

SOCIAL EXCLUSION AND HEALTH INEQUALITIES IN THE TIME OF COVID-19

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Abstract. Social exclusion as a process leads to a state of multiple relative deprivations in diverse areas of social life, like employment, education, healthcare, social ties, respect. Individuals or groups may have a worse position in several areas, particularly with other individuals or groups in society. Coronavirus pandemics disproportionately affect poorer communities and socially excluded people. Socially excluded are *double victims*; due to their position, they are more prone to infection by a coronavirus, further increasing their exclusion. The purpose of this contribution is to provide a conceptual framework for analyzing the relationship between social exclusion and health disparities during the COVID-19 pandemic. The goal is to comprehend the causes and consequences of unequal power relationships and offer critical assessments of current policies and measures to reduce health inequalities. Health and social inequalities are a significant constraint to economic revival and a successful fight against pandemics. The extent of the economic and health crisis caused by pandemic shock largely depends on past health and social inequality.

Keywords: social exclusion, poverty, COVID-19, healthcare, health inequalities.

JEL Classification: I14, I18, I31.

Introduction

The World Health Organization [WHO] announced on 3 August 2020 that there are almost 18 million confirmed coronavirus cases worldwide, with 683 thousand deaths (WHO, 2020). Almost all countries in the world have reported at least one case. In response, health authorities around the world are demanding frequent hand-washing and no face-touching. They have also advised people to take sick leave days at the beginning of symptoms. The recommendations have provoked the poor and precariously employed and socially excluded to deem again how demanding it is for many people to deal with a severe health problem.

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Although de Cervantes reminds us that illness attacks equally kings and pawns or (commoners), it looks like that their position is not identical because many researchers have found that coronavirus pandemics disproportionately affect poorer communities. Studies even suggest that it is inaccurate to believe that the ill and elderly are the most at-risk during plagues. Instead, mortality rates are divided among various classes, with poor regions recording more deaths during health crises than affluent ones. Healthcare and healthcare insurance are critical parts of economic, social, and political policies that are a consequence of and precondition for economic development and an indispensable factor for long-term quality of life. The forms that such policies may take very much depend on the existing institutional arrangements in social and economic life and the political willingness to change such systems to become steadily more inclusive. Access to healthcare disparities influence disparities in other dimensions of well-being and vice versa.

Without a doubt, poverty and social exclusion are significant factors in the virus's widespread spread. For instance, social distancing is impossible in densely populated areas, public transportation, and prisons. Additionally, it may result in increased stigmatization of already marginalized groups, while mass school closings may result in some children going without their only daily meal. Moreover, such circumstances may impose additional burdens on female caregivers of children and elderly family members. Additionally, healthcare services in refugee camps are frequently of low or insufficient quality and quantity, and adverse living conditions can promote the spread of communicable diseases, most notably the coronavirus. Finally, such a situation could shift responsibility away from the government and its agencies and toward individual employees and employers, thereby consolidating existing forms of privilege and deprivation across social determinants of health.

Despite the dire situation, the WHO has issued no practical guidance on implementing public health measures that protect people's health while also respecting human rights and promoting social inclusion. Amid growing public anxiety, confusion, misinformation, and government responses that may exacerbate rather than alleviate intolerance, discrimination, and exclusion, it is critical to define and implement critical human rights and inclusion principles and their accompanying guidance. The purpose of this text is to provide a conceptual framework for analyzing the relationship between social exclusion and health disparities during the COVID-19 pandemic. The goal is to comprehend the causes and consequences of unequal power relationships and offer critical assessments of existing policies and measures to reduce health disparities. Following the introduction, Section 1 contains a definition of social exclusion and a literature review. Section 2 discusses related health disparities, while Section 3 discusses the experiences of various countries with coronavirus. Conclusions and recommendations are included in the final section.

1. The definition of social exclusion and the literature review

Social exclusion has become one of the most widely discussed social sciences in the last 25 years, characterized by multidimensional approaches (Sen, 2000). It is a broader concept that rejects traditional, established approaches, particularly those exclusively focused on poverty and marginalization. The EU was instrumental in popularizing the concept of exclusion, introducing it into political and academic discourse, and levying it on countries with diverse linguistic and cultural traditions. A growing number of people live in social insecurity; while some are beneficiaries of various state and non-state social welfare programs, a growing

proportion of the total population lacks access to any form of social protection. As a result, since the 1970s, there have been increasing discussions about new risks, labor market duality, and new poverty. The concept of social exclusion can assist us in better comprehending the nature and causes of deprivation, poverty, and unfairness, as well as develop more suitable and effective solutions to these inequities (Sen, 2000). Social exclusion is a challenging notion in countries and regions with large populations living in poverty. In these circumstances, other discourses are more pertinent for policy and action. Exclusion, on the other hand, encompasses all strata of society, all social and age groups. The excluded do not have to be impoverished financially, as no family, regardless of its material circumstances, can guarantee that its children will not become homeless, addicts, runaways, or delinquents. Being poor almost always results in social exclusion, but exclusion encompasses more than poverty. It is associated with engagement in social and economic interactions (The World Bank, 2007). While income poverty and social exclusion are inextricably linked, they do not always intersect. Without being impoverished, one can be socially excluded (Atkinson, 1998).

There are many definitions for social exclusion (Atkinson et al., 2017). Mathieson et al. (2008) give 12 distinct definitions of social exclusion in Annex 1 on page 56, culled from the academic literature, and additional definitions from governmental or international entities. The definitions of social exclusion can be broadly classified into two categories: those that demonstrate that an individual or group is excluded from, and those that attempted to explain a broader relational approach by focusing more closely on the mechanisms and societal imbalances that contributed to and prolonged social exclusion (O'Donnell et al., 2018). The SEKN's (Popay et al., 2008) description is one of the most concise and accurate: social exclusion is a dynamic, multifaceted process fueled by uneven power relationships that operate and interact across four dimensions. These are the social, political, cultural, and economic components of existence. The social dimension is based on proximal relationships of support and solidarity, most notably personal connections with friends and relatives, which fosters a sense of belonging within social institutions. The political dimension of power dynamics is established through relationships that result in unequal patterns of legal rights embedded in constitutions, legislation, official policies and practices, and the conditions under which rights are realized – including access to various social services, such as healthcare, education, and social protection. Opportunities for engagement in public life, the expression of desires and interests, and access to services are lacking along this dimension. The cultural dimension reflects a diversity of widely accepted and valued beliefs, customs, and ways of life. The economic dimension concerns the distribution and accessibility of underpinning elements of life, including adequate job, conditions of employment, earnings, and accommodation (Taresh et al., 2021). According to the Irish Combat Poverty Agency, social inclusion is a series of positive measures aimed at achieving equal access to goods and services, helping all individuals participate in their community and society, encouraging all people to contribute to social and cultural life, and recognizing and challenging all forms of discrimination (Kelly, 2010). As a result of social exclusion, multiple relative deprivations in diverse spheres of social life, such as employment, education, healthcare, social ties, and respect, result. As a result, individuals or groups may find themselves in a worse position in various areas, most notably in their interactions with other individuals or groups in society. Unlike multidimensional deprivation, the social exclusion does not refer to the accumulation of several adverse living conditions but the combination of defective material and non-material dimensions of life. The following are the most frequently stated characteristics of social exclusion: complexity

(Byrne, 1999; Mathieson et al., 2008). Atkinson and Marlier (2010), multidimensionality (Frazer et al., 2014), and its dynamic nature (United Nations Development Programme Croatia, 2007; Atkinson et al., 2017). The dimensions contribute to exclusion from appropriate healthcare primarily through an unequal distribution of resources and capabilities, which results in the inability of the healthcare system to meet basic needs (Mishchuk et al., 2019; Pacáková & Kopecká, 2018). Vavrek and Kovářová analyzed the multidimensionality of social exclusion recently (Vavrek & Kovářová, 2021).

It is crucial to clarify the usage of the phrase “social exclusion” to refer to a state experienced by certain groups of people from the use of the term “social exclusion” to refer to multidimensional processes that result in exclusion from social institutions. In policy terms, social exclusion is commonly defined as citizens being considered to be excluded from conventional social structures and healthy connections. It is hypothesized that these exclusionary processes result in a continuum of exclusion characterised by unequal resource distribution and limited or unequal access to the capacities and rights required to meet fundamental requirements.

Establishing a set of criteria for defining who is excluded and how they are excluded is crucial for tracking progress, assessing the effectiveness of inclusion-promoting efforts, and ultimately ensuring that no one is left behind (United Nations, 2016). As a result, quantifying social isolation is extremely difficult. While measuring social exclusion in general has improved, determining the relationship between social exclusion and health outcomes remains extremely difficult (Atkinson et al., 2017). There are numerous reasons for this, including inconsistencies in how social exclusion is defined and quantified, a lack of a commonly agreed-upon set of indicators, and the inclusion of health indicators as a component of or risk factor for social exclusion in some measures of variability, rather than because of experience. As a result, the complexity of the idea of social exclusion – its multiple nature that includes both objective and subjective variables – cannot be fully conveyed in indicators and figures, and formal indicators cannot serve as a useful starting point for successful policy and action (Popay et al., 2008). The measurement of the health dimension of social exclusion always involves elements of subjectivity, in contrast with an approach utilizing objective indicators such as life expectancy, perinatal mortality, low birth weight, access to healthcare facilities, and the incidence of industrial diseases (Atkinson & Marlier, 2010). Even a relatively simple assessment on life expectancy by age and sex¹ (Eurostat, 2020), provides surprising results. Women in Bulgaria in 2018 lived healthy lives for ten years after 65 years, while in Luxembourg, they lived healthily for 9.1 years, in the Netherlands for 9.7 years, and in Austria for 7.4 years. It is tough to believe that Bulgarians are healthier than the Dutch, Luxembourgish, or Austrian. In Denmark, the period is 11.3 years, and in very similar Norway and Sweden, it is more than four years longer (15.4 and 15.7, respectively). The data are undoubtedly accurate, but it is a *subjective assessment* of personal health status. Roughly similar personal health conditions, various persons may experience and consider significantly different. The problem of social exclusion within the pandemic context through the channel of digital deprivation based on the example of Poland was given in the paper (Kuc-Czarnecka, 2020).

If the researcher is interested in health status, he or she may sample households but may also wish to learn about the health of all household members, from the newborn to the great-grandfather. For whatever reason, the researcher may prefer to analyze the position

¹ The indicator Healthy Life Years (HLY) at age 65 measures the number of years that a person at age 65 is still expected to live in a healthy condition, and it includes information on mortality and morbidity.

of an entire unit rather than the individual's health status and various other demographic, social, or economic data and preconditions. For instance, it would be illogical to consider the baby's income in isolation from her parents and other family members. However, once the data have been aggregated, there are numerous possibilities for defining the unit of analysis using the following criteria: "a) typical dwelling, where a household is defined as those who share some degree of housekeeping but are not necessarily related by blood; b) everyday spending, where the spending unit is defined as those who make significant spending decisions in common but are not necessarily related by blood; c) blood or marital relationship, where members of the family unit are related by marriage, cohabitation, or blood resemblance" (Atkinson & Marlier, 2010). All these factors complicate attempts to quantify the effect of social exclusion on health outcomes.

There are direct and strong links between various forms of social exclusion. Sen (2000) explains that "Being excluded from social relations can lead to other deprivations as well, thereby further limiting our living opportunities." For example, unemployment (mainly long-term when a person is jobless for more than 12 months) seriously deteriorates health status because it often leads to clinically identifiable illnesses and higher mortality rates. This can be the consequence of the loss of income and material resources and the diminished level of self-respect, hope, and motivation caused by persistent rejection by possible employers. Long-term unemployment also worsens human capital and employability due to *scarring effects* (a person is unemployed due to his or her characteristics), which further limits the probability of finding a job and reduces the possibility of exit from social exclusion. Deprived health status obstructs or discourages further education, training, and active job search, increasing the risk of poverty and social exclusion (Barr, 2012). Exclusion from work due to health problems or inability to obtain credit can easily result in economic impoverishment, resulting in other deprivations such as malnutrition or homelessness, which will undoubtedly worsen health status. The most critical component of social exclusion associated with health status is significant health inequalities, notable inaccessibility to healthcare services, and their negative consequences.

2. Health inequalities and their consequences

Health inequalities exist when disparities in health status or the distribution of health determinants exist between different population groups, for example, disparities in mortality rates between people from various social classes (Gwankin, 2000). Health inequity refers to avoidable or reversible disparities in health status between populations within and across countries. These distinctions arise because of social processes and are neither natural nor inevitable. As a result, it is critical to distinguish inequality from inequity in health. Certain health inequalities are unavoidable because they are caused by biological variations or free choice. Others are attributable to the external environment and circumstances beyond the individuals' control and are thus unnecessary and avoidable. Due to their unjust and unfair nature, health inequalities result in health inequity (WHO, 2011).

The World Health Organization publishes statistics on health inequities in various countries, demonstrating variation in mortality rates among children under the age of five by residence and wealth level. According to these data, despite some minor improvements at the national and regional levels in terms of reducing health inequities, global progress in implementing the social determinants approach "reflects in part the inadequacy of governance

at the local, national, and global levels to address the 21st century's key problems" (WHO, 2011). While circumstances vary by country and within countries, the most advantaged group rarely reports poor general health or long-standing health problems. Simultaneously, the disadvantaged population is subjected to material deprivation and adverse health outcomes (Wagstaff & van Doorslaer, 2000). For example, for both gender at ages 25 and over in the EU, less than 1 in 20 of the wealthiest quintile of the population expressed poor or feeble general health, while for the most deprived fifth of men and women, the reported levels were above 20% (European Commission, 2013).

This relationship between poverty and ill-health demonstrates that causality operates in both directions: poverty breeds an unfavorable health situation, while poor health makes it more difficult to escape poverty. Women are more likely than men to suffer from poverty and social exclusion, and thus chronic illness. According to the European Commission (2013), there are apparent inequalities in total mortality, cancer, ischaemic heart disease, general morbidity, diabetes, and suicide by educational status and thus income level. Health services fail to reach the poor, particularly in developing countries, because the wealthy can pay for healthcare in the private sector, but the poor also receive fewer government subsidies in the health sector (Wagstaff & van Doorslaer, 2000). The bias toward the wealthy is undeniable in the hospital sector, which receives the lion's share of government spending.

Additionally, due to a shortage of physicians and personal protective equipment in hospitals, the growing number of cases of infected doctors remains a serious concern. In the majority of developing countries, health systems are particularly precarious. For example, Sub-Saharan Africa has approximately one doctor for every 5,000 people, compared to approximately one doctor for every 300 people in Europe (The Economist, 2020). Additionally, many of these countries cannot test for and identify infected individuals, implying that the disease may spread undetected. Only a few developing countries, such as Costa Rica and Malaysia, appear to distribute public spending on health care in a pro-poor manner (Wagstaff, 2002). Yamin (2020) examines why the current situation has failed to foster greater equality within and between nations and how human rights practice must address threats to social justice in healthcare access.

As with social exclusion, measuring health inequalities and inequity is challenging. It is necessary to standardize healthcare needs in order to quantify inequality and inequity. Following standardization, any residual inequality in utilization, such as income, can be characterized as horizontal inequity, either pro-poor or pro-rich. Standardization for differences in need can be accomplished in two ways: directly or indirectly. After standardizing health care use for need, inequity can be quantified using the concentration index (Wagstaff & van Doorslaer, 2000). Typically, disparities in healthcare utilization are related to socioeconomic characteristics such as income. For instance, poorer citizens consume more healthcare resources in developed countries because of their poor health status and increased need for healthcare. Such disparities in healthcare access and utilization cannot be characterized as inequity.

On the other hand, in developing countries, the poor's lack of healthcare insurance and purchasing power naturally results in lower healthcare utilization than that of wealthier citizens, despite their greater need. In the situation mentioned above, inequity in health care utilization does not accurately reflect the underlying inequity. Although the appropriate standardizing variables are immediately noticeable with demographic standardization, this is not true for standardization. As a subjective assessment of one's health status, need is a somewhat elusive concept that is open to numerous interpretations regarding the definition

of healthcare equity. According to some, measuring need is impossible to control, at least in the context of large-scale household surveys. However, in practice, researchers assess needs primarily using demographic data combined with health status and morbidity variables (such as chronic conditions, self-reported health, and activity limitations). Additionally, an indirect standardization method calculates the difference between the actual distribution of use and the distribution of need that would be expected.

Health inequalities can be quantified in a variety of ways (European Commission, 2013). The absolute gap and the relative gap or ratio by various data such as mortality rates, life expectancy at birth, standardized death rates per 100,000 population, self-perceived health status, gender differences in life expectancy, and healthy life years at birth are the simplest to calculate and comprehend. Ratios between the highest and lowest values are more helpful for examining time trends in inequalities than absolute gaps. Annual fluctuations in the lowest value or denominator, on the other hand, may erode the standard ratio's strength. Such fluctuations are almost certainly found in small populations, particularly in low-mortality age groups. The slope index of inequality is a second gradient measure of inequality that quantifies socioeconomic position.

Welfare spending has different effects on different groups based on their educational level, according to an examination of EU-SILC data. Increased welfare spending helped all social categories, although it had the greatest impact on individuals with only a primary education and the least impact on those with a tertiary education. Furthermore, an examination of EU-SILC data demonstrates a substantial link between per capita social protection expenditure and the proportion of the population reporting ill health. To put it another way, countries with fewer social protection have a higher prevalence of alarming or awful health.

The previously mentioned slope index of inequality (SII) is a single score that represents the inequality gap between the most and least impoverished people of society. It can be computed for any ranked measure of deprivation, such as education or income level. The population is divided into 10 divisions, with the poorest tenth in the first. The second-poorest tenth grader in the second group and the least-poor tenth grader in the top group. The desired health outcome is then determined for each of these ten groups, such as life expectancy at birth. The life expectancy of the most destitute tenth of the population is much lower than that of the least deprived tenth. When the life expectancies of each of these categories are given in decreasing order of deprivation, there is virtually likely an increasing slope. The best-fitting line is then computed and added to the graph. The two final points on this line represent approximate estimates of the life expectancy of the most and least deprived members of the population, respectively, and the difference between these life expectancies represents the SII in life expectancy: the greater the disparity between the most and least deprived individuals, the greater the number and the steeper the SII in life expectancy. According to the data, education is a lesser predictor of negative health outcomes than material deprivation. People with no or only a pre-primary education have poor health outcomes, owing to their smoking and alcohol consumption habits, obesity, lack of physical activity, and general apathy toward their health problems (Macintyre et al., 2005), but primarily due to the healthcare system's inaccessibility.

It may come as a surprise, but despite their critical nature, only a few policies or actions specifically address social exclusion and related health inequality on a global scale (Popay et al., 2008). As a result, a combination of theory and pragmatism is required to define and implement necessary policies and actions and suggest which policies or actions can be used as positive examples of effective practice in addressing social exclusion. Health inequities are

a source of contention for societies and their governments and reducing them requires comprehensive and comprehensible policy responses across sectors and countries (WHO, 2011). Yamin (2020) believes that inequitable power distribution among diverse classes and social groups must be addressed by increasing previously excluded stakeholders' participation in decision-making processes.

Promoting diverse groups and communities' political participation is critical for building a broad social support base for innovative social policies and measures. These activities can significantly improve the quality and responsiveness of healthcare and other related social services, as well as management, accountability, evaluation, and monitoring. Numerous developing countries, such as Uganda, have successfully mobilized community empowerment, participation in the management, and monitoring of health facilities through their Health Sector Strategic Plans. Successful and efficient community involvement has a beneficial effect on health, especially when backed up by organizational and community processes (Maulsby, 2019).

Given the unique characteristics of each country and region, the inherent diversity of policies and actions should be tailored to the local conditions, development, and socioeconomic situation. Policies and actions should include the provision of new services, different initiatives to improve access to existing services, and enhanced coordination and implementation of existing policies and new strategies for policies and actions to address insufficient access to health care. Resolving health disparities in access to healthcare and addressing social exclusion also requires increased investment in other strategies for poverty eradication and social inclusion. For example, an EU report on health inequalities demonstrates a strong correlation between social disadvantage and health inequalities. The EU Member States with insufficient or insufficient social protection typically have a higher self-reported alarming or appalling health (European Commission, 2013).

Health equity monitoring cannot be limited to the healthcare sector or the measurement of health outcomes. Measuring inequities in health outcomes defines the problem but offer few solutions. However, monitoring inequities in the most critical social services and connecting data from various sectors can be beneficial in proposing, designing, and implementing optimal policies and making necessary adjustments when adverse outcomes are demonstrated (WHO, 2011). This is especially critical in light of the glaring divide between policymaking and policy implementation. This 'implementation gap' appears to be broader in some countries than in others, which can be resolved without a doubt through effective peer review and dissemination of best practices. Finally, reducing existing social exclusion requires sustained political and technical capacity building at all levels, most notably among policymakers and government employees involved in healthcare and social service delivery through NGOs and the private sector. Additionally, facilitation and other forms of knowledge exchange, the creation and dissemination of tools, and education and training are critical.

At times, it is suggested that resolving health inequalities serves as a diversion from more pressing issues, such as global climate change or mass migration from developing countries. However, there has always been a more pressing issue that should be addressed first and foremost, and thus the problem of social exclusion cannot wait for better times and circumstances. Additionally, ignoring social exclusion exacerbates other global problems, such as the pandemic events caused by the COVID-19.

3. Experiences regarding the social exclusion and coronavirus

In December 2019, a novel coronavirus named SARS-CoV-2 emerged in Wuhan, China (Acter et al., 2020; McKay et al., 2020). Coronaviruses are a family of viruses that circulate among warm-blooded animals and birds but can also be found in humans (Jaiswal & Saxena, 2020; Liu et al., 2020). There are four main sub-groupings of coronaviruses known as alpha, beta, gamma, and delta, as shown in Table 1.

Among these four genera, alpha- and beta-CoV are mainly responsible for human infection. The seven coronaviruses that can infect people are HCoV-NL63, HCoV-229E, HCoV-OC43, HCoV-HKU1, CoV (SARS-CoV), CoV (MERS-CoV), CoV 2 (SARS-CoV-2) (Acter et al., 2020; Yin & Wunderink, 2017). Table 1 presents that the SARS and MERS viruses can cause severe acute respiratory infection while four other lead to mild symptoms of the common cold. COVID-19 has been observed to be mostly transmitted from symptomatic patients by direct or close contact with respiratory droplets or indirect contact with infected objects and surfaces (Burke et al., 2020; Chan et al., 2020; Ong et al., 2020). However, the transmission may also occur from asymptomatic persons (Primorac, 2020; Zou et al., 2020). Since there was no vaccine or drug treatment at the start of pandemics, only available methods to control epidemics were the one from the late 19th and early 20th century: principally keeping records, monitoring both patients and all those who were in contact with them, and applying isolation and quarantine measures (Baldwin & Weder di Mauro, 2020). Further, extensively implemented measures to reduce person-to-person transmission of illness have been social distancing, avoiding close contacts and large gatherings, using masks, and hand hygiene after contact with contaminated objects/materials (Centre for Disease Control and Prevention, 2020).

The COVID-19 epidemic is a unique disruption to the social fabric and health care system in the whole world. It is a global problem that requires a global response. The epidemic will eventually retreat, but it is unknown how fast this will happen and its economic and social consequences. National lockdowns and social distancing measures in developing coun-

Table 1. Types of HCoVs responsible for health hazard (source: Acter et al., 2020; Yin & Wunderink, 2017)

Genera of Coronavirus (CoV)	Human Coronavirus	Health Hazard
alpha-CoV	HCoV-NL63	Mild symptoms of common cold
	HCoV-229E	
beta-CoV	HCoV-OC43	
	HCoV-HKUI	
	Severe acute respiratory syndrome CoV (SARS-CoV)	Potentially severe respiratory tract infection
	Middle East respiratory syndrome CoV2 (MERS-CoV)	
	Severe acute respiratory syndrome CoV 2 (SARS-CoV-2)	
gama-CoV	Unknown	
delta CoV	Unknown	

Note: For asymptomatic COVID-19 cases, other signs and symptoms are also developed (see more Acter et al., 2020, p. 6).

tries are leaving millions of people starving and without money and sufficient income, while in many developed countries deprived and the homeless population is particularly vulnerable (Gaeta et al., 2020). At the same time, increased public health spending to tackle the COVID-19 pandemic may reduce funding for other critical public health priorities, which may endanger adequate access to certain health services and increase the burden of disease (Ataguba, 2020). Furthermore, individuals who were formerly well-integrated into society are now facing also social and economic vulnerability.

This shock is entirely uncommon as it affects essential elements of both supply and demand sides. Supply will be disordered due to morbidity and mortality, a direct reduction in the supply of labor from unwell workers, and the restraint efforts that limit mobility and higher costs of doing business due to controlled supply chains and a tightening of credit; what should lead to increased unemployment. Furthermore, a significant effect on economic activity happens because of activities to hold the spread of the disease through different measures like lockdowns and quarantines, which inevitably lead to a decrease in capacity utilization. Furthermore, firms that count on supply chains have been unable to get the needed parts, whether on the national or international market (Gopinath, 2020). Demand will also decrease due to higher uncertainty, increased precautionary behavior, containment efforts, and increased financial costs that reduce spending. These effects will spill over across borders. Georgieva (2020) deems that under any scenario, global growth in 2020 will drop significantly below the level from 2019. How far it will decrease, and for how long, it is difficult or probably impossible to predict and would depend on the epidemic itself and the timeliness and effectiveness of organized human actions.

The biggest challenge right now is how to handle uncertainty. This is particularly difficult for countries with underdeveloped or weaker health systems and response capacity. Therefore, there is a need for a global coordination mechanism to reduce uncertainty and accelerate the recovery of demand and supply. Moreover, the spread of COVID-19 has deeply threatened social cohesion and community solidarity, bringing new forms of vulnerability for an increasing number of people. Overcoming social exclusion requires a new approach to the role of the state.

There is a paradoxical situation in which poor people are over-optimistic towards their health status and seriously neglect health problems (Macintyre et al., 2005). Furthermore, in many developed countries, there is no mandatory healthcare insurance. Therefore, bankruptcies due to substantial medical expenditures were even before the COVID-19 a vital cause of US personal bankruptcies (Baldwin & Weder di Mauro, 2020) or limited access to health care for a significant part of the population, like in the United Kingdom (Gill et al., 2013). Precarious workers who do shift work and get paid by the hour cannot take sick leave, as opposed to permanent staff on wages or salaries with sick days built-in (Zoledziowski, 2020). In most countries, sickness benefits are paid not from the first day of sickness but with some delay, for example, in Estonia and Italy from the 4th day. In certain states, an individual must meet certain conditions. In France, for a maximum of six months of sick leave, an employee must have worked for at least 150 hours in the three calendar months or 90 days prior to stopping work, or have received a salary totalling at least 1,015 times the hourly *Smic* (*salaire minimum interprofessionnel de croissance* – minimum interprofessional growth rate of pay) in the six calendar months prior to stopping work. In most of the countries, the employer bears the expenditures for sickness benefits for some period, for example, in the Czech Republic, for the first 14 days of sickness (European Commission, 2013). Therefore, too often, the use of a sickness period will not be deemed a very positive factor by possible professional promo-

tion or can be a hidden reason for firing in a case of redundancies. Finally, sickness benefit is just a part of regular wage or salary in all countries, motivating employees, particularly those on the fixed-term employment contract or working through the agency for temporary employment staying on the job regardless of their sickness. That is dangerous behavior with a contagious sickness like COVID-19 because an infected person can quickly spread the virus among many employees in the company. As many of the poor do not have adequate IT equipment or adequate digital skills to obtain needed information, they can, at the beginning of the pandemic, be entirely uninformed or, even worse, wrongly informed about the terrible effects of the virus (European Association for the Education of Adults, 2020).

No country currently includes low socioeconomic status groups on their list of groups prioritized for pandemic vaccination. This is surprising, considering that pandemic mortality rates both in 1918 and in 2009 were the highest among those with the lowest low socioeconomic status (Mamelund et al., 2019). It can be estimated with certainty that poor citizens are particularly exposed to the infection. Of the 1.3 billion people who are poor according to the Multidimensional Poverty Indicator (MPI) – meaning that each person is deprived in at least one-third of the dimensions at the same time – only 12.3% (160 million) are deprived in two out of ten indicators. Almost all (98.8%) of all MPI poor people are deprived in three or more indicators, and 82.3% are deprived in five or more indicators (Alkire et al., 2020). Keeping in mind the nature of multidimensional poverty – primarily simultaneously multiple deprivations – it is possible to assess the number of poor people who are particularly at risk from COVID-19.

To study the impact of pandemics on social exclusion, we use social exclusion index and epidemic dummy variable for ten countries based on data availability from Peltzman (2009) for Brazil, France, Germany, India, Japan, Russia, Spain, Sweden, UK, USA between the selected indicator in country i and year t using the panel vector autoregression model (PVAR) in the reduced form:

$$z_{it} = \Gamma_0 + \Gamma_1 z_{t-1} + \varepsilon_t. \tag{1}$$

Following Abrigo and Love (2016), we use

$$Y_{it} = Y_{it-1}A_1 + Y_{it-2}A_2 + \dots + Y_{it-p+1}A_{p-1} + Y_{it-p}A_p + X_{it}B + u_i + e_i, \\ i \in \{1, 2, \dots, N\}, t \in \{1, 2, \dots, T_i\}, \tag{2}$$

with Y_{it} – $(1 \times k)$ vector of dependent variables from the Table 1; X_{it} – $(1 \times l)$ vector of exogenous covariates; u_i, e_{it} – $(1 \times k)$ vectors of dependent variable-specific panel fixed-effects and idiosyncratic errors; $A_1, A_2, \dots, A_{p-1}, A_p$ – estimation parameters; matrix B $(1 \times k)$ – estimation parameters; assuming shock innovation $E(e_{it}) = 0, E(e'_{it}e_{it}) = \Sigma$, and $E(e'_{it}e_{is}) = 0$, for all $t > s$.

We use Peltzman’s (2009) Gini coefficient for lifetime inequality as a proxy variable to measure social exclusion. For the 2002–2020 period, we use the Univariate SSA gap-filling procedure (Ghil et al., 2002; Vautard & Ghil, 1989; Vautard et al., 1992; Allen & Smith, 1996; Schoellhamer, 2001). Peltzman (2009) defines social equality as equal access to social goods and services. For definition of the Gini index for lifetime inequality and social equality, see Peltzman (2009). The lower Gini coefficient for lifetime inequality shows a high level of social equality. Here we study the impact of epidemic diseases from 1742–2020 on social equality. Gini’s lifetime inequality index serves as a proxy for social equality, which we consider an indicator of social exclusion. Equal access to social services and goods, that is, social equality, indirectly measures social exclusion. The higher the Gini index for lifetime inequality, the higher the level of social exclusion.

After the coefficients of the VAR system are estimated, impulse responses using a Cholesky decomposition (with 5% error bands generated using 500 Monte Carlo replications) and variance decompositions are computed. Here we present just the sample's orthogonalized impulse response (IRF) results because of the space. To summarize, the IRF's (with 95% confidence intervals in grey) suggest pandemic outbreaks significantly impact social exclusion.

The figure shows pandemic outbreaks from 1742–2020 on social exclusion measured by the Gini index for lifetime inequality. The top-right chart shows the impulse response for social exclusion with pandemic outbreaks as an impulse variable. We can see that a shock (impulse) in pandemic outbreaks (new episode) decreases social exclusion in ten observed countries from 1742–2020. In the short run, the impact is not significant, as shown in Figure 1. COVID-19 outbreak will not decrease social inequality in the short run since it affects all income groups equally. Most of the pandemic outbreaks show the exact nature, and it affects all income groups equally. Epidemic outbreaks linked to housing and social conditions hit lower-income groups than wealthier groups. Still, the impact of such epidemic outbreaks on life expectancy is limited. For example, Spanish flu 1918 significantly decreased life expectancy across all income groups as pandemic outbreaks do. Opposite, epidemic outbreaks as typhus linked to worse social conditions do not significantly impact a country's average life expectancy. Thus, epidemic outbreaks do not affect social exclusion significantly (on the aggregate, national level), while pandemic outbreaks do.

In the short run, COVID-19 pandemic outbreaks will impact social exclusion by about 3%. However, in the long run, the impact of COVID-19 on social exclusion will be significantly higher. In fact, after ten years (impulse response horizon), COVID-19 will influence social exclusion by 65% in the next ten-year period. Our analysis shows that each pandemic

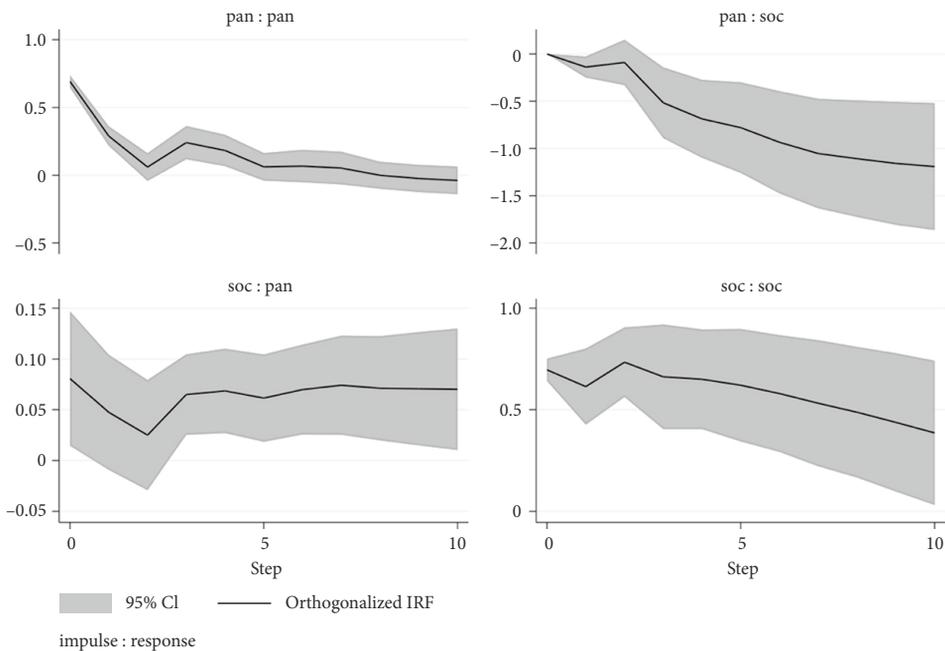


Figure 1. Graph of orthogonalized IRFs for social exclusion and pandemic (source: authors' calculation on data from Peltzman, 2009 and authors' construction)

outbreak in the short run does not affect social exclusion but in the long run, yes. Social adaptation policies to fight pandemic outbreaks decrease social exclusion in the long run since social goods and services are made available to all income groups, affecting life expectancy equally. After a single pandemic outbreak in the long run, if the life expectancy increases due to improved health conditions and innovation in medicine, it increases equally across all income groups, decreasing social exclusion.

Loss of human lives is a tragic consequence of pandemic outbreaks. The good in the evil occurrences is that pandemic outbreaks in the long run trigger society response in terms of social policies to fight pandemics resulting in future lower social exclusion. Pandemic outbreaks increase access to social goods and services through social policy response to the crisis lowering social exclusion. The history of pandemics (including epidemics) from 1742–2020 proves the same empirical evidence for COVID-19.

In dire situations, like wars and pandemic events, all the best and the worst human characteristics come to the surface. While there are many heroic actions by medical staff, police, fire workers, and employees in retail trade and transport, there are also blatant examples of disrespect and attacks on the weakest in the society, like poor, old, weak, and infirm (The Alliance for Child Protection in Humanitarian Action, 2019), diverse minorities – particularly racial and ethnic (Park Hong, 2019), immigrants (Al Jazeera, 2020), persons with disabilities and other vulnerable groups. For example, law (2020) states that more than half of coronavirus cases in Chicago, Illinois, were African American, despite only representing around one-third of residents. Seven in 10 patients who died from COVID-19 in the city were African American. In Louisiana, where approximately one-third of the population is African American, that group accounted for 70 percent of COVID-19-related deaths. According to preliminary state data, in New York, the epicenter of the pandemic in the USA, the coronavirus is killing African Americans and Hispanics at twice the rate of white people. The alarming trends follow a long history of inequality and racism that have disproportionately impacted African Americans. They suffer from high rates of asthma, obesity, and diabetes, which are adverse health conditions that cause a significantly greater risk for complications from COVID-19. Furthermore, such a situation is worsened by a lack of socioeconomic opportunities and adequate and reliable healthcare access.

The coronavirus pandemic in Italy has heightened awareness of the state of emergency facing refugees and migrants and their capacity to live and survive daily. Bertelli (2020) reports that Selam Palace, a sprawling structure on the southern outskirts of Rome, Italy, has devolved into a squat for refugees and migrants, with coronavirus confirmed. Citizens of the World, a charitable organization, has provided weekly health and social counseling services to refugees who occupied the building in 2006. Overcrowding, a lack of ventilation, and any means of heating or cooling these spaces create an ideal environment for virus transmission. One toilet is provided for every 19 residents, and one shower is provided for every 33 residents. Residents are concerned that authorities did not evacuate relatives of some of those who tested positive, although social distancing is practically impossible in such circumstances. As Orcutt (2020) puts it succinctly, “Coronavirus was a litmus test, and many of the world’s most advanced nations all too visibly failed.”

While the virus theoretically targets both rich and poor, its daily impact has exposed the world’s inequities, revealing how safety measures such as frequent hand washing, social isolation, and teleworking are privileges available to only a portion of the population. Due to a long history of discrimination, Roma and other minorities have been trapped in vicious poverty cycles, making them particularly vulnerable to the virus and its economic consequences.

Due to their lower educational attainment and persistent prejudice, many job opportunities are unavailable to them, and the majority of Roma work informally sorting waste and raw materials or as day laborers. Due to the coronavirus, these jobs and substandard wages have vanished from these hidden zones. Given that most of them live in homes without access to safe drinking water and two-thirds of homes are not connected to a sewerage system, it is unsurprising that they face health and humanitarian risks. As a result, as they say: "Racism is indiscriminate, carpet-bombing groups that share the barest resemblance. We are not infected with the coronavirus. Our name is coronavirus" (Mema & Nikolic, 2020).

Discussion

There is a wide range of definitions of social exclusion in use, and they tend to focus on entirely different aspects of the term. Some define the problems associated with social exclusion; others describe the parts of life that people are excluded from, and others explain social exclusion levels. Many groups of people still suffer from basic deprivations and face substantial barriers to overcoming them. The distribution of opportunities and social services is uneven between and within countries. The ability to access health care, and related social services like education, can vary significantly by region in a country, as can the quality of these services. Inequality and limited accessibility to adequate healthcare and other social services restrict the ability of most vulnerable people to expand their capabilities, achieve needed social inclusion, and therefore affect the distribution of income in the long run.

Despite the great diversity in identities and needs, marginalized groups such as long-term poor, ethnic minorities, persons with disabilities, and other excluded persons often face similar constraints, such as discrimination, social stigma, and a risk of further social exclusion. Therefore, they are *double* disadvantaged because, due to their position, they are more prone to be infected by a coronavirus, which further increases their exclusion. However, each group also has distinct needs that must be satisfied if they are socially included and less vulnerable to infection. Reducing social inequality in access to healthcare is a core aim of international policies and health policy, but there are insufficient national and international pandemic preparedness plans and adequate implementation measures directed to lessen social exclusion.

Poverty and ill-health of the people are intertwined and mutually reinforcing. Developing countries tend to have worse health results than wealthy countries. Even within rich countries, poor people generally have worse health situations than better-off people. This link reflects causality running in both directions: poverty often causes ill-health, and ill-health enables poor people to exit from poverty. The goal of the fight against exclusion means primarily social integration and full participation and adequate access to the healthcare system as a consisting of social services. Supporting the social inclusion and reintegration of people with various health problems into society has also become an important international policy goal. One possible reason is acknowledging the immense economic and social burden of severe health problems and inadequate access to healthcare worldwide. The starting point for this goal is the notion that persons with various forms of illness who receive an appropriate and timely treatment will ultimately become more engaged and included in society.

To improve social inclusion, societies must strive towards universal policies regarding healthcare, and health insurance is needed to reach those left out. However, practical universalism in policy is complicated and requires long-term preparation and implementation, while proper healthcare for the total population does not guarantee accessible healthcare. For example, a country may be committed to universal healthcare, but various geographical

locations, like islands, isolated locations, or mountain areas, may prevent it from establishing health care centres accessible to the needed population. In any case, universal human development policies, including accessible healthcare and health insurance, need to be reorganized to reach those left out.

Health system financing policy can have a central role in eliminating health inequities if dedicated to obtaining universal health insurance coverage. However, additional attention is needed for equitable distribution of the burden of funding the system and fair use and provision of healthcare services relative to need. For countries at all economic development and income levels, fragmentation in financing arrangements is a severe obstacle to efficient redistribution of resources concerning need. Without a doubt, health systems contribute to health equity, social justice, and the end of exclusion, particularly in terrible times such as the year 2020, characterized by the widespread coronavirus pandemic.

Conclusions

Many groups of people still suffer from basic deprivations and face significant barriers to their elimination. The fight against exclusion aims primarily at social integration and full participation, and adequate access to the health care system as part of social services. Poverty and poor health of people are intertwined, and reciprocal strengthened. Supporting social inclusion and reintegration of people with various health problems has also become an important international policy goal. The starting point for this goal is the idea that people with various forms of the disease who receive appropriate and timely treatment will ultimately become more engaged and involved in society.

COVID-19 pandemic will affect social exclusion by about 3% in the short run, but it will increase it by 65% in the long run. Pandemic outbreaks increase access to social goods and services through social policy responses to the crisis. In the long run, social adaptation policies to fight pandemic outbreaks will reduce social exclusion, as social goods are made available to all income groups, affecting the same life expectancy. The study's findings suggest pandemic outbreaks have a significant impact on social exclusion in the long run, and the issue should be studied more deeply.

Policymakers should develop more effective social inclusion policies in a time of pandemics. Many policymakers believe that the expected economic revival after COVID-19 will solve the default shock impact of social exclusion. Future economic growth is necessary but not a sufficient condition to deal with COVID-19 social exclusion implications. Our study is limited by data availability on a small sample, and panel studies on a larger sample are needed in the future.

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