Beyond income inequality: the mediating effect of trust and fairness on the relationship between multiple indicators of inequality and subjective well-being

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Master thesis

Abstract

Inequality in Europe has increased in the past decades. Recent studies have shown that increasing income inequality has a negative effect on subjective well-being (SWB) and other health outcomes. Yet, by focusing on income as a single measurement for inequality, one leaves out other important indicators of social inequality. This research has therefore broadened the scope of inequality by including educational, labor, and political inequality alongside economic inequality. It was examined whether these inequality indicators predict subjective well-being, and, if this effect is mediated by feelings of trust and fairness. A secondary quantitative data analysis was performed with data derived from the European Social Survey round 9 (2018) and parallel mediation analysis was performed using Hayes' PROCESS macro. The sample consisted of Norwegian citizens above the age of 15 and contained 1406 participants. Results show that indeed non-economic inequality (educational, labor, and political) has a negative effect on subjective well-being and that this relationship is partially mediated by feelings of trust and fairness. Educational inequality negatively predicts SWB and does so through feelings of fairness, labor inequality predicts SWB through experienced trust, and political inequality's influence on SWB is mediated by both trust and fairness. Furthermore, results show that income inequality does not significantly affect subjective well-being in this current study, an ambiguous result. This lack of significance could be due to lack of perceived inequality in Norway or to the operationalization of the concept. As the study contained secondary data, this issue could not be prevented. Regardless, this study shows the importance of the effects of non-economic inequality on subjective well-being, showing that reducing inequality should not merely be focused on income, but other societal inequalities as well. In order to achieve better societal psychological and physical health outcomes, decreasing non-economic inequality should therefore be high on the agenda.

Keywords: subjective well-being, non-economic inequality, trust, fairness, social gradient

Introduction

Over the past decades European countries have witnessed an increase in unequal distributions of income and wealth (ESS, 2020). The rise of inequality in Europe has implications on multiple social and health outcomes, and is generally seen as bad for society (Pickett & Wilkinson, 2014). One of these outcomes is a decrease in subjective well-being (Pickett & Wilkinson, 2014; Laythe, 2011; Wilkinson, 1996). In general, places where inequality is higher, people tend to be less happy and experience lower levels of life satisfaction (Delhey & Dragolov, 2014). Hence, people experience lower levels of subjective well-being. The reason why people tend to be less happy in more unequal societies is subject to debate. One of the main arguments supporting the relationship between inequality, lower well-being and poorer health is the unequal distribution of material living standards (Wilkinson, 1996). This argument seems plausible, yet only applies to populations with low economic resources. Societies with better economic resources but high economic inequality still experience lower levels of well-being compared to more equal societies (Wilkinson, 1996). The relationship between inequality and decreased well-being can thus not simply be ascribed to material resources.

Another explanation for the relationship between inequality and well-being can be attributed to psychosocial processes resulting from inequality. Research shows that the judgment of a nation's well-being should not be based solely on economic indicators, as there is clear evidence that people's emotions, social contacts and personal satisfaction are important factors when evaluating personal well-being (Diener & Seligman, 2004). When it comes to inequality and well-being, negative emotions arise from unequal societies, causing mental burdens and leading to lower levels of well-being (Layte & Whelan, 2014). These mental burdens are considered psychosocial processes.

What is notable in literature concerning the relationship between inequality and well-being is the emphasis on income as a means to measure inequality. Research still considers only a part of what inequality can entail by focusing solely on income. Inequality goes beyond income, and functions on educational, employment and political levels as well (Hennig, 2019). Yet, within this line of research, these inequality indicators have not been taken into consideration. Hence, how inequality beyond the means of income influences well-being remains a research gap.

In response, the current research will examine the relationship between inequality and well-being by expanding the scope of inequality as a predictor for lower well-being. By

considering non-economic inequality, that is educational opportunity, job chances, and political participation alongside economic inequality, I will research if previous findings concerning the relationship between inequality and well-being can be generalized.

This research will therefore not only theoretically contribute to knowledge about the effect of different indicators of inequality on SWB, but it has societal implications as well. As income inequality has a negative effect on subjective well-being, so could be the case for non-economic inequality. Gaining knowledge about the relationship between non-economic inequality and SWB can help improve SWB and with that improve general health in society.

Literature and theoretical framework

Well-being

Well-being and (in)equality have been proven to be related. The concept of well-being however, knows several definitions. One can speak of well-being in terms of physical factors or in terms of psychological factors (NG & Diener, 2014). The latter is often referred to as subjective well-being (SWB). The distinction between well-being and SWB can be made in terms of how well-being is evaluated. SWB tends to be the self-evaluation of one's life where happiness, life satisfaction, and a sense of purpose are crucial (Steptoe, Deaton, Stone, 2015), while well-being is mostly measured more objectively by combining concepts of income, health status, age and so forth.

Within academic literature it is well established that well-being, both 'objective' and subjective, are related to different types of health outcomes. Higher (subjective) wellbeing is related to longevity and can reduce the risk of physical illness (Steptoe, Deaton, Stone, 2015). Obtaining high subjective well-being is thus beneficial not only for psychological outcomes, but physical outcomes as well.

In comparing well-being to SWB authors tend to value one more than the other. The current research focuses on subjective well-being, following the argument that people's ideas of situations have more impact than actual situations as people evaluate certain conditions in life differently (Diener, Suh, Lucas & Smith, 1999).

Social health gradient

In order to get a better understanding of the relationship between SWB, physical health and inequality, understanding how health outcomes vary within and between countries is important. Outcomes such as life expectancy can differ up to twenty years between European

countries (Marmot & Wilkinson, 2005). These differences in health outcomes can be explained through the relationship with social position (Marmot & Wilkinson, 2005). Research has shown that health follows a certain pattern when it comes to social position, called 'the social gradient of health'. (Marmot & Wilkinson, 2005). In short, health varies on a gradient with social position within communities. Higher social positions corresponds with better health. It is argued that it is not just the poor, but every position within the social hierarchy that is affected with lower health standards than people who are above them in terms of social position (Marmot & Wilkinson, 2005).

Income is considered an influential social determinant of health, and in fact research shows that more unequal societies experience lower general health (Delhey & Dragolov, 2013). It is argued that in developed countries lower life expectancy is more strongly correlated with income inequality than it is to gross domestic product per capita (Wilkinson, 1996). This, Wilkinson (1996) argues, is due to psychosocial processes, such as stress and decreasing self-esteem that result from income inequality. These processes have a stronger negative effect on health than the physical effects of living with low material standards (Wilkinson, 1996).

As shown, physical health varies on a gradient as does psychological health of which SWB is a determinant. Inequality is therefore an influential predictor of health outcomes. The relationship between inequality and lower levels of SWB has been demonstrated by various authors (Buttrick, Heintzelman & Oishi, 2017; Oishi, Kesibir & Diener, 2011; Delhey & Dragolov, 2013; Laythe & Whelan, 2014). Although it has been shown that higher income inequality leads to lower general well-being also on the macro level (Buttrick et al., 2017; Delhey & Dragolov, 2013; Laythe & Whelan, 2014), the exact mechanisms or determinants driving this relationship, are still a topic of debate.

Mediators of income inequality and well-being

Within this debate authors argue that social capital mediates the relationship between income inequality and SWB (Laythe, 2011), others are more concerned with trust and fairness (Oishi et al., 2011; Buttrick et al., 2017; Delhey & Dragolov, 2013), conflict (Delhey & Dragolov, 2013) or status anxiety (Laythe, 2011; Buttrick et al., 2017; Laythe & Whelan, 2011).

Although relevant, examining all the above mentioned mediators is outside the scope of this research. Hence, two mediators, trust and fairness, will be reviewed and examined further in the next section

Trust

The mediating factor *trust* has been studied by Delhey & Dragolov (2013) and Oishi et al., (2011) as being an important factor between income inequality and SWB. Delhey & Dragolov (2013) hypothesize that trust mediates between inequality and well-being since higher inequality leads to distrust in others, which relates to lower levels of sociability, an important part of well-being. The relationship between inequality and lower levels of trust is due to the way in which inequality 'disjoints' and 'divides' communities (Oishi et al., 2011). Delhey & Dragolov (2013) argue that this results in communities losing a sense of togetherness, combined with perceptions of great differences with others in the community when referring to values and concerns. Next to the aforementioned relationship between distrust and sociability, Oishi et al. (2011) state that trust is positively related to happiness. Being more trustful leads to greater happiness, resulting in higher levels of well-being. The results of both studies show a correlation between more distrust and more economically unequal societies, arguing that it does in fact mediate the influence of inequality on SWB.

Fairness

Like *trust,* also *fairness* is discussed by both studies as a mediating factor in the relationship between income inequality and SWB. Oishi et al. (2011) show that higher income differences make people perceive the world as less fair. Notably, when the rich get richer and the poor remain poor, people with lower social statuses experience unfairness. Perceiving the world as less fair has a negative effect on well-being (Oishi et al., 2011). It is argued that an important aspect of fairness is the avoidance of inequity (Blake et al., 2015). People tend to have an internal motivation to perceive the world as equal, making it a fair place. The same goes the other way around. When people do not perceive their world as equal, they tend experience unfairness and will try to do something about it (Blake et al., 2015). Although Oishi et al. (2011) conclude perceived fairness to be an important mediator in the relationship between income inequality and SWB, Delhey & Dragolov (2013) decided not to examine fairness as a sole concept. Instead, they operationalized fairness as being part of another concept; conflict (Delhey & Dragolov, 2013). More inequality, they argue, leads to more feelings of

exploitation, unfairness, and confrontation, all negative emotions concerned with conflict that lead to lower SWB. Although stating that these concepts are part of conflict, Delhey & Dragolov (2013) in practice measured conflict by combining two questionnaire items asking how much tension people tend to see between different groups (e.g. poor/rich). Therefore, the three concepts exploitation, unfairness, and confrontation are not measured in this study. Delhey & Dragolov (2013) conclude that conflict does not significantly mediate the relationship between income inequality and well-being. These results however, do not mention anything about fairness as a mediator.

Comparing the two aforementioned researches, there are limitations to how fairness has been conceptualized by the two studies respectively. On the one hand, Delhey & Dragolov (2013) critique the work of Oishi et al. (2011), stating that their measurement of fairness is inconsistent. They argue that Oishi et al. (2011) claim to measure fairness of income distribution, yet, they measure another perspective of fairness, that being, fairness of others (in general people try to be fair). On the other hand, Delhey & Dragolov (2013) do not measure fairness directly, since it has been incorporated into the concept of conflict.

Due to these conflicting operationalizations and mixed findings, fairness would require more research as a possible mediator. I therefore argue that perceived fairness should be included in research concerning the relationship between inequality and well-being, yet the operationalization should be clear. Since Oishi et al. (2011) did find fairness of others to be a significant mediator between income inequality and SWB, the current study employs on this way of measurement with clear operationalization measuring fairness of others instead of fairness of income distribution.

Non-economic inequality

As described, multiple mediators could be argued to explain the relationship between inequality and SWB. However, studies on the topic focus merely on income as a mean to measure inequality. In a critical paper, Peterson (2013), reviews the way in which inequality is measured and related to well-being, criticizing the pure focus on inequality in income terms. Peterson (2013) argues that the distribution of inequality cannot just be measured in terms of income, but should include non-economic inequality (e.g. educational and health inequality). According to her, it is in fact non-economic inequality that is more relevant in research concerning well-being rather than economic inequality (Peterson, 2013). Income,

she argues, is just a means to acquire well-being, while non-economic aspects directly influence well-being.

Taking this into consideration, I argue that there is a research gap in the literature on the relationship between inequality and well-being. In response to this research gap I will broaden the scope of inequality in income terms by incorporating educational, labor, and political inequality as possible predictors of SWB.

Educational (in)equality

Educational inequality is an important component of the reproduction of broader social inequality (Torche, 2005). When it comes to educational inequality, one can distinguish between educational outcome and educational opportunity. The first is considered an individual level of inequality, influencing SWB directly (Ferreira & Gignoux, 2013). The second, educational opportunity, offers a societal perspective and is related to societal privileges (Bar Haim & Shavit, 2013). Individuals who are able to make use of cultural and material resources have means to take advantage of educational opportunities (Bar Haim & Shavit, 2013).

Like health varies on a gradient, so does educational opportunity (Melhuish, 2014). It is not just 'the poor' that have lower capacities to obtain good education for their children, but again, every social group 'lower' than the one above experiences lower educational opportunities (Melhuish, 2014). Educational inequality causes some social groups to be limited in freedom of choice, leading to lower levels of agency, that is, inconsistencies in what one values and what one is able to achieve. These inconsistencies result in lower levels of well-being (Walker, 2005).

In order to better understand the relationship between inequality and well-being, educational inequality is an important factor to consider.

Labor (in)equality

Similar to educational inequality, labor market inequality can be best described in terms of access to employment. As the labor market is based on selection, and organized around competition, equal access to the labor market would mean that individuals are selected only by the required skills and competences of a job. Yet, research has shown that selection of employees is often unfair (Kraal et al., 2009). Inequality in access to employment is related to

gender, ethnic origin, disability or age, making minority groups underrepresented in the European labor market. (EC, 2016).

The relationship between labor (in)equality and SWB has not yet been researched, making this a research gap. Yet, studies have shown that employment status does influence SWB. For instance, Paul & Moser (2009) show that unemployment has a strong negative effect on different aspects of mental health, of which SWB is one.

Other research shows that not only on the individual level does unemployment affect SWB, but also on a macro level people tend to experience lower levels of SWB when there are lower levels of employment in their country (Di Tella, MacCulloch & Oswald, 2001). This affects not only the unemployed but the employed as well as they could experience guilt towards the unemployed (Di Tella et al., 2001).

Since being unemployed has a negative effect on SWB as well as unemployment on a macro level, experiencing unequal access to the labor market in attaining a job would assumingly have the same negative effect. The current study therefore considers labor inequality as an important indicator of societal inequality and a predictor for lower SWB.

Political (in)equality

Another non-economic indicator of inequality is political inequality, or unequal access to political decision making (Dubrow, 2016). Prior research has shown that in places where more people have access to political decision making, the more policy will reflect the wishes of the public (Frey & Stutzer, 2000). Therefore, when the preferences of the public are increasingly met, people tend to generally be happier (Frey & Stutzer, 2000). Within this line of research, Frey & Stutzer (2000) show that the relationship between political decision making and happiness cannot just be ascribed to political outcomes, that is, better outcomes for the public, but that it is the political process that influences happiness. The feeling of having a say in certain political decisions brings out utility for all citizens, resulting in both 'winners' and 'losers' generally being more satisfied as they feel their ideas have been taken into account (Frey & Stutzer, 2000).

When all layers of society have access to political decision making, people tend to be happier, possibly leading to higher levels of SWB. When people feel able to participate, they develop a general sense of fair procedures leading to a greater sense of utility and happiness (Frey & Stutzer, 2000).

From this line of reasoning it seems plausible that experiencing political inequality, that is, the feeling that not everyone is able to participate in politics leads to lower well-being. Yet, whether lower happiness, or lower SWB, as a result of political inequality can in fact be explained through feelings of trust and fairness, remains a research gap that the current research will address.

Theoretical framework

The theoretical model of Delhey & Dragolov (2013) provides a framework to see how the different (in)equality variables are related to SWB and how the mediators affect this relationship. This model, building on the sequence model of life evaluation (Veenhoven, 1996), shows how people in general evaluate their lives through various levels of human functioning's and influences of society, and explains how life events (i.e. income inequality as a societal resource of life chances) affect emotional and cognitive reactions (i.e. SWB) through certain mental states (i.e. perceived trust and fairness) (Delhey & Dragolov, 2013). Hence, it offers guidance in structuring the hypotheses in order to answer the research question.

The theoretical model of the current study (see figure 1) shows how the factors trust and fairness mediate the relationship between different inequality indicators and SWB, showing a negative effect. Next to the inequality predictors of well-being, the model also incorporates additional predictors that have been proven to influence SWB directly, being age, gender, income and belonging to an ethnic minority (Dolan, Peasgood & White, 2007). Young and older people tend to experience higher levels of SWB, people between 32 and 50 experience the lowest SWB. Next, women tend to be happier, although these results sometimes disappear when controlled for other societal factors. Higher income generally leads to higher SWB and people belonging to an ethnic minority usually experience lower SWB due to experienced discrimination (De Vroome & Hooghe, 2015).

Reflecting on the current literature on factors influencing the relationship between inequality and SWB there is a research gap concerning measurements of inequality. Research on economic inequality and SWB suggests that the relationship is mediated by factors such as trust and fairness, yet, non-economic inequality has not been taken into account as being a possible predictor.
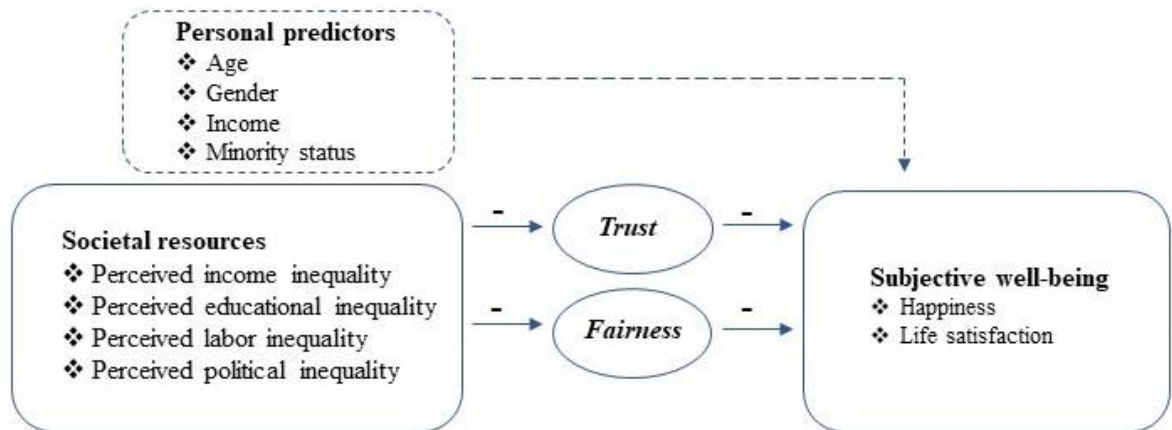
Figure 1 conceptual model

The current research therefore tests whether research on economic inequality and SWB can be generalized by incorporating non-economic inequality. To understand why higher inequality leads to lower well-being, this research tests whether trust and fairness serve as mediators between inequality and well-being in the context of Norway. Norway, and other Scandinavian countries have shown the highest levels of happiness and SWB for years (Martela, Greve, Rothstein, Saari, 2020).This research will show if indeed higher SWB in Norway is explained by lower levels of inequality. This leads to the following question:

How are different indicators of inequality related to subjective well-being, and to what extent do the factors trust and fairness mediate this relationship

Inequality is distinguished between perceived income (in)equality, perceived political (in)equality, perceived educational (in)equality, and perceived labor (in)equality.

Drawing from the theoretical model and previous research, this research tests the following hypotheses:

H1: Higher perceived inequality (income, educational, job, and political) negatively influences SWB

H2a: Higher perceived inequality (income, educational, job, and political) negatively predicts levels of perceived trust

H2b: Higher perceived trust positively relates to SWB

H2c: Perceived trust mediates the relationship between perceived inequality and SWB (Oishi et al., 2011; Delhey & Dragolov, 2013; Gould & Hijzen, 2016).

H3a: Higher perceived inequality (income, educational, job, and political) negatively predicts perceived fairness
H3b: Higher perceived fairness leads to higher levels of SWB SWB
H3c: Perceived fairness mediates the relationship between perceived inequality and SWB (Oishi et al., 2011; Delhey & Dragolov, 2013; Gould & Hijzen, 2016).

In this research bias is reduced by incorporating the control variables age, gender, income, and belonging to an ethnic minority.

Methods

Design

The research question will be answered using existing data conducted by the European Social Survey (ESS), hence, the current study is a quantitative secondary analysis. It has a cross-sectional design as it contains data from one point in time, covering multiple cases (Bryman, 2012).

The survey is conducted two-yearly with a core set of questions and rotating additional questions. The survey is designed to keep track of changing attitudes and values throughout Europe (ESS, 2021). For this research I will make use of SSE round 9, conducted in 2018. The four core themes in this ESS dataset include 'Media and social trust', 'Politics', 'Subjective well-being, social exclusion, religion, national and ethnic identity', 'Gender, household', 'Socio demographics', and 'Human values'. In the 2018 round additional data on the themes 'Timing of life' and 'Justice and fairness in Europe' was conducted as well (ESS, 2021).

The survey is developed by the use of a cross-national questionnaire design and pre-testing. The design phase consists of expert reviews, coding item characteristics to predict validity by making use of the Survey Quality Predictor, cognitive interviews, advance translation, and quantitative testing in two-nations (ESS, 2021).

Participants and Sampling

The ESS survey round 9 (2018) contains data from 29 European countries with response data from 49519 participants. The respondents consist of 23020 men (46.5%) and 26499 women (53.5%), with an age range from 15 to 90 (*M*: 51.1, *SD*: 18.6).

The selection of the participants is done by random probability measures and contains representative data of all persons aged 15 and older (ESS, 2021). Within country sampling can differ, as the ESS follows random probability selection methods (each member of ESS population has a probability larger than zero of being selected). This flexibility is chosen since not all countries have the same resources for sampling (ESS, 2018). This survey aims to include all persons above the age of 15, who are resident of that specific country. Nationality, citizenship, or language is not a criterium.

All the ESS round 9 data is collected via face-to-face interviews in all participating countries.The recruitment of participants was done by an opt-out approach. Participants received a letter with an invitation to participate in the study and a date and time when a researcher will visit the participant. If individuals do not want to participate, they need to express their decision to be excluded. No declaration of informed consent has been signed.

The current analytical sample consists of all participants living in Norway. This set consists of 1406 respondents, with 777 men (55.3%) and 629 women (44.7%), with an age range from 15 to 90 (*M*: 47.1, *SD*: 18.2). table 1 shows the relevant demographics in more detail.

Table 1. Sociodemographics

Variables	Norway (n=1406)		Total sample (n=49519)	
	n	%	n	%
Gender				
Female	629	44,7	26499	53,5
Male	777	55,3	23020	46,5
Age group				
15-30	317	22,5	8491	17,1
31-45	315	22,4	10816	21,8
46-60	388	27,6	12918	26,1
61-75	282	20,1	12095	24,4

76-90	72	5,1	4977	10,1
Educational level				
Less than lower secondary education	20	1,4	3800	7,7
Lower secondary education	177	12,6	8329	16,8
Upper secondary education	431	30,7	11212	38,8
Post secondary non-tertiary	180	12,8	6079	12,3
Bachelor	321	22,8	5517	11,1
Master	269	19,1	6281	12,7
Other educational level	5	0,4	167	0,3
Income*				
1st decile (€0 – 25.134,3)	66	4,7	3993	8,1
2nd decile (€25.134,4 -35.534,7)	129	9,2	4462	9,0
3rd decile (€35.534,8 – 44.779,5)	160	11,4	4425	8,9
4th decile (€44.779,6 – 53.928,0)	159	11,3	4412	8,9
5th decile (€53.928,1 – 63.076,5)	137	9,7	4267	8,6
6th decile (€63.076,6 – 72.706,5)	166	11,8	4045	8,2
7th decile (€72.706,6 – 82.818,0)	132	9,4	4069	8,2
8th decile (€82.818,1 – 96.203,7)	132	9,4	3838	7,8
9th decile (€96.203,8 -115.560,0)	101	7,2	3232	6,5
10th decile (€115.560,0 -)	113	8,0	3122	6,3
Belonging to ethnic minority				
Yes	88	6,3	2080	6,2
No	1301	92,5	46078	93,1

*For Norway, income is originally measured in NOK, thereafter converted to EURO with an exchange rate of 1 EURO=9.63 NOK. As income is country specific, it has been calculated into deciles. The specific numbers are thus for Norway, the total sample is previewed in deciles.

Measures

Subjective well-being

SWB is operationalized by the mean score of two question items. The first item measures happiness and is as follows: 'Taking all things together, how happy would you say you are?'. The answer options are coded in a numeric ten-point scale ranging from 0 'Extremely unhappy' to 10 'extremely happy'. The second question item measures life satisfaction: 'All

things considered, how satisfied are you with your life as a whole nowadays?'. Similarly the answer options are coded in a numeric ten-point scale ranging from 0 'Extremely dissatisfied' to 10 'Extremely satisfied'. By combining the two question items this study follows Delhey & Dragolov's (2013) approach. Although happiness and life satisfaction differ as sole concepts, Delhey & Dragolov (2013) argue that by combining these two items, one follows a larger construct of SWB.

The two question items (Cronbach's alpha α =.86) have been merged into the mean score of the two question items, ranging from 0 'extremely low SWB' to 10 'extremely high SWB'.

Perceptions of income (in)equality

Perceptions of income inequality are operationalized by a mean score of two question items. The first question measuring perceptions of income inequality is: 'Please think about the top 10% of employees working full-time in [country], earning more than [amount per month or per year]. In your opinion, are these incomes unfairly low, fair, or unfairly high?' The second question is: 'And now please think about the bottom 10% of employees working full-time in [country], earning less than [amount per month or per year]. In your opinion, are these incomes unfairly low, fair, or unfairly high?'

The two questions are coded the same with a numeric nine-point scale coded -4 'Low, extremely unfair', -3 'Low, very unfair', -2 Low, somewhat unfair, -1 'Low, slightly unfair', 0 'fair', 1 'High, slightly unfair, continuing with the same steps to 4 'High, extremely unfair.

These variables measure two separate issues within the question, that is, is the income either too high or too low, and whether this is fair or unfair. Consequently, in the current study the items are recoded into a five-point scale measuring fairness of top and bottom income. -4 and 4 have been recoded into 5 'top/bottom 10% earnings are extremely unfair', -3 and 3 into 4, 'very unfair', -2 and 2 into 3 'somewhat unfair', -1 and 1 into 2 'slightly unfair', and 0 into 1 'fair'. A higher score thus corresponds with greater income inequality.

For these two question items Cronbach's alpha is low (Cronbach's alpha α =.506). Nevertheless has been decided to merge the two items together by their mean score. Although the items do not measure the same thing, it does show perceptions of valued income differences in the population.

Perceptions of educational (in)equality

Perceptions of educational (in)equality is operationalized by the following question: 'Overall, everyone in [country] has a fair chance of achieving the level of education they seek.' This question measures to what extent the statement applies using a numeric ten-point scale where 0 equals 'Does not apply at all', and 10 equals 'Applies completely'. This question has been reversed so that a higher score indicates high educational inequality and a low score indicates low educational inequality.

Perceptions of labor (in)equality

Perceptions of labor inequality are operationalized by the following question: 'Overall, everyone in [country] has a fair chance of getting the jobs they seek.' This question measures to what extent the statement applies using a numeric ten-point scale where 0 equals 'Does not apply at all', and 10 equals 'Applies completely'. This question has been reversed so that a higher score indicates high labor inequality and a low score indicates low labor inequality.

Perceptions of political (in)equality

Perceptions of political inequality are operationalized by the mean of two question items. The first question measuring perceptions of political inequality is: 'How much would you say that the political system in [country] ensures that everyone has a fair chance to participate in politics?' The second question item is: 'How much would you say that the government in [country] takes into account the interests of all citizens?'. Both question items are coded with a numeric five-point scale ranging from 1 'Not at all' to 5 'A great deal'. The two question items (Cronbach's alpha α =.652) have been merged into the mean score of the two question items with a five-point scale ranging from 1 'extremely equal political system' to 5 'extremely unequal political system'. A higher score indicates higher experienced political inequality.

Trust

To measure perceived levels of trust, this study follows the line of Oishi et al., (2011), Delhey & Dragolov (2013), and Laythe (2012), and uses the following question: 'Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people?' this question is coded in a 10-point numeric scale where 0 equals 'You can't be too careful' and 10 equals 'Most people can be trusted'. A higher score indicates high experienced level of trust.

Fairness

To measure perceived fairness, again Oishi et al.,'s (2011) line of reasoning is followed, by using the following question: 'Do you think that most people would try to take advantage of you if they got the chance, or would they try to be fair?' For this question 0 equals 'Most people try to take advantage of me' and 10 equals 'Most people try to be fair'. A higher score indicates higher levels of perceived fairness.

Control variables

The current study controls for personal predictors that influence SWB directly. These are Gender (1=male, 2=female), age, calculated from date of birth, income ('please tell me which letter describes your household's total income, after tax and compulsory deductions, from all sources?'). The letters indicate a range of income of which participants choose. These ranges are country specific. The last control variable is belonging to an ethnic minority (1=yes, 2=no).

Data analysis

For this research data of ESS round 9 (2018) was analyzed using IBM SPSS statistics 25. To test whether the different inequality indicators, being income, educational, labor, and political inequality (predictors) affect SWB (outcome) through the mediators trust and fairness a parallel mediation analysis was conducted using Hayes' (2003) PROCESS macro. For this analysis, I made use of a simple mediation model that assumes that the predictor both directly, as through the mediator indirectly predicts the outcome variable. As for the PROCESS tool, the simple mediation test is represented by model 4 (Field, 2009).

   In order to analyze the different predictors in one model the analysis was run four times, each time with one indicator of inequality as the predictor variable and the other inequality indicators as covariates. All variables included in the model are standardized. Since the four predictors were measured in different scales, standardizing was necessary. As for the other variables, the decision has been made to standardize these too in order to get an unambiguous interpretation of the results.

   After running the analyses four times the results were incorporated together and presented as one model. Prior to conducting the main analyses, descriptives including SWB, income inequality, educational inequality, labor inequality, political inequality, trust, and fairness were calculated.

Results

Descriptive information of the variables used in the current study are presented in table 2. Besides descriptive information, the intercorrelations of the variables in the mediation model have been calculated (see table 3). This shows that all variables significantly correlate with SWB except for income inequality. The correlation table further shows that labor inequality and educational inequality are relatively highly correlated in comparison to the other correlation coefficients, $b= .559, <.001$, as are the two mediators trust and fairness, $b= .591$ $p <.001$.

Table 2. Descriptive information of variables used in the analysis

	Mean	SD	Min	Max
Dependent				
SWB	7.739	1.552	0	10
Independent				
Perceived income (in)equality	2.691	.905	1	5
Perceived educational (in)equality	2.576	1.908	0	10
Perceived labor (in)equality	3.950	1.874	0	10
Perceived political (in)equality	2.899	.708	1	5
Mediators				
Trust	6.76	1.919	0	10
Fairness	7.04	1.788	0	10

Mediation analysis

To test the hypotheses in this current research, parallel mediation analysis was performed . The variables age, gender, income and ethnic minority were included as covariates in the model, as they were all significantly correlated with SWB (see table 3).

First it was tested whether higher levels of perceived inequality (income, educational, labor, and political) negatively predict SWB, as well as the two mediators, trust and fairness. It was found that income inequality did not significantly predicts SWB, $b= -.020, p= .539$. Educational inequality has a significant negative effect on SWB, $b= -.123, p= .007$, as well as labor inequality, $b= -.094, p= .043$, and political inequality, $b= -.193, p < .001$. Thus, SWB is

lower for people who experience higher levels of educational, political, and labor inequality. Experiencing higher income inequality does not significantly affect SWB.

Trust as a mediator

Second, it was tested whether trust mediates the relationship between the different indicators of inequality and SWB. It was first tested whether the different inequality indicators predict experienced trust. Income inequality positively predicts trust, $b= .087$, $p=.001$. Educational inequality did not turn out as a significant predictor of trust $b= -.055$, $p= .116$. Labor inequality, $b= .099$, $p=.005$ and political inequality, $b= .201$, $p < .001$, both respectively significant, negatively predict trust. More feelings of labor and political inequality lead to less feelings of trust (see figure 2).

The mediator trust significantly predicts SWB in a positive direction, $b= .157$, $p < .001$. Experiencing higher levels of trust lead to higher levels of SWB.

Overall, the results show (see table 4) that income inequality has an indirect effect through trust on SWB, $b= .014$ 95% CI [.004, .027]. Educational inequality does not have an indirect effect on SWB through feelings of trust, $b= -.009$ 95% CI [-.024, .003], Labor inequality has an indirect effect through trust on SWB, $b= -.016$, 95% CI [-.033, -.003] as does political inequality, $b= -.031$ 95% CI [-.053, -.013].
Trust therefore mediates the relationship between income inequality, labor inequality, and political inequality and SWB, but not educational inequality and SWB.

Fairness as a mediator

Thirdly, the same steps were taken in testing whether fairness mediates the relationship between the different inequality indicators and SWB. The results showed that income inequality does not significantly predict feelings of fairness, $b= .026$, $p=.320$. Educational inequality is a predictor of fairness, showing a negative significant relationship, $b= -.105$, $p= .003$. Labor inequality does not significantly predict fairness, $b= -.027$, $p=.440$, and last the results show that political inequality respectively significant, negatively predicts feelings of fairness, $b= -.160$, $p < .001$ (see figure 2).

Next, the results show that the mediator fairness is a significant positive predictor of SWB, $b= .119$, $p= .007$. Higher levels of experienced fairness thus lead to higher levels of SWB.

To analyze whether mediation occurred, the results show (see table 4) that income inequality does not have an indirect effect through fairness on SWB, $b= .003$ 95% CI [-.003,

.011]. Educational inequality does have an indirect effect on SWB through fairness, $b= -.013$, 95% CI [-.030, -0015]. Labor inequality again does not show an indirect effect through fairness on SWB, $b= -.001$ 95% CI [-.015, .013], and last, political inequality has an indirect effect on SWB through feelings of trust, $b = -.019$, 95% CI [-.036, -.004]. Fairness mediates the relationship between political inequality and SWB, as well as educational inequality and SWB, but not the relationship between income and labor inequality and SWB.

Discussion

This current research investigated whether different indicators of inequality predict subjective well-being, and, if so, if this relationship is mediated by the factors trust and fairness. As expected, the results confirm that higher experienced educational, political, and labor inequality lead to lower SWB. The hypothesis that income inequality does so as well is rejected.

Furthermore the current research demonstrated that the relationship between inequality (income, educational, labor, and political) and SWB can somewhat be explained through feelings of trust and fairness. It was hypothesized that perceived inequality is negatively related to trust. The results confirm this hypothesis for labor inequality and political inequality, yet, income inequality shows a positive effect on trust. Educational inequality does not have an effect on trust.

As for fairness, the same hypothesis was tested. Again here, the hypothesis was partly confirmed and partly rejected. The results confirmed that educational inequality as well as political inequality negatively predict experienced fairness. Income inequality and labor inequality do not predict fairness.

Additionally, the results confirmed that both trust and fairness positively predict SWB. Lastly, the research hypothesized that trust and fairness mediate the relationship between different inequality indicators and SWB. The results support this hypothesis for political inequality showing that the relationship with SWB can partially be explained by feelings of trust and fairness. As for the other indicators of inequality, the relationship between educational inequality and SWB is partially mediated by feelings of fairness, but not trust. The relationship between labor and income inequality and SWB is partially mediated by feelings of trust but not fairness.

Table 3. Correlation table of variables used in the analysis

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. SWB											
2. Income inequality	-.050										
3. Educational inequality	-.177**	.123**									
4. Labor inequality	-.168**	.153**	.559**								
5. Political inequality	-.186**	.150**	.268**	.293**							
6. Trust	.254**	.044	-.139**	-.157**	-.223**						
7. Fairness	.255**	-.010	-.144**	-.121**	-.187**	.591**					
8. Age	.104**	.034	.004	.062*	-.026	.201**	.187**				
9. Gender	-.060*	.063*	.072**	.081**	.079**	-.030	.031	-.038			
10. Income	.145**	-.096**	-.073**	-.086**	-.116**	.061*	.052	-.090**	-.071*		
11. Ethnic minority	.053*	-.023	.045	.006	-.022	.066*	.034	.154**	-.064*	.096**	

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

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

Table 4. Overview of total, direct, and indirect effect of the different indicators of inequality, controlled for age, gender, income, and ethnicity

	Total effect	Direct effect	Indirect effect	Indirect effect
	SWB	SWB	Trust	Fairness
Income inequality	*b*= -.012, *p*=.732	*b*= -.028, *p*=.400	*b*= .014 95% CI [.004, .027]	*b*= .003 95% CI [-.003, .011]
Educational inequality	*b*= -.123, *p*=.007	*b*= -.102, *p*=.024	*b*= -.09 BCa CI [-.024, .003]	*b*= -.013 95% CI [-.024, -.003]
Labor inequality	*b*= -.094, *p*=.043	*b*= -.075, *p*= .100	*b*= -.016 95% CI [-.033, -.003]	*b*= -.003 BCa CI [-.016, .006]
Political inequality	*b*= -.193, *p* <.001	*b*= -.142, *p* < .001	b= -.031 95% CI [-.053, -.013]	b= -.019 95% CI [-.073, -.030]
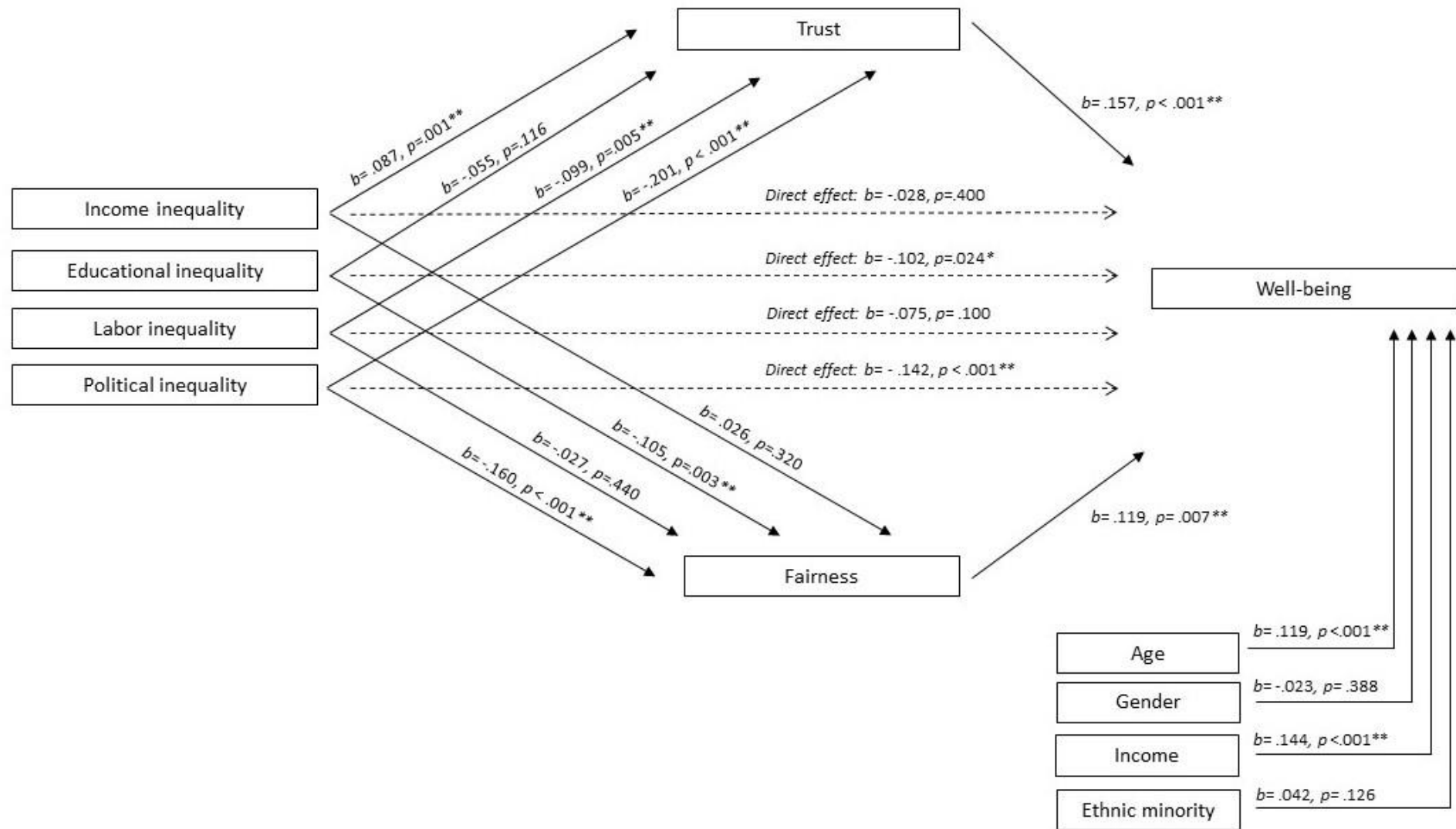
Figure 2. Model of different indicators of inequality on SWB, mediated by trust and fairness, controlled for age, gender, income, and ethnicity. The confidence interval for the direct effect is a BCa bootstrapped, CI based on 5000 samples. Note, *p* < .05; **p* < .00

Overall, it can be concluded that non-economic inequality (educational, labor, and political) negatively affects SWB. When individuals experience higher levels of non-economic inequality, they generally experience lower levels of SWB. This relationship can partially be explained through feelings of trust and fairness.

The current study contributes to research concerning inequality and well-being, showing that not just income inequality has a negative effect on SWB, but that non-economic inequality should be taken into account as predictors of SWB as well.

The process of being able to contribute to political decision making tends to be more important than actual outcomes (Frey & Stutzer, 2000). The results of this study further confirm that experienced equal political participation of all citizens influences SWB as well, and, that trust and fairness partially explain this relationship. These findings are in line with the work of Frey & Stutzer (2000), arguing that feelings of participation lead to feelings of fairness as people feel the decisions that have been made are fairly made. This again relates to theory of procedural justice, that further explains that fairness in the process of decision making is critical for enforcing trust (Yale Law School, n.d.). Placing these findings within a bigger debate on inequality and SWB, this research shows that previous findings on the relationship between income inequality and SWB can be generalized to political inequality. Educational inequality, like political inequality, affects SWB, yet, through feelings of fairness rather than trust. When inequality is perceived as high people tend to view others' opportunities to gain a certain education as unfair. This is in line with previous research on income inequality (Gould & Hijzen, 2016), yet, trust does not seem to be affected by educational inequality. The disjoining and dividing effect of income inequality on communities cannot be generalized to educational inequality. This could be due to specific policy regulations in Norway, or the young age in which educational inequality can occur. Future research should determine why educational inequality does not affect trust .

Further, the relationship between labor inequality and SWB can partially be explained by trust, yet, not through fairness. Trust as a result of labor market opportunity is linked to social solidarity. When people experience more equality in labor opportunities, people tend to feel more solidarity with their peers or community members, leading to more trust (Rothstein & Uslaner, 2005). This research shows that it works the other way around as well. More inequality leads to less social solidarity simultaneously leading to less trusting societies. It would be plausible to assume that labor inequality has the same effect on fairness, yet, this

current research shows that labor inequality is not mediated by experienced fairness. An explanation for this lack of mediation is, as mentioned earlier, the fact that this research has been done in the context of Norway, a country known for its specific labor market policies, aiming at fair labor participation for everyone (Nilsno, 2018). Assumingly, by implementing these policies aiming at fair labor participation, people do not associate labor inequality with unfairness. Yet, further research should determine if these contextual policies in fact determine the lack of mediation with fairness.

In the current study, perceived income inequality did not predict SWB, a peculiar finding compared to previous research. Thereby, the analysis did show an indirect effect through trust, suggesting that it does contribute to the relationship. What is notable is that this indirect effect is positive, which is also in contrast with previous research. There are three likely explanation for these ambiguous results. First, this study measured perceptions of inequality rather than objective measures of inequality. This is an important remark since individuals often misperceive levels of inequality, resulting in great differences between perceived and actual inequality (Hauser & Norton, 2017). Thereby, descriptive information shows that the analyzed population does not particularly perceive the income distribution as unequal (*M*= 2.69, *SD*= .905). This could also explain the lack of relationship. Another explanation for the lack of relationship is the way income inequality has been measured in the current study. As shown, the two variables used to measure income inequality do not capture the same concept completely. Since this study made use of existing data published by the ESS, there was no way to measure the concept differently. This is an important remark for future research on the topic.

Although economic inequality came out non-related to inequality, this research shows that non-economic inequality negatively affects SWB. It is worth discussing though, what the context of Norway implies for these outcomes. Norway has different policies specifically aimed at reducing inequality, reinforcing labor participation and improving health. Norway has actually implemented a so called 'social gradient approach' where they acknowledge the aforementioned social gradient of health, aiming different policies and interventions at reducing the gradient rather than focusing on disadvantaged groups (Wel, Dahl & Bergsli, 2016). In comparison with other European countries, Norway experiences low levels of inequality, both economic as non-economic (Wel, Dahl & Bergsli, 2016). Yet, relative inequality, that is within Norway, does exist and in fact influences SWB. This shows that even in more equal countries, such as Norway, a gradient of social position and health exists, meaning that the higher the social position is, the better the SWB is and with that the better

the physical health is. In more unequal countries similar results would arguably be even more visible. Narrowing down the social gradient by improving equality on both economic and non-economic terrains should therefore be prioritized in improving SWB and general health.

This research is the first that has taken into account different indicators of inequality next to income inequality. Although the study shows some important insights in the relationship between inequality and SWB, the study also has some limitations.

First, ross-sectional research has been conducted with data from Norway. Since this data captures one certain point in time, causality is difficult to determine (Bryman 2012). In order to get more knowledge on causal effects of non-economic inequality on SWB future research should be concerned with longitudinal research. This has been done with economic inequality (Oishi et al., 2011), yet, as this research shows, non-economic inequality should be incorporated as well.

A second limitation is the inclusion of only two possible mediators influencing the relationship between inequality and SWB. It is possible that other psychosocial processes play part in this relationship as well, for instance status anxiety, a concept that has been shown to explain the relationship between income inequality and SWB (Laythe, 2011; Laythe & Whelan, 2011; Delhey & Dragolov, 2013; Buttrick et al., 2017).

Lastly, as described before, the measurement of income inequality did not seem to capture the full concept. This could have led to an insignificant relationship between income inequality and SWB.

Based on the findings of this research I suggest policy improvements in to increase SWB. First, implementing policies concerning equal access to education as well as labor market policies would help to narrow inequality of opportunity. Making education free of charge offers all members of society, regardless of income or social position, an equal chance of getting the education they want and would reduce labor inequality as well. This would result in more experienced fairness and trusting societies, leading to higher levels of SWB. Second, more effort should be put in offering members of society the chance to actively speak about their concerns or support of policy implementations. For instance, occasionally implementing referendums in order for people to voice their opinion. Lastly, I suggest that implemented policies not only affect highly disadvantaged groups, but should be available in some way for all layers of society. As health, SWB, and social position varies on a gradient, it is not just the 'lower' positions that are affected.

Summing up, this research showed the importance of considering non-economic inequality, next to economic inequality, as a predictor of SWB. These findings are valuable

as it shows that the focus on reducing inequality should not just be put on income, but it should include other aspects of social life as well. When different indicators of inequality, both economic and non-economic are reduced, people will experience higher levels of trust and fairness, leading to higher SWB. This again leads to lower social ills, as well as physical illnesses.

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Appendix A. Syntax data analysis and PROCESS output

GET FILE='D:\Thesis\Data analysis\ESS9e03_original.sav'.

RENAME VARIABLES (stflife happy topinfr btminfr wltdffr evfredu evfrjob frprtpl gvintcz
ppltrst pplfair gndr cntry agea hinctnta hincfel eisced sclmeet health blgetmg=
SATISFLIFE HAPPY INCOME_INEQ_1 INCOME_INEQ_2 INCOME_INEQ_3
EDU_INEQ JOB_INEQ POLIT_INEQ_1 POLIT_INEQ_2 TRUST FAIRNESS GENDER
COUNTRY AGE INC_NET INC_FEEL EDUC SOCIALCONTACT HEALTH
ETHN_MINOR).

SAVE OUTFILE='D:\Thesis\Data analysis\ESS9e03_modified_final.sav'
 /KEEP
SATISFLIFE
HAPPY
INCOME_INEQ_1
INCOME_INEQ_2
INCOME_INEQ_3
EDU_INEQ
JOB_INEQ
POLIT_INEQ_1
POLIT_INEQ_2
TRUST
FAIRNESS
GENDER
COUNTRY
AGE
INC_NET
INC_FEEL
EDUC
SOCIALCONTACT
HEALTH
ETHN_MINOR.

```
GET FILE='D:\Thesis\Data analysis\ESS9e03_modified_final.sav'.


*demographic information


RECODE AGE (15 thru 30=1) (31 thru 45=2) (46 thru 60=3) (61 thru 75=4) (76 thru 90=5)
INTO AGE_GR.
EXECUTE.


FREQUENCIES VARIABLES=GENDER AGE EDUC INC_NET AGE_GR
 /STATISTICS=STDDEV MEAN MEDIAN
 /ORDER=ANALYSIS.


*demographic information NORWAY


USE ALL.
COMPUTE filter_$=(COUNTRY = 'NO').
VARIABLE LABELS filter_$ "COUNTRY = 'NO' (FILTER)".
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.
FORMATS filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE.



FREQUENCIES VARIABLES=GENDER AGE EDUC INC_NET AGE_GR
 /STATISTICS=STDDEV MEAN MEDIAN
 /ORDER=ANALYSIS.



* Happyness original variable freq


FREQUENCIES VARIABLES=HAPPY
 /STATISTICS=STDDEV MEAN MEDIAN
 /ORDER=ANALYSIS.
```

* Satisfied with life original variable freq

FREQUENCIES VARIABLES=SATISFLIFE
  /STATISTICS=STDDEV MEAN MEDIAN
  /ORDER=ANALYSIS.

* Trust variable freq

FREQUENCIES VARIABLES=TRUST
  /STATISTICS=STDDEV MEAN MEDIAN
  /ORDER=ANALYSIS.

* Fairness variable freq

FREQUENCIES VARIABLES=FAIRNESS
  /STATISTICS=STDDEV MEAN MEDIAN
  /ORDER=ANALYSIS.

* Educational (in)equality freq

FREQUENCIES VARIABLES=EDU_INEQ
  /STATISTICS=STDDEV MEAN MEDIAN
  /ORDER=ANALYSIS.

* Job (in)eqality freq

FREQUENCIES VARIABLES=JOB_INEQ
  /STATISTICS=STDDEV MEAN MEDIAN
  /ORDER=ANALYSIS.

* Political inequality 2 original variables freq

FREQUENCIES VARIABLES=POLIT_INEQ_1 POLIT_INEQ_2
  /STATISTICS=STDDEV MEAN MEDIAN

```
  /ORDER=ANALYSIS.


* income (in)equality 2 original freq


FREQUENCIES VARIABLES=INCOME_INEQ_1 INCOME_INEQ_2
  /STATISTICS=STDDEV MEAN MEDIAN
  /ORDER=ANALYSIS.
```

* Cronbach's alpha --> see if the 2 quesiton items for WELL-BEING do in fact measure that, and are thus correlated (chronbach's alpha = .860) which shows a high internal consistency

```
RELIABILITY
  /VARIABLES=SATISFLIFE HAPPY
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE CORR
  /SUMMARY=TOTAL.
```

*compute the two scores of HAPPYNESS AND SATISFIED LIFE into 1 score that measures WELL-BEING.

```
COMPUTE WELLB_tr=TRUNC (MEAN(SATISFLIFE,HAPPY)).
EXECUTE.
```

*add value labels to the new variable 'well-being'

```
VALUE LABELS
WELLB_tr
0 'extreme low well-being'
1 '1'
2 '2'
3 '3'
4 '4'
```

5 '5'

6 '6'

7 '7'

8 '8'

9 '9'

10 'extreme high well-being'

77 'refuses'

88 'dont know'

99 'no answer'.

MISSING VALUES WELLB_tr (77, 88, 99).

* Cronbach's alpha --> see if the 2 quesiton items for POLITICAL INEQUALITY do in fact measure that, and are thus correlated (chronbach's alpha = .652) which shows a modest internal consistency

RELIABILITY
  /VARIABLES=POLIT_INEQ_1 POLIT_INEQ_2
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE CORR
  /SUMMARY=TOTAL.

*compute the two scores of POLITICAL INEQUALITY into 1 score that measures political inequality. being POLIT_M

COMPUTE POLIT_M= TRUNC(MEAN(POLIT_INEQ_1,POLIT_INEQ_2)).
EXECUTE.

*add value labels to the new variable for political (in)equality

VALUE LABELS
POLIT_M

1 'extremely unequal political system'

2 'unequal political system'

3 'moderatly equal political system'

4 'equal political system'

5 'extremely equal political system'

7 'refusal'

8 'dont know'

9 'no answer'.

MISSING VALUES POLIT_M (7,8,9).

*Recode INCOME ineq into two variables into levels of fairness of income top and bottom

RECODE INCOME_INEQ_1 INCOME_INEQ_2 (-4=1) (4=1) (-3=2) (3=2) (-2=3) (2=3) (-1=4) (1=4) (0=5) INTO

   R_INCOME1 R_INCOME2.
EXECUTE.

VALUE LABELS
R_INCOME1 R_INCOME2
1 'Extremely unfair'

2 'Very unfair'

3 'Somewhat unfiar'

4 'Slightly unfair'

5 'Fair'

7 'refuses'

8 'dont know'

9 'no answer'.

MISSING VALUES R_INCOME1 R_INCOME2 (7, 8, 9).

*although Chronbach's alpha is low (.506), the two items show the valued income differences of the population. the other statitsics show that on average, people feel the top income

income is relatively fair (mean= 4.18) and the lowest incomes are relatively unfair (mean = 2.90). combining these two variables to measure income inequality makes sense anyway.

```
RELIABILITY
  /VARIABLES=R_INCOME1 R_INCOME2
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE CORR
  /SUMMARY=TOTAL MEANS.
```

*add two variables together, mean score

```
COMPUTE INC_INEQ= TRUNC(MEAN(R_INCOME1,R_INCOME2)).
EXECUTE.
```

*add value labels to the new variable for political (in)equality

```
VALUE LABELS
INC_INEQ
1 'Extremely unfair'
2 'Very unfair'
3 'Somewhat unfair'
4 'Slightly unfair'
5 'Fair'
7 'refuses'
8 'dont know'
9 'no answer'.
```

```
MISSING VALUES INC_INEQ (7, 8, 9).
```

*compute so high numbers mean high inequality, low numbers mean low inequality

RECODE POLIT_M INC_INEQ (1=5) (2=4) (3=3) (4=2) (5=1) INTO POL_INEQr
INC_INEQr.
EXECUTE.

RECODE EDU_INEQ (0=10) (1=9) (2=8) (3=7) (4=6) (5=5) (6=4) (7=3) (8=2) (9=1) (10=0)
INTO EDU_INEQr.
EXECUTE.

RECODE JOB_INEQ (0=10) (1=9) (2=8) (3=7) (4=6) (5=5) (6=4) (7=3) (8=2) (9=1) (10=0)
INTO JOB_INEQr.
EXECUTE.

*Descriptives of all variables used + save them as standardized values

DESCRIPTIVES VARIABLES=WELLB_tr INC_INEQr EDU_INEQr JOB_INEQr
POL_INEQr TRUST FAIRNESS AGE GENDER INC_NET ETHN_MINOR R_INCOME1
R_INCOME2
  /SAVE
  /STATISTICS=MEAN STDDEV MIN MAX.

*create correlation table for all variables for NORWAY

USE ALL.
COMPUTE filter_$=(COUNTRY = 'NO').
VARIABLE LABELS filter_$ "COUNTRY = 'NO' (FILTER)".
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.
FORMATS filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE.

NONPAR CORR

/VARIABLES=WELLB_tr INC_INEQr EDU_INEQr JOB_INEQr POL_INEQr TRUST FAIRNESS AGE GENDER INC_NET ETHN_MINOR
  /PRINT=SPEARMAN TWOTAIL NOSIG
  /MISSING=PAIRWISE.

********************MEDIATION ANALYSIS NORWAY***************

*select cases 'NORWAY'

USE ALL.
COMPUTE filter_$=(COUNTRY = 'NO').
VARIABLE LABELS filter_$ "COUNTRY = 'NO' (FILTER)".
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.
FORMATS filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE.

*frequencies of all variables used in mediation

FREQUENCIES VARIABLES=WELLB_tr POL_INEQr JOB_INEQr EDU_INEQr INC_INEQr FAIRNESS TRUST GENDER AGE INC_NET ETHN_MINOR
  /STATISTICS=MEAN MODE
  /ORDER=ANALYSIS.

*check for outliers data   outliers= wellbeing (mean= 7.733 5%trim= 7.837) political (in)equality (mean=3.097 5%trim=3.108) job (in)equality(mean=6.06 5%trim=6.09) educational (in)equailty (mean=7.42 5%trim=7.54) income (in)equality (mean=3.305 5%trim=3.312) trust (mean=6.77 5%trim=6.84) fairness (mean=7.04 5%trim=7.13)

EXAMINE VARIABLES=WELLB_tr POL_INEQr INC_INEQr EDU_INEQr JOB_INEQr TRUST FAIRNESS
  /PLOT BOXPLOT STEMLEAF

```
  /COMPARE GROUPS
  /STATISTICS DESCRIPTIVES EXTREME
  /CINTERVAL 95
  /MISSING LISTWISE
  /NOTOTAL.


USE ALL.
COMPUTE filter_$=(COUNTRY = 'NO').
VARIABLE LABELS filter_$ "COUNTRY = 'NO' (FILTER)".
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.
FORMATS filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE.
```

*****POLITICAL INEQUALITY*****

*PROCESS mediation, Model 4, 95 confidence intervals, 5000 bootstrap samples
Y=ZWELLB_tr, X=ZPOL_INEQr, M= ZTRUST & ZFAIRNESS C= ZEDU_INEQr,
ZJOB_INEQr, ZINC_INEQr ZGENDER ZAGE ZINC_NET ZETHN_MINOR

*****EDUCATIONAL INEQUALITY*****

*PROCESS mediation, Model 4, 95 confidence intervals, 5000 bootstrap samples
Y=ZWELLB_tr, X=ZEDU_INEQr, M= ZTRUST & ZFAIRNESS C= ZINC_INEQr,
ZJOB_INEQr, ZPOL_INEQr ZGENDER ZAGE ZINC_NET ZETHN_MINOR

*****JOB INEQUALITY*****

*PROCESS mediation, Model 4, 95 confidence intervals, 5000 bootstrap samples
Y=ZWELLB_tr, X=ZJOB_INEQr, M= ZTRUST & ZFAIRNESS C= ZINC_INEQr,
ZEDU_INEQr, ZPOL_INEQr ZGENDER ZAGE ZINC_NET ZETHN_MINOR

*****INCOME INEQUALITY*****

*PROCESS mediation, Model 4, 95 confidence intervals, 5000 bootstrap samples
Y=ZWELLB_tr, X=ZPOL_INEQr, M= ZTRUST & ZFAIRNESS C= ZINC_INEQr,
ZEDU_INEQr, ZJOB_INErQ ZGENDER ZAGE ZINC_NET ZETHN_MINOR

*******************************END*******************************


```
Run MATRIX procedure:

**************** PROCESS Procedure for SPSS Version 3.5.3 ****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
     Documentation available in Hayes (2018). www.guilford.com/p/hayes3

**************************************************************************
Model  : 4
    Y  : ZWELLB_t
    X  : ZINC_INE
    M1 : ZTRUST
    M2 : ZFAIRNES

Covariates:
 ZEDU_INE ZJOB_INE ZPOL_INE ZAGE     ZGENDER  ZINC_NET ZETHN_MI

Sample
Size:  1235

**************************************************************************
OUTCOME VARIABLE:
 ZTRUST

Model Summary
         R        R-sq        MSE          F        df1        df2
p
      ,3371       ,1136       ,5135    19,6476     8,0000  1226,0000
,0000

Model
            coeff         se          t          p       LLCI       ULCI
constant     ,5344      ,0309    17,3095      ,0000      ,4738      ,5949
ZINC_INE     ,0865      ,0262     3,3060      ,0010      ,0352      ,1379
ZEDU_INE    -,0554      ,0352    -1,5748      ,1156     -,1245      ,0136
ZJOB_INE    -,0989      ,0355    -2,7853      ,0054     -,1685     -,0292
ZPOL_INE    -,2009      ,0280    -7,1851      ,0000     -,2557     -,1460
ZAGE         ,1366      ,0223     6,1400      ,0000      ,0930      ,1803
ZGENDER      ,0239      ,0207     1,1578      ,2472     -,0166      ,0645
ZINC_NET     ,0371      ,0220     1,6921      ,0909     -,0059      ,0802
```

```
ZETHN_MI       ,0200       ,0212       ,9413       ,3467       -,0216       ,0616

**************************************************************************
OUTCOME VARIABLE:
 ZFAIRNES

Model Summary
         R         R-sq        MSE          F          df1          df2
p
     ,3082       ,0950       ,5093     16,0896      8,0000  1226,0000
,0000

Model
             coeff         se          t           p         LLCI         ULCI
constant      ,4625       ,0307     15,0422       ,0000       ,4021       ,5228
ZINC_INE      ,0259       ,0261       ,9946       ,3201      -,0252       ,0771
ZEDU_INE     -,1045       ,0351     -2,9809       ,0029      -,1733      -,0357
ZJOB_INE     -,0273       ,0354      -,7711       ,4408      -,0966       ,0421
ZPOL_INE     -,1605       ,0278     -5,7653       ,0000      -,2151      -,1059
ZAGE          ,1477       ,0222      6,6622       ,0000       ,1042       ,1911
ZGENDER       ,0491       ,0206      2,3832       ,0173       ,0087       ,0895
ZINC_NET      ,0376       ,0219      1,7214       ,0854      -,0053       ,0805
ZETHN_MI      ,0121       ,0211       ,5725       ,5671      -,0293       ,0535

**************************************************************************
OUTCOME VARIABLE:
 ZWELLB_t

Model Summary
         R         R-sq        MSE          F          df1          df2
p
     ,3709       ,1376       ,8403     19,5257     10,0000  1224,0000
,0000

Model
             coeff         se          t           p         LLCI         ULCI
constant     -,4023       ,0447     -9,0049       ,0000      -,4900      -,3147
ZINC_INE     -,0283       ,0336      -,8419       ,4000      -,0943       ,0377
ZTRUST        ,1565       ,0438      3,5754       ,0004       ,0706       ,2424
ZFAIRNES      ,1194       ,0439      2,7168       ,0067       ,0332       ,2056
ZEDU_INE     -,1020       ,0452     -2,2576       ,0241      -,1907      -,0134
ZJOB_INE     -,0749       ,0456     -1,6430       ,1006      -,1643       ,0145
ZPOL_INE     -,1419       ,0366     -3,8788       ,0001      -,2136      -,0701
ZAGE          ,0804       ,0291      2,7645       ,0058       ,0233       ,1374
ZGENDER      -,0329       ,0265     -1,2396       ,2154      -,0849       ,0192
ZINC_NET      ,1341       ,0281      4,7675       ,0000       ,0789       ,1892
ZETHN_MI      ,0377       ,0271      1,3890       ,1651      -,0155       ,0909

************************* TOTAL EFFECT MODEL ***************************
OUTCOME VARIABLE:
 ZWELLB_t

Model Summary
         R         R-sq        MSE          F          df1          df2
p
     ,3261       ,1064       ,8692     18,2415      8,0000  1226,0000
,0000

Model
             coeff         se          t           p         LLCI         ULCI
constant     -,2635       ,0402     -6,5598       ,0000      -,3423      -,1847
```

```
ZINC_INE       -,0117      ,0340      -,3432      ,7315      -,0785      ,0551
ZEDU_INE       -,1232      ,0458     -2,6895      ,0073      -,2130     -,0333
ZJOB_INE       -,0936      ,0462     -2,0265      ,0429      -,1842     -,0030
ZPOL_INE       -,1925      ,0364     -5,2913      ,0000      -,2638     -,1211
ZAGE            ,1194      ,0290      4,1236      ,0000       ,0626      ,1762
ZGENDER        -,0233      ,0269      -,8645      ,3875      -,0761      ,0295
ZINC_NET        ,1444      ,0286      5,0553      ,0000       ,0883      ,2004
ZETHN_MI        ,0423      ,0276      1,5317      ,1259      -,0119      ,0964
```

************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y
```
     Effect          se           t           p         LLCI        ULCI
c_ps        c_cs
     -,0117        ,0340      -,3432       ,7315      -,0785       ,0551       -
,0119     -,0094
```

Direct effect of X on Y
```
     Effect          se           t           p         LLCI        ULCI
c'_ps       c'_cs
     -,0283        ,0336      -,8419       ,4000      -,0943       ,0377       -
,0288     -,0229
```

Indirect effect(s) of X on Y:
```
            Effect     BootSE    BootLLCI    BootULCI
TOTAL        ,0166      ,0078       ,0021       ,0331
ZTRUST       ,0135      ,0059       ,0036       ,0270
ZFAIRNES     ,0031      ,0035      -,0033       ,0109
```

Partially standardized indirect effect(s) of X on Y:
```
            Effect     BootSE    BootLLCI    BootULCI
TOTAL        ,0169      ,0079       ,0022       ,0338
ZTRUST       ,0138      ,0060       ,0038       ,0273
ZFAIRNES     ,0031      ,0036      -,0033       ,0112
```

Completely standardized indirect effect(s) of X on Y:
```
            Effect     BootSE    BootLLCI    BootULCI
TOTAL        ,0134      ,0063       ,0017       ,0266
ZTRUST       ,0109      ,0048       ,0030       ,0216
ZFAIRNES     ,0025      ,0028      -,0026       ,0089
```

********************* ANALYSIS NOTES AND ERRORS *********************

Level of confidence for all confidence intervals in output:
  95,0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

WARNING: Variables names longer than eight characters can produce incorrect
output
when some variables in the data file have the same first eight characters.
Shorter
variable names are recommended. By using this output, you are accepting all
risk
and consequences of interpreting or reporting results that may be
incorrect.

------ END MATRIX -----

```
Run MATRIX procedure:

**************** PROCESS Procedure for SPSS Version 3.5.3 ****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2018). www.guilford.com/p/hayes3

*************************************************************************
Model  : 4
    Y  : ZWELLB_t
    X  : ZEDU_INE
    M1 : ZTRUST
    M2 : ZFAIRNES

Covariates:
 ZINC_INE ZJOB_INE ZPOL_INE ZAGE     ZGENDER   ZINC_NET ZETHN_MI

Sample
Size:  1235

*************************************************************************
OUTCOME VARIABLE:
 ZTRUST

Model Summary
          R         R-sq        MSE          F         df1        df2
p
      ,3371       ,1136       ,5135     19,6476     8,0000  1226,0000
,0000

Model
             coeff         se          t          p        LLCI       ULCI
constant     ,5344       ,0309    17,3095      ,0000       ,4738      ,5949
ZEDU_INE    -,0554       ,0352    -1,5748      ,1156      -,1245      ,0136
ZINC_INE     ,0865       ,0262     3,3060      ,0010       ,0352      ,1379
ZJOB_INE    -,0989       ,0355    -2,7853      ,0054      -,1685     -,0292
ZPOL_INE    -,2009       ,0280    -7,1851      ,0000      -,2557     -,1460
ZAGE         ,1366       ,0223     6,1400      ,0000       ,0930      ,1803
ZGENDER      ,0239       ,0207     1,1578      ,2472      -,0166      ,0645
ZINC_NET     ,0371       ,0220     1,6921      ,0909      -,0059      ,0802
ZETHN_MI     ,0200       ,0212      ,9413      ,3467      -,0216      ,0616

*************************************************************************
OUTCOME VARIABLE:
 ZFAIRNES

Model Summary
          R         R-sq        MSE          F         df1        df2
p
      ,3082       ,0950       ,5093     16,0896     8,0000  1226,0000
,0000

Model
             coeff         se          t          p        LLCI       ULCI
constant     ,4625       ,0307    15,0422      ,0000       ,4021      ,5228
ZEDU_INE    -,1045       ,0351    -2,9809      ,0029      -,1733     -,0357
ZINC_INE     ,0259       ,0261      ,9946      ,3201      -,0252      ,0771
ZJOB_INE    -,0273       ,0354     -,7711      ,4408      -,0966      ,0421
ZPOL_INE    -,1605       ,0278    -5,7653      ,0000      -,2151     -,1059
ZAGE         ,1477       ,0222     6,6622      ,0000       ,1042      ,1911
ZGENDER      ,0491       ,0206     2,3832      ,0173       ,0087      ,0895
```

```
ZINC_NET      ,0376      ,0219      1,7214      ,0854      -,0053      ,0805
ZETHN_MI      ,0121      ,0211      ,5725      ,5671      -,0293      ,0535


**********************************************************************
OUTCOME VARIABLE:
 ZWELLB_t

Model Summary
          R         R-sq        MSE          F         df1         df2
p
      ,3709      ,1376      ,8403      19,5257      10,0000   1224,0000
,0000

Model
              coeff         se          t          p         LLCI        ULCI
constant     -,4023      ,0447     -9,0049      ,0000     -,4900     -,3147
ZEDU_INE     -,1020      ,0452     -2,2576      ,0241     -,1907     -,0134
ZTRUST        ,1565      ,0438      3,5754      ,0004      ,0706      ,2424
ZFAIRNES      ,1194      ,0439      2,7168      ,0067      ,0332      ,2056
ZINC_INE     -,0283      ,0336      -,8419      ,4000     -,0943      ,0377
ZJOB_INE     -,0749      ,0456     -1,6430      ,1006     -,1643      ,0145
ZPOL_INE     -,1419      ,0366     -3,8788      ,0001     -,2136     -,0701
ZAGE          ,0804      ,0291      2,7645      ,0058      ,0233      ,1374
ZGENDER      -,0329      ,0265     -1,2396      ,2154     -,0849      ,0192
ZINC_NET      ,1341      ,0281      4,7675      ,0000      ,0789      ,1892
ZETHN_MI      ,0377      ,0271      1,3890      ,1651     -,0155      ,0909


************************* TOTAL EFFECT MODEL ***************************
OUTCOME VARIABLE:
 ZWELLB_t

Model Summary
          R         R-sq        MSE          F         df1         df2
p
      ,3261      ,1064      ,8692      18,2415       8,0000   1226,0000
,0000

Model
              coeff         se          t          p         LLCI        ULCI
constant     -,2635      ,0402     -6,5598      ,0000     -,3423     -,1847
ZEDU_INE     -,1232      ,0458     -2,6895      ,0073     -,2130     -,0333
ZINC_INE     -,0117      ,0340      -,3432      ,7315     -,0785      ,0551
ZJOB_INE     -,0936      ,0462     -2,0265      ,0429     -,1842     -,0030
ZPOL_INE     -,1925      ,0364     -5,2913      ,0000     -,2638     -,1211
ZAGE          ,1194      ,0290      4,1236      ,0000      ,0626      ,1762
ZGENDER      -,0233      ,0269      -,8645      ,3875     -,0761      ,0295
ZINC_NET      ,1444      ,0286      5,0553      ,0000      ,0883      ,2004
ZETHN_MI      ,0423      ,0276      1,5317      ,1259     -,0119      ,0964


************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y
      Effect         se          t          p         LLCI        ULCI
c_ps        c_cs
      -,1232      ,0458     -2,6895      ,0073     -,2130     -,0333      -
,1253      -,0924

Direct effect of X on Y
      Effect         se          t          p         LLCI        ULCI
c'_ps       c'_cs
```

```
      -,1020       ,0452    -2,2576       ,0241     -,1907     -,0134      -
,1038     -,0765


Indirect effect(s) of X on Y:
            Effect     BootSE    BootLLCI    BootULCI
TOTAL       -,0212      ,0113     -,0457     -,0007
ZTRUST      -,0087      ,0068     -,0236      ,0028
ZFAIRNES    -,0125      ,0075     -,0304     -,0010

Partially standardized indirect effect(s) of X on Y:
            Effect     BootSE    BootLLCI    BootULCI
TOTAL       -,0215      ,0114     -,0462     -,0007
ZTRUST      -,0088      ,0069     -,0241      ,0029
ZFAIRNES    -,0127      ,0076     -,0310     -,0010

Completely standardized indirect effect(s) of X on Y:
            Effect     BootSE    BootLLCI    BootULCI
TOTAL       -,0159      ,0084     -,0343     -,0005
ZTRUST      -,0065      ,0051     -,0177      ,0021
ZFAIRNES    -,0094      ,0056     -,0226     -,0008

*********************** ANALYSIS NOTES AND ERRORS ***********************

Level of confidence for all confidence intervals in output:
  95,0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

WARNING: Variables names longer than eight characters can produce incorrect
output
when some variables in the data file have the same first eight characters.
Shorter
variable names are recommended. By using this output, you are accepting all
risk
and consequences of interpreting or reporting results that may be
incorrect.

------ END MATRIX -----
```

Run MATRIX procedure:

**************** PROCESS Procedure for SPSS Version 3.5.3 ****************

          Written by Andrew F. Hayes, Ph.D.   www.afhayes.com
     Documentation available in Hayes (2018). www.guilford.com/p/hayes3

****
Model : 4
    Y : ZWELLB_t
    X : ZJOB_INE
    M1 : ZTRUST
    M2 : ZFAIRNES

Covariates:
 ZINC_INE ZEDU_INE ZPOL_INE ZAGE   ZGENDER ZINC_NET ZETHN_MI

Sample
Size: 1235

****
OUTCOME VARIABLE:
 ZTRUST

Model Summary
          R   R-sq   MSE   F   df1   df2
p
       ,3371   ,1136   ,5135   19,6476   8,0000 1226,0000
,0000

Model
              coeff   se   t   p   LLCI   ULCI
constant   ,5344   ,0309   17,3095   ,0000   ,4738   ,5949
ZJOB_INE   -,0989   ,0355   -2,7853   ,0054   -,1685   -,0292
ZINC_INE   ,0865   ,0262   3,3060   ,0010   ,0352   ,1379
ZEDU_INE   -,0554   ,0352   -1,5748   ,1156   -,1245   ,0136
ZPOL_INE   -,2009   ,0280   -7,1851   ,0000   -,2557   -,1460
ZAGE   ,1366   ,0223   6,1400   ,0000   ,0930   ,1803
ZGENDER   ,0239   ,0207   1,1578   ,2472   -,0166   ,0645
ZINC_NET   ,0371   ,0220   1,6921   ,0909   -,0059   ,0802
ZETHN_MI   ,0200   ,0212   ,9413   ,3467   -,0216   ,0616

****
OUTCOME VARIABLE:
 ZFAIRNES

Model Summary
          R   R-sq   MSE   F   df1   df2
p
       ,3082   ,0950   ,5093   16,0896   8,0000 1226,0000
,0000

Model
              coeff   se   t   p   LLCI   ULCI
constant   ,4625   ,0307   15,0422   ,0000   ,4021   ,5228
ZJOB_INE   -,0273   ,0354   -,7711   ,4408   -,0966   ,0421
ZINC_INE   ,0259   ,0261   ,9946   ,3201   -,0252   ,0771
ZEDU_INE   -,1045   ,0351   -2,9809   ,0029   -,1733   -,0357
ZPOL_INE   -,1605   ,0278   -5,7653   ,0000   -,2151   -,1059
ZAGE   ,1477   ,0222   6,6622   ,0000   ,1042   ,1911

```
ZGENDER        ,0491      ,0206     2,3832      ,0173      ,0087      ,0895
ZINC_NET       ,0376      ,0219     1,7214      ,0854     -,0053      ,0805
ZETHN_MI       ,0121      ,0211      ,5725      ,5671     -,0293      ,0535

*************************************************************************
OUTCOME VARIABLE:
 ZWELLB_t

Model Summary
          R        R-sq       MSE         F        df1        df2
p
      ,3709      ,1376      ,8403    19,5257    10,0000  1224,0000
,0000

Model
             coeff        se         t         p        LLCI       ULCI
constant    -,4023      ,0447    -9,0049      ,0000     -,4900     -,3147
ZJOB_INE    -,0749      ,0456    -1,6430      ,1006     -,1643      ,0145
ZTRUST       ,1565      ,0438     3,5754      ,0004      ,0706      ,2424
ZFAIRNES     ,1194      ,0439     2,7168      ,0067      ,0332      ,2056
ZINC_INE    -,0283      ,0336     -,8419      ,4000     -,0943      ,0377
ZEDU_INE    -,1020      ,0452    -2,2576      ,0241     -,1907     -,0134
ZPOL_INE    -,1419      ,0366    -3,8788      ,0001     -,2136     -,0701
ZAGE         ,0804      ,0291     2,7645      ,0058      ,0233      ,1374
ZGENDER     -,0329      ,0265    -1,2396      ,2154     -,0849      ,0192
ZINC_NET     ,1341      ,0281     4,7675      ,0000      ,0789      ,1892
ZETHN_MI     ,0377      ,0271     1,3890      ,1651     -,0155      ,0909

************************* TOTAL EFFECT MODEL **************************
OUTCOME VARIABLE:
 ZWELLB_t

Model Summary
          R        R-sq       MSE         F        df1        df2
p
      ,3261      ,1064      ,8692    18,2415     8,0000  1226,0000
,0000

Model
             coeff        se         t         p        LLCI       ULCI
constant    -,2635      ,0402    -6,5598      ,0000     -,3423     -,1847
ZJOB_INE    -,0936      ,0462    -2,0265      ,0429     -,1842     -,0030
ZINC_INE    -,0117      ,0340     -,3432      ,7315     -,0785      ,0551
ZEDU_INE    -,1232      ,0458    -2,6895      ,0073     -,2130     -,0333
ZPOL_INE    -,1925      ,0364    -5,2913      ,0000     -,2638     -,1211
ZAGE         ,1194      ,0290     4,1236      ,0000      ,0626      ,1762
ZGENDER     -,0233      ,0269     -,8645      ,3875     -,0761      ,0295
ZINC_NET     ,1444      ,0286     5,0553      ,0000      ,0883      ,2004
ZETHN_MI     ,0423      ,0276     1,5317      ,1259     -,0119      ,0964

************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y
     Effect        se         t         p        LLCI       ULCI
c_ps        c_cs
    -,0936      ,0462    -2,0265      ,0429     -,1842     -,0030      -
,0952     -,0702

Direct effect of X on Y
     Effect        se         t         p        LLCI       ULCI
c'_ps       c'_cs
```

```
      -,0749      ,0456    -1,6430      ,1006    -,1643      ,0145      -
,0762    -,0562


Indirect effect(s) of X on Y:
           Effect    BootSE   BootLLCI   BootULCI
TOTAL       -,0187     ,0107    -,0412      ,0008
ZTRUST      -,0155     ,0076    -,0328     -,0028
ZFAIRNES    -,0033     ,0054    -,0157      ,0063

Partially standardized indirect effect(s) of X on Y:
           Effect    BootSE   BootLLCI   BootULCI
TOTAL       -,0191     ,0108    -,0417      ,0009
ZTRUST      -,0157     ,0077    -,0330     -,0029
ZFAIRNES    -,0033     ,0055    -,0159      ,0063

Completely standardized indirect effect(s) of X on Y:
           Effect    BootSE   BootLLCI   BootULCI
TOTAL       -,0140     ,0080    -,0306      ,0006
ZTRUST      -,0116     ,0057    -,0244     -,0021
ZFAIRNES    -,0024     ,0041    -,0118      ,0046
```

*********************** ANALYSIS NOTES AND ERRORS ***********************

Level of confidence for all confidence intervals in output:
  95,0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

WARNING: Variables names longer than eight characters can produce incorrect output
when some variables in the data file have the same first eight characters. Shorter
variable names are recommended. By using this output, you are accepting all risk
and consequences of interpreting or reporting results that may be incorrect.

------ END MATRIX -----

Run MATRIX procedure:

**************** PROCESS Procedure for SPSS Version 3.5.3 ****************

          Written by Andrew F. Hayes, Ph.D.   www.afhayes.com
     Documentation available in Hayes (2018). www.guilford.com/p/hayes3

****
Model : 4
    Y : ZWELLB_t
    X : ZPOL_INE
    M1 : ZTRUST
    M2 : ZFAIRNES

Covariates:
 ZINC_INE ZEDU_INE ZJOB_INE ZAGE   ZGENDER ZINC_NET ZETHN_MI

Sample
Size: 1235

****
OUTCOME VARIABLE:
 ZTRUST

Model Summary
          R   R-sq   MSE   F   df1   df2
p
      ,3371   ,1136   ,5135   19,6476   8,0000 1226,0000
,0000

Model
              coeff   se   t   p   LLCI   ULCI
constant   ,5344   ,0309   17,3095   ,0000   ,4738   ,5949
ZPOL_INE   -,2009   ,0280   -7,1851   ,0000   -,2557   -,1460
ZINC_INE   ,0865   ,0262   3,3060   ,0010   ,0352   ,1379
ZEDU_INE   -,0554   ,0352   -1,5748   ,1156   -,1245   ,0136
ZJOB_INE   -,0989   ,0355   -2,7853   ,0054   -,1685   -,0292
ZAGE   ,1366   ,0223   6,1400   ,0000   ,0930   ,1803
ZGENDER   ,0239   ,0207   1,1578   ,2472   -,0166   ,0645
ZINC_NET   ,0371   ,0220   1,6921   ,0909   -,0059   ,0802
ZETHN_MI   ,0200   ,0212   ,9413   ,3467   -,0216   ,0616

****
OUTCOME VARIABLE:
 ZFAIRNES

Model Summary
          R   R-sq   MSE   F   df1   df2
p
      ,3082   ,0950   ,5093   16,0896   8,0000 1226,0000
,0000

Model
              coeff   se   t   p   LLCI   ULCI
constant   ,4625   ,0307   15,0422   ,0000   ,4021   ,5228
ZPOL_INE   -,1605   ,0278   -5,7653   ,0000   -,2151   -,1059
ZINC_INE   ,0259   ,0261   ,9946   ,3201   -,0252   ,0771
ZEDU_INE   -,1045   ,0351   -2,9809   ,0029   -,1733   -,0357
ZJOB_INE   -,0273   ,0354   -,7711   ,4408   -,0966   ,0421
ZAGE   ,1477   ,0222   6,6622   ,0000   ,1042   ,1911

```
ZGENDER         ,0491      ,0206     2,3832      ,0173      ,0087      ,0895
ZINC_NET        ,0376      ,0219     1,7214      ,0854     -,0053      ,0805
ZETHN_MI        ,0121      ,0211      ,5725      ,5671     -,0293      ,0535

*************************************************************************
OUTCOME VARIABLE:
 ZWELLB_t

Model Summary
          R        R-sq        MSE          F        df1        df2
p
      ,3709       ,1376       ,8403    19,5257    10,0000  1224,0000
,0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     -,4023      ,0447    -9,0049      ,0000     -,4900     -,3147
ZPOL_INE     -,1419      ,0366    -3,8788      ,0001     -,2136     -,0701
ZTRUST        ,1565      ,0438     3,5754      ,0004      ,0706      ,2424
ZFAIRNES      ,1194      ,0439     2,7168      ,0067      ,0332      ,2056
ZINC_INE     -,0283      ,0336     -,8419      ,4000     -,0943      ,0377
ZEDU_INE     -,1020      ,0452    -2,2576      ,0241     -,1907     -,0134
ZJOB_INE     -,0749      ,0456    -1,6430      ,1006     -,1643      ,0145
ZAGE          ,0804      ,0291     2,7645      ,0058      ,0233      ,1374
ZGENDER      -,0329      ,0265    -1,2396      ,2154     -,0849      ,0192
ZINC_NET      ,1341      ,0281     4,7675      ,0000      ,0789      ,1892
ZETHN_MI      ,0377      ,0271     1,3890      ,1651     -,0155      ,0909

************************** TOTAL EFFECT MODEL **************************
OUTCOME VARIABLE:
 ZWELLB_t

Model Summary
          R        R-sq        MSE          F        df1        df2
p
      ,3261       ,1064       ,8692    18,2415     8,0000  1226,0000
,0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     -,2635      ,0402    -6,5598      ,0000     -,3423     -,1847
ZPOL_INE     -,1925      ,0364    -5,2913      ,0000     -,2638     -,1211
ZINC_INE     -,0117      ,0340     -,3432      ,7315     -,0785      ,0551
ZEDU_INE     -,1232      ,0458    -2,6895      ,0073     -,2130     -,0333
ZJOB_INE     -,0936      ,0462    -2,0265      ,0429     -,1842     -,0030
ZAGE          ,1194      ,0290     4,1236      ,0000      ,0626      ,1762
ZGENDER      -,0233      ,0269     -,8645      ,3875     -,0761      ,0295
ZINC_NET      ,1444      ,0286     5,0553      ,0000      ,0883      ,2004
ZETHN_MI      ,0423      ,0276     1,5317      ,1259     -,0119      ,0964

************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y
      Effect         se          t          p       LLCI       ULCI
c_ps        c_cs
      -,1925       ,0364    -5,2913      ,0000     -,2638     -,1211      -
,1958     -,1532

Direct effect of X on Y
      Effect         se          t          p       LLCI       ULCI
c'_ps       c'_cs
```

```
      -,1419        ,0366    -3,8788      ,0001     -,2136      -,0701      -
,1443     -,1129


Indirect effect(s) of X on Y:
             Effect      BootSE    BootLLCI    BootULCI
TOTAL        -,0506      ,0109     -,0732      -,0300
ZTRUST       -,0314      ,0102     -,0533      -,0126
ZFAIRNES     -,0192      ,0083     -,0364      -,0038

Partially standardized indirect effect(s) of X on Y:
             Effect      BootSE    BootLLCI    BootULCI
TOTAL        -,0515      ,0108     -,0736      -,0311
ZTRUST       -,0320      ,0103     -,0539      -,0130
ZFAIRNES     -,0195      ,0084     -,0369      -,0039

Completely standardized indirect effect(s) of X on Y:
             Effect      BootSE    BootLLCI    BootULCI
TOTAL        -,0403      ,0086     -,0582      -,0241
ZTRUST       -,0250      ,0081     -,0424      -,0101
ZFAIRNES     -,0153      ,0066     -,0290      -,0030

*********************** ANALYSIS NOTES AND ERRORS ***********************

Level of confidence for all confidence intervals in output:
  95,0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

WARNING: Variables names longer than eight characters can produce incorrect
output
when some variables in the data file have the same first eight characters.
Shorter
variable names are recommended. By using this output, you are accepting all
risk
and consequences of interpreting or reporting results that may be
incorrect.

------ END MATRIX -----
```