).

SEWA has been at the forefront of using technology to empower grassroots households/communities and promote social justice. Over the past decade, SEWA has demystified technology for its members, piloted several ICT-based innovations and empowered thousands of rural women. For example, in partnership with private organizations, SEWA has piloted custom mobile or tablet based applications that digitize transactions conducted by each SEWA grassroots leader (*aagewan*), thereby reducing her travel time, improving her efficiency and increasing her income-generating ability substantially. The *aagewan* today logs into the application with her username and password, and is presented with a list of allocated villages and savings groups that she has to visit, from a central database. As she collects installments or premiums from the groups, she ticks their names on the application, and with a Bluetooth linked printer, presents a receipt to the members.

To help farmers form better harvest price expectations at the planting stage and thereby make better planting decisions, SEWA instituted an SMS-based information dissemination system that brought to the marginal farmer's village futures' and spot price information of the relevant crops from the commodity exchange. Over a pilot period of 3 years, SEWA extended this information system to over 150 villages linking over 7500 marginal farmers with spot and future prices information.

In two districts of Gujarat, SEWA has set up community radios, identified talented individuals from among its members and set up a programming team. The team has recorded (and is broadcasting) over 1600 hours of programming on various topics relevant to the district, such as agriculture, health, government schemes, weather information, social issues, local music and so on.

The SEWA GIS system in Vadodra district of Gujarat has mapped local natural resources, helped in identification of water conservation solutions and creation of appropriate cropping strategies. This system arms the community with relevant information with which they can approach the local government (panchayat) and implement solutions for their villages.

Finally, SEWA is pioneering tele-medicine and tele-agriculture with doctors and agriculture experts in cities being linked to members living in remote villages through internet-based conferencing tools.

To ensure that SEWA is moving in the direction of the twin goals of full employment and self-reliance, constant monitoring and evaluation is required. In a membership-based organization, it is the members' priorities and needs which necessarily shape the priorities and direction of the organization. Hence, it is appropriate that members' themselves have developed their own yardstick of evaluation.

The following eleven questions have emerged from discussions with members and continually serve as a guide for all members, group leaders, executive committee members and full-time organizers at SEWA. They are also useful for monitoring SEWA's progress and the relevance of its various activities and their congruence with our members' reality and priorities. They also lead to increased accountability of SEWA's leaders and organizers to the members. The eleven questions of SEWA are:

- 1. Have more members obtained more employment?
- 2. Have their incomes increased?
- 3. Have they obtained food and nutrition?
- 4. Has their health been safeguarded?
- 5. Have they obtained child care?
- 6. Have they obtained or improved their housing?
- 7. Have their assets increased? (like their own savings, land house, work-space, tools of work, licenses, identity cards, cattle and shares in cooperatives and all in their own name.)
- 8. Has the workers' organizational strength increased?
- 9. Has workers' leadership increased?
- 10. Have they become self-reliant both collectively and individually?
- 11. Has their education increased?

### A8.12 The equity-efficiency trade off: Theory and empirical evidence

## A8.12.1 The three welfare theorems and the public economic approach to economic policy

One perspective from which to look at the debate on globalization and redistribution is offered by the so-called "public economics" approach to policy. The building blocks of this approach were reviewed in sections A8.4 and A8.5, when we discussed the relationship between markets and states as agents of economic growth and social justice. That discussion can be reformulated in terms of economic theory (see e.g. the account in Stiglitz's (2015) economics textbook). The so-called first theorem of welfare economics asserts that perfect market competition will produce outcomes that are efficient in the sense of Pareto. An outcome is said to be Pareto-efficient when no alternative outcome exists that increases some individuals' welfare without decreasing some other individuals' welfare, given individuals' initial endowments and market prices. That is, an outcome is *not* Pareto-efficient when the welfare of at least one individual can be increased without decreasing the welfare of any other individual.<sup>5</sup> Pareto-efficiency is a frequently used measure of "social" efficiency, as opposed to technological efficiency. Perfect market competition thus entails that any agent in the economy, be she a firm or a consumer or a worker, maximizes her objectives given the economic constraints and the prices they are facing.

The second welfare theorem states that any Pareto-efficient outcome in an economy may be achieved through a suitable redistribution of agents' initial endowments and letting the competitive markets run. The combination of the first and the second welfare theorem provides a theoretical basis to what we may call a "liberal approach" to productive efficiency and social justice. Simply stated, such a liberal approach prescribes the state not to interfere with free competitive markets, except for correcting market failures such as externalities, imperfect competition and asymmetric information. This prescription rests on the optimality result of the first welfare theorem. Markets are adequate institutions to achieve efficiency in production and consumption. On the other hand, the state is required to intervene in the redistribution of agents' endowments *prior to* the realization of market exchanges. The state

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<sup>&</sup>lt;sup>5</sup> One way to look at Pareto-efficiency is the following. Let us assume that individuals are concerned only with their own welfare. Pareto efficiency grants a "veto power" to each individual. If the current outcome is Pareto-efficient, it means that moving away from such an outcome will discontent at least one individual. This individual will then block such a move. The set of Pareto-efficient outcomes is then those for which the welfare of some individuals may be bettered only by reducing some other individuals' welfare.

is required to select the initial endowment that guarantees the attainment of the final allocation that maximizes social welfare, according to the state's view of social welfare. More specifically, in democratic societies, the final outcomes should be those satisfying the citizens' preferences over social justice. Accordingly, the state should implement the initial distribution of endowments that permits unrestrained free markets to reach those final outcomes maximizing citizens' preferences. In general, the state will be required to carry out redistribution in initial endowments from the rich to the poor, in order to permit the final allocation of goods and well-being not to be too unequal. To be sure, reality is more complex than what assumed by these two theorems, and many variables of this redistributive problem may be either difficult to ascertain—what are citizens' preferences?—or difficult to implement—what if a conflict exists between preferences of different groups in societies? Regardless of these practical problems, the main idea stemming from welfare economics is one in which markets are held responsible for allocative efficiency, and states are responsible to interpret citizens' preferences for social justice. It may be argued that, to a large extent, the extension of the welfare state from 1945 to 1980 in most Western societies relied on this "division of labor" between state and markets. Markets were of course regulated by public authorities and anti-monopoly institutions. However, the idea that markets should not be regulated for redistributive goals still applies.

Another well-known result of public economics is that taxes, except lump-sum taxes, will create distortions and efficiency losses in the society. The reason is that rational agents will modify their behavior as a response to the introduction of taxes through the substitution effects, and these adjustments will create welfare losses. For instance, income tax will generally introduce a wedge between a worker's marginal productivity and the marginal utility from leisure. This will result in reduction in the equilibrium employment, which is not, under general conditions, optimal. Public economics states that the existence of these efficiency losses only permits the government to achieve a "second best" solution for the economy.

The debate over the magnitude of such efficiency losses has been broad-ranging and marred with ideological dogmatism. Many right-wing politicians have relied on the so-called Laffer curve—named after the economist Arthur Laffer—to demand cuts in the income tax. The Laffer curve is based on the simple argument that total income tax receipts must reach a maximum for some tax rates, beyond which the incentives to work are so little that the tax base becomes too small and tax receipts become smaller than the maximum. If, at the limit,

the tax rate was set at 100%, no sensible person would work and therefore the tax collected would simply be zero. Many right-wing politicians have referred to the Laffer curve to call for a reduction of income taxes, their argument being that the current income tax rates were already beyond the maximum. Or, more modestly, their argument has been that tax cuts would have incentivized individuals to work more, thus raising growth rates in the economy. Nevertheless, these claims lacked empirical foundations. The available estimates for the maximum in the Laffer curve situate this point at a tax rate between 76% and 80% (Lee and Roemer 2005; Atkinson 2015), well above the levels actually implemented in reality, and, reasonably, above levels that can considerably dis-incentivize people to work. In fact, the empirical literature on the efficiency cost of taxes reached the conclusion that the efficiency cost of taxes is rather moderate, for instance in relation to earning taxation in a closed economy (Diamond & Saez 2011).

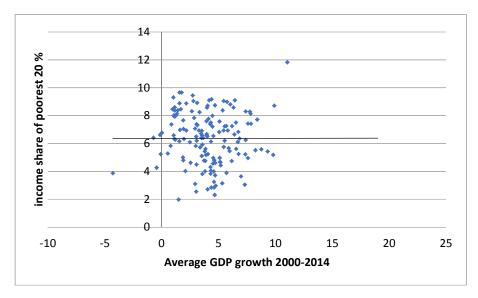
This result may be referred to informally as the "third theorem of welfare economics." In a world in which, contrary to the assumptions of the second theorem, redistribution is bound to create efficiency losses, the extent of such losses is so contained that an economy can in reality afford high levels of equality and justice with only moderate efficiency losses. In other words, the third theorem warrants the possibility of reducing the inequality of disposable incomes as strongly as the policy-maker wishes starting from almost any level of inequality of primary incomes. This view can be sustained by economic reasoning in a closed economy. A redrafted version of the "liberal approach" to policy goes therefore as follows: the labor market should be left to operate without too much intervention; the elected representatives should implement the redistribution levels satisfying their voters' preferences, and economists should advise the elected representatives to choose the least harmless tax instruments. Informed Democratic Capitalism (IDC) is able to correct the excessive inequalities produced by the markets and then democracy and capitalism works hand-in-hand to produce a second best world.

### A8.12.2 General empirical evidence on the equity and efficiency tradeoff

Figure A8.10 reports a simple scatterplot of data for GDP growth and the income share of the poorest 20% of the population for a sample of world economies, taken from the World Bank Development Indicators dataset. It goes without saying that GDP growth is a very imprecise measure of efficiency and the income share accruing to the poorest 20% is only one of the many possible measures of equity. Nonetheless, the evidence stemming from the graph is quite striking, in showing a virtually flat relationship. Clearly, a more in-depth statistical

analysis would be needed to control for possible confounding factors. Nonetheless, this graph suffices to show that equality and growth can and, in many cases, do go together. There is no guarantee that they will go together, but there is also no single set of evidence that says they cannot go together. The most egalitarian countries in the world grew on average at similar rates as the least egalitarian ones.

# Relation between average economic growth (GDP average growth) and average income share of the poorest 20% of the population between 2000 and 2014

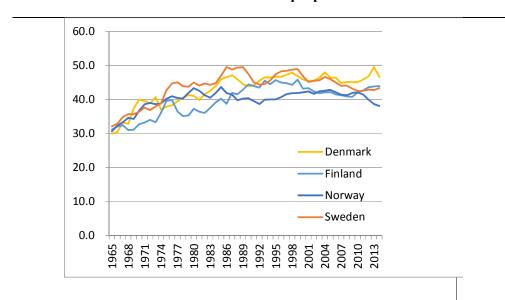


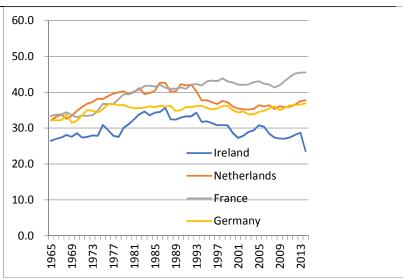
**Figure A8.10**: Relationship between average GDP growth (2000-2014) and income share of poorest 20%

Source: WDI.

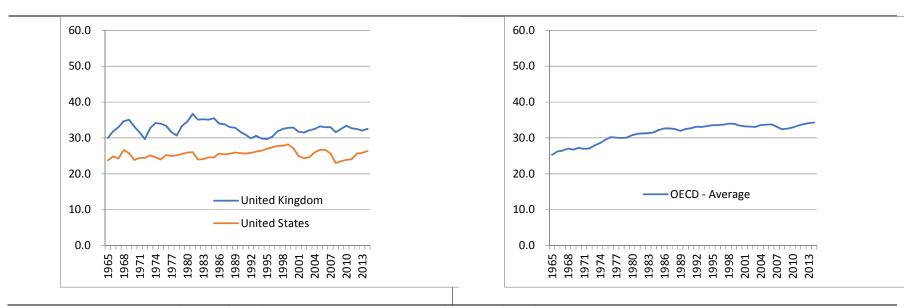
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### A8.13 The evolution of Tax Revenues as a proportion of GDP in selected OECD economies





IPSP Appendix Chapter VIII



**Figure A8.11**: Evolution of Total tax revenues as proportion of GDP (selected countries)

**Source**: OECD online database.

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