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How Social Assistance Affects Subjective Wellbeing: Lessons from Kyrgyzstan

FRANZISKA GASSMANN *, BRUNO MARTORANO* & JENNIFER WAIDLER**

*UNU-MERIT, Maastricht University, Maastricht, The Netherlands, **UNICEF Office of Research and UNU-MERIT, Firenze, Italy

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ABSTRACT *This paper investigates the effects of social assistance on subjective well-being looking at the case of Kyrgyzstan. For this purpose, we exploit recent changes in the design of social assistance and apply a difference in difference (DiD) method combined with an inverse probability weighting (IPW) technique. In contrast to the existing literature, we find that in the short-term, the receipt of social assistance benefits is associated with lower levels of subjective well-being. Our findings also reveal that participation in social assistance leads to some reduction in satisfaction regarding recipients' own economic conditions. Moreover, we find that the negative effects on subjective well-being disappear for the oldest generations, which experienced the dissolution of the Soviet Union. By contrast, the effect is negative for the youth, who grew up in a new society where needing help is ultimately the responsibility of the individual citizen. For individuals with high trust in political institutions, the negative effect of state intervention does not hold, while it persists in case of low trust in political institutions.*

KEYWORDS: Subjective well-being; social assistance; institutional trust; Soviet Union; Kyrgyz Republic

1. Introduction

How does policy affect subjective wellbeing? This question has been receiving a lot of attention recently (Attah et al., 2016). Subjective wellbeing is usually defined as 'people's multidimensional evaluation of their lives, including cognitive judgements of life satisfaction as well as affective evaluations of moods and emotions' (Eid & Diener, 2004, p. 63).¹ The rising interest around subjective wellbeing is mainly related to the fact that some of its dimensions – such as positive emotions, happiness, satisfaction with life – have been recognised to have an instrumental value for outcomes such as productivity, decision-making, educational achievements and health status (Attah et al., 2016; Haushofer & Fehr, 2014). Happier people are healthier, live longer and are more productive workers (Anand, 2017). A higher job satisfaction is related to increased productivity (Bryson, Forth, & Stokes, 2017) and, at the macro-level, subjective well-being is an input to higher total factor productivity (DiMaria, Peroni, & Sarracino, 2014). Subjective wellbeing (or happiness) has also gained a high position in the political discourse being recognised as an important goal for society (Layard, 2020). For example, New Zealand has recently implemented the 'well-being budget' prioritising happiness and life satisfaction over economic growth.² Before that, many other political institutions have adopted similar initiatives including the former French president, Nicolas Sarkozy,

Correspondence Address: Jennifer Waidler, Unicef Office of Research and UNU-MERIT, Via Degli Alfani 58, Firenze I-50121, Italy. Email: jwaidler@unicef.org

who set up the highly influential commission to report on this topic led by Stiglitz, Sen, and Fitoussi (2009). In view of this, it is important to understand how policy may affect subjective wellbeing.

In this paper, we investigate the role of social assistance transfers³ in shaping subjective wellbeing. Our study is in line with a new and growing empirical literature documenting the importance of cash transfer programmes in improving mental health, happiness and life satisfaction (Attah et al., 2016). Most of these studies show improvements in subjective well-being following the implementation of cash transfers in Sub-Saharan African countries (Baird, De Hoop, & Ozler, 2013; Handa, Martorano, Halpern, Pettifor, & Thirumurthy, 2014a, 2014b; Haushofer & Fehr, 2014). Similar results are also reported in the context of Latin America (Fernald & Gunnar, 2009; Macours, Schady, & Vakis, 2008; Ozer, Fernald, Weber & Flynn, Ozer, et al., 2011). More recently, a systematic review summarising 37 studies (all of them conducted in Africa and Latin America except for one in India and one in Cambodia) concludes cash transfers significantly improve mental health and subjective well-being in LMICs (McGuire, Kaiser, & Bach-Mortensen, 2020). The main explanation provided by these contributions is that social assistance increases subjective wellbeing by addressing the negative consequences associated with poverty, including mental health problems (Haushofer & Fehr, 2014).

However, a different strand of the literature highlights that this may be only one side of the coin (Roelen, 2017). According to this strand of the literature, the mental health of recipients of social assistance could be negatively affected despite the increase in material wellbeing, if receiving benefits leads to stigma or shame (Kassenböhmer & Haisken-DeNew, 2009; Yan, 2014).⁴ Indeed, social assistance is different from other social protection schemes, such as social insurance and labour market policies, as entitlement does not depend on contributions made in the past (World Bank, 2018). This characteristic is related to the narrative of deservingness, which may have negative implications for subjective wellbeing (Jun, 2019). The particular policy design, such as the targeting method, can further lead to negative consequences on psychological outcomes (see Devereux et al., 2015 for an overview). For example, the publication of names or queueing to collect government benefits in a public space can induce stigma and shame (Roelen, 2017). The same feelings may occur with verification processes in the community, where the eligibility is verified by a community leader (Yan, 2014). As a result, ‘the design and implementation of social assistance, and the wider discourse within which it takes place, can instigate stigma and shame’, leading to worsening mental wellbeing (Roelen, 2017, p. 2).

Whether or not social assistance is leading to higher or lower levels of subjective wellbeing is, therefore, an open question. Our study aims to fill this gap in the literature investigating the effects of social assistance on subjective wellbeing looking at the case of Kyrgyzstan. This country makes an interesting setting to test these alternative hypotheses. Under the Soviet Union, poverty existed, although people rarely admitted to be poor and the regime tried to mask the real numbers (Matthews, 1985; McAuley, 2008). Given the low inequalities and presumed adequate social conditions, poverty was seen, to a large extent, a responsibility directly attributed to the individuals suffering from poverty (Barr, 1994). Yet, the dissolution of the Soviet Union and the transition to the market economy generated feelings of collective deprivation through the dramatic increase in unemployment and the rapid worsening of general economic conditions (Campante & Chor, 2012; Ponticelli & Voth, 2020; Weinberg & Bakker, 2015). In such a setting, as explained by Alesina and Giuliano (2009, p. 14): ‘... [P]eople realise the importance of government intervention’. This may have resulted in poverty no longer understood as a responsibility directly attributed to the individual suffering from such a negative shock and in a more positive attitude towards government redistribution (Alesina & Giuliano, 2009; Giuliano & Spilimbergo, 2009). By contrast, the stigma or shame associated to social assistance may persist in the young generation who did not experience the dramatic shock of the dissolution of the Soviet Union while growing up in a society that used to think that it is the individual’s fault if citizens are in need of help (Alesina & Fuchs-Schündeln, 2007). Moreover, as explained above, the stigmatisation and shame might be further induced by the design and implementation of the ‘new’ social protection schemes. Indeed, it is a common practice in Kyrgyzstan to publish the list of beneficiaries in local social welfare offices (OECD, 2018).

In order to investigate the impact of social assistance on subjective wellbeing, we use two rounds of the Life in Kyrgyzstan survey (LiK), complemented with a third round to check for impacts in the medium run. Observational data makes it difficult to obtain reliable estimates due to reverse causality and omitted variable biases. However, in order to deal with these problems, we exploit recent changes in the design of social assistance and approach our empirical analysis applying a difference in difference (DiD) method combined with inverse probability weighting (IPW) strategy. Our results reject the first hypothesis that social assistance always increases subjective wellbeing. In fact, we find that, in the short-term, the receipt of social assistance benefits results in lower subjective well-being levels. Our analysis also reveals that the participation in social assistance leads to a decreased satisfaction with beneficiaries' own economic conditions. As reported above, these results might be explained by perceptions of stigma and shame related to welfare receipt, as other forms of transfers such as remittances received from migrants living abroad do not affect subjective well-being. Indeed, when we do heterogeneous analysis by age of beneficiaries, we find that the negative effects on subjective well-being disappear for the oldest generations – those that were in the labour market before the dissolution of the Soviet Union but who also experienced the transition to the market economy. By contrast, the effect is negative for the youth who grew up in a new society where needing help is ultimately the responsibility of the individual citizen. Lastly, we find that the negative effects of state intervention on life satisfaction hold only in case of low trust in political institutions. These results are robust to the use of alternative specifications of the main dependent variable, model specifications and estimation techniques. However, when testing whether results hold in the medium-run using an additional round of data, the impact of social assistance on subjective well-being is negative but no longer significant, while the negative effects on perceptions of economic conditions hold.

Our paper contributes to the literature on social assistance and subjective well-being (Attah et al., 2016). It adds important new evidence to the literature looking at the relationship between shame and poverty (Roelen, 2017). In particular, our paper shows that social transfers may lead to a decrease in subjective wellbeing despite improvements in material conditions. Moreover, this paper adds new evidence to the literature investigating this topic in a former Soviet country. Indeed, current literature mainly focuses on Sub-Saharan Africa and Latin America (Baird et al., 2013; Handa et al., 2014a, 2014b; Haushofer and Shapiro, 2016; Fernald & Gunnar, 2009; Ozer, Fernald, Weber, Flynn, & Vander Weele, 2011; Macours et al., 2008). Analysing the impact of social transfers on subjective wellbeing in Kyrgyzstan, we show the relevance of the cultural setting and history. Our findings could therefore be informative for other countries that share similar characteristics. By focusing on different age groups, as Alesina and Fuchs-Schündeln (2007), we also investigate if living in different political regimes and experiencing different shocks play a role on tastes and attitudes towards welfare policies. Lastly, this paper provides lessons for policy design. In particular, the results of our paper seem to be consistent with the idea that stigmatisation and shame may occur as a consequence of how programmes are designed and/or implemented (Devereux et al., 2015).

The rest of the paper is structured as follows: [Section 2](#) introduces the case study, Kyrgyzstan. [Section 3](#) presents the data and methodology used in this study. [Section 4](#) provides descriptive statistics of the sample used in the analysis, and [Section 5](#) presents the regression results of the relationship between social assistance and subjective well-being. Finally, [Section 6](#) concludes.

2. Social assistance under the Soviet Union and the case of Kyrgyzstan

Kyrgyzstan is a land-locked country with six million inhabitants, many of them living in mountainous territory (World Bank, 2019). It is one of the poorest countries in Central Asia with a Gross National Income (GNI) per capita of \$1,220 in 2018 (World Bank, 2019). In 1991, Kyrgyzstan became independent. As other Former Soviet Union countries, the new government promoted a transition to the market economy that, however, was associated with a reduction in industrial activity,

a dramatic increase in unemployment, and a considerable increase of poverty and inequality. Independence meant not only the loss of subsidies from the central Soviet budget, but also the disappearance of the export base. By 1995, the country's GDP was reduced by 50 per cent compared to 1990 (World Bank, 2003). The poverty rate increased from 12 per cent pre-transition to 76 per cent in 1993–94 (Subbarao et al., 1997), and the Gini coefficient from 0.26 to 0.55 over the same timeframe (Milanovic, 1998). Although economic and social conditions started to improve at the beginning of the 21st century, more than 20 per cent of the population is currently living below the national poverty line (World Bank, 2019).

The rapid increase in poverty after independence is partially explained by the weakness of the system of social protection. Indeed, social safety nets were almost absent during the Soviet times. Soviet authorities controlled the economic activity while 'protection against poverty was provided primarily through the state's policy of full employment and its control over the prices of basic consumer goods' (McAuley, 2008, p. 16). While poverty was understood as a socially undesirable phenomenon with high individual responsibility, social assistance was considered a residual component of the social protection system (Barr, 1994). As reported by Atkinson and Micklewright (1992) 'social assistance was rudimentary, a last resort due to the denial of existence of poverty ... benefits were stigmatising and handed only to the deserving poor' (Atkinson & Micklewright, 1992, p. 220–221). Transfers were mainly targeted to certain groups of the population such as elderly people, war veterans or individuals unable to work in order to satisfy basic needs (Atkinson & Micklewright, 1992). Another important component of the Soviet social protection system were maternity benefits for employed women and child benefits. Women giving birth to four or more children were entitled to additional benefits. They were also eligible to a lump sum payment on the birth of their third child. Single mothers could receive child allowances until the child's sixteenth birthday (McAuley, 2008).

Before independence, Soviet subsidies, accounting for 30 per cent of the Kyrgyz government budget in 1990, ensured the provision of basic universal health care, education and employment (World World Bank, 2003). The collapse of the Soviet Union and the transition to a market economy resulted in a rapid increase in unemployment and a significant impoverishment of the society, together with a continuous failure of the new institutions to deliver basic services, widespread corruption and inter-ethnic conflicts (ICG, 2016). In an effort to protect its citizens during this difficult time, the new government introduced a number of reforms including several measures to improve the effectiveness of the social protection system, which was inherited from the Soviet Union and mainly consisted of categorical benefits⁵ (World Bank, 2009). In 1996, just after the peak of the recession, social protection spending, broadly defined, accounted for 14 per cent of GDP.⁶ Yet, spending on poverty-targeted social assistance was only 2 per cent of GDP. After 1996, the share decreased further and by 2001, spending on social assistance was down to 0.6 per cent of GDP (Tesliuc, 2004).

In 1998 the Kyrgyz government introduced a new unified monthly benefit thereby unifying and simplifying the previous cash assistance policies. The Monthly Benefit for Poor Families (MBPF) is means-tested and targeted at extremely poor families with children (Tesliuc, 2004). Over the years, the benefit changed its name two times, but the design remained in essence the same.⁷ Eligibility for the MBPF is based on the Guaranteed Minimum Income (GMI) which is a discretionary threshold set by the government, as well as the presence of children in the household. The GMI is usually set between 30 and 50 per cent of the extreme poverty line⁸ (Gassmann & Trindade, 2015). Since its introduction in 1998, the government has tried to perfect the targeting criteria (Gassmann, 2011; Gassmann & Timár, 2018; Tesliuc, 2004). As a result, the MBPF is well-targeted; however, the coverage of the poor is low and the benefit size – only 15 per cent of the average income of beneficiaries – is too small to have a significant effect on poverty reduction.

Beyond the MBPF, the government introduced other social assistance benefits after the collapse of the Soviet Union including the Monthly Social Benefit (MSB), which is a categorical cash transfer paid to vulnerable groups regardless of income, such as orphans, individuals with a disability or elderly individuals without pension rights, and it continued with the provision of state benefits for

privileged groups such as war veterans (Gassmann & Trindade, 2015).⁹ Benefit levels vary depending on the beneficiary group, but they are usually higher than the value of the MBPF. Coverage of the MSB has been rising in recent years (OECD, 2018). Overall, social assistance benefits in Kyrgyzstan cover a small percentage of the population (between 1 and 10 per cent depending on the benefit type) (Gassmann & Trindade, 2015).

Therefore, despite the various reforms, social assistance is still implemented on a low scale, and benefits may be seen as charity reflecting the legacy of the Soviet Union (OECD, 2018; World, 1993). Moreover, it is common practice to publish the list of beneficiaries in local social welfare offices, which can also lead to higher stigma and shame. Interestingly, qualitative studies show that the receipt of poverty-targeted benefits such as the MBPF, is likely to be associated with shame and stigma (Narayan, Chambers, Shah, & Petesch, 2000).

3. Data and methodology

3.1. Data

Our analysis draws on data extracted from two rounds (2011 and 2012) of the Life in Kyrgyzstan Study (LiK study). The LiK study is a yearly multi-topic longitudinal survey with information on around 2,800 households and 8,000 adult household members collected in all seven oblasts¹⁰ of Kyrgyzstan – i.e. Batken, Chui, Jalal-Abad, Issyk-Kul, Naryn, Osh, and Talas – and the cities of Bishkek and Osh. This survey provides comprehensive information on several dimensions including demographic characteristics, employment, economic variables as well as wellbeing outcomes (Brück et al., 2014). The household section includes information on the different sources of income including data on government transfers such as social assistance. In particular, the household is asked whether they have received any social assistance transfer in the last 12 months. This allows us to obtain the needed information about the recipients of the Monthly Social Benefit and the Monthly Benefit for Poor Families.¹¹ Table 1 provides some statistics regarding our sample of analysis showing that about nine per cent of the households is benefitting from any of these two programmes, in line with Gassmann and Trindade (2015). Beneficiary households receive about KGS 1400 per capita (19 USD approximately) on average per month, which represents around 15 per cent of the total household income.

The LiK study also collects information on subjective indicators such as self-reported life satisfaction. We use this indicator because it has been defined as one of the core measures of subjective well-being (OECD, 2013). Life satisfaction has been widely used both in the psychological as well as the economic literature (Frijters, Haisken-De New, & Shields, 2004; Pavot & Diener, 2008); it was also shown to be a reliable and valid measure of wellbeing and it is widely used to compare wellbeing across countries (Krueger & Schkade, 2008). Life satisfaction ranges between 0

Table 1. Social assistance characteristics and life satisfaction by year

		2011	2012
% individuals living in recipient households	Mean	8.2	9.7
	SD	0.003	0.003
Average monthly transfer in recipient households (KGS)	Mean	1374	1496
	SD	46.8	46.9
% of total household income (recipients)	Mean	15.1	13.7
	SD	0.006	0.006
Life satisfaction (scale 0–10)	Mean	6.75	6.93
	SD	0.03	0.03

Source: Authors' calculations, LiK 2011 and 2012.

Note: Social assistance transfers include the Monthly Benefit for Poor Families (means-tested) and the Monthly Social Benefit while state benefits and energy compensation are excluded.

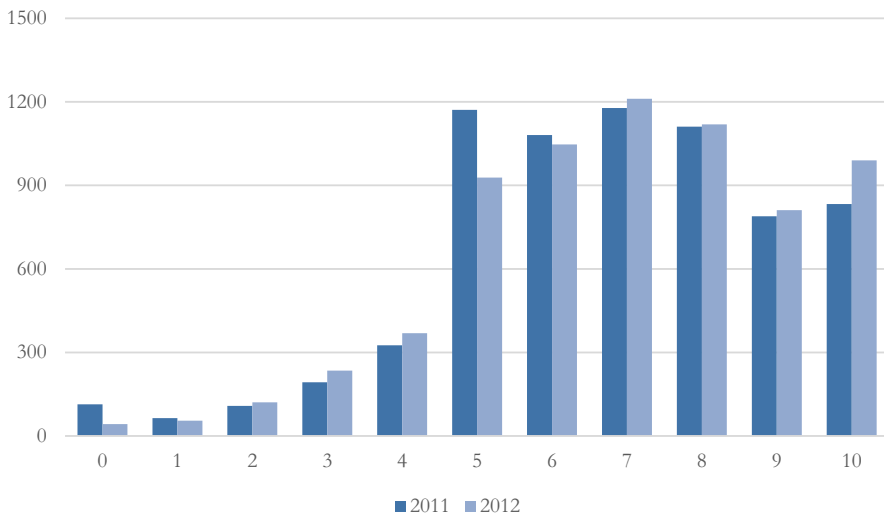


Figure 1. Life satisfaction by year.
Source: authors' calculations, LiK 2011 and 2012.

and 10 – with high values indicating more satisfaction. [Figure 1](#) shows how responses are distributed across the outcome values both in 2011 and 2012. Our data shows that the average life satisfaction value in the year 2011 was 6.75 and it slightly increased to 6.93 in 2012 ([Table 1](#)).

3.2. Methodology

The question this paper aims to address is whether and how the receipt of social assistance benefits affects subjective well-being. We exploit the changes in the eligibility for the MBPF introduced in 2012. The GMI was raised and the transfer amount changed to a flat rate transfer (Gassmann & Timár, 2018). One would therefore expect an increase in beneficiaries following the increase of the GMI, and the LIK data seem to confirm this.

Taking advantage of these changes, we apply a difference-in-differences (DiD) approach comparing the subjective well-being of non-recipients (those who do not receive benefits either in 2011 or in 2012) with recipients, that is individuals living in households that started receiving social assistance in 2012. The difference in difference specification is denoted as:

$$Y_{ikt} = \beta_0 + \beta_1 T_t + \beta_2 D_{ik} + \beta_3 (T_t * D_{ik}) + \beta_4 Z_{ikt} + \delta_k + \varepsilon \quad (1)$$

where Y_{ikt} is the outcome variable reporting the level of life satisfaction – with values ranging between 0 and 10 – for an individual i , living in oblast k and in time t . D is the variable indicating treatment status which equals 1 if an individual benefits from a social assistance programme. T is a time dummy that equals 1 for the post-reform period (year 2012). Our main independent variable is the interaction term, $T_t * D_{ik}$, which intends to measure how the extension of social assistance affected subjective wellbeing in the post reform period. In particular, the coefficient β_3 in the Equation (1) aims to capture how social assistance schemes translate into differential levels of life satisfaction before and after the reform.

Z_{ikt} is a vector of demographic and economic variables. First, demographic factors such as age, sex, marital status, ethnicity, education, and household size are included in the regression. Second, in order to control for economic conditions, an asset index was built considering the following items: television, radio, internet, landline phone, mobile phone, computer, gas stove, electric stove, microwave, refrigerator, sewing machine and washing machine.¹² Controlling for material conditions is

important to avoid problems of omitted variable bias. Indeed, the existing literature shows a positive relationship between living standard and subjective wellbeing (Deaton, 2008; Stevenson & Wolfers, 2008). This relationship becomes stronger in the context of poor countries as the quality of life of the poor depends on their ability to satisfy basic needs (Handa et al., 2014a). We also control for working status of the individual (if the individual is currently working) and place of residence (urban/rural).

Additionally, we apply inverse probability weighting (IPW) to adjust for the selection bias resulting from the fact that we are using observational data (Wooldridge, 2007). IPW aims to reproduce an experimental setting by matching ‘quasi – identical’ households in the treatment and control groups. For this purpose, we use a probit model to estimate the probability of being a recipient of social assistance in 2012. Variables in the model include number of children in the household, which is one of the required eligibility conditions to receive the means-tested social assistance benefit (the MBPF), number of elderly individuals living in the household, gender and education of the household head, logarithm of per capita income, dependency ratio (defined as the number of individuals working in the household divided by the number of household members), location (rural or urban), and a dummy variable indicating whether the household owns livestock. These variables refer to 2011 in order to reproduce initial conditions.¹³

Table A3 in the appendix shows that the differences in means between control and treatment group are not statistically different after matching. Importantly, differences between the two groups are also not statistically significant when analysing individuals’ information collected in 2010. The goodness of the overall balance after matching is confirmed by the Hotelling test ($\text{Prob} > F(11, 7458) = 0.5835$). Evidence that the treated and control group are balanced after matching is also provided in Figure A1, which shows the distribution of the probability scores before (panel a) and after (panel b) applying the inverse probability weights.

4. Results

4.1. Main results

Table 2 shows the results of our estimations. The first column of Table 2 shows the difference in difference estimates of the effects of social assistance on subjective well-being when no control variables are included. The regression shown in column 2 shows the same estimation when controls are added to the model. The treatment effect of receiving social assistance is given by the interaction term between treatment status and time variable. We see that in both models receiving social assistance has a negative effect on life satisfaction. The coefficient of our preferred specification (Table 2 – Column 2) indicates that the participation in social assistance leads to a 0.36 points decrease in life satisfaction.

In terms of the control variables, being married, having a higher level of education or living in a rural area is associated with higher levels of life satisfaction. Being ethnic Kyrgyz, as opposed to Uzbek, Russian, or other ethnicity is also associated with higher subjective well-being levels. Living in a larger household and having a job also correlates with higher levels of life satisfaction. Finally, those households that enjoy better living standards (measured through the asset index) have, on average, higher levels of subjective well-being.

Overall, our findings indicate that receiving social assistance does not contribute to an improvement in subjective well-being, but rather has negative consequences on life satisfaction. These results contradict most of the previous studies on the topic. There are several reasons that could explain the largely negative association between social assistance receipt and subjective well-being in the context of Kyrgyzstan. We turn to analyse some of them in the section 5.

Table 2. Main results

	(1)	(2)
	Model 1	Model 2
Treated*time	-0.35** (0.15)	-0.36** (0.15)
Treated	0.23** (0.11)	0.28*** (0.11)
Time	0.36*** (0.06)	0.34*** (0.05)
Age		-0.07*** (0.01)
Age squared		0.00*** (0.00)
Male		-0.04 (0.08)
Married		0.46*** (0.10)
Ethnic Kyrgyz		0.45*** (0.09)
Secondary education		0.22* (0.11)
Technical education		0.18 (0.14)
University		0.53*** (0.16)
Household size		0.05** (0.02)
Asset index		0.51*** (0.07)
Works		0.20** (0.10)
Urban		-0.70*** (0.11)
Constant	6.68*** (0.11)	7.26*** (0.33)
Observations	13,581	14,578
R-squared	0.05	0.10

Notes: All regressions include oblast fixed effects. Robust standard errors in parentheses.

***p < 0.01.

4.2. Subjective economic well-being

This section extends our main analysis investigating the specific dimension that may affect subjective wellbeing. In particular, it might be that life satisfaction decreases because the participation in social assistance generates feelings of stigma and shame regarding recipients' own economic conditions. Hence, we repeat the same difference in difference estimation substituting life satisfaction with measures of subjective economic well-being with respect to the past and to the future. In doing so, we consider two questions: (1) 'If you look back one year, how has your household's economic situation changed since that date?', and (2) 'How do you think the economic situation of your household will be in one year from now?'. Answers range between five options, from 'highly increased' to 'highly decreased'. For ease of interpretation, we have re-scaled the categories so that 5 reflects highly increased and 1 highly decreased. Results show a negative association between receiving social assistance and subjective economic well-being (Table 3). As expected, these results

Table 3. Alternative dependent variables

	(1) Subjective economic well-being with respect to the past	(2) Subjective economic well-being with respect to the future
Treated*time	-0.27*** (0.05)	-0.32*** (0.05)
Treated	0.16*** (0.03)	0.18*** (0.03)
Time	0.09*** (0.02)	0.06*** (0.02)
Constant	3.27*** (0.10)	3.43*** (0.10)
Controls	Yes	Yes
Observations	13,590	13,590
R-squared	0.08	0.09

Notes: All regressions include controls (age, age squared, male, married, ethnicity, education, working status, household size, asset index, and urban/rural) and oblast fixed effects. Robust standard errors in parentheses.

*** $p < 0.01$,

focusing on the economic component show that feelings of dissatisfaction might be explained by material conditions.

4.3. Medium term impact of the social assistance on subjective wellbeing

An important question to investigate is whether the impact of social assistance on subjective wellbeing persists in the medium and long term.¹⁴ We therefore restricted the data to those receiving social assistance in both 2012 and 2016, and dropped new recipients (only receiving transfers in 2016), as well as those who exited the programme (that is those receiving social assistance in 2012 but not in 2016). As a result, the control group consists of those individuals who did not receive government transfer in any of the years studied. To estimate the medium-term impact of social assistance on subjective wellbeing, we implement a difference-in-difference strategy as described in the section 3.2 and use information referred to 2011 and 2016.

Table 4 shows that while the coefficient of social assistance when estimating impacts on life satisfaction is still negative, it is not statistically significant. The negative impact of the programme on life satisfaction seems to disappear after the initial years. However, the negative effects of social assistance hold with regard to the subjective economic situation with respect to the past.¹⁵ When interpreting these findings, data limitations should be considered. These include a smaller sample size due to attrition or household members moving out of the household, and the fact that many of the beneficiaries in 2012 did not receive social assistance in 2016.

4.4. Robustness checks

We first apply a series of robustness tests to check the validity of the main results. These tests include (i) alternative estimator techniques, (ii) alternative model specifications, (iii) and a falsification test using remittances instead of the participation in the programme.

(i) *Alternative estimator techniques.* We use two alternative estimator techniques to test the robustness of our baseline estimation results. First, we apply a fixed effects regression strategy. By including individual fixed effects, we are able to control for unobserved variation that can be correlated with the explanatory variables and are likely to generate bias. Fixed effects cannot control for time variant unobserved characteristics though. Second, we use an alternative matching technique. Entropy balance matching is a multivariate reweighting method described in Hainmueller (2012)

Table 4. Medium-term findings

	Life satisfaction	Subjective economic situation with respect to the past
Treated*time	-0.34 (0.30)	-0.24** (0.12)
Treated	0.02 (0.23)	0.25*** (0.06)
Year 2016	0.46*** (0.07)	0.13*** (0.02)
Age	-0.05*** (0.02)	-0.01*** (0.00)
Age squared	0.00*** (0.00)	0.00*** (0.00)
Male	-0.14* (0.07)	0.03 (0.02)
Married	0.29*** (0.10)	0.09*** (0.03)
Ethnic Kyrgyz	0.08 (0.07)	0.05* (0.03)
Secondary	-0.04 (0.10)	0.01 (0.03)
Technical	0.05 (0.13)	0.07** (0.04)
University	0.16 (0.18)	0.07 (0.04)
Household size	0.03** (0.01)	0.01 (0.01)
Asset index	0.55*** (0.05)	0.10*** (0.01)
Works	0.36*** (0.08)	0.08*** (0.02)
Urban	-0.57*** (0.13)	-0.15*** (0.03)
Constant	7.30*** (0.33)	3.33***
Observations	8278	8283
R-squared	0.12	0.09

Notes: All regressions include oblast fixed effects. Robust standard errors in parentheses.

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

which allows users to reweight the data in a way that the distribution of the covariates satisfies a set of specified moment conditions. This is useful when using quasi-experimental data to create a balanced sample of treatment and controls, where the covariates of the control group of an intervention can be reweighted to match the covariate moments in the treatment group. Results show that our main findings hold when we use fixed effects and entropy balanced matching confirming the validity of our baseline estimations (Table A4 in the appendix).

(ii) *Alternative model specifications.* Three alternative specifications are used in order to test the correct specification of our model and potential issues in terms of omitted variable biases. First, we exclude the set of socio-economic variables and check the result using only demographic variables. Second, we exclude the set of demographic variables and use only economic variables as controls. Third, we test the validity of the previous results to the introduction of additional controls that may also affect subjective well-being, such as whether the individual has a chronic illness. Lastly, we add an additional set of variables referring to other social dimensions such as whether the respondent practices sports or has access to a network in case of need. Table A5 in the appendix shows that the results are robust to different model specifications.

(iii) *Falsification test using remittances.* An additional question is whether our main results indicate a specific effect of social assistance transfers or reflect the effects of monetary transfers more generally. For this purpose, we re-estimate our baseline regressions by substituting social assistance transfers with remittances received from migrants living abroad. Table A6 in the appendix shows that the interaction term is no longer statistically significant, confirming that it is specifically social assistance that is associated with reductions in life satisfaction.

5. Heterogenous impact of social assistance receipt

The results above raise the question of what could possibly explain the negative effects. For this purpose, we investigate the conditions under which social assistance receipt may reduce subjective wellbeing. Given the case study, we consider two different variables i.e. age and trust in institutions.¹⁶

Age. The experience individuals acquire over their lifetime and particularly during their formative years matters for their attitudes towards inequality (Ignácz, 2018). A large share of Kyrgyz citizens experienced the Soviet Union and its dissolution. Its underlying egalitarian principles were commonly shared by the population. The state was supposed to provide economic security and social protection and to prevent economic inequality (Junisbai, 2010). Following the egalitarian Zeitgeist principle (Robinson & Bell, 1978), individuals that lived and worked during the Soviet period are expected to be more egalitarian, hence more supportive towards redistribution (Junisbai, 2010). This hypothesis seems to be confirmed by Table 5. In particular, the older group (people who were 18 years and older in 1992) shows more willingness to pay extra money to help the needy. The difference between the two age groups is of about 9 percentage points and it is also statistically significant.

Moreover, individuals that lived and worked during the Soviet period experienced the dissolution of the regime. This event (and the subsequent economic recession) was of historical magnitude to leave a lasting mark on citizens and form their attitudes and beliefs for the rest of their lives. Individuals that have experienced a macroeconomic shock during early adulthood are more supportive to government redistribution (Alesina & Giuliano, 2009; Giuliano & Spilimbergo, 2009). By contrast, the transition to the market has increased individual responsibilities in the process of income generation as well as the feeling of shame and stigma for people being in need of state support. We hypothesise that younger people are less egalitarian and more likely to feel stigma and shame given the poverty targeting approach of social protection adopted after the transition.

Hence, this section explores whether there is some age cohort effect that can explain our main results. To do that, we separate our initial sample between individuals aged 40 years and older and those aged less than 40 years old. The former not only transitioned to adulthood under the Soviet Union, but as explained above, they also experienced the dissolution of the Soviet Union. Table 6 indeed shows that results are different by age group. We find negative effects only among the

Table 5. Share of respondents willing to pay extra money to increase spending on selected areas

	Older group	Younger group	Difference	p-value
Public education	0.379	0.420	-0.041	0.301
Health	0.415	0.469	-0.054	0.178
Climate change	0.134	0.135	-0.001	0.981
Poverty	0.519	0.426	0.093	0.020

Notes: Authors' elaboration on data extracted from Life in Transition Survey II. Older are individuals aged 38 years and older at the time of the survey 2010/2011. Younger are those aged less than 38 years old. The two age groups are built in order to distinguish between those who were already older than 18 years old during the transition and the younger generations. The question asked to the participants of the survey is: 'Would you be willing to give part of your income or pay more taxes, if you were sure that the extra money was used to ...'.

Table 6. Age and trust on president and local officials

	Age		Trust in President		Trust in Local officials	
	Age 18–39	Age 40+	No trust (3)	Trust (4)	No trust (1)	Trust (2)
Treated*time	−0.65*** (0.20)	−0.00 (0.22)	−0.50** (0.21)	−0.27 (0.20)	−0.54** (0.22)	−0.25 (0.20)
Treated	0.35** (0.14)	0.18 (0.16)	0.53*** (0.15)	0.09 (0.14)	0.34** (0.15)	0.22 (0.14)
Time	0.37*** (0.07)	0.34*** (0.08)	0.44*** (0.09)	0.25*** (0.07)	0.62*** (0.09)	0.13** (0.07)
Constant	7.34*** (1.20)	7.25*** (1.30)	7.07*** (0.43)	6.62*** (0.49)	7.93*** (0.46)	6.14*** (0.47)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	6819	6759	5957	6677	5469	7165
R-squared	0.10	0.11	0.15	0.10	0.14	0.10

Notes: All regressions include controls (age, age squared, male, married, ethnicity, education, working status, household size, asset index, and urban/rural) and oblast fixed effects. Robust standard errors in parentheses.

*** $p < 0.01$, ** $p < 0.05$.

younger population confirming the hypothesis that younger people are likely to be less egalitarian and more likely to feel stigma and shame given the poverty targeting approach adopted in post-Soviet Union societies. In particular, this new approach of identifying (and separating) the eligible population has most probably increased stigmatisation of programme beneficiaries.

Trust. Subjective wellbeing is both a function of socio-economic characteristics and institutional trust, which depends on the quality of institutions (Hudson, 2006). Poor citizens relying on social assistance after the dissolution of Soviet Union may have lost trust in the authorities. The help they get from social assistance is only marginal and not enough to cover their basic needs. Given the small amount of social assistance benefits and the fact that these are not enough for recipients to escape poverty, individuals may feel deceived by the government and its institutions. We explore this moderator through a series of variables measuring trust. In particular, we include variables that measure the levels of trust in the president and in local government officials. We follow the same approach as before, dividing the sample and distinguishing between individuals who have some level of trust in the aforementioned government officials and those who do not have trust in these political institutions.

Table 6 shows that the negative effects of social assistance on subjective well-being fade away when recipients have trust in their president and in local government officials. This means the negative effects of social assistance on subjective well-being are driven by those recipients who have low trust in institutions. Local officials are involved in the allocation of benefits, particularly the MBPF. Social staff at the district level assesses applications and applies the means test. Applicants, especially those in rural areas, depend on local officials to receive information on land and livestock ownership, and to obtain certified documents. A local committee eventually approves the list of eligible beneficiaries. For those having trust in local officials, social assistance receipt does not affect their subjective wellbeing, possibly reflecting satisfaction with the decision-making process. In contrast, if trust in local officials is low, benefit receipt leads to lower subjective wellbeing, possibly indicating a dissatisfaction with the process (Sapsford, Abbott, Haerperfer, & Wallace, 2015).

6. Conclusion

Using data from the Life in Kyrgyzstan Study, this paper investigates the effects of social assistance on subjective well-being looking at the case of Kyrgyzstan. This country makes an interesting setting to test this relationship given that its social protection system and the understanding of poverty are still influenced by its history as a member of the Soviet Union. To our knowledge, this is the first study looking at the effects of social assistance on subjective well-being in Kyrgyzstan, and findings could also be informative to other Former Soviet Union countries who share a very similar history.

Contrary to previous studies in the field, this paper underscores a negative relationship between social assistance and both life satisfaction and subjective economic well-being, at least in the short-term. Two factors seem to explain these negative impacts. First, our study shows that the negative effects on subjective well-being disappear for the older generations who were in the labour market before the dissolution of the Soviet Union but who also experienced the transition to the market economy. We find significant effects only among the younger population who seem to be less egalitarian and more likely to feel stigma and shame given the poverty targeting approach adopted in post-Soviet Union societies. Our paper also shows that trust in institutions matters for the acceptance and experience of public interventions. The negative effects of social assistance on subjective well-being are driven by those recipients who have low trust in political institutions. However, the negative effects of social assistance do not seem to hold four years after observing the adverse impacts on subjective well-being, while the dissatisfaction with material conditions hold.

This paper provides important lessons for policy makers by showing that cash transfers not always ‘buy’ happiness. Factors such as the design of social protection programmes and their implementation, as well as the discourse associated to these schemes might generate stigma and shame with negative consequences on the subjective wellbeing of recipients.

Notes

1. Happiness and subjective well-being are often used interchangeably in the psychology, sociology and economic literature (see, for example, Stewart, 2014; Bartram, 2013, or Diener, 1984).
2. <https://www.weforum.org/agenda/2019/05/new-zealand-is-publishing-its-first-well-being-budget/>
3. Social assistance as a subset of social protection policies refers to transfers in cash or in kind aimed at supporting individuals and households in need. Contrary to social insurance, eligibility does not depend on contributions made in the past.
4. Shame is defined as an emotion happening after social rejection or feeling of lower social attractiveness that undermine one’s self-esteem (Roelen, 2017; Van Vliet, 2008), whereas stigma is defined as ‘a set of negative and often unfair beliefs that a society or group of people have about something’ (Merriam-Webster English dictionary). Public stigma (or social stigma) refers to people’s views or attitude towards a specific group, while self-stigma refers to a process of internalising of prejudices and stereotypes resulting in the acceptance of certain views (Corrigan & Watson, 2002). Public stigma can lead to self-stigma, or the ‘potential internalisation of the negative beliefs and feelings associated with the stigmatised condition’ (Bos, Pryor, Reeder, & Stutterheim, 2013, p. 2).
5. Eligibility depended on demographic or other characteristics, such as being a war veteran, Chernobyl cleaner or having more than three children.
6. This included social insurance (53 per cent of total social protection spending), social assistance (14 per cent) and quasi-fiscal transfers (33%) (Tesliuc, 2004).
7. The programme was previously known as the Unified Monthly Benefit. In 2018 it was renamed to *Uybulugu Komok*.
8. The extreme poverty line is an empirically estimated threshold reflecting the average costs of 2100 kcal per person per day.
9. State benefits are essentially a legacy of the Soviet Union. While most of these benefits were previously provided in kind, in 2010, the government monetised the state benefits (Gassmann, 2011).
10. An oblast is an administrative unit similar to a province or region.
11. State benefits and energy compensations are excluded because they are regressive. Households at the middle or top of the distribution are the main beneficiaries of these benefits.
12. To compute the asset index, we applied factor analysis. The results are reported in Table A1.
13. Results of the probit model are reported in Table A2.
14. Given that data from 2016 became available while this paper was being revised, we checked whether the impacts of receiving social assistance in the medium-term hold among those receiving social assistance in 2012.
15. The variable measuring subjective economic well-being with respect to the future was not available for this round.

16. We have conducted the heterogeneous analysis for 2016 too. Coefficients are negative but not statistically significant (results available upon request).

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Disclosure statement

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

ORCID

Franziska Gassmann  <http://orcid.org/0000-0003-3767-831X>

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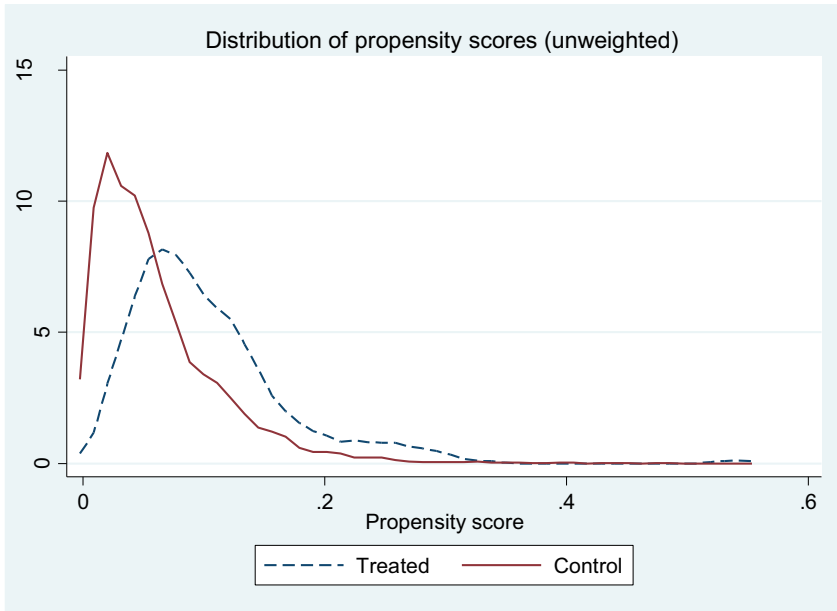
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Appendix

a)



b)

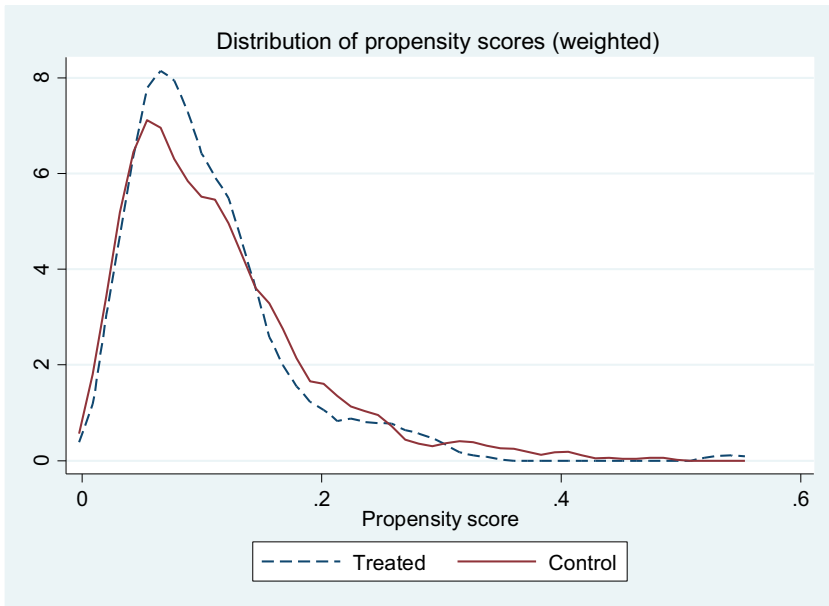


Figure A1. Distribution of the probability of receiving social assistance before (a) and after (b) applying inverse probability weights.

Table A1. Asset index, factor analysis

Variable	Eigenvalue	Factor	Uniqueness
Refrigerator	2.16	0.32	0.90
Gas stove	0.76	0.58	0.66
Electric stove	0.36	-0.09	0.99
Microwave	0.26	0.46	0.79
Sewing machine	0.13	-0.03	0.99
Washing machine	-0.01	-0.18	0.97
Washing machine	-0.05	0.68	0.54
Mobile phone	-0.07	0.12	0.99
Landline phone	-0.12	0.60	0.64
Internet	-0.15	0.52	0.73
TV	-0.17	0.08	0.99
Computer	-0.22	0.60	0.64
Radio	-0.27	0.07	0.99

Note: Only eigenvalues higher than one are retained, although the index is robust to different options.

Table A2. Probability of receiving social assistance (marginal effects)

Rural	-0.03*** (0.01)
Secondary Education	0.02 (0.07)
Technical Education	-0.01 (0.01)
University	-0.04*** (0.01)
Number of kids	0.02*** (0.00)
Number of elder	-0.01 (0.01)
Dependency ratio	-0.07*** (0.07)
Household size	-0.01*** (0.00)
Male head	0.01* (0.01)
Log of pc income	-0.02*** (0.00)
Owns livestock	0.02*** (0.00)
Observations	7,470
R^2	0.09

Note: coefficients are expressed as average marginal effects. Standard errors in parentheses; ***p < 0.01,, *p < 0.1.

Table A3. Differences in means between control and treatment group in 2010 and 2011

Variable	2011			2010		
	Mean treated	Mean control	P-value	Mean treated	Mean control	P-value
<i>Location</i>						
Rural	0.699	0.699	0.87	0.703	0.693	0.74
<i>Education of hh head</i>						
Secondary	0.553	0.5527	0.75	0.565	0.545	0.57
Technical	0.214	0.2139	0.91	0.209	0.209	0.99
University	0.06568	0.06604	0.90	0.057	0.066	0.58
Number of kids	2.39	2.389	0.61	2.357	2.40	0.68
Number of elder	0.375	0.3749	0.91	0.404	0.358	0.32
Dependency ratio	0.105	0.1052	0.98	0.093	0.115	0.05
Household size	6.14	6.139	0.41	5.917	5.955	0.79
Male head	0.8199	0.8199	0.72	0.842	0.839	0.90
Log of pc income	7.447	7.447	0.38	7.374	7.337	0.54
Owns livestock	1.945	1.944	0.58	1.847	1.784	0.53

Table A4. Alternative estimators

	(2) Fixed effects	(3) Entropy balanced matching
Treated*time	-0.36** (0.14)	-0.33** (0.15)
Treated		0.25** (0.11)
Time	0.37* (0.20)	0.32*** (0.05)
Constant	12.36* (6.63)	7.16*** (0.32)
Controls	Yes	Yes
Observations	13,578	13,544
R-squared	0.02	0.10

Notes: All regressions include controls (age, age squared, male, married, ethnicity, education, working status, household size, asset index, and urban/rural). Model 2 includes individual fixed effects. Model 3 includes oblast fixed effects. The Robust standard errors in parentheses.

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

Table A5. Alternative model specifications

	(1)	(2)	(3)
	Demographic controls	Economic controls	Extended
Treated*time	-0.32* (0.15)	-0.38** (0.15)	-0.36** (0.15)
Treated	0.21** (0.11)	0.30** (0.11)	0.33*** (0.10)
Time	0.36*** (0.06)	0.34*** (0.05)	0.36*** (0.06)
Age	-0.07*** (0.01)		-0.07*** (0.01)
Age squared	0.00*** (0.00)		0.00*** (0.00)
Male	-0.01 (0.08)		-0.18** (0.08)
Married	0.44*** (0.10)		0.46*** (0.10)
Ethnic Kyrgyz	0.33*** (0.08)		0.38*** (0.09)
Secondary	0.21* (0.11)		0.09 (0.11)
Technical	0.22 (0.15)		0.07 (0.14)
University	0.72*** (0.16)		0.38** (0.16)
Household size	0.06*** (0.02)		0.04*** (0.02)
Asset index		0.49*** (0.07)	0.40*** (0.07)
Works		0.21** (0.09)	0.11 (0.10)
Urban		-0.75*** (0.11)	-0.57*** (0.11)
Networks			0.66*** (0.08)
Does not have a chronic illness			0.25** (0.10)
Member of an organisation			-0.02 (0.12)
Plays sports			0.44*** (0.10)
Constant	6.84*** (0.30)	6.94*** (0.16)	6.74*** (0.35)
Observations	13,578	13,581	13,229
R- squared	0.07	0.07	0.12

Notes: All regressions include oblast fixed effects. Robust standard errors in parentheses.

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

Table A6. Receiving remittances and life satisfaction

	(1) Life satisfaction
Treated*time	-0.05 (0.21)
Treated	0.16
	Happiness and economic migration
Time	0.17** (0.08)
Constant	7.38*** (0.34)
Controls	Yes
Observations	13,578
R-squared	0.10

Notes: All regressions include controls (age, age squared, male, married, ethnicity, education, working status, household size, asset index, and urban/rural) and oblast fixed effects. Robust standard errors in parentheses. ***p < 0.01, **p < 0.05.