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# The Preserving Effect of Social Protection on Social Cohesion in Times of the COVID-19 Pandemic

## Evidence from Kenya

*Christoph Strupat*

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## Abstract

This paper examines empirically whether social protection in the form of adapted social assistance programmes are affecting social cohesion during the COVID-19 pandemic. Using unique primary data from nationally representative, in-person surveys from Kenya allows for the exploration of the effect of social protection on attributes of social cohesion (trust, cooperation and identity). The analysis employs a difference-in-differences approach that compares households with and without social assistance coverage before and after the first wave of the pandemic. The findings suggest that social assistance programmes have a preserving effect on social cohesion. Attributes of social cohesion remain stable for beneficiaries, while they decline for non-beneficiaries due to the pandemic. This result is pronounced in regions that faced larger restrictions due to government lockdown policies. Overall, the results suggest that existing national social assistance programmes and their adaptation in times of large covariate shocks, such as the COVID-19 pandemic, can be beneficial for social cohesion.

**Keywords:** social protection, social assistance, social cohesion, COVID-19, Kenya

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This Discussion Paper is part DIE's research project "Social Cohesion in Africa". Social cohesion within societies is a key success factor for sustainable development. However, social cohesion is also particularly under pressure in societies in Africa among other world regions. The DIE team aims to identify patterns of social cohesion and analyses factors that influence the degree of social cohesion (or its absence) and the effects of social cohesion on development outcomes. Furthermore, it identifies domestic and international policies that contribute to the creation and consolidation of social cohesion. In addition to creating knowledge on social cohesion, the project aims to provide a science-policy interface and dialogue between practitioners. The project also established the Social Cohesion Hub, which provides a web-based, collaborative platform for exchange on social cohesion in research and development cooperation. The project is funded by Germany's Federal Ministry for Economic Cooperation and Development (BMZ).

The survey data used in this Discussion Paper was collected as part of a joint project between the Friedrich-Ebert-Stiftung (FES), the International Labour Office (ILO) and the German Development Institute (DIE). National survey institutes (NSIs) that are part of the AfroBarometer network were the implementing partners in the survey countries. Technical support, including data management, was provided by the Institute for Development Studies (IDS), University of Nairobi. Members of these institutions met on several occasions to jointly develop the questionnaire and agree on details of the survey protocol. The main objective of the survey was to gain a better understanding of the social and economic situation of households in the informal economy. The project was funded by the FES and the BMZ.

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## Abbreviations

DIE	German Development Institute / Deutsches Institut für Entwicklungspolitik
FES	Friedrich-Ebert-Stiftung
HSNP	Hunger Safety Net Programme
ILO	International Labour Office
KES	Kenyan shilling
KCWG	Kenya Cash Working Group
NSNP	National Safety Net Programme
NSPP	National Social Protection Policy

## 1 Introduction

The COVID-19 pandemic is a major public health challenge that is generating serious economic and social impacts that are likely to persist for some time. In order to mitigate the adverse economic consequences of the pandemic and the related containment policies, social protection programmes have been adapted and expanded on a large scale in many countries (Gentilini et al., 2021). Initial studies have shown that these measures have been effective in reducing some of the negative economic impacts of the pandemic, including poverty, hunger and inequality (Abay, Berhane, Hoddinott & Tafere, 2021; Banerjee, Faye, Krueger, Niehaus, & Suri, 2020; Bottan, Hoffmann, & Vera-Cossio, 2021; Lustig, Neidhöfer, & Tommasi, 2020). However, in the past years the goals of social protection have been expanded, and it has been recognised that social protection can also affect more complex outcomes, such as human capital, health and social cohesion (Garcia-Mandicó, Reichert, & Strupat, 2021; Koehler, 2021; Strupat, 2021). The literature on the relationship with social cohesion is still limited and does not consider covariate shocks, such as the COVID-19 pandemic, that alone can affect social cohesion.<sup>1</sup> This paper contributes to this knowledge gap and investigates to what extent social protection measures can influence social cohesion during pandemics.

Social cohesion is a multi-faceted concept, and despite the longstanding literature on social cohesion (Durkheim, 1893/1984; Festinger, 1950), a universally shared definition is missing (Chan, To, & Chan, 2006). In this paper, a recent definition of social cohesion is endorsed that identifies three key attributes of social cohesion and their respective measurement – namely trust, inclusive identity and cooperation – and two separate dimensions – the horizontal and the vertical (Leininger et al., 2021a). The horizontal dimension includes the relationship between individuals or groups within a society, while the vertical dimension refers to the relationship between individuals/groups and state institutions.

In general, there is mixed evidence that social protection can affect different dimensions of social cohesion in the absence of large covariate shocks. Studies show a positive relationship between social protection and dimensions of social cohesion, such as horizontal trust (Adato, 2000; Pavanello, Watson, Onyango-Ouma, & Bukuluki, 2016), horizontal cooperation (Attanasio, Pellerano, & Polanía-Reyes, 2009; Attanasio, Polanía-Reyes, & Pellerano, 2015) and vertical trust (Evans, Holtemeyer, & Kosec, 2019). Other studies, in contrast, find negative effects on social cohesion in particular on the horizontal dimension that includes social relations between those that have received benefits and those that have not (Hochfeld & Plagerson, 2011; Molyneux, Jones, & Samuels, 2016; Roelen, 2017; Strupat & Klohn, 2018). In addition, negative effects can be found on the societal perceptions of governments (Aytaç, 2014; Bruhn, 1996; Guo, 2009). One of the points emerging from the literature is that a single social protection scheme alone is unlikely to accomplish broader objectives, such as social cohesion. Social protection schemes coordinated in a systemic way may provide larger benefits.

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1 The COVID-19 pandemic is a specific type of covariate shock as it affects all members of a society at the same time and can change social cohesion through changes in societal relationships between individuals and state-citizen relationships. In contrast, idiosyncratic shocks, such as natural disasters, have devastating impacts on some members of a society, but cannot affect relationships within societies as a whole. Thus, it is of particular relevance to study the mediating effects of social protection on social cohesion during the COVID-19 pandemic.

So far, no study has analysed the relationship between social protection and social cohesion in the presence of a covariate shock, such as a pandemic. Kenya is an ideal setting in which to examine this relationship. Over the past 10 years, the Kenyan social protection sector has evolved and expanded into a *social protection system*. The 2011 National Social Protection Policy (NSPP) introduced a vision of increasing coverage, improving coordination and bringing about greater *integration* of programmes and services (Government of Kenya, 2011). Spending on social protection has grown slightly as a percentage of GDP, increasing from 0.38 per cent in 2017 to 0.45 per cent of GDP in 2019 (World Bank, 2019). The Kenyan government has responded to the pandemic by continuing and adapting their two national social assistance programmes: the National Safety Net Programme (NSNP) and the Hunger Safety Net Programme (HSNP) (Doyle & Ikutwa, 2021). Beneficiaries of the programmes received lump-sum payments and cash top-ups to the regular cash transfers (see Section 4 for more details on the adaptation). Both flagship programmes cover 1.23 million vulnerable households working in the informal economy (Government of Kenya, 2017). Kenya was severely impacted by the first wave of the pandemic and the government has established one of the most stringent lockdowns among Sub-Saharan African countries (Hale, Webster, Petherick, Phillips, & Kira, 2020; Leininger et al., 2021b). In response to the regional variation in the pandemic outbreak, the government imposed different lockdown policies that varied between the counties. For example, movement in and out of the most affected counties, known as the “lockdown counties”, was curtailed for several months, while this policy was not implemented in other counties.

In order to examine the relationship between social protection and social cohesion in this context, this study uses unique primary data from two nationally representative, in-person surveys that were conducted more than one year before and six months after the first wave of the pandemic in Kenya. These cross-sectional surveys include in total 3,796 randomly selected households and were realised as a joint project between the Friedrich-Ebert-Stiftung (FES), the International Labour Office (ILO) and the German Development Institute (DIE).<sup>2</sup> The surveys are representative of the entire informal economy,<sup>3</sup> which covers the majority of the Kenyan population, including households that receive benefits from the NSNP and HSNP.

Using both cross-sectional surveys allows for the application of a difference-in-differences approach. As the NSNP and the HSNP have been continued during the pandemic and targeting criteria have not been changed, one can compare households that are covered and not covered by these social assistance programmes before and after the first wave of the pandemic.<sup>4</sup> Following Blundell & Costa Dias (2009), this difference-in-differences approach is combined with a kernel propensity score matching to ensure homogeneity of the treatment and control groups in terms of observable characteristics. Furthermore, a heterogeneity analysis has been conducted in order to check whether the effects of social assistance coverage on social cohesion differ between lockdown and non-lockdown regions.

<sup>2</sup> Additional technical support, including data management, was provided by the Institute for Development Studies (IDS), University of Nairobi.

<sup>3</sup> The informal economy is defined as all economic activities by economic units that are – in law or in practice – not covered or insufficiently covered by formal arrangements (ILO, 2002).

<sup>4</sup> The social assistance programmes were not re-targeted due to the pandemic nor were new beneficiaries added to either programme (Doyle & Ikutwa, 2021).

The findings suggest that social assistance programmes have a preserving effect on social cohesion. Attributes of social cohesion remain stable for social assistance beneficiaries, while they decline substantially for non-beneficiaries during the pandemic. Trust in government and parliament is reduced by 4 and 3 percentage points, while the willingness to cooperate with others to do voluntary work is reduced by 2 percentage points. This decrease is even pronounced in regions that faced larger restrictions due to lockdown policies, while no decline can be detected for beneficiaries. As households covered by the same social assistance programmes faced on average a lower loss of income and did not have to sell their assets to cope with the pandemic, the results are in line with the theoretical considerations suggesting that the protective function of social protection explains why social cohesion outcomes have not declined for social assistance beneficiaries during the pandemic.

The rest of this paper is organised as follows. Section 2 briefly presents the endorsed concept of social cohesion and highlights the theoretical relationship between social protection and social cohesion in times of covariate shocks. Section 3 describes the spread of COVID-19 and the lockdown policies in Kenya. Section 4 presents the national social assistance programmes and describes how they have been adapted during the pandemic in Kenya. Section 5 introduces the dataset and the definition of the outcome variables that approximate different attributes of social cohesion and presents the econometric model and the robustness checks. Section 6 shows the estimation results, and Section 7 concludes.

## 2 Concept of social cohesion and theoretical considerations

### 2.1 Concept of social cohesion

This paper endorses the social cohesion definition provided by Leininger et al. (2021a): “social cohesion refers to both the vertical and the horizontal relations among members of society and the state as characterised by a set of attitudes and norms that includes trust, an inclusive identity and cooperation for the common good”. This narrow concept of social cohesion includes the essential attributes of social cohesion, which are frequently referred to in the literature. Such a narrow understanding of social cohesion avoids including potential drivers such as inequality or conflicts. Using this concept is favourable in the context of covariate shocks as the presence of such shocks may contribute to an increase in inequality or a higher prevalence of conflicts. So, the concept does not prevent the study of whether and how increasing inequality in times of shocks could impact social cohesion and to what extent social protection schemes can mitigate this effect.

The definition includes three attributes, each of them examined in both dimensions, horizontal and vertical. Following Leininger et al. (2021a) and Burchi, von Schiller and Strupat (2020), the attributes are as follows.

#### 1. *Trust*

Trust is an important component of social cohesion (Chan et al., 2006; Dragolov, Ignácz, Lorenz, Delhey, & Boehnke, 2013; Langer, Stewart, Smedts, & Demarest, 2017; Schiefer & van der Noll, 2017). One can differentiate between two types of trust: social trust and institutional trust (Langer et al., 2017; Zerfu, Zikhali, & Kabenga, 2009). Social

trust is the “ability to trust people outside one’s familiar or kinship circles” (Mattes & Moreno, 2018). It also could act as the “bond that people share across a society and across economic and ethnic groups, religions, and races” (Rothstein & Uslaner, 2005). This is the type of trust capturing the horizontal dimension. Institutional trust is the trust towards “formal, legal institutions of government and state” (Mattes & Moreno, 2018), and refers to the vertical level.

## 2. *Inclusive identity*

Individuals have several identities, some superimposed and some freely chosen. A socially cohesive society is one in which individuals with different identities can co-exist in a peaceful way and where certain identities are not dominant over the collective identity. In other words, different group identities are tolerated, recognised and protected. However, in order for a society to be cohesive, it is necessary that people feel first of all part of a broader entity (e.g., the nation) that is more than the sum of individuals and that bridges different identities of a society.

## 3. *Cooperation for the common good*

“Cooperation” refers to the positive social interactions within society, while “the common good” refers to the conception of the material and immaterial living conditions of a collectivity. A society in which many people and groups cooperate for interests that go beyond individual interests (van Oorschot & Komter, 1998) is considered to have a high level of social cohesion. While the importance of cooperation among individuals and groups (horizontal dimension) has been stressed in the past, this definition also incorporates vertical cooperation (Chan, To, & Chan, 2006). Individuals cooperate with the state through participation in public life and civic engagement (Acket, Borsenberger, Dicke, & Sarracino, 2011; Chan et al., 2006; Jenson, 2010; Schiefer & van der Noll, 2017).

## 2.2 Theoretical considerations

Theoretically, social protection can affect social cohesion by helping beneficiaries to cope with covariate shocks. Social protection schemes can prevent beneficiaries from having to sell assets or engage in other costly strategies to deal with covariate shocks. Thereby, beneficiaries can still invest in their livelihoods and may achieve more equal opportunities, which they would not have achieved without social protection. The literature on societies’ resilience capacities in times of large covariate shocks also highlights social protection schemes and their adaptation as important factors (Gerard, Imbert, & Orkin, 2020; Ulrichs, Slater, & Costella, 2019). Béné, Wood, Newsham and Davies (2012) analysed the overlaps between the key functions of social protection (protect, prevent, promote and transform (Devereux & Sabates-Wheeler, 2004)) and the three resilience capacities (absorptive, adaptive and transformative). They found that protective social protection measures, such as social assistance, are the bedrock on which to build absorptive capacity, which allows people to absorb shocks and prevent an immediate increase of poverty. In particular, this supports those that depend on daily earnings or transfers for survival in the informal economy and have difficulty accessing credit.

The described protective effect of social protection might improve attributes of social cohesion such as *institutional trust*, as beneficiaries experience that the state cares about their needs by maintaining and adapting social protection schemes in times of covariate shocks. If states have national social protection schemes in place that can be used as a *national* response to the covariate shock, the protective effect might also impact *inclusive identity* as beneficiaries feel part of a broader entity (e.g., the nation) that is more than the sum of individuals. Further, more equal opportunities and the feeling that one is not neglected can improve *social trust* and *horizontal cooperation*, as beneficiaries realise that members of other societal groups are as much deprived due to the covariate shock as themselves and, therefore, benefit from the schemes in the same way.

However, the responsiveness and adaptation capability of social protection schemes in times of shocks is crucial. Lack of transparency in the adaptation of the scheme and targeting of the beneficiaries, for example, can create feelings of unfairness and resentment, and, thus, worsen social relations (Molyneux et al., 2016). In addition, the adequacy of social protection benefits, that is, the size of the social protection benefits, is important in order to offset or at least mitigate the negative economic and social effects due to the covariate shock. A further important factor is that governments must highlight that the state plays a key role in the financing and/or management of social protection programmes in times of shocks. Beneficiaries can take that as a signal that the state cares about their interests, which in turn can increase trust in public institutions (Burchi, von Schiller & Strupat, 2020). When social protection measures are communicated as a response of national unity to deal with the shock, it may also improve the beneficiaries feeling of belonging (*inclusive identity*). However, citizens often have limited information about who is financing and/or implementing a social protection scheme. Consequently, there is the possibility that an effective programme characterised by high national ownership would not lead to an increase in institutional trust if the beneficiaries were unable to associate the programme with the true implementer.

### 3 Spread of COVID-19 and lockdown policies

This section presents to what extent Kenya was affected by the COVID-19 pandemic and describes the containment measures implemented by the government.

The first case of COVID-19 was confirmed in Kenya on 13 March 2020, and between then and November 2021, more than 254,541 cases and 5,325 deaths have been confirmed (or 9.7 deaths per 100,000 people). While COVID-19 cases have been confirmed across the country, in the early stages of the outbreak more than 82 per cent of the COVID-19 cases were found in Nairobi and 14 per cent in the coastal regions of Mombassa, Kwale and Kilifi (World Bank, 2020).

In response to the outbreak, on 15 March 2020, the Government of Kenya declared a state of emergency and implemented a range of containment measures. Movement in and out of the five most affected counties, known as the “lockdown counties”, was curtailed for three months in Kilifi and Kwale and four months in Nairobi, Mombasa and Mandera, and markets, restaurants and eateries were closed (see Figure 1 for locations of lockdown counties) (Doyle & Ikutwa, 2021). Further country-wide measures that were imposed in all 47 counties included instructing non-essential public and private sector workers to work

from home; banning large social gatherings, including weddings, church gatherings and congregating at malls; and imposing a nationwide curfew from 7.00 p.m. to 5.00 a.m. Following this, all schools and learning institutions were closed until October 2020. A ban on international passenger flights lasted until August 2020 (Doyle & Ikutwa, 2021).

Kenya's economy contracted by 0.4 per cent between January and June 2020, a stark contrast with the growth of 5.4 per cent during the same period in 2019 (World Bank, 2020a). COVID-19 and the containment measures had the most severe socioeconomic impacts in Nairobi and the other lockdown counties where, initially, cases were highest and lockdown measures were most stringent (World Bank, 2021). Country-wide unemployment is almost double what it was before COVID-19, and the labour force participation rate has decreased. Close to half of the informal labour force in the lockdown counties and one-third of it in the other counties had to discontinue their labour activities for almost 12 weeks. Overall, the World Bank (2021) reports that earnings have significantly decreased for wage earners in the informal sector. Moreover, the reduction in earnings was found to be greater for informal workers in the lockdown counties (42 per cent) than in other counties (24 per cent). In addition, COVID-19 is estimated to increase poverty in Kenya by about 4 percentage points resulting in 2 million newly poor Kenyans (World Bank, 2020a).

Excessive violence against civilians was used by the police to enforce the lockdown measures. Police killed 15 people and injured 31 while the lockdown measures were imposed. There were also numerous arrests of those violating curfew rules (Citizen Reporter, 2020). Vendors protested their loss of livelihood due to movement restrictions and the mandated closure of businesses. There were brief incidences of social unrest in some areas of Nairobi when the lockdown measures were imposed (Renner, 2020). These demonstrations did not lead to mass scale civil unrest, but the government apologised about police brutality against citizens during the protests and curfew hours (Kemboi, 2020).

**Figure 1: Location of lockdown counties**



Source: Author

## 4 Social protection in Kenya

This section briefly presents the social protection system in Kenya and focuses on the description of the national social assistance programmes and how they have been adapted during the COVID-19 pandemic.

Over the past 10 years, the Kenyan social protection sector has evolved and expanded into a social protection system. The 2011 NSPP introduced a vision of increasing coverage, improving coordination and bringing about greater integration of programmes and services (Government of Kenya, 2011). Social protection in Kenya is currently structured along the three main pillars of social assistance, social security and health insurance (Government of Kenya, 2017).<sup>5</sup> The most prominent programme under these pillars is the NSNP, which has been adapted during the pandemic. It consists of the Older Persons Cash Transfer (OP-CT), the Cash Transfer for Orphans and Vulnerable Children (CT-OVC) and the Persons with Severe Disabilities Cash Transfer (PWSD-CT). These three cash transfer programmes give beneficiary households a transfer of KES 2,000 (USD 18) per month.<sup>6</sup> Target households are living in poverty and have at least one household member that falls under the categories covered by each programme (orphans and vulnerable children, elderly and people with severe disabilities). The HSNP is the fourth cash transfer programme; it is implemented by the National Drought Management Authority (NDMA). It targets households that cannot afford to meet basic expenses (regular nutritious food, adequate housing, sanitation, etc.) and are vulnerable to becoming poorer in times of shocks, for example, drought, livestock disease and floods. The programme provides KES 5,400 (USD 50) every two months.<sup>7</sup> The Government of Kenya directly finances 100 per cent of the four cash transfer programmes, which collectively reach 1.23 million households across all counties (Doyle & Ikuwa, 2021).

As a response to the COVID pandemic, the government announced on 25 March 2020 the continuation of NSNP/HSNP and that funds previously committed would be released so that the pandemic would not impact the timely delivery of benefits. Consequently, beneficiaries received a lump sum of KES 8,000 (USD 74) to cover the period January to April 2020 (two regular payment cycles were pooled). A second tranche of KES 4,000 (approx. USD 37) was disbursed as a lump sum at the end of June 2020 to cover May and June 2020 (Doyle & Ikuwa, 2021). Vertical expansions that temporarily increased the level of support to NSNP beneficiaries by providing cash top-ups to the regular cash transfers were provided by the United Nations Children's Fund (UNICEF) and an EU-funded consortium led by the Kenyan Red Cross Society and Oxfam. UNICEF provided two monthly cash top-up payments of KES 2,000 per month to all NSNP beneficiaries with children under the age of 10. The EU consortium provided monthly cash top-ups of KES 5,668 (approx. USD 52) for three months to all NSNP beneficiaries residing in informal settlements. The continuation and adaptations of the NSNP and HSNP were highlighted in public appeals of the government to “stand together” in order to cope with the pandemic (Government of Kenya, 2020).

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5 Coverage of social security programmes, such as social insurances, is limited. Only 3% of informal workers are covered (KNBS, 2019). In terms of health insurance, 7.7 million members are covered, but most members are from the formal sector where membership is compulsory (Government of Kenya, 2017).

6 On 18 November 2021, the exchange rate for the Kenyan shilling was KES 1 = USD 0.0089 (Onvista, 2021).

7 The targeting criteria of the NSNP and the HSNP have not changed during the COVID-19 pandemic.

The government also set up new short-term social assistance programmes to cushion some of the negative socioeconomic consequences of the pandemic. They target households that are not enrolled in the NSNP or HSNP. This short-term response consists of the multi-agency COVID-19 cash transfer and the National Council for Persons with Disabilities (NCPWD) cash transfer. Both programmes target the chronically sick, widowers, the elderly and persons with disabilities. The response took the form of a weekly cash transfer of KES 1,000 (approx. USD 10) for a period of three to four months and reached 669,000 households (Doyle & Ikutwa, 2021).

## 5 Data and research design

### 5.1 Data

The analysis in the study is based on primary data from 3,796 randomly selected households that operate in the informal economy. Between November and December of 2018, 1,188 households were surveyed, and in December 2020 after lockdown measures were eased 2,608 households were surveyed. The surveys were realised as a joint project between the FES, the ILO and DIE. The surveys were designed as country-representative cross-sections of households in the informal economy. The data was collected through in-person interviews with the household head and one randomly selected household member over the age of 15.<sup>8</sup> The main objectives of the surveys were to obtain a better understanding of the economic and social situation of households in the informal economy before and after the first wave of the COVID pandemic. The questionnaire included modules on household demographics, health, social protection programmes, social cohesion and self-organisations. The selected sample was determined by random selection methods at every stage of sampling and the application of probability sampling was based on population size.<sup>9</sup>

The present study concentrates on outcomes related to social cohesion. Following the concept of social cohesion (see Section 2), the questionnaire inquired about the three attributes of social cohesion: trust, inclusive identity and cooperation for a common good.

The first two questions measure trust according to the social cohesion definition used for this paper. The first asks respondents whether at the time of the survey they trusted the parliament and the government. Answers ranged from “not at all” (coded “0”) to “a lot” (coded “3”). This question is used to measure institutional (vertical) trust. Please note that in the social cohesion definition of Leininger et al. (2021a) trust in the government is not part of the measure for institutional trust as the concept aims at measuring trust in institutions. Unfortunately, there are no further measures on institutional trust, such as trust

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<sup>8</sup> The random selection of the household member was done after screening all household members with the tablet computers that were used during the survey.

<sup>9</sup> Random sampling with probability proportional to population size was applied at each stage. The sampling process was based on stratification of the country into regions. Regions were further classified into counties, and these were further divided into districts and villages. Primary sampling units (PSUs) are the smallest geographical unit for which reliable population data are obtainable. The primary sampling units were selected from each stratum based on its share of the national population, and further allocated based on the urban/rural divide. Twice as many primary sampling units were selected from lockdown counties to enable a detailed analysis. This oversampling was accounted for by applying sampling weights in the subsequent analysis.

in the police or courts, that cover both survey rounds. Additionally, the measure on social trust is not available for both survey rounds due to data limitations.

The second question that was used approximates the attribute “identity” in the social cohesion definition. Respondents were asked about their agreement or disagreement with the following statement: “It makes me proud to be called a Kenyan”. Answers ranged from “strongly disagree” (coded “0”) to “strongly agree” (coded “4”).

The third questions refer to the social cohesion attribute “cooperation”. The question asked respondents: “How often did you do voluntary work with others such as help out with food or cash or doing community work?” The answer options ranged from “never” (coded “0”) to “occasionally (once per month)” (coded “3”) to “very frequently (every day)” (coded “5”). This measure approximates the horizontal dimension of cooperation. In general, to assess cooperation in the Kenyan context including lockdown policies is possible, as the lockdown measures did not include stay-at-home restrictions and the survey was conducted six months after the ease of lockdowns. A measure on vertical cooperation is not available due to data limitations. Questions of institutional trust were transformed to binary indicators so that they take the value “0” if the respondent answered “not at all” or “just a little” and the value “1” if the respondent answered “somewhat” or “a lot”. Similarly, binary variables were created for other question formulations: taking value “0” if the respondent answered “strongly disagree” or “disagree” and value “1” if the answers were “agree” or “strongly agree”. For the question on cooperation, the variable takes the value of “0” if the respondents answered “rarely (3 to 6 times per year)”, “very rarely (1 or 2 times per year)” or “never”, and it takes the value “1” if the respondents answered “occasionally (once per month)”, “frequently (once per week)” or “very frequently (every day)”.

Table 1 shows the means of the four outcome variables for the time before and after the first wave of the pandemic. Lower levels in the social cohesion attributes can be detected for cooperation, trust in the government and trust in the parliament. Trust in the government and parliament declines by 4 and 2 percentage points, respectively, while cooperation decreases by 4 percentage points. No differences can be detected with regards to the attribute of identity.

**Table 1: Means of the outcome variables after and before the first wave of the pandemic**

	After the first wave of the pandemic	Before the pandemic	Difference
<i>Outcomes</i>			
Trust in government	0.80 (0.01)	0.84 (0.01)	-0.04*** (0.01)
Trust in parliament	0.70 (0.01)	0.72 (0.01)	-0.02** (0.01)
Inclusive identity	0.93 (0.01)	0.93 (0.01)	0.00 (0.01)
Cooperation (horizontal)	0.24 (0.01)	0.28 (0.01)	-0.04*** (0.01)
N	2,608	1,188	

Note: Standard errors are in parentheses. \*, \*\* and \*\*\* denote  $p < 0.10$ ,  $p < 0.05$  and  $p < 0.01$ , respectively.  
Source: Author

The survey team asked the household head whether the household is covered by the NSNP (including the three cash transfer programmes) or the HSNP (see Section 4). Enrollment status was checked by the enumerators using either identification documents or the NSNP card. In order to separate existing social assistance programmes from new short-term programmes, the enumerators first asked whether the respondents had received any support in cash since the COVID-19 outbreak. If yes, they were asked if it was received from the national government, the local government or an employer. If it was from the national government, the respondents were asked to indicate the programme from which they received the cash transfers. At the end, they were asked to report the amount of cash they received.

As the focus of the paper is to examine the effects of existing social assistance programmes (NSNP and HSNP) and their adaptation during the pandemic, Table 2 presents the mean coverage of these programmes before and after the first wave of the pandemic. As the government of Kenya managed to minimise disruptions to the routine delivery of benefits, 12 per cent of our sample were covered by the NSNP or HSNP in 2020. This share is in line with the 1.23 million households that were covered by social assistance in 2020, which represent 12 per cent of the 10 million households of the informal sector (KNBS, 2019).

**Table 2: Social assistance coverage after and before the first wave of the pandemic**

	After the first wave of the pandemic	Before the pandemic	Difference
Social assistance (NSNP and HSNP)	0.12 (0.01)	0.11 (0.01)	0.01 (0.01)
N	2,608	1,188	

Note: Standard errors are in parentheses. \*, \*\* and \*\*\* denote  $p < 0.10$ ,  $p < 0.05$  and  $p < 0.01$ , respectively.  
Source: Author

## 5.2 Empirical specification

The estimation strategy used for this study exploits the effect of the national social assistance programmes (NSNP and HSNP) during the COVID-19 pandemic in a difference-in-differences setting. More specifically, members of households with and without coverage of national social assistance programmes (NSNP and HSNP) are compared before and after the first wave of the pandemic using repeated cross-sectional data.<sup>10</sup> To employ the difference-in-differences strategy, the following linear regression specification is estimated.

$$y_{ict} = \beta_0 + (T_t \cdot SA_{ict})\beta_1 + T_t\beta_2 + SA_{ict}\beta_3 + X_{ict}\beta_4 + \sum_{c=1}^{47} \mu_c(County_c) + \epsilon_{ict} \quad (1)$$

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<sup>10</sup> NSNP and the HSNP have been continued during the pandemic and their targeting criteria have not been changed.

where  $y_{ict}$  represents the outcome of interest for respondent  $i$  residing in county  $c$  at the time of each survey  $t$ .<sup>11</sup> This variable is regressed on the interactions between the binary variable  $T_t$  which takes the value “1” after the first wave of the pandemic at the end of 2020 and the binary variable  $SA_{ict}$  which takes the value “1” if the household of respondent  $i$  is covered by national social assistance programmes (NSNP or HSNP) at the time of the survey  $t$ .  $X_{ict}$  is a set of individual and household characteristics observed at the time of each survey including age and sex of the respondent, education level of the respondent, marital status of the respondent, chronic illness and disability in the household, household size, gender of the household head, the household’s share of elderly and children, and coverage from other social protection measures, such as the new short-term social assistance programmes or a health insurance scheme.<sup>12</sup> In order to account for the different initial development levels of the counties that are possibly related to the outcome variables and social assistance coverage, 47 county dummies ( $County_c$ ) are included.  $\epsilon_{ict}$  is the usual error term.

The coefficients of interest are  $\beta_1$  and  $\beta_2$ .  $\beta_1$  measures the effect of the national social assistance coverage after the first wave of the pandemic on the outcome variables.  $\beta_2$  shows the effect of the first wave of the pandemic on those that are not covered by social assistance. Whether one can interpret these effects as causal depends critically on the identifying assumption. Conditional on the controls included in Specification (1), the identifying assumption is that respondents with and without coverage of the national social assistance programmes during the pandemic would have had the same time trend in the impacts on the outcome variables without the national social assistance programmes. Because the national social assistance programmes (NSNP and HSNP) have been continued by the government during the pandemic, this assumption is not directly testable.

However, one can check the robustness of the results by including interactions between the controls  $X$  and the survey round indicator  $T$  to take into account the possibility that these variables had a differential impact on social cohesion in the period after the first wave of the pandemic. If the results do not change this would indicate that changes in the outcomes are due to the national social assistance programmes and not due to changes in other underlying factors (see Section 6.2 for results).

In addition, a kernel matching, difference-in-differences analytical framework (Villa, 2016) is applied on both rounds of the cross-sectional surveys (following Blundell and Costa Dias (2009)). This allows for each of the control groups (social assistance before the pandemic and no social assistance before and after the first wave of the pandemic) to be matched to the social assistance beneficiaries after the first wave of the pandemic separately. The overlapping region of support is composed of the social assistance beneficiaries to whom a counterfactual is found in each of the three control samples, which grants a high degree of homogeneity between the treatment and control groups in terms of observable characteristics and potentially unobserved characteristics over time (Blundell & Costa Dias, 2004).

11 Respondents are household members over the age of 15. They were randomly selected from the household after the screening of all household members. The random selection was done with the tablet computers that were used during the survey.

12 Descriptive statistics of all explanatory variables can be found in Table A1 of the Appendix. Tables A2 and A3 shows the means of all explanatory variables by social assistance coverage before and after the pandemic.

The final check for robustness goes in a similar direction. The sample of households is restricted so that the households meet at least one of the targeting criteria of the NSNP (households living in extreme poverty, households with an orphan or vulnerable child, households with an elderly household member and households with a disabled household member). This sample restriction increases the homogeneity of the treatment and control groups in terms of observable characteristics.

### 5.3 Heterogeneity analysis using lockdown counties

In order to explore whether the effect of social assistance is heterogeneous between lockdown and non-lockdown counties, the main Specification (1) is adapted and the following triple-differences model is estimated.

$$y_{ict} = \beta_0 + (T_t \cdot SA_{ict} \cdot L_{ict})\beta_1 + (T_t \cdot L_{ict})\beta_2 + (T_t \cdot SA_{ict})\beta_3 + T_t\beta_4 + SA_{ict}\beta_5 + \gamma' X_{ict} + \sum_{c=1}^{47} \mu_c(County_c) + \epsilon_{ict} \quad (2)$$

where  $L_{ict}$  represents a binary indicator that takes the value “1” if respondent  $i$  resides in one of the lockdown counties (see Figure 1). In this specification,  $\beta_1$  measures the effect of national social assistance coverage in lockdown counties compared with non-lockdown counties after the first wave of the pandemic on the outcome variables.  $\beta_2$  shows the effect of the first wave of the pandemic on those that reside in lockdown counties compared with those in non-lockdown counties who are not covered by social assistance.

## 6 Results

### 6.1 Descriptive results

Table 3 shows the means of the four outcome variables for the two groups across the two survey rounds. It seems that before the pandemic there were no statistically significant differences in levels of social cohesion between those with and without social assistance. The difference-in-differences reveal an increase in trust in government and horizontal cooperation by 6 percentage points (see Column 3). The double difference also shows that households that were covered by regular social assistance exhibit a higher likelihood of trusting the parliament and higher inclusive identity, but the effects are not statistically significant. It seems that households that do not receive regular social assistance experience a decrease in institutional trust and cooperation. The descriptive findings point to the potential preserving effect of social assistance on social cohesion during the COVID-19 pandemic. However, it is important to consider individual/household characteristics and the set of county dummies in order to control for confounding factors, so the next subsection gives the results of the econometric model.

**Table 3: Means of the outcome variables by social assistance coverage after and before the first wave of the pandemic**

	After the first wave of the pandemic			Before the pandemic		
	1	2	3	4	5	
	Social assistance	No social assistance	Double diff. (1-2) – (4-5)	Social assistance	No social assistance	Single diff. (4-5)
<i>Outcomes</i>						
Trust in government	0.89 (0.02)	0.78 (0.01)	0.06*** (0.03)	0.89 (0.01)	0.84 (0.01)	0.05 (0.03)
Trust in parliament	0.77 (0.03)	0.69 (0.01)	0.03 (0.05)	0.77 (0.04)	0.72 (0.01)	0.05 (0.04)
Inclusive identity	0.95 (0.01)	0.93 (0.01)	0.03 (0.03)	0.92 (0.02)	0.93 (0.01)	-0.01 (0.02)
Cooperation (horizontal)	0.29 (0.01)	0.24 (0.01)	0.06*** (0.01)	0.27 (0.03)	0.28 (0.01)	-0.01 (0.01)
N	313	2,295		125	1,063	

Note: Standard errors are in parentheses. \*, \*\* and \*\*\* denote  $p < 0.10$ ,  $p < 0.05$  and  $p < 0.01$ , respectively.

Source: Author

## 6.2 Empirical results

Table 4 reports the estimation results from the main econometric specification (Specification (1)) for the four outcome variables illustrated in Section 5 (see Table A4 of the Appendix for full results).<sup>13</sup> Coverage by social assistance programmes (NSNP or HSNP) positively affects trust in parliament and the government and inclusive identity and cooperation, however, the effects are not statistically significant. In contrast, those that are not covered by social assistance after the first wave of the pandemic reveal significantly lower levels of social cohesion attributes. Trust in government and parliament is reduced by 4 and 3 percentage points, respectively, while the willingness to cooperate with others to do voluntary work is reduced by 2 percentage points. These findings point to a preserving effect of social assistance on social cohesion in times of large covariate shocks. The presence of social assistance can potentially stabilise levels of social cohesion attributes for beneficiaries of adapted social assistance programmes, while social cohesion outcomes decline for non-beneficiaries. Given the fact that Strupat and Rukundo (2021) found that the same social assistance programmes had positive impacts on income and household asset wealth,<sup>14</sup> it seems that the mitigation of adverse economic outcomes is partly responsible for this stabilising effect on social cohesion.

13 Given the set of individual and household characteristics, the estimation results are based on 3,416 of 3,796 household heads on whom we have complete information on all variables.

14 Using the same cross-sectional datasets and applying a difference-in-differences with kernel propensity score matching to estimate the effect of social assistance coverage on various economic indicators, Strupat and Rukundo (2021) found that social assistance coverage reduced the probability of becoming income poor during the pandemic by 13.8 percentage points. In addition, households with social assistance coverage have a 12.5 percentage point lower probability of coping with the economic consequences of the pandemic by selling assets as compared with households that are not covered by social assistance coverage.

**Table 4: Effects of social assistance on attributes of social cohesion**

<i>Outcome variables</i>	Trust in parliament	Trust in government	Inclusive identity	Cooperation (horizontal)
( $\beta_1$ ) Social assistance After first wave of pandemic	0.05 (0.06)	0.04 (0.04)	0.05 (0.04)	0.01 (0.02)
( $\beta_2$ ) After first wave of pandemic	-0.03* (0.02)	-0.04** (0.02)	-0.01 (0.01)	-0.02** (0.01)
N	3,416	3,416	3,416	3,416
Adjusted R-squared	0.02	0.02	0.01	0.03

Note: Control variables and county fixed effects are included. Standard errors (in parentheses) are clustered at the household level. \*, \*\* and \*\*\* denote  $p < 0.10$ ,  $p < 0.05$  and  $p < 0.01$ , respectively.

Source: Author

Interestingly, if one focuses on the heterogeneity of the social assistance effect between lockdown and non-lockdown counties (see Specification (2) in Section 5), one finds a positive and statistically significant effect of social assistance on trust in government and horizontal cooperation. Table 5 shows that social assistance coverage in lockdown counties improves trust in the government and willingness to cooperate with others to do voluntary work, such as help others with food or cash, by 3 and 4 percentage points, respectively (see Table A5 of the Appendix for full results). No statistically significant effects can be detected for the other attributes of social cohesion. However, the signs of the estimated coefficients are positive. It is unclear whether the cooperation effect is related to joint activities to help others with food or cash so that they can cope with the negative consequences of the pandemic. In general, the increase in cooperation with others was possible in lockdown counties, as the containment measures did not include stay-at-home restrictions and the survey was conducted six months after the ease of lockdowns in these counties.

Table 5 shows that respondents residing in lockdown counties that are not covered by the national social assistance programmes face a strong decline in attributes of social cohesion. Trust in parliament is reduced by 10 percentage points compared with respondents living in non-lockdown counties, which is a relative reduction of 13 per cent over time. Trust in the government and inclusive identity declines by 5 percentage points. Overall, these results suggest that the preserving effect of national social assistance programmes on social cohesion seems to be particularly relevant in regions that faced the most negative consequences of the pandemic.

<b>Table 5: Heterogeneity of social assistance effects due to differences in regional lockdown policies</b>				
<i>Outcome variables</i>	Trust in parliament	Trust in government	Inclusive identity	Cooperation (horizontal)
( $\beta_1$ ) Social assist. · After pandemic · Lockdown	0.02 (0.09)	0.03** (0.01)	0.01 (0.07)	0.04** (0.02)
( $\beta_2$ ) After pandemic · Lockdown	-0.10*** (0.03)	-0.05* (0.03)	-0.05*** (0.01)	-0.02 (0.02)
N	3,416	3,416	3,416	3,416
Adjusted R-squared	0.01	0.01	0.06	0.03

Note: Standard errors (in parentheses) are clustered at the county level. \*, \*\* and \*\*\* denote  $p < 0.10$ ,  $p < 0.05$  and  $p < 0.01$ , respectively.

Source: Author

### 6.3 Robustness checks

In order to check whether the explanatory variables have a differential impact on social cohesion after the first wave of the pandemic, interaction terms between the controls  $X$  and the survey round indicator  $T$  were included in both estimation specifications. Results are presented in Table A6 and A7 of the Appendix. The estimates of interests remain similar after the inclusion of the interaction terms, suggesting that the effects on social cohesion are due to the national social assistance programmes and not due to compositional changes of the samples and the differential impact of the control variables over time.

An additional check of robustness extends the difference-in-differences model by the kernel matching difference-in-differences analytical framework (Villa, 2016). This approach increases the homogeneity of those with and without coverage of national social assistance programmes in terms of observable characteristics and could also raise the similarity in unobserved characteristics. Table A8 of the Appendix shows the estimation results. The results remain similar to the original difference-in-differences approach.

The last check of robustness includes the restriction of the survey sample to households that meet at least one of the targeting categories of the NSNP. This sample restriction also increases the homogeneity of those with and without coverage of national social assistance programmes in terms of observable characteristics. Table A9 of the Appendix shows the estimation results. The results of the sub-sample analysis remain similar to the full sample.

## 7 Conclusion

As it was unclear whether social assistance measures affect social cohesion in times of large covariate shocks such as a pandemic, this study attempts to close this knowledge gap by focusing on the relationship between social assistance and social cohesion in Kenya during the COVID-19 pandemic. The adaptation of existing social assistance programmes in response to the COVID-19 pandemic, coupled with regional differences in impacts of the pandemic and lockdown policies, makes Kenya an ideal setting for examining this relationship. Using unique primary data from country-representative in-person surveys that

were collected more than one year before and six months after the first wave of the pandemic and employing a difference-in-differences approach, shows that social protection in the form of adapted social assistance can influence attributes of social cohesion. The findings suggest that social assistance has a preserving effect on social cohesion. Attributes of social cohesion remain stable for social assistance beneficiaries, while they decline substantially for non-beneficiaries due to the pandemic. This result is pronounced in regions that faced larger restrictions due to lockdown policies.

In line with the theoretical considerations, the protective function of social protection potentially explains why social cohesion outcomes have not declined for social assistance beneficiaries in Kenya. As shown by Strupat and Rukundo (2021), households covered by the same social assistance programmes faced on average a lower loss of income and did not have to sell their assets to cope with the pandemic.<sup>15</sup> This protective effect of the adapted social assistance measures has potentially contributed to the stabilisation of social cohesion outcomes for the beneficiaries. However, the adapted social assistance benefits were in general too small to entirely offset the negative economic consequences of the pandemic (Doyle & Ikuwa, 2021) and positive effects on social cohesion probably could have been achieved with larger adapted cash transfers. Importantly, relief measures and adapted social assistance were frequently covered in public speeches and press statements by the government broadcasted over radio and television during the pandemic (Government of Kenya, 2020; Ministry of Health – Kenya, 2020), so it is likely that the beneficiaries perceive the state as the main implementer of these programmes.

### *Policy recommendations*

Overall, the results suggest that existing national social assistance programmes and their adaptation in times of large covariate shocks, such as the COVID-19 pandemic, can be beneficial for social cohesion. As it has been shown that cash transfers do not necessarily increase social cohesion (Li & Walker, 2017; Roelen, 2017), they can have an effect on social cohesion in the presence of large covariate shocks. Therefore, policymakers aiming to preserve social cohesion should consider the benefits of giving cash through social assistance programmes.

Three further policy lessons can be drawn from the study. First, existing social assistance programmes that can be adapted to the pandemic should especially target regions that have been highly affected by lockdown policies. As these regions face substantial declines in social cohesion outcomes, the vertical and horizontal expansion of social assistance to these regions can be very beneficial from a social cohesion point of view. Second, the size of the adapted social assistance benefits is important to prevent or mitigate the negative consequences of the pandemic in order to contribute to social cohesion. The Kenya Cash

15 Using the same cross-sectional datasets and applying a difference-in-differences with kernel propensity score matching, Strupat and Rukundo (2021) found that social assistance coverage reduced the probability of becoming income poor during the pandemic by 13.8 percentage points. In addition, households with social assistance coverage have a 12.5 percentage point lower probability of coping with the economic consequences of the pandemic by selling assets as compared with households that are not covered by social assistance coverage. The results suggest that, during a systematic crisis such as a pandemic, pre-existing social assistance schemes can deliver positive impacts in line with the primary goals of social safety nets and prevent household from falling deeper into poverty by preserving their wealth.

Working Group (KCWG) recommends that cash transfers provide a minimum level of support equivalent to 50 per cent of the minimum expenditure basket of the household for three months. The social assistance benefits covered only 24 per cent of the expenditure basket during the first phase of the pandemic (Doyle & Ikuwa, 2021) and was not adequate to prevent all negative economic impacts of the pandemic. An increase in the amount of the cash transfers is necessary in order to achieve a positive effect on attributes of social cohesion. Third, the content and extent of governmental communication during large covariate shocks is important from a social cohesion perspective. The experience in Kenya shows that speeches and public appeals of the government should clearly highlight that the benefits of relief measures and of adapted social protection programmes are provided and implemented by the state. This should be done on a regular basis to ensure that beneficiaries associate these activities with the state.



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## Appendix

<b>Table A1: Means of the explanatory variables</b>				
	After the first wave of the pandemic	Before the pandemic	Difference	Std. error
Social assistance coverage (NSNP or HSNP)	0.1229	0.1091	-0.0138	0.0103
Age 15-29	0.3443	0.3677	-0.0234	0.0176
Age 30-39	0.2534	0.2616	-0.0082	0.0165
Age 40-49	0.1959	0.1868	0.0091	0.0148
Age 50-59	0.1205	0.1091	0.0113	0.012
Age >60	0.0759	0.0747	0.0012	0.011
Female	0.5265	0.5285	-0.0020	0.0187
No education	0.095	0.0855	0.0095	0.0108
Primary education	0.5732	0.5641	0.0091	0.0185
Secondary education	0.3022	0.297	0.0053	0.0172
University education	0.0296	0.0334	-0.0038	0.0065
Married	0.6832	0.6942	-0.011	0.0174
Disability in the household	0.0679	0.0875	-0.0196**	0.0098
Chronic illness in the household	0.1167	0.1485	-0.0318***	0.0121
Household size	4.4019	4.2829	0.1190	0.0890
Share of elderly (age>60) in household	0.0629	0.0574	0.0055	0.0068
Share of children (age<15) in household	0.3119	0.3095	0.0024	0.0093
Short-term social assistance (COVID related)	0.0863	0	0.0863***	0.0083
Health insurance (household)	0.2626	0.2575	0.0051	0.0161
Number of observations	2,399	1,017		

Note: \*, \*\* and \*\*\* denote p < 0.10, p < 0.05 and p < 0.01, respectively.

Source: Author

**Table A2: Means of the explanatory variables by social assistance coverage before the pandemic**

	Social assistance	No social assistance	Difference	Std. error
Age 15-29	0.384	0.3744	0.0096	0.0458
Age 30-39	0.228	0.2747	-0.0467	0.0421
Age 40-49	0.201	0.1797	0.0203	0.0365
Age 50-59	0.112	0.1016	0.0104	0.0287
Age >60	0.076	0.0696	0.0064	0.0239
Female	0.544	0.5278	0.0162	0.0472
No education	0.162	0.0706	0.0914***	0.0254
Primary education	0.576	0.556	0.0200	0.047
Secondary education	0.256	0.3283	-0.0723	0.0441
University education	0.016	0.0452	-0.0292	0.019
Married	0.680	0.7159	-0.0359	0.0428
Disability in the household	0.104	0.0781	0.0259	0.0258
Chronic illness in the household	0.224	0.1373	0.0867***	0.0334
Household size	4.344	4.2333	0.1107	0.2063
Share of elderly (age>60) in household	0.0675	0.0512	0.0163	0.0156
Share of children (age<15) in household	0.3382	0.3164	0.0218	0.0232
Health insurance (household)	0.2480	0.2568	0.0088	0.0413
Number of observations	111	906		

Note: \*, \*\* and \*\*\* denote p < 0.10, p < 0.05 and p < 0.01, respectively.

Source: Author

	Social assistance	No social assistance	Difference	Std. error
Age 15-29	0.3429	0.3415	0.0014	0.0364
Age 30-39	0.2171	0.2671	-0.0499	0.0346
Age 40-49	0.2071	0.1911	0.016	0.0311
Age 50-59	0.1429	0.1187	0.0242	0.0256
Age >60	0.0901	0.0716	0.0185	0.0241
Female	0.5286	0.5184	0.0102	0.0392
No education	0.1901	0.0868	0.1032***	0.0229
Primary education	0.5586	0.5751	-0.0165	0.0388
Secondary education	0.2343	0.3076	-0.0733**	0.036
University education	0.0171	0.0306	-0.0134	0.0133
Married	0.6286	0.6875	-0.0589	0.0365
Disability in the household	0.0743	0.0674	0.0068	0.0198
Chronic illness in the household	0.1714	0.1116	0.0598***	0.0242
Household size	4.5643	4.3942	0.1701	0.1912
Share of elderly (age>60) in household	0.0753	0.0619	0.0134	0.0146
Share of children (age<15) in household	0.2978	0.3146	-0.0168	0.0196
Short-term social assistance (COVID related)	0.0468	0.0454	0.0014	0.0190
Health insurance (household)	0.2401	0.2644	0.0244	0.0346
Number of observations	288	2,111		

Note: \*, \*\* and \*\*\* denote  $p < 0.10$ ,  $p < 0.05$  and  $p < 0.01$ , respectively.

Source: Author

**Table A4:** Effects of social assistance on attributes of social cohesion

	(1)	(2)	(3)	(4)
	Inclusive identity	Cooperation (horizontal)	Trust in government	Trust in parliament
Social assistance · After first wave of pandemic	0.0480 (0.0379)	0.00619 (0.0106)	0.0443 (0.0438)	0.0494 (0.0563)
After first wave of pandemic	-0.0106 (0.0101)	-0.0250*** (0.00867)	-0.0378** (0.0191)	-0.0330* (0.0200)
Social assistance	-0.0205 (0.0345)	0.00794 (0.0106)	0.0438 (0.0327)	0.0561 (0.0484)
Age 30-39	-0.0206 (0.0123)	-0.00838 (0.0130)	-0.0427*** (0.0128)	-0.0462*** (0.0145)
Age 40-49	0.00334 (0.0148)	0.00595 (0.0184)	0.00181 (0.0178)	-0.0417* (0.0245)
Age 50-59	-0.0104 (0.0173)	-0.00763 (0.0234)	-0.0117 (0.0217)	-0.0273 (0.0263)
Age >60	0.00869 (0.0193)	0.00641 (0.00397)	0.0105 (0.0362)	0.0314 (0.0426)
Female	0.0394*** (0.00872)	-0.0106 (0.0102)	-0.00950 (0.0125)	0.0184 (0.0157)
Primary education	0.0436*** (0.0137)	0.0337 (0.0279)	0.0225 (0.0284)	0.0160 (0.0359)
Secondary education	0.0220 (0.0173)	0.0257 (0.0298)	-0.0177 (0.0321)	-0.0403 (0.0368)
University education	-0.0500 (0.0387)	-0.0447 (0.0293)	-0.0360 (0.0436)	-0.0358 (0.0487)
Married	-0.000920 (0.00910)	-0.0191* (0.0106)	0.0233 (0.0164)	0.0346** (0.0167)
Disability in household	-0.0377 (0.0323)	0.00770 (0.0210)	-0.00674 (0.0235)	-0.0473 (0.0295)
Chronic illness in household	-0.0162 (0.0142)	-0.0206 (0.0189)	-0.0424** (0.0192)	-0.0587*** (0.0215)
Household size	0.00309* (0.00176)	-0.00381 (0.00292)	-0.00402 (0.00290)	-0.0119*** (0.00374)
Share of children (age<15) in household	0.0155 (0.0171)	0.0542** (0.0265)	0.0499 (0.0302)	0.0503 (0.0375)
Share of elderly (age>60) in household	0.0445* (0.0264)	-0.0109 (0.00804)	0.0252 (0.0568)	-0.0341 (0.0647)
Short-term social assistance (COVID related)	-0.00839 (0.0261)	-0.00130 (0.00151)	0.0378 (0.0383)	-0.00392 (0.0458)
Health insurance (household)	0.00235 (0.00993)	-0.00241 (0.00186)	-0.0314* (0.0158)	-0.0340* (0.0195)
Observations	3,416	3,416	3,416	3,416
R-squared	0.020	0.027	0.015	0.015

Standard errors (in parentheses) are clustered at the household level, \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ 

Source: Author

**Table A5: Heterogeneity of social assistance effects due to differences in regional lockdown policies**

	(1)	(2)	(3)	(4)
	Inclusive identity	Cooperation (horizontal)	Trust in government	Trust in parliament
Social assistance · After first wave of pandemic · Lockdown county	0.00947 (0.0669)	0.0376** (0.0159)	0.0319** (0.0137)	0.026 (0.0950)
After first wave of pandemic · Lockdown county	-0.0542*** (0.0150)	-0.0189 (0.0185)	-0.0448* (0.0265)	-0.0969*** (0.0320)
After first wave of pandemic · Social assistance	0.0340 (0.0474)	-0.0135 (0.0128)	0.0177 (0.0560)	0.00417 (0.0698)
Social assistance · Lockdown county	0.0403 (0.0605)	-0.0156 (0.0159)	-0.0447 (0.0707)	-0.0133 (0.0925)
After first wave of pandemic	-0.0227* (0.0113)	-0.0250** (0.0102)	-0.0212* (0.0118)	0.00281 (0.0231)
Social assistance	-0.0280 (0.0409)	0.0142 (0.0124)	0.0491 (0.0389)	0.0729 (0.0456)
Age 30-39	-0.0209* (0.0124)	-0.0145 (0.0130)	-0.0457*** (0.0128)	-0.0453*** (0.0147)
Age 40-49	0.00342 (0.0148)	0.000145 (0.0220)	0.00227 (0.0178)	-0.0424* (0.0250)
Age 50-59	-0.0112 (0.0174)	-0.0111 (0.00231)	-0.00934 (0.0216)	-0.0278 (0.0264)
Age >60	0.00711 (0.0194)	0.00644 (0.00460)	0.0139 (0.0363)	0.0323 (0.0427)
Female	0.0395*** (0.00881)	-0.0104 (0.00988)	-0.00992 (0.0123)	0.0186 (0.0159)
Primary education	0.0438*** (0.0139)	0.0335 (0.0270)	0.0225 (0.0283)	0.0158 (0.0359)
Secondary education	0.0212 (0.0172)	0.0238 (0.0291)	-0.0176 (0.0324)	-0.0370 (0.0369)
University education	-0.0529 (0.0385)	-0.0480 (0.0383)	-0.0326 (0.0437)	-0.0313 (0.0486)
Married	-0.000979 (0.00900)	-0.0195* (0.0108)	0.0225 (0.0165)	0.0359** (0.0170)
Disability in the household	-0.0382 (0.0326)	0.00660 (0.0207)	-0.00555 (0.0235)	-0.0470 (0.0299)
Chronic illness in the household	-0.0165 (0.0143)	-0.0242 (0.0197)	-0.0443** (0.0195)	-0.0550** (0.0212)
Household size	0.00308* (0.00178)	-0.00393 (0.00366)	-0.00427 (0.00289)	-0.0115*** (0.00377)
Share of children (age<15) in household	0.0153 (0.0171)	0.0488* (0.0248)	0.0470 (0.0300)	0.0559 (0.0384)
Share of elderly (age>60) in household	0.0467* (0.0263)	-0.0113 (0.00797)	0.0224 (0.0567)	-0.0371 (0.0646)
Short-term social assistance (COVID related)	-0.0117 (0.0264)	-0.00129 (0.00143)	0.0420 (0.0387)	0.00106 (0.0428)
Health insurance (household)	0.00109 (0.00974)	-0.0249 (0.0190)	-0.0298* (0.0158)	-0.0325* (0.0192)
Observations	3,416	3,416	3,416	3,416
R-squared	0.022	0.029	0.017	0.019
Standard errors (in parenthesis) are clustered at the county level, * $p < 0.10$ , ** $p < 0.05$ , *** $p < 0.01$				
Source: Author				

**Table A6: Robustness check of social assistance on attributes of social cohesion**

	Inclusive identity	Cooperation (horizontal)	Trust in government	Trust in parliament
Social assistance · After first wave of pandemic	0.0493 (0.0383)	0.00790 (0.00965)	0.0472 (0.0459)	0.0592 (0.0589)
After first wave of pandemic	-0.0167 (0.0194)	-0.0220** (0.0106)	-0.0350** (0.0171)	-0.0269* (0.0144)
Social assistance	-0.0218 (0.0339)	0.00872 (0.00971)	0.0519 (0.0336)	0.0475 (0.0411)
Age 30-39	0.000404 (0.0264)	0.00272 (0.00337)	-0.0507** (0.0218)	-0.0581** (0.0266)
Age 40-49	0.0261 (0.0275)	0.00463 (0.00556)	-0.00583 (0.0269)	-0.0648* (0.0331)
Age 50-59	-0.0311 (0.0320)	0.00455 (0.00653)	-0.0268 (0.0440)	-0.0413 (0.0555)
Age >60	0.0442 (0.0307)	0.0110 (0.00688)	0.00950 (0.0545)	-0.00818 (0.0730)
Female	0.0431** (0.0170)	-0.00963 (0.0273)	-0.0121 (0.0318)	0.0420 (0.0304)
Primary education	0.0846** (0.0344)	0.0191 (0.0122)	0.0360 (0.0595)	0.0591 (0.0658)
Secondary education	0.0336 (0.0368)	0.0170 (0.0128)	-0.0669 (0.0645)	-0.0278 (0.0713)
University education	0.0466 (0.0602)	0.00804 (0.0125)	0.0772 (0.0728)	0.0604 (0.103)
Married	0.00751 (0.0172)	-0.00496 (0.00344)	0.00710 (0.0268)	-0.00958 (0.0343)
Disability in the household	-0.0499 (0.0356)	-0.00514 (0.00456)	-0.00116 (0.0465)	-0.0473 (0.0596)
Chronic illness in the household	0.0254 (0.0238)	-0.00752* (0.00426)	-0.0373 (0.0255)	-0.0419 (0.0328)
Household size	0.000891 (0.00354)	-0.00170 (0.00114)	-0.0134** (0.00558)	-0.0186** (0.00745)
Share of children (age<15) in household	-0.0426 (0.0352)	0.00274 (0.00712)	0.0670 (0.0573)	0.0856 (0.0690)
Share of elderly (age>60) in household	0.00848 (0.0364)	-0.00900 (0.0138)	-0.0393 (0.0885)	-0.00342 (0.110)
Short-term social assistance (COVID related)	-0.00843 (0.0264)	-0.000718 (0.00144)	0.0396 (0.0387)	-6.08e-06 (0.0454)
Health insurance (household)	0.000564 (0.0156)	0.000184 (0.00384)	-0.00277 (0.0280)	-0.0330 (0.0446)
Round 2 · Age 30_39	-0.0302 (0.0288)	-0.00397 (0.00358)	0.0102 (0.0270)	0.0199 (0.0330)

**Table A6: Robustness check of social assistance on attributes of social cohesion**

	Inclusive identity	Cooperation (horizontal)	Trust in government	Trust in parliament
Round 2 · Age 40_49	-0.0307 (0.0358)	-0.00597 (0.00588)	0.0140 (0.0291)	0.0330 (0.0427)
Round 2 · Age 50_59	0.0314 (0.0309)	-0.00563 (0.00728)	0.0270 (0.0527)	0.0220 (0.0667)
Round 2 · Age >60	-0.0517 (0.0385)	-0.00641 (0.00598)	0.00266 (0.0599)	0.0524 (0.0931 )
Round 2 · Female	-0.00400 (0.0205)	-0.000102 (0.00306)	0.00629 (0.0363)	-0.0308 (0.0391)
Round 2 · Primary education	-0.0572 (0.0383)	-0.0220 (0.0144)	-0.0189 (0.0567)	-0.0595 (0.0671)
Round 2 · Secondary education	-0.0151 (0.0414)	-0.0205 (0.0157)	0.0702 (0.0643)	-0.0166 (0.0751)
Round 2 · University education	-0.139* (0.0696)	-0.0127 (0.0149)	-0.174* (0.100)	-0.148 (0.116)
Round 2 · Married	-0.0106 (0.0213)	0.00461 (0.00398)	0.0211 (0.0305)	0.0613 (0.0393)
Round 2 · Disability in the household	0.0243 (0.0436)	0.00908 (0.00546)	-0.00706 (0.0634)	-0.00306 (0.0782)
Round 2 · Chronic illness in the household	-0.0673** (0.0273)	0.00792* (0.00415)	-0.00907 (0.0365)	-0.0246 (0.0457)
Round 2 · Household_size	0.00320 (0.00410)	0.00217* (0.00122)	0.0128* (0.00726)	0.00908 (0.00941)
Round 2 · Share of children (age<15)	0.0834* (0.0441)	0.00432 (0.00871)	-0.0234 (0.0827)	-0.0519 (0.0881)
Round 2 · Share of elderly (Age>60)	0.0535 (0.0467)	-0.00208 (0.0125)	0.0895 (0.126)	-0.0455 (0.140)
Round 2 · Health insurance (household)	0.000422 (0.0227)	-0.00380 (0.00356)	-0.0369 (0.0318)	0.00104 (0.0525)
Observations	3,416	3,416	3,416	3,416
R-squared	0.027	0.202	0.022	0.020

Standard errors (in parenthesis) are clustered at the household level, \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Source: Author

**Table A7: Robustness check of social assistance effects due to differences in regional lockdown policies**

	Inclusive identity	Cooperation (horizontal)	Trust in government	Trust in parliament
Social assistance * After first wave of pandemic * Lockdown county	0.0167 (0.0678)	0.0380** (0.0166)	0.0323** (0.0140)	0.0163 (0.103)
After first wave of pandemic * Lockdown county	-0.0591** (0.0235)	-0.0188 (0.0174)	-0.0493 (0.0324)	-0.0925* (0.0499)
After first wave of pandemic * Social assistance	0.0375 (0.0472)	-0.0143 (0.0121)	0.00897 (0.0574)	-0.00531 (0.0723)
Social assistance * Lockdown county	0.0310 (0.0631)	-0.0260 (0.0266)	-0.0284 (0.0718)	0.0236 (0.107)
After first wave of pandemic	-0.0358 (0.0563)	-0.112*** (0.0170)	-0.138* (0.0778)	-0.0416 (0.103)
Social assistance	-0.0290 (0.0407)	0.0144 (0.0119)	0.0555 (0.0389)	0.0798* (0.0470)
Age 30-39	0.00114 (0.0265)	0.00252 (0.00353)	-0.0509** (0.0221)	-0.0570** (0.0266)
Age 40-49	0.0269 (0.0269)	0.00470 (0.00558)	-0.00602 (0.0268)	-0.0649* (0.0338)
Age 50-59	-0.0302 (0.0324)	0.00482 (0.00654)	-0.0253 (0.0440)	-0.0441 (0.0560)
Age >60	0.0437 (0.0311)	0.0119* (0.00679)	0.0122 (0.0541)	-0.0110 (0.0727)
Female	0.0424** (0.0170)	-0.000990 (0.00273)	-0.0125 (0.0316)	0.0431 (0.0309)
Primary education	0.0801** (0.0357)	0.0180 (0.0114)	0.0355 (0.0592)	0.0684 (0.0621)
Secondary education	0.0259 (0.0393)	0.0152 (0.0122)	-0.0684 (0.0646)	-0.0106 (0.0677)
University education	0.0324 (0.0606)	0.00685 (0.0120)	0.0800 (0.0715)	0.0826 (0.0996)
Married	0.00590 (0.0178)	-0.00524 (0.00351)	0.00647 (0.0267)	-0.00579 (0.0343)
Disability in the household	-0.0471 (0.0365)	-0.00479 (0.00466)	0.00170 (0.0465)	-0.0561 (0.0599)
Chronic illness in the household	0.0231 (0.0234)	-0.00794* (0.00433)	-0.0379 (0.0256)	-0.0369 (0.0320)
Household size	0.000263 (0.00358)	-0.00178 (0.00114)	-0.0136** (0.00562)	-0.0173** (0.00720)
Share of children (age<15) in household	-0.0513 (0.0346)	0.000303 (0.00736)	0.0626 (0.0556)	0.111 (0.0678)
Share of elderly (age>60) in household	0.00395 (0.0383)	-0.0117 (0.0137)	-0.0433 (0.0890)	0.0136 (0.107)
Short-term social assistance (COVID related)	-0.0131 (0.0265)	-0.000872 (0.00131)	0.0446 (0.0398)	0.00723 (0.0429)
Health insurance (household)	0.000166 (0.0158)	9.98e-05 (0.00389)	-0.00227 (0.0281)	-0.0335 (0.0445)
Round 2 · Age 30_39	-0.0322 (0.0290)	-0.00385 (0.00376)	0.0118 (0.0272)	0.0207 (0.0327)
Round 2 · Age 40_49	-0.0321 (0.0351)	-0.00609 (0.00592)	0.0155 (0.0290)	0.0329 (0.0418)

**Table A7: Robustness check of social assistance effects due to differences in regional lockdown policies**

	Inclusive identity	Cooperation (horizontal)	Trust in government	Trust in parliament
Round 2 · Age 50_59	0.0288 (0.0314)	-0.00594 (0.00726)	0.0291 (0.0527)	0.0258 (0.0677)
Round 2 · Age >60	-0.0537 (0.0385)	-0.00740 (0.00599)	0.00442 (0.0617)	0.0579 (0.0929)
Round 2 · Female	-0.00238 (0.0205)	-3.09e-05 (0.00308)	0.00599 (0.0362)	-0.0328 (0.0386)
Round 2 · Primary education	-0.0505 (0.0402)	-0.0206 (0.0135)	-0.0173 (0.0579)	-0.0723 (0.0661)
Round 2 · Secondary education	-0.00602 (0.0448)	-0.0184 (0.0150)	0.0729 (0.0654)	-0.0350 (0.0724)
Round 2 · University education	-0.124* (0.0701)	-0.0112 (0.0144)	-0.174* (0.101)	-0.172 (0.114)
Round 2 · Married	-0.00972 (0.0220)	0.00479 (0.00405)	0.0214 (0.0304)	0.0599 (0.0399)
Round 2 · Disability in the household	0.0216 (0.0444)	0.00875 (0.00556)	-0.0111 (0.0631)	0.00728 (0.0773)
Round 2 · Chronic illness in the household	-0.0628** (0.0267)	0.00831* (0.00420)	-0.0132 (0.0367)	-0.0303 (0.0444)
Round 2 · Household_size	0.00393 (0.00425)	0.00222* (0.00122)	0.0126* (0.00730)	0.00785 (0.00912)
Round 2 · Share of children (age<15)	0.0937** (0.0431)	0.00684 (0.00916)	-0.0216 (0.0815)	-0.0785 (0.0875)
Round 2 · Share of elderly (age>60)	0.0619 (0.0501)	0.000761 (0.0120)	0.0920 (0.128)	-0.0706 (0.139)
Round 2 · Health insurance (household)	0.000651 (0.0229)	-0.00363 (0.0035)	-0.0367 (0.0319)	0.000817 (0.0521)
Observations	3,416	3,416	3,416	3,416
R-squared	0.031	0.024	0.024	0.024
Standard errors (in parenthesis) are clustered at the county level, * p < 0.10, ** p < 0.05, *** p <0.01				
Source: Author				

**Table A8: Robustness check of social assistance on attributes of social cohesion: Kernel matching, difference-in-differences analytical framework**

Outcome variables	Inclusive identity	Cooperation (horizontal)	Trust in government	Trust in parliament
( $\beta_1$ ) Social assistance · After first wave of pandemic	0.048 (0.03)	0.0100 (0.01)	0.0516 (0.0590)	0.0521 (0.0574)
( $\beta_2$ ) After first wave of pandemic	-0.016 (0.011)	-0.0210* (0.0109)	-0.0401* (0.0231)	-0.0321* (0.0189)
N	2,929	2,929	2,929	2,929
adjusted R-squared	0.01	0.03	0.02	0.01

Note: Control variables and county fixed effects are included. Standard errors (in parentheses) are clustered at the household level. \*, \*\* and \*\*\* denote p < 0.10, p < 0.05 and p < 0.01, respectively.

Source: Author

**Table A9: Robustness check for social assistance on attributes of social cohesion: Restricted sample**

	(1)	(2)	(3)	(4)
	Inclusive identity	Cooperation (horizontal)	Trust in government	Trust in parliament
Social assistance · After first wave of pandemic	0.0492 (0.0500)	0.00899 (0.0126)	0.0493 (0.0530)	0.0532 (0.0598)
After first wave of pandemic	-0.0143 (0.0119)	-0.0230** (0.00910)	-0.0391* (0.0221)	-0.0294 (0.0223)
Social assistance	-0.0249 (0.0455)	0.0118 (0.0125)	0.0298 (0.0449)	-0.0210 (0.0549)
Age 30-39	-0.0332* (0.0176)	0.0108 (0.0135)	-0.0521** (0.0233)	-0.0679** (0.0322)
Age 40-49	0.00105 (0.0172)	-0.00118 (0.0210)	-0.0153 (0.0232)	-0.0460 (0.0350)
Age 50-59	-0.0100 (0.0205)	0.00681 (0.00196)	-0.0357 (0.0303)	-0.0282 (0.0402)
Age >60	0.00358 (0.0198)	0.00635* (0.00342)	-0.00534 (0.0383)	0.0193 (0.0482)
Female	0.0370*** (0.0113)	-0.0117 (0.0138)	-0.00142 (0.0152)	0.00251 (0.0190)
Primary education	0.0510*** (0.0186)	0.0304 (0.0260)	0.0340 (0.0251)	0.0242 (0.0350)
Secondary education	0.0162 (0.0203)	0.0156 (0.0242)	-0.0267 (0.0351)	-0.0292 (0.0397)
University education	-0.0890 (0.0703)	-0.0257 (0.0388)	-0.00695 (0.0692)	-0.0529 (0.0695)
Married	0.00309 (0.0112)	-0.0183* (0.0107)	0.0351* (0.0203)	0.0499** (0.0240)
Disability in household	-0.0404* (0.0238)	0.00976 (0.0193)	-0.0178 (0.0233)	-0.0572* (0.0306)
Chronic illness in household	-0.0184 (0.0163)	-0.0279 (0.0222)	-0.0316* (0.0185)	-0.0267 (0.0241)
Household size	0.00408* (0.00205)	-5.83e-06 (0.000466)	-0.00722** (0.00351)	-0.0176*** (0.00430)
Share of children (age<15) in household	-0.00617 (0.0230)	0.0406 (0.0273)	0.0546 (0.0367)	0.0727 (0.0524)
Share of elderly (age>60) in household	0.0390 (0.0300)	-0.00872 (0.00794)	0.00911 (0.0610)	-0.0663 (0.0652)
Short-term social assistance (COVID related)	-0.0127 (0.0289)	0.00272* (0.00157)	-0.00604 (0.0398)	-0.0293 (0.0449)
Health insurance (household)	-0.00932 (0.0150)	-0.0335 (0.0263)	-0.0264 (0.0199)	-0.0270 (0.0275)
Observations	2,180	2,180	2,180	2,180
R-squared	0.028	0.028	0.017	0.018

Note: Standard errors (in parentheses) are clustered at the household level. \*, \*\* and \*\*\* denote p < 0.10, p < 0.05 and p < 0.01, respectively.  
Source: Author

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