

Fairness perceptions mediate the relationship between income comparisons and subjective well-being: evidence from Türkiye

Hatime Kamilçelebi & Martijn J. Burger

To cite this article: Hatime Kamilçelebi & Martijn J. Burger (24 Mar 2024): Fairness perceptions mediate the relationship between income comparisons and subjective well-being: evidence from Türkiye, Applied Economics Letters, DOI: [10.1080/13504851.2024.2332584](https://doi.org/10.1080/13504851.2024.2332584)

To link to this article: <https://doi.org/10.1080/13504851.2024.2332584>



© 2024 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.



[View supplementary material](#)



Published online: 24 Mar 2024.



[Submit your article to this journal](#)



Article views: 1360





[View related articles](#)



[View Crossmark data](#)

Fairness perceptions mediate the relationship between income comparisons and subjective well-being: evidence from Türkiye

Hatime Kamilçelebi ^a and Martijn J. Burger ^{b,c,d}

^aFaculty of Applied Science, Kırklareli University, Kırklareli, Türkiye; ^bFaculty of Management, Open University of the Netherlands, Heerlen, the Netherlands; ^cErasmus Happiness Economics Research Organisation, Erasmus University Rotterdam, Rotterdam, the Netherlands; ^dFaculty of Economics, University of Johannesburg, Johannesburg, South Africa

ABSTRACT

In this article, we explore to what extent fairness perceptions mediate the relationship between income comparisons and subjective well-being. Using data of 1100 Turkish respondents collected amid the Turkish economic crisis, we find that people who attach more importance to income comparisons with others report lower subjective well-being levels. Mediation models indicate that fairness perceptions and negative affect fully mediate the relationship between these income comparisons and subjective well-being.

KEYWORDS

Subjective well-being; social comparison; fairness; Türkiye

JEL CLASSIFICATION

I31; I30

I. Introduction


Over the past decades, there has been a burgeoning literature examining how income is related to subjective well-being. One of the key findings in this literature is that not only absolute income matters for subjective well-being, but also perceived relative income (Clark, Frijters, and Shields 2008). In the relationship between income and happiness, social comparison plays an important role. Social comparison theory holds that people do not evaluate their situation and life in isolation from others. Instead, they compare their income and other achievements with those of people around them, such as family members, friends, and colleagues.


People can make upward and downward social comparisons (Festinger 1954), meaning that they can contrast themselves with others that are respectively better off (upward comparison) and worse off (downward comparison). Although upward and downward comparisons can co-exist within the same person (Taylor and Lobel 1989), it is generally believed that people mostly compare with others that have similar or higher incomes (Dufhues et al. 2023; Goerke and Pannenberg 2015). Although upward social comparisons can enhance life satisfaction through a signalling effect related to admiration,

identification, and seeing ways to improve one's own status (e.g. Olivos, Olivos-Jara, and Browne 2021), it is believed that social comparison typically reduces subjective well-being through feelings of unfairness and envy (Clark and Senik 2010; Ferrer-I-Carbonell 2005).

At the same time, it has not been formally tested whether fairness perceptions mediate the relationship between income comparisons and subjective well-being. To the best of our knowledge, only Ugur (2021) found that the negative association between income inequality and subjective well-being could be explained by fairness concerns.

In this research, we examine to what extent fairness perceptions mediate the relationship between income comparisons and subjective well-being, where we conceptualize subjective well-being as the evaluation of life satisfaction or a respondent's global subjective evaluation of his or her life (Kapteyn et al. 2015). Specifically, we use data from a survey held in Türkiye from the last week of March to the second week of May 2023, a period in which Türkiye was experiencing an economic crisis and record-high inflation of over 50% (TURKSTAT 2023). Türkiye can be perceived as a compelling case study due

CONTACT Martijn J. Burger  mburger@ese.eur.nl  Erasmus Happiness Economics Research Organization, Erasmus University Rotterdam, Van der Gootgebouw M5-37, Burgemeester Oudlaan 50, Rotterdam, PA 3062, the Netherlands

 Supplemental data for this article can be accessed online at <https://doi.org/10.1080/13504851.2024.2332584>

© 2024 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.

This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives License (<http://creativecommons.org/licenses/by-nc-nd/4.0/>), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited, and is not altered, transformed, or built upon in any way. The terms on which this article has been published allow the posting of the Accepted Manuscript in a repository by the author(s) or with their consent.

to its collectivistic culture, where the importance of comparing oneself to others, particularly those with higher incomes, is emphasized (Dumludag et al., 2016). Furthermore, especially in times of economic crises, individuals tend to engage in upward comparisons, as has been observed by Tao (2015).

Data and methodology

Data

In this research, we use data collected in Türkiye from the last week of March to the second week of May 2023. The survey was carried out online across Türkiye through convenience sampling via providing a link via Google Forms targeting *full-time employees*. Participation in the survey was voluntary and participants were not paid for participating. Overall, our sample consists of 1100 people over the age of 18 that are full-time employees. Appendix A provides an overview of the socio-demographic characteristics of the sample, which is not representative for the Turkish working population: particularly employees with university education and working in the public sector are overrepresented. Despite the non-representativeness of the sample, convenience sampling was our only viable option (given resources and lack of access to a panel) to study income comparisons and subjective well-being amid the Turkish crisis. Although this is a limitation of the study, there is now also a growing body of research showing that sample source has only a limited effect on study outcomes (e.g. Ellis, Savchenko, and Messer 2023; Winton and Sabol 2022).

Variables

To measure subjective well-being, we used a life satisfaction score, which can be considered an evaluative measure of subjective well-being and is commonly used in the literature (Diener, Oishi, and Tay 2018). Specifically, respondents had to answer this question: ‘Taking all things together, how satisfied are you with your life these days? 0=completely dissatisfied, 10=completely satisfied’. The importance of income comparisons was

measured on a 7-point scale making use of the question: ‘How important is it for you to compare your income with other people’s incomes? 1=Not at all important, 7=Very important’. Finally, our mediating variable fairness perceptions was measured by the question: ‘Do you think your salary is fair? 1=Very unfair, 5=Very fair’. We control for several correlates of life satisfaction, as suggested by Dolan et al. (2008) and presented in Appendix A. The control variables are gender, age, education, marital status, number of children respondent has, number of working hours, income, sector, health status, location of residence. Descriptive statistics are provided in Appendix A.

Empirical strategy

To examine the relationship between the importance of income comparisons and subjective well-being, we start with an OLS regressions to examine the relationship between importance of income comparisons and subjective well-being. Specifically, we estimate the following model:

$$LS_i = \Theta \text{Income Compariso}_i + \Sigma \text{Control}_i + \varepsilon_i,$$

where LS_i is the reported life satisfaction, *Income Comparisons* is the reported importance of income comparisons for the respondent, *Control* is a vector of the personal characteristics of the respondent, and ε is the residual error. Subsequently, we utilize the Baron and Kenny (1986) approach as well as Sobel’s test structural equation modelling approach for our mediation analysis using the *medsem* package in Stata (Mehmetoglu 2018). An elaborate description of the mediation test that is conducted can be found in Iacobucci et al. (2007).

Please note that the data collected prevents us from drawing causal inferences and our results should be interpreted as conditional associations, rather than causal relationships. The causal relationship between income comparisons and subjective well-being has elsewhere been shown in the literature (Card et al. 2012; Perez-Truglia 2020) and the added value of this article is that we explore the mediating mechanism.

Empirical results

Examining the descriptive statistics (Appendix A1), we gauge that average life satisfaction in our Turkish sample is a 4.8, which is a bit lower than earlier reported averages in the existing literature (Veenhoven 2023), but not remarkable given that the survey was held in the mid of an economic crisis and in the wake of a natural disaster (earthquake) in Türkiye. Moreover, the majority of respondents (71%) find their current salary unfair to very unfair, while the importance attached to income comparisons is quite uniformly distributed across the respondents: about 40% does not attach much importance to income comparisons, while also 40% finds income comparisons important.

However, is the importance people attach to income comparisons indeed associated with life satisfaction through its effect on fairness perceptions? As expected, we find for our Turkish sample a negative relationship between the importance people attach to income comparison and life satisfaction. To exemplify, respondents who do not care at all about income comparisons score, on average, 0.7 points higher on life satisfaction compared to respondents

that care very much about income comparisons (Table 1, Column 1). Our conclusions hold when re-estimating the model using ordinal probit (Table 1, Column 2). The subsequent mediation analysis using the Baron and Kenny (1986) approach suggests that fairness concerns mediate the relationship between the importance of income comparisons and life satisfaction (Table 1, Column 3).

A further exploration using Sobel's test shows that fairness perceptions mediate 73% of the relationship between income comparisons and life satisfaction. Despite Sobel's test indicates a complete mediation (given that the effect of income comparisons is now insignificant), the mediation analysis also shows that the sum of the proportion mediated does not reach 100%, indicating that there are other potential mediators in play. Controlling for negative emotions (anger and stress) – related to the feelings of envy comparisons generate as discussed in the introduction – resolves this problem (see Table 1, Column 4) in that the two variables completely mediate the relationship between importance of income comparisons and life satisfaction.

Table 1. Main results.

	(1) OLS	(2) Ordinal probit	(3) OLS	(4) OLS
Income comparisons	-0.12 (0.05)**	-0.05 (0.02)*	-0.03 (0.04)	0.01 (0.04)
Perceived fairness income			0.91 (0.07)**	0.75 (0.07)**
Anger and stress feelings				-0.27 (0.03)**
Male	-0.15 (0.15)	-0.05 (0.07)	-0.37 (0.15)*	-0.44 (0.15)**
Age	-0.05 (0.06)	-0.04 (0.02)	-0.05 (0.05)	-0.06 (0.05)
Age ²	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
University education	-0.02 (0.23)	-0.02 (0.06)	-0.04 (0.22)	-0.12 (0.22)
Married	-0.09 (0.20)	-0.03 (0.08)	-0.07 (0.19)	-0.02 (0.18)
Number of children	0.12 (0.10)	0.05 (0.04)	0.18 (0.10)#	0.16 (0.10)#
Number working hours	-0.03 (0.01)*	-0.01 (0.00)*	-0.02 (0.01)#	-0.01 (0.01)
Ln income	1.16 (0.15)**	0.48 (0.06)**	0.72 (0.14)**	0.67 (0.13)**
Working in public sector	0.01 (0.17)	-0.00 (0.07)	0.29 (0.16)#	0.19 (0.15)
No health problems	0.24 (0.17)	0.10 (0.07)	0.22 (0.16)	0.12 (0.15)
Living in large city	0.35 (0.17)*	0.15 (0.07)*	0.30 (0.16)#	0.29 (0.16)#
Observations	1100	1100	1100	1100

Robust standard errors in parentheses. ** $p < 0.01$; * $p < 0.05$; # $p < 0.10$

Concluding remarks

This study finds a negative relationship between social income comparisons and subjective well-being amid the Turkish economic crisis and that this relationship is almost fully mediated by feelings of unfairness. Although we do not expect that our main findings would change considerably when more representative samples are used, additional research using different samples is warranted to examine whether our findings hold in different populations.

Our findings have some policy implications. To combat the negative effects of upward social comparisons, reducing income inequalities would be an obvious measure. At the same time, given that there seems to be an innate human drive to socially compare, more needs to be done to avoid negative effects of upward social comparisons. In terms of policy actions, one can think of more transparency regarding pay (e.g. through more open communication) and more consistent application of rules and policies within society since these actions could increase feelings of fairness. Future (experimental) research could further examine what kind of measures would work to reduce the harmful effects of social comparisons by reducing feelings of unfairness.

Acknowledgements

Hatime Kamilçelebi's research was funded by a TUBITAK 2219 scholarship.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

The work was supported by the Türkiye Bilimsel ve Teknolojik Araştırma Kurumu.

ORCID

Hatime Kamilçelebi  <http://orcid.org/0000-0002-1028-7135>
Martijn J. Burger  <http://orcid.org/0000-0002-9529-849X>

Ethics statement

The data collection procedure was reviewed and approved by the Scientific Research and Publication Ethics Committee of the Rectorate of Kırklareli University (reference no: E-35523585-199). The respondents provided their written informed consent to participate in this study.

References

- Baron, R. M., and D. A. Kenny. 1986. "The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations." *Journal of Personality and Social Psychology* 51 (6): 1173–1182. <https://doi.org/10.1037/0022-3514.51.6.1173>.
- Card, D., A. Mas, E. Moretti, and E. Saez. 2012. "Inequality at Work: The Effect of Peer Salaries on Job Satisfaction." *American Economic Review* 102 (6): 2981–3003. <https://doi.org/10.1257/aer.102.6.2981>.
- Clark, A. E., P. Frijters, and M. A. Shields. 2008. "Relative Income, Happiness, and Utility: An Explanation for the Easterlin Paradox and Other Puzzles." *Journal of Economic Literature* 46 (1): 95–144. <https://doi.org/10.1257/jel.46.1.95>.
- Clark, A. E., and C. Senik. 2010. "Who Compares to Whom? The Anatomy of Income Comparisons in Europe." *The Economic Journal* 120 (544): 573–594. <https://doi.org/10.1111/j.1468-0297.2010.02359.x>.
- Diener, E., S. Oishi, and L. Tay. 2018. "Advances in Subjective Well-Being Research." *Nature Human Behaviour* 2 (4): 253–260. <https://doi.org/10.1038/s41562-018-0307-6>.
- Dolan, P., T. Peasgood, and M. White. 2008. "Do We Really Know What Makes Us Happy? A Review of the Economic Literature on the Factors Associated with Subjective Well-Being." *Journal of Economic Psychology* 29 (1): 94–122. <https://doi.org/10.1016/j.joep.2007.09.001>.
- Dufhues, T., J. Möllers, A. Jantsch, G. Buchenrieder, and L. Camfield. 2023. "Don't Look Up! Individual Income Comparisons and Subjective Well-Being of Students in Thailand." *Journal of Happiness Studies* 24 (2): 477–503. <https://doi.org/10.1007/s10902-022-00604-4>.
- Dumludag, D., O. Gokdemir, and S. Giray. 2016. "Income Comparison, Collectivism and Life Satisfaction in Turkey." *Quality & Quantity* 50: 955–980.
- Ellis, S. F., O. M. Savchenko, and K. D. Messer. 2023. "Is a Non-Representative Convenience Sample of Adults Good Enough? Insights from an Economic Experiment." *Journal of the Economic Science Association* 9 (2): 293–307. <https://doi.org/10.1007/s40881-023-00135-5>.
- Ferrer-I-Carbonell, A. 2005. "Income and Well-Being: An Empirical Analysis of the Comparison Income Effect." *Journal of Public Economics* 89 (5–6): 997–1019. <https://doi.org/10.1016/j.jpubeco.2004.06.003>.

- Festinger, L. 1954. "A Theory of Social Comparison Processes." *Human Relations* 7 (2): 117–140. <https://doi.org/10.1177/001872675400700202>.
- Goerke, L., and M. Pannenberg. 2015. "Direct Evidence for Income Comparisons and Subjective Well-Being Across Reference Groups." *Economics Letters* 137:95–101. <https://doi.org/10.1016/j.econlet.2015.10.012>.
- Iacobucci, D., N. Saldanha, and X. Deng. 2007. "A Mediation on Mediation: Evidence That Structural Equation Models Perform Better Than Regressions." *Journal of Consumer Psychology* 17 (2): 140–154. [https://doi.org/10.1016/S1057-7408\(07\)70020-7](https://doi.org/10.1016/S1057-7408(07)70020-7).
- Kapteyn, A., J. Lee, C. Tassot, H. Vonkova, and G. Zamarro. 2015. "Dimensions of Subjective Well-Being." *Social Indicators Research* 123 (3): 625–660. <https://doi.org/10.1007/s11205-014-0753-0>.
- Mehmetoglu, M. 2018. "Medsem: A Stata Package for Statistical Mediation Analysis." *International Journal of Computational Economics and Econometrics* 8 (1): 63–78. <https://doi.org/10.1504/IJCEE.2018.088321>.
- Olivos, F., P. Olivos-Jara, and M. Browne. 2021. "Asymmetric Social Comparison and Life Satisfaction in Social Networks." *Journal of Happiness Studies* 22 (1): 363–384. <https://doi.org/10.1007/s10902-020-00234-8>.
- Perez-Truglia, R. 2020. "The Effects of Income Transparency on Well-Being: Evidence from a Natural Experiment." *American Economic Review* 110 (4): 1019–1054. <https://doi.org/10.1257/aer.20160256>.
- Tao, H. 2015. "Multiple Earnings Comparisons and Subjective Earnings Fairness: A Cross-Country Study." *Journal of Behavioral and Experimental Economics* 57:45–54. <https://doi.org/10.1016/j.socec.2015.04.002>.
- Taylor, S., and M. Lobel. 1989. "Social Comparison Activity Under Threat: Downward Evaluation and Upward Contacts." *Psychological Review* 96 (4): 569–575. <https://doi.org/10.1037/0033-295X.96.4.569>.
- TURKSTAT. 2023. "Consumer Price Index, March 2023." (Accessed September 29, 2023) <https://data.tuik.gov.tr/Bulten/Index?p=Consumer-Price-Index-March-2023-49652&dil=2>.
- Ugur, Z. B. 2021. "How Does Inequality Hamper Subjective Well-Being? The Role of Fairness." *Social Indicators Research* 158 (2): 377–407. <https://doi.org/10.1007/s11205-021-02711-w>.
- Veenhoven, R. 2023. "Rank Report on Happiness in Türkiye (TR)." The Netherlands: World Database of Happiness, Erasmus University Rotterdam.
- Winton, B. G., and M. A. Sabol. 2022. "A Multi-Group Analysis of Convenience Samples: Free, Cheap, Friendly, and Fancy Sources." *International Journal of Social Research Methodology* 25 (6): 861–876. <https://doi.org/10.1080/13645579.2021.1961187>.