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The Lottery of Birth

An Experimental Study on Intergenerational Inequality and Perceptions of Fairness

Henrik Y. Ellefsen & Magnus Ingvaldsen
Supervisor: Alexander Wright Cappelen

Master thesis, Economics and Business Administration

NORWEGIAN SCHOOL OF ECONOMICS

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Magnus Ingvaldsen   Henrik Y. Ellefsen

Abstract

Rising income inequality after the Covid-19 pandemic has been a frequently discussed topic among both academics and the general public. In this thesis we aim to expand our understanding into how income inequalities are perceived through the lens of inheritance.

We conducted a survey experiment on the Norwegian population through the statistics company Norstat. Each respondent was presented with one treatment out of four, and asked to consider whether they perceived the hypothetical income inequality as fair or unfair. We then used a linear regression approach in order to analyse the collected data.

Our experiment yielded several interesting results. First, we found that people generally were accepting of income inequalities that was a result of inheritance. In general, treatments that implied parental investment, in the form of capital transfers or academic encouragement, were considered more fair than those that may be attributed to luck. Furthermore, we also found that voters belonging to the right side of Norwegian politics were significantly more inclined to perceive income inequalities as fair.

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1 Introduction

1.1 Background

On the 1st of January 2014, a new government took office in Norway. It was made up of an alliance between two economically liberal parties, and a series of new legislation was passed as the clocks passed midnight. Among these were reforms to the tax system. Wealth inheritance taxation, introduced in 1901, was abolished with significant protest from the left side of Norwegian politics. They argued that wealth taxation is perhaps the most socially beneficial form of taxation, and how its removal would result in increasing economic inequality. Commentators assumed that this relaxing of taxation would only be temporary, and that future left leaning governments would reinstate the inheritance tax (Dackling, 2020).

This was however not the case. In the next general election, the social democrats opted for a strategy where they emphasised the importance of taxation as a mechanism for reducing inequality, with particular focus on reintroducing an inheritance tax. The social democrats assumed that the generally egalitarian Norwegian population would embrace this position, but were wrong (Dackling, 2020). As a result, the incumbent government won four more years, and inheritance taxation was absent from the social democratic platform for the 2021 election.

The unpopularity of the proposed taxation hints at a fundamental tension between competing egalitarian and liberal values held by the Norwegian population. Norwegians generally believe in the importance of equal opportunities, which may indicate a latent support for ideas such as inheritance taxation. This egalitarian view is however challenged by liberal values that potentially is considered equally important by the population (Clemet, 2019). For instance, most people believe parents should have the right to help their children both financially and socially, which may come at the detriment of equal opportunities.

In a 2020 paper, Almås, Cappelen, and Tungodden, conducted an experiment aimed to explain the high variation in income inequality and redistributive policies across countries by examining diverging views of fairness between Norwegians and Americans. They

found that there is a clear difference in how fair inequality is perceived between the two cultures. In the Norwegian population, a more egalitarian view was prevalent, leading to respondents indicating higher a preference for more redistribution. The American population, on the other hand, held a more libertarian view, as respondents were willing to accept a higher degree of inequality (Almås, Cappelen, & Tungodden, 2020). Furthermore, the paper found that to what degree the participants were willing to redistribute incomes varied with the cause of the inequality. Participants were more willing to redistribute if the inequality stemmed from sheer luck, than if the inequality stemmed from differing productivity (Almås, Cappelen, & Tungodden, 2020). This finding may also reflect the previously mentioned tension between egalitarian and liberal values.

1.2   Motivation and problem formulation

In this thesis, we are looking to build upon this insight and examine how various sources of income inequality are perceived. Specifically, we are looking into what inequalities stemming from inheritance people consider as fair. By conducting a survey experiment on the Norwegian population, we aim to compare inherited material and immaterial sources of inequality. We refer to intergenerational transfers of wealth, such as financial assets, as material forms of inheritance. This form of inheritance is a widely discussed topic, with inheritance taxation often proposed as a solution to the inequality stemming from inheritance. Direct financial transfers are however not the only source of intergenerational inequality. Immaterial inheritance may take many forms. For instance, highly educated parents tend to produce highly educated children, which leads to income inequality through a wage premium on highly educated labourers in the market. The goal of this thesis is to examine whether people perceive these immaterial sources of inequality as more or less fair than material inheritance. Moreover, we also wish to understand whether inequalities that can be attributed to parental effort, in the form of investments into their children, are considered more fair than those who are a result of luck. In order to reach these goals, we constructed the following research question:

How are different sources of inequality perceived in regard to fairness, and what factors may influence this perception?

Our study yielded several interesting results. We constructed four distinct treatments that

each were intended to represent an actual source of income inequality. The first treatment was intended to represent capital inheritance and emphasised how the generated wealth was a result of parental effort. Interestingly, our respondents considered this treatment as significantly more fair than the other three treatments that were intended to represent immaterial inheritance. Furthermore, the treatment that may be interpreted as nepotism was considered the least fair, which was in accordance with previous research. Another interesting finding was that respondents perceived treatments implying parental effort as the source of the inequality as significantly fairer than those inequalities that may be attributed to luck.

The remainder of the thesis will be structured as follows. We will begin with providing a theoretical framework mostly based on earlier empirical research on the subject that is of particular relevance to our experiment. Then, we will present our data and how this was collected through the Norwegian statistics company Norstat. Next, we will discuss the methodology used in order to conduct our study, before we present our findings in the analysis section. Finally, we will provide a discussion where we consider the implications of our research.

2 Literature review

2.1 Income inequality

Income inequality, and economic inequality in general, is a frequently discussed topic with a wide range of definitions. A commonly used version defines income inequality as "the distribution of equivalised household disposable income, defined as income from all sources, including transfer payments, minus taxes and social security contributions" (Atkinson & Morelli, 2014). This definition includes multiple sources of income such as income from labour and capital income. Income inequality can be measured with various statistical methods, with the gini-coefficient as the most commonly published figure by statistical agencies (Atkinson & Morelli, 2014).

According to a 2020 report on income inequality by Statistics Norway, the degree of income inequality in Norway varies significantly with what measurements are being used. If only income resulting directly from labour is considered, there was a relatively insignificant increase in the share of total incomes going to the top 1 percent of earners. Top earners went from receiving 8 percent of total national incomes, to 8,8 percent between 2001 and 2018. However, these results change drastically if you also include capital incomes, with the wealthiest 1 percent then receiving a total of 19 percent of total national incomes in 2018, which was an increase from only 10,9 percent in 2001 (SSB, 2020).

2.2 Sources of income inequality

In this section, we will give a brief explanation of Thomas Piketty's model on how income inequality rises on a macroeconomic level as a result of wealth inheritance and accumulation. Then, we will discuss some forms of social inheritance that also tend to generate income inequality.

2.2.1 Piketty's model of income inequality

In his book "Capital in the Twenty-First Century", Thomas Piketty provides a thorough theoretical and empirical analysis of how income inequality arises as a result of wealth inheritance. He creates a model which explains under what conditions income inequality

will rise in an economy. This section will only provide a simple introduction to the key aspects of the model.

Piketty's model consists of one definitional relationship, two fundamental economic laws of capitalism, and one inequality relationship. The definitional relationship serves as a connection between the stock of capital (K) and the flow of income (Y). Capital includes all forms of return-bearing assets, including housing. The relationship between K and Y is given as beta (β) (Milanović, 2014). According to Piketty's research, β has followed a U-shaped curve since the French Revolution. This K/Y ratio was high in the 1800s, and began decreasing after WW1, it then remained low until the last thirty years where the ratio has been steadily increasing (Milanović, 2014). The first fundamental economic law of capitalism states that the share of capital income in the total national income (α) is equal to the real rate of return of capital (r) multiplied by β. This is connected to his inequality relationship which states that if r is greater than the rate of growth in the economy (g), inequality will rise. Rising income inequality will thus enter a positive feedback loop as long as $r > g$, as capital owners get wealthier at a faster rate than the overall economy. In addition, the income inequality gap will rise at a faster rate if capital owners do not consume their entire rate of return and decide to invest into capital, which increases α further (Milanović, 2014). These are the key mechanisms of Piketty's model, and describe how increasing rate of returns on capital has led to increased income inequality in the western world. The final fundamental law plays only a minor role for the long-term behaviour of β, and is thus omitted from this thesis.

2.2.2   Cognitive abilites

Based on insights from decades of research, there are few doubts about there being a positive correlation between general intelligence (IQ) and positive socioeconomic outcomes. Different studies give varying results regarding the size of this correlation, but most scholars do agree that it is uncommonly strong for psychological studies (Strenze, 2007). There might however be some challenges related to isolating general intelligence in the research. Variables such as parental socio-economic status and academic performance might influence the relationship.

Despite these challenges, there exists significant evidence that the most important factor

in deciding whether someone possesses high IQ or not, is their parents' cognitive abilities. Furthermore, research also indicates there being a significant correlation between positive outcomes, such as higher incomes and more prestigious occupations, and general intelligence (Gottfredson, 2004).

2.2.3   Parental effort

How education influences expected wages is a thoroughly researched subject. Studies show that there is a significant gap between people who graduate college and those with high school diplomas. The size of this gap has varied both over time and between countries. In the US, the gap is large and has continued to grow over time. The picture is somewhat more complicated in European countries where there exists a significant gap, but the trends vary. While the gap is closing in some European countries, there is however still a significant connection between college degrees and higher wages (Crivellaro, 2016).

According to a 2016 study on the effect of paternal involvement on future education levels, academic encouragement by parents is positively correlated with education levels. Furthermore, the study found that parental involvement may be especially crucial in cases where children were struggling academically (Benner & Sadler, 2016). These results indicate how parental effort serve as an indirect source of inequality by motivating children to pursue higher education.

2.2.4   Parental role models

People often tend to follow the educational and professional path of their parents. The phenomena where children of highly educated parents are more likely to pursue higher education themselves is consistently found across most countries. According to research on the subject, there are two explanations for this intergenerational relationship. First, the inherent characteristics that lead parents to pursue higher education can also impact their general abilities related to raising a child. Through genetics and environmental factors, children might inherit these characteristics from their parents. Second, parents who have attained more education, are more likely to provide an environment which furthers educational success (Dickson & Robinson, 2016). Consequently, the effect of parents serving as role models might be a significant source of income inequality.

2.3   Egalitarian and liberal justice

When discussing whether a given outcome should be regarded as fair, different conclusions will be drawn based on what framework of justice it is considered. According to John Rawls, who is considered one of the greatest philosophers on the subject, the fundamental idea of justice is in its simplest form fairness (Rawls, 1958). What outcomes or principles that are considered just, or fair, is however one of the most frequently discussed questions in disciplines such as political science, economics, and philosophy. In this section we will present two frameworks of justice which emphasise different factors when evaluating socioeconomic outcomes. First, we will discuss egalitarian justice, where principles such as equality of opportunity are given primacy. Then, liberal ideas of justice are presented, which form a counterpart to egalitarian ideas, as individual rights are emphasised.

2.3.1   Egalitarian justice

John Rawls' work *a theory of justice* is considered one of the greatest works of political philosophy, and is fundamental to egalitarian justice. Here, he outlines a thought experiment known as the veil of ignorance, which serves as the basis for his views on fairness. Briefly, the experiment envisions an original position where every participant of society is made unaware of their socioeconomic position. From this scenario, Rawls argues that there will be a series of principles that all participants will agree on, due to them being unaware of their own position. According to Rawls, these principles will be based on the maximin rule, where decisions are made that maximises the well-being of the least well-off participants in society (Rawls, 1971). Based on these decision-making processes, Rawls argues that one of the key principles emerging from the social contract would be the difference principle. This principle relates to socioeconomic inequalities, and whether these are to be considered fair. According to the difference principle, an inequality is only acceptable if it is to the benefit of the least advantaged. More specifically, this means that inequalities can only be accepted if all participants benefit from its existence (Rawls, 1958).

One of Rawls' chief concerns is overcoming what he calls the lottery of birth. He argues that nature is arbitrary, and peoples' fates are shaped by circumstances that individuals have no control over such as family background or natural talents (Rawls, 1971). Equality of

opportunity is thus considered as essential in order to correct these arbitrary circumstances. In practice, this means making sure that everyone has the same life opportunities regardless of social backgrounds (Rawls, 1958). What he argues for can thus be characterised as a just meritocracy, where everyone has an equal chance to develop their natural abilities. While Rawls supports a meritocracy, he emphasises how it is crucial that individuals have equal starting points and opportunities for this to be just. He also argues that this set of governing principles will create a more efficient and productive society, as the talents of the population may be fully utilized (Rawls, 1958).

Egalitarian justice can thus be summarised as a series of ideas and principles that emphasise values such as equality of opportunity. Inequality is generally regarded with scepticism unless they result in tangible benefits for the less well-off in society. Rawls, and other egalitarian philosophers, consequently argue that striving for equality of opportunity is essential to protect basic liberties, and consider arbitrary inequalities as unfair. It is however important to point out that egalitarian views of justice are relatively diverse. More left-leaning philosophers, such as Cohen, argue that egalitarian justice requires more redistribution of wealth, and thus a general minimisation of economic inequality (Cohen, 1997). In spite of this diversity, the ideas discussed in Rawls' justice theory provides the most commonly used framework for egalitarian justice.

2.3.2   Liberal justice

Robert Nozick is considered one of the greatest thinkers in liberal philosophy, and is critical of Rawlsian views of egalitarian justice. According to liberal frameworks of justice, individual rights and autonomy must take precedence over egalitarian values such as equality (Coleman, Frankel, & Phillips, 1976). Consequently, liberal considerations of what constitutes a fair distribution of wealth differs significantly from egalitarian views.

Nozick argues that there are three historical principles of justice. If the requirements of these principles are met, an outcome must be considered as fair. The first of these is justice in acquisition. This principle states that the initial acquisition of any given holding must be just. Specifically, possession of holdings must have been a result of processes such as voluntary exchange between parties, or original appropriation. The second principle is justice of transfer. Here, Nozick argues that holdings are considered just if subsequent

transfers have been made voluntarily and consensually. Finally, there is the principle of justice in rectification. This final principle states that injustices in acquisition or transfer may be rectified through compensatory measures, but not through the redistribution of holdings. In practical terms, he argues that an injustice can be rectified if adequate compensation is made, but not by dispossessing the current holder of any assets and redistributing these (Coleman, Frankel, & Phillips, 1976). In summary, any situation must be considered fair, according to liberal justice, if the requirements presented in these three principles are met. Consequently, liberal thinkers argue that any inequality should be considered fair as long as it is not the result of criminal activities or coercion.

In order to exemplify how inequalities can arise from fair circumstances, Nozick employs what he calls the Wilt Chamberlain example. Here, he argues that the professional basketball player Wilt Chamberlain has become significantly wealthier than the general population, but to the detriment of no one. Spectators are willing to pay a fair ticket price in order to watch Chamberlain play basketball, and he receives a portion of the ticket sale revenue. This is fair as Chamberlain generates sales through his skills as a player, and people voluntarily pay in order to watch. According to Nozick, every participant in the example is acting in accordance with their individual interests and rights, and thus the outcome must be considered just. Consequently, seizing of the fairly traded holdings, stemming from individuals exercising their rights, are considered unfair no matter what the intention may be (Coleman, Frankel, & Phillips, 1976).

These ideas stand in contrast to egalitarian views. According to egalitarian philosophers, redistributive policies are necessary in order to attain equality of opportunity, and are thus required in order to produce fair outcomes. Liberal thinkers, on the other hand, would argue that the process of seizing justly possessed holdings is inherently unjust, and is an unacceptable infringement on individual rights. These conflicting views of fairness stem from differing opinions of what considerations are to be given primacy. Egalitarian frameworks of justice are not inherently against individual rights, such as property rights, but argue that these rights sometimes must be infringed upon in order to ascertain societal goals such as equality of opportunity. This also applies to liberal views of justice who value meritocracy and equality of opportunity, but argue that one cannot compromise individual rights in the name of these ideas. In summary, whether a situation is considered

fair is often a result of differing opinions of which of these conflicting values any given person gives primacy to.

2.4   Empirical findings on perceptions of fairness

General attitudes towards distributive justice have, as previously mentioned, been a frequent subject of theoretical and empirical research. In this section we will discuss some previous empirical findings into how people generally perceive inequalities, and under what conditions political redistribution of wealth is considered fair.

In their 2020 paper *Cutthroat Capitalism versus Cuddly Socialism: Are Americans more Meritocratic and Efficiency-Seeking than Scandinavians?*, Almås, Cappelen, and Tungodden (2020), aimed to study the differences in how Americans and Norwegians perceive inequality. They created an experiment with a set of three treatments that each represented different causes of an income inequality. The first treatment reflected an inequality that stemmed from pure luck. Next, there was a merit treatment. Here, the inequality resulted from differing productivity. Finally, there was an efficiency treatment, where the inequality was a result of luck, but there was a significant cost of redistribution. Respondents were only given one of the three treatments. Each respondent was then asked to redistribute the inequality in a manner they regarded as fair given the information received. Generally, they found that Norwegians were significantly more egalitarian than their American counterparts. Interestingly, the overall redistribution levels chosen by each population were very similar to the actual gini-coefficient of their respective populations (Almås, Cappelen, & Tungodden, 2020).

The study yielded interesting insight into how each population perceives fairness. In general, they found that Americans were much less likely to redistribute earnings compared to Norwegians. Specifically, 63.3 percent of Norwegians decided to divide equally, while only 42.3 percent of Americans decided the same. Moreover, only 14.8 percent of Norwegians decided not to redistribute at all, where 38.9 of Americans made no redistributions (Almås, Cappelen, & Tungodden, 2020). Furthermore, the study found that there was considerably more acceptance of an inequality, in both populations, when it was a result of merit rather than luck. The added redistribution costs did not seem to have a big influence on distribution. The researchers argue that this difference in attitudes can be contributed to

the fact that there are significantly more libertarians in the US compared to Norway. These libertarians are more likely to seek efficiency at the cost of equality. There was however a clear pattern where both Americans and Norwegians found meritocratic inequality as more fair than pure luck (Almås, Cappelen, & Tungodden, 2020).

Another experimental study called *How fair is it? An Experimental Study of Perceived Fairness of Distributive Policies*, written by Rondon and Sanjaume-Calvet, aims to understand under what conditions Americans view redistributive policies favourably. They employed a survey-based conjoint experiment in order to examine perceived fairness when different components are considered. The experiment asked respondents to evaluate redistributive policies in hypothetical countries, in order to map latent attitudes towards redistribution (Rodon & Sanjaume-Calvet, 2020). In order to gain a general understanding of attitudes towards fairness, respondents were asked to consider several aspects of the subject. They were asked to consider policies that would change the country's overall wealth, the situation of the wealthiest and poorest, social mobility, and various sources of wealth.

Generally, the results indicated that people felt strongly that redistributive policies would have to make poorer people wealthier in order to be fair. This sentiment is in accordance with Rawls' previously discussed views of fairness (Rodon & Sanjaume-Calvet, 2020). Furthermore, respondents regarded policies that would increase social mobility favourably. Interestingly, respondents viewed policies that would increase both upward and downward mobility more favourably than keeping the current state. This indicates a general meritocratic sentiment. Finally, the experiment yielded interesting results regarding sources of wealth. People's inherent talent served as a baseline for perception of fairness. The respondents indicated that they regarded effort-based inequality as somewhat fairer than talents, which makes this the fairest source of inequality. Then, there was a significant gap down to the next factor which was a luck treatment. Respondents viewed luck-based inequality as unfair, and were thus supportive of policies that aimed to correct this inequality. Finally, there was a family-connection treatment that aimed to reflect nepotism. This treatment was considered the most unfair of all the study's treatments, with people strongly supporting redistributive policies (Rodon & Sanjaume-Calvet, 2020).

2.5   Individual characteristics and perceptions of distributive justice

Perceived fairness regarding questions of distributive justice varies with a wide range of individual characteristics. Consequently, attempting to understand what specific characteristics are linked to given attitudes has been a frequent area of research. In this section we will present research into how attitudes towards distributive justice are linked to various individual characteristics that are of particular relevance to our research. We will start by examining research into gender-based differences on distributive justice. Then, we will present theory on how age and income may influence perceptions of fairness. Finally, we shall provide a brief discussion of the significance of political leanings.

2.5.1   Gender-babsed differences from experimental research

In order to understand gender-based differences on distributive justice, we will present findings from an experimental paper on gender and distributive justice. By utilising a dictator game experiment, the researchers aimed to gain a deeper understanding of the subject (Rodriguez-Lara, 2015). The dictator game is a derivative of the ultimatum game, and is a popular experiment in psychology and behavioural economics. In short, the experiment is made up of a "dictator" and one other player. During the game, the dictator is asked to propose a distribution of wealth between themselves and the other player, and the other player can decide to accept or deny the proposition. If the other player denies the proposed distribution, the payoff for both players is zero. According to classical economic theory, the other player should accept any proposition where they receive a greater amount than zero. Results from this experiment usually challenges this assumption, as people often reject unequal propositions due to them being perceived as unfair. This experimental method has however received criticism based on concerns over external validity outside the laboratory (List, 2007).

The first experiment, from 2014, was conducted among Spanish university students. Here, pairings of two were created with one serving as the dictator, and the other as the observer. In this experiment, the researchers wanted to introduce effort-based rewards in order to gain a deeper understanding of the subjects' attitudes towards fairness. Each participant

was given a short multiple-choice test, and a randomised monetary reward based on the amount of correct answer. The randomisation of rewards made it so that test performance was not the only factor in determining generated funds. Next, the dictator was asked to choose from five methods of allocating the funds between themselves and their matched observer. First, the dictator could choose to keep all the funds for themselves, which was called the selfish allocation. Second, all funds could be given to the observer. Third, dividing the funds equally in what was called the egalitarian allocation. Fourth, dividing the funds based on how many correct answers they had on the test. This was called the accountability allocation. Fifth, dividing the funds based on the subject's monetary contribution, which was called the libertarian allocation (Rodriguez-Lara, 2015).

The experiment yielded several results, with one of particular relevance to our thesis. Overall, women were significantly less likely to choose the selfish distribution than men (Rodriguez-Lara, 2015). Furthermore, women were also significantly more likely to choose the egalitarian allocation than the men were. Women's allocations were also more sensitive to context, with their choices regarding allocation varying more with whether the dictator had accumulated more or less funds than the observer (Rodriguez-Lara, 2015). These findings were consistent with other similar research such as Dulebohn et al. (2016), which also conducted a dictator game experiment. This study did however also use neuroscientific methods in order to approach the question of gender-differences, and found women to consistently make more egalitarian choices than men (Dulebohn et al., 2016). Based on these findings, we can see that there exists significant empirical evidence that indicates women, in general, harbouring more egalitarian preferences than men.

2.5.2   Age groups and perceived fairness

Another factor influencing peoples' perception of fairness is age. Conventional knowledge tells that people, in general, tend to get more conservative with age, which may influence attitudes towards distributive justice (Peterson, Smith, & Hibbing, 2020). In a 2017 study, Brienza and Bobocel, aimed to understand how age affects perceptions of justice, which again influences behaviour in an organisational context. Their hypothesis was based on the idea that fair treatment may alleviate negative psychological states, and wished to see whether perceived fairness was related to experienced emotional states. In order to conduct their study, the researchers recruited US workers to complete an online survey.

Participants were asked to answer twenty questions, where four of these were related to perceptions of distributive justice (Brienza & Bobocel, 2017).

Based on respondents' answers, the study found evidence that older people tended to have a less negative view on unequal socioeconomic outcomes. This indicates that younger people are more likely to consider an uneven allocation of resources as unfair (Brienza & Bobocel, 2017). These empirical findings are in line with similar research. A 2020 study aimed to challenge the previously stated conventional knowledge of how political ideas change with age. This study yielded empirical evidence indicating that American people were more likely to become conservative with age. The effect observed in this paper were however not that strong, and found that a considerable share of people kept their political beliefs throughout their lives (Peterson, Smith, & Hibbing, 2020). However, these findings also indicate that people may change their attitudes towards distributive justice with age, as they tend to become more conservative.

2.5.3   Income levels and perceived fairness

A 2010 paper by Dion and Birchfield attempted to gain further understanding into why there are global variations in support for redistributive policies. In order to accomplish this goal, they gathered a vast dataset comprised of annualised surveys from 50 countries (Dion & Birchfield, 2010). Considerable amounts of background information were collected, which allowed the researchers to estimate various fixed effects. Their main hypothesis was that support for redistributive policies would be inversely related to income levels. Yielding significant results, they found that, not accounting for regional differences, there was an 18 percent chance that members of the high-income group would view redistribution negatively (Dion & Birchfield, 2010). Being an international study, these results indicate that these perceptions of fairness may be consistent over various regions.

This study was based data on collected over time, and the researchers were thus able to see how perceptions of fairness changed with shifting social positions. Interestingly, the found that people who moved between classes also changed their views on distributive policies (Dion & Birchfield, 2010). These findings stand in contrast to the results from the previously discussed paper by Brienza and Bobocel, who found that political sentiments mostly remain constant. Dion and Birchfield hypothesise that this change in perceptions

on fairness may be a result of self-interest crowding out political beliefs (Dion & Birchfield, 2010). Consequently, it may be interesting to conduct further research into this topic.

2.6   Norwegian political parties and constellations

The figure below shows the current distribution of seats in the Norwegian parliament. Furthermore, the parties are placed from left to right according to their position on the economic axis of Norwegian politics.
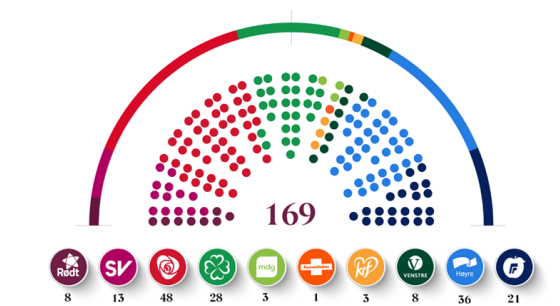
Figure 2.1: The parties of Stortinget, 2023b

What is usually considered the left in Norwegian politics consists of three parties. On the far-left wing lies Rødt, which is a socialist party. They hold eight seats, and represent the most extreme left views. Rødt is regarded as a relatively radical party, and argues for ideas such as the removal of capitalism as Norway's economic system (Rødt, 2019). Next, with 13 seats, is Sosialistisk Venstreparti (SV) which, while also a socialist party, represents a somewhat more moderate social economic policy compared to Rødt (SV, 2023). Arbeiderpartiet, with 48 seats, is the largest party on the left, and the national assembly in general. They are a social democratic party and are the leaders of the current government (Arbeiderpartiet, 2023).

Next, what is usually referred to as the centre of Norwegian politics consists of four parties. This group is relatively heterogenous. First, we have Senterpartiet which is a mainly agrarian party that chiefly represents rural interests (Senterpartiet, 2023). Senterpartiet is currently the junior partner in a government coalition with Arbeiderpartiet, and hold 28 seats in the national assembly. Next, there is the green party Miljøpartiet De Grønne, or simply MDG (MDG, 2023). They hold a total of 3 seats. Kristelig Folkeparti, or just KrF, is a christian-conservative party which argues for christian traditional values (KrF,

2023). While being considered a centre party, they are categorised as a part of the right side of Norwegian politics. Finally, we have Venstre, which is considered the last of the centre parties. They are a moderate liberalist party, and hold 8 seats in the parliament (Venstre, 2023). Venstre is also considered as a part of the right-side of the political spectrum. In the graph above, we can see there is a group holding 1 seat which is called Pasientfokus. This is not a traditional political party, but an independent list which only entered the election in the northernmost county Finnmark. Pasientfokus does not have a complete political programme, ignoring most areas of government. Their programme consists chiefly of measures required to protect hospitals in Finnmark (Olav Garvik, 2023). We have chosen to omit them from our analysis as they are only a regional party, and lack formalised opinions on most political issues.

Finally, the right-wing of the Norwegian political spectrum consists of two parties. First, there is Høyre, which is a conservative party (Høyre, 2023). They were the second biggest party at the last general election, and hold 36 seats in the parliament. Høyre also had the previous prime minister, Erna Solberg. The other right-wing party is Fremskritspartiet, which hold a total of 21 seats. According to themselves, they are a liberalistic popular party. In practical terms, their ideology is described as a mixture of traditional economic liberalism and right-wing populism. It is however important to emphasise that this right-wing populism is significantly more moderate than what is commonly described as right-wing populism in the European context (Jupskås & Garvik, 2023).

For the purposes of our analysis, we have divided all the major parties introduced above into two general groups. Our grouping is based on what are usually described as potential coalition partners, and shared ideological beliefs. The left consists of Rødt, SV, Arbeiderpartiet, Senterpartiet, and MDG. In general, voters who vote for these parties are described as left-side voters. The right thus consists of KrF, Venstre, Høyre, and Fremskrittspartiet. Similarly, voters who vote for these parties are generally considered as belonging to the right-side of Norwegian politics. It is important to emphasise that Norwegian parties are relatively heterogenous, and parties that are close on the economic spectrum may differ significantly on various topics. As our thesis aims to map different attitudes towards economic inequalities, using these groupings is however quite accurate, as they are well established among the Norwegian populace.

3 Data

In this chapter we will describe how we collected our data, as well as give a brief descriptive overview of the data. We will also describe the constructed variables which we will use in the analysis.

3.1 Data collection

The data collection strategy employed in this study involves the utilization of the survey method featuring standardized questions. This method presents distinct advantages in terms of efficiency, particularly in reaching a sufficient sample size. The magnitude of the sample size, in turn, gives the prospect of generalizing findings from the sample to the broader population.

The data our research is based on was collected from the Norwegian public, through the statistics company Norstat. Norstat is a leading European data collection company for market research, operating since 1997. The company focuses on delivering reliable, high-quality data through fair and transparent data collection methods. They utilize an extensive international panel network, and employ automated processes to ensure both speed and efficiency in data collection. Norstat also adheres to ESOMAR's ethical guidelines in all its operations (Norstat, 2023). By using Norstat's omnibus we were able to get 1051 respondents, which all were selected carefully to be as representative to the overall population of Norway as possible. The sample size were split in four evenly distributed groups, were each group got one unique question. Additionally the whole sample size were given a question regarding their political beliefs.

3.2 Survey

We constructed four distinct treatments, each intended to represent a source of income inequality. The first three treatments represent immaterial sources of inequality, with the final treatment representing inequality through intergenerational wealth transfers. Each of the treatments were constructed in a manner which makes them as similar as possible, with only the source of inequality varying between the four questions. Participants were

presented with a hypothetical scenario with two people who were completely identical except for one factor. This factor is then emphasised as the source of a significant income discrepancy, and the respondents were asked to consider whether the unequal outcome was fair or not on a Likert scale. Each of the factors were intended to represent prevalent sources of inequality that are discussed earlier in the thesis.

The first treatment, called the effort treatment, describes a scenario where an unequal income distribution stems from the parents of Person A helping and encouraging him/her during their childhood, which has proved beneficial for them in the labour market. Parental investments, in the form of encouragement and support, during childhood is, as mentioned earlier, a significant source of inequality. The respondents are thus asked to answer to what extent some parents helping their children, while others do not, and the inequalities that may stem from this choice, is considered fair or unfair.

Our second treatment is referred to as the intelligence treatment. This treatment is intended to represent genetical differences, and how fair inequalities resulting from these are perceived. Here, the question explains how the income inequality is a result of one of the people inheriting better cognitive capabilities than the other. Simply, Person A is more intelligent than person B, and this has resulted in an income inequality.

The third treatment is referred to as the preference treatment. In this treatment, participants are presented with an income inequality stemming from the two hypothetical people choosing similar career paths as their parents. This is intended to represent the discrepancies that result from people growing up in different socio-economic households. Surroundings are an important source of inequality, as people often make similar choices as their parents simply due to them passively acting as role models.

Finally, the fourth treatment is called the capital treatment. In this scenario, respondents are asked to consider an inequality stemming from a simple intergenerational transfer of wealth. More specifically, the inequality is a result of person A being given shares in their parent's company, which pays out an annual dividend. We chose this mechanism of inheritance as we believed a straight cash transfer to be both too direct and relatively unrealistic.

All the treatments have in common that the source of inequality is something out of

the hypothetical children's control, and is a result of choices made by their parents. We chose this approach as it allows us to measure the populations attitudes towards intergenerational sources of inequality where luck, from being born into the beneficial circumstances, is the only factor deciding the outcome. Furthermore, the "Effort" and "Capital" treatments reflect parental investment into their children. Consequently, these inequalities are intended to be interpreted as parents actively helping their offspring, while the "Intelligence" and "Preference" treatments reflect pure luck as the inherited advantages resulting in an inequality are acquired without parental effort. In this way, we can measure the participants' views on how fair income inequalities which are a result of inheritance are perceived. The four treatments can be summarised as follows:

- **Effort treatment (E):** The respondent considers whether an income inequality stemming from parental effort, in the form of encouragement and support, is fair or unfair.

- **Intelligence treatment (I):** The respondent considers whether an income inequality stemming from inheriting better cognitive abilities, in the form of IQ, is fair or unfair.

- **Preference treatment (P):** The respondent considers whether an income inequality stemming from different career paths, based on parents acting as role models, is fair or unfair.

- **Capital treatment (C):** The respondent considers whether an income inequality stemming from intergenerational wealth, in the form of dividends from their parent's company, is fair or unfair.

3.3   Construction of variables

For the main analysis we started by making dummy variables for all the treatments, taking the form of (4) if the response was either "Fair", (3) if "Somewhat fair", (2) if "Somewhat unfair" and lastly (1) if "Unfair". The dependent variable *FCEIP* in our model is the intersection between the four treatment dummy variables mentioned above, which essentially means the sum of the fairness score. Since each respondent only got one question this means that FCEIP holds a value between 1-4. To be able to compare

the relative fairness between the treatments we also had to make the following dummy variables *Effort*, *Intelligence*, *Capital*, and *Preference*, which is stating if a person took the specific treatment or not.

The survey data also included demographic and socioeconomic factors of the respondents, therefor we made four independent variables to gain insights in the relationship between those and the dependent variable. We created the variable *Male*, which includes all male participants. The variable *High age* includes all participants in the range of 39 years old or older, and is constructed on the basis of a median age in Norway of 39 years old in the year 2016 (Marianne, 2016). *High income* includes the participants with a household income of 1.300.000 NOK or more. Lastly we made a variable to distinguish the participants with a high education level equalling a masters degree or higher.

In the second section of our analysis we look at the perceived fairness between two different groups of political affiliation. We therefor created a variable called *Right-win* which is comprised of the people who would replied they would vote for either Høyre, Fremskrittspartiet, Venstre or Kristelig Folkeparti, if there was an election today. To be able to look at the percieved fairness compared to all the different treatments individually, we used the dummy variables described in the first part of this section. Thus, we will be able to see the relative perception of fairness between the participants with different political views in relation to each individual treatment.

The table below shows the different variables, their respective intervals, and percentage of observations in each. It also shows how the variables will be used in the regression models for our analysis, in the "Type of variable" column. The first value describes the role of the variable while the second describes the nature of the variable.

Table 3.1: Description of Variables

Variable name	Percentage	Type of variable	Interval
FCEIP	100%	Dependent / Ordinal	"Fair"=4, "Somewhat fair"=3, "Somewhat unfair"=2, "Unfair"=1
FCEIP-B	100%	Dependent / Binary	"Fair" or "Somewhat fair" =1, "Somewhat unfair" or "unfair" =0
Effort	25.0%	Independent / Binary	Took the treatment = 1, or not = 0
Intelligence	25.0%	Independent / Binary	Took the treatment = 1, or not = 0
Preference	25.0%	Independent / Binary	Took the treatment = 1, or not = 0
Capital	25.0%	Independent / Binary	Took the treatment = 1, or not = 0
Male	46.9%	Control / Binary	Male = 1, Female = 0
High age	66.6%	Control / Binary	39 years old or older = 1, younger = 0
High income	16.4%	Control / Binary	Household income of over 1.3 mill NOK = 1, less or no comment = 0
High education	31.7%	Control / Binary	Master's degree or more = 1, less or no comment = 0
Right wing	38.4%	Control / Binary	Voting for either Høyre, Fremskrittspartiet, Venstre or Kristelig Folkeparti = 1, all other participants = 0

4   Methodology

In this section we will give a detailed orientation of the ideas behind our research, and choices made during the design phase of the experiment. First, we will describe the aims and structure of the experiment. Second, we will discuss our empirical strategy. Then, we will discuss the validity and reliability of our research.

4.1   Aims and research question

As stated in the background section of this thesis, the aim of this study is to further our understanding of what factors influence perceptions of fairness on income inequalities. More specifically, we aim to shed light on how different material and immaterial sources of inequality are perceived. In order to reach this goal, we look at different forms of inheritance, where material inheritance is defined as intergenerational transfers of physical capital or cognitive abilities, while immaterial inheritance can be described as a sum of various parental behaviours during upbringing. Both material and immaterial inheritance are important sources of income inequality, and is thus particularly suited for our research. Consequently, our research question reflects this, and can be defined as:

How are different sources of inequality perceived in regard to fairness, and what factors may influence this perception?

4.2   Research Design

The research method used in our study can be explained by the research onion, proposed by Saunders, Lewis, and Thornhill (2009). Thus our approach, have the following characteristics; a positivist philosophy, with a deductive approach to theory development, using a mono method quantitative methodological choice, with survey as the strategy, and lastly done in a cross-sectional timeline. In more practical terms, this means that our research is only reliant on data gathered from the survey at a specific point in time. The purpose of the research design follows a descriptive approach, were we aim to shed light on the general opinion of the Norwegian public in regards to fairness attached to different types of heritage.

The chosen philosophical assumption derives from the quantitative nature of our study. Positivism tries to look at the world with objective eyes, clear from any biases. In this study, we have taken significant measures to ensure that our own biases do not influence the questions asked to the survey participants. We have refrained from using charged words, and framed the questions as objectively as possible. This is crucial to not skew the results in either direction.

Using a mono method quantitative approach, means that we only gather data from one source. The advantage with this approach is that it is easy to conduct, and less time consuming which aligns well with the time-frame of our thesis. On the contrary, a mixed method approach would have made the foundation for analysis richer and possibly yield more robustness to the results (Saunders et al. 2016).

4.3   Empirical strategy

4.3.1   Choice of model

We chose to use the multiple linear regression model in our analysis. This is a linear regression model that takes in more than one independent variable. It tries to find the relationship between the dependent and the independent variables, and is therefore a good tool to help answering our research question. Other models such as logistic regression models were discussed, but we concluded that the easiness of using the linear regression model was the best fit for our purpose. We are employing an ordinal dependent variable, presuming the presence of a linear relationship in the responses. This assumption implies that, when assigning ordinal values (from 4 to 1) to the categories respondents could choose from (fair, somewhat fair, somewhat unfair, and unfair), we also posit that the intervals between these values accurately reflects the underlying distinctions.

4.3.2   Model specification

To analyse the data in respect to fairness we made our main model with FCEIP (Fairness from Capital, Effort, Intelligence and Preference treatments) as the dependent variable. FCEIP is a variable showing the fairness score from the four different treatments. Since no participant got more than one treatment, FCEIP will show a score from 1-4 (least fair -

most fair), from the treatment the participant took. The three binary treatment variables (Effort, Intelligence, and Preference) serve as independent variables in the regression model, indicating whether the participant received each respective treatment or not. The choice of the capital treatment as the base treatment means that it is excluded from the regression, and its absence is captured by the intercept coefficient. The coefficients for the other three treatments quantifies therefore the direct relationships with the fairness score, relative to the baseline established by the capital treatment. The reason behind making the capital treatment as the base variable, is because that is the only material treatment of the four which make it easier to compare the material and immaterial treatments. Below is the formula for our main regression line.

$$FCEIP_i = \beta_0 + \beta_1 \cdot \text{Effort treatment}_i$$
$$+ \beta_2 \cdot \text{Intelligence treatment}_i + \beta_3 \cdot \text{Preference treatment}_i + \varepsilon_i \qquad (4.1)$$

The formula shows the dependent variable on the left side and the independent variables with their coefficients on the right side. The first coefficient, denoted as β_0 , represents the intercept. In the context of our analysis, this intercept signifies the predicted value of *FCEIP* when all other independent variables are set to zero. Specifically, the intercept serves as the baseline, or reference point, for the perceived fairness derived from the capital treatment. The error term, denoted as ε, represents the unobserved factors or random variation that influence the fairness score *FCEIP*, but are not accounted for by the independent variables included in the model. In essence, it captures the discrepancy between the predicted fairness score based on the treatment variables and the actual observed fairness score for each participant. These unobservable factors may arise from factors not considered in our model or from inherent variability in participants' responses.

To asses if there are any possible situations were a treatment have gotten excessive participants of either of the control variables, we include them in different iterations to see the effects on the model. Our final model thus include the rest of the defined variables, and is shown below.

$$FCEIP_i = \beta_0 + \beta_1 \cdot \text{Effort}_i + \beta_2 \cdot \text{Intelligence}_i$$
$$+ \beta_3 \cdot \text{Preference}_i + \beta_4 \cdot \text{Male}_i$$
$$+ \beta_5 \cdot \text{Age 15-39}_i + \beta_6 \cdot \text{High income}_i$$
$$+ \beta_7 \cdot \text{High education}_i + \beta_8 \cdot \text{Right wing} + \varepsilon_i \quad (5.2)$$

Incorporating these background variables into our analysis allows us to gain valuable insights into the perceived fairness concerning gender, age groups, income levels, and education levels. Each coefficient (β_4, β_5, β_6, β_7, and β_8) associated with these background variables signifies the impact of each category on the fairness score

Next we will implement a heterogeneity analaysis of the control variables and their subgroups. For this analysis we will use the following regression equation.

$$FCEIP_i = \beta_0 + \beta_1 \cdot \text{Effort}_i + \beta_2 \cdot \text{Intelligence}_i + \beta_3 \cdot \text{Preference}_i$$
$$+ \beta_4 \cdot \text{X} + \beta_5 \cdot \text{X} \cdot \text{Intelligence}_i + \beta_6 \cdot \text{X} \cdot \text{Effort}_i$$
$$+ \beta_7 \cdot \text{X} \cdot \text{Preference}_i + \varepsilon_i \quad (5.2)$$

In the equation X works as an indicator variable, which will take the value of the control variable we will analyse. For example when performing the heterogeneity analysis for the gender column, we will replace X with the variable *Male*.

4.3.3   Grouping of political parties

As stated in the literature review, both the right and left of Norwegian politics are relatively heterogenous. There are however some fundamental characteristics that parties belonging to what is considered the left and right share. Parties on the left side are generally recognised as being egalitarian. They usually emphasise the importance of reducing inequality through redistributive measures. While there is a wide gap regarding to what extent these parties wish to combat inequality, they can all be characterised as egalitarian. This also goes for the two centre parties Senterpartiet and MDG. Senterpartiet

seeks redistribution of wealth from cities to more rural areas (Senterpartiet, 2023), and consequently hold egalitarian views. Green parties, such as MDG, are also often regarded as being part of the political left (Thorsen, 2021). Consequently, the parties belonging to what is often considered the political left are grouped together as they share egalitarian views on economic policy issues.

Where the left side of Norwegian politics are characterised by shared egalitarian beliefs, the right side also share certain ideological beliefs. The Norwegian right is made up of both conservative and liberal parties, which share certain ideas on economic policy. In general, they are all considered economically liberal parties. Consequently, they emphasise liberal values such as autonomy and strong property rights (Thorsen, 202. As with the left, the right is relatively heterogenous. The four parties all give primacy to autonomy, but with differing ideas serving as the basis for this view. For instance, KrF, a christian-conservative party, emphasise traditional family values (Kristelig Folkeparti, 2022), which requires economic autonomy in order to be upheld. Fremskrittspartiet, on the other hand, being considered either a liberalist or a populist party, argues for things such as individual rights and low taxes, which also requires economic autonomy (Fremskrittspartiet, 2023). While these two parties often fundamentally disagree on most issues, they share a fundamental belief in individual rights and autonomy. As a result, these four parties are usually grouped together, and considered the right side of Norwegian politics.

4.4   Validity

In this section we will describe the methods used to enhance the validity of our study. This will be important in the context of both ensuring that our findings is accurately representing the participants attitudes, and having the possibility of generalising our findings to the broader population. The section will be divided into internal validity, which means that we measure what we intend to measure, and external validity, which refers to the ability to generalise our findings.

4.4.1   Internal validity

When constructing the four questions in the survey, our main task was to make the questions easy to comprehend but still capture the phenomena we wanted to understand.

Another important factor was to make the questions as similar as possible, so that we could make comparisons between them when analysing the data. Thus, our questions went trough several iterations, and were altered based on feedback from third parties. The questions now possess a high degree of similarity except the variable we want to examine.

We have also performed a power analysis, looking at the necessary sample size needed, and which power value we can expect. The power value represents the likelihood that a hypothesis test will detect an effect when there is indeed an effect to be discovered. A low statistical power indicates a high likelihood of encountering false negatives, whereas a high statistical power implies a minimal risk of such occurrences (Brownlee, 2020). We will not go any deeper into the subject of power analysis other than specifying our parameters used, and the output. By using an effect size of 0.5, and an alpha (p-value) of 0.05, and a power of 0.8 we got a required sample size of 33 as the result. When calculating the statistical power we used our real sample size per treatment of 263, effect size of 0.5 and an alpha of 0.05. The result was a power value of 0.9999. The power analysis conducted therefore implies that our actual sample size of 263 per treatment is sufficient, and also that we have a high likelihood of finding any true effect if it exists.

A direct challenge to our results is that we treat the dependent categorical variable as a continuous variable in our model, which potentially could lead to biases. The reason being that we assume the magnitude of the intervals between the categories ("Fair", "Somewhat fair", "Somewhat unfair" etc.) are equal. There is an ongoing debate on the subject of whether it is appropriate to treat an ordinal variable as a continuous variable in linear regression, with both arguments for and against (Robitzsch, 2020).

When analysing the data with the use of a multiple linear regression model, we also test the output in relation to the assumptions of a linear model. If the assumptions is violated it may produce inaccurate results. The main assumptions tied to the linear regression model are 1) *linearity* between the dependent and independent variables, 2) presence of *homoscedasticity*, 3) that the observation are *independent* from each other, and lastly 4) *normality* in the residuals (Osborne & Waters, 2002).

Since our dependent variable is ordinal, it is hard to assess the linearity relationship towards the independent variables. When checking for linearity we typically look at a fitted values vs. residuals plot. A sign of a linear relationship will show randomly distributed

residuals. However, due to the design of our dependent variable we get four straight diagonally lines of residuals. As a result, it is hard to judge the linearity assumption with regards to our variables.

Checking for homoscedasticity in our data, is a critical aspect to ensure the robustness of our findings. Homoscedasticity refers to the assumption that the variance of the residuals is constant across all levels of the independent variables. Departure from homoscedasticity can lead to biased standard errors, and compromise the efficiency of estimating the coefficients. To evaluate homoscedasticity, we employ the Breusch-Pagan test, a diagnostic tool specifically designed to detect heteroscedasticity in the residuals. Additionally, we utilise the Variance Inflation Factor (VIF) test to assess multicollinearity, as multicollinearity can be a potential source of heteroscedasticity. High levels of multicollinearity may distort the precision of individual coefficient estimates, affecting the reliability of our model.

Given that our survey data is collected at a single point in time with no temporal variation in the variables, the assumption of independence among observations becomes less susceptible to violations related to time-based autocorrelation. A method to estimate autocorrelation is the *Durbin Watson test*, where an output close to 2 will mean that there is no autocorrelation. Values significantly below 2 suggest positive autocorrelation, while values significantly above 2 suggest negative autocorrelation. In this cross-sectional setting, where data is collected at a singular point in time, test for autocorrelation may be less important, as its primary utility lies in detecting sequential dependencies in time series data. However, it remains crucial to consider other potential sources of autocorrelation that could affect the independence assumption. For instance, if the survey respondents are grouped or clustered in some manner, such as by geographic region or other affiliations, within-group correlation may be present. However, by utilising Norstat as our survey provider, the data should be representative to the overall public with no overweight of any geographic, or other socioeconomic affiliation.

To check for normality in the residuals we will make a histogram and Q-Q plot of the residuals. In the histogram we will look for a symmetric bell curve centered around zero on the x-axis. The residuals in the Q-Q plot should follow a straight diagonally line. Any deviations of normality might lead to biases in the parameter estimation, or high rates of

false-positive conclusions (Knief & Forstmeier, 2021). However, linear regression models who violates this assumption still often produce valid results, especially if the sample size is large (Schmidt, 2018).

In the robustness section in the analysis chapter we will go through the output of the tests, and discuss them in relation to the assumptions described above.

4.4.2   External validity

The purpose of our study is to be able to generalise our findings to the Norwegian public. To be able to do this it is crucial that our sample is as representative to the overall population as possible. As mentioned earlier Norstat has on our behalf performed the survey for us, with the intention of making the sample as representative as possible. By looking at the distribution of the respondents in comparison to different characteristics in the appendix, we can see that it is well diversified. For instance we see that the gender balance is approximately equal, all age groups are represented as well as all the different geographic regions. This contributes to enhancing the external validity of our study.

4.5   Reliability

Reliability refers to the level of consistency and replicability of the study (Saunders, Lewis, & Thornhill, 2009). This essentially means the trustworthiness of the study, and whether similar experiments would yield the same results. Next we will discuss the measures taken to enhance the reliability of the study.

First, as mentioned earlier, we performed a pilot study on four different external individuals. The goal was to estimate if they perceived the context of the questions accurately. To begin, we presented the questions to two participants and incorporated their feedback to make some minor adjustments. The adjustments were attached both to the easiness in the overall language used, as well as to clarify what we intend to measure in the question on capital inheritance. Subsequently, we provided the modified questions to the initial two participants and introduced them to two new participants as well. The response was that all the participants had the same interpretation of the questions. The participants were chosen with the intention of covering at least some degree of different education levels. By performing a pilot survey, we ensure that the responses are more likely to be

consistent. However, limitations of the pilot study could potentially arise from the small amount of participants.

A comprehensive explanation of our data collection procedures and variable definitions, contributing to the overall reliability of our study is described in the data collection chapter. The multiple linear regression model is also described in detail in the regression model subsection.

4.6   Ethics

Our data has been collected, and archived, in accordance with the rules and guidelines provided by the Norwegian Agency for Shared Services in Education and Research, also known as Sikt. These rules and guidelines are intended to both protect the private information of participants in any given study, and make sure that data is accessible to the wider research community.

As our data is anonymous, and does not contain any directly or indirectly identifiable information, it will be made generally accessible through Sikt's databases upon the completion of this thesis.

5 Analysis

In this section we will share our results from the regression models. We will look at the comparison between the treatments in respect to fairness. Furthermore, we will look at which attributes makes a person more likely to perceive any treatment as fair. Lastly, we will examine the treatments in relation to participants political beliefs

5.1 Perception of fairness

5.1.1 Main results

The histogram below shows the results from our survey. The *Capital* treatment stands out as significantly more fair than the others, with 72% finding it fair or somewhat fair. Next is the *Effort* treatment at 60%, followed by the *Intelligence* treatment at 55%. The *Preference* treatment is seen as the least fair, with only 47% finding the question fair or somewhat fair.
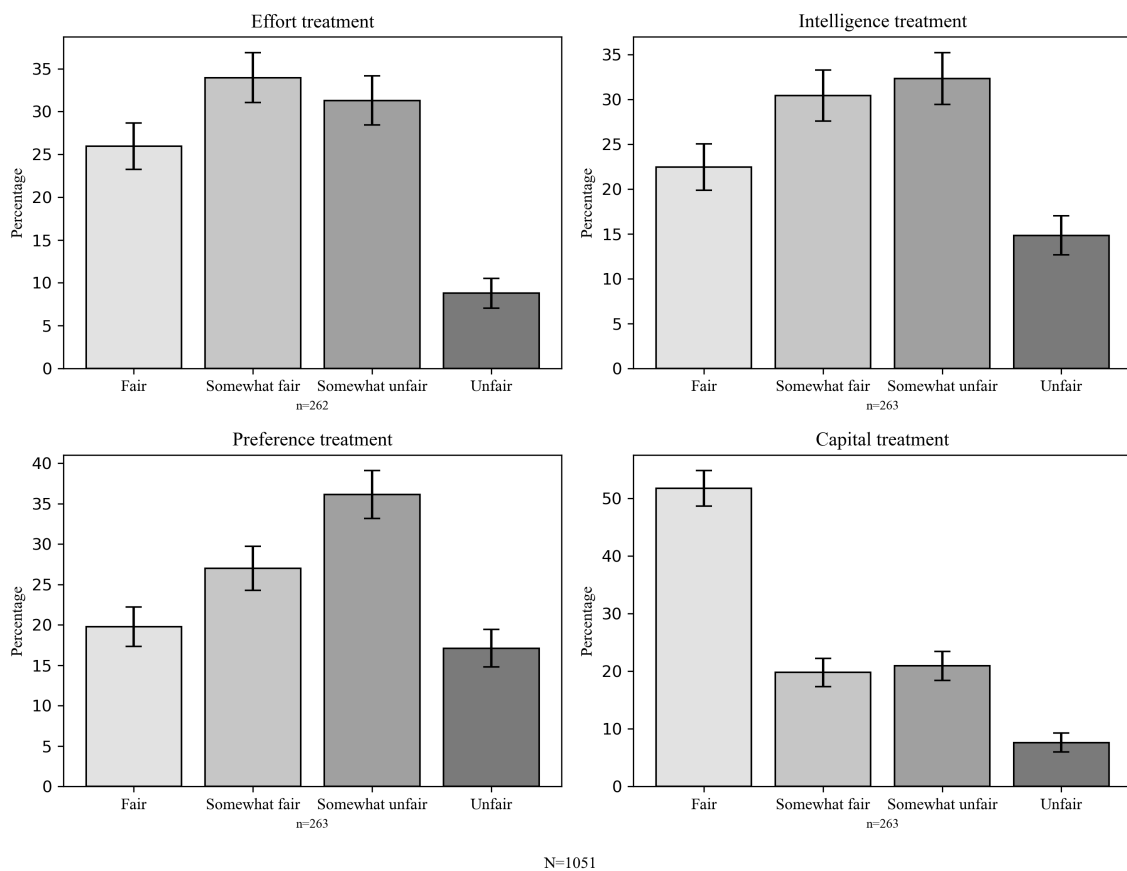
Figure 5.1: Distribution of survey results by treatment

Next we will dive deeper into the statistical regression models performed on our survey results. In table 6.1 we find the main regression model described in the methodology section. It goes trough two iterations with the original Likert-scale dependent variable *FCEIP*, and two with the same variable in a binary form *FCEIP-B*, treating both "Fair" and "Somewhat fair" as fair, and opposite. It displays the differences in perceived fairness between the treatments, as well as highlighting the differences in perceived fairness between the control variables.

Table 5.1: Regression results for perceived fairness

	1	**2**	**3**	**4**
Effort	-0.1156***	-0.1285***	-0.3849***	-0.4073***
	(0.042)	(0.041)	(0.086)	(0.082)
Intelligence	-0.1863***	-0.1923***	-0.5513***	-0.5589***
	(0.042)	(0.041)	(0.086)	(0.082)
Preference	-0.2471***	-0.2471***	-0.6616***	-0.6571***
	(0.042)	(0.041)	(0.086)	(0.082)
Male		0.0764***		0.1206**
		(0.030)		(0.060)
High age		0.0844***		0.1116*
		(0.031)		(0.062)
High income		0.0908**		0.2185***
		(0.040)		(0.080)
High education		-0.0743**		-0.1727***
		(0.032)		(0.065)
Right wing		0.2108***		0.4692***
		(0.030)		(0.061)
Constant	0.7148***	0.5555***	3.1559***	3.1462***
	(0.030)	(0.039)	(0.061)	(0.075)
Number of obs.	1051	1051	1051	1051
R^2	0.03	0.11	0.06	0.15

Note: Level of significance: $*p \leq 0.05 \ **p \leq 0.01 \ ***p \leq 0.001$. The table is a representation of an OLS regression. In column (1) and (2) the dependent variable is the binary version of FCEIP-B (Fair = 1, Unfair=0). While column (3) and (4) have the ordinal variable FCEIP (4-1). Column (1) and (3) only look at the differences in perception of fairness between treatments, while (2) and (4) includes the control variables male, high income (household income of > 1.3 million NOK), high education (masters' degree or more), right wing (participants voting for høyre, fremskrittspartiet, venstre or kristelig folkeparti).

Examining the results in column (1) of the table, it becomes evident that all immaterial treatments are perceived as less fair than the capital treatment. As seen in the histogram above we confirm that 71% of the participants thinks the capital treatment is fair. This is seen by the intercept coefficient. All of the treatments are significant ($p<0.001$). In column (2) we include the control variables and find that political view has the largest difference between the variables. Participants who would vote for any party at the right spectrum were 22% more likely to find the treatments fair, in comparison to the people voting left ($p<0.001$). In relation to gender, the share of participants finding the questions fair were 7.6% more for male than females. The older age group also perceived the treatments to be more fair than the younger generations with a 8.4% difference ($p<0.001$). We also see that the people having a master's degree or more were finding the treatments less fair than the people with a lower education level ($p<0.05$). Finally, the people with the highest household income were 9.1% more likely to find the treatments fair, compared to the participants with lower income ($p<0.05$).

In the (3) and (4) column we use the ordinal variable *FCEIP*. This will try to capture the degree of fairness, by taking into account the original Likert-scale from the responses for the treatments. We see the main trends that we saw from the first two columns, but some control variables change more than others by looking at the differences between the columns. Age and gender seem to increase less than the rest, while income, education and political stands increase more in absolute terms. This points toward that the latter variables possesses more extreme values than *Male* and *High age*.

When we examine the differences in the coefficients of the treatments between (1-2) and (3-4) we see that there are small changes. This implies that the participants with their demographic characteristics is evenly distributed between the treatments.

5.1.2   Control variables effect on treatments

From table 6.2 we look at the interaction between each control variable and the treatment. The regression output will help determine if there exist a systematic relationship between the control variable and the treatments. In addition, it also checks whether there exists differences inside the subgroups themselves. The main results from the table are that *Gender*, *Income* and *Education* seem to be systematically stable over the different

treatments. This is determined by the non-significance in the interaction terms. Hence, we can say that a male is more likely to think either of the treatments is more fair than a women. While on the other hand, the subgroup *Age* is significant in both interaction terms with the intelligence and preference treatment ($p<0.05$) with strong negative coefficients. This equates to it being a significant difference in the subgroup itself. Hence, we can not infer that there exist a systematic difference in perception of fairness between the two subgroups. However, there is a difference in perception of fairness between the subgroups in relation to the capital treatment versus the preference and intelligence treatments. Here, older people generally regard the capital treatment as more fair.

Table 5.2: Regression results for perceived fairness by subgroup

	Gender	**Age**	**Income**	**Education**
Effort	-0.1490**	-0.0599	-0.1370***	-0.1324***
	(0.059)	(0.071)	(0.047)	(0.051)
Intelligence	-0.1992***	-0.0528	-0.1942***	-0.1898***
	(0.056)	(0.073)	(0.046)	(0.0.52)
Preference	-0.2547***	-0.1111	-0.2653***	-0.2649***
	(0.057)	(0.071)	(0.046)	(0.051)
X	0.1022**	0.2392***	0.0422	-0.1057
	(0.060)	(0.061)	(0.080)	(0.064)
X * Effort	0.0493	-0.0993	0.1070	0.0480
	(0.085)	(0.088)	(0.111)	(0.092)
X * Intelligence	0.0332	-0.2169**	0.0540	0.0200
	(0.085)	(0.090)	(0.115)	(0.090)
X * Preference	0.0119	-0.2195**	0.1369	-0.0524
	(0.085)	(0.088)	(0.118)	(0.092)
Constant	0.6690***	0.5657***	0.7078***	0.7486***
	(0.040)	(0.048)	(0.033)	(0.036)
Number of obs.	1051	1051	1051	1051
R^2	0.05	0.05	0.04	0.04

Note: Level of significance: $*p \leq 0.05$ $**p \leq 0.01$ $***p \leq 0.001$. The table is a representation of an OLS regression. The dependent variable is a binary variable taking the value 1 if the participant found the treatment to be any degree of fair. X work as an indicator variable taking the value of the header in the columns. So for column gender, it will represent the subgroup *Males*, for age it will represent people over 39 years of age, while income will represent people with over 1.3 million in household income, lastly education will be the subgroup of people with a master's degree or more.

5.1.3 Perceptions of fairness by political beliefs

From table 6.1 we found that the political view of the participants resulted with large differences in perceptions of fairness. Right-side voters were significantly more likely to consider the treatments fair. Thus, we will explore the control variable in more detail. We start of by showing a histogram of the percentage of participants responses which were fair for each treatment. We are also here aggregating "Fair" and "Somewhat fair" as fair, and opposite for the two other categories from the survey. From figure 6.2 we clearly see that there is a systematic difference between the voters. The right wing voters are finding the treatments more fair than the left voters in every treatment. We also see that the left wing only has a majority of fair responses in the capital treatment. For the right-side voters 83% responded they perceived capital treatment as fair. This was followed by the "effort" treatment which 78% considered fair. Next, is the "intelligence" treatment with 65% of right-side voters finding it fair. Finally, the "preference" treatment which was considered as the least fair. Left-side voters are significantly different from their right-side counterparts. Left-side participants had a proportion of 64% thinking capital treatment is fair. Next, was the effort treatment which 49% considered fair. The intelligence treatment is relatively close with 45% considering it fair. Last, we have the preference treatment, which only 37% of left-side voters considered fair or somewhat fair.
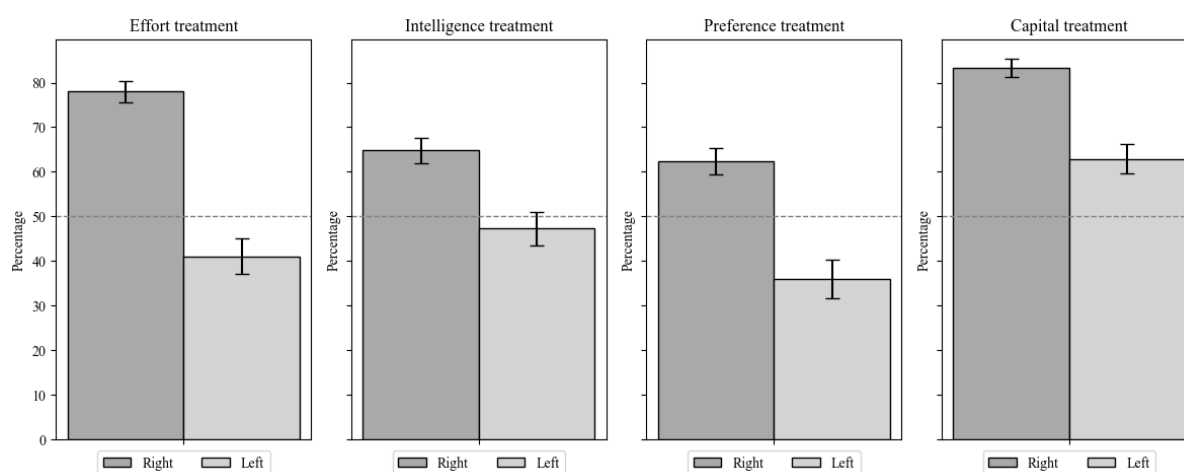

Figure 5.2: Histogram of survey results by political belief

Further we want to examine the same interaction terms as we did in table 6.2 but with emphasise on political stands. In table 6.3 column (1) we see that the people in the right wing are 23.8% more likely to find the treatments fair, than the people in the left wing. In

column (2) we include the interaction terms, and see that there is no significant coefficients implying that there exist a systematic difference between the two subgroups. This is also visible in the histogram. With adding the control variables in the column (3) we see no large changes in the coefficients which is implies no overweight of any demographic in the treatments.

Table 5.3: Heterogeneity analysis for political belief

	1	2	3
Effort	-0.1150***	-0.1543***	-0.1616***
	(0.041)	(0.053)	(0.052)
Intelligence	-0.1908***	-0.1961***	-0.1956***
	(0.041)	(0.053)	(0.052)
Preference	-0.2707***	-0.2742***	-0.6740***
	(0.041)	(0.053)	(0.052)
Right wing	0.2375***	0.1897***	0.1690***
	(0.030)	(0.060)	(0.059)
Right wing * Effort		0.1026	0.0866
		(0.085)	(0.084)
Right wing * Intelligence		0.0154	0.0104
		(0.084)	(0.084)
Right wing * Preference		0.0745	0.0722
		(0.085)	(0.084)
Male			0.0765**
			(0.030)
High age			0.0829***
			(0.031)
High income			0.0906**
			(0.040)
High education			-0.0739**
			(0.032)
Constant	0.6236***	0.6420***	0.5724***
	(0.031)	(0.037)	(0.044)
Control variables included?	No	No	Yes
Number of obs.	1051	1051	1051
R^2	0.09	0.09	0.11

Note: Level of significance: $*p \leq 0.05$ $**p \leq 0.01$ $***p \leq 0.001$. The table is a representation of an OLS regression. The dependent variable is a binary variable taking the value 1 if the participant found the treatment to be any degree of fair. Right wing * Effort/Intelligence/Preference is the interaction between politics and the treatments. Column (1) is the main regression with the control variable right wing added. Column (2) includes the interaction term, while (3) is also including control variables.

5.2   Robustness

In this section we will discuss the robustness of the findings. We will look at the output of the model in relation to the assumptions tied to the linear regression model. We will look at if their exist heteroscedasticity, autocorrelation, multicollinarity and if the residuals are normally distributed.

We start of by looking at if there exist multicollinarity between the variables. This is done by using the VIF method described in the methodology section. The output can be seen below.

Table 5.4: VIF Values for Variables

Variable	VIF
Constant	
Effort treatment	1.50
Intelligence treatment	1.51
Preference treatment	1.50
Male	1.03
High age	1.02
High income	1.04
High education	1.04
Right wing	1.03

As we remember from the methodology section, a VIF score between 1-5 are considered moderate. A score of 1, indicates that there is no correlation. By looking at table 6.5 we can see that there is little correlation between the independent variables. With the highest *VIF* score being 1.51 there seems to be no reason to perform any correcting measures.

As we have established that there is low correlation between the independent variables we can now check for heteroscedasticity, as the *Breush-Pagan test* is sensitive to multicollinarity. We start by formulating the hypothesis. '

$$H_0 : \text{Homoscedasticity is present} \qquad (5.1)$$

$$H_A : \text{Heteroscedasticity is present} \qquad (5.2)$$

We reject the null hypothesis if the p-value of the test is less than a significance level of 0.05. When we perform the test in python, we get a p-value of 0.89, which means that we can not reject the null hypothesis and conclude that homoscedasticity is present.

Lastly we will check the assumption tied to linear regression of normality in the residuals, by looking at a *Q-Q Plot* and a histogram of the residuals. Ideally we want to see the residuals lay along the red line in the Q-Q plot, any deviation off the line, points to failure to the assumption of normality. In the histogram we want to see a bell curve centered around zero.
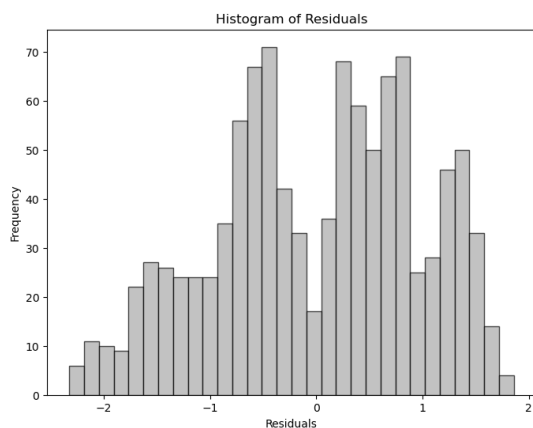

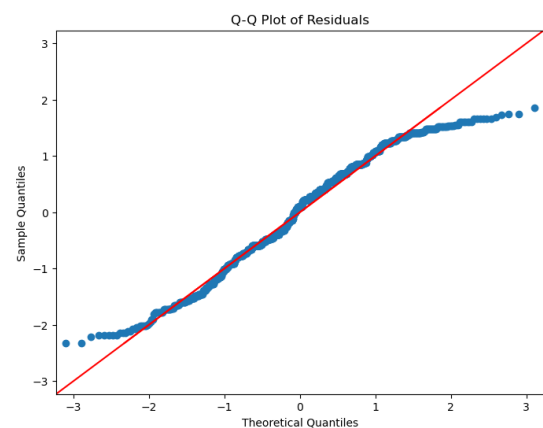**Figure 5.3:** Histogram of Residuals

Figure 5.4: Q-Q Plot of Residuals

When we looking at the two plots we can see that there are deviation from normality in the residuals. Figure 6.1 indicates a slight negative skew, with the frequencies of positive values surpassing those of the negatives. The Q-Q plot (fig 6.2) is also showing some deviation from the line where it starts above and ends under. These deviations from normality in the residuals imply that we cannot confidently assert the presence of normal distribution in the data. The implications when normality is not met could affect the validity of the study, and lead to potential biases and inaccuracies in the results.

Also as predicted in the validity section there are no signs of autocorrelation in our variables. When looking at the output of the model summary, we see that the value of Durbin Watson is 2.06 which is close to 2, indicating no autocorrelation.

In recapitulating the model's robustness, it is observed that there exists low multicollinearity, with no individual independent variable surpassing the established threshold of 5. Additionally, the outcomes of the *Breush-Pagan test* are deemed satisfactory,

affirming the presence of homoscedasticity within the variables under consideration. However, the interpretation of normality in the residuals poses a nuanced challenge. The absence of a perfect normal distribution, makes the inferential aspects of the study more challenging. It should be mentioned that the deviations from normality is not extreme and that we have a large sample size which points towards valid results, as described in the validity section. Also we can not conclude if there exist a linear relationship between the dependent and independent variables.

6 Discussion

In this section, we shall discuss the implications of our findings in light of previous research. First, we will discuss our general findings. Then, we shall consider implications of demographic factors such as gender and age. Before we finally discuss our findings in a political context. Finally, we will consider some potential empirical limitations of our research.

6.1 General findings

As shown in the analysis section of the thesis, the experiment yielded several interesting results. In general, we found that the "capital" treatment was perceived as the fairest, while the "preference" treatment was considered the least fair. The "preference" treatment is intended to reflect social stratification, and could also be interpreted as nepotism by respondents. Thus, our results provide further empirical support for the findings made by Rodon and Sanjaume-Calvet (2020), who also established that people perceived inequalities stemming from familiar connections and preferences as highly unfair. Moreover, they also found that inequality stemming from talent, which includes both effort and inherent talent, is mostly considered as fair. These findings are also in accordance with our results. Rodon and Sanjaume-Calvet's study were made in an American context. Interestingly, their results indicate that how people rank various sources of inequality may be consistent across regions where general attitudes regarding inequality differs. As previously discussed, Almås, Cappelen, and Tungodden found that Norwegians were significantly more egalitarian than Americans in general (2020). Our findings, in combination with those of Rodon and Sanjaume-Calvet, indicate that attitudes towards the sources of income inequality may be somewhat consistent between the two regions.

Another interesting finding is that our sample seems to hold a generally liberal view of distributive justice. Apart from the "preference" treatment, the other treatments were perceived as fair by the majority of respondents. It is however important to emphasise that the inequality presented in our treatments is not that large in a societal context. Whereas one part receiving double the income of the other is a sizeable difference, it does not reflect the sometimes vast income inequalities that exists. The relatively small

income inequality may thus skew results in favour of a liberal interpretation of fairness. As a result, it is possible that larger income differences, in i.e. the "capital" treatment, might yield more egalitarian results. In spite of this challenge, it is fair to say our results indicate that Norwegians seem to prefer values such as individual rights and autonomy when presented with relatively small income inequalities.

6.1.1   Meritocracy and parental effort

Futhermore, our results also seem to be in accordance with Almås, Cappelen, and Tungodden (2020) findings regarding the importance of meritocracy. As previously mentioned, they found that both Americans and Norwegians were more willing to accept inequalities they perceived as stemming from meritocratic factors. The three treatments that are perceived as fair all indicate the inequality stemming from some meritocratic factor. They all share that parental effort, or genes in the "Intelligence" treatment, has given their offspring an advantage. None of these advantages imply any corresponding direct disadvantages for the other party, and could thus be interpreted as fair in accordance with egalitarian views. The "preference" treatment, on the other hand, implies a degree of nepotism, where socio-economic background is the most important factor in generating the inequality. Consequently, our results support the findings by Almås, Cappelen, and Tungodden, where people are more inclined to accept meritocratic inequalities. Interestingly, our findings indicate that people also perceive intergenerational inequalities as fair as long as inherited advantages are regarded as meritocratic.

The "capital" treatment in our study implies such a meritocratic relationship. Where the offspring in our scenario is simply lucky that they have been given shares in their parents' company, it is implied that the parents are generating wealth in a meritocratic manner. As discussed earlier, this result may be influenced by the relatively small inequality presented in our experiment. The results may have differed if the inherited wealth would put our hypothetical person among societies top earners without having to work themselves. If this was the case, the income inequality might be interpreted as detrimental to equality of opportunity, which the inequality described in our experiment probably is not.

Another potential explanation for the relatively high variation in acceptance of the different treatments may be that respondents believe parents should have the right to help their

children. The "capital" and "effort" treatments both imply that parents have made a deliberate choice and effort to aid their offspring, which again results in an income inequality. In the "intelligence" and "preference" treatment however, the inequality is a result of luck. Here parental effort is not implied, and the inequality is caused by the hypothetical children simply being born with either higher intelligence or a more beneficial socio-economic background. Respondents seem willing to accept income inequalities if they are a result of parental effort, but not if they stem from pure luck. Consequently, our results indicate that whether the Norwegian population gives primacy to liberal values, such as individual rights and autonomy, or egalitarian values, such as equality of opportunity, may be highly contextual. Further research into under what circumstances either egalitarian or liberal values is given primacy is thus highly interesting.

6.2   Demographic findings

The background information in our dataset also yielded several interesting findings. As discussed earlier in the thesis, we found a significant gender effect. According to our results, men are about 7.6% more likely to perceive the inequalities described in our treatments as fair relative to women. These findings are generally in accordance with previously presented research. Both Rodriguez-Lara (2015) and Dulebohn et al. (2016) found women to be considerably more egalitarian than men in a dictator game setting. Our results provide further empirical support for these findings, as there seems to be a strong indication than men generally harbour more liberal views on distributive justice. Furthermore, based on descriptive statistics, men perceived all the treatments as fair. A majority of women, however, also found the "intelligence" treatment to be unfair with a narrow margin. Consequently, it is reasonable to state that women generally view inherited inequalities as significantly more unfair compared to men.

Another interesting finding from the Rodriguez-Lara (2015) experimental study was the effect where women seemed more sensitive to experimental context than men. In his paper, there was a trend where women generally would allocate the funds in a more egalitarian manner if the counterpart had generated more of the overall funds. There is also a clear general trend in our data where men generally hold more liberal attitudes to the inequalities presented. However, the differences between how fair women and men

perceive the inequalities remain relatively constant according to our data. Consequently, our findings indicate that women are not necessarily more sensitive to changes in the experimental setting than men. As a result, our findings stand in contrast to these findings in Rodriguez-Lara's paper. It should however be considered that our experiment was not created with the intention of measuring this effect.

Furthermore, our data indicates support for both the previously discussed conventional knowledge and experimental results that older people tend to hold a more liberal view of distributive justice. We found that the older participants were about 8.4% more likely to find the treatments fair. This indicates that younger people generally hold more egalitarian views than their older counterparts. As mentioned earlier, older people tend to be more conservative, which our findings also indicate. These results may also support the hypothesis regarding older voters becoming more self-serving by Dion and Birchfield (2010). They hypothesised that as older people tend to hold more capital, and thus tend to look less favourably on questions of distributive justice, which our data seems to be in accordance with our data.

According to our data, income levels also seem to have an effect on people's attitudes towards income inequality. Higher income individuals are more likely to regard inequalities as fair. This provides additional support to the empirical findings made by Dion and Birchfield. It is however hard to tell whether this implies self-serving attitudes, as our data is not collected over time. According to Brienza and Bobocel, attitudes towards distributive justice usually remain when people change economic classes. Our findings may provide some support for this hypothesis, as we found higher educated people are less likely to consider the inequalities as fair. As highly educated people tend to be wealthier than those who are not, these findings indicate that attitudes towards distributive justice may remain as income levels increase. Consequently, one could argue that these findings challenge Dion and Birchfield's hypothesis. As a result, further research is needed to improve our understanding of how changes in socio-economic class influences perceptions of fairness in relation to inequality.

6.3   Political findings

The strongest findings from our experiment, both in terms of coefficient size and significance levels, were those of political views and attitudes towards the four treatments. The relative large difference in perception of fairness by political affiliation, were also constant across all treatments seen by the heterogeneity analysis in the previous chapter. Based on the groupings explained earlier in the thesis, we found that right-side voters are considerably more liberal than their left-side counterparts. For instance, the proportion of people from the right wing who found the "effort" treatment to be fair was 78%, compared to the other participants at 49%. These findings show how attitudes towards distributive justice in general remains one of the greatest points of disagreement in Norwegian politics. Interestingly, there were also a large difference in perception of fairness between right- and left-side voters in the "preference" treatment. Right-side voters is considerably more likely to regard this inequality as fair. This finding illustrates how left-side voters emphasise equality of opportunity as a key socio-economic value, and right-side voters give primacy to autonomy and individual rights. As the "preference" treatment is illustrate inequalities that stem from inherited socio-economic class, it is understandable that this treatment is contentious in a political context. Consequently, our results indicate that political leanings may be the most important factor when discussing attitudes towards distributive justice.

Overall, our data gives clear indications that right-side voters seem to give primacy to liberal values when considering income inequalities. The issue with our treatments illustrating a relatively small inequality in a societal context should however also be emphasised here. It is highly likely that especially left-side voters would be far less accepting of the inequalities if they were of a considerably larger size. In spite of this limitation, it is clear that our results support the general distinction where left-side voters can be characterised as egalitarians, and right-side voters are more liberal in attitudes towards distributive justice.

6.4   Empirical limitations

This section addresses the shortcomings of the methodology employed in our analysis, intending to enhance the transparency of the conducted research.

Empirical limitations in our study include the treatment of a categorical variable as an ordinal one, assuming uniform distances between categories, which may not accurately reflect perceived differences. For instance, assuming the distance between "Somewhat fair" and "Somewhat unfair" is equal to that between "Fair" and "Somewhat fair" may not hold true. This assumption could potentially impact our results.

Additionally, the absence of information regarding the survey response rate raises concerns about sample bias. Without knowledge of who chose to respond and who did not, the results may be skewed, as individuals with a particular interest in the subject might be more inclined to participate, introducing potential bias into our sample. It is crucial to acknowledge and assess the impact of this limitation on the generalizability of our findings.

When conducting the pilot study a limitation is the few participants. The purpose of the pilot study was to ensure that our questions was universally understood, and by only including four participants we can not conclude that all participants taking the final survey had the same perception of the context of the questions.

In regards to the assumptions tied to the multiple linear regression, we can not conclude that there exist a linear relationship between the dependent and the independent variables. However, this is more crucial if our purpose was focused towards prediction rather than comparison of coefficients between variables. Also the diagnostic plots tied to the assumption of normality in the residuals did not show a perfect bell curve. However, there was not any extreme deviation from normality, which makes it less concerning based on past literature on the subject.

For future research, we recommend exploring alternative regression models, such as logistic regression or ordinal regression, to enhance the methodological robustness of the study. By reducing the ordinal values to a binary variable for fair/unfair, a logistic regression model might be more suitable, as this particular model is not tied to the assumption of linearity.

7 Conclusion

The purpose of this thesis was to gain further understanding into the how various sources of income inequality are perceived, and what factors may influence this perception. In order to answer this question, we conducted a survey experiment on the Norwegian public. By utilising Norstat's omnibus, we were able to collect a representative dataset consisting of 1051 respondents. Our experiment consisted of four distinct treatments, each intended to represent an actual source of income inequality.

In order to analyse our data, we utilised a linear regression approach. As presented in the discussion section, the experiment yielded several interesting findings. Our general findings indicated that the Norwegian population were most willing to accept the income inequality that stemmed from intergenerational capital transfers. Inequalities resulting from different socio-economic backgrounds, which also may be interpreted as nepotism, was considered the least fair treatment in accordance with earlier research. Furthermore, we found that respondents seemed to be more accepting of income inequalities that were a result of parents choosing to invest either capital or effort into their children. This can be explained by the general tension between liberal and egalitarian variables found in Norwegian society, and indicates that Norwegians are willing to compromise equality of opportunity in order to protect individual rights.

Furthermore, we found that there is a very strong link between peoples' political beliefs and to what degree they perceive an inequality as fair. In general, people who vote for parties belonging to the right side of the Norwegian political spectrum were significantly more likely to perceive the inequalities as fair. All the four treatments were considered as fair by the majority of right-side voters. This deviated drastically from the left-side voters where only the capital treatment was considered fair by a majority of respondents.

In order to gain further understanding about fairness considerations regarding income inequalities, further research is required. Our treatments were constructed with a relatively small income inequality, which may influence fairness perceptions. Consequently, new experiments utilising larger income inequalities may further our understanding into the tension between egalitarian and liberal values in Norwegian society.

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Appendices

A   Survey questions

Figure A.1: Capital treatment

Vi ønsker at du skal vurdere ulikhet i inntekt mellom to tilnærmet identiske personer, Person A og Person B. De har samme jobb, og mottar like mye lønn for arbeidet. Den eneste forskjellen mellom de to er at Person A har fått aksjer i foreldrenes virksomhet, og mottar ekstra inntekt fra disse. Dette har ført til at Person A i dag har dobbelt så høy inntekt som Person B. I hvilken grad synes du denne inntektsulikheten er rettferdig?

	KJØNN			LANDSDEL						ALDER				
	TOTAL	Mann	Kvinne	Nord-Norge	Midt-Norge	Vestlandet	Østlandet	Sørlandet inkl TeVe	Oslo	15-29 år	30-39 år	40-49 år	50-59 år	60+ år
		A	B	C	D	E	F	G	H	I	J	K	L	M
BASE	266	130	136	22	46	56	72	36	35	57	55	42	33	79
Helt rettferdig	51%	57%	46%	36%	44%	46%	68% CDEH	54%	40%	40%	43%	61% I	72% IJM	50%
Litt rettferdig	20%	16%	23%	41% EF	22%	17%	11%	26%	18%	12%	19%	19%	15%	28% I
Litt urettferdig	22%	21%	22%	18%	31% G	25% G	16%	8%	33% G	38% KLM	29% LM	15%	13%	13%
Helt urettferdig	8%	6%	9%	6%	3%	13%	4%	12%	9%	10% L	9% L	5%		9% L
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

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Figure A.2: Effort treatment

NOHNO123950_ineq_skill
Vi ønsker at du skal vurdere ulikhet i inntekt mellom to tilnærmet identiske personer, Person A og Person B. Den eneste forskjellen mellom de to er at foreldrene til Person A har brukt mer tid på å hjelpe barnet med å utvikle evner som senere har kommet til nytte i arbeidslivet. Dette har ført til at Person A i dag har dobbelt så høy inntekt som Person B. I hvilken grad synes du denne inntektsulikheten er rettferdig?

	KJØNN			LANDSDEL						ALDER				
	TOTAL	Mann	Kvinne	Nord-Norge	Midt-Norge	Vestlandet	Østlandet	Sørlandet inkl TeVe	Oslo	15-29 år	30-39 år	40-49 år	50-59 år	60+ år
		A	B	C	D	E	F	G	H	I	J	K	L	M
BASE	263	144	119	16	33	41	93	41	39	58	44	43	39	78
Helt rettferdig	28%	30%	27%	26%	25%	35% H	29% H	37% H	14%	24%	32%	41%	23%	26%
Litt rettferdig	33%	38%	28%	30%	24%	35%	38%	25%	38%	34%	20%	18%	35%	47% JK
Litt urettferdig	31%	26%	37%	30%	43%	26%	27%	30%	36%	40% M	45% M	26%	31%	19%
Helt urettferdig	8%	7%	9%	15%	8%	4%	6%	7%	12%	3%	4%		15% I	11%	8%
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Sign.level: 95%   powered by NORSTAT

Figure A.3: Intelligence treatment

NOHNO123950_ineq_iq

Vi ønsker at du skal vurdere ulikhet i inntekt mellom to tilnærmet identiske personer, Person A og Person B. Den eneste forskjellen mellom de to er at Person A har arvet høyere intelligens fra sine foreldre. Dette har ført til at Person A i dag har dobbelt så høy inntekt som Person B.

I hvilken grad synes du denne inntektsulikheten er rettferdig?

	TOTAL	KJØNN		LANDSDEL						ALDER				
		Mann	Kvinne	Nord-Norge	Midt-Norge	Vestlandet	Østlandet	Sørlandet inkl TeVe	Oslo	15-29 år	30-39 år	40-49 år	50-59 år	60+ år
		A	B	C	D	E	F	G	H	I	J	K	L	M
BASE	258	123	136	28	31	46	83	38	31	61	32	44	54	68
Helt rettferdig	22%	26%	19%	15%	27%	18%	26%	26%	18%	21%	19%	23%	28%	21%
Litt rettferdig	31%	35%	28%	37%	30%	29%	24%	33%	47% F	36%	26%	35%	22%	34%
Litt urettferdig	33%	25%	41% A	32%	30%	40%	37%	32%	20%	33%	41%	37%	32%	28%
Helt urettferdig	13%	14%	13%	17%	13%	14%	13%	9%	16%	11%	15%	5%	18% K	17% K
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Sign.level: 95%

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Figure A.4: Preference treatment

Vi ønsker at du skal vurdere ulikhet i inntekt mellom to tilnærmet identiske personer, Person A og Person B. Den eneste forskjellen mellom de to er at de har ulike jobber, siden begge har valgt lignende karrierer som sine foreldre. Dette har ført til at Person A i dag har dobbelt så høy inntekt som Person B.

I hvilken grad synes du denne inntektsulikheten er rettferdig?

	TOTAL	KJØNN		LANDSDEL						ALDER				
		Mann	Kvinne	Nord-Norge	Midt-Norge	Vestlandet	Østlandet	Sørlandet inkl TeVe	Oslo	15-29 år	30-39 år	40-49 år	50-59 år	60+ år
		A	B	C	D	E	F	G	H	I	J	K	L	M
BASE	264	131	133	27	33	72	71	28	33	60	45	35	43	80
Helt rettferdig	19%	22%	16%	14%	20%	16%	21%	8%	33% G	23%	17%	16%	20%	18%
Litt rettferdig	28%	30%	27%	31%	22%	32%	32%	30%	17%	22%	27%	21%	36%	32%
Litt urettferdig	37%	35%	40%	30%	47%	44% H	30%	51% H	25%	45%	41%	48%	27%	31%
Helt urettferdig	15%	14%	17%	25%	12%	9%	17%	11%	25% E	10%	16%	14%	17%	19%
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Sign.level: 95%

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B   The Norwegian political system

The Norwegian political is characterised as a representative democracy. In short, this means that the public elects representatives to the national assembly, Stortinget. These representatives than vote over political propositions on behalf of their constituents. Each of the Norwegian regions of Norway are allocated a given number of representatives based on geographical and demographical size.Stortinget consists of 169 seats, where nine major political parties are represented. Elections to the national assembly is held every fourth years. Seats in the parliament are distributed based on a proportional system. This means that the distribution of seats in the parliament is intended to reflect the shares of votes each party received in the general election. In addition, Norway has an electoral threshold at 4 percent, meaning that parties who receive enough votes to reach this

threshold is entitled to additional seats. The threshold exists in order to ensure adequate representation for smaller parties, as they may not win regional seats directly (Stortinget, 2023).