

NHH

Norwegian School of Economics
Bergen, Autumn 2019



Fair shares among children

Experimental evidence from Norway and Shanghai exploring adults behaviour
in a distributive conflict of inequality

Iselin Jordan & Lena Øyberg

Supervisor: Alexander Wright Cappelen

MSc in Economics & Business Administration

Majors:

Business Analysis & Performance Management

Strategy & Management

NORWEGIAN SCHOOL OF ECONOMICS

This thesis was written as a part of the Master of Science in Economics and Business Administration at NHH. Please note that neither the institution nor the examiners are responsible – through the approval of this thesis – for the theories and methods used, or results and conclusions drawn in this work.

Abstract

This paper is written as the final thesis of our master's degree at Norwegian School of Economics, NHH, and as a contribution to "Development of Fairness Preferences" – a large scale experimental project launched by Centre for Experimental Research on Fairness, Inequality and Rationality, FAIR. Our aim through this thesis is to understand why there is such a big difference in inequality acceptance among adults, what might contribute to shape such divergent preferences, and what implications the endorsement of different fairness ideals may have in a larger perspective. By conducting a modified version of "the dictator game", we studied adults' inclination to accept an uneven distribution – or to redistribute – earnings between two children who had completed the same task. Hence, the experiment was designed to reveal spectators' fairness views through their preferred distributive choices. The study was implemented in collaboration with East China Normal University, with an experimental group of 6014 adults and 6014 pairs of children located in Norway and Shanghai. In order to determine causal relationships, we manipulated two dimensions of the distributive situation: the source of inequality (luck or merit) and the cost of redistribution. In addition, the age of the children varied between 5, 9, 13 and 17 years. Our findings suggest that there is a significant difference in the willingness to accept inequality among children in Norway and Shanghai (China). The result is calculated based on the spectators' average distribution in the two countries. Faced with an identical situation, adults in Shanghai implemented about twice as high inequality (0.542) than adults in Norway (0.262). Neither age nor treatment could be proven to be of any significance to explain this gap in fairness preferences. Further, we adopt the design presented by Almaas, Cappelen and Tungodden (2016) to estimate the share of spectators that endorse the different fairness ideals within the two societies, respectively. We find that Norwegian and Chinese spectators differ significantly in their fairness views, and that these findings may help us shed light on why there are so big variations in inequality acceptance between the countries. Another possible explanation for the large variation is that children in different societies are exposed to different signals from their circle of surroundings regarding how to handle such inequalities, and that these attitudes may contribute to shape the children's own fairness ideals through adolescence. Thus, the findings also indicate how inequality acceptance in society may be shaped by social learning from one generation to the other.

Acknowledgements

The experiment that provides the data for this thesis was designed and carried out by scholars from Centre for Experimental Research on Fairness, Inequality and Rationality, FAIR. First and foremost, we want to thank our supervisor Professor Alexander W. Cappelen for introducing us to such an exciting research project, and for valuable help and insights along the way. Further, would like to thank the FAIR research group for allowing us to participate in such a vital research environment, as well as their generosity and trust sharing their data with us. The FAIR research Centre is situated at the Department of Economics at the Norwegian School of Economics (NHH) and consists of more than 60 members including visiting professors, leading collaborators, scientific coordination group, PhD students, faculty, affiliated researchers and administrative staff. One that deserves a special thanks is PhD student Ranveig Falch, for inspiring guidance and contagious enthusiasm, for quick replies to our every question, and for sharing her competence, motivation and trust along the way. We could never have carried this out without you. A second thanks goes to all the research assistants, making the data collection a fun experience. Thanks for all the laughter and joy along the way.

We are also very thankful for the actors that made this project possible, including the Institute for Applied International Studies (FAFO) in Oslo, NORFACE (New Opportunities for Research Funding Agency Cooperation in Europe) Network, and the Research Council of Norway through its Centres of Excellence Scheme. Not least to mention the participating kindergartens and school's cooperation.

Bergen, 18. December 2018

Iselin Jordan and Lena Øyberg

Contents

Abstract	
Acknowledgements	
Contents	
Tables and Figures	
1. Introduction	1
2. Literature Review	4
2.1 Conceptual clarifications	4
2.2 Different preferences of fairness	7
2.3 Fairness ideals	8
2.4 International Comparisons	9
2.4.1 Different degrees of inequality – varying degrees of justice?	9
2.5 Development of fairness preferences	11
2.6 The experimental method	13
3. Country presentations	16
3.1 Grounds for country selection	16
3.2 Differences in inequality and revenue growth	17
3.3 Socioeconomic conditions	18
3.4 Political governance and legislations	20
3.5 Child-rearing and institutional exposure	23
3.6 Education and the upbringing of tomorrow’s generation	24
4. Experimental design	26
4.1 Treatments	27
4.1.1 The age of the children	27
4.1.2 The distributive situation	28
4.2 The stages of the experiment	29
4.3 Survey	32
4.4 Data collection	33
4.4.1 Recruitment	33
4.4.2 Sample description	34
4.5 Ethical considerations	37
5. Theoretical framework	38
6. Empirical strategy	42
6.1 Research questions	42

6.2 Specifications and definition of outcome variables	43
6.2.1 Main empirical specifications	43
6.2.2 Observable characteristics	44
6.2.3 Fairness ideals	45
6.2.4 Survey questions: Attitudes towards inequality	46
6.3 Regressions	46
6.3.1 Main OLS-regressions	46
6.3.2 Balance Test & Heterogeneity analysis	48
7. Research findings: Empirical evidence from Norway and China (Shanghai)	49
7.1 Descriptive statistics	49
7.2 Implemented inequality	49
7.2.1 Observable characteristics	51
7.2.2 Treatment effects	54
7.2.3 The children's age	55
7.2.4 The distributive situation	57
7.4 Fairness ideals	59
7.4.1 Estimating fairness ideals	59
7.5 Survey questions: Attitudes towards inequality	65
7.5.1 Moral motivation	65
7.5.2 External validity	67
8. Concluding remarks	69
8.1 Review of findings	69
8.2 Proposals for further research	72
9. Reference List	73
Appendix	82
Appendix 4.1 General instructions	82
Appendix 4.2 Background information	85
Appendix 4.3 Statements	90
Appendix 6.1: Balance test, Norway	91
Appendix 6.2: Balance test, China (Shanghai):	92
Appendix 6.3: Heterogeneity Analysis: Observable characteristics	93
Appendix 7.1: Full regression: Observable characteristics	93
Appendix 7.2: Implemented inequality	94
Appendix 7.3: Regression observable characteristics	94
Appendix 7.4: Calculations of Fairness Ideals	97

Tables and Figures

<i>Figure 1: The Gini Coefficient</i>	16
<i>Figure 2: Scale responses</i>	46
<i>Figure 3: Implemented inequality across all treatments</i>	49
<i>Figure 4 and 5: Differences in inequality acceptance across all ages</i>	56
<i>Figure 6 and 7: Differences in inequality acceptance across distributive situations</i>	58
<i>Table 1: Treatments</i>	27
<i>Table 2: Stages of the experiment</i>	29
<i>Table 3: Redistribution in luck-/merit treatment</i>	30
<i>Table 4: Redistribution in efficiency treatment</i>	31
<i>Table 5: Number of adult spectators in each of the treatments</i>	34
<i>Table 6: Descriptive statistics of the sample</i>	35
<i>Table 7: Implemented inequality sorted by treatments</i>	50
<i>Table 8: Control variables' effect on inequality</i>	51
<i>Table 9: Norway vs. China (Shanghai) all age groups</i>	55
<i>Table 10: Norway vs. China (Shanghai) all distributive situations</i>	57
<i>Table 11: Fairness ideals in Norway and China (Shanghai)</i>	59

“Being good is easy, what is difficult is being just.”
— **Victor Hugo (1802-1885)**

1. Introduction

Numerous studies have been conducted through the last decades, exploring the causes and consequences of inequality (Dabla-Norris, Kochhar, Suphaphiphat, Ricka & Tsounta, 2015), as well as how individuals and institutions contribute to shape the further development within this area (Cappelen, List, Samek & Tungodden, 2016). How to respond to the problem of a rising inequality is an issue widely shared by the population (OECD, 2012), although there are important differences in people's perceptions of inequality, and which inequalities they find morally justifiable. Through this thesis, we want to study how adults choose to deal with inequality between children. Cultural transmission of values has been highlighted as a central source of learning, where this has been proven to be transmissible also in a context of social preferences (Almaas, Cappelen, Sørensen & Tungodden, 2010; Cappelen et al., 2016). By studying whether adults in two quite distinct countries have a universal understanding of how to treat children, it is possible to draw parallels to their attitudes towards fairness and consider how these attitudes affect children's further perceptions of inequality. Hence, we also try to shed light on differences in inequality acceptance between countries, and to find out whether they have a universal understanding of how to treat children.

The general perception of whether inequality is *fair* appears to be related to its origin, or what caused the initial inequality (Cappelen, Hole, Sørensen & Tungodden, 2007). Does John receive a higher salary than Peter because he was born with better skills, made a higher effort, or simply because he was lucky? Most of us argue that there are some considerations that may justify an uneven outcome, although we do not seem to agree entirely with each other on which considerations that might be. A difficult, but highly relevant question, is thus how do to decide which inequalities are morally acceptable – and who is not. These preferences seem to vary both within and between societies. While Europeans see poverty as a trap from which it is difficult to escape, Americans believe that a weak position is due to poor choices or lack of effort (Alesina & Angeletos, 2005). Some scientist suggests that nations with greater income inequality typically demonstrate greater acceptance of the inequality itself, and less support for redistribution than their more equal counterparts (Kerr, 2014). This is, however, a controversial claim, as social behaviour is a complex combination of many factors. Although traditional economic theory claims that humans are motivated purely by rationality and cost/ benefit assessments, behavioural economics has proven that this is not always the case. It is well

documented that most adults can be willing to deviate from one's own benefits in order to achieve a outcome they consider fair (Cappelen et al., 2007; Konow 2000). Hence, people also tend to be affected differently by fairness- and efficiency considerations, depending on how much one think fairness is worth. If fairness (or redistribution) is to costly, some might not believe that such considerations can be justified (Acemoglu, Robinson & Verdier, 2012; Konow, 2000). Scientists have long tried to identify the underlying causes of why individuals tend to assess fairness considerations differently. Research suggest that children's preferences might be shaped by prosocial behaviour during childhood, as adults are transmitting signals of what is considered acceptable behaviour (Nielsen, 2006; Almaas et al., 2015; Cappelen et al., 2016). How children are held accountable could thus potentially affect their preferences later in life. Consequently, it would be interesting to compare two countries that differ greatly from one another, both when it comes to income inequality, general policies and parental strategies, further to assess if their inequality acceptance differs accordingly. Our project attempts to shed light on this by studying two distinct countries: Norway and The People's Republic of China.

With a population of 1.386 billion (World Bank, 2018a), The People's Republic of China is the most populous country in the world, and also one of the largest economies. Through recent decades the country has experienced a tremendous economic growth, lifting millions of people out of poverty. However, it is not only the economy that is growing. Since 1980s income inequality has also increased sharply, rendering China among the most unequal countries in the world (Jain-Chandra et al., 2018). A close contradiction is the society of Norway, which is one of the most egalitarian societies when it comes to income inequality (OECD, 2018a). The two countries do not just differ from each other when it comes to income inequality and how they deal with it, but also in terms of political views and redistributive policies. More importantly, they differ greatly in their accountability of children. Through this thesis, we will consider if adults in the two different cultures have a universal understanding of how to deal with inequalities among children by employing a modified version of the well-known experimental design "the dictator game". We will also try to reveal what factors that appear to have the greatest impact on their inequality acceptance. The traditional dictator game captures a situation where only self-interest and perceived fairness can be of significance, as all other motives are eliminated by the design. In this modification, the experiment is designed to study exclusively what people experience as fair (i.e. self-interest is also removed). Participants in China and Norway are placed in the same situation, making it easier to compare the results. In total, 6014 adults have been recruited from the general population, which constitutes a heterogeneous

sample. The adults were asked to make a distributive choice with real consequences on behalf of two children that were set to do the same task. Hence, we also recruited 6014 pairs of children as recipients of the distribution. After completing the assignment, the adults were told that only one of the children would get to receive payment, equivalent to 48 NOK (Norway) or 24 CNY (Shanghai). With the role of an objective third party spectator, the adults were free to redistribute the payment in any way they considered fair. We randomly varied the age of the children (5, 9, 13 or 17), the source of inequality (luck or merit) and cost of redistribution (efficiency) in the experiments. With three distributive situations and four age groups, we had twelve different treatments in total.

There are two reasons why people might accept inequality: they perceive the inequality as fair, or they think the cost of redistribution is too high. Adults in Norway and China varied considerably in the way they chose to redistribute the earnings between the children. Faced with an identical situation, adults in Shanghai implemented about twice as high inequality (0.542) than adults in Norway (0.262) when considering an average of all treatments in total. We assessed this result against the distributive situation and the children's age without finding any significant explanations for this difference. Furthermore, we considered whether the difference was dependent on the spectators' respective fairness views. We identified shares of spectators within three distinct fairness ideals; egalitarians, libertarians and meritocrats. These ideals all have their different opinions of what is considered a fair source of inequality. We found that Chinese and Norwegian spectators differed significantly in their fairness views. Norwegian adults largely chose a more egalitarian distribution, while Chinese spectators in general accepted far more inequality. We therefore suggest the Chinese spectators to have developed personality traits that tend more towards a libertarian fairness view, but we do not, however, characterize them as pure libertarians. Both societies had a significant proportion of spectators endorsing a meritocratic fairness ideal, of which this was clearly the dominant fairness ideal in China (Shanghai). In contrast, egalitarianism was the dominant ideal in Norway. Furthermore, we show that these findings seem to correspond to participants' attitudes in society, including attitudes towards redistributive policies and the beliefs of the extent to which citizens are responsible for their own success.

2. Literature Review

The literature chapter serves as a basis for the empirical section and an initial stand for discussion and analysis throughout the thesis. First, we will briefly present some of the general definitions and conceptual clarifications within in the field of fairness and inequality. Second, different fairness ideals will be presented, and variations in prosocial behaviour between countries and individuals will be discussed. Finally follows a section which includes the development of justice preferences, and how to use the experimental methods to reveal the various fairness preferences that prevail in society.

2.1 Conceptual clarifications

Fairness could be considered one of the most important foundations of morality (Li, Wang, Yu & Zhu, 2016), and there is a substantial amount of evidence suggesting that fairness considerations are significant to understand the behaviour of individuals in different situations (Fehr & Schmidt, 2003). Still, what is remarkable and perhaps unique, about fairness is that there is no consensus about what its definition actually entails (Konow, 2001). According to Merriam Webster's online dictionary (2018), the adjective *fair* could be defined as something (...) "*marked by impartiality and honesty: free from self-interest, prejudice, or favoritism*". Fairness is often perceived as the kind of conditions where people are treated in a reasonable manner, and act in accordance with moral duties and principles. For example, one could say that theft is unfair because it does not respect the property of other individuals. Another influential way of reviewing fairness is "*the kind of conditions where everyone receives what they deserve*" (SNL, 2018). This definition rest upon the idea that there are some things one is entitled to, and that it is fair to claim one's own proportion. However, even the scholars argue to which extent moral principles play a central role in people's behaviour, or whether there are some things individuals are entitled to – still leaving the debate of fairness open for discussion.

Many people perceive that something is fair to the fact that it is also equal – at least in some situations. The traditional approach to inequality does not distinguish between fair and unfair inequalities. In such a perspective, any movement towards a more equal distribution is considered an improvement of justice (Almaas, Cappelen, Lind, Sørensen, & Tungodden, 2011). An important distinction, however, is that something does not have to be equal to be considered fair. Wormeli (2006) discuss how differentiated practices can also correspond to

what is just, as the basic needs of individuals are considered during distribution. James, Carrin, Savedoff and Hanvoravongcha (2005) explains this by distinguishing between equal treatment for equal need, and understandably the opposite: unequal treatment for different needs. Differences in treatment as a result of inequality can hence be explained by a basic desire to help those disadvantaged. Justifications for prioritizing interventions, although not cost-effective, can sometimes be done to favor the most deprived. Equality is, therefore, more a subjective view of justice than a definition of fairness itself. In a marginal perspective, an improvement from severe deprivation is often appreciated more than the same size improvement for a less unfortunate candidate (James et al., 2005). In fact, empirical findings suggest that people seem to tolerate lower cost-effectiveness levels for measures that concern people with higher initial burdens, than individuals with minor problems (Nord, Pinto, Richardson, Mensal & Ube, 1999). Thus, one can infer that people are motivated by justice and that moral principles matter for individual choices.

The question of whether to differentiate in treatment depends on whether or not the individual self is considered to be responsible for the inequality. *Inequality* could be considered an uneven distribution, a difference in size or degree, or in other words “absence of equality”. A common distinction in the discourse of inequality is whether the inequality comprises of differences in outcomes such as income, wealth or expenditures or inequality in opportunities – i.e. circumstances beyond the individual’s own control, such as family background, gender, ethnicity and birthplace (Dabla-Norris et al, 2015). The latter can lead to a lack of social mobility – a reflection of a disadvantage for particular segments of society. If the disadvantage is persistent, inequality could be considered particularly harmful (Dabla-Norris et al., 2015). Inequality in outcomes, such as wealth or income, is the most common form of inequality. The general perception of whether such inequality could be considered fair thus appears to be related to its origin, or what caused the initial inequality (Cappelen et al., 2007). Essentially, one could distinguish between whether such inequalities rise a result of better innate abilities, higher effort or simply because of luck. Empirical research shows that most adults consider some inequality justifiable, although the beliefs of fairness (what one is entitled to or deserve) and what causes income inequality, varies greatly (E.g. Almaas, Cappelen, Haaland, & Tungodden, 2015; Cappelen et al., 2007).

It is, of course, reasonable to assume that distinctions in fairness preferences also occur at an individual level, where everyone has different inclination to accept inequality. Fehr and

Schmidt (1999) choose to assess this phenomenon through different degrees of inequity aversion among individuals. The term *inequity aversion* means that individuals resist inequitable outcomes and prefer fairness in a situation of distribution. In this paper, we choose to apply the term *inequality acceptance* to measure how much social preferences impact the outcome of a decision. That is, how much inequality one is willing to accept, given different assumptions. It is well documented that most adults are willing to divest their own financial or material benefits to level out what they consider to be an unfair outcome (Cappelen et al., 2007). This brings with it a question of how much justice is worth, i.e. how much individuals are willing to pay to achieve what they consider to be a fair solution (Almaas et al., 2010).

When deciding how to distribute a given amount of resources, the overall goal should be to maximize the total benefits whilst at the same time considering the allocation of these resources and other equity concerns. That is, resource allocation should be both as efficient and as fair as possible. However, there might also be occasions when achieving fairness requires a sacrifice of efficiency. In such conflicting cases, individuals must make a trade-off between what matters the most (Fehr & Falk, 2002; James et al., 2005). Empirical research suggests that many believe that efficiency considerations may justify an unequal distribution (Acemoglu et al., 2012; Konow, 2000). Especially if redistribution is costly, some might prefer to keep the inequality as it is rather than to equalize it. Where the resources should be placed therefore depends on what the public considers to be fair in terms of proper use, also accounted for their perceived effectiveness of the solutions. One classic example is the tax system; To ensure sufficient public services for all, everyone must contribute by distributing a given share of their income to the benefit of the community. This redistribution is also costly, as the tax system requires administration and governance to properly function. To understand why some societies choose high tax rates and high redistribution and some vice versa, one needs to consider the respective populations' perceptions of inequality, and further which inequalities they are willing to pay to equalize. Acemoglu et al. (2012) argue that efficiency considerations may be the reason why Americans are less in favor of redistribution than Scandinavians. As the cost to implement a comprehensive welfare system is believed to be greater for the United States, they are also believed to accept more inequality by not implementing it (Acemoglu et al. 2012). Hence, fairness should be treated as a genuine value, but it will also exist an incentive and a potential for changing beliefs about it (Konow, 2000). Essentially, one can infer that there are two reasons why people accept inequality: they perceive the inequality as fair, or they think the cost of redistribution is too high. However, this raises a difficult question of how individuals

measure or perceive the fairness of outcomes, and whether there are some circumstances that can justify for inequalities (Fehr & Schmidt, 1999).

2.2 Different preferences of fairness

To illustrate the distinction between fairness preferences, one could consider two siblings, John and Sarah. After performing a job for their neighbor, the two children have received a cinema ticket to the latest movie on screen. However, since there is only one ticket and two of them, they must make a choice on who will receive the benefit. Sarah suggests that they flip a coin to decide, as they both performed the same job. John, on the other hand, argues that he should get the ticket, as he was slightly faster, and therefore made a larger share of the work. A third option is to sell the ticket and split the earnings equally. However, it should be noted that they will not be able to regain the full value of the ticket, should they choose to sell it. Hence, the children have the choice to accept and retain the inequality as it is, or to share the reward even though the overall gain will become less. These arguments distinguish from each other in relation to the source of inequality, depending on whether they should allocate based on luck or merit (individual talent or effort). The option to sell the ticket also takes efficiency considerations into account. Empirical research suggests that most adults accept differences in individual achievements or efficiency considerations as fair sources of inequality (Konow, 2000; Cappelen et al., 2007; Almaas et al., 2011), while benefits achieved by luck are considered unjustified (Cappelen, Sørensen & Tungodden, 2010; Almaas et al., 2016) Hence, John and Sarah's arguments for distribution are all legitimate in a certain way, although they might not be for everyone. Some might perceive the fact that one achieves higher benefits on the basis of luck as a legitimate source of inequality, while others accept only the results of individual effort or skills as appropriate. Many would prefer to keep the initial inequality rather than selling the ticket if the price-reduction is considered significant. Then it is considered fairer that one of the children gets to watch the movie, rather than both of them getting a monetary benefit significantly lower than the initial value.

2.3 Fairness ideals

In society there are different fairness ideals, providing different answers to the fundamental questions in distributive justice (Cappelen et al., 2010). Two opposing views are egalitarianism and libertarianism. Egalitarianism is based on the principle of equality, and according to the Merriam-Webster (2018) online dictionary, the term has two distinct definitions; “*A belief in human equality especially with respect to social, political, and economic affairs*” or “*a social philosophy advocating the removal of inequalities among people*”. Both definitions emphasize that inequalities should be equalized so that individuals are given the same access to resources, are treated equally or have the same social status (Merriam-Webster, 2018). Strict egalitarianism maintains this perspective even in matters involving production, stating that the inequalities should be evened out no matter what the origin of the inequality is (Cappelen et al., 2007). Following this ideal, John and Sarah should sell the ticket and divide the earnings equally regardless of differences in luck, effort or talent.

Libertarianism, on the other hand, holds people personally responsible for outcomes and claims that the right solution is to give each person whatever wealth he or she produces (Cappelen et al., 2007). This ideal emphasizes that everyone is entitled to enjoy the wealth of their own effort or talent, but also the wealth obtained through luck. Following this view, John and Sarah would both receive their part of the profit, regardless of inequalities due to luck, merit (better innate abilities, higher skills) or effort (working more hours, being more productive).

A third ideal, meritocracy, locates the responsibility for social status within the efforts and abilities of the individual alone (McCoy & Major, 2007). According to a meritocratic ideal, it is unproblematic that John who is talented and hardworking earns more than Sarah who works hard but does not possess the same talent as John (Pedersen, 2014) This view leaves the responsibility of all factors to personal traits, regardless of whether it is talent or effort. Luck is not considered a fair source of inequality in a meritocratic point of view, as the individual has no influence on the outcome in such situations. Likewise, one could say there are three possible ways to get “to the top” in society; either talent, luck or effort. These three factors can all be decisive for a person’s income, and hence give rise to income disparities among the population (Almaas et al., 2015).

2.4 International Comparisons

The example with John and Sarah illustrates how justice considerations may vary on an individual level. However, there are also tremendous differences in social perceptions regarding the fairness of market outcomes and the underlying sources of income inequality around the world. To exemplify this, a study conducted by Almaas et al. (2016) utilized a modified version of the dictator game to estimate shares of the populations in the US and Norway presumed to coincide with the different fairness ideals. Their findings suggest that there is a significant difference in inequality acceptance between Norway and the United States. This difference in inequality acceptance is so great that it is larger than the political differences within each of the two countries, respectively (Almaas et al., 2016). Further, they found that the difference in distributive behaviour is largely driven by the fact that Norwegians and Americans endorse different fairness views. There was a significantly greater proportion of the Norwegian spectators who endorsed an egalitarian fairness view, while the majority of the American spectators had a libertarian fairness view. This despite the fact that both groups made the same choices in an identical situation (Almaas et al., 2016).

2.4.1 Different degrees of inequality – varying degrees of justice?

Due to the large variations in individual judgments about the fairness of inequalities, several researchers have tried to uncover the actual origins of our social preferences, in this case why it is that we consider inequalities so differently (E.g. Robinson & Bell, 1978; Dabla-Norris et al., 2015; Jain-Chandra et al., 2018). This is especially interesting when studying countries with different degrees of inequality and how they choose to handle it. “The underdog principle” predicts that people who objectively benefit from inequalities are more likely to acknowledge them. Individuals with disadvantages in terms of opportunities and conditions are thus predicted to be more conscious of inequalities, and hence more reluctant to accept them (Robinson & Bell, 1978). Following this view, one might think that countries where the majority of the population are poor and the class divisions are large will have a lower acceptance for inequality among the population in general. However, individuals may also experience and respond differently to such differences in deprivation and privilege, as this becomes a matter of the subjective self-placement into the social classes of society (Robinson & Bell, 1978). How individuals choose to regard their own position is linked to factors such as education, income and employment, but also how much weight to impose on their own responsibility for their socioeconomic status. McCoy and Major (2007) found evidence across two studies that priming

meritocracy led participants to justify both personal and group disadvantages by reducing perceptions of discrimination, even if they belonged to an inferior (low-status) group. Such beliefs justify status inequalities by locating the cause of status differentials within the individual's talent and effort (McCoy & Major, 2007). In addition to differences in fairness perceptions, there are thus also large variations in the way people regard the origin of inequality. Alesina and Angeletos (2005) assume that Scandinavians and Americans follow the same meritocratic fairness ideology, yet we see that individuals in the two countries may regard fairness of inequalities differently because they believe the very origin of inequality is different. While Europeans see poverty as a trap from which it is difficult to escape, Americans believe that a weak position is due to poor choices or lack of effort (Alesina & Angeletos, 2005). According to the World Values Survey, 60 percent of Americans believe that poverty is possible to escape, and that poor could become rich if they just tried hard enough, seeming to blame laziness as the main reason why people don't climb the career ranks. This meritocratic view is a central component of the American Dream, with the belief that hard work and talent leads to success (Pedersen, 2014; McCoy & Major, 2007). Contradictory, the European belief is that the cause of poverty is bad luck rather than poor skills (Alesina & Angeletos, 2005). In the United States, where one is supposed to be "a man of his own fortune", it is thus conceivable that individuals might respond differently to inequalities as they consider themselves responsible for whether they have succeeded in their job or achieved the education they wished for. In contrast, such inequalities are in Scandinavia regarded as something beyond the individual's control. However, such connections cannot be determined with certainty. Almaas et al. (2015) found that there is whether individuals regard inequality as fair or not that has the greatest impact, not perceptions about how the inequality has occurred. Indeed, there is no consensus to be found on how populations consider the degree of justice of inequality.

Several studies have attempted to shed light on other phenomena to see which factors might contribute to shaping differences in preferences within and between populations that differ in terms of inequality. Falk and Hermle (2018) presented and tested two hypotheses with opposite predictions regarding gender differences in an international perspective. On the one hand, social role hypothesis claims that attenuation of gender-specific roles in well-developed and equalized countries can curb the difference in preferences between men and women. In this way, social role theorists expect differences in men's and women's preferences to be smaller in cultures with more gender equality and higher economic development than in cultures of the opposite (Schmitt et al., 2017; Falk & Hermle, 2018). On the other hand, the resource hypothesis claims

that higher levels of gender equality and economic development could create an opportunity for gender-specific desires and ambitions through the removal of the gender-neutral goal of subsistence. Gender-equal access to resources could also allow men and women to express preferences independently of one another (Falk & Hermle, 2018). Through a geographically representative study of 80 000 participants from 76 countries, Falk and Hermle (2018) tested these two competing predictions. Their findings highly supported the social role hypothesis, as they found that gender differences in their study had a strong positive association with gender equality and economic development. That is; the greater the similarity between women and men – the greater the gender differences in personality. Even after several validation tests, their findings remained both robust and significant. Similar studies have been conducted earlier, including a study of 127 samples from 70 countries conducted by Schwartz and Rubel-Lifschitz (2005). They also found consistent cross-cultural gender differences where women attributed greater importance to the values of benevolence and universalism, while men attributed more importance to values such as power, achievement, and self-direction. Interestingly, for 19 of the European countries, Schwartz and Rubel-Lifschitz (2005) also found that the higher the gender equality within the country, the larger the gender-gap in preferences. These findings contradict the idea that gender equality reduces gender differences due to personality.

2.5 Development of fairness preferences

Previous studies have shown that social preferences start to develop already in early childhood (Cappelen et al., 2016; Almaas et al., 2010; Li et al., 2016). As a child, one is exposed to different individuals and environments transmitting signals of what is considered acceptable behaviour. These may be the parents and caregivers of the children, people within the children's surroundings, but also other environments where the children reside. Many of the most important social and cognitive skills of the children are thus developed by observing and copying what others are doing (Nielsen, 2006). When children engage in such non-verbal social interaction, they are provided with a way of acquiring new skills, and it has also been argued that the transmission of culture is founded through observation. Such a transmission of values and behaviour can also be named "social learning". Hence, attitudes prevalent in society can be submitted to future generations through social interaction stating what is right and wrong. Interpersonal communication between adults and children has thus become a topic of central importance to increase our understanding of human development (Nielsen, 2006). Scientists even suggest that the phase of childhood stands out as a period of rapid development in the area

of social preferences and that young children's fairness evolution in these years appears to be formative for their social preferences later in adulthood (Almaas et al, 2010; Ben-Ner, List, Putterman & Samek, 2015).

Almaas et al. (2010) present evidence of complex notions of fairness through an economic experiment intended to measure children's development of inequality acceptance. Their findings suggest that individuals are not born with unchangeable behavioural traits, but that such preferences are acquired during adolescence. The study thus sheds light on what may explain differences in fairness preferences: That children through childhood develop different attitudes towards merit and efficiency-considerations. Almaas et al. (2010) did not find any statistically significant difference in selfishness from mid-childhood to late adolescence, but on the other hand, they found evidence that accepts for inequality due to differences in production increased in line with the child's age. Nearly no fifth-graders in the experiment were meritocrats, while almost all endorsed an egalitarian fairness view. On the other hand, the proportion of strict egalitarians fell dramatically through late adolescence, as meritocracy took over as the dominant fairness ideal. Older participants also had a greater likelihood of taking efficiency-matters into consideration. A degree of self-interest was thus stable through adolescence, while the children's fairness views changed significantly during the same period. These differences were particularly due to an increasing distinction between the sources of inequality, as the children began to emphasize skills and merit to a greater extent, the older they became. The proportion of libertarians was stable throughout the experiment, although the proportion of strict egalitarians were reduced. One possible explanation for the merit-effect is that children experience a cognitive maturation during adolescence; e.g. they develop skills to distinguish between information. In this way, the children can learn to distinguish between inequalities that arise based on coincidences and luck, and inequalities that arise due to differences in individual achievements. However, this effect cannot explain the differences in libertarians and egalitarians, thus suggesting that social experiences also matter for the development and inequality acceptance (Almaas et al., 2010).

Further, a study conducted by Cappelen et al. (2016) highlights the impact of early childhood education, suggesting that differences in institutional exposure may be explanatory to the heterogeneity of social preferences in society. During the study, a selection of children was either attending preschool or put into a parenting program within a period of nine months. This was intended to assess whether early childhood education had a causal impact on preferences,

as well as measuring whether the content of the educational program mattered in itself (Cappelen et al., 2016). As the study was followed up by economic experiments after a period of four years, the researchers received the opportunity to test the same respondents to see if the different approaches to educational investment affected the development of children's social preferences. Their findings provided novel evidence that attending preschool made the participating children more egalitarian, while the children within the parenting program increased their importance placed on efficiency in relation to fairness. The researchers thus found the causal impact from early childhood education to be strong even several years after the intervention. Even though the study revealed concrete evidence linked to egalitarianism and efficiency considerations respectively, this might have been influenced by the research context. Cappelen et al. (2016) proposed that potential mechanisms for the impacts were that teachers in the Preschool resolved conflicts in an egalitarian matter, while families within the parenting program may have been affected by efficiency-considerations through influence from The Parent Academy. These reasonings might have been transmitted to the children through their interaction with the adults. Nevertheless; the influence was a fact, as the preferences of the children varied due to the treatment they were exposed to. The findings thus show that social learning through preschool and family interaction are causally identified to affect children's development of prosocial behaviour (Cappelen et al., 2016). Ultimately, several researchers provide evidence that institutional exposure might affect the common attitudes and fairness ideals of a society, and that this influence starts already in early childhood. As social institutions in their turn might pave the way to reduce social inequalities and class divisions among the population by design, it is instrumental that we include these considerations when evaluating exposure from social institutions impact on social preferences.

2.6 The experimental method

From both a theoretical and empirical point of view, it is evident that it is not easy to interpret the reasoning behind people's behaviour, or to measure their moral attitudes. A key challenge when interpreting behavioural data is that there can be many possible explanations of what is observed (Konow, 2003; Cappelen & Tungodden, 2012). Experiments give the scientist control of the environment and can reduce possible motives in an economic situation. The use of the experimental method has thus been highlighted as one of the most prominent reasons behind the breakthrough of behavioural economics. There are essentially two main reasons for this; experiments provide control and allow randomization. Moreover, results from economic

experiments have shown that the traditional assumptions of selfishness and rationality do not always provide an accurate explanation of people's behaviour in different situations (Cappelen & Tungodden, 2012). To exemplify these points, we will present one of the most common, classical experimental designs; The dictator game.

In the classic dictator game, one of the participants (the dictator) is assigned an amount of money to be distributed between him- or herself (player A) and another person (player B). The dictator can allocate the money in whatever way he wants, and the outcome will be decisive. Hence, the counterparty cannot respond, only accept the money distributed to him or her (Konow, 2000). Let us say that the participants in the dictator game had \$100 to share, and that player A chose an equal division of the money. How can we know if this distribution was caused by moral motivation? While real-world data contains too much noise to say something about causal relationships, theoretical models often fail to include all mechanisms necessary. Experiments on the other hand, allows us to study the participant's true behaviour and hence question economic models by showing what people do in contrast to what theory predicts them to do. One can also complement the experimental method with information obtained from other empirical methods, for example, in combination with surveys. Surveys generate large and representative datasets that provide statistical power, while the experiment further allows the researcher to elicit preferences and attitudes in a controlled environment. Elicitation may be even closer to reality using experimental incentives, where participants make choices with real money at stake. Such evidence is particularly useful to provide a better understanding of preference heterogeneity (Falk & Heckman, 2009). Experimental design becomes extra advantageous when considering the possibilities of randomization, which allows the researcher to identify causal relationships (Cappelen & Tungodden, 2012). However, the fact that experiments are so stringent also means that they do not necessarily capture all the mechanisms that might play a part of decision making in real life. Based on this, experiments have been criticized for having low external validity, as individual actions are often controlled by impulses and intuition in addition to being influenced by external factors. Such influence is likely to be removed when operating within specified limits. Participants' behaviour may also change by being aware that someone else is monitoring one's own behaviour, also referred to as "The Hawthorne Effect". This phenomenon occurs if the participant's awareness of taking part in an experiment affects his/ her behaviour within the study and hence the results (Jones, 1992; Cappelen & Tungodden, 2012). This is something that must be taken into consideration during both the design and implementation of the experiment.

In a well-developed design, however, one can more easily meet the challenges mentioned in the previous section. The dictator game design is designed to study what people experience as fair, as well as it captures the effect from self-interest as the dictator is also being a stakeholder. That is, individuals tend to implement the solution they make the most of themselves or what they think is most fair given that they regard fairness as an important value. The researcher could thus capture a situation where only self-interest and justice can mean something for the outcome, as all other motives are eliminated by the design. Both players are anonymous, and the situation will only occur once. As the total amount is unaffected of how the money is divided between the two participants, there is no fairness argument justifying an unequal split (Almaas et al., 2010). However, the degree of self-interest is often a key factor in experiments. Konow (2000) states that narrow goals such as self-interest, may have an impact on individual behaviour and moreover dominate or bias the concern for equity. It is conceivable that one's true fairness preferences are revealed by impartiality, or as what one would choose if the choice to be made is purely objective. In recent studies, therefore, several researchers have employed a spectator design where the proposer has no stake in the game, thereby avoiding any self-serving bias (Konow, 2003; Cappelen, Konow, Sørensen and Tungodden, 2013). True economic behaviour is also induced by monetary incentives (Cappelen and Tungodden, 2012). Most economic experiments hence use real money rewards in order to mimic real-life situations and in that way uncover true behaviour. To motivate participants to make a carefully considered choice, this experiment was no exception. This thesis studies a variant of the dictator game where the dictator acts as an impartial third-party spectator, and not as one of the two players. The children were paid in real money, which clarifies the importance of the adults implementing the decision they believe is most fair. A more detailed review of our experiment will be presented in Chapter 4. Before this, we find it appropriate to get to know the two cultures participating in the experiment. Further follows a section exploring the societies of Norway and China, respectively, ideally presented to explore the potential differences in inequality acceptance between the two societies.

3. Country presentations

3.1 Grounds for country selection

Inequality is a considerable issue and remains a key concern to governments all over the world (OECD, 2012; Dabla-Norris et al, 2015). Still, there are big differences in the level of inequality within countries, how different societies assess types of inequality, and presumably how they are dealing with it. Here, the difference between China and Norway is a case on point. The two societies differ strongly in terms of political views and redistributive policies, but also when it comes to income inequality and how they deal with it. In the following sections, we will present differences we consider to be central to provide a better understanding of the two cultures individually. First, we consider income inequality. One way to statistically quantify dispersion in income and wealth distribution between countries is by the Gini-coefficient. Gini is defined as a number between 0 and 1, where the closer to 0, the greater the equality (Blakely, Kennedy, Glass & Kawachi, 2000). In a situation of 0, income differentials would be non-existing, and the country's wealth would be evenly distributed between everyone within the population. Coefficient 1, on the other hand, equals total inequality, of which one person disposes all the wealth (OECD, 2018a).

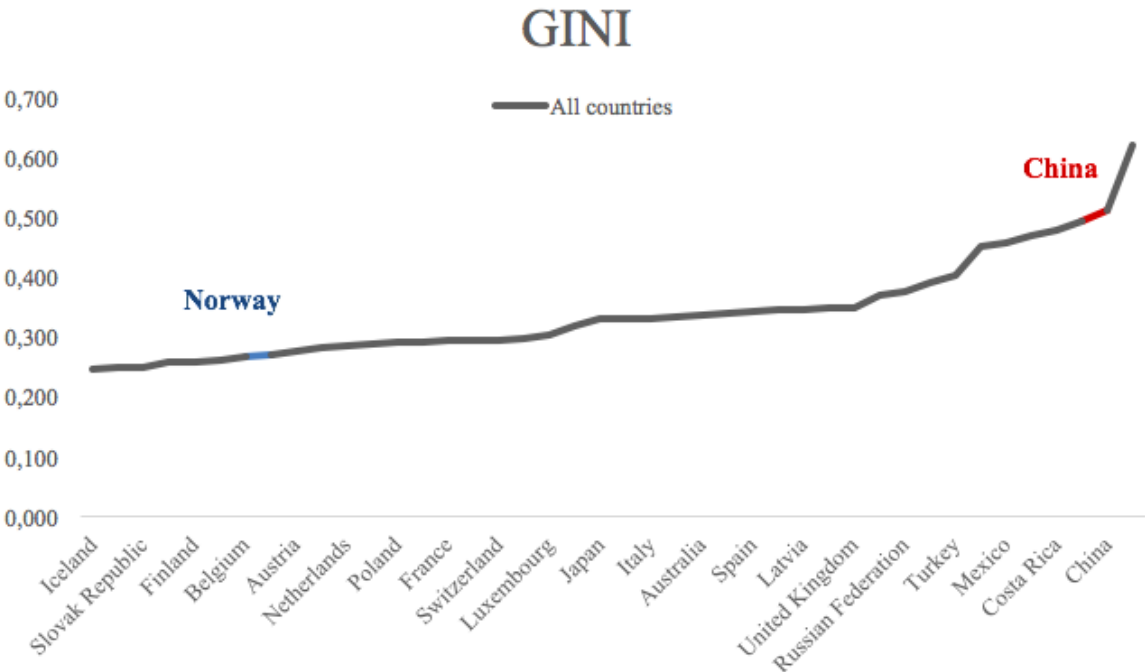


Figure 1: The Gini Coefficient (OECD, 2018b)

3.2 Differences in inequality and revenue growth

As illustrated in figure 1, Norway is on the world top 8 according to the inequality-measures set by the Organization for European Economic Co-operation (OECD), with a Gini coefficient corresponding to 0.272. In contrast, China is seen on the other side of the scale with a Gini corresponding to 0.514 (OECD, 2018b). The United Nations Millennium Development Goals to reduce poverty stated that from 1990 to 2015, the proportion of the world population living for less than one dollar a day should be halved. The main difference that world inequality in recent years has been reduced, has, in fact, a correlation with China having reduced the number of poor considerably. In the transition to a market economy, China has experienced a sustained revenue growth greater than observed in any other major economy (OECD, 2012). From being considered a poor country oppressed by autocracy, the number of people living below the poverty line has in recent years been drastically reduced. With almost 1.4 billion inhabitants, China has had a direct impact on the Gini-measure, reflecting better living conditions for hundreds of millions of Chinese (Bartolini & Sarracino, 2015). However, the economic growth has not affected all segments of the population equally or at the same pace. Incomes of the richer groups in society have been rising faster than incomes of the poor, resulting in a large increase in inequality and differences in revenue growth (OECD, 2012; Sicular, 2013). Despite the reduction in the number of poor, China's Gini has increased from 0.3 since the 1980s, which is almost a double in percentage points. Milanovic (1999) finds that increased differences between urban and rural China in isolation contribute more than a tenth of this total Gini coefficient growth rate. This may indicate that China's economic growth has contributed to creating an even greater social division among the population, as China now is rendered among the least equal 25 percent of countries worldwide (Sicular, 2013). According to SSB (Bureau of Statistics in Norway), the income gap between households in Norway has also increased slightly from the 1980s to today. This difference is also due to the rich being richer, while those with the lowest income remain at the same level (SSB, 2017a). However, wealth differentials in Norway are low in international contexts. Upon the wealthy and picturesque image that is created, few could imagine that Norway was still among the poorest nations in Europe just about a hundred years ago (Fang, 2008). As of today, Norway has in recent decades had steady growth and a stable economy without any major disruptions.

3.3 Socioeconomic conditions

Whereas Norway has had a stable economy over a long period of time, China has in recent years been through a revolutionary development in the transition to a market economy, which consequently entails some accompanying challenges. Key sources of inequality in emerging economies such as China includes gaps in access to education, career progression, employment, and disparities in access to basic services in rural and urban areas (Jain-Chandra et al., 2018). To date, there are major social differences in China, especially prominent between the poor and the rich and between rural and urban areas (FAFO, 2018). Inequality in access and opportunities, such as access to education, social safety net, and financial services, will eventually translate into inequitable income and increase the social differences among the population even more (Jain-Chandra et al., 2018). State policies should be developed to prevent such development, and to ensure inclusion and equal opportunities. Norway has a well-developed welfare model that ensures community members assistance in case of health, social distress or loss of income, for example at unemployment or old age (Kildal, 2013). This model rests on important values, such as the principle of equality, even distribution and high mutual trust. Further, it has helped the country achieving a high standard of living compared to many other countries by aiming to reduce social and economic differences (Fang, 2008; Fløtten, Hansen & Kavli, 2009). When the Second World War ended in 1945, Norway had no public benefits intended to target the whole population. However, during the next 20 years, Norwegian social policies changed significantly in character. Children's allowance was introduced to all families with more than one child (1946), and sickness benefits were introduced for all workers (1956) It was also introduced age insurance (1957) and disability allowance to all those of working age (1961). The Act on National Insurance, which gathered and coordinated all welfare schemes in one, was introduced from 1st of January 1967 (Kildal, 2013). Ever since, protection against social risks has been given in the form of universal social rights to relatively generous benefits – and that gradually increasing risks such as unemployment, illness and disability have been recognized as public responsibilities (Kildal, 2013).

The welfare system is drawn by many as one of the main reasons that Norway has such low social differences seen in an international perspective. There is a broad agreement that policies will need to play an important role in curbing future inequality, also in China (Jain-Chandra et al., 2018). Hence, the Chinese government has in recent years been developing their policies to provide social security for all. To what extent people actually support the policies developed in

different areas is also important both in term of the legitimacy, and the effectiveness of the policies. By implication, if high levels of inequality remain even after the state's efforts have been taken into account, the disadvantaged in society may be even less pleased with the democratic institution and their practices (Anderson & Singer, 2008). A national survey of people's attitudes toward redistribution and justice was conducted in 2014, by an extensive collaboration between Norwegian, Chinese and American researchers. Preliminary results show that China's population are concerned with fair distribution and the role of Chinese authorities in ensuring a good standard of living for all (Forskningsrådet, 2018; FAFO, 2018). The pervasive inequalities that characterize today's situation in China are still seen as deeply unfair and problematic. In addition to pure material inequality, people are concerned with different approaches to health and education and see the authorities as responsible for contributing to more similarity. Although the Chinese authorities have implemented major reforms of health, retirement and education systems, many still want further reforms (Forskningsrådet, 2018; FAFO, 2018).

Many highlight the Norwegian welfare model as particularly outstanding, especially due to children policies. Citizens in Norway have, among other things, statutory rights that ensure them the right to maternity leave and payments related to pregnancy, birth and adoption (Altinn, 2018). The government systems thus facilitate that having children should not be a burden or a barrier for the parents in their professional life. In China, the situation is quite different. Especially in the cities, living is expensive, and it has thus become very expensive to have more children. In combination with maintaining their careers, parents struggle with a limited welfare system and limited childcare facilities (Sauarlia & Jufen, 2008). The situation in China has also long been characterized by the controversial one-child policy imposed by the state. The policy was introduced in 1979 and is by many considered one of the most radical approaches to limit population growth. As a result, the number of children that urban couples could have was restricted to one, only with exceptions for those from ethnic minorities or with a severely disabled child (Cameron, Erkal, Gangadharan & Meng, 2013). The policy was ultimately relieved in 2013 and further changed to a so-called "birth planning policy" by 2015, where all families from this date were allowed to give birth to two children (Mjøset & Skarstein, 2017).

3.4 Political governance and legislations

From the preceding paragraph, policies in Norway and The People's republic of China suggests standing in great contrast to each other. As one of the world's largest economies, China has often been in the spotlight of both the media and public research. This is partly due to a high degree of censorship and detention among the population, (King, Pan & Roberts, 2013), but also due to an attempt of understanding how to best organize the world's most populous society. China's politics has long been characterized by somewhat controversial legislations, such as their contentious one-child policy, and the role of the government is central within most spheres of society. Although China is traditionally meant to exchange leadership about every ten years, the country is strongly criticized for powerful leaders getting an ever-stronger grip on control. Since the Communists seized power in 1949 under the state leader Mao Zedong, the Communist Party has controlled the country unanimous. According to UN, there is no real opposition to the current power, neither today (UN, 2018). The introduction of communism brought about a series of changes for the Chinese people, and at this time, another social ideology was followed. Like Karl Marx, Mao claimed that population should be considered an asset and that it was the exploitative class systems of feudalism and imperialism (not overpopulation) that were the causes of poverty, disease and unemployment (Kristoffersen, 2008). After a successful revolution that had been performed and won in the countryside, Mao and his comrades devoted unprecedented attention to the peasants (Perry, 2007). Several welfare measures were launched, such as free schooling, free health care and guaranteed work. Even though the problem of poverty in China was not solved, the most visible manifestations of poverty were eliminated (Cheng & Selden, 1994). However, in spite of the peasant revolution, agriculture was heavily undervalued during most of the Maoist period, resulting in chronic poverty for millions of rural dwellers. Mao's attempt to bring up industrial production thus resulted in heavy labour pressure and a horrendous Great Leap famine (Perry, 2007). Post Mao leader Deng Xiaoping thus saw the need for a new revolution, this time in the form of tumbling reforms from a closed plan economy through a transition to a market economy with higher growth.

According to a study conducted by Alesina and Fuchs-Schündeln (2007), Communism is suggested to have direct effects on social policy preferences. By studying East and West Germany, they found that such effects could rise due to indoctrination e.g. in public schools, or simply because the people were becoming accustomed to an intrusive public sector. If Communism was indeed contributing to making East Germany poorer than the West,

Communism would create indirect effects by making the former east more dependent on redistribution and hence more favourable to it (Alesina & Fuchs-Schündeln, 2007). Likewise, it is conceivable that the political upheavals in China may have led to different preferences when it comes to state legitimacy and support. On the one hand, one can see that the legacy of Mao has left behind, among other things, beliefs that the state should play a key role in providing welfare systems for the population, while the new government struggles to provide sufficient welfare services. The new head of state in China has had to impose strict limits and laws among the population to maintain control, thus leading to an alarming discrepancy between current and future labour force, as well as a growing elderly generation. Even though these measures were highly needed to reduce overpowering population growth, it has also led to a serious gap between tax money raised and the money needed to support the population in the form of e.g. pensions. This will inevitably make it very difficult for the state to create and maintain good welfare systems, as the state can no longer afford to pay for an omnipresent welfare system as that of the Mao generation (Kristoffersen, 2008). According to the results of Alesina and Fuchs-Schündeln (2007), it will take at least one shift of generations, if not two, before preferences for state intervention will be the same between population groups after such a political shock. Similarly, there may be a distinction between younger and older generations in China, but there are no data available at this time to corroborate this theory.

The Norwegian welfare model is built on an egalitarian distribution of wealth so that large wage differences between taxpayers can be avoided (Fang, 2008). Political hierarchy and status are thus exchanged with openness and democracy, which opens for that Nordic people have a high trust in the state. Even though revolutions in China has contributed to lots of changes, leaders have been very reluctant to introduce reforms that would weaken the Communist Party's power monopoly. The leadership of China is still known to maintain a high degree of control over the population, and class distinction is evident. Throughout the 1950s, the Chinese government implemented a code of laws, regulations and programs with the aim to formally differentiate between residential groups. This was both to control the population's movement and mobility, but also for forming state development priorities (Cheng & Selden, 1994). Gradually following the success of the communist revolution in 1949, the Hukou system, or Chinese household registration system, thus evolved (Afridi, Li & Ren, 2015). Under this system, every citizen was legally bound to register her or his permanent place of residence, say city x in province y, and the type of hukou, which was either rural or urban. As presented by Afridi et al. (2015), the

population in large municipalities such as Beijing and Shanghai usually consist of four different hukou categories:

- ❖ local urban (residents of the urban areas of municipality)
- ❖ non-local urban (migrants who are urban residents of less-developed cities)
- ❖ local rural (residents of the rural areas of municipality)
- ❖ non-local rural hukou holders (migrants from rural areas of provinces outside municipality).

The Hukou system favours urban residents in social benefits and resource allocation, as these residents are considered to be at the top of the social hierarchy (Cheng & Selden, 1994; Afridi et al., 2015). The migrants from rural areas, on the other hand, are typically at the bottom (Afridi et al., 2015). This is a relatively large contrast to the Norwegian society, which aims to equalize all kinds of social division. The importance of initial socioeconomic circumstances might in many cases be considered significant, especially if the inequalities are to be influential of social mobility and people's possibilities later in life (Jain-Chandra et al., 2018). In the context of the hukou system, a household's hukou was (and continues to be) inherited by the next generation (Afridi et al., 2015). Even though the system does not prohibit migration, it sets strict limitations on government-provided provisions as one is not entitled to services such as medical care without registration. As Chinese citizens are entitled to subsidized public education only in the area of their legal permanent residency, non-local hukou holders must pay fees of a significant proportion of their incomes to possibly enroll their children in local schools in line with the locals. This discrimination against rural residents is not limited to the educational system only. Employment opportunities usually also favours urban hukou holders in cities, increasing the division in the population (Afridi et al., 2015).

As Hukou status, educational attainment and eventually employment opportunities are restricted by birth, inequality would be a major hurdle for social mobility. This is not easily comparable to the society of Norway, as equality and democracy stand strong, and the distribution of power is a basic principle within Norway's democratic form of governance. Most Norwegians grow up with the mindset that they are born with all possibilities open and that there are no restrictions for their options later in life. These are values that we share with our neighbouring countries, and which is deeply entrenched in our culture.

3.5 Child-rearing and institutional exposure

Until now, we have elaborated for how China and Norway differ in terms of inequality and the way they deal with it, but also how they vary in social structure, politics and welfare programs. An equally – if not even more important distinction, is the way the two countries vary in terms of their accountability of children. A research collaboration between Bergen University College and East China Normal University (ECNU) compares kindergartens in Norway and China in terms of the children's learning and freedom of expression. While Chinese pre-school offerings aim to incorporate good and considerate habits, perfection and development of responsibility towards the community, Norwegian daycare offers a platform for children to express themselves, be heard and seen for the sake of self-realization and development of identity (Ødegaard, 2012). According to Chinese educational ideals, a child must meet the desires of two parents and four grandparents and, in addition, live up to core virtues like charity, righteousness, good conduct, wisdom and honesty. On the other hand, the Western educational ideal does not focus on the children acquiring skills and knowledge alone, but also develop a self (Ødegaard, 2012). Many scientists emphasize the highly disputed one-child policy as one of the main reasons why these cultural differences are so prominent. Particularly in urban areas like Shanghai, the one-child policy has led to the so-called "little emperor syndrome", where children are pampered but also put under enormous pressures and expectations to perform (Dello-Iacovo, 2009). This is evident, not only in preschool but also in other arenas in the children's upbringing.

In Norway, children's equality, rights and freedom to choose for themselves are very much in focus. By studying the legislation of the Norwegian Sports Association (NIF), it is statutory that children in Norway should not be allowed to compete at a national level before reaching the age of 12, and that all children under this level will receive a prize in a sports event if prizes are taking place (NIF, 2015). This underlines the fact that Norwegians do not want the children to be aware of any differences between themselves and their peers. Further, Norwegian children have a right to participate in a safe training environment, free from pressure and exploitation. The children also have the right to choose which sport or how many sports they want to participate in, and they have a right to decide how much they want to exercise (NIF, 2015). In China, we see quite strong opposites in the treatment of children in terms of sports performance, and training methods that most likely would not have been approved in Norway. There are many sports schools for children in China, and they are characterized by hard discipline. Talents

are discovered early, which is considered to be a very important factor for China's success in sports. Already at a young age, children are taken out of regular school to work out (Yang & Leung, 2008). Family life, schooling and an ordinary childhood are thus sacrificed. This type of "battle of prestige" both within school, sports and other venues, has developed as parents have grown an increasing dependence on children for future family survival. Children must live up to the expectation to perform well in school for one day to take care of their family, thus creating an increasing pressure for them to succeed in life. A study from 1998 showed that all 97.1 percent of parents in urban China expected children to have at least two years of college education, while 70.5 percent expected children to complete at least one master's degree (Sun, 2006). Many Chinese parents devote considerable time and effort providing the necessary knowledge for their children, among others, it has become customary to send the children to extra lessons in the evenings and weekends. As education funding has been, and continues to be low; parents use money, power and connections to get their children into coveted schools (Dello-Iacovo, 2009). Cameron et al. (2013) claim that parents of only children presumably may be more attentive and responsive to the child's needs, which may promote a greater sense of confidence, security and intellectual competence for their youngsters. However, as many parents spend a lot of resources on extra education, the children may feel that they owe their parents to pay back for this sacrifice (Kristoffersen, 2008). On the one hand, children can enjoy an increasing attention from multiple caregivers, as on the other hand, they live under great pressure and expectations to succeed. These extreme expectations are what is meant by controversial expressions such as the upbringing of the "quality child" (Dello-Iacovo, 2009). This is far from the Norwegian egalitarian society, where both academic pressures and expectations in general are low for young children.

3.6 Education and the upbringing of tomorrow's generation

An important basis for the Norwegian Welfare model is the individual right to education, which eventually will ensure the right competence and high employment – a prerequisite to funding a welfare state with a social security network that embraces all citizens. This model may be one of the reasons why Norwegian parents do not have to rest the burden of a pleasant future on the back of the children. In Norway, everyone is entitled to free public education. Both primary and lower secondary schools in Norway are available for all, and one also has the option of moving on to a free higher education (college or university). Internal competition between the students is small, and most have the opportunity to attend the school that they want. The

determination of grades for the students does not begin before at the secondary school (OECD, 2011). Compared to western countries, the Chinese culture could thus be considered quite prestigious, and internal competition among the citizen much more prominent. Ever since the beginning of primary school, the students get accustomed to grades and examinations, they are tested and get to know which number they are compared to their peers. It is a basic Chinese belief that people are different, whereas some people are more talented than others. “Key” schools and “key” classes are separated from the ordinary ones, so that class distinction between ordinary and elite is evident (Fang, 2008). The common attitude is that a good future depends on a good education. Such hierarchical thinking is highly uncommon in Norway, where extra engagement and resources, if any, are provided to the disadvantaged rather than the top-performing (Fang, 2008).

Through increasing attention and active involvement, research suggests that parents may also be more able to interact with the children in ways that promote desirable development (Cameron et al., 2013). It is hard to say whether these factors in themselves are decisive for improving the children’s performance, though it is demonstrated that Chinese children in an international perspective hold a high academic level compared to the rest of the world. As the first Chinese province to take part in the Programme for International Student Assessment (PISA), Shanghai has attracted widespread attention as their fifteen-year-olds reached the highest performance standards in every subject assessed, outperforming students from 73 other participating economies (OECD, 2012). However, the Chinese education system, despite its top ranking in the PISA surveys, is also under criticism in China. Parents, researchers and teachers are critical of the amount of work and homework that children are overburdened with (Dello-Iacovo, 2009), as an average day at school day is usually twelve hours already at the primary school level. To further enter universities and colleges, students must pass a state college entrance examination, and there is great competition for entering public universities. The college entrance examination test, the Gaokao, is generally considered the single most important test any Chinese citizen can take. Its results determine not just whether the children will attend a Chinese university, but also which one. This is a selection many Chinese say has a decisive impact on future career opportunities (Wong, 2012). On the one hand, the Chinese school system can be criticized for the extreme pressure exerted on the students, while on the other, many think that this system is fairer because it means that those who are best-qualified proceed to the best schools, so that further admission is not determined by money or corruption. Anyway, it is evident that there are exceedingly small margins that determine the course of

one's life already from a young age in China, opposed to the society of Norway where the opportunities are many, even for those who do not graduate with top score results. It is therefore in many ways conceivable that these expectations, which are raised by society, also contribute to shaping the expectations and preferences of the citizens in the two countries, respectively. To investigate whether this alleged pressure in expectations also influences adults' fairness preferences and how they make choices on behalf of children, we conducted an economic experiment with 6014 participants from Norway and China (Shanghai) respectively. Upcoming chapters will present our use of method, analysis and findings.

4. Experimental design

The empirical section of this thesis is built around an economic experiment, of which this chapter will present the experiment's context, design and execution. Introducing a field experiment (with elements of survey), we reap the benefits of a controlled environment along with randomization. Those two features are particularly advantageous for establishing causal relationships (Falk & Heckman, 2009). We adopt the design first presented by Almaas et al. (2016) as an extension of the spectator framework introduced in Cappelen et al. (2013). This design has been proven useful for uncovering social preferences in previous studies. By conducting a modified version of "The dictator game", we gave an impartial adult spectator the opportunity to change an inequality that had occurred between two children of the same age. Several considerations are included in the design, with the focus on revealing what the spectators consider as a fair distribution (ref. section 2.6). The main point in an ordinary dictator game is to capture a situation where only self-interest and justice can be of significance, as all other motives are eliminated by the design. In our modification, the notions of self-centered gain or disadvantage are also removed by the spectator acting as an impartial third-party. Both players, as well as the dictator, are anonymous, and the situation will only occur once. No benefits will be received to favor one child opposed to the other. The dictator does not know anything about the children except their age, that they have completed a task (the money was earned through "production"), and that an inequality has occurred due to either luck or merit. Thus, the dictator has no motives to give more to one or the other child, besides the motives promoted through the design. As justice preferences will be the only thing that can vary, it is possible to study what people experience as fair. The experiment consisted of different treatments, each a combination of a different age of the children and different distributive situations. To make the results easily comparable, participants in China and Norway were

placed in the same identical situation. In this way, we could rule out that variations in distribution might be due to the fact that participants were placed in different situations. In order to motivate adults to make well thought out decisions, it was emphasized that the children would be getting paid due to the spectators chosen distribution. Hence, the choice to be taken also had real consequences in terms of real payment. The following chapter will present the experiment at a more detailed level.

4.1 Treatments

To be able to measure causality, participants were divided into twelve different treatments. The treatments were a combination of 1) different distributive situations and 2) different ages of the children. We randomly varied the age of the children (5, 9, 13 or 17), the source of inequality (luck or merit) and cost of redistribution (efficiency). Hence, all participants were randomly exposed to one age effect as well as one effect from the source of inequality. With three distributive situations and four age groups, we had twelve different treatments in total:

	Luck	Merit	Efficiency
5	Luck/ 5 years	Merit/ 5 years	Efficiency/ 5 years
9	Luck/ 9 years	Merit/ 9 years	Efficiency/ 9 years
13	Luck/ 13 years	Merit/ 13 years	Efficiency/ 13 years
17	Luck/ 17 years	Merit/ 17 years	Efficiency/ 17 years

Table 1: Treatments

The age of the children

We wanted to map out what the adults considered morally right for children across childhood and adolescence. Age was set as a randomization-criteria as we considered it likely that adult's accountability of children would gradually increase in line with the children's ages. One goes under the definition of a child from the age of 0-18, hence children within only one age group would result in a non-representative representation of the segment. The children's age in the experiment varied between 5, 9, 13 and 17 years. By including children within several different ages, we got the opportunity not only to see if there was a difference between the age groups, but also to measure the age difference effect on inequality acceptance directly.

The distributive situation

In order to make it possible to identify the spectators' fairness ideals, we had to be able to distinguish between what actually characterizes them. Egalitarians emphasize that all inequalities should be evened out no matter their origin, libertarians claim that everyone is entitled to enjoy all the wealth they have obtained, while meritocrats leaves the responsibility to personal traits, stating that it is fair to enjoy benefits obtained through talent or effort, but not wealth obtained by luck. By distinguishing between two different sources of inequality, either luck or merit, we were enabled to identify the spectators' fairness ideals through studying their beliefs of what was a fair source of inequality. The situation *Merit* is thus identical to *Luck*, except for the source of inequality.

Further, we wanted to examine how individuals would handle a situation of redistribution of which fairness required a sacrifice of social efficiency. The initial inequality was caused by luck, and the spectator was free to redistribute the earnings in any way considered fair - *but* to do so required a significant reduction in the total amount to be distributed between the two children. The efficiency situation is thus identical to luck, apart from the cost of redistribution. By studying the spectators' choices within efficiency treatment, we were able to identify trade-offs between fairness and efficiency. The three distributive situations can be summarized briefly as follows:

Luck situation:

To examine the adults' willingness to accept inequality when the children's earnings were determined by a lottery, luck treatment were designed with *luck* as the source of inequality and there was *no cost of redistribution*.

Merit situation:

To examine the adults' willingness to accept inequality when the children's earnings were determined by individual performance, merit treatment was designed with *productivity* as the source of inequality and there was *no cost of redistribution*.

Efficiency situation:

To examine the adults' willingness to accept inequality when the children's earnings were determined by a lottery, efficiency treatment were designed with *luck* is the source of inequality and there was *a significant cost of redistribution*.

4.2 The stages of the experiment

Although we have placed our emphasis on the distributive choice up to now, the experiment itself is far more extensive. The following table shows all the different phases of the experiment, further to be explained in the following sections:

1. Work stage	Children complete an assignment
2. Earnings stage	Children are matched in pairs and assigned initial earnings according to the treatment
3. Redistribution stage	Each spectator decides for one pair of children whether and how much to redistribute
4. Payment stage	Children are paid according to the spectator's decision

Table 2: Stages of the experiment

1. Work stage

The experiment started by two children of the same age, child A and child B, completing an assignment. The task to be carried out was the same for both participants. During the design, it has been emphasized that the tasks should be adapted to fit the different age groups respectively, but it was also necessary to consider the purpose of the task. In merit treatment, the assignments were designed to measure which of the two children was most productive. In luck- and efficiency treatment, the assignments were just a formality as their earnings were determined by the lottery. However, the children did not know this in advance.

2. Earnings stage

After completing the task, the children were told that they were to be matched with another participant, and that their respective earnings depended on either individual achievement (their productivity) or luck (a lottery). These options were mutually exclusive based on the treatment in which the children were placed. If the child was lucky (winning the lottery) or the most productive, the child earned 48 NOK or 24 CNY on the assignment. In the opposite case, the children did not earn anything. In each case, either child A or child B would receive the entire payment, even though both children completed the same task.

3. *Redistribution stage*

Each spectator was randomly assigned to one of the twelve treatments, in which each of the treatments had a corresponding online survey amended. The different scripted survey versions are included in Appendix 4.1 The spectator adults were informed about the situation of the two children, and then asked to make a distributive choice. They could choose either to keep the initial inequality or to redistribute the money between the two children. In contrast to traditional surveys, it was emphasized in the questionnaire that the decision made by the adults would have real consequences in terms of actual payment. As mentioned, the treatments were mutually exclusive, as each spectator only had the opportunity to participate in one of them. The adults in luck- and merit treatment were given seven different options for (re)distribution:

Child A is paid 24 NOK/ 12 CNY	Child B is paid 0 NOK/0 CNY
Child A is paid 20 NOK/ 10 CNY	Child B is paid 4 NOK/2 CNY
Child A is paid 16 NOK/ 8 CNY	Child B is paid 8 NOK/4 CNY
Child A is paid 12 NOK/ 6 CNY	Child B is paid 12 NOK/ 6 CNY
Child A is paid 8 NOK/ 4 CNY	Child B is paid 16 NOK/8 CNY
Child A is paid 4 NOK/ 2 CNY	Child B is paid 20 NOK/ 10 CNY
Child A is paid 0 NOK/ 0 CNY	Child B is paid 24 NOK/ 12 CNY

Table 3: Redistribution in luck-/merit treatment

The first option reflects the outcome if the adult chose not to redistribute and the inequality persisted. The six other options reflect the different ways it was possible to redistribute the earnings between the two children. Efficiency treatment differed from the other two treatments by making redistribution costly. Increasing child B's payment by 2 NOK/ 1 CNY would decrease child A's payment by 4 NOK/ 2 CNY. In this way, it was possible to measure the adults' inclination to eliminate inequalities at the expense of efficiency. These differences are illustrated in table 3.

Child A is paid 24 NOK /12 CNY	Child B is paid 0 NOK/0 CNY
Child A is paid 20 NOK/ 10 CNY	Child B is paid 2 NOK/ 1 CNY
Child A is paid 16 NOK/ 8 CNY	Child B is paid 4 NOK/2 CNY
Child A is paid 12 NOK/ 6 CNY	Child B is paid 6 NOK/3 CNY
Child A is paid 8 NOK/ 4 CNY	Child B is paid 8 NOK/4 CNY
Child A is paid 4 NOK/ 2 CNY	Child B is paid 10 NOK/5 CNY
Child A is paid 0 NOK/ 0 CNY	Child B is paid 12 NOK/6 CNY

Table 4: Redistribution in efficiency treatment

4. Payment stage

For all treatments, the spectators' chosen distribution determined the actual income for each of the two children (child A and child B). The adults were told that the payment would be received by the children within a short period, but they did not get any further information. More importantly, they were guaranteed full anonymity and the reality of the situation was emphasized.

4.3 Survey

Survey questions

After completing the distributive choice, the spectators were asked to respond to a set of non-incentivized survey questions about their attitudes. The questions were prepared to reveal possible motives for behaviour, as well as general attitudes towards politics (including redeployment and children policies). They were asked to indicate to what extent they agreed with four statements on a scale from 1 (on the left) to 10 (on the right). If the participants chose 1, it meant that they agreed completely with the statement to the left, and vice versa for the number 10. The attachment was responded through an online survey and is included in its entirety in Appendix 4.3. The wording of the statements was as follows:

1. “A society should aim to equalize incomes” (left) or “A society should not aim to equalize incomes” (right)
2. “A society should have a particular focus on helping low-performing children in school” (left) / or *not* have a particular focus (right)
3. “Children should be held responsible for their own choices” / or *not* be held responsible
4. “It is important for children to learn that life is not always fair” / or *not* important to learn that life is not always fair

As mentioned, the statements were developed based on two purposes. First, statement 1 and 2 were designed to indicate whether the spectators’ behaviour within experiment corresponded to their actual behaviour. This was measured by attitudes, i.e. whether the adults’ behaviour within the experiment was predictive of their attitudes in real life. By studying this, we could determine if egalitarian behaviour within the experiment corresponds to e.g. egalitarian preferences in redistributive policies. Statement 3 and 4 were designed to indicate whether the adults implemented inequality based on the option they considered fair (their fairness ideal) or whether they had another purpose explanatory for their decision (motives). Explanations of the latter may include a desire to teach children about injustice or responsibility. The survey questions were the same within all treatments.

Observable characteristics

To be able to study causal relationships, candidates were also asked to provide background information about age, marriage status, having child(ren) or not, place of birth, household income level, education, and occupation. This information was obtained through a standard set of background questions. We will elaborate for the further use of these variables in the analytical part of the assignment, more specifically section 6.1.2. The exact formulations and a complete list of the background questions are provided in Appendix 4.2.

4.4 Data collection

Together with a number of research assistants (students at NHH) and one other master student at the University of Bergen, our role was to assist in carrying out the experiments. Due to limitations in time writing the master's thesis, there was not possible for us to participate in all of the data collection. We participated in carrying out experiments visiting a total of 18 schools and 31 kindergartens, where the adults' decisions were implemented. In this thesis, we will continue to focus on the data collection conducted among the adults specifically.

4.4.1 Recruitment

Two separate recruitment processes were conducted, one for each of the countries. All participants were recruited from the general population. The sampling was completed by two data-collection agencies through an online survey; Opinion Research Shanghai in China and Norstat in Norway. Both companies are considered to be credible and are well-proven from previous experiments.

Opinion Research Shanghai has worked in the research field in China market for over 15 years and was recommended to us by Gallup after they had been working with them on several projects. Based on this, we consider the company's methods as well verified and trustworthy. The method used was quota sampling from their data pool, with a pool size of more than 300 000 people in Shanghai. These were all respondents that had been interviewed within the past 15 years. Preferences of the adults could obviously vary according to their life situation (age, education, having child(ren) or not, occupation etc.), and it was therefore important that the selection was representative to avoid any potential biases. For this survey, the method of quota sampling with a quota on observable characteristics such as income level, age-break and gender were used, after a recommendation from the company. According to the Opinion Research

Shanghai, the pool works well for quota sampling survey because of the accuracy – but, since the market research products are usually more targeted at higher income people, the samples skew towards higher education and higher income. As the data is collected from Shanghai only, it is important to note that our sample does not capture all urban/ rural differences, and therefore we can not necessarily generalize the results to all of China.

Norstat was chosen to implement the same procedure in Norway. As Norway’s largest consumer panel with a large number of observable characteristics, Norstat is considered a trustworthy provider of such services, with well-grounded research methods to collect reliable data. The data collection in Norway was conducted in the same way as in Shanghai, with quota sampling on a set of observable characteristics (age, gender, geography, income, children etc.).

4.4.2 Sample description

Before we go further into the analysis, we want to provide a better overview of the sample. In total there were 6014 participating adults (18+), 3014 from Norway, and 3000 from China. Children in the age groups of 5, 9, 13 and 17 have participated as recipients of money, i.e. to implement the choices made by the adults. We wanted the sample to be representative of the Shanghai and Norwegian population respectively, on a set of observable characteristics. Table 5 shows the distribution between the number of participants in each treatment for each of the respective countries, while table 6 includes an overview of the adult participants distribution according to the observable characteristics

Norway/ China (Shanghai)				
	5y	9y	13y	17y
Luck	245/ 250	248/ 250	256/ 250	251/ 250
Merit	250/ 250	250/ 250	255/ 250	254/ 250
Efficiency	249/ 250	251/ 250	251/ 250	254/ 250

Table 5: Number of adult spectators in each of the treatments

	Norway	China
Age (year)		
Median	50	43
p10	19	27
p90	72	60
Gender (share)		
Female	0.524	0.514
Male	0.476	0.486
Income		
Median	649 999.5 NOK per year	8 999.5 CNY per month
p10	249 999.5 NOK per year	4 999.5 CNY per month
p90	1 250 000 NOK per year	27 499.5 CNY per month
Education (share)		
High school or less	0.345	0.358
College/ University	0.609	0.642
Share with child(ren)	0.669	0.822
Share with 2+ children	0.521	0.033
Number of participants	3014	3000

Table 6: Descriptive statistics of the sample

Our Norwegian sample had a median age of 50 divided among 52.40 percent women and 47.60 men. The median age of the Chinese sample was 43, divided by 51.40 percent women and 48.60 percent men. Compared to national averages, the median age in Norway (2017) is 39.2 years, divided by 50.40 percent men and 49.60 percent women (SSB, 2018a). In China, the median age is respectively 37.40 years with 49.60 percent men and 50.4 percent women (NBSC, 2017a). We observe that the gender distribution in our sample is similar to the national averages, while the sample is skewed towards a higher median age in both societies. The median income distributed to all households in Norway after tax was according to SSB par value 497 600 NOK (SSB, 2017b). Assuming an average tax rate of 25 percent (SSB, 2008), this corresponds to a median gross annual income of 663 466.67 NOK, which is not far from the median household income of our sample (649 999.5 NOK). The average disposable income per capita in Shanghai (2016) is according to Shanghai Statistical Yearbook (2017) 54305 CNY when considering urban and rural households in one. Assuming an average household of 2.69 people, this corresponds to an average monthly income of 12 173 per household (NBSC,

2017a). This average is a bit above the median from our Shanghai-data, but if one considers China as a whole, the average is significantly lower. China Statistical Yearbook (2017) provides national statistics showing that the average disposable income is as low as 23 821 CNY, considering all households in total (NBSC, 2017a). Assuming an average household of 3.11 (Statista, 2018), this corresponds to an average monthly income of 6173 per household. To see this in the context of our median, participants in the experiment has an income above the national average, but slightly below the average in Shanghai. China Statistical Yearbook (2017) provides insights in that there are huge differences between income in urban and rural areas, which means our sample can be considered a good starting point for generalizing beyond the most prosperous cities alone.

We see that participants across the two countries in our sample have a relatively similar educational background, where about 60 percent have completed higher education in both countries. When comparing these numbers to the national averages, we find that in Norway, approximately 33.40 percent of the population had completed higher education in 2017, while 26.20 and 37.40, respectively, had completed secondary school and high school (SSB, 2018b). Unfortunately, to our knowledge, there is no exact data for the education level in Shanghai that are visible through national statistics. The most comparable data we have found in this area is according to China Population and Employment yearbook (2017). Here, it is stated that 55.60 percent of the Chinese residents employed have completed secondary school (comparable to high school or less), while 18.10 percent of the same group have completed higher education (college or university) (NBSC, 2017b). When comparing these figures, our sample indicates to be well above national averages in both countries, indicating that our sample is slightly skewed towards higher education.

As the experiment entailed for the adults to make a choice on behalf of two children, we found it relevant to capture the share of spectators that were parents themselves. There was no distinction between whether the spectators' children were below the age of 18, making it difficult to find comparable statistics in national databases. The most comparable figure we have when it comes to children is, therefore, the fertility rate, indicating the number of children women will give birth to during their life. In 2016, the fertility rate in Norway was 1.72 (SSB, 2018c), stating that the average women in the Norwegian Society have between one and two children, with a predominance of two. Shanghai is known as one of the three cities in China with ultra-low fertility rates (less than 1) (Trading Economics, 2018). This is mainly due to the

one-child policy, as is were imposed more strictly in certain areas than others. In comparison, overall China had a fertility rate on 1.6 in 2016 (World Bank, 2018b), although this needs to be considered against the changes in the one-child policy constraints, which were relieved in 2013 and removed in 2015. We chose to include the share of spectators having more than one child in the descriptive statistics, to be able to say something about whether or not our sample was representative of the national populations. We see that 52.10 percent of the Norwegian Spectators had more than one child, whereas this was only applicable to 3.30 percent of the Chinese spectators. Of course, this could not be directly compared to fertility rates as we have not presented the variations by gender. Altogether, this set of observable characteristics constitutes a heterogeneous sample.

4.5 Ethical considerations

As our study collected personal information about a large number of individuals, it was important to consider the ethical aspects that this entailed. As mentioned, the adult sampling in Shanghai was completed by the data collection company *Opinion Research Shanghai*. We were informed that social research is heavily monitored in China, and that research companies are obliged to check the contents voluntarily to assure the questions are fitted to the current laws/regulations and standards. Besides, we were also informed that due to cultural differences, some recipients could be a bit sensitive to some social research questions. This including the wording of the questions for the Hukou-system and questions that may be linked to one-child policy. As the Hukou of developed regions is much superior (especially in social welfare) over that of smaller cities, it was not appropriate to ask the question directly if the recipient had Shanghai Hukou or not. The wording was therefore set to “Please tell me the province where your Hukou was at your birth”. To make sure that the questionnaires were perceived as they were intended, the questions were sent to Opinion Research Shanghai after completion of the design, and a thorough dialogue was conducted in advance of the dispatch. This provided feedback for possible revisions in order to make the questionnaire suitable for research in China.

Norstat also works in line with the EU’s Personal Protection Directive (GDPR) and has systems and procedures that ensure that data remains protected (Norstat, 2018). During the data collection, the limits and restrictions imposed by the respondents were respected at all time. Everyone had the opportunity to choose whether they wanted to participate in the study or if they wanted to withdraw their participation. Moreover, all data collected were treated

confidentially and stored in accordance with current regulations. To point out that all respondents were guaranteed full anonymity was thus very central, as otherwise we may have risked the survey being answered inappropriately.

5. Theoretical framework

This section provides a simple social preference model to guide our analysis and the interpretation of the results. The model was first introduced by Almaas et al. (2016) as an extension of the spectator framework introduced in Cappelen et al. (2013). We assume that all participants have a fairness view, as well as some preferred efficiency considerations. Together, these two predilections constitute the spectator's social preferences in this thesis. With the help of this framework, we aim to identify the spectators' fairness ideals in the two societies respectively. Similarly, we consider it likely that other conditions will also affect the distributor's preferred choice, such as the workers (i.e. children's) age. This will be taken into consideration in the analysis

In the experiment, the spectators are informed of the initial earnings earned by the children and then determines a distribution. The distribution to child A (which was productive or lucky) is $1-y$, whereas y is total income for the worker with no pre-distribution earnings (i.e. the child which has been either unfortunate or not productive enough). This applies for all the distributive situations (j): luck (L), merit (M) and efficiency (E). We assume that the spectator cares about fairness and efficiency as captured by the following utility function:

$$V(y; \cdot) = -\frac{\beta}{2}(y - m(j))^2 - c(j)y, \quad (1)$$

$\beta \geq 0$ is the weight attached to fairness relative to efficiency, $m(j)$ is what the spectator considers to be the fair share to the worker with no pre-redistribution earnings in treatment j , and $c(j) \geq 0$ is the cost of redistribution in treatment j .¹ The model captures that the spectators' social preferences may vary in two respects: in what they consider a fair distribution of income, $m(\cdot)$, and in the importance they place to fairness relative to efficiency, β (Almaas et al., 2016)

¹ This formulation of the utility function assumes that the fair share is independent of the size of the total income. The assumption is only binding in the efficiency treatment, where the cost of redistribution implies that total income may differ from total earnings (Almaas et al., 2016).

Consequently, the optimal interior solution is given by

$$y(j) = m(j) - \frac{c(j)}{\beta}. \quad (2)$$

It follows that if there is no cost of redistribution, the spectator would implement the fair (equal) solution, i.e. $y(j) = m(j)$. By including a cost of redistribution, the spectator would make a tradeoff between fairness- and efficiency considerations. If the weight the spectators attach to efficiency exceeds their fairness considerations set relatively against the cost of redistribution, they prefer to give nothing to the worker with no pre-redistribution earnings ($\beta \leq c/m$). Contradictory, a spectator who mainly cares about fairness assigns a share close to what he or she considers the fair distribution, i.e. $\beta \rightarrow \infty$ implies that $y \rightarrow m$.

Following these assumptions, we can now explain how comparisons of the three treatments within the experiment (luck, merit, efficiency) can be used to study the two dimensions of social preferences that are captured by this model: the spectators' fairness views and their weight attached to fairness. It follows from the model that differences in shares to each of the two children in luck and merit treatment respectively, identifies that the source of inequality matters for the spectator's fairness view:

$$\textbf{Merit versus Luck:} \quad y(L) - y(M) = m(L) - m(M). \quad (3)$$

In order to study the importance attached to fairness relative to efficiency, we present the assumption that a reallocation cost does not affect the spectator's preferred distribution to the child without initial income, i.e. $m(L) = m(E)$.² Subject to these assumptions, the model describes how any difference between luck- and efficiency treatment is driven by the cost of redistribution and the weight attached to fairness:

$$\textbf{Efficiency versus Luck:} \quad y(L) - y(E) = \frac{c(E)}{\beta}. \quad (4)$$

² This assumption states that fairness is linked to the source of inequality (luck in both treatments). This is necessary to distinguish between justice and efficiency considerations (Almaas et al, 2016).

Through the analysis, we also study the prevalence of specific fairness views among the spectators. We emphasize the most salient fairness views in this type of distributive situations (Cappelen et al., 2007; Almaas et al., 2010; Cappelen et al., 2013), also presented earlier in this paper under section 2.2:

- ❖ ***Egalitarian fairness view:*** It is fair that the children receive the same income regardless of their initial earnings due to luck or effort. All inequalities should be equalized, as the egalitarian fairness view considers it fair to split the earnings equally in both merit- and luck treatment; i.e. $m(L) = m(M) = m(E) = 1/2$.
- ❖ ***Libertarian fairness view:*** It is fair that the income of the children is equal to their initial earnings in all treatments, i.e. $m(L) = m(M) = m(E) = 0$. Libertarian spectators do not face a tradeoff between fairness- and efficiency considerations, as for them these two concerns coincide in the distributive situation.³
- ❖ ***Meritocratic fairness view:*** It is fair that the more productive child receives a higher income than the less productive child, but income inequalities due to luck are not fair, i.e., $m(M) < 1/2$ and $m(L) = m(E) = 1/2$. Hence, only the meritocratic fairness view assigns importance to the source of inequality (distinguishes between luck and merit).

We can further compare the fairness ideals against the participants' behaviour in the experiment. If the spectators behave differently within the luck- and merit treatments, this difference will consequently be driven by the spectator's fairness ideal, more specifically, the spectators with a meritocratic fairness ideal. Moreover, a difference in behaviour between the luck- and efficiency treatments must be driven by spectators with meritocratic and egalitarian fairness ideals. Hence, the effect of introducing a cost of redistribution depends both on how many of the spectators that are non-libertarian and on the relative importance these spectators assign to efficiency. The theoretical framework is enlightening for the comparison of the social preferences of Norwegian and Chinese spectators (Almaas et al., 2016).

First, it follows from (3) that differences in the respective countries' distribution within the merit treatment (the merit effect), reflects that Chinese and Norwegians differ in their fairness

³ This coincidence is not due to the design, but inherent to a libertarian fairness view (Almaas et al, 2016).

view. Specifically, if there are more meritocrats in China than in Norway, it is conceivable from the model that one will experience a greater merit treatment effect for the Chinese spectators than for the Norwegian ones. Second, it follows from (4) that a country difference within the efficiency treatment reflects a difference in the weight that Chinese and Norwegian spectators attach to fairness (efficiency treatment effect). Notably, if the Chinese spectators assign less weight to fairness relative to efficiency than the Norwegian ones, the model predicts a similar increase in the efficiency treatment effect when comparing the two countries. However, the two countries may also differ in the proportion of spectators who actually make a tradeoff between fairness and efficiency. In particular, if there are more libertarians in China than in Norway, then the model predicts a coinciding reduction in the effect from the efficiency treatment.

6. Empirical strategy

The purpose of our experiment is thus exploring if, and how, individuals in two distinct societies differ in their inclination to accept inequality among children. We will in the following section present six research questions that underlie the further analysis and discussion. These questions provide an overview of what we will emphasize through the analysis, where the differences in inequality acceptance will be the focus of all aspects.

6.1 Research questions

1. Do adults in Norway and China differ in their way to treat children in an inequitable distributive situation?
2. How is adult inequality acceptance affected by the origin of the inequality, the age of the children or whether there is a redistribution cost, in the two countries respectively?
3. What fairness ideals are most prominent in the respective societies, reflected by the inequality that is implemented in the experiment?
4. Do the attitudes we capture within the experiment correspond to the attitude's adults have outside the experiment? (E.g. due to policies of redistribution)
5. In what way can differences in adolescence and the children's surroundings shape inequality acceptance, and how can our results help to substantiate that theory?

6.2 Specifications and definition of outcome variables

6.2.1 Main empirical specifications

Our main outcome variable is *inequality*, intended to measure dispersion within the adults' implementing choices. This income inequality implemented by the spectators is denoted by e_i , and the variable is calculated as the absolute value of the difference in payment to the two children *after* the distribution, divided by total payment:

$$Inequality (e_i) = \frac{|Income\ Child\ A_i - Income\ Child\ B_i|}{Total\ payment} \in [0,1] \quad (5)$$

The reason we employ the absolute value is that the total amount can change in efficiency treatment through a cost of redistribution. Overall it was possible for the adults to distribute 48 NOK/ 24 CNY in any way they considered fair. Income Child A_i is the post-redistribution income for the child with initial earnings (48 NOK/ 24 CNY) and Income Child B_i is post-redistribution income for the child with no initial earnings (0). The measure of 1 corresponds to full income inequality after the redistribution (the winner got to keep 48 NOK/ 24 CNY), while the income inequality was equalized (0) if the distribution was 24 NOK/ 12 CNY to each of the children. In efficiency treatment the, fair amount is equivalent to 12 NOK/ 6 CNY due to the cost of redistribution. This makes the inequality measure equivalent to the Gini-coefficient in the two-person-situations considered by the adults.

6.2.2 Observable characteristics

Through the regressions, we controlled for the following observable characteristics: gender, income, age, education, and whether the respondent had children or not. The control variables were coded as follows:

- ❖ **Norway:** Coded as a dummy for the spectator's citizenship (Chinese=0, Norwegian=1)

- ❖ **Age:** Coded as a dummy for the spectator being below the median age in Shanghai (43 years) and Norway (50 years) separately.

- ❖ **Gender:** Coded as a dummy for the spectator's gender (Male=0, female=1).

- ❖ **Income:** Coded as a dummy for having below the median income (using the midpoints of the specified intervals) in Shanghai (8 999.5 CNY per month) and Norway (649 999.5 NOK per year).

- ❖ **Education:** Coded as a dummy for having below the median education in Shanghai and Norway separately (High School or less in both countries).

- ❖ **Having children:** Coded as a dummy for having children (1; Have children, 0; Do not have children).

6.2.3 Fairness ideals

The identification of fairness ideals follows the principles presented in the previous chapter. The concrete equations and related justifications are as follows:

❖ **Egalitarians:** In merit: $(\text{child}(A) = 1/2) / N$

If the children's individual performance does not affect preferred redistribution (the spectator does not distinguish between the sources of inequality), one can assume that the distribution falls below the egalitarian assumptions, i.e. $m(L) = m(M) = m(E) = 1/2$. Hence, it is possible to identify the share of egalitarians by the spectators dividing equally in the merit treatment.

❖ **Libertarians:** In luck: $(\text{child}(A) = 1) / N$

Libertarians are indifferent between the sources of inequality, and therefore will not feel any need to redistribute the gain between the children, regardless of the cause. As there is no fairness argument within the egalitarian or meritocratic ideals justifying luck as a fair source of inequality, we estimated the proportion of libertarians based on the number of spectators who chose not to redistribute the initial earnings in luck-treatment. I.e. the payment distributed to the unlucky child equals $m(L) = m(M) = m(E) = 0$.

❖ **Meritocrats:** In merit: $(\text{child}(A) > 1/2) / N$ - (In luck: $(\text{child}(A) = 1) / N$).

Meritocrats consider only factors under the individual's own control to be fair sources of inequality (e.g. differences in effort and individual achievements). Hence, potential meritocrats are the spectators' who consider merit to be a fair source of inequality, and therefore gives more than half to the productive child in merit treatment $m(M) < 1/2$ and $m(L) = m(E) = 1/2$. The challenge is to classify meritocrats against those who simply do unexpected things. We assume that candidates who choose to accept total inequality within luck treatment also accepts total inequality in merit treatment (libertarian). Hence, we deduct the proportion of libertarians from the share of potential meritocrats to calculate the actual share. As we have already considered (read: omitted) those who give more to the less productive child, as well as those sharing the same, this calculation will give us the share of meritocrats.

6.2.4 Survey questions: Attitudes towards inequality

The self-reported measures on attitudes were designed as Likert-scale responses with the values from 1-10 that corresponded to the spectator's agreement with each of the statements. We considered the variables as continuous, and the answers were coded as they were responded (1-10). With this approach, the values of the sentences were contradictory, i.e. the value 0 in two first statements spoke in favor of similarity, whereas in the latter two it reflected acceptance for inequality. For a better interpretation, we created a second pair of variables for statement 3 and statement 4, calculated as the original value minus 11 (absolute value). In this way, the scale was reversed so that, for example, answer 3 became 8. The new values were of the same strength as the original answers, but it was now possible to declare for all sentences that a high value of the response reflected a high acceptance for inequality. We used the new variables as the basis for all analyzes for statements 3 and 4.

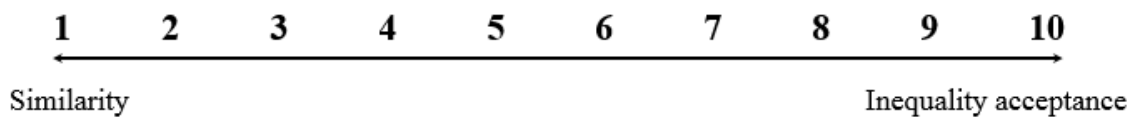


Figure 2: Scale responses

6.3 Regressions

6.3.1 Main OLS-regressions

To check for causality and what effect each of the respective treatments had on the overall outcome of inequality, we conducted multiple linear OLS regressions using the full sample with implemented inequality as the outcome variable (dependent variable). As we wanted to let the control variables (observable characteristics) maintain their respective values during the analysis, we chose to conduct regressions with the pooled sample and, in addition, the countries separately. In this way, we allowed for the effect of the variables to be different for each of the respective countries, as opposed to using interaction variables which considers their effect collectively. We do, however, make use of interaction variables when measuring whether the internal differences are significant between subgroups (e.g. men vs. women). Although our main regressions included the control variables, we will also report and discuss results for regressions without controls.

First, we ran regressions to measure causality from the different age groups. Estimates were to be interpreted relative to a baseline situation with 5-year-olds as references group. All independent variables were dummies indicating the age of the “worker” within the experiment. Similarly, we checked for causality from the distributive situations (luck, merit, efficiency). With luck as a references group, merit and efficiency were indicators for the spectator being in the respective treatments. Thus, the results were to be interpreted due to a baseline situation with luck as the source of inequality and without a cost of redistribution. The survey questions were regressed in two different manners: Statement 3 and 4 were analyzed to measure the significance of the motives behind the adult’s distributive behaviour, hence, these regressions were conducted with inequality as a dependent variable. Statement 1 and 2 on the other hand, were regressed with the statements as dependent variables, intended to measure whether there is a correlation between behaviour in the experiment and the adult’s preferences in real life (external validity).

All regressions have been tested for missing values to make sure that every participant is included. We use a 95% confidence interval, which means we consider the results to be significant at 5% level. The confidence interval is used as a measure of the quality of our findings. The measure indicates the error margin of a measurement, i.e. whether the regression coefficient of repeated examinations on other random samples would be the same or if it deviates significantly from our expectations (Tjønndal, 2018). In our tables we will present the findings based on the significance of 0.1-level (*), 0.05 (**) and 0.01 (***) respectively. We will also point out findings that are significant at a 99% level (0.001). The tables present the standard error of each coefficient, which indicates their spread and uncertainty. Everything that cannot be explained by our analysis’ is captured by the constants.

We report R-square values in each regression, as it tells us how much of the variance of the dependent variable that is due to the independent variables respectively (E.g. how much of the difference in inequality that is explained due to the variables tested for in the regression). In social science studies, it is not common to get high numbers on R-square, especially not if the dependent variable measures attitudes. This is because social phenomena are complex and often difficult to explain based on selected influence factors (Tjønndal, 2018). An important point to emphasize in the analysis is that Norway’s variable is a strong explanation factor (raises the R-square value significantly). We apply the adjusted R-square since it takes into account the number of variables in our analysis.

6.3.2 Balance Test & Heterogeneity analysis

We conducted a joint F-test (balance test) to test whether the random assignments to the twelve different treatments in the adult sample was balanced on the observable characteristics listed in 6.1.2. Separate tests were conducted for Norway and China separately. The reference category across all regressions was the spectators assigned to the luck treatment for 5-year-old children. The balance tests provide a measure if our respondents were evenly distributed between the different treatments. Without such a steady distribution, we would not be able to draw any conclusions whether our modeled variables were significant to explain the impact of the dependent variable (Tjønndal, 2018). The only variable that stood out with a lower value was “child” in Norway. This was because it was slightly more parents in some of the treatments, which unfortunately can occur even after randomization. Even so, our F-test provides sufficiently high values that we can determine that our sample was well balanced due to the observable characteristics. Hence, we can keep them as a comparative basis for the analyzes.

We also conducted a heterogeneity analysis to control for whether the effects were significantly different from each other. The full analysis is included in Appendix 6.3. By studying the effect of interaction variables between the country-effect (variable Norway) and the other variables, respectively, it was possible to measure to which extent the differences within and between the countries were significant. The interaction effect reflects the differences between subgroups that are captured by the same variable within the two countries (e.g. male and female in Norway). The p-value show whether the difference between these two subgroups are significant.

7. Research findings: Empirical evidence from Norway and China (Shanghai)

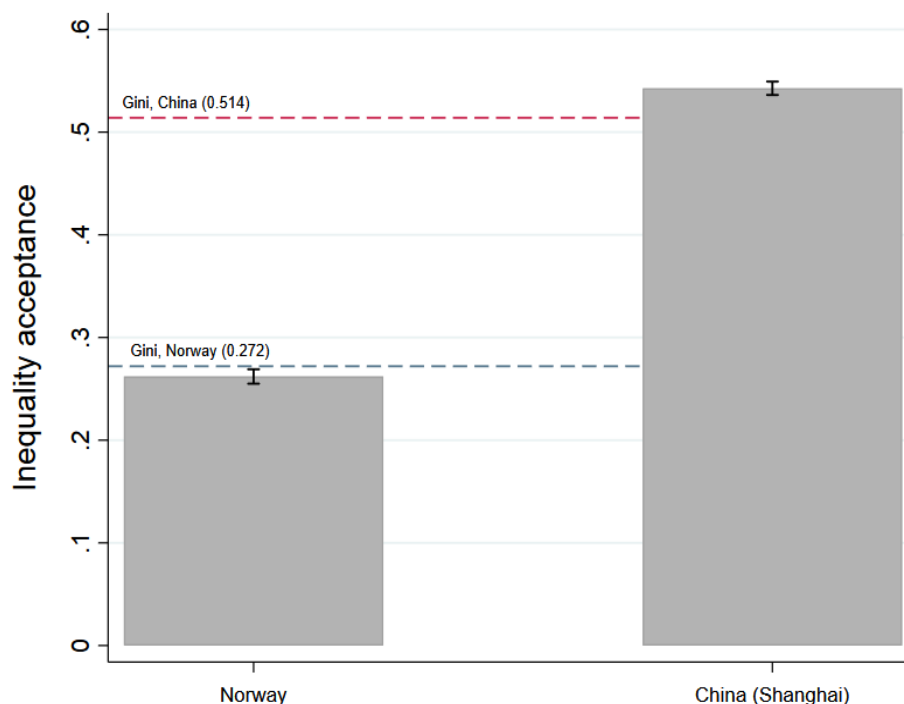
In this chapter we will present the research findings. All findings are based on spectators' implemented inequality within the different situations.

7.1 Descriptive statistics

Complete histograms of the various distributions across the two countries and the different treatments are provided in Appendix 7.2.

7.2 Implemented inequality

The research findings reveal considerable differences in how adults choose to handle distributive situations on behalf of children in Norway and Shanghai, respectively. Faced with an identical situation, adults in Shanghai implemented about twice as high inequality (0.542) than adults in Norway (0.262) when considering an average of all treatments in total. This can be illustrated by the following figure:



Note: Standard errors are indicated by the bars
The figure shows inequality acceptance in Norway and China across all treatments

Figure 3: Implemented inequality across all treatments

The implemented inequality seems to imply that adults in China have a higher inclination to accept inequality among children than adults in Norway. An interesting comparison is how this seems to be coinciding with the degree of inequality in the countries, measured by the Gini coefficient. In Norway, the implemented inequality by the adults corresponds to 0.262 only separated by 0.01 from the actual Gini. In China, the inequality implemented by the adults (0.542) differed only with 0.028 (actual Gini = 0.514). The Gini coefficients in each of the countries, respectively, are marked as horizontal lines in figure 1. Of course, one cannot draw any conclusions based on this comparison alone, although we found it enthralling that the findings happened to be so synchronized with the actual Gini. Nevertheless, these findings lead us to our first result:

Result 1: There are considerable differences in how adults choose to handle distributive conflicts on behalf of children in Norway and China (Shanghai), respectively.

It is worth to mention that Figure 1 have merged all distributive situations in one and does not distinguish between whether the settings change in terms of different treatments. As stated, the experiments randomly varied the source of inequality (luck, merit), cost of redistribution (efficiency), and age of the children (5, 9, 13, 17). Table 7 shows the inequality implemented by the adults, between the different treatments and the two countries respectively. All numbers are presented by the variable “inequality”.

	Norway/ China (Shanghai)				
	5y	9y	13y	17y	Total
Luck	0.1741/ 0.4830	0.2204/ 0.4666	0.2786/ 0.4946	0.2111/ 0.5426	0.2216/ 0.4970
Merit	0.2386/ 0.5066	0.2786/ 0.5253	0.2601/ 0.5266	0.3333/ 0.5466	0.2778/ 0.5263
Efficiency	0.2340/ 0.5827	0.2627/ 0.5760	0.3305/ 0.6186	0.2875/ 0.6414	0.2620/ 0.6047
Total	0.2158/ 0.5244	0.2540/ 0.5226	0.2895/ 0.5466	0.2875/ 0.5769	0.2620/ 0.5426

Table 7: Implemented inequality sorted by treatments

In the following sections, we would like to point out the differences in which implemented inequality varied within and between the different treatments. In order to determine whether these differences were significant, we conducted regression analyzes to study the treatment effects. The analyzes have been carried out both with and without control variables. As we assumed that the effect from the different controls was not the same for both countries, separate analyzes were conducted for the whole sample, as well as for Norway and China respectively.

Before we present the regressions in their entirety in the following sections, we will discuss the observable characteristics and their influence on implemented inequality.

7.2.1 Observable characteristics

	(1)	(2)	(3)
	Sample	Norway	China
Gender (female)	-0.050*** (0.010)	-0.069*** (0.014)	-0.020 (0.013)
Low Income	0.001 (0.012)	-0.013 (0.015)	0.029 (0.018)
Low Age	0.040*** (0.012)	-0.028* (0.015)	0.057*** (0.018)
Low Education	-0.025** (0.012)	-0.001 (0.015)	-0.059*** (0.018)
Child(ren)	0.065*** (0.013)	-0.034** (0.016)	0.037** (0.018)
Constant	0.369*** (0.016)	0.340*** (0.020)	0.506*** (0.023)
Observations	6014	3014	3000
R^2	0.010	0.009	0.012

Standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 8: Control variables' effect on inequality

All control variables are tested for collinearity within the different treatments. The balance tests are found in their entirety in Appendix 6.1 and 6.2. Although the overall effect seems to be normalized between the countries, there are some interesting internal variations which will be addressed in the following chapter.

Gender

The overall gender effect is strong, as we observe that the spectators implement 0.050 less inequality if being female ($p < 0.001$). This effect is mainly driven by Norwegian spectators (0.069, $p < 0.001$), whereas in China there is a small, but not a significant effect of 0.020 ($p = 0.137$). These findings seem to correspond to the findings presented in chapter 2.5, suggesting that gender differences in aspects of personality are to be larger in cultures characterized by

egalitarian gender roles and socio-political equality (Schwartz & Rubel-Lifschitz, 2005; Schmitt et al., 2017; Falk & Hermle, 2018). We find the gender differences in Norway to be significantly different from each other ($p = 0.005$), while in China, the differences between women and men are not significantly different ($p = 0.248$). Furthermore, gender effects in Norway and China do not have the same effect on inequality acceptance, respectively. These cross-country gender-effects are also significantly different from each other.

Income

The effect of the spectators' income was somewhat lower, as the implemented inequality increased by 0.001 if the spectator's income was below the 50% percentile (median). This overall difference was not significant ($p = 0.924$). The interesting thing, however, was that the effect appeared opposite in Norway and China. Norwegian spectators implemented -0.013 less inequality when their income was below the average ($p = 0.381$), while in China the spectators implemented 0.029 more inequality in the same distributive situation ($p = 0.104$). We did not, however, find a connection between spectators' income and their preferred distribution of inequality. Neither did we find that the effects of income were significantly different from each other in Norway and China. So, although some researchers claim that countries with greater inequality typically demonstrate greater acceptance of inequality than their more equal counterparts (Kerr, 2014), we do not find evidence that differences in income are explanatory to how much inequality the spectators accepted in this experiment.

Age

The spectator's age seems to be of great importance, as we find that spectators' implement 0.040 more inequality if being below median age ($p = 0.001$). This effect is mainly driven by China. Young Chinese spectators implement a total of 0.057 more inequality ($p = 0.001$) than the older spectators, which in itself may seem quite surprising. This difference between spectators above and below the median age in China is significantly different ($p < 0.001$). Without being able to determine any causal relationships, these findings can possibly be linked to the legacy of Mao. According to the results of Alesina and Fuchs-Schündeln (2007), it will take at least one shift of generations, if not two, before preferences for state intervention will be the same between population groups after a political shock. Hence, one can expect the generation that grew up with communism to be more favorable towards state redistribution, while the younger has not experienced such political changes. In Norway, on the other hand, young spectators seem to have a more egalitarian fairness view than those above the median

age. Younger spectators implement 0.028 less inequality. In Norway, both the spectators above and below the median age have grown up in relatively similar conditions. However, the internal difference between spectators of different ages is still significant ($p < 0.001$). The age-effect differences between Norway and China are also significantly different, hence, we see that such effects work differently in the two countries.

Education

Overall, less inequality is implemented by spectators with low education. Spectators implement 0.025 less inequality by being below median educated ($p = 0.033$). This effect is negative in both Norway and China, but only significant in China ($p = 0.001$). We find the effects of lower or higher education, however, to be significantly different from each other both in Norway ($p = 0.003$) and in China ($p < 0.001$). As from the country presentations, we did not expect that the internal differences would be significant in both countries, because of the Norwegian welfare system which ensures less variation in the level of education among the population. However, the effects are both greater and more significant in China, which may be linked to the fact that internal competition between the citizens is experienced to be far more prominent. The effects of education in Norway and China are also significantly different from each other.

Children

Overall, 0.065 more inequality is implemented if the spectator has children ($p < 0.001$). This effect also appears opposite in Norway (-0.034) and in China (0.037). In Norway, parents seem to be more egalitarian, which apparently corresponds to the expectation that Norwegian children are taught to express themselves, be heard and seen for the sake of self-realization and development of identity. Norwegian parents thus seem to implement less inequality ($p = 0.036$), which would recur in the way Norwegians handles sports and preschool programs among children presented in previous chapters. However, the effect is not significant, and neither is the internal differences between the Norwegian spectators having children or not ($p = 0.121$). In China, we find a corresponding opposite effect as parents seem to implement more inequality than the spectators without children ($p = 0.039$). Seemingly, they tend to have a higher inclination to accept an uneven distribution, which may be linked to the fact that children are expected to perform already from a young age. This effect, on the other hand, is also not significant, and neither is the difference between Chinese spectators with and without children ($p = 0.294$). The effects of having children in Norway and China are neither significantly different from each other, and no conclusions can thus be drawn based on these findings.

Summary

The analysis shows that although the overall effect of observable characteristics appears to be quite similar, there are some interesting internal variations between the two countries. Based on the discussion, such variations may be linked to how the two respective countries have chosen to organize their welfare system, their policies, and how they choose to raise their children. Overall, we find that the effect of the observable characteristics on the difference in implemented inequality is neither large nor significant. This effect is shown by the effect on the variable Norway (included in the full regression in Appendix 7.1). Even when including all of the observable characteristics in the regression, the country-coefficient is still virtually unchanged ($p < 0.001$). Nevertheless, we think it is relevant to include the observable characteristics in subsequent analyzes to check whether they have different effects on the different treatments and countries, respectively. The following regressions are therefore analyzed including the observable characteristics, but we will also present the effects when excluded.

7.2.2 Treatment effects

After discussing the impact from the observable characteristics overall set, we now turn to how implemented inequality depended on changes in treatment. We first test whether Norwegian and Chinese spectators differ in the way they treat children of different ages. Second, we consider whether merit or efficiency considerations work differently in Shanghai and Norway. We consider the difference in inequality acceptance as systematic if the level of inequality implemented is higher in all the three distributive treatments (merit, luck, efficiency) in Shanghai than in Norway. Furthermore, we assess whether the difference is robust from the heterogeneity analyzes.

7.2.3 The children's age

Through examining differences in treatment between the four age groups, we wanted to search for potential age effects. The main focus in this part of our analysis is whether the treatment differences in the age group comparisons of 5- and 9-year-olds, 9- and 13-year-olds, and 13- and 17-year-olds, are particularly strong in one of the two countries opposed to the other. This was an essential part of the experimental design, mainly to investigate whether it is the case that adults in different cultures vary in the way they treat children of different ages. Table 9 shows a regression analysis of all age treatments vs. implemented inequality. As we have already discussed the effect of the observable characteristics, we will only show their total effect as “controls”: yes or no in this analysis.

	(1)	(2)	(3)	(4)	(5)	(6)
	Sample	Sample	Norway	Norway	China	China
Nine	0.018 (0.014)	0.018 (0.014)	0.038* (0.020)	0.036* (0.020)	-0.002 (0.018)	-0.003 (0.018)
Thirteen	0.048*** (0.014)	0.047*** (0.013)	0.074*** (0.020)	0.073*** (0.020)	0.022 (0.018)	0.019 (0.018)
Seventeen	0.062*** (0.014)	0.061*** (0.014)	0.072*** (0.020)	0.071*** (0.020)	0.052*** (0.018)	0.051*** (0.018)
N (Norway)	-0.281*** (0.010)	-0.281*** (0.010)				
Constant	0.511*** (0.011)	0.541*** (0.018)	0.216*** (0.014)	0.295*** (0.023)	0.524*** (0.013)	0.489*** (0.026)
Controls	No	Yes	No	Yes	No	Yes
Observations	6014	6014	3014	3014	3000	3000
R^2	0.128	0.133	0.005	0.014	0.003	0.015

Standard errors in parentheses

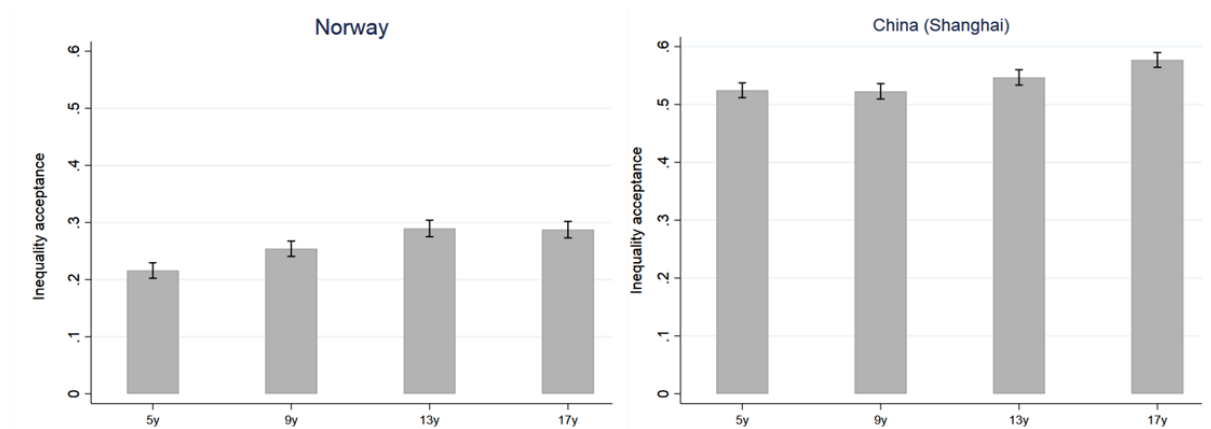
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 9: Norway vs. China (Shanghai) all age groups

The regressions presented in table 9 is conducted with 5-year-olds as references category. From table 7 it is apparent that Norwegian spectators had a low inclination to implement inequality among the youngest children (0.234 for ages of 5), while this inclination gradually seemed to increase reflecting the age of the child. Adults in Shanghai implemented more than twice as high inequality as adults in Norway, even for the five-year-olds (0.524). However, we also saw that adults in China also seemed to increase their implemented inequality as the

children became older. The child's age thus seemed to have a bearing on adults' choices within the different treatments. From the regression, we observe that there is a big and significant difference between the spectator's treatment of 5- and 17-year-olds in both countries ($p < 0.001$). Both Norway and China therefore suggest having a significantly lower inclination to accept inequality for a 5-year-old than a 17-year-old. This effect is somewhat larger in Norway than in China, possibly due to the fact that spectators in China implemented a higher degree of inequality already for the youngest children. The age difference is also statistically significant for the Norwegian 13 years old ($p < 0.001$). A surprising finding, however, is that the difference between Norwegian 5- and 13-year-olds is larger than the difference between the Norwegian 5- and 17-year-olds. Why the Norwegian spectators choose to implement more inequality for 13-year-olds against 17-year-olds is interesting, but difficult to answer from the analysis. The age difference is neither significant for the 13-year-olds ($p = 0.308$) nor the 9-year-olds ($p = 0.886$) in China, nor for the Norwegian 9-year-olds ($p = 0.067$).

The difference between Norway and China (measured by the variable Norway) is not affected by adding the different age groups into the regressions ($p < 0.001$). The cross-country differences can thus not be explained due to age effects. The implemented inequality within the different age treatments (in total) can be illustrated as follows:



Note: Standard errors are indicated by the bars

Figure 4 and 5: Differences in inequality acceptance across all ages

Result 2: Whether the age of the children is 5, 9, 13 or 17 matter for implemented inequality in both Norway and China (Shanghai). The difference between 5- and 17-year-olds is significant in both countries. The difference between the two countries, however, remains the same.

7.2.4 The distributive situation

Further, we wanted to examine the effects of the distributive situations: luck, merit and efficiency. Table 9 shows a regression analysis of all distributive treatments vs. implemented inequality. Observable characteristics are included as controls.

	(1)	(2)	(3)	(4)	(5)	(6)
	Sample	Sample	Norway	Norway	China	China
Merit	0.0428*** (0.012)	0.0436*** (0.012)	0.0562*** (0.017)	0.0569*** (0.017)	0.0293* (0.016)	0.0307* (0.016)
Efficiency	0.0861*** (0.012)	0.0872*** (0.012)	0.0647*** (0.017)	0.0656*** (0.017)	0.108*** (0.016)	0.109*** (0.016)
N (Norway)	-0.281*** (0.010)	-0.281*** (0.010)				
Constant	0.500*** (0.010)	0.529*** (0.018)	0.222*** (0.012)	0.300*** (0.022)	0.497*** (0.011)	0.459*** (0.025)
Controls	No	Yes	No	Yes	No	Yes
Observations	6014	6014	3014	3014	3000	3000
R ²	0.132	0.137	0.005	0.014	0.016	0.028

Standard errors in parentheses

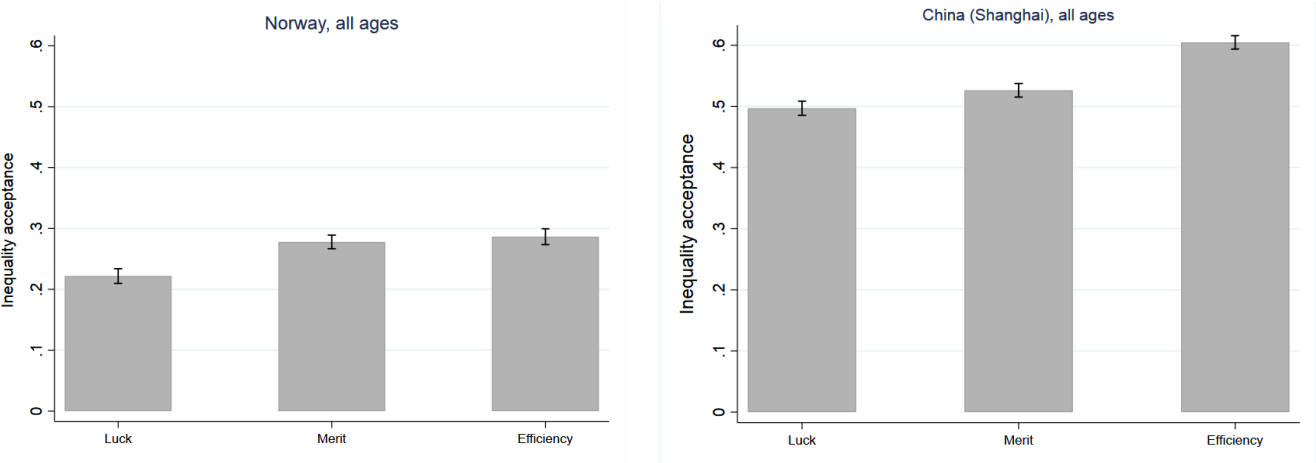
*p<0.1, ** p<0.05, *** p<0.01

Table 10: Norway vs. China (Shanghai) all distributive situations

From table 7 we observed that adults in both countries had the lowest inclination to implement inequality if the source of inequality was luck and there was no cost of redistribution. Apart from a slight deviation between luck and merit on behalf of the Norwegian 13-year-olds, this was exclusively the result in all treatments. The regression presented in table 10 is conducted with luck as a reference's situation. The treatment effects thus illustrate the influence of introducing a difference in productivity (merit) or cost of redistribution (efficiency). The effects are measured as an increase in implemented inequality. In the pooled sample, we observe that adults in both countries implement 0.044 more inequality when merit is the source of inequality rather than luck ($p < 0.001$) An interesting finding is that the merit effect is mainly driven by Norwegian spectators. In Norway, adults implemented an average of 0.056 more inequality when the source of merit was introduced ($p = 0.001$), while the corresponding increase was 0.029 in China ($p = 0.052$). Efforts seem to matter in both countries, but the difference is only

significant in Norway. Thus, the findings indicate that effort is of higher importance for adult's inequality acceptance in Norway than in China.

Furthermore, adults in both countries implemented 0.087 more inequality when a cost of redistribution was introduced ($p < 0.001$). We see that the increase was bigger in China (0.109) than in Norway (0.066). As from the model presented in chapter 5, this could imply that Chinese spectators assign less weight to fairness relative to efficiency than Norwegian ones (are more efficiency-oriented). Table 10 shows that the differences are significant ($p < 0.001$) in both countries, although it is mostly driven from Chinese Spectators. The implemented inequality in the distributive situations (in total) can be illustrated as follows:



The figure shows inequality acceptance in Norway and China across all treatments

Figure 6 and 7: Differences in inequality acceptance across distributive situations

By observing the country-variable (Norway), we saw that there was no deviation in the difference between Norway and China by introducing the distributive situations into the regression. Hence, the cross-country difference was still apparent ($p < 0.001$).

Result 3: Whether the source of inequality is luck or merit, and whether there is a cost of redistribution, matter for inequality acceptance in both countries. The effect of merit is significant in Norway, while efficiency considerations are significant in both countries. The difference between Norway and China is the same across all situations.

Result 4: The cross-country difference in adult’s inequality acceptance could be considered systematic as the implemented inequality is higher in China (Shanghai) than in Norway in all twelve treatments.

7.4 Fairness ideals

Although both societies differ in accountability of different age groups, e.g. how they treat a five-year-old vs. a seventeen-year-old, there is no significant divergence in inequality acceptance with the age of the children between the two countries, respectively. The same result applies for the effects from introducing a new source of inequality (luck vs. merit) as well as a cost of redistribution (efficiency). Inequality acceptance in both societies are affected by the treatments, as shown in result 2 and 3, but the difference between the countries, however, remains as large and as significant as initially ($p < 0.001$).

Furthermore, we want to consider whether this difference can be explained by looking at the fairness views of the respective societies. We will now make use of the theoretical framework introduced in the chapter 5 to estimate the proportions of participants that can be categorized within each of the respective fairness ideals.

7.4.1 Estimating fairness ideals

All calculations are carried out based on the revised model of Almaas et al. (2016), further presented in section 5.1.3. A table with all calculations is included in Appendix 7.4. Table 11 shows the estimated proportion of spectators within the different fairness ideals in Norway and Shanghai, respectively:

	Norway	China (Shanghai)
Egalitarians	51,54 %	18,30 %
Libertarians	17,30 %	24,70 %
Meritocrats	30,07 %	53,20 %
Other	1,09 %	3,80 %
	100,00 %	100,00 %

Table 11: Fairness ideals in Norway and China (Shanghai)

Egalitarians

Of 1009 Norwegian spectators, 520 (51.54 percent) chose to distribute evenly despite the fact that one child had been more productive than the other. In China, contradictory 183 spectators (18.30 percent) chose to divide the earnings equally between the children if any of them had done a better job. These findings are consistent with the expectation that Norwegian spectators will be less inclined to implement inequality among children than Chinese spectators, due to the presentations of the countries respectively. Moreover, we find that there is a huge difference in the proportion of spectators that equalize in the sample overall (i.e. if we move beyond our definition that calculates egalitarians from those who share equally in merit treatment). In Norway, a total percentage of 61.58 of the 3014 spectators chose an equal division of payment regardless of treatment. That is nearly two out of three Norwegians choosing not only to redistribute, but to completely avoid implementing any inequality among the children. In contrast, the corresponding proportion of Chinese spectators is 18.70 percent of the 3000 participating adults who opt for an even distribution. It can thus be emphasized that there is a huge difference in the respective proportions that choose to equalize in the two countries, regardless of treatment. The results seem to underpin our proposal that there are to be more egalitarians in Norway than in China. These findings are illustrated in figure 9.



Figure 9: Shares dividing equally across all treatments

Libertarians

Of 1000 Norwegian spectators, 173 (17.30 percent) chose not to redistribute the earnings between the lucky and the unlucky child at all. This means that they consider luck to be a full-fledged source of inequality, which can justify for total inequality between the children. The

corresponding figure in China was 247 of 1000 (24.70 percent). One initial concern was that Chinese spectators might be less willing to interfere in a distribution that was already set, due to their less existing habits of interference (default bias). However, there is no reason to believe that this was the case in the experiment. Of all Chinese spectators in all treatments, 25.7 percent chose not to redistribute. A significant overweight (74.3 percent) of the spectators was therefore not affected by the default value, and we also see that the proportion of Libertarians based on our estimates is quite well matched with this finding from the sample overall (25.7 vs. 24.7 percent). Hence, we choose to believe that the reason why the spectators chose not to redistribute, was because they endorsed a libertarian fairness ideal. The underlying motivation of the adults will be considered more in detail in the next section of the assignment.

In total, we find that the difference in Norwegian and Chinese libertarians, respectively, was not as big as we might have assumed in advance. However, our calculations only include those who consider merit and luck to be perfectly acceptable sources of inequality, by not distributing anything to the unlucky or least productive child. Such a review may thus not capture the entire image, as social phenomena consist of many shades. We want to shed light on these nuances by considering everyone who chose to distribute more than half of the payment, not just all, to the lucky child. This would more or less mean the spectators that endorse libertarian personal traits by considering luck a fair source of inequality, without solely to include the ones that consider luck perfectly justifiable for all inequalities. Here we saw that the difference between Norway and China was very clear. The difference between the Norwegian libertarians and the share when included the spectators endorsing libertarian personality traits was 10.8 percent. The difference in China, on the other hand, was 47.4 percent. A total of 72.10 percent (more than 7 out of 10 of the Chinese spectators) chose to give more to the lucky child within treatment, thereby acknowledging luck as a fair source of inequality to a greater or lesser extent. These findings help us shed light on how adults in Norway and China vary in terms of their fairness preferences. The differences are illustrated in figure 10.



Figure 10: Shares dividing more to lucky

Meritocrats

Considering merit treatment alone, 478 of 1009 Norwegian spectators choose to allocate more than half of the earnings to the most productive child, while 779 out of 1000 choose the same in Shanghai. If these choices were to be considered in isolation, about 50 and 80 percent of the Norwegian and Chinese spectators, respectively, viewed merit as a fair source of inequality. However, we needed to deduct the estimated proportion of libertarians who viewed luck is a fair source of inequality to estimate the true share of meritocrats, as this prerequisite does not apply within a meritocratic ideal. This was true for 173 Norwegian spectators and 247 Chinese, which provided the shares of meritocrats to be 30.07 percent (Norway) and 53.20 percent (China) respectively. As presented in chapter 5, our model predicted that the share of meritocrats would be greater in the country with the biggest merit treatment effect. When regarding the findings in section 7.2.4, we found that this was not the case as Norwegians were most influenced by the introduction of merit. Due to our reflections in previous sections, we suggest that the reason why Chinese did not experience an equally significant impact, even though they largely endorse a meritocratic fairness ideal, is because they accept far more inequality in the first place.

Interestingly, by comparing the fairness ideal within the different treatments, the proportion of meritocrats were higher for spectators' distributing for the youngest children in China than for the oldest. When considering the spectators within the 5-year-old-treatment in China, we identified a share of 55.60 percent meritocrats. The corresponding share for 17-year-olds was 48.00 percent. In contrast, the proportion of meritocrats seemed to increase in Norway when

looking at the youngest and the elderly children in isolation. Considering the spectators distributing for the 5- and the 17-year-olds respectively, the share of meritocrats increased from 23.72 percent to 39.55 percent. These contradicting findings may be connected to the way children treated differently in Norway and China, e.g. how Chinese children are to be held accountable and living under great expectations already from an early age, while Norwegian children are taught to express themselves, be heard and seen for the sake of self-realization, as well as living under low pressure and competition. Parallels can also be drawn to the findings within chapter 7.2, where we emphasize that Norwegian spectators are affected to implement more inequality both when the child's age is increasing ($p < 0.001$ from 13 years) and due to a shift in the source of inequality from luck to merit ($p < 0.001$).

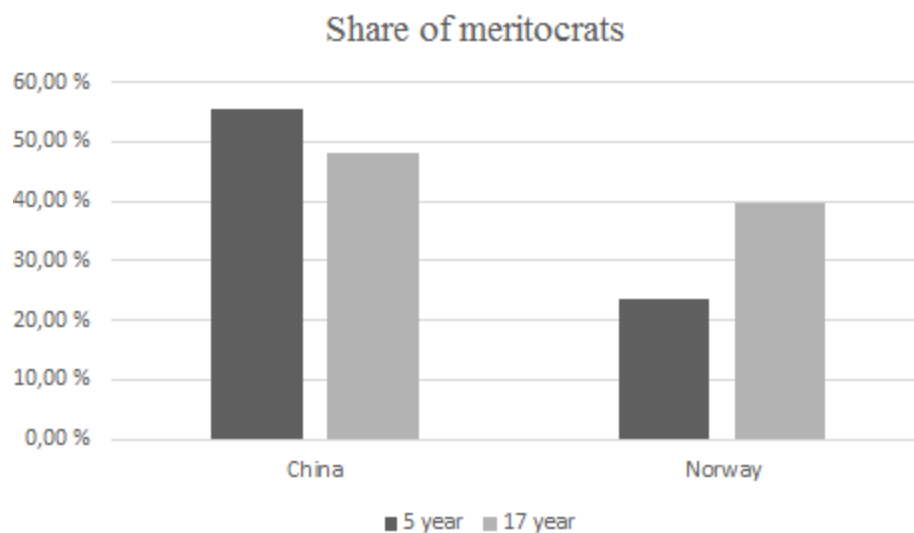


Figure 11: Comparing the meritocratic fairness ideals

Others

For those who did not fall into other categories, they were grouped as “others”. Reasons for coming into this category may be if the spectators choose a distribution that contradicts our arguments of justice arguments (e.g. allocating more to the least productive or unlucky child), or that categorical features of the distributors’ behaviour cannot be categorized based on our definitions. Our calculation is presented as follows:

$$100\% - (\text{Share of egalitarians}) - (\text{Share of libertarians}) - (\text{Share of meritocrats}) = \text{Other } (\%).$$

In Norway, this applied to a small share of 1.09 percent, while in China (Shanghai) this proportion was equal to 3.80 percent.

Discussion

We find that Norwegian and Chinese spectators differ considerably in their fairness views, although not so much in the matter of merit. The main differences, which can also explain differences in inequality acceptance, are that Norwegians largely endorse an egalitarian fairness view, while most Chinese spectators have libertarian personality traits. Hence, the differences in inequality acceptance cannot be explained solely by looking at the pure ideals, but we must also consider the different personality traits to get a slightly more nuanced image of the situation.

A greater proportion of libertarian personality traits in China could help us explain why Norwegians respond more strongly to a shift the source of inequality (merit). That is, when Chinese spectators accept more inequality in the first place, a change in treatment will not have the same effect. We see that the original difference in the calculated shares of libertarians is not as great as one might think, covering 24.70 percent (China) and 17.30 percent (Norway), respectively. Many Chinese people thus consider luck to be a fair source of inequality in some contexts, but as a full-fledged source of inequality, however, they are more reluctant to accept it. This shows that although Chinese spectators accept more inequality in general, this does not mean that they accept all inequality. This is also visible in the way the Chinese responded to the introduction of efficiency considerations, which were the most significant in China ($p < 0.001$). As from our theoretical framework, the model predicts a reduction in the effect from efficiency treatment if more Chinese libertarians are identified, which is clearly not the case.

Yet, it is also worth to remark that our estimates are calculated on the basis that the “workers” in the experiment are children. Due to the age effects presented in chapter 7.2.3, we see a significant increase in the implementation of inequality for older children approaching adulthood ($p < 0.001$ for both 13 and 17 years in Norway, $p < 0.001$ for 17-year-olds in Shanghai). This coinciding increase in age and inequality seems to indicate that differences in fairness ideals might rise dependent on those to be distributed on behalf of. This review is not something we will discuss further in detail in this analysis, but it is worth to keep in mind for other comparisons. Another interesting point is whether the adult’s distribution actually reflected their real fairness views. E.g. it might be that some accept luck as a fair source of inequality because one wishes to teach the children that the world is not always fair. In the next section, we will go more into detail of such considerations of moral motivation.

Result 5: Norwegian and Chinese spectators differ largely in their fairness views. The main difference, which might also explain differences in inequality acceptance, is that Norwegians largely endorse an egalitarian fairness view, while most Chinese spectators endorse libertarian personality traits.

7.5 Survey questions: Attitudes towards inequality

7.5.1 Moral motivation

As presented in chapter 4.1.1, spectators were told to indicate to what extent they agreed or disagreed with four statements after completing the distributive choice. Statement 3 and 4 were designed to indicate whether the adults implemented inequality based on the option they considered fair (their fairness ideal) or whether they had another purpose explanatory for their decision. In the latter case, this could also be instrumental in explaining the difference between Norway and The People's Republic of China. The desirable outcome is that the adults answer in the way they do because they dislike deviations from what they consider to be a fair distribution. Of course, there are also many other possible explanations, including trying to teach the children a sense of responsibility (captured by statement 3) or make them aware that the world is not always fair (captured by statement 4).

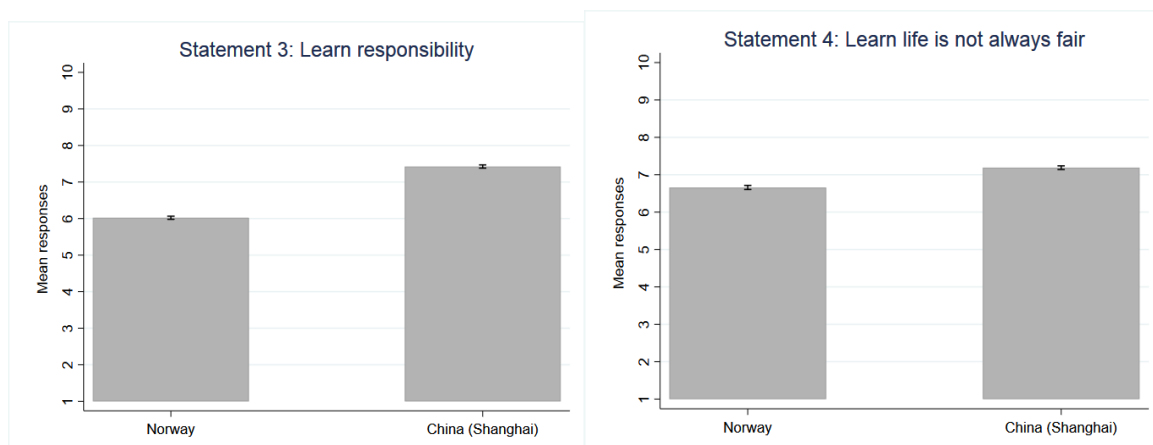


Figure 13 and 14: Average responses to statements

The higher the value, the more agreement with the statement. Based on the figures, we see that there are great differences in how the adults in the two countries choose to answer these questions, respectively. Spectators in China seem to impose more importance on the responsibility of children and the choices they make, with an average response of 7.42 out of 10 in statement 3. In comparison, Norwegian spectators had an average response of 6.02 out of

10. When it comes to the question of teaching children that the world is not always fair (statement 4), Chinese spectators give an average response of 7.19 while Norwegian spectators answer an average of 6.66. This also indicates major differences, as adults in China are much more willing to teach the children that the world is unfair than the Norwegian adults. Further, we performed OLS regressions to analyze the actual significance of the motives behind the adult's distributive behaviour.

	(1)	(2)	(3)	(4)
	Sample	Sample	Norway	China
Norway	-0.280*** (0.010)	-0.255*** (0.010)		
Statement 3		0.018*** (0.002)	0.0010*** (0.003)	0.023*** (0.003)
Statement 4		-0.001 (0.002)	-0.008*** (0.003)	0.008** (0.003)
Constant	0.571*** (0.017)	0.443*** (0.023)	0.337*** (0.030)	0.279*** (0.031)
Controls	Yes	Yes	Yes	Yes
Observations	6014	6014	3014	3000
R ²	0.129	0.140	0.013	0.050

Table 13: Attitudes towards inequality

Regression (2) shows that controlling for the attitudes explains a lot (Adjusted R square = 0.129, $p < 0.001$), but it does not explain the difference between the countries. Introducing the attitudes (2) makes a slight reduction in the country-effect (-0.280 vs. 0.255), but the difference in implementation of inequality between Norway and China is still large and significant ($p < 0.001$). By assessing the statement effects for the countries individually ((3) and (4)), the effect of statement 3 is significant in both countries ($p < 0.001$) but the strongest in China. The effects of statement 4, on the other hand, equalize each other (2) and are overall not significant ($p = 0.489$). Hence, the findings present a strong correlation between the inequality implemented by the adults and the beliefs that children should be responsible for their choices, but there is no significant association between the inequality implemented by the adults and the beliefs that children should be taught that life is not always fair. Overall, these results can be interpreted as the adults implementing inequality based on what they think is a fair distribution.

Result 6: Implemented inequality seem to coincide with the spectator’s fairness views. Hence, we can assume that we capture the adults’ real preferences.

Result 7: The difference between Norway and China (measured by variable Norway) is robust even when controlling for attitudes ($p < 0.001$).

7.5.2 External validity

The other two statements, statement 1 and 2, were designed to indicate whether the adults’ behaviour within the experiment was predictive of their attitudes in real life, i.e. whether there is a correlation between their behaviour in the experiment and their preferences towards redistributive policies. The first contention (Statement 1) asked for whether the participants believed that a society should aim to equalize incomes, while the second (Statement 2) measured whether the adults believed that it is society’s responsibility to help those children inferior at school. The average response can be illustrated as follows:

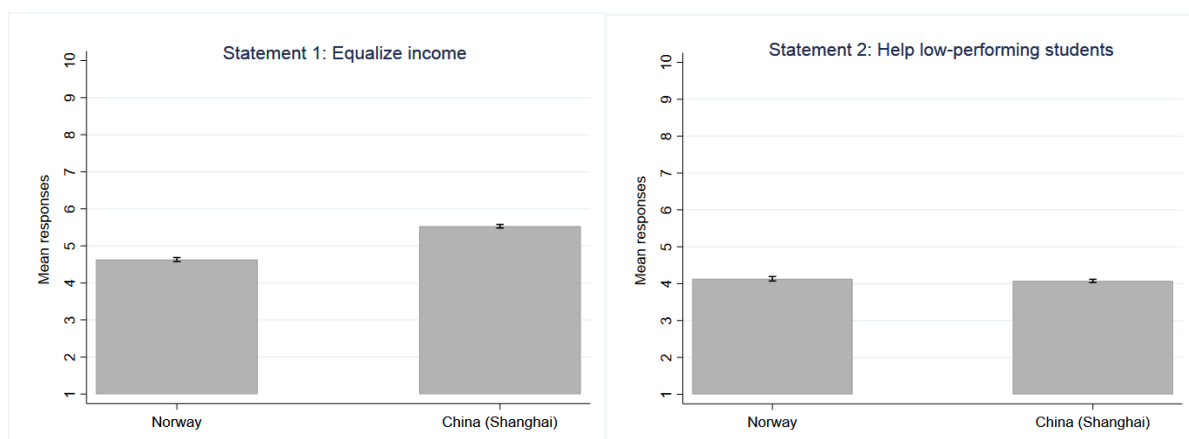


Figure 14 and 15: Average responses to statements

Regarding the statement that society should aim to equalize differences in income, both countries are centered around the middle. With an average response of 5.53, Chinese spectators think that society should focus less on leveling out economic differences than Norway with its average response rate of 4.63 (low-level answers equals more agreement to the statement). From the figure, we see that Norway and China apparently do not vary so much in their answers by statement 2, with average responses of 4.13 (Norway) and 4.07 (China), respectively. This could imply that both countries think it is important to put a focus on helping low-performing children in school. Although the participants responded in a similar manner to some parts of the survey, there are still great cross country-variations when we consider this towards

correlation in behaviour. The following table reports OLS regressions on inequality vs. the statements, intended to measure these effects in particular.

	(1)	(2)	(3)	(4)	(5)	(6)
	Sample - S1	Norway - S1	China - S1	Sample - S2	Norway - S2	China - S2
Inequality	0.982*** (0.096)	0.615*** (0.139)	1.385*** (0.131)	0.512*** (0.100)	0.664*** (0.155)	0.360*** (0.121)
Norway	-0.0564*** (0.072)			0.251*** (0.080)		
Constant	4.396*** (0.135)	3.765*** (0.160)	4.522*** (0.179)	3.187*** (0.140)	3.026*** (0.179)	3.972*** (0.165)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	6014	3014	3000	6014	3014	3000
R ²	0.066	0.019	0.026	0.026	0.039	0.053

Standard errors in parentheses

*p<0.1, ** p<0.05, *** p<0.01

Note: The table reports OLS regressions on inequality acceptance on S1 and S2

Table 14: External validity

From the total sample, we see a significant correlation ($p < 0.001$) between the inequality implemented by the adults and their attitudes displayed in statement 1. This effect is more than twice as high in China (3) as in Norway (2). When it comes to the question of society should be responsible for helping the low-performing, we also see a strong correlation ($p < 0.001$) between the inequality implemented and the attitudes towards statement 2. Although this effect is lower, it is still large and significant ($p < 0.001$). This correlation is highest in the society of Norway whereas one can possibly draw parallels to the welfare society and Norwegian values. Overall, the effects of both statements are significant, where less inequality is implemented if it is believed that society should aim to equalize differences in income, or if it is believed that society should invest in assisting the low-performing. We find that behaviour within the experiment is consistent with the adults' real attitudes and are thus also highly predictive for their preferences towards social policies in society.

Result 8: We find adult's behaviour in the experiment to be highly predictive of their attitudes in real life. Thus, it is conceivable that the way adults treat children in this experiment corresponds to how adults treat children in other important contexts.

8. Concluding remarks

8.1 Review of findings

We have presented empirical evidence from a large-scale experiment carried out among heterogeneous samples from the general populations in Norway and China (Shanghai). This thesis has thus served as a comparative study on social preferences between two countries that differs in many terms, including income inequality, social policies, and as suggested through this thesis; their inequality acceptance among children.

The biggest and certainly most interesting difference was the tremendous gap in social preferences between Norway and Shanghai in total. From result 1, we found that Norwegian and Chinese spectators differed significantly in their distributive behaviour, even when facing an identical situation. We considered this difference as systematic as it consisted in all twelve treatments (Result 4). Chinese spectators implemented more than twice as much inequality (0.542) as Norwegian spectators (0.262) when considering the average of all treatments in total. An interesting comparison is how this seems to coincide with the Gini coefficient in each of the countries, which is 0.514 (China) and 0.272 (Norway), respectively.

We found that whether the age of the children was 5, 9, 13 or 17 mattered for inequality acceptance (Result 2). The pattern of how adults' behaviour varied due to age effects was fairly similar in both countries, as implemented inequality was increasing in line with the age of the child ($p < 0.001$ for 17-year-olds in both countries). An interesting and significant difference, however, was how the adults differed in their implementation of inequality between children of similar age, including the youngest. We found that Chinese spectators accepted a much higher level of inequality already for children of five years of age. This "country-difference" was virtually unchanged ($p < 0.001$) for all ages. Hence, there seemed to be a basic acceptance of inequalities in each country, which consequently were shaped by something else than age-considerations.

Through the thesis, we also robustly denote that most individuals do not consider all inequalities as unfair. We have provided evidence that the spectators' inequality acceptance was significantly affected (i.e. increased implemented inequality) by shifting the source of inequality from luck to merit, or by introducing efficiency considerations (Result 3). However,

the significance of each of these respective considerations also varied due to the spectator's nationality in our experiment. Norwegian spectators were more affected by fairness considerations (shifting the source of inequality), while Chinese spectators assigned more weight to efficiency relative to fairness. We suggest that the reason why Chinese spectators did not experience an equally significant impact from the introduction of merit, even though they largely endorse a meritocratic fairness ideal, is because they accept far more inequality in the first place. The difference from introducing a cost of redistribution was significant in both countries. The "country-effect", however, was still virtually unchanged ($p < 0.001$) even after controlling for the changes in distributive situations. The heterogeneity analyzes emphasize this point, stating that there is a significant difference between Norway and China regardless of treatment.

Hence, we chose to believe that the fundamental difference in inequality acceptance was driven by Chinese and Norwegians endorsing different fairness ideals. Result 5 supports this theory, as we found that Norwegian and Chinese spectators largely differed considerably in their fairness views, although not so much in the matter of merit. The main differences, which might also explain some of the differences in inequality acceptance, was that Norwegians largely endorsed an egalitarian fairness view, while most Chinese spectators endorsed libertarian personality traits. These differences were substantial. We found that more than half of the Norwegian spectators endorsed an egalitarian fairness view (51.54 percent), a proportion equivalent to almost three times as many egalitarians as in China (18.30 percent). Chinese spectators were expected to accept more inequality than Norwegians. We found that one in four Chinese is willing to not redistribute total inequality even on the basis of luck. However, this proportion of libertarians (24.70 percent) was not in substantial deviance from the Norwegian proportion of libertarians (17.30 percent). On the other hand, we saw that although most Chinese spectators did not fall under our definition of a libertarian, several of them had libertarian personality traits. This indicated that they had a higher acceptance of inequality in general, although they did not accept all inequalities. Then e.g. efficiency considerations would not be of such significance as we found it to be in China, as libertarians do not differ between a fair and efficient distribution. These findings are in line with recent survey evidence showing that the Chinese are in fact not indifferent between the sources of inequality, but worry about inequalities that are considered unfair, and demand policies that address them. Although only 24.70 percent are characterized as libertarians, 72.10 percent of Chinese spectators consider luck to be a fair source of inequality to a greater or lesser extent by distributing more to the

lucky child. The equivalent proportion in Norway was significantly lower, corresponding 28.10 percent.

In conclusion, we see that there is a tremendous difference in inequality acceptance between Norwegian and Chinese adults, and that this acceptance largely seems to be driven by various fairness preferences in the two societies, respectively. The majority of Norwegian spectators prefer an egalitarian distribution, while most Chinese spectators accept more inequality in general. As follows from result 5, we assume that the spectators implemented the distribution they considered fair, so that we presumably capture the adult's real preferences. The difference between Norway and China is equal across all treatments and situations, even when controlling for the spectator's motivation and attitudes. This cross-country difference can, therefore, be considered to be robust. When assessing whether or not the attitudes we capture within the experiment corresponded to the attitudes adults have outside the experiment, we found that their behaviour seems highly predictive of their attitudes in real life; e.g. due to redistribution- and children policies. This is based on that the degree to which the spectator disagreed with the statements was increasing in the level of inequality they implemented ($p < 0.001$ and $p < 0.001$ respectively).

More research is needed to be able to causally detect how individuals make the actual distinction between fair and unfair inequalities. However, our findings shed light on how cultural differences might contribute to create differences in inequality acceptance across countries through social learning. As presented, children are exposed to a number of different environments transmitting signals of what is considered acceptable behaviour. These signals might differ due to cultural traits as presented in chapter 3; thus, the children's social preferences receive different formation. Based on the presentation of the countries, we see that China's culture is far more characterized by competition and a battle of prestige. We see that, for example, urban/ rural residence affects both employment and educational opportunities for the citizens, while children at the same time must compete and perform to get into the best schools. Competition is evident in several arenas for the children, especially within education and sports. Thus, citizens quickly have to recognize that hard work and skills are the only thing that pays off to get up and forth, consequently creating a greater need to acknowledge the fact that there are some inequalities. In Norway, on the other hand, one sees that the structure of society makes it possible for the inhabitants to start from identical conditions, which reinforces the egalitarian culture and forms the preferences thereafter. Children are rarely exposed to a

pressure to perform, as the focus is on the development of their own identity. As young children's fairness evolution appears to be formative for their social preferences later in adulthood, such cultural influence may potentially be crucial for this development. Without being able to draw any firm conclusions, we see that adult's behaviour within this experiment corresponds to the way children are treated in important contexts such as sports and school, suggesting that we might have been able to capture some of these social mechanisms within this experiment.

8.2 Proposals for further research

Our findings indicate that heterogeneity in fairness preferences may be an important reason for the variation in children- and social policies across countries. However, to be able to determine whether adult beliefs appears to be formative for the development of children's preferences, their distributive choices must be compared against the child data that comes later in the project. The exact same distributive situations have been conducted among children aged 5, 9, 13 and 17. By comparing the results, it is possible to identify whether the behaviour of adults has a connection to the formation of children's preferences, how strong this influence is, and in which part of childhood the influence seems to be greatest. We would also recommend expanding the project to several countries in order to identify stronger causal relationships between socio-economic development and the development of social preferences. An interesting continuation of the study may be to assess countries within the process of developing social policies, further to assess the role of government institutions in relation to citizens' attitudes. For example, one can see if citizens become more or less inclined to accept inequality as the welfare system develops and the socioeconomic differences are reduced. It may also be interesting to take a closer look at institutions, such as kindergartens and preschools, impact on children's preferences, to complement existing studies in this area.

9. Reference List

- Acemoglu, D., Robinson, J. A. & Verdier, T. (2012). *Can't we all be more like the Scandinavians? Asymmetric growth and institutions in an interdependent world*, NBER Working Paper No. 18441.
- Afridi, F., Li, S. X. & Ren, Y. (2015). *Social identity and inequality: The impact of China's hukou system*. *Journal of Public Economics*, 123, p. 17-29
<https://doi.org/10.1016/j.jpubeco.2014.12.011>
- Almaas, I., Cappelen, A.W., Haaland, I. & Tungodden, B. (2015). *Rettferdig ulikhet*. *Magma: Econas tidsskrift for økonomi og ledelse*. p. 38-43
- Almaas, I., Cappelen, A.W., Sørensen, E.Ø. & Tungodden, B. (2010). *Fairness and the Development of Inequality Acceptance*. *Science* 328(5982), p. 1176-1178. DOI: 10.1126/science.1187300
- Almaas, I., Cappelen, A. W., Lind, J. T., Sørensen, E. Ø. & Tungodden, B. (2011). *Measuring unfair (in) equality*. *Journal of Public Economics*, 95(7-8), p. 488-499.
<https://doi.org/10.1016/j.jpubeco.2010.11.002>
- Almaas, I., Cappelen, A.W. & Tungodden, B. (2016). *Cutthroat capitalism versus cuddly socialism: Are Americans more meritocratic and efficiency-seeking than Scandinavians?* Discussion Paper at the Department of Economics, NHH (Norwegian School of Economics).
<https://brage.bibsys.no/xmlui/bitstream/handle/11250/2423528/DP18.pdf?sequence=1&isAllowed=y>
- Alesina, A. & Angeletos, G. (2005). *Fairness and Redistribution*. *American Economic Review*, 95(4), p. 960-980.
- Alesina, A. & Fuchs-Schündeln, N. (2007). *Goodbye Lenin (or not?): The effect of communism on people's preferences*. *American Economic Review*, 97(4), p. 1507-1528. <https://www.jstor.org/stable/pdf/30034104.pdf>

-
- Altinn. (2018, 8. November). *Rettigheter ved graviditet, fødsel, adopsjon og omsorg for små barn*. Retrieved from <https://www.altinn.no/starte-og-drive/arbeidsforhold/permisjoner-og-ferie/rettigheter-ved-graviditet-fodsel-adopsjon-og-omsorg-for-sma-barn/>
- Anderson, C. J. & Singer, M. M. (2008) *The Sensitive Left and the Impervious Right: Multilevel Models and the Politics of Inequality, Ideology, and Legitimacy in Europe*. *Comparative Political Studies*, 41(4-5), p. 564-599.
<http://www.lisdatacenter.org/wps/liswps/477.pdf>
- Ben-Ner, A., List, J. A., Putterman, L. & Samek, A. S. (2015). *Learned generosity? A field experiment with parents and their children*. Working Paper, No. 2015-12, Brown University, Department of Economics, Providence, RI.
<https://www.econstor.eu/bitstream/10419/145435/1/844768421.pdf>
- Bartolini, S. & Sarracino, F. (2015). *The Dark Side of Chinese Growth: Declining Social Capital and Well-Being in Times of Economic Boom*. In *World Development*, 74, p. 333–351. <http://dx.doi.org/10.1016/j.worlddev.2015.05.010>
- Blakely, T. A., Kennedy, B. P., Glass, R. & Kawachi, I. (2000). *What is the lag time between income inequality and health status?* *Journal of Epidemiology & Community Health*, 54(4), p. 318-319.
- Cameron, L., Erkal, N., Gangadharan, L. & Meng, X. (2013). *Little Emperors: Behavioural Impacts of China's One-Child Policy*. *Science*, 339(6122), p. 953-957.
- Cappelen, A. W., Hole, A. D., Sørensen, Ø. & Tungodden, B. (2007). *The Pluralism of Fairness Ideals: An Experimental Approach*. *American Economic Review*, 97(3), p. 818-827.
- Cappelen, A. W., Konow, J., Sørensen, E. Ø. & Tungodden, B. (2013). *Just Luck: An Experimental Study of Risk-Taking and Fairness*. *American Economic Review*, 103(4), p. 1398-1413. <https://www.jstor.org/stable/23469622>

-
- Cappelen, A. W., List, J. A., Samek, A. & Tungodden, B. (2016). *The Effect of early education on social preferences*. NBER (National Bureau of economic research) Working Paper No. 22898 <http://www.nber.org/papers/w22898>
- Cappelen, A. W., Sørensen, E. Ø. & Tungodden, B. (2010). *Responsibility for what? Fairness and individual responsibility*. *European Economic Review*, 54(3), p. 429-441.
<https://doi.org/10.1016/j.euroecorev.2009.08.005>
- Cappelen, A. & Tungodden, B. (2012). *Adferdsøkonomi og økonomiske eksperimenter*. *MAGMA*, p. 26-30.
- Cheng, T. & Selden, M. (1994). *The origins and social consequences of China's hukou system*. *The China Quarterly*, 139, p. 644-668.
<https://www.jstor.org/stable/pdf/655134.pdf>
- Dabla-Norris, M. E., Kochhar, M. K., Suphaphiphat, M. N., Ricka, M. F. & Tsounta, E. (2015). *Causes and consequences of income inequality: a global perspective*. International Monetary Fund.
- Dello-Iacovo, B. (2009). *Curriculum reform and 'quality education' in China: An overview*. *International Journal of Educational Development*, 29(3), p. 241-249.
<https://doi.org/10.1016/j.ijedudev.2008.02.008>
- FAFO. (2018). *Towards a new Chinese welfare state in China- – perceptions about distributive justice in China*. Retrieved from
<https://www.fafo.no/index.php/forskningstema/prosjekter/aktive-prosjekter/item/towards-a-new-chinese-welfare-state-perceptions-about-distributive-justice-in-china>
- Forskningsrådet. (2018). *Towards a new Chinese welfare state: Chinese perceptions of distributive justice*. Retrieved from
https://www.forskningsradet.no/prosjektbanken/?fbclid=IwAR2atE8vsOeQsv_RVUkqP4XOV-gNruZbH4mINGBb5_itHRMYoWXPrvZSoEQ#/project/NFR/225132

-
- Falk, A. & Heckman, J. J. (2009). *Lab Experiments Are a Major Source of Knowledge in the Social Sciences*. *Science*, 326(5952), p. 535-538.
- Falk, A. & Hermle, J. (2018). *Relationship of gender differences in preferences to economic development and gender equality*. *Science*, 362(6412).
- Fang, T. (2008). *Nordic Culture and Nordic People: A Chinese Perspective*. In: Lie, M., Lund, R. & Hansen, G. H. (red.): *Making it in China*. Kristiansand: Høyskoleforlaget.
- Fehr, E. & Falk, A. (2002). *Psychological foundations of incentives*. *European economic review*, 46(4-5), p. 687-724. [https://doi.org/10.1016/S0014-2921\(01\)00208-2](https://doi.org/10.1016/S0014-2921(01)00208-2)
- Fehr, E. & Schmidt K. M. (1999). *A theory of fairness, competition and cooperation*. *Quarterly Journal of Economics*, 114(3), p. 817–868.
<https://doi.org/10.1162/003355399556151>
- Fehr, E. & Schmidt K. M. (2003). *Theories of fairness and reciprocity: evidence and economic applications*. *Advances in Economics and Econometrics* eds Dewatripont L.H.M., Turnovsky S., editors. Cambridge: Cambridge University, p. 208-257.
- Fløtten, T., Hansen, S. I. L. & Kavli, H. C. (2009) *De ti største humanitære utfordringene i Norge*. Fafo-notat 2009:05
https://www.fafo.no/media/com_netsukii/10079.pdf
- Jain-Chandra, S., Khor, N., Mano, R., Schauer, J., Wingender, M. P. & Zhuang J. (2018). *Inequality in China – Trends, Drivers and Policy Remedies*. International Monetary Fund.
- James, C., Carrin, G., Savedoff, W. & Hanvoravongcha, P. (2005). *Clarifying Efficiency-Equity Tradeoffs Through Explicit Criteria, With a Focus on Developing Countries*. *Health Care Analysis*, 13(1). DOI: 10.1007/s10728-005-2568-2

-
- Jones, S. R. G. (1992). *Was There a Hawthorne Effect?* In *American Journal of Sociology*, 98(3), p. 451-468. Retrieved from <http://www.jstor.org/stable/2781455>
- Kerr, W. R. (2014). *Income inequality and social preferences for redistribution and compensation differentials*. *Journal of Monetary Economics*, 66, p. 62-78. <https://doi.org/10.1016/j.jmoneco.2014.03.002>
- Kildal, N. (2013). *Den norske velferdsstaten: Fra sosiale til kontraktbaserte rettigheter*. *Tidsskrift for velferdsforskning*, 16(2) p. 87 -95. <https://bora.uib.no/handle/1956/17403>
- King, G., Pan, J. & Roberts, M. E. (2013). *How censorship in China allows government criticism but silences collective expression*. *American Political Science Review*, 107(2), p. 326-343.
- Konow, J. (2000). *Fair shares: Accountability and cognitive dissonance in allocation decisions*. *American economic review*, 90(4), p. 1072-1091. <https://www.jstor.org/stable/pdf/117326.pdf>
- Konow, J. (2001). *Fair and square: the four sides of distributive justice*. *Journal of Economic Behavior & Organization*, 46(2), p. 137-164. [https://doi.org/10.1016/S0167-2681\(01\)00194-9](https://doi.org/10.1016/S0167-2681(01)00194-9)
- Konow, J. (2003). *Which is the fairest one of all? A positive analysis of justice theories*. *Journal of economic literature*, 41(4), p. 1188-1239. <https://www.jstor.org/stable/pdf/3217459.pdf>
- Kristoffersen, H. (2008). *Young in China: Values and Strategies among Young Professionals of the Deng Generation*. In: Lie, M., Lund, R. & Hansen, G.H. (red.): *Making it in China*. Kristiansand: Høyskoleforlaget.
- Li, J., Wang, W., Yu, J. & Zhu, L. (2016). *Young Children's Development of Fairness Preference*. *Frontiers in psychology*, 7, p. 1274. doi:10.3389/fpsyg.2016.01274

-
- McCoy, S. K. & Major, B. (2007). *Priming meritocracy and the psychological justification of inequality*. *Journal of Experimental Social Psychology*, 43(3), p. 341-351.
<https://doi.org/10.1016/j.jesp.2006.04.009>
- Merriam-Webster. (2018). *Egalitarianism*. <https://www.merriam-webster.com/dictionary/egalitarianism>
- Milanovic, B. (1999). *True World Income Distribution, 1988 and 1993: First Calculations, Based on Household Surveys Alone*. The World Bank.
<https://doi.org/10.1596/1813-9450-2244>
- Mjøset, L. & Skarstein, R. (2017). *Kina gjennom to globaliseringsperioder*. *Agora*, 33(02-03), p. 85-134.
https://www.idunn.no/agora/2016/0203/kina_gjennom_to_globaliseringsperioder
- National Bureau of Statistics of China (NBSC). (2017a). *China Population & Employment Statistical Yearbook 2017*. In China Statistics Press.
- National Bureau of Statistics of China in Shanghai (NBSC). (2017b). *2017 Shanghai Statistical Yearbook English Edition*. Retrieved from <http://www.stats-sh.gov.cn/html/sjfb/201801/1001529.html>
- Nielsen, M. (2006). *Copying actions and copying outcomes: social learning through the second year*. *Developmental psychology*, 42(3), p. 555.
- Nord, E., Pinto, J. L., Richardson, J., Mensal, P. & Ube, P. (1999). *Incorporating Societal Concerns for Fairness in Numerical Valuations of Health Programmes*. *Health Economics* 8, p. 25– 39.
- Norges idrettsforbund (NIF). (2015). *Idrettens barnerettigheter: Bestemmelser om barneidrett*. Retrieved from https://www.idrettsforbundet.no/contentassets/7d1ccf72f5a047dfac1b2124adaddf42/17_15_barneidrettsbestemmelser_lr.pdf

-
- Norstat (2018, 10. October). *Home*. Retrieved from <https://norstatgroup.com/>
- OECD. (2011). *Reviews of National Policies for Education: Improving Lower Secondary Schools in Norway 2011*. <http://www.oecd.org/education/school/48297989.pdf>
- OECD. (2012). *China in Focus: Lessons and Challenges*, OECD, Paris., <http://www.oecd.org/china>, <http://www.oecdchina.org>
- OECD. (2018a). *Income inequality (indicator)*. doi: 10.1787/459aa7f1-en
- OECD. (2018b). *Income Distribution Database (IDD): Gini, poverty, income, Methods and Concepts*. Retrieved from <http://www.oecd.org/social/income-distribution-database.htm>
- Pedersen, J. (2014). *Økonomiske forskjeller og normative verdier: Pikettys Kapitalen i det 21. århundre*. Norsk filosofisk tidsskrift, 49(03-04), p. 179-188. https://www.idunn.no/file/pdf/66742672/nft_2014_03-04_pdf.pdf
- Perry, E. J. (2007). *Studying Chinese politics: farewell to revolution?* The China Journal, (57), p. 1-22. <https://www.jstor.org/stable/20066239>
- Robinson, R. V. & Bell, W. (1978). *Equality, Success, and Social Justice in England and the United States*. American Sociological Review, p. 125-43. <https://www.jstor.org/stable/pdf/2094695.pdf>
- Sauarlia, L. & Jufen, W. (2008). *Women's Labour Migration and Migrant Lives in Contemporary China*. In: Lie, M., Lund, R. & Hansen, G.H. (red.): *Making it in China*. Kristiansand: Høyskoleforlaget.
- Schmitt, D. P., Long, A. E., McPhearson, A., O'Brien, K., Remmert, B. & Shah, S. H. (2017). *Personality and gender differences in global perspective*. In International Journal of Psychology, 53, p. 45-65. DOI: 10.1002/ijop.12265

-
- Schwartz, S. H. & Rubel-Lifschitz, T. (2005). *Sex Differences in Value Priorities: Cross-Cultural and Multimethod Studies*. *Journal of Personality and Social Psychology*, 89(6), p. 1010. DOI: 10.1037/0022-3514.89.6.1010
- Sun, Y. (2006). *Introduction to Chinese Children*. In: Xi, J., Sun, Y & Xiao, J. J. *Chinese youth in transition*. Ashgate Publishing, Ltd.
- Sicular, T. (2013). *The challenge of high inequality in China*. *Inequality in focus*, 2(2), p. 1-5. <http://documents.worldbank.org/curated/en/254081468218393028/Inequality-in-focus-vol-2-no-2>
- Statista. (2018). *Average number of people living in households in China from 1990 to 2017*. Retrieved from <https://www.statista.com/statistics/278697/average-size-of-households-in-china/>
- Store Norske Leksikon (SNL). (2018). *Rettferdighet*. Retrieved from <https://snl.no/rettferdighet>
- Statistisk Sentralbyrå. (2008, 02. May). *Bruttoinntekten har økt med 39 prosent*. Retrieved from <https://www.ssb.no/inntekt-og-forbruk/artikler-og-publikasjoner/bruttoinntekten-har-okt-med-39-prosent>
- Statistisk Sentralbyrå (SSB). (2017a, 13. September). *Dette er Norge 2017*. Retrieved from https://www.ssb.no/befolkning/artikler-og-publikasjoner/_attachment/317854?_ts=15e7aefaba
- Statistisk Sentralbyrå (SSB). (2017b, 13. December). *Inntekts- og formuesstatistikk for husholdninger*. Retrieved from <https://www.ssb.no/inntekt-og-forbruk/statistikker/ifhus/aar>
- Statistisk Sentralbyrå (SSB). (2018a, 04. May). *Dette er kvinner og menn i Norge 2018*. Retrieved from https://www.ssb.no/befolkning/artikler-og-publikasjoner/_attachment/341883

-
- Statistisk Sentralbyrå (SSB). (2018b, 08. June). *Befolkningens utdanningsnivå*. Retrieved from <https://www.ssb.no/utdanning/faktaside/utdanning>
- Statistisk Sentralbyrå (SSB). (2018c, 06. March). *Rekordlav fruktbarhet*. Retrieved from <https://www.ssb.no/befolkning/artikler-og-publikasjoner/rekordlav-fruktbarhet>
- Tjønndal, A. (2018). *Statisk analyse i Stata* (1.utg). Oslo: Cappelen Damm AS.
- Trading Economics. (2018). *China - Population, female (% of total)*. Retrieved from <https://tradingeconomics.com/china/population-female-percent-of-total-wb-data.html>
- United Nations (UN). (2018, October). *Kina*. Retrieved from <https://www.fn.no/Land/Kina>
- Wong, E. (2012). *Test That Can Determine the Course of Life in China Gets a Closer Examination*. In The New York Times July 1, 2012 Sunday.
http://sites.utexas.edu/chinaecon/files/2015/06/NYT_Test-That-Can-Determine.pdf
- World Bank. (2018a). *Population, total*. Retrieved from <https://data.worldbank.org/indicator/SP.POP.TOTL>
- World Bank. (2018b). *Fertility rate, total (births per woman)*. Retrieved from <https://data.worldbank.org/indicator/SP.DYN.TFRT.IN>
- Wormeli, Rick (2006). *Fair isn't always equal: Assessing & grading in the differentiated classroom*. Stenhouse Publishers.
<https://www.bmiestore.com/samples/DDTr/ste9781571104243s.pdf>
- Yang, D. L. & Leung, A. (2008). *The politics of sports anti-doping in China: Crisis, governance and international compliance*. *China: An International Journal*, 6(01), p. 121-148.
- Ødegaard, E. E. (2012). *Barnehagen som danningsarena* (s. 157-180). Oslo: Fagbokforlaget. ISBN: 8245011533, 9788245011531

Appendix

Appendix 4.1 General instructions

Instructions, adult sample

Instructions: Distributive Choices

We here provide the instructions for the distributive situations faced by the adult sample (English translation from Norwegian). Each individual adult spectator will make only one distributive decision for only one pair of children. The examples below are based on an adult assigned to make redistributive decisions for a pair of 5-year- old children. The instructions for the adult spectators assigned to make redistributive choices for other age groups only vary in the specified age; 5, 9, 13 and 17.

Treatment 1: Luck. 5- year- old children.

In contrast to traditional survey questions that are about hypothetical situations, we now ask you to make a choice that has real consequences for two children. We have recruited two children, let us call them child A and child B. They are both 5 years old and go to school in Bergen. After completing the same assignment, the children are told that their earnings from the assignment is determined by a lottery. The child winning the lottery earns 48 NOK for the assignment and the other child earns nothing for the assignment. They are not informed about the outcome of the lottery. However, they are told that a third person will be informed about the assignment and the outcome of the lottery. They are also told that this third person will be given the opportunity to redistribute the earnings and thus determine how much they are paid for the assignment. You are the third person and we now want you to choose whether to redistribute the earnings for the assignment between child A and child B. Your decision is completely anonymous. The two children will receive the payment that you choose for the assignment within a short period, but will not receive any further information.

Child A is the winner of the lottery and earns 48 NOK for the assignment, thus child B earns nothing for the assignment.

Please state which of the following alternatives you choose:

I do not redistribute:

- child A is paid 48 NOK and child B is paid 0 NOK.

I do redistribute:

- child A is paid 40 NOK and child B is paid 8 NOK.
- child A is paid 32 NOK and child B is paid 16 NOK
- child A is paid 24 NOK and child B is paid 24 NOK.
- child A is paid 16 NOK and child B is paid 32 NOK.
- child A is paid 8 NOK and child B is paid 40 NOK.
- child A is paid 0 NOK and child B is paid 48 NOK.

Treatment 2: Merit. 5- year- old children.

In contrast to traditional survey questions that are about hypothetical situations, we now ask you to make a choice that has real consequences for two children. We have recruited two children, let us call them child A and child B. They are both 5 years old and go to school in Bergen.

After completing the same assignment, the children are told that their earnings from the assignment is determined by their productivity. The most productive child earns 48 NOK for the assignment and the other child earns nothing for the assignment. They are not informed about who is the most productive child. However, they are told that a third person will be informed about the assignment and who is the most productive child. They are also told that this third person will be given the opportunity to redistribute the earnings and thus determine how much they are paid for the assignment.

You are the third person and we now want you to choose whether to redistribute the earnings for the assignment between child A and child B. Your decision is completely anonymous. The two children will receive the payment that you choose for the assignment within a short period, but will not receive any further information.

Child A is the most productive and earns 48 NOK for the assignment, thus child B earns nothing for the assignment.

Please state which of the following alternatives you choose:

I do not redistribute:

- child A is paid 48 NOK and child B is paid 0 NOK.

I do redistribute:

- child A is paid 40 NOK and child B is paid 8 NOK.

-
- child A is paid 32 NOK and child B is paid 16 NOK.
 - child A is paid 24 NOK and child B is paid 24 NOK.
 - child A is paid 16 NOK and child B is paid 32 NOK.
 - child A is paid 8 NOK and child B is paid 40 NOK.
 - child A is paid 0 NOK and child B is paid 48 NOK.

Treatment 2: Efficiency. 5- year- old children.

In contrast to traditional survey questions that are about hypothetical situations, we now ask you to make a choice that has real consequences for two children. We have recruited two children, let us call them child A and child B. They are both 5 years old and go to school in Bergen.

After completing the same assignment, the children are told that their earnings from the assignment is determined by a lottery. The child winning the lottery earns 48 NOK for the assignment and the other child earns nothing for the assignment. They are not informed about the outcome of the lottery. However, they are told that a third person will be informed about the assignment and the outcome of the lottery. They are also told that this third person will be given the opportunity to redistribute the earnings and thus determine how much they are paid for the assignment.

You are the third person and we now want you to choose whether to redistribute the earnings for the assignment between child A and child B. Your decision is completely anonymous. The two children will receive the payment that you choose for the assignment within a short period, but will not receive any further information.

Child A is the winner of the lottery and earns 48 NOK for the assignment, thus child B earns nothing for the assignment. There is a cost of redistribution. If you choose to redistribute, increasing child B's payment by 1 NOK will decrease child A's payment by 2 NOK.

Please state which of the following alternatives you choose:

I do not redistribute:

- child A is paid 48 NOK and child B is paid 0 NOK.

I do redistribute:

-
- child A is paid 40 NOK and child B is paid 4 NOK.
 - child A is paid 32 NOK and child B is paid 8 NOK.
 - child A is paid 24 NOK and child B is paid 12 NOK.
 - child A is paid 16 NOK and child B is paid 16 NOK.
 - child A is paid 8 NOK and child B is paid 20 NOK.
 - child A is paid 0 NOK and child B is paid 24 NOK.

Appendix 4.2 Background information

We asked the adult respondents to answer the following set of background questions. The questions about gender, age and income were asked prior to the distributive choice (to ensure a representative sample on these characteristics). The other background questions were asked after the distributive choice and the survey questions. We first present the Norwegian background questions, followed by the Chinese. The Norwegian background questions are translated from Norwegian to English.

Background questions Norway

- What is your age?
- What is your zip code?
- Are you a man or a woman?
 - Man
 - Woman
- County: (list of counties)
- Region: (list of regions)
- Do you live in?
 - Oslo
 - Town with more than 50,000 inhabitants
 - Town with between 5,000 and 50,000 inhabitants
 - Town/large village (2,000-4,999 inhabitants)
 - Village (less than 2,000 inhabitants)
 - Do not know.
- How many persons are there in the household? (1,2,3,4,5 or more, do not want to respond)
- How many persons are there in the household below 18 years old?

(None, 1,2,3,4,5 or more, do not want to respond)

- Child 1 (list of years of birth)
- Child 2 (list of years of birth)
- Child 3 (list of years of birth)
- Child 4 (list of years of birth)
- Child 5 (list of years of birth)
- What is the household's gross income (before taxes)?
 - 0-100,000 NOK
 - 100,001-200,000 NOK
 - 200,001-300,000 NOK
 - 300,001-400,000 NOK
 - 400,001-500,000 NOK
 - 500,001-600,000 NOK
 - 600,001-700,000 NOK
 - 700,001-800,000 NOK
 - 800,001-900,000 NOK
 - 900,001-1,000,000 NOK
 - 1,000,001-1,100,000 NOK
 - 1,100,001-1,200,000 NOK
 - 1,200,001-1,300,000 NOK
 - 1,300,001-1,400,000 NOK
 - 1,400,001-1,500,000 NOK
 - 1,500,001 NOK or more.
 - Do not want to respond.
 - Do not know.
- How would you describe your daily situation?
 - Studies
 - Full time employee
 - Part time employee
 - Work in my own firm
 - Military/civil service
 - Parental leave
 - Retired
 - Job seeker

-
- Homemaker
 - Temporarily laid off
 - On government welfare
 - What is your area of work? (list of areas of work)
 - What sector do you work in?
 - Public sector
 - Private sector
 - Do not work
 - Other
 - Did you vote in the parliamentary elections in 2017? If so, what party did you vote for? (List of Norwegian parties and other, did not vote, do not want to respond, do not remember, did not have voting rights).
 - If there was an election tomorrow, which party would you then vote for? (List of Norwegian parties and other, did not vote, do not want to respond, not sure, do not have voting rights).
 - What is your relationship status?
 - Single
 - Married/Partnership/Cohabitation (without children in the household)
 - Married/Partnership/Cohabitation (with children in the house-hold)
 - Live with my parents
 - Widow/widower
 - Divorced
 - Do not want to respond
 - Other
 - What is your highest completed education?
 - Compulsory education (primary and junior middle school)
 - High school
 - University/college up until 3 years (Bachelor or equivalent)
 - University/college up until 4 years
 - University/college more than 4 years (Master degree or equivalent and higher degree)
 - Other
 - How many children do you have?
 - 0 children / 1 child /2 children / 3 children / 4 children or more

Background information China

Background Information

D1. Please fill in your gender:

Male 0
1

Female..... 0
2

D2. What is your exact age? _____ Years old

D3. What is your final education level? Please choose the one which best describe your final education level.

Primary school or below 0
1

Junior middle school..... 0
2

Senior middle school..... 0
3

College 0
4

University 0
5

Graduate school or above 0
6

D4. Do you have children or not?

Yes	01
No	02

<Programmer: Only for those who answer 'Yes' in D4, ask D4-1. Others skip to D5>

D4-1. How many children do you have?

1 child..... 01

2 children 02

3 children 03

4 children or more 04

D5. What is your occupation?

Student..... 0
1

Technician 0
2

Professional (professor, teacher, artist, doctor, lawyer etc.) 0
3

Blue collar (servant, delivery man, salesperson, office clerk etc.)..... 0
4

White collar (company managers, executives, director, owner etc.)..... 0
5

Government officer..... 0
6

Self-employed, small private business..... 0
7

Freelancer..... 0
8

Full-time housewife..... 0
9

Unemployed..... 1
0

Retired..... 1
1

Others 1
2

D6. Which of the following income level best describe your monthly household income? Please include all sources of income, e.g. bonus, bank deposit interest, 2nd-job payment, rental allowance etc.

Below RMB 4,000	01
RMB 4,000- 5,999	02
RMB 6,000-7,999	03
RMB 8,000-9,999	04
RMB 10,000-12,999	05
RMB 13,000-14,999	06
RMB 15,000-17,999	07
RMB 18,000-19,999	08
RMB 20,000-24,999	09
RMB 25,000-29,999	10
RMB 30,000-34,999	11
RMB 35,000-39,999	12
RMB 40,000-44,999	13
RMB 45,000-49,999	14
RMB 50,000 or over	15

D7: Please tell me the province where your Hukou was at your birth.

- | | |
|------------------------------------|--|
| 1 Beijing | 17 Hubei Province |
| 2 Tianjin | 18 Hunan Province |
| 3 Hebei Province | 19 Guangdong Province |
| 4 Shanxi Province | 20 Guangxi Zhuang Autonomous Region |
| 5 Inner Mongolia Autonomous Region | 21 Hainan Province |
| 6 Liaoning Province | 22 Sichuan Province |
| 7 Jilin Province | 23 Guizhou Province |
| 8 Heilongjiang Province | 24 Yunnan Province |
| 9 Shanghai | 25 Chongqing |
| 10 Jiangsu Province | 26 Tibet Autonomous Region |
| 11 Zhejiang Province | 27 Shaanxi Province |
| 12 Anhui Province | 28 Gansu province |
| 13 Fujian Province | 29 Qinghai Province |
| 14 Jiangxi Province | 30 Ningxia Hui Autonomous Region |
| 15 Shandong Province | 31 Xinjiang Uygur Autonomous Region |
| 16 Henan Province | 32 Hong Kong, Macau, Taiwan and others |

----Many thanks for your participation. Please click the link below for Wechat red envelope---

Appendix 4.3 Statements

Introduction

We now want you to indicate to what extent you agree with the following statements. 1 means that you agree completely with the statement on the left, 10 means that you agree completely with the statement on the right, and the numbers in between indicate the extent to which you agree or disagree with the statements.

Statement 1:

A society should aim to equalize incomes.	1	2	3	4	5	6	7	8	9	10	A society should not aim to equalize incomes.
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

Statement 2:

For left side:

A society should have a particular focus on helping low-performing children in school.

For right side:

A society should not have a particular focus on helping low-performing children in school.

Statement 3:

For left side:

Children should be held responsible for their own choices.

For right side:

Children should not be held responsible for their own choices.

Statement 4:

For left side:

It is important for children to learn that life is not always fair.

For right side:

It is not important for children to learn that life is not always fair.

Appendix 6.1: Balance test, Norway

	(1)	(2)	(3)	(4)	(5)
	Gender	Age	Income	Education	Child
Merit 5y	0.025 (0.045)	0.515 (1.535)	10550.088 (36347.862)	1.428 (1.793)	0.080* (0.042)
Efficiency 5y	(-0.037) (0.045)	1.407 (1.537)	40023.245 (35340.763)	0.707 (1.795)	0.087** (0.042)
Luck 9y	(-0.027) (0.045)	2.335 (1.539)	28369.234 (36347.862)	0.328 (1.797)	0.126*** (0.042)
Merit 9y	(-0.027) (0.045)	-0.773 (1.535)	45108.282 (35958.840)	1.268 (1.793)	0.016 (0.042)
Efficiency 9y	(-0.017) (0.045)	2.199 (1.534)	-3774.385 (35774.538)	1.330 (1.792)	0.070* (0.042)
Luck 13y	(-0.070) (0.045)	-1.134 (1.527)	17795.899 (35058.060)	-0.763 (1.783)	0.037 (0.042)
Merit 13y	(-0.026) (0.045)	0.731 (1.528)	49949.983 (36005.945)	3.309* (1.785)	0.091** (0.042)
Efficiency 13y	-0.017 (0.045)	0.558 (1.534)	-3832.068 (35424.594)	1.784 (1.792)	0.082* (0.042)
Luck 17y	-0.001 (0.045)	-0.307 (1.534)	26846.269 (35729.465)	2.254 (1.792)	0.113*** (0.042)
Merit 17y	-0.066 (0.045)	1.996 (1.529)	48924.342 (36005.945)	1.418 (1.786)	0.125*** (0.042)
Efficiency 17y	-0.019 (0.045)	1.622 (1.529)	59225.618* (35774.538)	2.134 (1.786)	0.141*** (0.042)
Observations	3014	3014	2403	3014	3014
	-0.000	0.001	-0.001	-0.001	0.004
Prob > F	0.5209	0.2979	0.6622	0.6832	0.0117

Standard errors in parentheses

*p<0.1, ** p<0.05, ***

p<0.01

Appendix 6.2: Balance test, China (Shanghai):

	(1)	(2)	(3)	(4)	(5)
	Gender	Age	Income	Education	Child
Merit 5y	-0.000 (0.045)	0.248 (1.138)	-527.986 (811.882)	0.096 (0.106)	0.016 (0.034)
Efficiency 5y	-0.000 (0.045)	0.256 (1.138)	-413.990 (811.882)	0.020 (0.106)	-0.008 (0.034)
Luck 9y	-0.000 (0.045)	0.140 (1.138)	-477.990 (811.882)	0.128 (0.106)	-0.032 (0.034)
Merit 9y	-0.000 (0.045)	0.140 (1.138)	-340.000 (811.882)	0.124 (0.106)	-0.012 (0.034)
Efficiency 9y	-0.000 (0.045)	0.664 (1.138)	74.006 (811.882)	0.084 (0.106)	0.000 (0.034)
Luck 13y	-0.000 (0.045)	-0.084 (1.138)	-489.994 (811.882)	0.104 (0.106)	0.016 (0.034)
Merit 13y	-0.000 (0.045)	0.596 (1.138)	-858.000 (811.882)	0.076 (0.106)	0.016 (0.034)
Efficiency 13y	-0.000 (0.045)	0.548 (1.138)	-933.994 (811.882)	0.096 (0.106)	0.020 (0.034)
Luck 17y	-0.000 (0.045)	0.196 (1.138)	-253.996 (811.882)	0.128 (0.106)	0.004 (0.034)
Merit 17y	-0.000 (0.045)	1.000 (1.138)	-293.998 (811.882)	0.088 (0.106)	-0.008 (0.034)
Efficiency 17y	-0.000 (0.045)	0.904 (1.138)	154.006 (811.882)	0.048 (0.106)	0.020 (0.034)
Observations	3000	3000	3000	3000	3000
R^2	-0.004	-0.003	-0.002	-0.003	-0.002
Prob > F	1.0000	0.9981	0.9765	0.9852	0.9413

Standard errors in parentheses

*p<0.1, ** p<0.05, ***

p<0.01

Appendix 6.3: Heterogeneity Analysis: Observable characteristics

	(1)	(2)	(3)	(4)	(5)	(6)
	Gender	Income	Age	Education	Child	All
Norway	-0.253*** (0.014)	-0.280*** (0.012)	-0.244*** (0.014)	-0.303*** (0.012)	-0.253*** (0.020)	-0.166*** (0.031)
Female*Norway	-0.054*** (0.019)					-0.049** (0.019)
Low income*Norway		0.001 (0.022)				-0.043* (0.024)
Low age*Norway			-0.075*** (0.021)			-0.085*** (0.024)
Low education*Norway				0.063*** (0.021)		0.058** (0.024)
Child*Norway					-0.036 (0.023)	-0.072*** (0.025)
Constant	0.558*** (0.017)	0.571*** (0.017)	0.546*** (0.018)	0.585*** (0.017)	0.555*** (0.019)	0.506*** (0.024)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
(Norway + interaction)	-0.307 (0.014)	-0.279 (0.018)	0.169 (0.014)	-0.366 (0.017)	-0.289 (0.011)	
Observations	6014	6014	6014	6014	6014	6014
R ²	0.130	0.129	0.131	0.131	0.130	0.134

Standard errors in parentheses

*p<0.1, ** p<0.05, *** p<0.01

Appendix 7.1: Full regression: Observable characteristics

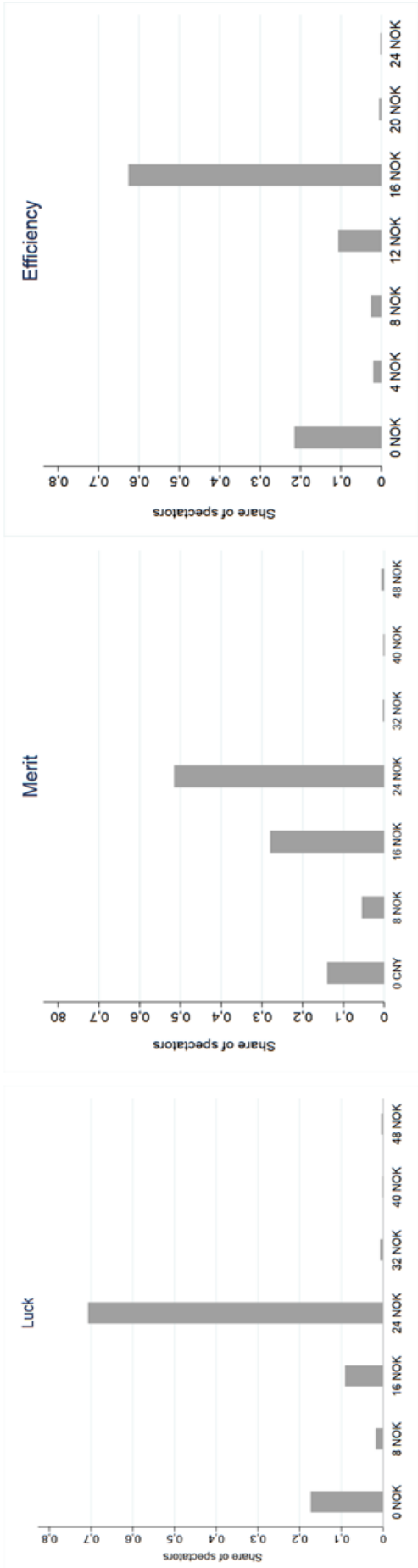
	(1)	(2)	(3)	(4)	(5)
	Sample	Sample	Norway	China	Sample
Norway (origin)	-0.281*** (0.010)	-0.280*** (0.010)			
Gender (female)		-0.043*** (0.010)	-0.069*** (0.014)	-0.020 (0.013)	-0.050*** (0.010)
Low Income		-0.006 (0.011)	-0.013 (0.015)	0.029 (0.018)	0.001 (0.012)
Low Age		-0.015 (0.011)	-0.028* (0.015)	0.057*** (0.018)	0.040*** (0.012)
Low Education		-0.030*** (0.011)	-0.001 (0.015)	-0.059*** (0.018)	-0.025** (0.012)
Child(ren)		-0.002 (0.012)	-0.034** (0.016)	0.037** (0.018)	0.065*** (0.013)
Constant	0.543*** (0.007)	0.571*** (0.017)	0.340*** (0.020)	0.506*** (0.023)	0.369*** (0.016)
Observations	6014	6014	3014	3000	6014
R ²	0.125	0.129	0.009	0.012	0.010

Standard errors in parentheses

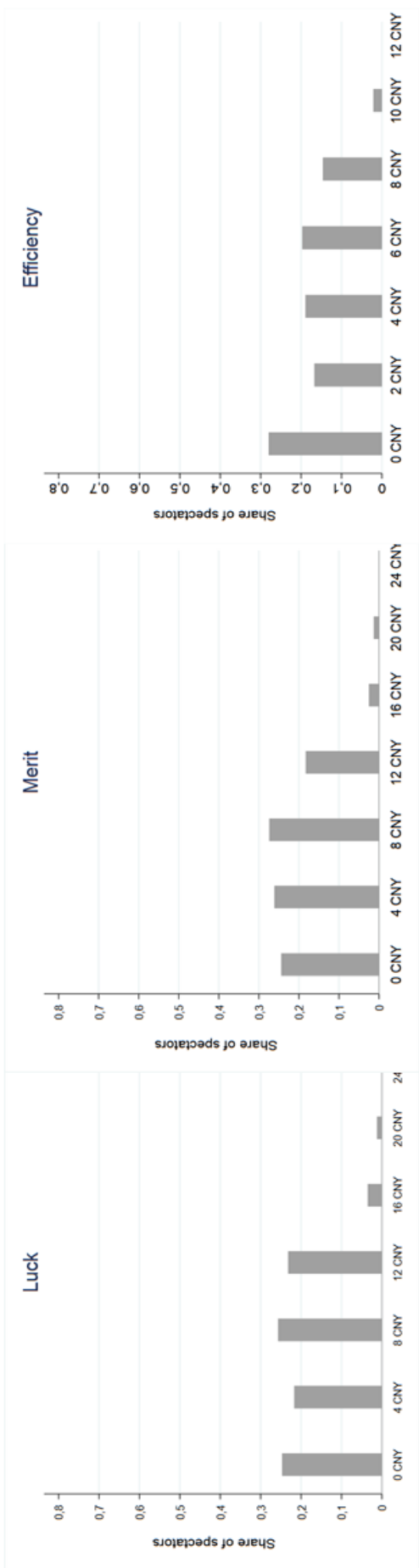
*p<0.1, ** p<0.05, *** p<0.01

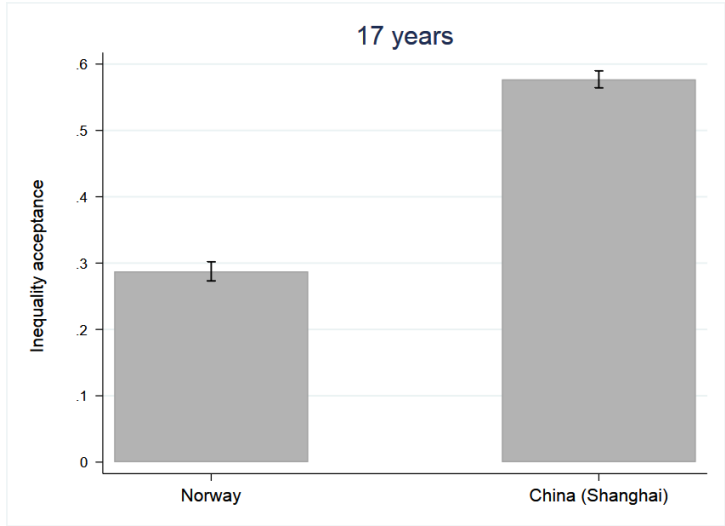
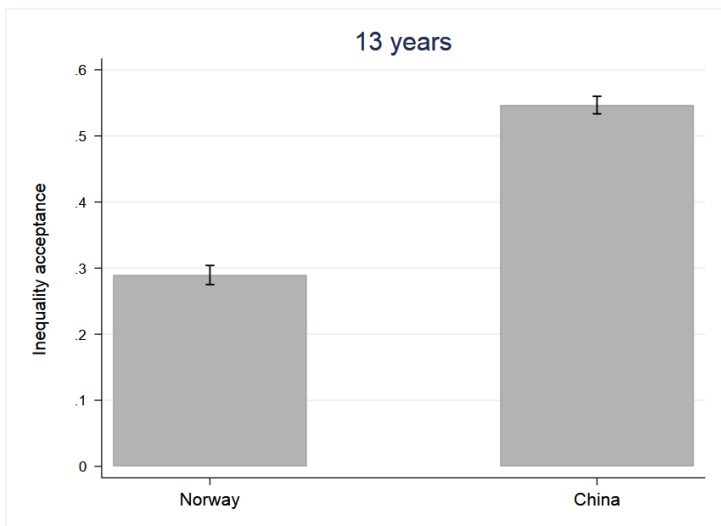
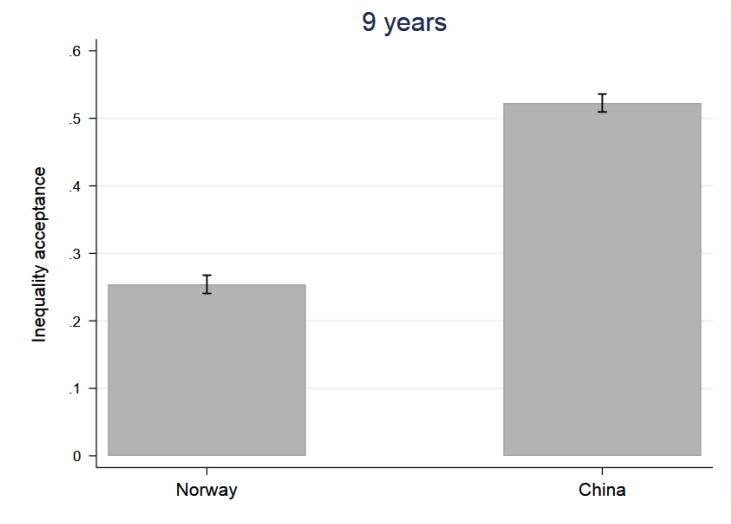
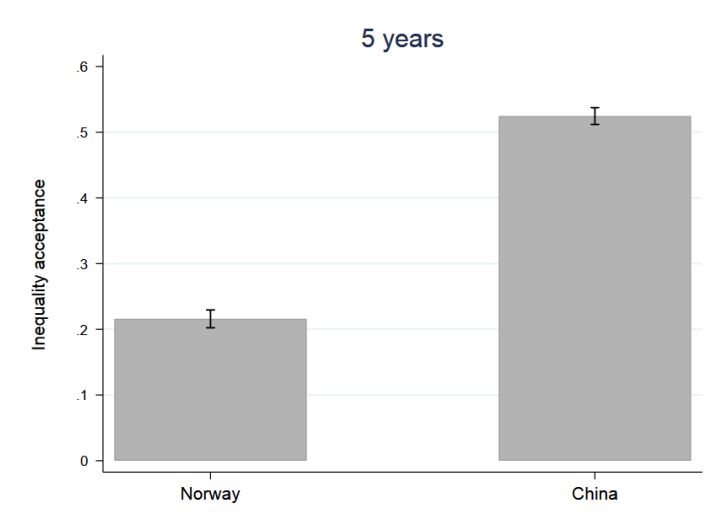
Appendix 7.2: Implemented inequality

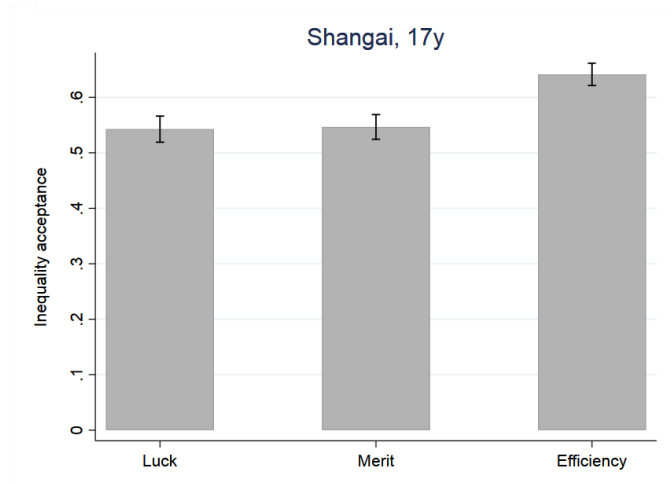
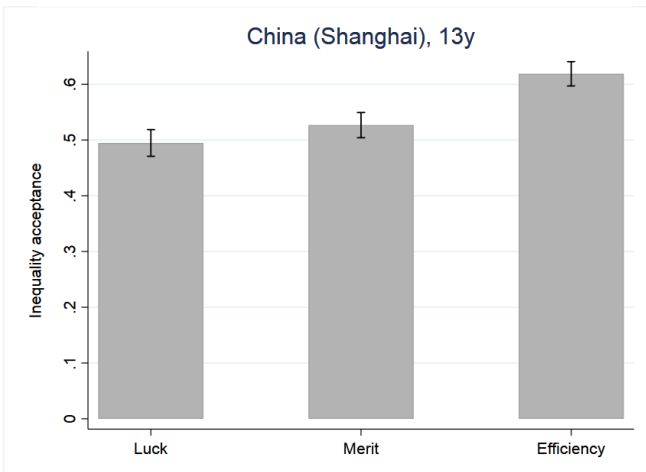
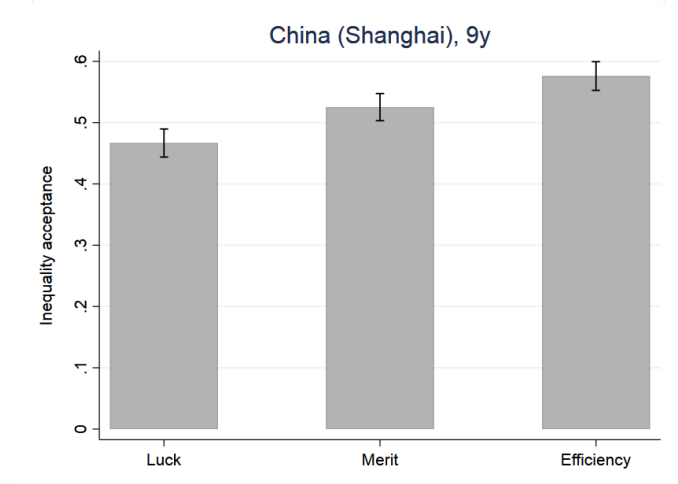
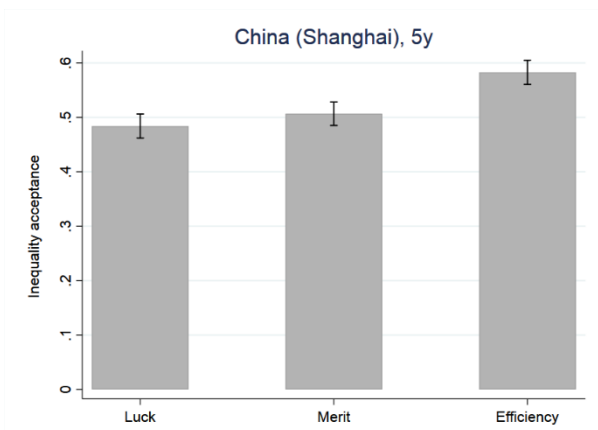
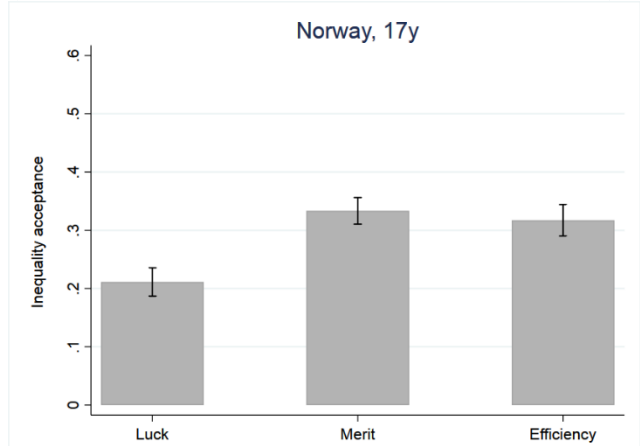
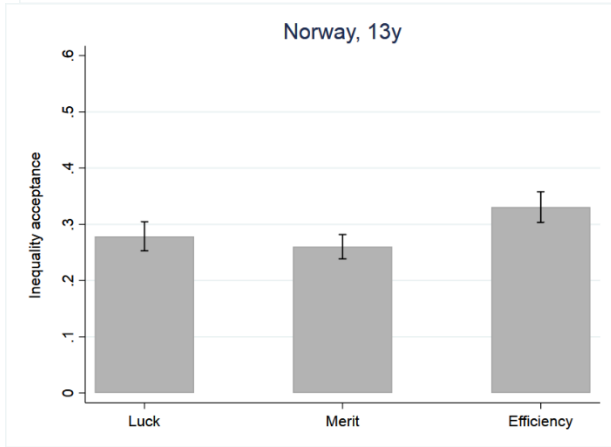
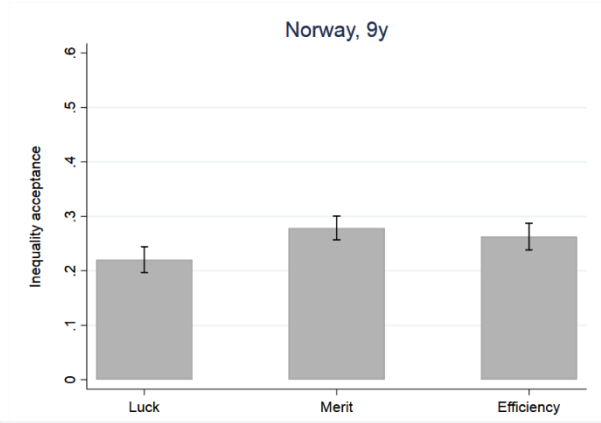
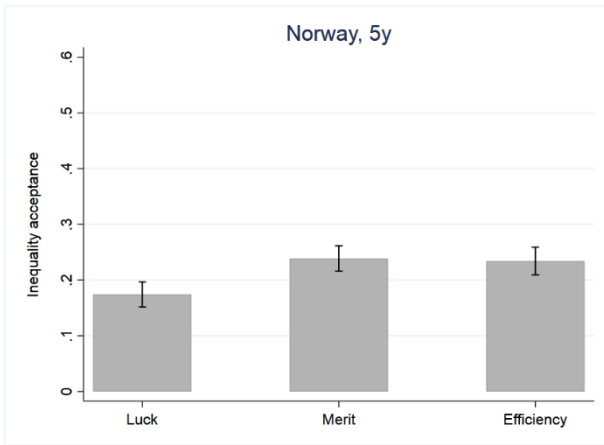
Norway



China (Shanghai)







Appendix 7.4: Calculations of Fairness Ideals

	Norway		China (Shanghai)	
	Equation	Share	Equation	Share
Egalitarian (E)	<i>In merit:</i> $\frac{child(A) = \frac{1}{2}}{N} = \frac{520}{1009}$	51,54 %	<i>In merit:</i> $\frac{child(A) = \frac{1}{2}}{N} = \frac{183}{1000}$	18,30 %
Libertarian (L)	<i>In luck:</i> $\frac{child(A) = 1}{N} = \frac{173}{1000}$	17,30 %	<i>In luck:</i> $\frac{child(A) = 1}{N} = \frac{247}{1000}$	24,70 %
Meritocrat (M)	<i>In merit:</i> $\frac{child(A) > \frac{1}{2}}{N} = \frac{478}{1009}$ - <i>in luck:</i> $\frac{child(A)=1}{N} = \frac{173}{1000}$	30,07 %	<i>In merit:</i> $\frac{child(A) > \frac{1}{2}}{N} = \frac{779}{1000}$ - <i>in luck:</i> $\frac{child(A)=1}{N} = \frac{247}{1000}$	53,20 %
Other	$100\% - (E) - (L) - (M) = Other$	1,09 %	$100\% - (E) - (L) - (M) = Other$	3,80 %