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Working Paper Series

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Working Paper No. 39
March 2022

LUMSA UNIVERSITÀ
DIPARTIMENTO DI GIURISPRUDENZA, ECONOMIA, POLITICA E LINGUE MODERNE

Can Emotional Intelligence promote Individual Wellbeing and protect from perceptions' traps?

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Abstract

Rising income inequality has become a major worry in rich countries' societies and a focus for remedial policy action to protect individual wellbeing. However, cognitive biases, misconceptions and emotions might detach inequality, as perceived by individuals, from the real measures of inequality. On a unique survey of 627 Italian respondents to a questionnaire tailor-made to embrace individuals' Emotional Intelligence (EI), and perceptions about various socio-economic variables, we study the determinants of wellbeing. Specifically, we quantify wellbeing alternatively through Happiness – hedonic measure – or through Flourishing – eudemonic measure – and investigate its relationship with an individual's perceived inequality (PI) and EI. Via an instrumental variable approach to tackle the intrinsic endogeneity of wellbeing with PI and EI, we reach two main results: i) Happiness responds (negatively) to PI, and positively to EI; ii) Flourishing is positively related to EI, but not to PI. Moreover, we find that PI depends negatively on individual's trust, and income comparison. Finally, Happiness, Flourishing and PI are all related to real measures of income inequality such as the Gini index. Thus, reducing perceived inequality and promoting the capability to recognize other's emotions are the true channels through which policies could promote society's wellbeing while protecting it from perception traps.

1. Introduction

Economic inequality has important consequences for politics, public policy and people's wellbeing. Indeed, the evidence that inequality rebounded in rich countries in recent decades questions the long-held benign Kuznets hypothesis that an initial spike in inequality was a temporary price to be paid for a country to industrialize while, later on, the country's income and wealth distributions would become more equal (Alvaredo et al., 2013). On one hand, this calls for macroeconomic policies to counter income inequality (Stiglitz, 2016; Arestis & Gonzalez-Martinez, 2016) and policies to promote more general equality of opportunities (Roemer & Trannoy, 2016). On the other hand, inequality may favor populism, possibly menacing democracies, where national ethno-cultural majorities feel a sense of collective status threat amplified by the political and media discourse to feed resentments toward elites, immigrants, and ethnic, racial and religious minorities (Bonikowski, 2017). All these channels will likely impact individual wellbeing.

However, the previous arguments crucially assume that ordinary individuals know how high inequality is, how it has been changing, and where they fit in the income distribution. In practice, most of the literature assumes that this inequality, usually represented by an index calculated from a distribution of income of a household survey, is common knowledge for all individuals, both in terms of what it exactly represents and of its levels (or changes). Thus, this literature ignores the fact that in reality what people think they know is often wrong. Hence inequality should be measured not only through an objective metrics but also in terms of subjective perceptions. Widespread ignorance and misperceptions emerge, regardless of data source, operationalization, and measurement method.

Hence, a clear problem arises if either there is a gap on average between subjective perceptions of inequality, which influence individuals' actions and choices, and objective inequality, which is used to explain those same actions by the literature, or if the two measures move differently over time. Some authors dismiss this problem, in part because of widespread reluctance towards subjective data,[1] and tend to characterize subjective assessment of inequality as individuals' misperceptions rather than as something we need to understand in depth. Part of the gap between objective and subjective inequality is likely accounted for by mismeasurement, misconception, or simple mistakes but, in this paper, we show that these factors are only the tip of the iceberg.

Perceived inequality shapes people's mind, wellbeing and actions.

In addition, we need to define which measure of individual wellbeing to use. On one side, we have hedonic wellbeing which encompasses daily experience and quality of life. Hedonic wellbeing is associated with happiness, and means pleasurable feeling. On the other side, we have eudemonic or evaluative well-being, which encompasses well-being over the life course, including opportunity and life fulfillment (e.g., Bruni, 2008; Clark & Senik, 2011; Benjamin et al., 2014; Graham & Nikolova, 2015; Clark, 2016; Pugno, 2016). The term has recently been translated from ancient Greek with 'flourishing' (Crespo & Mesurado, 2015). This is because – according to Aristotle's philosophy (Keyes & Annas, 2009) – 'eudaimonia' refers to living by functioning well, and by realising one's human potential. These differences between eudemonia and life satisfaction clearly indicate that the two variables are not perfect substitutes

[1] The reasons that justify economists' reluctance relate to the lack of incentives, in most surveys, that leads individuals astray from revealing their true beliefs as Manski (2004) notes at p. 1337.

and that they are not even fixed overtime (Bartolini et al., 2013; Mikucka et al., 2017; Cobb-Clark & Schurer, 2013; Boyce et al., 2013). Moreover, 'happiness' and 'flourishing" are not only correlated with economic and socio-demographic variables, but also with some subjective variables that characterise the psychology of individuals, like emotional intelligence, perceived trust in others, confidence of being able to influence events, and other personality traits (e.g., Helliwell et al., 2018; Verme, 2009).

Given that both hedonic and eudemonic measures have pros and cons, we decided to consider each one of them separately.

However, the way perceived inequality affects wellbeing might also depend on an individual's Emotional Intelligence (EI). To be sure, the total EI (EI-overall) can be decomposed into three main components: i) EI-own emotions, regarding the ability of an individual to recognize his/her own emotions; ii) EI-altruistic, concerning an individual's capability to recognize others' emotions, such a capability is the main affective factor involved in the propensity to empathize with others; iii) EI-regulation which encompasses the ability of an individual to regulate and control his/her own emotions. Hereafter, we will EI-overall.

As already reported by Helliwell et al. (2018) and Verme (2009), individual wellbeing responds to economic and socio-demographic variables not only in a direct way, but also in indirect way through their effects on subjective variables. In this paper we aim to quantify how much wellbeing, alternatively through Happiness – hedonic measure – or through Flourishing – eudemonic measure –, is explained by two non-objective measures like individual's perceived inequality (PI) and Emotional Intelligence (EI) that in turn can be affected by socio-economic variables. By doing so, we are able to further investigate the different determinants of happiness and flourishing that are of paramount interest for informing and designing policies. Via an instrumental variable approach to tackle the intrinsic endogeneity of wellbeing with PI and EI, we reach two main results: i) Happiness responds (negatively) to PI, and positively to EI; ii) Flourishing is positively related to EI (often called empathy), but not to PI.

In what follows, Section 2 traces a guided review of the extant relevant literature. In Section 3 we present our data and empirical strategy, while Section 4 is devoted to report and discuss the main results we reached. Finally, in Section 5, we conclude recapitulating the research questions, the data and methods used, the chief findings

as well as discussing policy implications and listing some further yet unanswered research questions.

2. Literature review

Recently, perceived inequality and its determinants have been gaining a lot of attention in the economics literature (Gimpelson & Tresiman, 2018; Choi, 2019; Cancho et al. ,2015, Cancho et al., 2015b). Such literature can be divided in three strands: pay-differential studies, stylized distribution studies and respondents' point estimates studies.

First, studies using the pay differential between estimated and actual wages for common professions find lower perceived inequality than actual wage inequality in most countries. This is due primarily to individuals' overestimation of wages at the lower end of the earnings distribution and underestimation of the pay gap between low-paying and high-paying professions (Kuhn, 2013; Osberg & Smeeding, 2006; Yanai, 2017).

Second, some authors quantify misperceptions by letting respondents choose between stylized distributions illustrated in bar charts. The difference between the chosen stylized distribution and the actual disposable household income distributions is then interpreted as the misperception of income inequality (Gimpelson & Treisman, 2018; Niehues, 2014). In contrast to the literature on pay differentials, these works find that people overestimate income inequality in Germany, France, and Hungary, but underestimate it in the U.S., Norway, and Switzerland. By the same token, DiPrete (2007) reports that many Americans overestimate their odds of becoming rich some-day, which dampens their support for policies that reduce inequality (Benabou & Ok 2001). Other authors combine two or more indicators into a single one (Brunori, 2017; Jasso, 2007), assuming that it reflects the latent perceived inequality.

A third strand of literature relies on respondents' point estimates for different locations along the income distribution, either for the top or bottom decile, the mean or their own location. Distributional estimates usually present a more nuanced picture of inequality perceptions, showing a general overestimation of inequality in most Western countries (Cruces et al., 2013; Engelhardt & Wagener, 2017) and an underestimation of inequality in countries like Brazil (Bublitz, 2016). Finally, Engelhardt & Wagener (2014) compute median-to-mean ratios of subjective social

status by asking respondents to locate themselves on a 10-point scale. Matching the computed ratio to ratios for actual income, they find that individuals underestimate income inequality in each one of the 26 OECD countries in their sample.

The variety of results has led to different explanations that focus on lack of information, reference groups, or systematic inattention. Based on the reference group hypothesis, Clark & D'Ambrosio (2015) argue that questions using respondents' assessments of their own position to infer the level of inequality tend to yield estimates lower than actual inequality. This is explained by the fact that reference groups are often more homogeneous than countries are in reality. Therefore, measures that include a comparative perspective will yield lower subjective estimates of inequality than measures taking an absolute perspective. Reference group effects might explain the different results obtained from pay differentials and point estimates compared to results from stylized distributions and subjective social status. However, much of the variation in perceptions within and between countries and between comparative measures remains unexplained. This residual variation is commonly attributed to a lack of information, but since media coverage has only a short-term impact (Diermeier et al., 2017), this appears to be an inadequate solution that obscures a more fundamental issue.

While the literature cited above extensively discusses potential measurement errors, it does not address in depth the conceptual question of what is being observed or measured. Namely, what determines people's formation of perceived inequality. Discrepancies between measured economic performance and public perceptions had been highlighted in the past (Blendon et al., 1997; Slemrod, 2006). However, the sources of these discrepancies have not been the focus of scholarly research by economists.

Clark & D'Ambrosio (2015) suggest that perceptions may deviate from objective measures because the concept of inequality that individuals have in mind includes more than just a monetary metrics. Indeed, for Bavetta et al. (2019) and Poppitz (2019) the underlying problem of measuring perceived inequality seems to be related to the multidimensionality of the issue issue and to the lack of consistency among different domain (Bavetta et al. 2020) .

What shapes perceptions of inequality?

The drivers of accurate/inaccurate perceptions of inequality have yet to be fully studied. But, some recent research has begun to explore the contributing factors.

First, individual's economic, cultural and social capital (Poppitz, 2019) and, in the first place, employment status, education or occupational prestige and family background may contribute to distorted calculation of inequality. By the same token, Brunori (2017) emphasizes the role of cultural and social variables as well as of personal experiences of intergenerational social mobility to determine respondents' perception of inequality in opportunity.

Second, people's social group belonging exerts a 'framing' influence on their inference of perceived inequality (Cruces et al., 2013; Karadjia et al., 2017). Cruces et al. (2013) conducted a survey and field experiment in Argentina, showing that survey respondents' societal ranking in their local community predicted their perception of inequality at the country level. Xu & Garand (2010) further support the hypothesis that people project local perceptions onto their estimates of national inequality. However, this hypothesis of connection between subjective social status and inference does not come without caveats.

Third, individuals' (in)ability to correctly perceive inequality (Niehues 2014; Norton & Ariely, 2011; Chambers et al., 2014) determines perceived inequality between groups.

Fourth, the size of government expenditure correlates with perceived inequality (Engelhardt & Wagener, 2014). Bussolo et al. (2019) investigate the formation mechanism of inequality perception in a multidimensional way. In concrete, the authors find that people's inequality perceptions, driving their preferences for redistribution, depend on several factors:

- the context: uncertainties in the labour market (unemployment), actual inequality, poverty, and government expenditures in education;
- intergenerational fairness: how current income distribution and employment opportunities were generated;
- individual characteristics: a higher social status (measured with education or income) correlates positively with perceiving one's own country as more equal, which might relate to self-interest motives or to access to information; political ideology not only has a direct impact on inequality perceptions (individuals who report to be on the left of the political spectrum perceive, ceteris paribus, their

country to be more unequal), but also in the way in which individuals transform information (economic context and own characteristics) into inequality perceptions.

Those four strands of literature highlight several facets of the same phenomenon, focusing a lot on its economic, social and political dimensions. Yet, there might be space for some other individuals' and latent dimensions that could help to explain people's formation of and reactions to perceived inequality: individuals' EI and their trust level. The first dimension, that is a component of the emotional intelligence, gives as a measure of how individuals respond emotionally to social comparison. In turn, measured in its generalized capacity, trust captures individuals' basic emotion towards the Government's work in safeguarding its citizens.

Emotional intelligence and perceived inequality

Emotional intelligence (EI) refers to the ability to perceive, to appraise, to regulate and to manage with emotion information (Salovey & Mayer, 1990; Mayer et al., 2000). There is growing literature showing that EI plays a pivotal role in the development of pro-social behaviours (Trobst et al., 1994; Roberts & Strayer, 1996; Charbonneau & Nicol, 2002). Recently, we have observed that EI mediated the relationship between the need for relatedness – which regards the propensity of individuals to be connected with others – and psychological well-being measured as both happiness and flourishing (Callea et al., 2019).

When social behaviours are considered in work environments and job organizations, it is noteworthy that EI emerges as important factor in determining how people perceive organizational justice and inequality, and in determining job performance (Lawal & Omole, 2015; Zhu et al., 2015; Makkar & Basu, 2017). Individuals with higher EI display strong self-awareness and interpersonal skills, as well as better performances on the job. They are also more empathic, adaptable and able to cope with pressure, experiencing less stress and better health (Slaski & Cartwright, 2002; Lawal & Omole, 2015).

How we emotionally connect with and react to other people's feelings, emotions, experiences of pleasure and pain might also be one of the building blocks of the processes of social comparison ("positional" or "status" concerns) with others (Tesser et al., 1988; Tesser, 1991; Akai et al., 2019). Building on this literature we investigate whether Emotional Intelligence (EI) might be one of the drivers of

perceived inequality. Here we make the specific hypothesis that if a person is endowed with a higher level of EI she will be more prone to have an egalitarian preference for the distribution of wealth within society. Or, in other words, the more one is able to recognize and self-regulate his own emotion the higher the perception of equality and the ability to empathize with others.

Trust and perception of inequality

At the same time, the formation of the perception of inequality might respond to a lack of accountability of institutions, namely by generalized trust.

There is a substantive literature that has argued that the relation between income inequality and trust is negative. Important papers in this wide literature are Knack (2001), Alesina & La Ferrara (2002), Bjørnskov (2007), Leigh (2006a, 2006b), Gustavsson & Jordahl (2008) and Barone & Mocetti (2016). Leigh (2006b) claimed that, on a regional level, ethnic heterogeneity appears to be of greater importance than income inequality in explaining trust. Fischer & Torgler (2006) found evidence in support of the relative income hypothesis, that is, frustration with not being able to "keep up with the Joneses" decreases generalised trust.

Yet the direction of causation is not clear in the literature (Bergh & Bjørnskov, 2011; Bjørnskov & Svendsen, 2013). Bergh & Bjørnskov (2014) find a reverse causal relationship between inequality and trust. According to them countries with higher trust levels have less economic inequality with and without the mediation of the size of the welfare state. For Butler et al. (2016), individuals with too little or too much trust have lower income than individuals that have an intermediate level of trust.

While the previous works studied income inequality, the literature on perception of inequality is scant. To our knowledge, few other papers (Chi & Kwon, 2016; Knell & Stix, 2016) have causally linked perception of inequality and trust. Following Bergh & Bjørnskov (2014) we hypothesize, in this paper, that generalized trust is a determinant of perceived inequality along with EI. Specifically, we formulate the hypothesis that generalized trust, as a measure of social capital, will affect in a positive way people's drive to egalitarian distribution of economic resources.

Why we care about perceptions

The lack of alignment between actual inequality and its perception has consequences and effects on the natural development of society and on individuals' choice, behavior and emotional health. This disconnect is partly driven by how people form their opinions about the level of inequality and by their assessment of income distribution.

The assessment can be regarded, fundamentally, as a statistical inference problem and as such can be biased. Individuals observe the income levels of no more than a sub-sample of the population and must infer the entire distribution from that information. If agents do not fully account for the selection process involved in the formation of the sample they observe, their inferences will be systematically biased. This failure may be due to limitations in the information set available to the agents – the information might be costly or unavailable. Alternatively, agents may have the necessary information, but they may sometimes fail to use it correctly, as argued in the cognitive bias literature (Rabin, 1998; Camerer et al., 2003; Camerer et al., 2005). Misrepresentation of the reality has consequences on individuals' behaviour and motivation.

Previous research suggests that people's ideal levels of inequality are far lower than their perceptions of inequality (Norton & Ariely, 2011; Kiatpongsan & Morton, 2014) suggesting that correcting those perceptions, through intervention that make visible such dis-alignment, may bring people to realize how far reality is from their ideals and may influence their beliefs and behaviours.

In fact, irrespective of whether agents have limited information or bounded rationality, some research suggests that people's perceptions of inequality exert a larger influence on their policy preferences than the actual levels of inequality (Niehues, 2014; Kuziemko et al., 2014; Cruces et al, 2013; Bussolo et al., 2019; Chambers et al., 2014). It is perceived – not actual – inequality that is associated with support for redistribution (Gimpelson & Tresiman, 2018). Other works report that misperception of fairness of the income generation process affects the association between income inequality and subjective wellbeing (Bjørnskov et al., 2013). Especially the nexus between perceived inequality and happiness and flourishing is the interest of our paper. Indeed, if the connection between objective inequality and happiness has been discussed in numerous papers (Alesina et al., 2004; Mikucka and Sarracino, 2014; Bartolini & Sarracino, 2015; Mikucka et al., 2017; Graafland & Lous,

2019; for a review see Ferrer-i-Carbonell & Ramos, 2014) the nexus between perception of inequality and happiness is new.

Exposure to inequality can be emotionally arousing in line or not with empathetic behavior (Kuziemko et al., 2014; Fehr & Gachter, 2002; Akay et al., 2019) and impact individuals' level of happiness and flourishing. In previous work (Callea et al., 2019) we investigated the relationship between EI and wellbeing, while here we take a further step in the analysis.

Emotional intelligence can have a direct and indirect effect on an individual's happiness and flourishing. The direct effect hypothesizes that the higher individuals' EI the higher their level of psychological wellbeing. The indirect effect is measured through perception of equality: the more one is able to self-regulate his own emotions the higher the perception of equality and the ability to empathize with others; and the more individuals perceive society as equal the more they are happy. Hence, our hypothesis aims at exploring whether stronger egalitarian drive and high emotional intelligence make individuals happier/more flourishing.

3. Data and Empirical Strategy

Data were collected through an *ad hoc* online questionnaire designed to gather information on happiness, emotional intelligence, and perception of inequality as well as a wide range of socio-demographic characteristics.

Flourishing was computed with nine items of the European Social Survey, with a Likert scale ranging from 1 (strongly disagree) to 5 (completely agree). Happiness was measured with a single item through the positive emotion factor of the European Social Survey: the item was: "Taking all things together, how happy would you say you are?", rated on a scale ranging from 0 (extremely unhappy) to 10 (extremely happy).

EI was assessed with the Emotional Intelligence Scale (EIS), proposed by Schutte et al. (1998), using the Italian version by Di Fabio et al. (2008). It was composed of 33 items, with a Likert scale ranging from 1 (strongly disagree) to 5 (completely agree).

For perception of inequality, we adapt the question in the International Social Survey Program (ISSP) by asking respondents which, among the 5 types of societies, best fitted the Italian situation. From the answers we elaborated an index measuring individuals' attitudes towards an equal society that we call "egalitarian drive" or, hitherto, "perception of inequality".

The participants were selected via a snowball procedure, beginning with people known to the researchers. The questionnaires were collected via Computer Assisted Web Interviewing (CAWI) through an online platform. After completing the questionnaire, each participant was asked to send the link to other people. A sample of 627 individuals was collected. In particular, around 70 per cent were female, 32 years old on average (SD=14.9), with an income between 1,000 and 1,200 euros per month and a medium-low level of education (see Table 1 for the definition of the variables employed and Table 2 for full descriptive statistics).

[INSERT TABLE 1 ABOUT HERE]

[INSERT TABLE 2 ABOUT HERE]

Our hypotheses aim at exploring: i) whether context related factors such as social capital or individual related factors like the ability to appraise and to recognize emotions in the others play a role in the determination of a stronger perception of inequality; and consequently ii) whether a stronger perception of inequality and higher emotional intelligence make individuals happier/more flourishing;

Hence, the empirical strategy proposes three OLS regressions addressing such issues. The first specification tests the role of objective measure, as the Gini index, and subjective measures, such as trust and the EI in the determination of the perception of inequality. This specification is not affected by endogeneity,[2] therefore simple OLS was carried out.

The second and third specifications test separately the effect of the perception of inequality and the ability to appraise and to recognize emotions in the others on happiness and flourishing.

$$Perc\_ineq_i = \alpha + \beta_1\, trust_i + \beta_2\, \text{EI\_altruistic}_{\,i} + \delta ICovariates_i + \varepsilon \qquad (1)$$

$$Happiness_i = \alpha + \beta_1\, perc\_ineq_i + \beta_2\, \text{EI\_altruistic}_{\,i} + \delta ICovariates_i + \varepsilon \qquad (2)$$

[2] The variables trust and empathy were instrumented, as for specification 2 and 3, and the endogeneity test revealed that the independent variables were really exogenous. (Accepted the null, the variable is exogenous).

$$Fluorishing_i = \alpha + \beta_1\, perc\_ineq_i + \beta_2\, \text{EI\_altruistic}_{\,i} + \delta ICovariates_i + \varepsilon \qquad (3)$$

In this case, in order to fix the possible endogeneity due to reverse causality, i.e. intrinsic endogeneity of wellbeing with PI and EI, the 2SLS instrumental variable approach is applied. In particular, three instruments are used: i) income comparison, which assesses if an individual perceives herself to be better off than her reference group; ii) the GINI index of the province,[3] weighted for the individual's income class; iii) the Spirituality component representing individuals' beliefs and faith (Table 9 in the Appendix).[4] The three instruments are correlated with PI and EI but not with the Happiness and Flourishing.

4. Results

The first specification assesses the relation among institutional related factors – social capital – and individual related factor – the ability to recognize others' emotions – and the perception one may have of an egalitarian society. In alignment with the results of Bergh & Bjørnskov (2014) and of the behavioural economics literature on social sentiments (e.g., Pelligra, 2011; Edele et al., 2013; Klimecki et al., 2016) Table 3 shows that institutional factors like social capital and Gini have a significant effect on PI. In fact, higher levels of social capital, in the form of trust, significantly reduce the individual perception of inequality (-1.017). Moreover, it is worth noting, the higher the level of regional inequality (gini^2) the more society is

[3] We also insert a squared term for the Gini index along with its linear term to test whether the nexus between true inequality and Happiness/Flourishing is nonlinear. Namely, Yu & Wang (2017) argue that income inequality and happiness should exhibit an inverted U-shaped relationship due to the dynamic competing process between two effects: when inequality is relatively low, the *signal effect* dominates – where individuals feel happy since they consider inequality as a signal of social mobility and expect upward mobility – but, if inequality rises above a critical level, the *jealousy effect* prevails – where individuals turn unhappy since they are disillusioned on the prospect of upward mobility and jealous of their wealthier peers. The authors report empirical cross-country validations of their hypothesis.

[4] The spirituality instrument is introduced by one of the factors of Magnano et al (2019)'s validation of the Jarel Spiritual Well-Being Scale. The Jarel Scale defines spiritual well-being as a sense of harmonious interconnectedness between self, others/nature, and Ultimate Other which exists throughout and beyond time and space. Research has shown that spirituality has a double impact on EI. The first effect is on empathy: Empathy may be a product of spiritual well-being and self-transcendence (King et al., 2012). The second effect is on Emotion regulation: Pizarro and Salovey (2002) suggest that one can increase the ability to engage in effective emotional regulation through religious belief and participation, which in turn may influence one's spiritual well-being. Individuals may be involved in practices such as prayer, meditation, and rituals like morning devotions that change the intensity of emotions and permit regulation of feelings (Guela, 2004; Pizarro & Salovey, 2002). The scale is composed by 16 items that Magnano et al (2019) re-ordered in three factors. Please refer to TABLE %%% for a full display of the 16 items.

perceived as unequal (-1,8). Whereas the more self-perception of income is defined by far better than the reference category the lower is the individual's perception of inequality (-0.184).

[INSERT TABLE 3 ABOUT HERE]

But why does the perception of inequality matter? As recalled in Section 2, some research suggests that people's perceptions of inequality exert a larger influence on their policy preferences and that misperception of fairness of the income generation process affects the association between income inequality and subjective well-being. Therefore, the second and third specifications assess the impact of perception of inequality on subjective wellbeing and psychological wellbeing. In addition, attention to the effect of empathy on wellbeing is proposed because the ability to recognize others' emotions was found to positively affect wellbeing (Callea et al., 2019). Table 4 reports results on happiness. The latter is instrumented with three variables: income comparison, the GINI index of the province,[5] and individual's beliefs and faith (Spirituality). The instruments are relevant, meaning that they are significantly correlated with the endogenous regressors (the null of the underidentification test is rejected). The instruments are also valid, meaning that they are uncorrelated with the error terms thus being exogenous (the Sargan test accepts the null). Moreover, the endogeneity test suggests that our independent variable – Happiness (the same applies to Flourishing) – is really endogenous.

It is worth noting that the Gini index and social capital increase their coefficients from Specification 1 (Table 3) to Specification 2 (Table 4). Such results confirm the importance of institutional variable such as Gini and social capital.

Looking at the first stage, as seen in the previous specification, results show that income comparison is a good predictor of perception of inequality, namely the more individuals perceive their income by far better than the reference category the lower is the average perception of inequality. Moreover, the status of being single emerges as significant variable in modulating individual's PI. Spirituality, instead, results to be a stronger instrument for EI rather than PI. The more one has stronger beliefs

[5] Our results fail to find a significant effect for either Gini or Gini^2. Thus, we do not find support for the hypothesis that income inequality and happiness should exhibit an inverted U-shaped relationship (Yu & Wang, 2017).

and faith, the more is able to self-regulate his own emotion the higher the ability to recognize others' emotions. As well as deprivation appears to count more for EI than for PI. The second stage results strongly highlight both perception of inequality and emotional intelligence as predictor of happiness. Namely a 1-point higher perceived inequality brings to a 2.194 lower level of happiness. It means the more individuals perceive society as unequal the less they are happy. Moreover, the level of emotional intelligence is found to significantly affect happiness and a 1-point increase in the level of EI brings to a 2.634 higher level of happiness. These results are robust also when we consider only one factor of EI, i.e. empathy, as previous findings suggested (Callea et al., 2019), the capability to recognize others' emotions is found to significantly affect happiness (Table 6, 7 and 8 in the appendix).

[INSERT TABLE 4 ABOUT HERE]

Table 5 reports the results on Flourishing. In this case, the ability to recognize and regulate own's emotions and being empathetic with others is found to be a significant predictor of flourishing: individuals who reported higher scores in EI also reported higher level of psychological wellbeing (1.211). On the contrary, perceived inequality does not seem to affect flourishing, while being educated and having higher social capital increases individual flourishing.

[INSERT TABLE 5 ABOUT HERE]

Even though, if we consider specification 2 and 3 altogether, the effect of perceived inequality on wellbeing may result controversial, it is worth remarking the well-grounded difference between the two dependent variables. Indeed, both variables underlie a concept of wellbeing, yet happiness is a hedonic measure of wellbeing based on self-reported measures of positive and negative emotional affects, whereas flourishing is a eudemonic measure of psychological wellbeing measured through a validated psychometric scale. In this context, the former is a subjective evaluation of wellbeing, the latter goes beyond the respondent's reflective evaluation and emotional status and focuses on the functioning and the realisation of the person's objective wellbeing status (Bruni et al., 2008). Bearing this difference in mind, interpreting the results appears coherent: the subjective evaluation of inequality

affects the subjective evaluation of individual wellbeing but it does not affect a more comprehensive and cognitive psychological evaluation of wellbeing. Moreover, it is worth noting, emotional intelligence positively correlates with the perception of inequality, which in turn affects happiness, highlighting an indirect effect of EI on happiness.

5. Discussion and Conclusions

We started pointing out that rising income inequality is shaking rich countries' societies and creating a sense of widespread insecurity which is taking a heavy toll on individual wellbeing. In turn, this is prompting policy makers to take corrective action to protect individual wellbeing. Yet, we posited that cognitive biases, misconceptions and emotions might detach inequality, as perceived by individuals, from the real ("true") measures of inequality. In view of this potential detachment, should well-intentioned policy makers aiming to revamp individual wellbeing just aim to reduce "true" inequality or should they aim first and foremost to diminish "perceived" inequality? Besides, should policy makers disregard the role of individuals' emotions or should they aim to empower individuals with abilities to manage their own emotions in a way to curb the stress caused by inequality so to achieve better outcomes for their own and society's wellbeing?

Accordingly, the main task we undertook was to dig into the complex interactions whereby inequality affects individual wellbeing. As to individual wellbeing, we assessed it both through hedonic measures – Happiness – and through eudemonic measures – Flourishing. Regarding income inequality, we navigated among an objective measure – the Gini index – and a range of variables pertaining to an individual's subjective perceptions and emotions, such as the individual's perceived inequality, emotional intelligence and social trust.

We used a unique survey of 627 Italian respondents to a questionnaire tailor-made to embrace individuals' Emotional Intelligence (EI), and perceptions about various socio-economic variables.

Via an instrumental variable approach to tackle the intrinsic endogeneity of wellbeing with perceived inequality (PI) and EI, we reached two main results.

First, the higher emotional intelligence the higher the individual wellbeing in both its specimen, i.e. its fundamental state (i.e. eudemonic) and its superficial instance

(i.e hedonic state). Second, that PI impacts, negatively, only the hedonic state of individual well-being, the one that is more sensitive and fickler to social discontent. Moreover, we found that PI depends positively on an individual's trust, income comparison with peers and Gini index.

Hence, to avoid that such discontent could lead to irrational and self-defeating choice – like voting intention that goes beyond what is captured by standard financial and economic indicators[6] (Liberini, Redoano, and Proto, 2017; Esaiasson, Dahlberg, and Kokkonen, 2017; Ward, 2019)- we can work on two dimensions. On the one hand we could design interventions apt to increase trust and, in turn, reduce Perception of Inequality; on the other hand we could design policy oriented to increase Emotional Intelligence that, simultaneously, acts directly and compensates, the negative effect of PI, on happiness.

Finally, while our investigation used data collected in 2018-2019, future research might try to elucidate whether our findings were robust to the epochal shock imparted on society and on individual perceptions by the COVID-19 pandemic.

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[6] The literature on the political determinants of subjective well-being, instead, is prolific and well-established. See Alvarez-Diaz, Gonzalez, and Radcliff (2010), Di Tella and MacCulloch (2005); Flavin and Keane (2012); Flavin, Pacek, and Radcliff (2011); Pacek and Radcliff (2011); Radcliff (2001); Stutzer and Frey (2006).

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Table 1. Variables' description

Variables	Definition
happiness	Taking all things together how happy are you on a scale 1 to 10?
Flourishing	
gender	1 "female"; 0 "male"
education status	0 "no education"; 1 "elementary"; 2 "lower secondary"; 3 "professional/upper secondary"; 4 "university"; 5"doctorate"
income	11 income classes (min: income lower than €600 per month; max: income higher than €5,000.00 per month)
Age	years in number.
Deprivation index	Severe material deprivation rate: Share of population living in households lacking at least 4 items out of the following 9 items: i) to pay rent or utility bills, ii) keep home adequately warm, iii) face unexpected expenses (of 800 euros in 2014), iv) eat meat, fish or a protein equivalent every second day, v) a week holiday away from home, or could not afford) vi) a car, vii) a washing machine, viii) a colour TV, or ix) a telephone.
Perception of equality	In your opinion, what types of societies better represents the Italian situation?
EI altruism	EIS1, EIS2, EIS3r, EIS4, EIS5, EIS6, EIS7, EIS8, EIS9, EIS10, EIS11r
EI own emotion	EIS12, EIS13, EIS14, EIS15
EI composite	composite
Trust	Supposing that you lost your wallet, what is the likelihood of it being returned intact if found by: i) a neighbour; ii) a policeman; iii) a stranger.
Spirituality	Factor 1 – Faith and Belief: 1, 20, 8, 12, 6, 14 Factor 2 – Life and Self-Responsibility: 9, 19, 15, 16, 3 Factor 3 – Life Satisfaction and Actualization: 10, 4, 13, 2, 11, 5
income comparison	How do you evaluate your income position with respect to your reference category? (colleagues; relatives; friends; others) (1= by far worse; 5= by far better)
weighted – concentration index	Gini index based on disposable income at province level

Table 2. Descriptive Statistics

Variables	Obs	Mean	Std. Dev.	Min	Max
happiness	645	7.105	1.657	1.000	10.000
sex	645	0.691	0.422	0.000	1.000
education	645	2.908	1.167	0.000	5.000
income	645	4.007	2.933	1.000	11.000
age	644	32.824	14.337	15.000	86.000
deprivation	645	0.065	0. 469	0.000	1.000
perception of equality	645	3.652	1.154	1.000	5.000
EI altruistic	645	3.774	0.468	2.090	5.000
EI own emotion	645	3.734	0.777	1.000	5.000
EI overall	645	3.795	0.472	1.447	5.000
trust	645	4.721	1.692	1.000	10.000
spirituality	645	3.173	1.197	0.800	5.600
flourishing	645	3.601	0.646	1.444	5.000
income comparison	645	2.800	0.641	1.000	4.750
concentration index	628	0.532	0.200	0.056	1.044
weighted-concentration index	628	0.323	0.201	0.003	1.091

Table 3. Specification 1

VARIABLES	**perception of inequality**
Emotional Intelligence	-0.121
	(0.101)
generalized trust (log)	-1.017**
	(0.426)
female	0.054
	(0.103)
education status	0.062
	(0.045)
income (log)	0.039
	(0.311)
age (log)	0.248
	(0.328)
income comparison	-0.184**
	(0.084)
deprivation index	0.180
	(0.169)
location of residence	0.002
	(0.004)
weighted –concentration index	1.648
	(1.135)
weighted –concentration index squared	-1.800*
	(1.063)
Constant	4.090***
	(0.837)
Observations	627
R-squared	0.038

Note: The table reports regressions coefficients. *The dependent variable and the estimation method are reported at the top of each column.* In parentheses are robust standard errors. *(*): coefficient significant at 10% confidence level; (**): coefficient significant at 5% confidence level; (***): coefficient significant at less than 1% confidence level.*

Table 4. Specification 2

	Second Stage	First Stages	
	(1)	(2)	(3)
VARIABLES	**happiness**	**perception of inequality**	**Emotional Intelligence**
income comparison		-0.172**	-0.037
		(0.081)	(0.033)
weighted –concentration index		1.688	0.236
		(1.054)	(0.425)
weighted –concentration index squared		-1.867*	-0.252
		(1.035)	(0.418)
Spirituality		-0.017	0.077***
		(0.041)	(0.016)
female	0.249	0.070	-0.041
	(0.280)	(0.102)	(0.041)
education	0.152	0.042	0.010
	(0.127)	(0.046)	(0.019)
marital status (single)	1.860	0.894*	-0.083
	(1.471)	(0.470)	(0.190)
marital status (married)	1.832	0.710	-0.042
	(1.322)	(0.453)	(0.183)
marital status (divorced)	1.222	0.723	0.148
	(1.395)	(0.489)	(0.197)
income log	0.463	0.045	-0.034
	(0.385)	(0.316)	(0.128)
age log	0.630	0.670	0.034
	(1.229)	(0.411)	(0.166)
deprivation index	-0.083	0.209	-0.150*
	(0.582)	(0.191)	(0.077)
generalized trust (log)	0.088	-1.036**	0.291
	(1.653)	(0.445)	(0.179)
perception of inequality	-2.194**		
	(0.875)		
Emotional Intelligence	2.634**		
	(1.340)		
Constant	1.496	2.321**	3.520***
	(5.339)		
Observations	627	627	627
R-squared	-2.199		
F Test	0,000		
Underid Test (p.value)	0,035		
Sargan T.statistic	0,611		
Endogeneity (p.value)	0,000		

Note: The table reports regressions coefficients. *The dependent variable and the estimation method are reported at the top of each column.* In parentheses are robust standard errors. *(*): coefficient significant at 10% confidence level; (**): coefficient significant at 5% confidence level; (***): coefficient significant at less than 1% confidence level. The F test tests whether the hypothesis that all the included regressor coefficients are jointly zero can be rejected (*: at 10%; **: at 5%; ***: at 1% level of significance). The Underidentification test for instrument irrelevance tests whether, on the basis of the ancillary regression, the hypothesis of irrelevance may be rejected (significance means rejection hence the instrument are relevant). The Sargan* test whether an instrument is exogenous, namely uncorrelated with the error term *(insignificance means acceptance hence the instrument is exogenous).*

Table 5. Specification 3

	Second Stage	**First Stages**	
	(1)	**(2)**	**(3)**
VARIABLES	**flourishing**	**perception of inequality**	**Emotional Intelligence**
income comparison		-0.172**	-0.037
		(0.081)	(0.033)
weighted –concentration index		1.688	0.236
		(1.054)	(0.425)
weighted –concentration index squared		-1.867*	-0.252
		(1.035)	(0.418)
Spirituality		-0.017	0.077***
		(0.041)	(0.016)
female	-0.069	0.070	-0.041
	(0.056)	(0.102)	(0.041)
education	0.055**	0.042	0.010
	(0.025)	(0.046)	(0.019)
marital status (single)	0.377	0.894*	-0.083
	(0.296)	(0.470)	(0.190)
marital status (married)	0.431	0.710	-0.042
	(0.266)	(0.453)	(0.183)
marital status (divorced)	0.301	0.723	0.148
	(0.281)	(0.489)	(0.197)
income log	0.090	0.045	-0.034
	(0.078)	(0.316)	(0.128)
age log	0.040	0.670	0.034
	(0.248)	(0.411)	(0.166)
deprivation index	-0.028	0.209	-0.150*
	(0.117)	(0.191)	(0.077)
generalized trust (log)	0.561*	-1.036**	0.291
	(0.333)	(0.445)	(0.179)
perception of inequality	-0.255		
	(0.176)		
Emotional Intelligence	1.211***		
	(0.270)		
Constant	-0.909	2.321**	3.520***
	(1.076)	(0.956)	(0.386)

Observations	627	627	627
R-squared	0.146		
F Test	0,000		
Underid Test (p.value)	0.0345		
Sargan T.statistic	0,543		
Endogeneity (p.value)	0.0450		

Note: The table reports regressions coefficients. *The dependent variable and the estimation method are reported at the top of each column.* In parentheses are robust standard errors. *(*): coefficient significant at 10% confidence level; (**): coefficient significant at 5% confidence level; (***): coefficient significant at less than 1% confidence level. The F test tests whether the hypothesis that all the included regressor coefficients are jointly zero can be rejected (*: at 10%; **: at 5%; ***: at 1% level of significance). The Underidentification test for instrument irrelevance tests whether, on the basis of the ancillary regression, the hypothesis of irrelevance may be rejected (significance means rejection hence the instrument is relevant). The Sargan* test whether an instrument is exogenous, namely uncorrelated with the error term *(insignificance means acceptance hence the instrument is exogenous).*

Appendix

Table 6: Robustness check first specification

VARIABLES	**perception of inequality**
Emotional Intelligence- empathy	-0.030
	(0.094)
generalized trust (log)	-1.019***
	(0.379)
female	0.069
	(0.095)
education status	0.027
	(0.042)
income (log)	0.063
	(0.291)
age (log)	0.190
	(0.301)
income comparison	-0.206***
	(0.073)
deprivation index	0.137
	(0.161)
location of residence	0.001
	(0.004)
weighted –concentration index	1.463
	(1.027)
weighted –concentration index squared	-1.623*
	(0.970)
Constant	4.102***
	(0.766)
Observations	627
R-squared	0.038

Note: The table reports regressions coefficients. *The dependent variable and the estimation method are reported at the top of each column.* In parentheses are robust standard errors. *(*): coefficient significant at 10%*

confidence level; (**): coefficient significant at 5% confidence level; (***): coefficient significant at less than 1% confidence level.

Table 7: Robustness check second specification

	Second Stage	First Stages	
	(1)	(2)	(3)
VARIABLES	**happiness**	**perception of inequality**	**Emotional Intelligence**
income comparison		-0.172**	-0.037
		(0.081)	(0.033)
weighted –concentration index		1.688	0.236
		(1.054)	(0.425)
weighted –concentration index squared		-1.867*	-0.252
		(1.035)	(0.418)
Spirituality		-0.017	0.077***
		(0.041)	(0.016)
female	-0.215	0.070	-0.041
	(0.375)	(0.102)	(0.041)
education	0.132	0.042	0.010
	(0.149)	(0.046)	(0.019)
marital status (single)	1.185	0.894*	-0.083
	(1.679)	(0.470)	(0.190)
marital status (married)	1.466	0.710	-0.042
	(1.528)	(0.453)	(0.183)
marital status (divorced)	0.213	0.723	0.148
	(1.751)	(0.489)	(0.197)
income log	0.740	0.045	-0.034
	(0.507)	(0.316)	(0.128)
age log	1.501	0.670	0.034
	(1.487)	(0.411)	(0.166)
deprivation index	0.177	0.209	-0.150*
	(0.743)	(0.191)	(0.077)
generalized trust (log)	0.107	-1.036**	0.291
	(1.915)	(0.445)	(0.179)
perception of inequality	-2.271**		
	(1.027)		
Emotional Intelligence-empathy	4.112*		
	(2.371)		
Constant	-4.215	2.321**	3.520***
	(9.059)	(0.956)	(0.386)
Observations	627	627	627
R-squared	-3.350	0.043	0.072
F Test	0.0127		

Underid Test (p.value)	0.0523
Sargan T.statistic	0.555
Endogeneity (p.value)	0,000

Note: The table reports regressions coefficients. *The dependent variable and the estimation method are reported at the top of each column.* In parentheses are robust standard errors. *(*): coefficient significant at 10% confidence level; (**): coefficient significant at 5% confidence level; (***): coefficient significant at less than 1% confidence level. The F test tests whether the hypothesis that all the included regressor coefficients are jointly zero can be rejected (*: at 10%; **: at 5%; ***: at 1% level of significance). The Underidentification test for instrument irrelevance tests whether, on the basis of the ancillary regression, the hypothesis of irrelevance may be rejected (significance means rejection hence the instrument is relevant). The Sargan* test whether an instrument is exogenous, namely uncorrelated with the error term *(insignificance means acceptance hence the instrument is exogenous).*

Table 8: Robustness check second specification

	Second Stage	**First Stages**	
	(1)	**(2)**	**(3)**
VARIABLES	**flourishing**	**perception of inequality**	**Emotional Intelligence**
income comparison		-0.172**	-0.037
		(0.081)	(0.033)
weighted –concentration index		1.688	0.236
		(1.054)	(0.425)
weighted –concentration index squared		-1.867*	-0.252
		(1.035)	(0.418)
Spirituality		-0.017	0.077***
		(0.041)	(0.016)
female	-0.278***	0.070	-0.041
	(0.099)	(0.102)	(0.041)
education	0.046	0.042	0.010
	(0.039)	(0.046)	(0.019)
marital status (single)	0.068	0.894*	-0.083
	(0.443)	(0.470)	(0.190)
marital status (married)	0.263	0.710	-0.042
	(0.403)	(0.453)	(0.183)
marital status (divorced)	-0.147	0.723	0.148
	(0.462)	(0.489)	(0.197)
income log	0.212	0.045	-0.034
	(0.134)	(0.316)	(0.128)
age log	0.431	0.670	0.034
	(0.392)	(0.411)	(0.166)
deprivation index	0.082	0.209	-0.150*
	(0.196)	(0.191)	(0.077)
generalized trust (log)	0.587	-1.036**	0.291
	(0.506)	(0.445)	(0.179)
perception of inequality	-0.286		
	(0.271)		
Emotional Intelligence	1.834***		

	(0.626)		
Constant	-3.333	2.321**	3.520***
	(2.391)	(0.956)	(0.386)
Observations	627	627	627
R-squared	-0.995	0.043	0.072
F Test	1.06e-05		
Underid Test (p.value)	0.0523		
Sargan T.statistic	0.550		
Endogeneity (p.value)	0,000		

Note: The table reports regressions coefficients. *The dependent variable and the estimation method are reported at the top of each column.* In parentheses are robust standard errors. *(*): coefficient significant at 10% confidence level; (**): coefficient significant at 5% confidence level; (***): coefficient significant at less than 1% confidence level. The F test tests whether the hypothesis that all the included regressor coefficients are jointly zero can be rejected (*: at 10%; **: at 5%; ***: at 1% level of significance). The Underidentification test for instrument irrelevance tests whether, on the basis of the ancillary regression, the hypothesis of irrelevance may be rejected (significance means rejection hence the instrument is relevant). The Sargan* test whether an instrument is exogenous, namely uncorrelated with the error term *(insignificance means acceptance hence the instrument is exogenous).*

Table 9- Jarel Scale

Factor	Items description
Factor 1: People's beliefs and faith	1. Prayer is an important part of my life. 5. I feel there is a close relationship between my spiritual beliefs and what I do. 6. I believe in an afterlife. 8. I believe in a supreme power. 12. God has little meaning in my life. 14. Prayer does not help me in making decisions. 20. Belief in a supreme being has no part in my life.
Factor 2: Life and Self-responsibility	2. I believe I have spiritual well-being. 4. I find meaning and purpose in my life. 5. I feel there is a close relationship between my spiritual beliefs and what I do. 10. I am satisfied with my life. 11. I set goals for myself. 13. I am satisfied with the way I am using my abilities. 19. I accept my life situations.
Factor 3: Life satisfaction and actualization	3. As I grow older, I find myself more tolerant of others' beliefs. 9. I am able to receive and give love to others. 11. I set goals for myself. 19. I accept my life situations. 15. I am able to appreciate differences in others. 16. I am pretty well put together.