



Ca' Foscari  
University  
of Venice

Master's Degree  
in International Management  
"ordinamento" (ex D.M. 270/2004)

Final Thesis

# The COVID-19 Pandemic: Have We Really Been All in This Together?

**Supervisor**

Ch. Prof. Enrica Croda

**Graduand**

Fabio Gottardi

Matriculation Number 859253

**Academic Year**

2021 / 2022



# Table of Contents

Introduction.....	1
Chapter 1: Covid-19: Overview	
1.1 Introduction to Chapter 1.....	3
1.2 Is Covid-19 a black swan?.....	3
1.3 The diffusion of Covid-19.....	7
Chapter 2: A syndemic's story	
2.1 Introduction to Chapter 2.....	17
2.2 Structural inequalities.....	17
2.3 Differences in contagions and deaths.....	22
2.3.1 The factors behind the insurgence of a pandemic.....	22
2.3.2 Quality of the official Covid statistics.....	25
2.3.3 Mortality.....	27
2.4 The role of citizenship.....	44
2.5 Inequalities in the distribution of vaccines.....	46
Chapter 3: The crisis into the crisis	
3.1 Introduction to Chapter 3.....	55
3.2 Digital divide.....	55
3.2.1 The various dimensions of the digital inequalities.....	55
3.2.2 The effects of the digital inequalities during the Covid-19 pandemic.....	68
3.3 Employment.....	73
3.3.1 The controlled inequalities in the labor market.....	73
3.3.2 Teleworkability.....	74
3.3.3 Unemployment trends.....	80
3.3.4 Income losses and support practices.....	85
3.4 Education .....	91
3.4.1 The access to remote learning solution.....	91
3.4.2 The importance of an adequate family environment.....	93
Conclusions.....	97
References.....	101



# Introduction

Metaphorically speaking, the Covid-19 pandemic in its conceptual essence can be intended as one of the biggest cauldron of ideas, opinions, debates, hypothesis and ideological conflicts ever witnessed in modern times. At the base of the most discussed arguments there are several, and extremely important, questions such as: Was it really unpredictable? What kinds of errors, if any, have been made by national and international institutions for contrasting the diffusion and the negative effects of the virus? Have the direct and indirect consequences of the crisis been shared equally? And if not, what factors impacted on the perceived inequalities? The principal aim of this elaborate is to try to address these issues.

The motivations that stand behind the choice of the research undertaken are twofold. On one hand I would like to understand what truly happened during one of the most important phenomenon of current times unveiling the main elements responsible of the social crumbling experienced in the whole world. On the other hand, it gives me the opportunity to explore the complex system of interrelations through which inequalities still afflict today a large part of population both in developing and developed countries.

Inequality is a complex concept. In this project I will focus on selected dimensions. Specifically, I will analyze the health inequalities, inequalities in the availability of technological tools and the inherent access to online services, the labor markets, and the instructional frameworks. These dimensions of inequality play an important role in the core around which every society is developed. Therefore, an assessment of their internal disruption caused by the Covid-19 crisis allows me to obtain insights about the principal hardships suffered.

The structure of the study is composed by three chapter. The first chapter provides insights about the extent to which the covid-19 outbreak can be labelled as something of predictable and offers a chronological review of the spread of the infection. The second chapter focuses on the origin of the pre-existing structural inequalities within societies and the role that they played in the creation of the unbalances registered in the health context. The third chapter examines how the differences in the availability of digital solutions impacted on the capability to manage the hardships caused by generalized lockdowns and strict physical distancing measures offering also an in-depth analyses on the struggles in the labor and educational spheres.



# Chapter 1

## Covid-19: Overview

### 1.1 Introduction to Chapter I

This introductory chapter provides insights about the reasons behind the origin and the successive escalation of the Covid-19 pandemic. In doing so, it explores first the ideological fallacies at the base of the general unpreparedness in facing the virus-related shock, and then it furnish a chronological overview of its spread all over the world with the inclusion of the main events happened within the international context.

### 1.2 Is COVID-19 a black swan?

Since the very beginning of 2020 our lives have changed forever. Social norms, beliefs, our way of thinking about the world that surround us, all has vanished and no, this is not the script of the last Hollywood production, this is the cruel reality. The cause of this, as everybody sadly know, has been the spread of the new SARS COV 2 virus, better known as Covid-19, around the globe. This tremendous respiratory disease killed more than six million people as reported by the WHO<sup>1</sup>, it forced us to take extreme measures such as general lockdowns, it has disrupted global economy, and it has exacerbated already existing inequalities.

However, you've certainly heard governments stating that the outbreak of the infection was unpredictable and that all what was possible to do has been done, right? This affirmation would be true if Covid-19 could be categorized as a black swan<sup>2</sup>. So, what is a black swan? This term has been coined for the first time by Nassim Nicholas Taleb, author of the book "The

---

<sup>1</sup> "WHO Coronavirus (COVID-19) Dashboard", World Health Organization, Accessed June 12, 2022.

<sup>2</sup> Nassim N. Taleb, *The Black Swan: The impact of the Highly Improbable*, (New York: Random House, 2007).

Black Swan: The Impact Of The Highly Improbable” published in 2007, and the origin of the name is a quite curious story.

Before 1697 among European teachers, scientists, and animal experts there was a strong conviction that all the swans were white because every swan ever examined presented the same identical features: elongated curved necks, streamlined bodies and a candid snow plumage. Then, during an exploration trip in Australia the Dutch sea captain Willem de Vlamingh noticed something strange, a bird that seemed just like a swan except for a detail: it was black. Since that moment the existence of black swans has been included in the European animal registers becoming something considered obvious and, in a certain sense, predictable<sup>3</sup>.

Now, returning to the metaphor used by Taleb, a black swan event has three main characteristics: it is unpredictable and nothing in the past can lead someone to think about its possible occurrence, it creates extreme consequences, and after it's struck the human nature tend to label it as something that should have been forecasted<sup>4</sup>.

Black swan events happen every day and they can assume different connotations. In fact, they can be associated to single individuals, they can involve an entire society or even take global proportions. Furthermore, they can bring something of positive or negative and eventually their classification as black swans can depend on the point of view of those who are looking at them; an event that is a black swan for someone could not be the same for someone else. There are many possible examples of these kind of phenomena such as the Chernobyl nuclear leakage in 1986, the global financial crisis in 2007/2008, or even the incredible success obtained by J.K. Rowling with the series of Harry Potter books.

One essential aspect to consider about black swan events is that they have contributed in a tremendous way to create the world in which we live. Our everyday life routine is shaped and derived directly from black swans happened in the past: the car that we use for going to work, the internet that allow us to communicate immediately with the most remote corner of the planet (or our mom), even the film that we like to watch again and again to fall asleep can be considered the result of a black swan.

---

<sup>3</sup> getAbstract, *The Black Swan: The Impact of the Highly Improbable* (Economist.com, 2017), 2, PDF file.

<sup>4</sup> Claire Powles, “Was COVID-19 a Black Swan? And why this is an important question...”, *Continuity Central*, July 23, 2020.



However, despite their importance, people behave and think as if they do not exist. Why? The answer to this question lies in the biological nature of the humankind. Our mind tends to simplify the reality, to create mental schemas that gather only a small amount of the total available information, namely those that are useful for facing the immediate threats in front of us. The result is that we give more importance to the probability of an event rather than the consequences in its womb.

Additionally, it is not rare to fall in the mental trap called “confirmation bias” that induces people to become overconfident about their thoughts and incapable of interiorizing any other point of view or information in contrast respect to what they believe to know<sup>5</sup>. In this framework, the integration of the concept of randomness as something of which we should count became very difficult.

It is also possible to describe this scenario in statistical terms using the Gaussian distribution, also known under the name of “bell curve”. Those who does not consider the randomness as an intrinsic aspect of life have a mindset settled as a bell curve in which all the results and their relative probability are predictable and follow a given path. In this framework a black swan can be considered as a variable that would completely distort the curve and as the element responsible of an incredible skewed distribution<sup>6</sup>.

Following all the information written above, it should be clear now that when we talk about the Covid-19 we are not discussing about a black swan. Indeed, it misses one of the three principal elements described by Taleb: the unpredictability. The naissance of a new pandemic was entirely predictable. Human history gives us all the insights we are looking for, with an incredible number of epidemics and pandemics that have hit and killed millions and millions of people over time, in an almost cyclic way. For instance, starting from the half of the 19<sup>th</sup> century it’s possible to count many of them. Among the most important ones to mention there are: “The Third Plague” (1855 – 1960) a resurgence of the medieval “Black Death” that caused the departure of 15 million people, the “Spanish Flu” (1918 – 1919) one of the worst pandemic ever seen that was responsible to put the death toll approximately to 50 million people all over the world, the “Asian flu” (1957 – 1958) that killed 1.1 million people and, surely, the

---

<sup>5</sup> getAbstract, *The Black Swan: The Impact of the Highly Improbable*, 3,.

<sup>6</sup> Ibid., 4.

Covid 19 pandemic that is still ongoing nowadays<sup>7</sup>. In light of this, it is undoubtedly that the optimistic bias and the mental schemas used until now have contributed to the blindness of our societies and governments respect the past; in substance we did not learn the lesson.

Imagine a giant gray rhino with the horn pointed on our way, it is clearly visible and the consequences of what could happen if we remained there are almost obvious. Sars COV 2 can metaphorically be represented as one of those rhinos, something that should have been forecasted with more constructive pragmatism<sup>8</sup>.

Nevertheless, there is also another animal to which it is possible to associate the phenomenon: a yellow canary<sup>9</sup>. This definition has been suggested by An Xiao Mina, a journalist for Niemanlab, who coined it referring to the use made of these birds by coal miners in the 20<sup>th</sup> century for detecting possible spill of methane. If the canary died, workers known that they needed to evacuate immediately. Thus, a yellow canary event must be seen as a preventative (and often dramatic) sign that something worse could happen in the future if adequate precautions are not taken. It begins by affecting the most vulnerable, then it exposes the structural deficits of a system that can lead to an exponential harmful effect to everyone.

In my opinion, the yellow canary event in this case have been the initial wave of contagions in Wuhan at the very end of 2019. The response to this red siren alarm by the rest of the world has been too much a “wait and see” tactic that have substantially ignored the death of the canary and eventually created the conditions for the death of all the miners.

One crucial point here is to reflect about the fragility of our global hyperconnected system. In fact, in a paper dated 26<sup>th</sup> January 2020, Taleb, Joseph Norman, and Yaneer Bar-Yam warned about the danger related to the “increased connectivity” that would have caused, in absence of competent and drastic measures such as a swift cut to most contact networks, a nonlinear spread of the virus all over the world. The term “nonlinear” must be interpreted in statistical terms, and it is used for indicating an event that have an output disproportionate to known inputs<sup>10</sup>. In a metaphorical sense, it is possible to imagine the global interconnections as a sort

---

<sup>7</sup> History.com Editors, “Pandemics That Changed History: As human civilizations rose, these diseases struck them down”, *History.com*, December 21, 2021.

<sup>8</sup> Michele Wucker, “Was the pandemic a gray rhino or a black swan?”, *The Economist*, November 17, 2020.

<sup>9</sup> An Xiao Mina, “2020 isn’t a Black Swan – it’s a yellow canary”, *NiemanLab*, 2020.

<sup>10</sup> Nassim N. Taleb, Joe Norman, and Yaneer Bar-Yam, *Systemic Risk of Pandemic via Novel Pathogens – Coronavirus: A Note* (New England Complex System Institute, New York University, January 2020), 1, PDF file.

of spider net, so that when an event happens in one point of the net its effects (or vibrations) will be perceived everywhere on the surface and in a very short amount of time.

Therefore, the association of the Covid-19 pandemic to the concept of black swan must be seen as a complete misunderstanding of what Taleb meant when he coined the term, and maybe also an attempt for justifying the unpreparedness and the errors made in dealing with it. It was a white swan if any.

### **1.3 The diffusion of Covid-19**

Hubei is a landlocked province of the Popular Republic of China, and it is located at the center of the country. Its name means “at north of the lake” with expressed reference to the Dongting lake situated just on the south of the region. It counts 60 million of inhabitants and its most populous city, as well as its county seat, is Wuhan<sup>11</sup>. This latter is a well-known tourism destination for those interested in discovering the Chinese culture with numerous attractions and historical sites such as the “Yellow Crane Tower” that is one of the most famous buildings in China, the Hubei provincial museum, the Guiyuan Temple and the “East Lake”, famous for being the largest lake within a city in the whole state<sup>12</sup>.

But nowadays, every time we heard the name of Wuhan our minds make a different kind of association. We do not think about its beauties, rather to the fact that this place has been the cradle of one of the most disruptive events on a global level in the living memory.

It all started in November 2019, when the first case of a suspected pneumonia disease due to unknown causes has been diagnosticated in the Hubei province<sup>13</sup>. In this occasion we witnessed to the first error ever made in managing the pandemic. In fact, following this event, Chinese doctors and experts did not react quickly enough, they simply recognized the problem without making any statements or reports to the competent authorities but, in the end, it was not so relevant, wasn't it?

---

<sup>11</sup> Kelly Pang, “Hubei Travel Guide – How to Plan a Trip to Hubei”, *China Highlights*, December 31, 2021.

<sup>12</sup> “Things to Do in Wuhan”, China Discovery, accessed July 2, 2022.

<sup>13</sup> J. Michael Ryan and Serena Nanda, *COVID-19: Social Inequalities and Human Possibilities* (New York: Routledge, 2022), 11, Google Play Libri.

Due to this misconception of the risk, the total number of cases multiplied and by December the diffusion reached the city of Wuhan.

On December 27, Dr. Zhang Jixian, head of the respiratory department at Hubei Provincial Hospital, took the initiative and reported to the Chinese health officials the discovery of a new pneumonia disorder albeit still even not well known<sup>14</sup>. The WHO (World Health Organization) became aware of the situation on December 31 through a direct communication by Chinese authorities<sup>15</sup>.

The world now is alerted and news about what was happening in the central region of China became to be broadcasted by all the journalists and news channels around the globe; despite this, no one seemed to be too much worried about it.

Then, on January 7, 2020 a new piece of the puzzle was added as Chinese scientists communicated the discovery of the cause of the suspected pneumonia cases: a novel type of coronavirus named 2019-nCov.

In the meanwhile, the virus continued its run reaching day after day an ever-rising basin of influence expanding to other cities and Chinese regions as well as outside the country. Indeed, on January 13, Thailand reported the first case of 2019-nCov outside of China suddenly followed seven days later by the US statement of a case detected in Washington.

The very next day, on January 21, the WHO gave confirmation of what has been just supposed until that moment: the novel coronavirus is transmissible from human to human<sup>16</sup>.

Two days after this affirmation, the concept of lockdown make his first appearance in our minds as the city of Wuhan closed entirely, its streets were surrounded with police forces and its citizens were obliged to stay at home for safety reasons<sup>17</sup>.

At the other part of the world, in Europe, the beginning of the pandemic is dated January 24 when France reported the first three confirmed cases of Covid-19, two hospitalized in Paris and the other one in the southwestern city of Bordeaux<sup>18</sup>.

---

<sup>14</sup> Jeanna Bryner, "1<sup>st</sup> known case of coronavirus traced back to November in China", *LiveScience*, November 17, 2020.

<sup>15</sup> Ryan and Nanda, *COVID-19: Social Inequalities and Human Possibilities*, 11.

<sup>16</sup> *Ibid.*, 11.

<sup>17</sup> Andreas Illmer, Yitsing Wang, and Tessa Wong, "Wuhan lockdown: A year of China's fight against the Covid pandemic", *BBC*, January 22, 2021.

<sup>18</sup> Reuter staff, "France confirms first three cases of coronavirus in Europe", *Reuters*, January 24, 2020.

At that point, it becomes clear how the spread of the virus was no more a “Chinese problem” but something that have reached an international dimension, and, in fact, the WHO on January 30 declared the virus diffusion as a “public health emergency of international concern”.

In the meanwhile, the numbers of contagions became immediately paired with another tremendous source of fear: the new global killer demonstrated an incisive death rate. On February 10, the total number of victims were more then 900, surpassing those of MERS (Middle East Respiratory Syndrome)<sup>19</sup>.

The next day, on February 11, the WHO announce the official modification of the name of the virus: Covid-19, an acronym composed by the words Corona (Co), Virus (Vi), disease (d) and 19 that is the year of identification<sup>20</sup>.

In the following weeks the situation got even worse with Egypt that confirmed the first case in the African continent and Brazil that announced the first one in South America. At the beginning of March the contagion toll reached 100.000 cases and on March 11 the World Health Organization declared Covid-19 a pandemic<sup>21</sup>.

This was a turning point, from that moment the emergency alarm began to ring loudly in every corner of the globe: measures of containment, social-distancing, lockdowns, facemasks, medical equipment, panic, anxiety and sadness become the everyday life’s bread. All the most famous international events were shut down or cancelled (the Olympic games programmed in Tokyo, the Eurovision song contest, the Wimbledon tournament, just to cite some of them), the non-essential flight suspended, the borders closed, and a dense mist of protectionism surrounded every country and every mind in the attempt to protect the internal livelihood in an international context suffocated by uncertainties and fear.

The efforts put in place have been huge but the timing of their introduction was absolutely wrong. On April 2, the confirmed global cases went up to 1 million, five days after the announcement by the IMF of the insurgence of a global recession and then, on April 10, the official numbers of deaths tops 100.000.

---

<sup>19</sup> Ryan and Nanda, *COVID-19: Social Inequalities and Human Possibilities*, 12-13.

<sup>20</sup> BBC staff, “Coronavirus disease named Covid-19”, *BBC*, February 11, 2020.

<sup>21</sup> Ryan and Nanda, *COVID-19: Social Inequalities and Human Possibilities*, 13.

The burden of the psychological pressure started to be heavy and people more and more tired. On April 15, in the state of Michigan, the first anti-shutdown protest in the US exploded, with the former president Trump that taken the side of the manifestants instead of encouraging the respect of the norms, the same president that few days later suggested the possibility of injecting disinfectants into the veins for killing the virus.

Follies apart, on April 28 the count of the people infected by Covid-19 in the USA passed 1 million and several cases of measles appeared in different countries around the world as an indicator of the negative outcomes caused by the non-vaccination of numerous children due to the overwhelming attention and resources reserved to the treatments of the novel coronavirus<sup>22</sup>.

But, in a red sea of uncertainties, one well-defined pattern started to be clear: people already at the bottom of the respective societies were those most hit by the adverse effects of the pandemic. This result must not be undervalued because it has unveiled the already pre-existing inequalities created by our social systems and policies, a concept reiterated also by Antonio Guterres, the United Nations Secretary-General, that on May 18 stated “The virus must be a wake-up call and we must reshape our economies and societies to be fairer and more inclusive”.

By the end of the month, the number of deaths in US surpassed 100.000 while the Brazilian president Bolsonaro continued his skeptic campaign defining the virus nothing but a “little flu” and President Trump announced the end of any relationship with the WHO.

One month later, there were also rooms for some positive news as the New York Stock Exchange returned to pre-covid levels and global leaders began to diffuse hope talking about the state of development of vaccines and how they would have been treated as a “global common good”. On July 20, the UK ordered 100 million doses of a new promising Oxford’s vaccine, one of the 24 vaccines in trial phases around the world.

But these sparkling announces were immediately counterbalanced by the cruel reality. On August 7, Africa top 1 million cases and on August 9, the USA reached the unenviable record of 5 million contagions.

---

<sup>22</sup> Ryan and Nanda, *COVID-19: Social Inequalities and Human Possibilities*, 15-16.

Nevertheless, the covid-19 pandemic was not the only “disease” spreading at that time. As reported in a study conducted by the WHO and IMF, the global economy was losing more than \$375 billion per month due to the pandemic, while a survey by CDC (Centers for Disease Control and Prevention), published on August 13, demonstrated that over 40% of the respondents declared to struggle with mental issues caused directly by the new daily routine and the general global situation<sup>23</sup>.

At least part of this resentment has been linked to the social perception on how national governments has handled the pandemic since the beginning. Surely, there were also some virtuous examples such as the epidemiological management put in place in New Zealand, Denmark and Australia but the vast majority of politicians have operated in a negligent way, underestimating the risks and then imposing a series of stringent, coercive, and often contradictory norms that have created a sense of guiltiness and incompetence with the consequent falling of population’s trust versus the respective national institutions.

Significative of the situation is what happened on August 31, when the US department of Health and Human Service offered a deal of \$250 million to a PR firm in order to “defeat despair and inspire hope”. This solution has probably contributed to alleviate the psychological suffering of someone, but surely did not create a radical change of perspective in the majority of people, how would it be possible after all?

On September 28, the number of deaths directly caused by covid-19 reached the peak of 1 million globally and few days later, on October 1, a study conducted to evaluate the financial consequences of the pandemic revealed that more than 61% of households in the United States with children under 18 were struggling, with the 44% of them that have spent all or most of their savings<sup>24</sup>. This microeconomic analysis was valid especially for the middle-income and low-income social classes (those with a high level of income, indeed, had substantially maintained their living standards) and it was the reflection of a macroeconomic situation in which national economies has been the subject of the biggest economic downturn since the second world war; all except China. On October 19, the authorities of the country in which the pandemic began announced fiercely that the GDP increased by 4,9 percentage

---

<sup>23</sup> Ryan and Nanda, *COVID-19: Social Inequalities and Human Possibilities*, 16-21.

<sup>24</sup> *Ibid.*, 23-24.

points from the July-to-September period compared to the previous year (with a net result of +2,3% at the end of the year).

Returning to the medical sphere, on October 30 the number of contagions in the Old Continent top 10 million with the UK premier Boris Johnson that the very next day announced a new generalized lockdown and then, on November 8, the toll surged to more than 50 million cases and more than 1.25 million confirmed deaths in the whole world.

But November 2020 was also the month of vaccine announcements, of the renewed hope of the people and of the business success for pharmaceutical producers. For instance, on November 11 was provided the news that Pfizer CEO, Albert Bourla, sold a stock of the new vaccines of the value of \$5.6 million the day before the release of promising information about them, while the US stocks skyrocketed after Moderna statement that fixed the effectiveness of its vaccine to 94,5%.

Then, at the beginning of December, the UK became the first western country to approve the marketable of a vaccine against the Sars-Cov 2 virus, immediately followed by the US FDA (Food and Drug Administration) that on December 12 gave an emergency use authorization to the Pfizer vaccine and on December 18 also to Moderna shots.

As every brand new product, after their authorization vaccines needed a well-programmed and exhaustive marketing campaign to convince the most skeptics, and the first “spot” saw as protagonist the new elected US President Joe Biden receiving the first dose of a vaccine on live television.

In Europe, on December 21, the Commission approved the Pfizer vaccine and immediately after this event the European Union began to deploy its plan for the distribution and administration of the first doses in the continent. The motto of policymakers seemed to be “extreme problems call for extreme solutions” that, in concrete terms, resulted in the implementation of every possible way to speed up the rollout campaign, from the mobilization of military forces to the use of improbable (but very effective) vaccination hubs such as the Disneyland Park in California or the historical Salisbury Cathedral in England.

But, despite the previous promises made by the governors of rich countries about the equality of distribution, or the famous statement “We are all in it together”, poor nations remained marginalized at a point that on January 18, 2021, the WHO Director-General pronounced “the



world is on the brink of a catastrophic moral failure...the promise of equitable access is at serious risk”.

In this regard, indicative was the attempt made by the Philippines to settle an agreement with Britain and Germany in which the Asian country offered thousands of nurses in exchange of vaccines.

In addition, a study dated March 11 indicated that the most developed nations were administering shots with a rate of one person per second while at the same time many poor countries did not have access to a single dose.

Certainly aided by this “rich people first” policy, the virus continued to reap victims and on April 17 the confirmed deaths globally top 3 million, but now the weapons were ready and began firing with the result that on April 24 more than 1 billion of sho(o)ts had already been used.

Whether one side of the medal was shining and proving the successes of science and resiliency, the other one was dirty and rusted. On May 1, India reported more than 400.000 cases in a single day, just a week after the declaration of shortages in medical equipment that have caused the death of hundreds of thousands of patients in its hospitals. In addition, on May 17 the total number of contagions surpassed 25 million unit with almost 280.000 people passed away (according to official numbers provided by Indian authorities).

While in some parts of the world people were worried to survive day after day against the virus, in others, where the vaccine shots were available, the principal daily thought was how to return to “normality” as soon as possible to the limit of social hysteria.

On June 9, the European Parliament introduced the digital Covid-19 travel certificate, released only to those that have received a vaccine or that tested negative or healed, with the aim to favor the reopening of international roads assuring at the same time the safety of the travelers. Despite the usefulness of this document was undeniable, it has opened the door to the implementation of other stringent rules based on the same groundwork which were thought to allow at least a partial return to the pre-pandemic life (like the Italian Green Pass, for instance). On one hand the design of these “passes” has contributed to mitigate the incidence of the disease but on the other it has also created the preconditions for an intense

social fracture since they have assumed the connotation of instruments used to limit the individual freedom of choice.

On June 22, a group of students at Indiana University sued their institution over the vaccine mandate required to maintain their matriculation<sup>25</sup>. After the denial of the injunctions by the federal judge, the case arrived up to the Supreme Court that finally confirmed the validity of the reasons expressed by the university<sup>26</sup>.

However, this sentence created an intense public debate especially over the fact that the vaccines have been approved using an “emergency option” without passing all the tests needed to assess their safety. In another perspective, the request of the institution could be interpreted also as a strong (forced) incentive to get a shot, a method that has been frequently used by policymakers and public authorities in a lot of instances in the attempt to administer as many vaccines as possible.

On August 12, for example, the mayor of San Francisco, London Breed, announced the introduction of the mandatory demonstration of full vaccination for entering at indoor restaurants, bars, gyms, and entertainment venues, in order, using his words, “To protect kids, to protect those who cannot be vaccinated, to make sure that we don’t go backwards”<sup>27</sup>.

However, on August 17, the confirmed number of covid-19 cases in the USA reached the daily record since the vaccine became available even though more than half of the population had already received their shots.

Furthermore, on August 30 the global death toll top 4.5 million with 216 million of registered contagion.

With the aim to reinforce even more the protection against the virus for their citizens and their economies, wealthy nations began to discuss about the administration of booster shots but on September 8 the WHO Director-General asked them to wait until the end of the year to allow a fairer distribution of doses also to low-income nations; the result was that on

---

<sup>25</sup> Ryan and Nanda, *COVID-19: Social Inequalities and Human Possibilities*, 26-36.

<sup>26</sup> Pete Williams, “Supreme Court rejects challenge to Indiana University’s vaccination requirements: eight students asked the court for an emergency order, arguing that the risk of vaccination outweigh potential benefits for those in their age group”, *NBC News*, August 12, 2021.

<sup>27</sup> Associated Press, “San Francisco to Require Vaccine Proof at Indoor Venues”, *U.S. News*, August 12, 2021.

September 24 the US started their booster campaign on eligible people while in the poorest countries only 2% of the total global doses has been utilized.

One month later, on October 31 the world bulletin indicated 5 million covid-related deaths and almost 250 million infections<sup>28</sup>.

Entering into 2022, the general global situation started to ameliorate, at least with respect to the medical sphere, and several restrictions began to be removed. By the end of January, the UK announced the lift of all covid-related limitations including the pass required to access into indoor venues, the Danish government declared that the coronavirus should no longer be categorized as a socially critical sickness and that the country would have been completely “free” starting from February 1, and France followed suit with its Prime Minister Jean Castex that on March 3 assured the complete removal of the covid passport to access almost any indoor places. In the USA the situation remains still today a bit more complicated with health authorities that are proceeding more cautiously due to the high incidence of cases even if some emergency rules have been lightened such as the mandatory use of facemasks in indoor places for those up to date with vaccinations in San Francisco, or the necessary demonstration of vaccination documents in some Colorado counties.

We are still far from declaring Covid-19 pandemic as an event relegated to history books and our attention must be maintained high, but nowadays something is really changed and maybe, this time, we will return to breath.

---

<sup>28</sup> Ryan and Nanda, *COVID-19: Social Inequalities and Human Possibilities*, 28-40.



# Chapter II

## A Syndemic's story

### 2.1 Introduction to Chapter II

The first part of this chapter is devoted to clarify the concept of structural inequality through an explanation of the general factors which have contributed to create it. The second part, instead, proposes an analysis of the direct consequences derived by the interconnections between the pandemic and the previously treated unbalances in terms of contagions, hospitalizations, and deaths together with in-depth specifications on the vaccine topic.

### 2.2 Structural Inequalities

May 25, 2020, Minnesota, USA. At 8 p.m. of that day the Minneapolis police department received a call from a store clerk lamenting that a client has paid a pack of cigarettes with a counterfeit \$20 bill. A squad of 4 policemen were deployed to the place and found the man in his car sitting in the driver's seat. They ordered him to go out and then, after few resistances, he was put in their ordinance car. The man, under illegal substances, left the car and lied down on the street claiming a problem of claustrophobia. Immediately three officers pin his face down and one of them kneeled on his neck, the man began saying more and more times he could not breathe; that period of stasis lasted nine, endless, minutes. George Floyd, a 46-year-old black man died in that way, for a pack of cigarettes.

This tragedy has not been the only one perpetrated by the US police force toward a black man and it will definitely not be the last, but it was the straw that broke the camel's back. The fact spurred large racial-based protests in the city of Minneapolis and across the whole country with the national guard that intervened in 21 states and often used violence also against

pacific manifestants<sup>29</sup>. One may wonder whether it would have gone differently if, instead of George Floyd, the arrested man was white and a representant of the middle-upper American class. This event has not highlighted a novel reality, it can simply be viewed as the concrete manifestation of a sleeping giant or, in other words, it has simply put under the spotlight something that is often surrounded by dark shadows of indifference and suppression: the structural inequality.

The concept of structural inequality can be thought of as a form of inequality created by the institutions that govern a system which through their initiative and policies tend to maintain the status quo and the dominance of the system itself tracing a marked line between the protected and favored ones and those who remain at the bottom of the society which, in the end, constitute the base used by the others to emerge. It is worth noting that this definition must not be interpreted as a way to say that the system ends up justifying acts such as those of George Floyd, but we should be aware that the persistent inequalities in the background often can manifest themselves even in manners that are not socially and humanitarially defensible.

That said, structural inequality is a very far reaching concept and it involves many dimensions such as minority group status, sex and gender, class divisions, working conditions, citizenship status, geography, political ideologies, education, health care, and the general economic development. Furthermore, it exists both within and between nations meaning that it can be discovered also in the mechanisms that govern international diplomacy, trade, and relationships on a global level. But what is the origin of this structural inequality?

Due to the incredible number of ways in which this complex concept can be treated, an exhaustive explanation of its roots would require an analytical analysis of every single component of the matter in question that is not the scope of this elaborate. Here, instead, it is sufficient to note that structural inequalities derive directly from an historical background which has still today its degree of influence in our “ordinary” life.

A concrete and powerful example of this can be found in the history of North America since the XVII century. Indeed, in August 1619 the frigate White Lion landed at Point Comfort, one of the principal British colonies situated in the country, but this time the vessel didn't bring

---

<sup>29</sup> Tim Arango et al., “How George Floyd Died, and What Happened Next”, *The New York Times*, July 29,2022.

with it just material goods and other exponents of the Queen's empire, rather also twenty black men deported directly from Africa with an already written fate: to become the slaves of some "lord" for the rest of their lives. This is traditionally considered the event that marked the first step into the outrageous practices of slavery, discrimination, abuse, and segregation in North America.

It is worth to note how the establishment and the maintenance of this foolish system has been possible through the inclusion of specific laws and policies into the political structure together with an intense social control over the slaves which was though in order to impede free mobility, aggregation, and education. At the moment of the United States declaration of independence (July 4, 1776) all the original thirteen colonies in North America had already implemented formal "Slaves Codes" which were justified on the basis of the white supremacy over the other "races".

However, by the end of the 18<sup>th</sup> century and the beginning of the 19<sup>th</sup> something began to change, and a social fracture emerged within the country. On the south the economy was principally based on rural activities and the exploitation of black people while the north developed a far more progressive industrial system with a subsequent reduction of slavery practices until their complete abolishment. The ideological and economical discrepancy described above culminated in the American Secession war that lasted from 1961 to 1965 and that had as principal motivations the will of the Northerners of imposing the elimination of slavery also to the south together with expansionistic aims of industrial kind.

However, the most important result was not obtained on the battlefield but, rather, on the political ground where, after few months since the end of the conflict, the XIII amendment was ratified enshrining the freedom for all the African Americans in the Union<sup>30</sup>. Despite the enormous step forward granted by this act, the discriminations and segregations suffered by black individuals into the US territory were far from being suppressed.

Immediately after the implementation of the amendment, the Southern states, which were obliged to respect the ban imposed on slavery practices but not to grant any other rights to black people, began to introduce the so-called "Black Codes" that were a system of laws designed to limit rights and economic opportunities for African Americans by strictly define

---

<sup>30</sup> Federica Campanelli, "Nel 1619 nasceva la schiavitù nell'America del nord", *Focus*, December 1, 2021.

which kind of property they could own and which kind of job they could be hired for, among other things. During the “Reconstruction era” (1867 – 1877) the Congress managed to eliminate this new form of slave’s codes and enforced the respect of equality among individuals in every US states through the implementation of the Civil Right law and the 14<sup>th</sup> and 15<sup>th</sup> amendment; an effort that unfortunately remained confined to those years. Indeed, after the end of this period, the “Black Codes” returned under the name of “Jim Crow laws” and this time they were even worse respect the previous ones: they preserved the marginalization practices of the past adding a well-defined segregation system. Initially they were applied just on the South and within rural areas, but soon began to be a norm also in cities and across the whole country. Neighborhoods, public transport, schools, workplaces, everything was segregated, with the worst strictly reserved to Black people. The justification used for the maintenance of this political and social structure was that the separation of facilities and services between Black and White individuals was intended to be equal, in other terms the constitutionality of those practices were based on the ground that the segregation did not impede the African Americans the same degree of opportunities and possibilities associated to White people; a collective liar.

The first sign of change happened in 1954 when the Supreme Court ruled that the segregation in the field of education was unconstitutional. The sentence was suddenly followed by numerous manifestations of Black people headed by charismatic leaders such as Rosa Parks and Martin Luther King Jr. demanding more rights and the abrogation of the Jim Crow laws. Ten years later, in 1964, the Congress approved the “Civil Right Act” that suppressed all the segregation norms granting more equality and freedom<sup>31</sup>.

Today the scars of the past are still present and visible in the social structure of the United States although we have witnessed a constant and persistent amelioration of the context over time. Surely the lives of the ethnic minorities nowadays are far better respect those of their predecessors, but this does not mean that structural inequality has been beaten. There are differences in education, employment, income, wealth, housing, health and more that are clearly referable to historical paths.

In order to better understand the above-mentioned connection between past and present just think about a simple example. Imagine a Black woman living during the segregation

---

<sup>31</sup> Jason Shvili, “The Black Codes And Jim Crow Laws”, *World Atlas*, November 8, 2021.



period. She is subject to explicit discriminatory laws that do not allow her to have a proper level of education, this translates into fewer job opportunities respect her White counterparts, a lower wage, and the necessity to rent an apartment in a poor neighborhood given the impossibility to own one. She is far away from useful services and the only way to reach them is to use public transport that, however, are always perpetrator of discriminatory practices and often not available at all. Furthermore, she has a health problem, but due to the inherent difficulties in reaching the nearest medical facility and the fact that she has no health insurance the issue is impossible to be treated. In the meantime, the “Civil Right Act” passed, the “Jim Crow laws” abrogated and a better future for minority communities began to appear. Her child now needs to be enrolled at school, her mother wants the best for him, but the funds are no sufficient to allow the subscription to a private institution and the only possibility is to choose a school located near the poor neighborhood in which they live, even if it is not a good one. Due to this obliged solution, he will not receive an education comparable to the one provided to the richer guys, he will probably end to find a lower-paid job, he will not be covered by health insurance, and he will be obliged to make serious compromises in relation to his housing. Thus, despite the legal elimination of segregation laws, inequalities continue to exist and are the reflect of the past social structure.

It is important to consider that the focus on the American history and the structural origin of inequalities between Black and White people just described must be interpreted for what has been intended in this specific context: an example. Structural inequalities do not exist just in the USA but they are a global matter, something that has shaped the lives of billions of people in the world. Thus, the fundamental thing in this instance is to clearly understand the general mechanism of the interrelation between past and present that stand at the base of the functioning of structural inequality and, more than that, to develop the awareness necessary to apply it to different contexts and situations.

This concept represents a key aspect in the analysis of how Covid-19 has impacted different individuals, communities, and countries in different ways both directly and indirectly by permeating among already-existing inequalities and exacerbating them.

## 2.3 Differences in contagions and deaths

### 2.3.1 The theory behind the resurgence of a pandemic

One statement that everyone of us have surely heard from the media during the period of the spread of Covid-19 all over the world has been: “We are all in it together”. This sentence has been used to pass, in a very simplistic manner, the concept that the virus makes no distinctions among individuals, that it doesn’t discriminate in relation to income, gender, social status, class, and nationality, spurring the idea of the necessity to develop a sentiment of collaboration and mutual solidarity to overcome those difficult times. Could we define this argument true? The answer is undoubtedly yes, but the reality of facts exposed a completely different picture. In order to understand why, let’s start from the basis.

A virus is a natural entity (if it is alive or not is still subject to debate) with biological characteristics that has as unique scope to find a host to reproduce itself and to survive. It has no conscience, no intention to produce damages (even if it does), and no interest in making any kind of social discrimination among various possible “incubators”<sup>32</sup>.

However, if we look at data relative to the pattern of contagions and deaths (that will be provided and analyzed further in this chapter), it is easy to notice that different individuals and communities has been hit differently in different countries and also within the same nation. How it can be explained? The key is to understand the mechanism behind the “creation” of a pandemic or, in other terms, the variables that influence a certain kind of spread of the virus.

The pace of diffusion of a viral entity depends essentially on three factors: how likely it spreads, how easily it spreads and how quickly it spreads. These three features, in turn, depend on others two macro-categories of variables that are the intrinsic attributes of the virus itself (its medical typology, the method of diffusion etc.) and the structural characteristics that define the society (or country) in which the biological entity is intended to circulate (economic development, culture, urbanization, labor market, health system etc.)<sup>33</sup>.

---

<sup>32</sup> Ryan and Nanda, *COVID-19: Social Inequalities and Human Possibilities*, 45.

<sup>33</sup> *Ibid.*, 45.

Furthermore, within the context of the structural features is fundamental to take into consideration the differences that exists inside each dimension that compose the general category, in other words to evaluate the structural inequalities presents within the community of interest. It is worth noting at this point that the inequalities that exists in each dimension that compose the structure of a society are not isolated and independent from each other but, rather, intertwined and mutual dependent. This invisible but strong “spider-net” explain not just the presence of the inequalities as a burden on the shoulders of certain communities, ethnicities and individuals but also the creation of the inequalities themselves. To better understand this seemingly difficult argument just recall the example made in the previous section regard the woman living in the segregation period in the USA and the various interrelated inequalities that have shaped her life and the one of her son.

This complex set of interconnections among different factors create the framework of the so-called “viral cloud”, a term coined by Astorino and Nicola for indicating the relationships between the virus and his host and, in turn, between the host and the other components of a community that has, as a final result, the unveiling of what is invisible<sup>34</sup>. This means that on one hand in the viral cloud the culture and the general structure of a society influence the variables that shape the spread of the Covid-19 but, on the other hand, the social system itself is influenced by the diffusion of the viral entity rendering, in this way, something that is invisible as visible in an indirect way through actions and practices.

The covid-19 pandemic has gone exactly in this direction, it has embraced both the medical and the social sphere together requiring doctors and scientists to work closely with politicians and sociologists to face it. In this sense, the Sars-Cov2 pandemic can also be thought of as a syndemic. In fact, the syndemic theory explores the process by which a disease co-exists and interact with other diseases within a social context and an environment which represent the background that allow both the insurgence and the connectedness between them leading finally to a condition of mutual enhancement<sup>35</sup>.

The concrete explanation of this definition refers to the fact that among the social groups that compose a society, especially the poorest ones, there are several individuals suffering from

---

<sup>34</sup> Joseph A. Astorino and Anthony V. Nicola, “Making the Invisible Visible: Viral cloud moments in the SARS-COV-2 pandemic” in *Covid-19: Global Pandemic, Societal Responses, Ideological Solutions*, ed. Michael J. Ryan (London: Routledge, 2020), 184-196.

<sup>35</sup> Ryan and Nanda, *COVID-19: Social Inequalities and Human Possibilities*, 46.

NCD (Non-Communicable Diseases, also known under the name of non-infectious diseases) that includes conditions such as: cardiovascular problems, diabetes, obesity, chronic respiratory pathologies etc. which if combined with another medical issue can increase their dangerousness in an exponential way. However, it is even possible to look at this kind of intersectionality in a metaphorical sense considering the various dimensions of inequality as a sort of “epidemics”.

This out-of-context use of the term is frequently used by the media to indicate anything viewed as widespread and harmful to society, so that we have epidemics of opioid addiction, misinformation, crime, and social media just to cite some examples.

Thus, if we utilize the same conceptual line, the covid-19 diffusion can be re-interpreted as a pandemic that has permeated within already-existent epidemics causing a double-face syndemic, one in the social inequalities sphere and the other in the medical sphere which are mutually interrelated.

More precisely, there are four principal pathways that link inequalities with contagions, case severity and deaths. The first is the higher level of vulnerability for less healthy individuals due to the presence of comorbidities which derives from inequalities in the social determinants of health intended as the divergent access to essential goods, medical facilities and services together with, and connected to, discrepancies in type of employment, income and wealth. The second one is the increased susceptibility of poor people to develop serious consequences from the contraction of the virus even in the absence of pre-existing health conditions that can be explained by mental stress and psychological circumstances which influence the effectiveness of the immune response in an organism that could already be debilitated from the general unhealthy standard of living. The remaining two elements, the increased exposure and transmission, necessitate to be treated together. Indeed, the higher level of exposure to the covid-19 for the most deprived depend directly on the degree of potential transmission of the virus indwelling in the various daily contexts with which an individual interacts<sup>36</sup>. For instance, a woman that belong to an ethnic minority and that live in a poor neighborhood is more likely to have no choices but to share her (little) house with the whole family rendering the physical distancing impossible and, furthermore, she has more probability to have a job

---

<sup>36</sup> Clare Bambra, Julia Lynch, and Katherine E. Smith, *The Unequal Pandemic: Covid-19 and Health Inequalities* (Bristol: Policy Press, 2021), 13-14, Google Play Libri.

which require strict contacts with others such as those in the care, restoration or cleaning sectors.

### **2.3.2 The underestimation of the official COVID-19 data**

The theoretical concepts just delineated found empirical confirmation in the real-world data that various governments and statistical agencies had released. However, before entering into the analyses of them, it is necessary to make a point. All the models that provide useful information about contagions and deaths associated to the Covid-19 pandemic utilize data that are labelled as “confirmed”. This term indicates that they are directly provided by the competent authorities of the various national and international institutions rendering them “official”. Obviously, they are the best sources of information and numbers on which build the consciousness about what surround us and the most affordable elements for understanding the right interventions that necessitate to be implemented through the creation of medical and social policies. Nevertheless, there are occasions in which external forces, such as political interests and/or lack of adequate resources, can influence the collection and publication of these data creating a gap between what is reported and the real context.

Taking a more specific look at Covid-19 pandemic, there is general agreement among experts that the representation of the reality made by official numbers is subject to an intrinsic underestimation. This is due to several reasons: the voluntarily actions of some governments, the dramatic disruptions of economies and health systems all around the world, the distinct ways in which the human body respond to the infection, and the trust of a society towards its institutions.

For instance, a significative case that has given rise to skepticism within the international community is the one of North Korea which has reported the first confirmed infection of covid-19 only in May 2022, rising questions whether the preventative measures taken by its leader Kim Jong-un has been really so effective or if, instead, it is just a form of political misrepresentation targeted to instill a sense of security and power in its own citizens and, especially, towards the other countries. Japan is another similar example, with the health authorities that claimed a very low level of contagions and deaths respect the other

industrialized nations during the first stages of the pandemic only to being obliged to delay the Olympic Games programmed in Tokyo to the next year due to the heavy pressures by international athletes and their respective sport federations, a decision that has seen shortly after a rapid surges of infections in the country, always considering official data. Furthermore, other nations have also been touted to report political manipulated numbers such as Brazil, Russia, Turkey, and Kazakhstan<sup>37</sup>.

Parallel to this one, another significant problem in the official counting has been the capability to effectively dispose the conditions to perform the tests. Due to the economic disruptions caused by the spread of the virus and the consequent restrictions aimed at its containment, global supply chains have showed all their weaknesses with many of them that have been completely interrupted or obliged to heavily reduce their working regimes. Among the others, this has also hit the supply of medical equipment (ventilators, Oxygen tanks, gloves, facemasks, testing kits etc.) that, together with the incredible surge of the demands for such goods, has contributed to reduce the capacity of overburdened national health systems to intercept new cases and, more generally, to effectively manage the pandemic itself.

In certain instances, hospitals and other medical facilities have been so overwhelmed that people were suggested to avoid them, even in presence of suspicious symptoms, causing an undercounting of confirmed infections.

An additional issue for statistical analyses are the asymptomatic, that is those individuals that contract the virus but don't experience any kind of disease or disturb from it. A study published in the Journal of the American Medical Association has discovered that the rate of this phenomenon depend on multiple factors such as age, gender and pre-existing health conditions, and that, on average, roughly the 40.5% of the infected can be included into this category<sup>38</sup>. Only a small part of them ends up being taken into account within the official data because only a minority had constated the positivity through an appropriate medical test often made just for bureaucratic reasons (to receive the sanitary pass for example).

Finally, the last factor able to determinate the accuracy of the reported confirmed cases and deaths is the willingness of the people to follow the suggestions and the directives provided

---

<sup>37</sup> Ryan and Nanda, *COVID-19: Social Inequalities and Human Possibilities*, 57.

<sup>38</sup> Qiuyue Ma et al. "Global Percentage of Asymptomatic SARS-CoV-2 Infections Among the Tested Population and Individuals With Confirmed COVID-19 Diagnosis", *Journal of American Association*, December 14, 2021.

by the state and the other institutions and authorities. This aspect has been particularly relevant in poor and developing nations where corruptions and self-interests have always dominated public policies and actions contributing to develop a general sentiment of untrust among citizens, albeit even developed countries should not be taken out of the speech. The matter assume importance in statistical purposes when it is so marked to induce individuals to avoid any contact with medical authorities. An example is what happened in Mexico where people were so frightened by hospitals that many Mexicans came to see medical facilities as death places and doctors as the principal diffusers of contagions<sup>39</sup>. Obviously, this has dramatically reduced the possibilities to have a clear view of the real numbers and has led to the underestimation of them. That said, it is still worth to discover what official numbers have to say and, as always, let's start from the basis.

### **2.3.3 Mortality**

A research conducted by the Harvard Center for Population and Development Studies during the first months of the pandemic has highlighted how in Illinois and in New York City the spread-rate of the virus has been particularly relevant in the most disadvantaged ZCTAs (ZIP Code Tabulation Areas), and how this often coincided with the places where the presence of ethnic minority communities is higher:

---

<sup>39</sup> Ryan and Nanda, *COVID-19: Social Inequalities and Human Possibilities*, 84.

**Table 1: Illinois rate of confirmed Covid-19 cases per 100.000 population**

Illinois rate of Confirmed Covid-19 cases per 100.000 population as of 04/16/2020					
% Poverty	Number of ZCTAs	Population	Number of confirmed cases	Confirmed case rate per 100.000	Incidence ratio
0-4,9%	65	1.531.569	2.378	155,3	1,00 (Ref.)
5-9,9%	138	3.357.448	6.442	191,9	1,24
10-14,9%	65	2.052.094	4.682	228,2	1,47
15-19,9%	39	1.225.648	3.085	251,7	1,62
20-100%	63	2.186.595	8.041	367,7	2,37
Missing			47		
% Population of color					
(0,0318-0,197]	99	2.073.667	2.651	127,8	1,00 (Ref.)
(0,197-0,315]	78	2.023.605	2.992	147,9	1,16
(0,315-0,46]	77	2.159.499	4.071	188,5	1,47
(0,46-0,744]	60	2.038.179	5.731	281,2	2,20
(0,744-0,99]	55	2.051.861	9.172	447,0	3,50
Missing			58		

Source: Chen and Krieger's elaboration using data from HCPDS Working Paper 19, Number 1

**Table 2: New York City rate of Confirmed Covid-19 cases per 100.000 population**

New York City rate of Confirmed Covid-19 cases per 100.000 population as of 04/16/2020					
% Poverty	Number of ZCTAs	Population	Number of confirmed cases	Confirmed case rate per 100.000	Incidence ratio
0-4,9%	9	130,121	1,362	1046.7	1.00 (Ref.)
5-9,9%	41	1,506,286	20,609	1368.2	1.31
10-14,9%	48	2,100,915	30,294	1441.9	1.38
15-19,9%	27	1,439,746	22,359	1553.0	1.48
20-100%	52	3,256,108	48,982	1504.3	1.44
Missing			1,816		
% Population of color					
(0,0839-0,402]	43	1,695,113	21,166	1248.6	1.00 (Reference)
(0,402-0,584]	38	1,678,144	20,554	1224.8	0.98
(0,584-0,826]	38	1,708,248	25,541	1495.2	1.20
(0,826-0,957]	29	1,708,722	27,231	1593.6	1.28
(0,957-0,992]	28	1,639,409	29,042	1771.5	1.42
Missing			1,888		

Source: Chen and Krieger's elaboration using data from HCPDS Working Paper 19, Number 1



Looking at the data in table 1, it is possible to have a more concrete understanding of the strong connection that exists between inequalities and the number of contagions. In fact, confronting the information in the first column (% poverty) with those in the fifth (confirmed case rate per 100.000) the evidence suggests that the higher the degree of deprivation the greater is the number of registered infections, something that is confirmed also by the “Rate ratio” data contained in the last column which indicate a difference of 1,37 between the most disadvantaged ZCTAs and the most advantaged ones. The second part of the table make the same analysis but confronting the areas with different percentages of black individuals. The results obtained show clearly that the places in which ethnic minorities are more abundant are those that has been hit the hardest by Covid-19, an association that is made by confronting the data inserted in the first column with those of the positivity case rate per 100.000. Again, it is worth to consider the divergences between the two extremes in the rate ratio that in this case amount to 2,5. Table 2 exhibits the outputs of the same kind of research administered in New York City. The general trend described above is confirmed also in this case, with the increase of the infections per 100.000 strictly following both the rise in the percentage relative to the degree of poverty and the increment of the percentage of black people in the relative places. Furthermore, the differences in the two rate ratio is 0,44 and 0,42 respectively.

Another scenario in which the covid-19 has shown its strict interrelation with inequalities is the one of labor market. Here, the negative effects of the pandemic has taken place under both the medical and economic sphere perpetrating contagions and deaths together with sectorial closures, financial hardships and ever-imagined unemployment levels. In this instance, the focus is on the health consequences, the economic one will be adequately treated further in the elaborate. A significant food for thought is given by a research conducted in California with the scope to analyze the eventual excess mortality after the outbreak of the virus on individuals aged 18-65 by occupational sector during the period March-October 2020:

**Table 3: Excess mortality working adults 18-65 by occupational sector**

Excess mortality working adults 18-65 by occupational sector, March-October 2020, California			
Sector	Expected deaths	Actual deaths	Death ratio
Facilities	1.324	1.681	1,27
Food or Agriculture	755	1.050	1,39
Government or Community	370	422	1,14
Health or Emergency	492	585	1,19
Manufacturing	519	638	1,23
Retail	547	646	1,18
Transportation or Logistics	1.205	1.542	1,28
Not essential workers	1.051	1.167	1,11
Unemployed or missing	1.601	1.969	1,23
Total	8.235	10.047	1,22

Source: Chen, Glymour, et al’s elaboration using data from medRxiv

The first element worth of attention is the nomenclature “Not essential workers” included in the “Sector” column. This term must be interpreted as a general concept in which are included a wide set of industries whose related jobs has been deemed as not obligatorily to be performed at all or that do not require a necessary physical presence of the workers during extraordinary times such as a pandemic. Thus, while professionals like lawyers, accountants, politicians, journalists (just to cite some of them as an example) have had the advantage of staying at home and to practice physical distancing, others did not have this kind of privilege resulting more exposed to catching the virus and to die from it. Table 3 gives an empirical representation of the consequences of this unequal scenario. Every category included in the first column have recorded real numbers worse than the expected ones, an aspect also reflected by the values of the death ratio which is always higher than 1. The virus has therefore induced an increase in the health risks of everyone independently from the sector of belonging and also from the labor status of individuals, in other terms whether employed or not. However, there are important differences that must be taken into consideration. Among the essential workers, those in the “food or agriculture”, “transportation and logistics” and “facilities” have suffered the most with a rise in the death ratio of 39%, 28% and 27% respectively. This strides with the (still considerable) increment of deaths for the non-essential workers of 11 percentage points. Finally, the total gap between pandemic and non-pandemic times in the period of interest is of +1.812 deaths with a ratio of 1,22.

The same study has gone even further through the implementation of a decomposition of the various ratios in sub-ratios in order to shed light on how differently the burden of the risks have been experienced among various ethnicities:

**Table 4: Excess mortality working adults 18-65 by occupational sector and ethnicities**

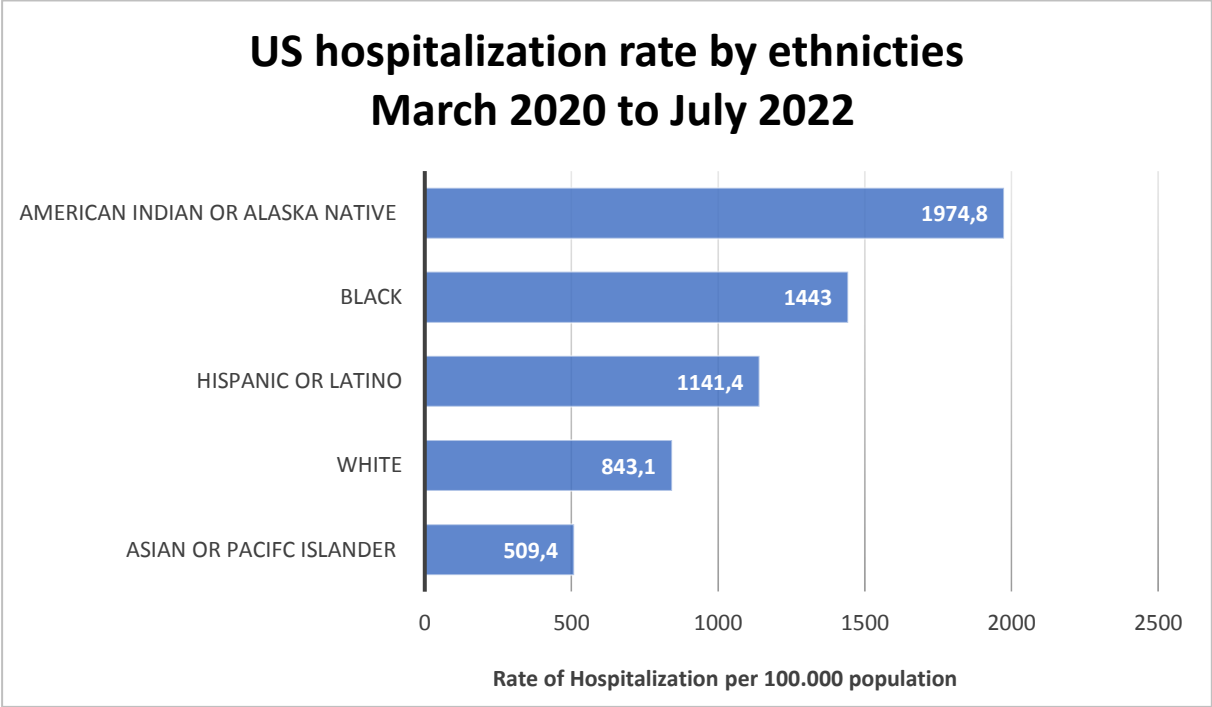
Excess mortality ratio of working adults 18-65 by occupational sector and ethnicities March-October 2020, California					
Sector	Asian	Black	Latino	White	All
Facilities	1,24	1,25	1,38	1,11	1,27
Food or Agriculture	1,18	1,34	1,59	1,16	1,39
Government or Community	1,22	1,20	1,42	0,96	1,14
Health or Emergency	1,40	1,27	1,32	1,02	1,19
Manufacturing	1,18	1,13	1,44	1,00	1,23
Retail	1,10	1,36	1,40	1,08	1,18
Transportation or Logistics	1,26	1,35	1,40	1,10	1,28
Not Essential Workers	1,14	1,23	1,29	1,00	1,11
Unemployed or missing	1,08	1,31	1,31	1,09	1,23
<b>Total</b>	1,18	1,28	1,36	1,06	1,22

Source: Chen, Glymour, et al’ s elaboration using data from medRxiv

The specifications provided by table 4 are perfectly in line with what has been declared so far. Indeed, when the attention is shifted to ethnicities, the existing structural inequalities among them became visible. Data indicates that the percentage of White Californians died from complications related to Covid-19 is lower than the death ratio of Blacks, Asians and Latinos in all the sector scrutinized, with the only exception present under the voice “unemployed or missing” in which the Asian index show a slightly worse result respect the one of the majority of population. In addition, White non-essential workers and those employed in manufacturing have seen no variations between pre-pandemic and pandemic numbers in the period of time considered while an even more surprisingly outcome is the one associated to “Government or Community” that exhibit a decrease of four percentage points than what forecasted. On the other hand, Latino individuals in “Food or Agriculture” experienced an increase of 59% of deaths due to the virus, the highest ratio exposed in the table, and of 44% in the manufacturing industry. Among Black minority the worst statistical output is in “Retail” (1,36) while the Asian group has its peak in the “Health or Emergency” sector (1,40). In conclusion, the value of the average total index of 1,22 derives from a major contribution by Latino community (1,36) followed by Black (1,28), Asian (1,18), and White (1,06).

A further possible lens to scrutinize the unequal medical impact of Covid-19 on the US population is through the analyses of the degree to which individuals belonging to different societal groups (and socio-economic status) necessitated hospitalization:

**Figure 1: US hospitalization rate by ethnicities**



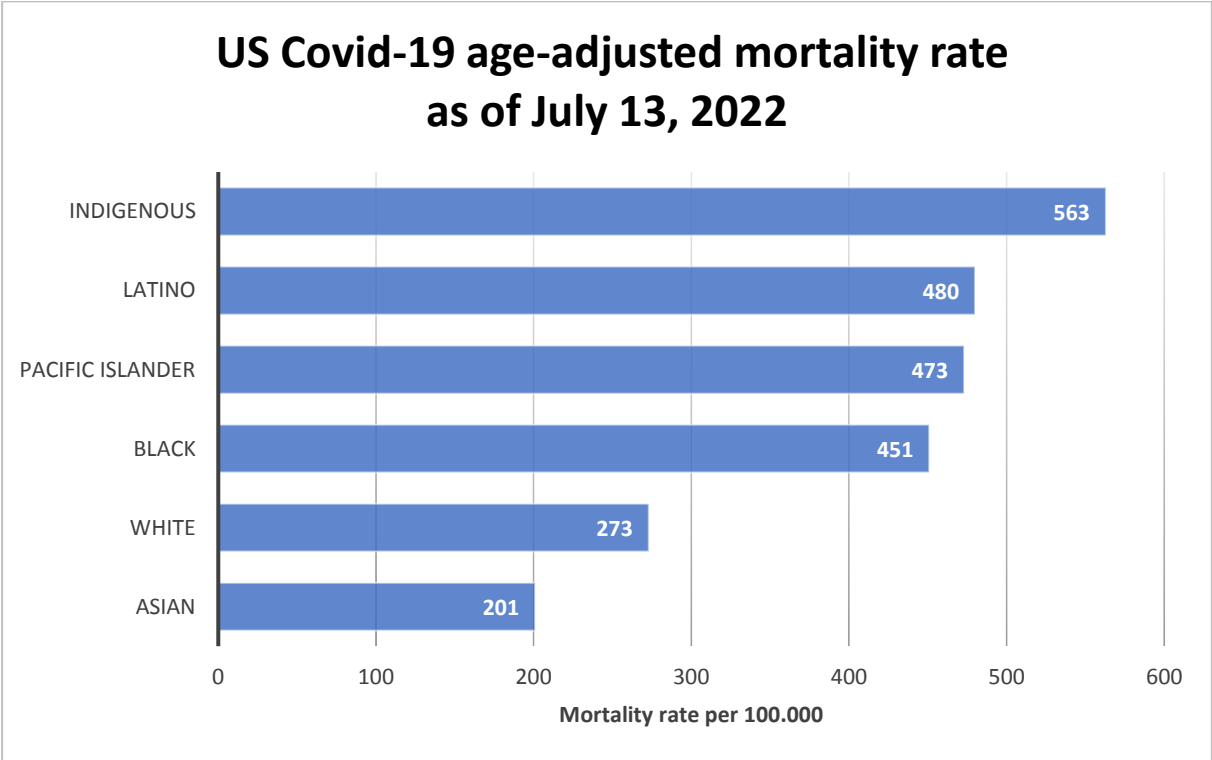
Source: Elflein’s elaboration using data from Statista

The importance of the numbers reported above stands in the knowledge of the reasons that lead to hospitalization. The latter, in fact, can be thought of as a consequence of the high level of severity reached by a disease in a human body which causes the increase of the risk ratio related to possible negative outcomes requiring, therefore, the prompt intervention of doctors and experts in a medical facility. Thus, the chart uses hospitalization data to highlight how the social context within different communities is able to influence the seriousness of the health issues ascribed to Covid-19. In this respect, the standard living conditions of American Indigenous people seems to be the less adapt to deal with a global pandemic as their rate of hospitalization of 1974,80 per 100.000 population suggests. The explanation of this outcome is a mix of several factors that goes from cultural and religious aspects to a complete lack of water, soap, PPEs all seasoned with a general indifference for their fate by the whole society and US institutions, especially under the Trump administration (a deepening treatment of the matter will be provided further in the chapter). Another very under pressure category has been that of black individuals with an average of 1443 hospitalization per 100.000 people in

the span of time considered, followed by the white community and by the Asian or Pacific islander groups with a rate of 843,10 and 509,40 respectively.

Despite useful, it is necessary to recall that the data showed are always eligible to be deemed as an underestimation of the actual situation, especially when minorities are taken into account. This consideration is important because allows to discern the results of studies that at first sight examine aspects that are strictly intertwined between them. For instance, the information relative to hospitalizations could give a first impression also about the number of deaths so that those categories with the highest numbers of the first kind are potentially the same that would register an elevate rate of the second kind, however in certain cases this is totally a misthinking. This is not an attempt to say that what analyzed before is irrelevant, rather that the outcomes of another type of analysis could not follow a pre-determined path. This fits perfectly with the story told by this second graph:

**Figure 2: Covid-19 age adjusted mortality rate per 100.000**



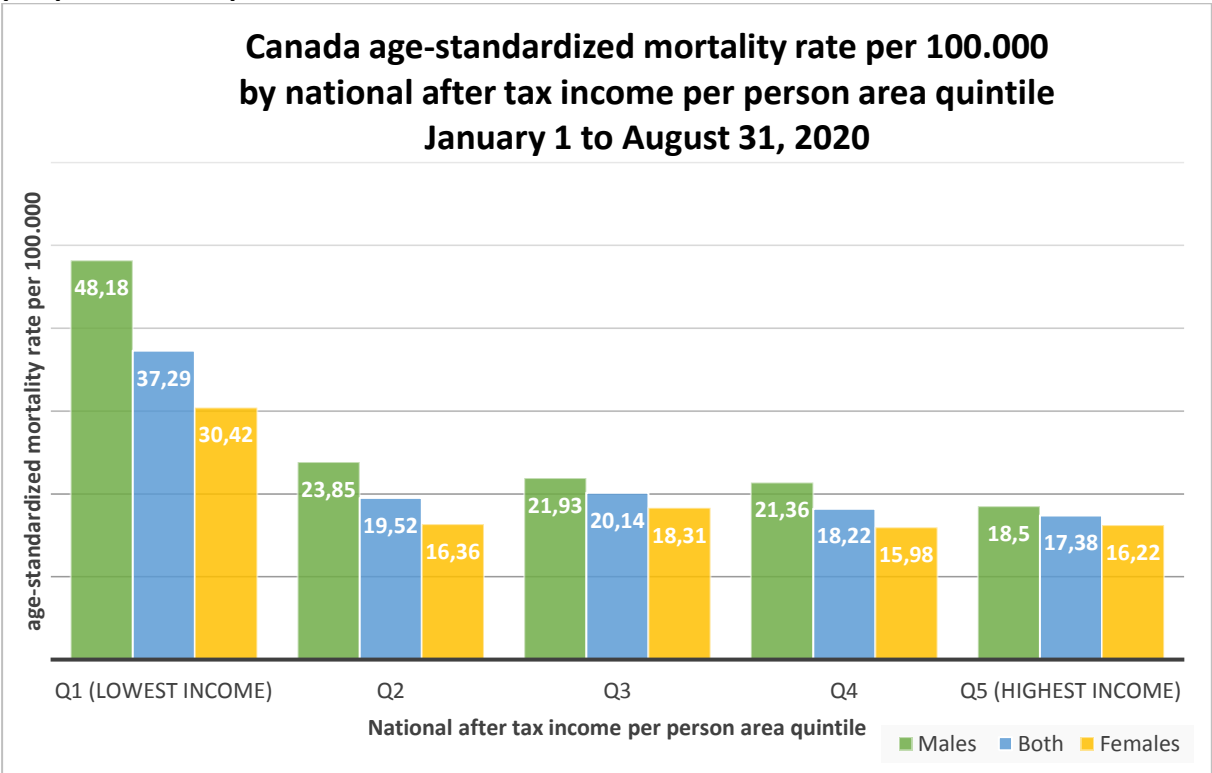
Source: Gawthrop’s elaboration using data from APM Research Lab

The first aspect to consider in order to properly understand the content exposed here is the meaning of the term “age-adjusted”. This refers to a research tool used with the aim to account for age differences among the statistical groups analyzed to produce an outcome that

is as less as possible influenced by external factors but the one under examination. It is particularly useful when diseases carry a varying levels of risk depending on the age of the host, that is exactly what happen in the case of Covid-19. Furthermore, demographic data proves that each ethnic community in the US has its own average level of age, and that minorities in general have a younger base than the majority of population represented by White groups. The application of the age-adjusted method is therefore a guarantee of quality of the data reported. That said, it is worth noting how the scenario depicted by graph 2 have a diverse connotation respect the one seen in precedence. Although Indigenous people still occupy the worst place with a rate of 563 deaths on 100.000, Latinos take the step immediately after them registering 480 fatalities (while in the case of hospitalizations they were even behind black community). The most surprising result is detained by the Pacific Islanders group (473/100.000) that in this instance find itself ahead of black population marking a significant difference compared to the precedent graph. They are then followed by the categories of Blacks (451/100.000), Whites (273/100.000) and Asians (201/100.000).

The patterns delineated so far are not unique characteristics of the US. Remaining in the American continent, just a bit more on the north, it is possible to witness at very similar connections between the virus and the structural inequalities. The Public Health Agency of Canada (PHAC) in collaboration with the Pan-Canadian Public Health Network (PHN) and Statistics Canada had developed useful data able to shed light on this aspect, such as how the mortality of the Covid-19 differs based on the quintile of the income examined:

**Figure 3: Canada age-standardized mortality rate per 100.000 by national after tax income per person area quintile**



Source: Pan-Canadian’s elaboration using data from Public Health Agency of Canada

As the graph shows, the pre-existing economic differences among geographical areas in Canada have played an undisputable role in shaping the distribution of the mortality rate in the country even during the first stage of the pandemic. Those living in the poorest conditions (represented by Q1, the first quintile) have seen the highest mortality rate with an average number of deaths of 37,29 per 100.000, a value that is subject to a drastic decline as the level of income increases. In fact, moving from the left to the right of the graph, the mean ratio (figured in yellow) takes a different connotation standing at 19,52 in Q2 which indicate a non-negligible decrease of 17,77 points. In Q3 and Q4 it takes 20,14 and 18,22 respectively, while in the last quintile (Q5) the best result is obtained with 17,38. Furthermore, the statistical output relatives to male individuals is more prominent than the one associated to females in each of the five different categories analyzed. The latter aspect is explainable first of all by biological factors (it has been proved how women are more resilient to the virus) and also by the fact that men, especially those established in poor neighborhoods, are more inclined to engage themselves in bad health behaviors (smoking and an elevated alcohol usage for instance), to have more problematic comorbidities, and to be exposed to high occupational risk factors. Finally, the comparison of the same variable between the quintiles demonstrate

a certain degree of linearity when men are considered, while women present a more skewed distribution but still characterized by a difference of 14,22 deaths between Q5 and Q1.

However, as already demonstrated, income levels and economic differences are not the only determinants that shaped the diffusion and the related consequences of the virus. Another interesting point of view is provided thanks to a research conducted by Public Health Ontario, an agency of the Government of Ontario, which has made a point on the relations between the ethnic concentration (based on neighborhood quintiles) and the rates of incidence, hospitalizations and deaths caused by Covid-19. The term ethnic concentration is used to indicate the proportion of non-white and non-indigenous residents together with immigrants that arrived in the country within the past five years, a concept that can also be thought of as a measure of the intrinsic level of ethnic diversity within a specific geographical area. The following table exposes the results obtained about the confirmed cases of infection:

**Table 5: Ontario confirmed cases of Covid-19 for each neighborhood diversity quintile**

Ontario confirmed cases of Covid-19 for each neighborhood diversity quintile February 26, 2020 to December 13, 2021				
Quintiles of neighborhood diversity	Cumulative case count	Percentage of all Covid-19 cases	Age-standardized cumulative rate per 100.000 population	Incidence ratio
Quintile 1 (Low)	39.626	6,7%	1.977	1 (reference)
Quintile 2	56.808	9,6%	2.555	1,3
Quintile 3	79.946	13,5%	3.187	1,6
Quintile 4	130.268	22%	4.233	2,1
Quintile 5	284.268	48,1%	6.629	3,4

Source: Public Health Ontario’s data elaboration

The data reported in table 4 leaves no space for possible doubts of interpretation. In fact, it is quite clear that when the level of ethnic concentration increases (from quintile 1 to quintile 5) the numbers of Covid-19 cases and the percentages associated to them increase as well. More precisely, the cumulative case count goes from 39.626 in the least diverse neighborhood quintile to 284.268 in the most diverse one, an output explainable due to the constant increase registered in the intermediate areas of interests. In percentage, quintile 5 account for almost half (48,1%) of the total cases and more than double of those associated to the



previous one, while the less ethnically concentrated neighborhood stands to 6,7%. The age-standardized cumulative rate make no exception to this pattern with quintile 1 that shows 1.977 confirmed cases of infection per 100.000, but then increase for each new quintile until it reaches 6.629 in the fifth. The incidence ratio that follow the trend of the cumulative rate provide an even more concrete idea of the differences reported, with the most disadvantaged area that have 2.4 times the number of cases respect the reference.

As outlined before, Public Health Ontario in its research has also put the spotlight on hospitalizations which has been examined using the same conceptual framework just seen with the distribution of infections:

**Table 6: Ontario hospitalization among cases of Covid-19 for each neighborhood quintile**

Ontario hospitalization among cases of Covid-19 for each neighborhood diversity quintile February 26, 2020 to December 13, 2021				
Quintile of neighborhood diversity	Median age	Total number of hospitalization	Percentage of hospitalizations	Age-standardized cumulative rate per 100.000 population
Quintile 1 (Low)	68	2.108	7,7%	73,4
Quintile 2	67	2.891	10,6%	100,3
Quintile 3	65	3.947	14,5%	135,2
Quintile 4	65	6.047	22,2%	187,1
Quintile 5	62	12.278	45%	300,4

Source: Public Health Ontario’s data elaboration

The first information given by table 6 is that still in this case numbers follow the already well-known path ascribed to the previous instance. The total amount of hospitalizations is subject to a steady increase as the analyses move from quintile 1 to quintile 5, with a +10.170 units between the two extremes, as well as the percentages inherently related to them exposed in the fourth column. The age-standardized cumulative rate per 100.000 population seems to be drawn from the same hand, but the real interesting aspect come from the confrontation of these data with those of the same type but referring to the number of confirmed cases. If expressed in percentage, the results of the pairings of the same quintiles included within both tables are the following: 3,71% for the first, 3,93% for the second, 4,24% for the third, 4,42% for the fourth and 4,53% for the fifth. These outputs means that the degree of ethnic

concentration have an influence also on the number of serious cases given a specific number of confirmed infections, with the percentage that express the relation between these two variables that increase with the rise of the level of neighborhood diversity. A final notice is reserved to the median age that, contrary to general trend, diminish from quintile 1 to quintile 5, a result which probably derives from the fact that the most ethnically variegated areas are characterized by a younger population then the others.

The study ends with the proposition of the information collected in terms of number of deaths, which are reported in the table below:

**Table 7: Ontario deaths among cases of Covid-19 for each neighborhood quintile**

Ontario deaths among cases of Covid-19 for each neighborhood diversity quintile February 26, 2020 to December 13, 2021				
Quintile of neighborhood diversity	Median age	Number of deaths	Percentage of deaths	Age-standardized cumulative rate per 100.000 population
Quintile 1 (Low)	76	417	8,1%	11,6
Quintile 2	78	600	11,7%	17,6
Quintile 3	77	735	14,3%	22,9
Quintile 4	77	1.098	21,4%	32,7
Quintile 5	75	2.275	44,4%	56,5

Source: Public Health Ontario’s data elaboration

The scenario depicted here is exactly what one should have imagined after having seen and understood the data presented before. Even in this casuistry the degree of ethnic concentration influence in a positive way (or negative way, depends on the standpoint used) the number of deaths connected to each quintile, in other words the rise of the diversity prompt the increase of the deceases. Again, this correlation can be very easily extrapolated looking at the values inside the table. For instance, quintile 1 counts for the 8,1% of all the deaths registered in the time frame of the research, a percentage that becomes higher and higher from quintile 2 onwards until it reaches 44,4% in the last one. Furthermore, the age-standardized cumulative rate per 100.000 population represents another useful parameter on which to count to better understand the general trend mentioned before. The lone voice is the median age of those passed away which seems to not follow neither the same line traced

for the other values nor to have a contrary tendency as in the case of hospitalizations, it just stands around 75-78 years old without significant differences among the various quintiles.

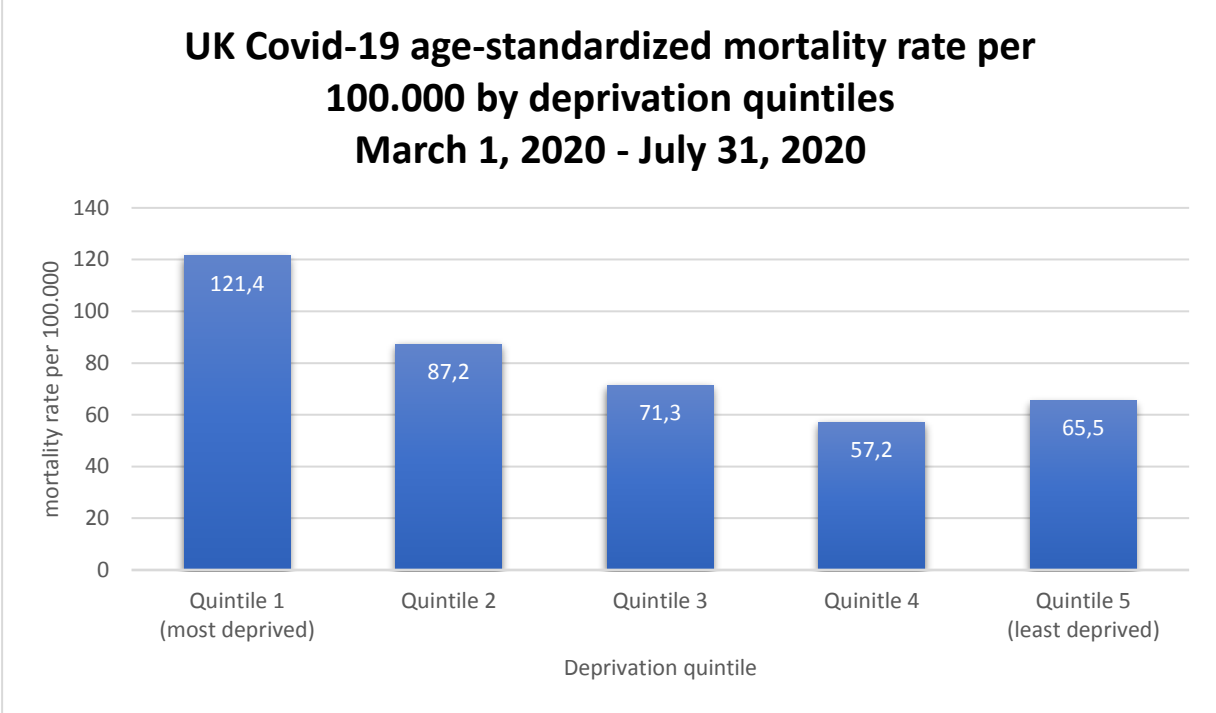
To conclude, the results obtained by Canadian researchers furnish the proof that the data about the United States previously analyzed does not represent stand-alone situations but reflects the more general interrelationships that exists in the binomial virus-social inequalities; whenever the latter subsist, Covid-19 permeate among them and produce an exacerbating effect. However, it should be noted that the content proposed so far has interested just the North American continent, therefore with the aim of a more comprehensive view on the matter, the focus will be shifted to Europe, and more precisely to what happened in England.

Here, the Office for National Statistics has collected, analyzed and published relevant data about the impact of the virus on the Britain's population under several aspects, exposing also the divergencies within the medical sphere to which people belonging to different social groups has been subject. For Instance, a research conducted during the first wave of the pandemic has divided the national territory in five areas based on the score of the Index of Multiple Deprivation (or IMD. It is an index which value is calculated as the weighted sum of other seven indexes each of them indicating a different dimension of possible deprivation: income 22,5%, employment 22,5%, education 13,5%, Health 13,5%, Crime 9,3%, barriers to housing and services 9,3%, living environment 9,3%)<sup>40</sup> in order to discover the eventual differences in the incidence of Covid-19 related deaths among them:

---

<sup>40</sup> David McLennan et al., *The English Indices of Deprivation 2019* (Ministry of Housing, Communities & Local Government, September 2019), 21, PDF file.

**Figure 4: UK Covid-19 age-standardized mortality rate per 100.000 by deprivation quintiles**



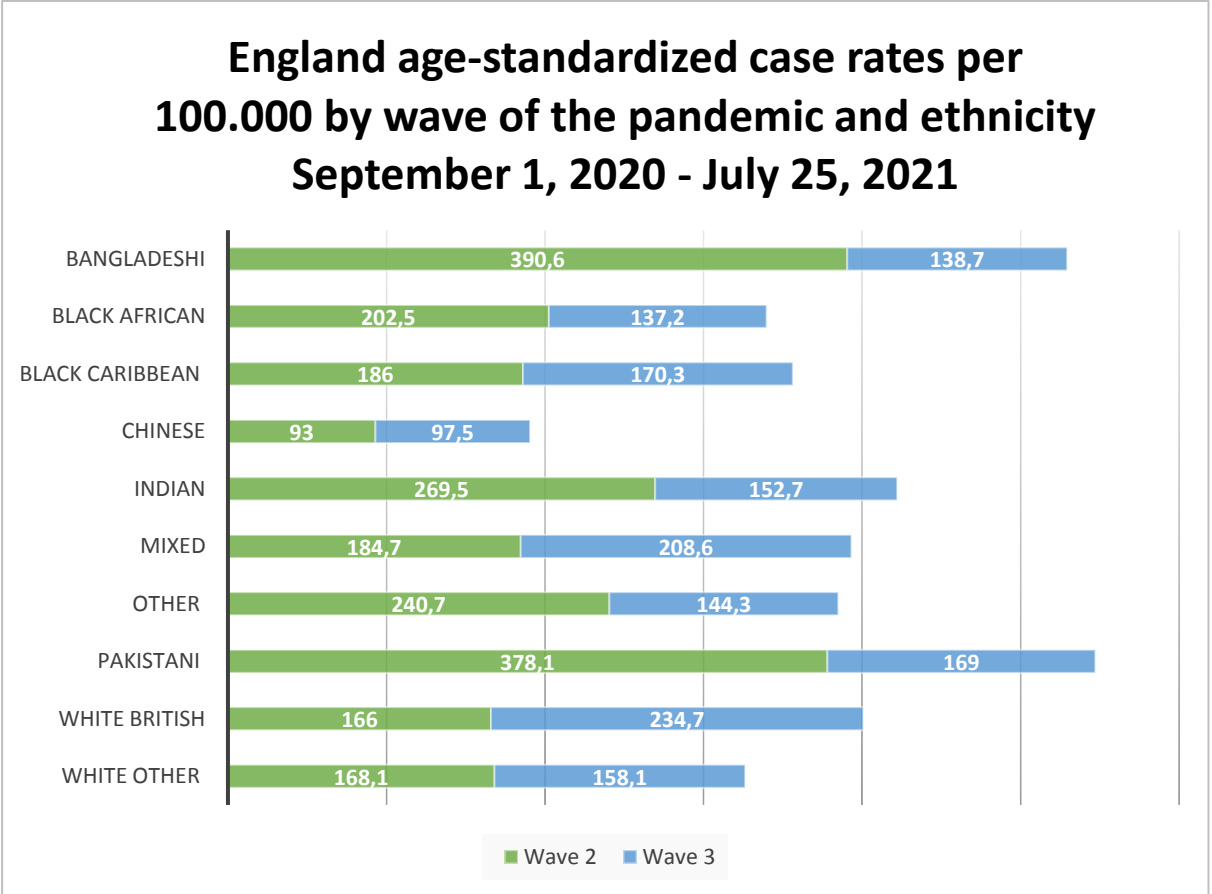
Source: Office for National Statistics’ data elaboration

In line with the data about the US and Canada previously reported, the most deprived areas of England are undoubtedly those that have been hit the hardest by the virus since the very beginning of the health emergency. In fact, as figure 4 shows, quintile 1 has registered 121,4 number of deaths during the time frame considered, a value that is much higher even respect the one of the immediately successive quintile with a gap between them of 34,2 deceases. With the third and the fourth quintile (and the consequent constant amelioration of the levels of deprivation) numbers became to be less threatening, thus confirming once again the relationships between poverty and risks of developing significant consequences from the infection. The last quintile deserves a mention apart. Because it represents the case with the best IMU score among all the five categories included in figure 4, given the general trend mentioned before it should have the lowest number of deaths, but the associate value of 65,5 is higher than the one related to quintile 2 instead. The reason under this curious aspect can reside in the analyses of the intervals of confidence reported in the study: 131,3-111,6 (quintile1), 94,7-79,7 (quintile 2), 77,7-65 (quintile 3), 62,7-51,8 (quintile 4), 71,3-59,7 (quintile 5). The fact that those referring to the last two quintiles overlap each other, ailments the insecurity of the real result that derive from the comparison between them, which theoretically could be different from the one reported and also include the possibility of a

reversal. The main point here is not to concentrate the attention specifically on the minimal differences among the quintiles but to develop an idea about the tendency existent between Covid-19 related deaths and levels of deprivation, a correlation that results clear from the figure.

Furthermore, a successive report of the ONS dated September 2021, has investigated on the distribution of confirmed cases of Covid-19 based on the various ethnicities that compose the social structure. The research, which takes into account the period attributable to the second and third wave, presents interesting aspects and even some (quite) unexpected outcome:

**Figure 5: England age-standardized case rates per 100.000 by wave of the pandemic and ethnicity**



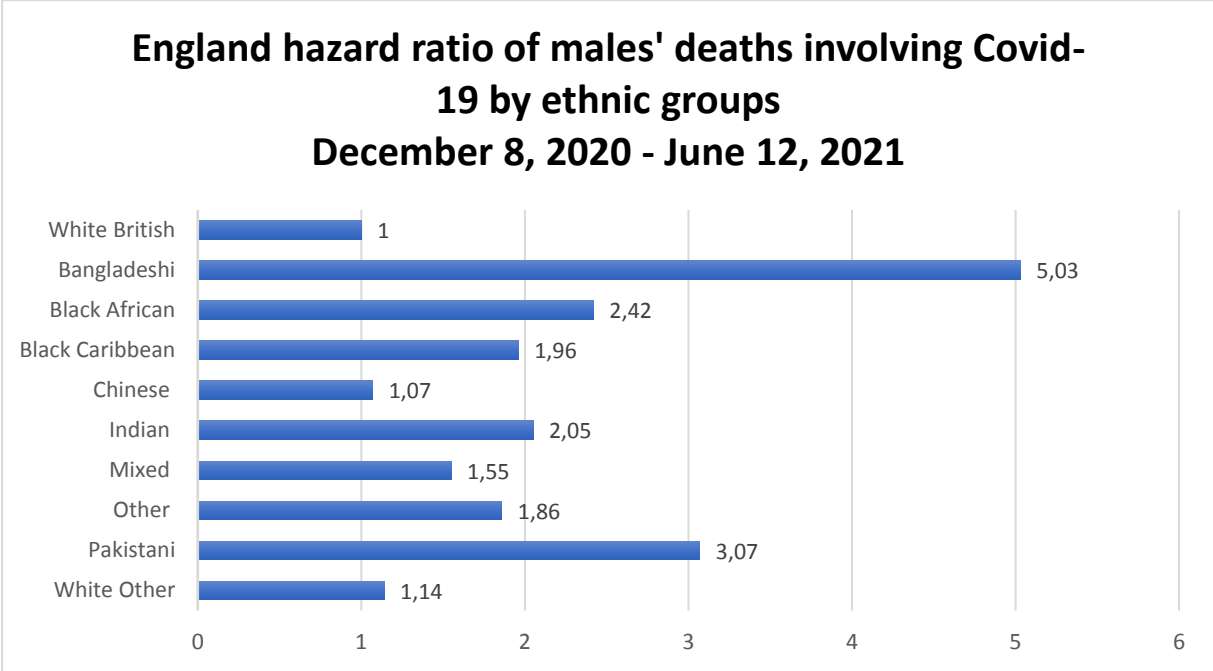
Source: Office for National Statistics’ data elaboration

Data suggests that during the second wave of contagions, the ethnic minorities are those that have contributed the most to the rise of the infection numbers. In particular, Bangladeshi population has registered the peak with 390,6 confirmed cases, suddenly followed by Pakistani (378,1) and Indians (269,5). A very tragic scenario is also the one which has seen

Black African and Black Caribbean as protagonists with 202,5 and 186 age-standardized case rates respectively, a situation shared with those belonging to the mixed group (British citizens whose parents are of two or more different ethnic backgrounds). Better outcomes, instead, are those associated to the White Others (168,1) and White British (166) that have been burdened by two similar degree of contagion, even if the lowest number of positives has been reported among the Chinese community. That said, wave three has changed the just mentioned statistics in a significant way. In overall terms, the hardest hit groups remained the Bangladeshi, the Indians and the Pakistani, but now behind them the White British population makes its appearance. This quite unexpected result finds its explanation in the rate of 234,7 contagions per 100.000 inhabitants, the highest of the third wave, that have prompted a significant jump for this ethnic category which end to found itself among the most hit during the span of time under investigation. Then, continuing the analyses of the blue bars in the figure 5, the “mixed” category takes the second place in this unavailing list with 208,6 confirmed cases preceding Black Caribbean (170,3), Pakistani (169), White Others (158,1), Indians (152,7), the group of Others (144,3), Bangladeshi (138,7), Black African (137,2) and Chinese (97,5).

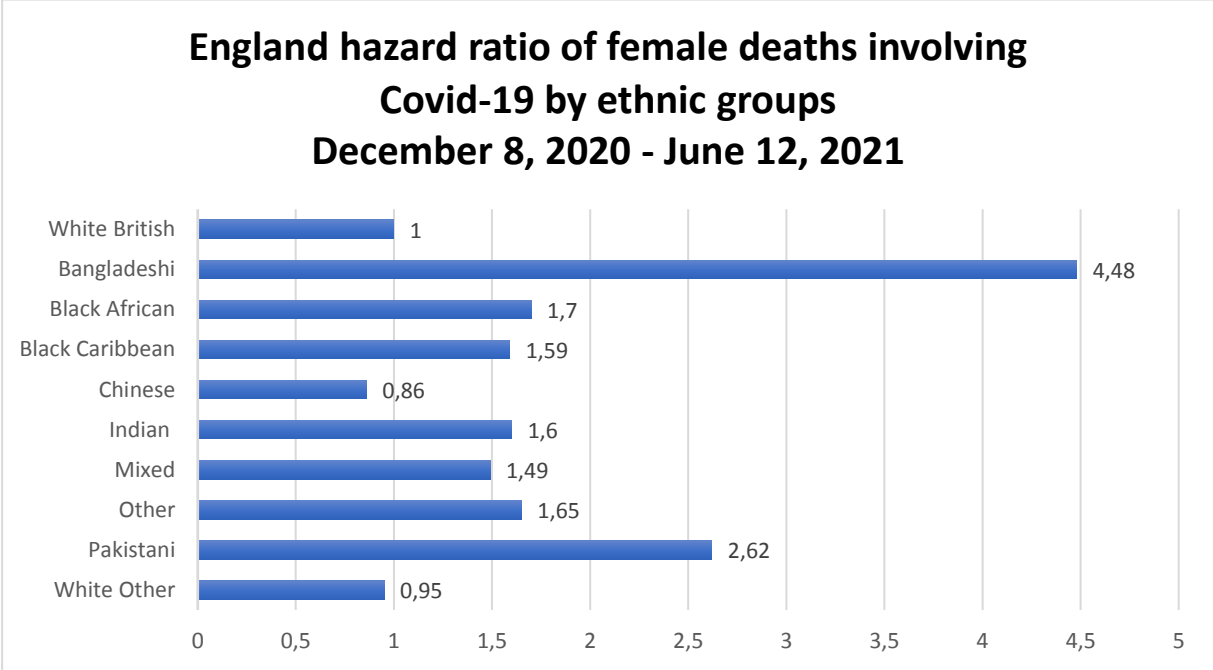
Despite the data about the confirmed cases are important in evaluating the impact of a virus on the various social stratifications, the real source of concern is, strictly speaking, more related to the hazard risk that the Covid-19 potentially induces on individuals, and how this rate changes when structural inequalities play a central role in shaping it:

**Figure 6: England hazard ratio of men’s deaths involving Covid-19 by ethnic group**



Source: Office for National Statistics’ data elaboration

**Figure 7: England hazard ratio of women’s deaths involving Covid-19 by ethnic groups**



Source: Office for National Statistics’ data elaboration

The first aspect to mention in the analyses of the two figures is that both of them contain hazard ratios which take the one of the With British ethnicity as reference. Starting with figure 6, the first aspect to notice is that all the various groups have a rate higher than 1, and this

despite the fact that during the period considered their overall numbers of infections per 100.000 population have not surpassed the incidence of positives in the community taken as base of study, apart the cases of Bangladeshi, Pakistani and Indians as earlier understood. More in detail, the latter with ratios of 5,03, 3,07 and 2,05 respectively, demonstrate once again the relative medical fragility to which they are subject within the social context, a condition shared with Black African community (2,42). Lower but still impressive is also what is reported about Black Caribbean (1,96), the group of Others (1,86) and the Mixed (1,55), while White Others (1,14) and Chinese (1,07) are those more in line with the reference ratio. For what concern women, the data of interest are included in figure 7 which shows how even in this case the worst scenario is associated to Bangladeshi that have a hazard index higher than 1,86 percentage points respect the one of Pakistani that stands in the second place. The best results, instead, have been registered in the White Other and Chinese groups with a ratio lower than the reference, while all the other ethnicities are above 1 with no significant differences among each other.

## **2.4 The role of citizenship**

Independently from who conducts the study, the dimensions of medical inequality considered, the instrument used to take the various measurements, and the country under analyses, the final result seems to be always the same with the minorities and those that were already living in fragile social contexts in the pre-pandemic era that have suffered the worst consequences. The role of national institutions, social practices and history in creating this background through errors and self-interests ideologies is undisputable, but at least a part of the divergencies witnessed during these difficult times is due to the necessary application of policies which found their justification in international laws.

Since the first phase of the Covid-19 emergency, governors all around the world began to fathom the possibility to implement extraordinary measures such as total or partial border closures, in the attempt to safeguard the internal health security and to prevent the virus to circulate undisturbed. For instance, the former US president Donald Trump announced on January 31, 2020 a travel ban for everyone that comes from Wuhan, a decision then extended



also to Iran on February 29 due to both the outbreak of SARS-CoV2 in that region and its “history of malign activity”. Moreover, on March 13 the block of entries arrived for all the nations included in the Schengen area citing the free flow of people within it as a too much favorable condition for the spread of the virus. Russia followed an almost identical path (to the point that suspects of imitation strategy or the existence of an agreement between the two have been pronounced) closing out any stream of people from China (January 31, 2020), Iran (February 28), then arriving to impose travel restriction to and from Europe on March. South Africa introduced a travel ban starting from March 15, 2020 which impeded nationals from “high risks” countries (Italy, Iran, South Korea, Spain, Germany, USA, UK and China) to cross their borders, while Australia, that initially implemented targeted bans, ended up imposing a total closure to both incoming and outgoing travels on March 20<sup>41</sup>. These are just few examples of the general pattern that the vast majority of states in the world followed between early February and early March, especially after the official statement by the WHO that renamed the spread of the Covid-19 as a pandemic. The usefulness of such choices in terms of medical outputs is still object of debate, but one sure aspect is that the role of citizenship during this time frame became more important than ever.

In the decades before the struck of the health emergency, the world has seen a constant increase in the internal and global migration due to both the globalization effect and phenomena such as economic depressions, xenophobia, violence, and civil wars among others but paired with a positive stance against these events which have improved the social integration of refugees and immigrants within the host countries.

However, the various blocks previously mentioned had completely reversed the situation, and many found themselves locked in a limbo of legal requirements which has caused the worsening of an already difficult context of living. Under the new regulations, with a lot of countries that accept only their respective citizenship as entry pass and the resurgence of ideologies against foreigners dictated by the delicate moment, asylum seekers and refugees together with migrant workers began to be refused even by countries which until that moment were considered inclusive and safe, being stuck in crumbling camps near the borders as never before. With the impossibility to return to their home nations and a total lack of protection, they faced an environment in which violence and discrimination were

---

<sup>41</sup> Mary A. Shiraef, “Europe’s border responses to COVID-19 in global context”, *Europe in the World*, December 16, 2021.

commonplaces as well as covid-19 infections and deaths<sup>42</sup>. The necessary practices to contrast the spread of the virus such as social distancing and the use of PPEs were impossible due to the overcrowding of encampments and a significant decrease of humanitarian aids with annexed resources.

## 2.5 Inequalities in the distribution of vaccines

A different but still worrisome scenario was the one experienced by non-citizens that were already within the host country when restrictions come into effect. Before entering into details, it is worth to mention the importance that these individuals have for the economic sphere of the state in which they live. In fact, in many developing and developed countries, this section of the population represents a substantial part of the floor that constitute the base of the general economy, often employed in humble and discarded jobs like construction workers, chefs, hairdressers, hoteliers, housemaids and more. Whether their recognition as an essential dowel of the society from the general public has been at very least ignored during normal times, when things got to be problematic a sentiment of neglection became to be transparent.

A research conducted in Germany during the period April 2020 – March 2021 unleashed important food for thoughts relative to this aspect and allows to make a spotlight on how much the legal status of citizenship counted for what concern the access to national services.

As a premise, it is worth to remember that German's health care system is one of the most developed and inclusive in the world with advanced technologies at disposal of everyone who needs them for free, an aspect shared with others Western Europe developed nations such as Italy, Spain, France and UK as examples.

Nonetheless, the unprecedented situation created by Covid-19 pandemic has put under great pressures doctors and experts who necessitated to find an answer to one of the most morally and ethically difficult questions: who deserve to have its life saved? The response of German medical associations was to prioritize individuals based on the utility that they may potentially

---

<sup>42</sup> Ryan and Nanda, *COVID-19: Social Inequalities and Human Possibilities*, 91.

provide to society and those with a higher probability to survive; in other words, they apply the concept of the most efficient allocation of scarce available resources. Therefore, the degree of prioritization under this philosophy depended on factors such as: type of occupation, level of education, age, gender, criminal record, number of children and, beyond any possible debate or discussion that can be made in this regard, it seemed to be a quite logical choice.

The real source of concern here is that public opinion ended up giving citizenship a fundamental role in the matter. The data collected through a survey included in the study highlighted how the status of immigrant (or permanent resident) impacted in a negative way the evaluation of respondents about the deservingness of medical treatment in case of severe covid-19 consequences in an even higher level than specific occupations or age. A theoretical explanation could be that non-citizens are viewed in a simplistic manner as those that incorporate all the conditions that cause an inherent diminishing in the scale of the priority, while nationals as the prototype of inhabitants more useful to society. If this assumption would be true, then an immigrant which explicitly meets all the requirements to be at the top of the list should be treated equally to a citizen with the same attributes. Researchers explored also this hypothesis finding out that, even under these conditions, Germans assigned a penalty to those without citizenship in a range that goes from seven to fourteen percentage points.

The healthcare chauvinism is surely something that have contributed in a huge way to produce the discrepancies of the burden suffered during the pandemic and it has been a state of mind which has embraced many developing as well as developed countries all over the world<sup>43</sup>.

In the Gulf States, for instance, thousands of migrant workers have been subject to discrimination practices hidden behind the mask of the necessary measures to contrast the pandemic. In Qatar, non-citizen laborers has been locked down (segregated) in crowded neighborhoods with little or no medical assistance, while in Saudi Arabia, king Salman promised a rescue package of \$2.4 billion to cover the wage losses of everyone that suffered due to covid-19, foreigners included, except then to provide it effectively only to Saudi citizens.

---

<sup>43</sup> Marc Helbling et al., "The Importance of citizenship for deserving COVID-19 treatment", *Nature*, September 2, 2022.

If the conditions of migrants blocked in a host country were not the very best (using a euphemism), there have been cases in which even those that were capable of returning to their home nations found themselves in troubles, especially in developing nations and especially because they were seen as virus spreaders<sup>44</sup>.

Finally, in the exploration of the differences in contagions and deaths there is another argument worth of your attention, that is the one concerning the “magic bullet” represented by vaccines and the outstanding inequalities related to their rollout campaigns.

Actually, the premises of an effective (and morally ethic) strategy have been truly set since April 2020, when the WHO put in place an initiative called “Access to COVID-19 Tools (ACT) Accelerator” aimed at implementing a global effort to ensure an equitable access to all the resources needed to contrast the pandemic in every country of the world, with a particular focus on those more economically fragile.

The most significative pillar of this program is the “Covid-19 vaccines Global Access Facility” or COVAX through which all the participating nations have the right to receive support in the development and manufacture of vaccines together with the guarantee of an equitable distribution of them.

The World Health Organization covers the fundamental role of scrutinizer of all the serum candidates proposed, going into a severe work of analysis to evaluate their relative effectiveness and safety.

Developed nations are charged with the task of purchase doses of the approved shots that eventually compose the portfolio at disposal of the organization which, thanks to its market power, should be able to negotiate with manufacturers several batches at a good price.

The functioning-schema involved an initial supply to all the members based on the number of their inhabitants ensuring to the self-financing countries a coverage that varied from a minimum of 10% to a maximum of 20% of the total population on the long term which was calculated taking into account the explicit requests made, the contribution apported by each participant and the availability of resources. The protocol establish that higher percentages

---

<sup>44</sup> Ryan and Nanda, *COVID-19: Social Inequalities and Human Possibilities*, 102-103.

are admitted only when at least one fifth of individuals in each national territory had received the injections<sup>45</sup>.

At this point one question emerge: why COVAX should be an attractive option for everyone? The formal response was that it would have been seen as an assurance for the rich and a lifeline for the poor, a “contract” that allowed the wealthiest to count on a vast choice of solutions and protect them in case their bilateral deals with pharmaceutical companies went wrong, and at the same time it would have permitted the poorest ones to have access to doses that otherwise they would have never received.

In September 2020 the UK paid £71 million to purchase 27 million of vaccines for the organization, Canada added CA\$ 220 million for other 15 million shots and, by December, the amount of subscribers to this ambitious plan reached the peak of 190 among which it is possible to find the most developed countries in the world.

The table seemed to be set up, but very soon the awareness of lack of food became evident. The altruism and the spirit of collaboration of the self-financing states toward the rest of the world proved to be just an ideal without a concrete application as many of them preventively signed agreements with manufacturers for the supply of millions and millions of vaccines leaving to COVAX just the leftovers. For instance, by August 2020, the USA already engaged itself into seven bilateral arrangements with six pharma companies for a supply of 800 million doses that is enough to vaccinate 140% of its population, the UK went even further securing 270 million units with the capacity to cover the 225% of its inhabitants, while the EU on its whole reached a deal for the delivery of half a billion doses<sup>46</sup>.

At a first glance, it might look that the distribution inequalities described derived by an egoistic behavior of the rich which have used their privileged position to be the first to get their hands on the shots, but this is only partially true. On one hand it is a fact that the economic power has played a relevant role in shaping the choices that have produced this unequal context, but, on the other, there are even plausible justifications that have led to such solutions.

---

<sup>45</sup> Seth Berkley, “COVAX explained: To end this global health crisis we don’t just need COVID-19 vaccines, we also need to ensure that everyone in the world has access to them”, *GAVI the vaccine alliance: VaccinesWork*, September 3, 2020.

<sup>46</sup> Danaiya Usher, “A beautiful idea: how COVAX has fallen short”, *The Lancet*, June 19, 2021.

Indeed, the structural functioning of COVAX itself proved to be not the very best to incentivize the pooling of resources. First, the initial proposal to allocate the available vaccines to every member based on the size of the population, as mentioned above, is a mirror of a general incapacity to evaluate the complexity of the reality where different countries and regions were experiencing not comparable situations in terms of cases, hospitalizations, and deaths, therefore requiring a more tailored approach. Second, the coverage threshold fixed at 20% together with the impossibility to increase it until the moment in which all the nations involved would have reached that goal is truly inappropriate, both because it is unthinkable that self-financing states may accept it after all the finances devoted to grant supplies and because the limits imposed are simply too low to ensure the protection of societies. Third, it is necessary to remember that all the purchases have been made thanks to the use of public funds, or in other words, through the money that individuals have collectively invested to ameliorate their respective communities, the same people that, especially in a moment of emergency, deserve to receive from governments what is due to them.

In light of this, the actions of the wealthiest nations assume a different connotation, less the one of greed measures and more the one of reasonable vaccine nationalism. It is worth to stay on this latter term a bit more, essentially because this kind of nationalism is also the responsible of the exportation block of manufactured doses by the institution seen as the cornerstone of the COVAX supply strategy.

On March 2021, in response to an incredible surge of cases and deaths, Indian's government announced the will to prioritize its own population in the protection against the virus, a decision which implied the maintenance within its borders of all the AstraZeneca jabs produced by the Serum Institute of India (SII), the largest vaccine manufacturer in the world with a production capacity of 60 – 70 million units per month (according to what has been declared by its management in January 2021)<sup>47</sup>.

Faced with this additional issue, with the hope of reaching the founding objective reduced to a flicker, COVAX decided to redesign the conditions at the base of its functioning in favor to (theoretically) donating countries. The new introduced "Optional Purchase Agreement" consisted of two principal points: self-financing countries were no more considered as "product agnostic" but free of choosing which kind of vaccine would have been allocated to

---

<sup>47</sup> BBC staff, "Coronavirus: India temporarily halts Oxford-AstraZeneca vaccine exports", *BBC*, March 24, 2021.

them, always considering portfolio availability and, furthermore, the ceiling of total possible coverage shifted from 20% to 50% but it remained as previously established for financed nations<sup>48</sup>. Better, but still not enough.

Whether the first aspect represented a not indifferent upgrade in attractiveness, the second one raised a question: why rich countries should have been interested to an option which would have allowed them to protect not in a sufficient way, again, their population when they would have surpassed that threshold just through the continuation of their multiple bilateral agreements?

At the same time in which this not-so-well-designed-plan was communicated, on early May 2021, a parallel attempt to increase global collaboration was made directly by US president Joe Biden that call for a waiver of the intellectual property rights on Covid-19 vaccines as the unique solution to help low and middle income countries to overcome those terrible times<sup>49</sup>. Actually, the idea was not something new, but a re-proposal of the joint appeal made to the WHO in October 2020 by the governments of South Africa and India which at that time ended to obtain a negative outcome<sup>50</sup>.

The answer to the American president's statement was not long in coming, with the EU states responding in chorus from their informal meeting in Porto. The floor was taken by the French president Emmanuel Macron that, in line with the thoughts of the other European nations, expressed his reservation on the extraordinary measure demanded indicating that it was not the solution to resolve the scarcity problem, especially because behind the production of vaccines there are others, and more relevant, factors to consider such as the necessary know-how, the presence of adequate facilities and well-rooted systems of quality controls that cannot be assured in the developing countries in the short time. Even the European Commission president, Ursula Von Der Leyen, married the vision of her colleague announcing that the IP waiver would have not bring a single dose in the medium and short term<sup>51</sup>.

Passing through this difficult scenario, a COVAX meeting was hold on June 2 in Japan, and all chickens came home to roost. In this occasion, the UN secretary general Guterres warned

---

<sup>48</sup> Usher, "A beautiful idea: how COVAX has fallen short".

<sup>49</sup> Daniel Boffey and Kate Connolly, "Macron Voices concerns over Covid Vaccines patent waiver", *The Guardian*, May 7, 2021.

<sup>50</sup> Danaiya Usher, "South Africa and India push for COVID-19 patents ban", *The Lancet*, December 5, 2020.

<sup>51</sup> Boffey and Connolly, "Macron Voices concerns over Covid Vaccines patent waiver".

about the worrisome discrepancy emerged between real and planned data, informing the participants that the organization had delivered over 72 million of doses in 125 nations instead of the 172 million units promised, numbers that became even more discouraging considering that of the 21 billion of jabs administered worldwide until then, COVAX has been involved just in the 4% of them. Moreover, 75% of global vaccine production reached wealthy states, while poor ones not even received enough resources to protect health workers and individuals with underlying conditions<sup>52</sup>.

The gross inequity lamented during that gathering echoed also in the room hosting the G7 appointment in Cornwall, United Kingdom, just a week later on May 13 and 14. Through the “Carbis Bay declaration”, the most industrialized nations in the world agreed on pledging the delivery of 1 billion doses to low and middle income countries in the next 12 months, with 500 million shots promised by the USA alone and 100 million by the former UK prime minister Boris Johnson<sup>53</sup>.

Despite the efforts put in place, the announcement brought some critics from humanitarian alliances such as Amnesty International, which called it “a drop in the ocean” underlining as rich countries were continuing to apply paltry half measures and insufficient gestures<sup>54</sup>.

Surely, the amount of units committed by the act were not sufficient to obtain immediately the adequate global level of protection, but it was a sincere starting point toward the future imagined by COVAX founders. As demonstration of this, according to the World Health Organization’s vaccine director Kate O’Brien, in the last 40 days of 2021 there were more doses shipped to countries in need than in the rest of the entire year.

Although the access to vaccines seemed to be at least in part resolved, another equally relevant, but less contemplated, issue remain unsolved: how to transform the received jabs into real shots in arms. It is not a mystery, in fact, that the vast majority of developing nations have poorly funded and weak health care systems, completely inadequate to run up a vaccination campaign as rich ones did. The distribution on the ground of the landed resources must be inserted into a context in which the lack of qualified personnel, organization,

---

<sup>52</sup> Usher, “A beautiful idea: how COVAX has fallen short”.

<sup>53</sup> Patrick Wintour, Heather Stewart and Phillip Inman, “G7’s Carbis Bay declaration: the key pledges”, *The Guardian*, June 13, 2021.

<sup>54</sup> Usher, “A beautiful idea: how COVAX has fallen short”.



infrastructures, knowledge, streets and way of communication are in the daily agenda with the concrete risk of vanishing the aided received.

Furthermore, throughout the 2021 countries such as Congo, Nigeria, Uganda, Kenya and Guinea have been the theatre of intense protests and strikes by doctors and nurses lamenting inappropriate and dangerous working conditions together with insufficient payments and wages that have completely paralyzed the already devastated systems since the outbreak of the pandemic.

Then, another negative factor that deserve to be included in the discussion is the one concerning the hesitancy to get the shots. Truly speaking, there is no evidence that poor countries have been hit hardest than wealthy ones under this aspect, however if the latter have been able to deal with it thanks to very expensive marketing campaigns and publicity stunts, the same cannot be said for the first simply because economic hardships didn't allow them to copy the script.

Criticisms have been moved toward international institutions, guilty of being too much focused on access without considering the successive deployment hurdles, a vision with which it is difficult to disagree. A research conducted by the humanitarian agency CARE highlighted that by late November 2021, only 14 percent of the \$5,8 billion provided by the World Bank on vaccine assistance were deployed to finance the rollout campaigns and that the COVAX program has vastly undervalued the expenses inherent to them. According to the estimates made by the latter, the average delivery cost per person in the third world regions was fixed at \$3,70, but the CARE study increased that number at \$8 for one dose, specifying that in particular challenging cases, such as the one of Nepal, it could be above \$18 for two units per each individual.

The superficiality with which rich nations have interpreted global needs is astonishing, but it doesn't end here. A large part of the supplies conceded were very close to their expiration dates, rendering them almost useless within a context in which their administration was hampered by all the reasons cited before. The final result was that by January 2022, 32 low and middle income states have used less than half of the vaccine furnished to them, with

negative peaks registered in Ghana (37%), Burkina Faso (27%), Somalia (26%), and Burundi (1%), as reported by CARE investigation<sup>55</sup>.

At the time of writing, the population coverage in poor nations has ameliorated but there is still a lot to do, mostly in the African continent. Actually, international institutions must learn from the failures and the unpreparedness showed in the managing of the pandemic for truly granting a world in which no one is left behind; a remainder for the present and, especially, for a better future.

---

<sup>55</sup> Anthony Faiola, "The new kind of vaccine inequality", *The Washington Post*, January 24, 2022.

# Chapter 3

## The crisis into the crisis

### 3.1 Introduction to Chapter 3

This final chapter is focused on the indirect effects produced by the pandemic. In order to propose an adequate understanding on the matter, the initial part is reserved to the discussion of the digital inequalities that, as will be reported, played a crucial role in defining the level of hardships faced by different individuals in various fundamental social dimensions. Then, the attention switch on the employment and educational frameworks which are the subjects of an in-depth analyses aimed at discovering the principal elements that caused their internal disruption.

### 3.2 Digital Divide

#### 3.2.1 The various dimensions of the digital inequality

In building awareness about the existing inequalities in our world and the subsequent exacerbation of them in relation to the pandemic, the concept of digital divide plays a critical role.

The term has been coined by Lloyd Morrisett, an American psychologist, who have introduced it in reference to the difference between information “have” and “have-nots”, or in other words, between those that have the possibility to rely on digital technologies in their daily life and the ones whose do not have this advantage<sup>56</sup>.

---

<sup>56</sup> Ryan and Nanda, *COVID-19: Social Inequalities and Human Possibilities*, 146.

Unlike the others, such kind of inequality is relatively new, and its date of birth can be precisely traced back to March 12 1989, the day in which the English computer scientist Tim Berners-Lee presented to his CERN colleagues the project of an innovative system which would have allowed the exchange of data among a network of computers, a net with the potential to connect all the devices of the various research centers in the whole globe (according to the foundational intent of the author). Two years later, on August 6 1991, the website of the Geneva's institution, the first ever created, came to light and with it even a new world era<sup>57</sup>.

To size the progress made since then, at the time of writing the number of webpages are almost 2 billion with 5.4 billion of users (68,4% of the world population) which use them to find the most disparate information<sup>58</sup>.

But internet has proved to be more than that, and today it can be considered the very beating heart of human progress with labor markets, education systems, financial transactions, artistic productions, news, shopping markets and more that found in it a fertile ground on which to reside and develop.

Furthermore, the World Wide Web is, in its essence, a great equalizing force. It is a platform which contains contents created by the people and for the people and that, theoretically, does not make any distinctions based on race, ethnicity, gender, social class or nationality<sup>59</sup>.

So, where inequalities stand? In order to find them, it is necessary to look at the factors that concretely enable the fruition of the digital universe which are directly interconnected and shaped by the pre-existing differences in opportunities and possibilities between communities and individuals.

The first dimension in which the digital inequality manifests itself regards the access to the technologies which allow the use of an internet connection. Nowadays, the most widespread devices on a worldwide level able to do so are the smartphones, which have witnessed an ever rising increase of usage in the last two decades. For this reason, it is possible to consider them as the perfect tools to take as a sample in order to analyze the discrepancies in the aspect of the digital exclusion mentioned above:

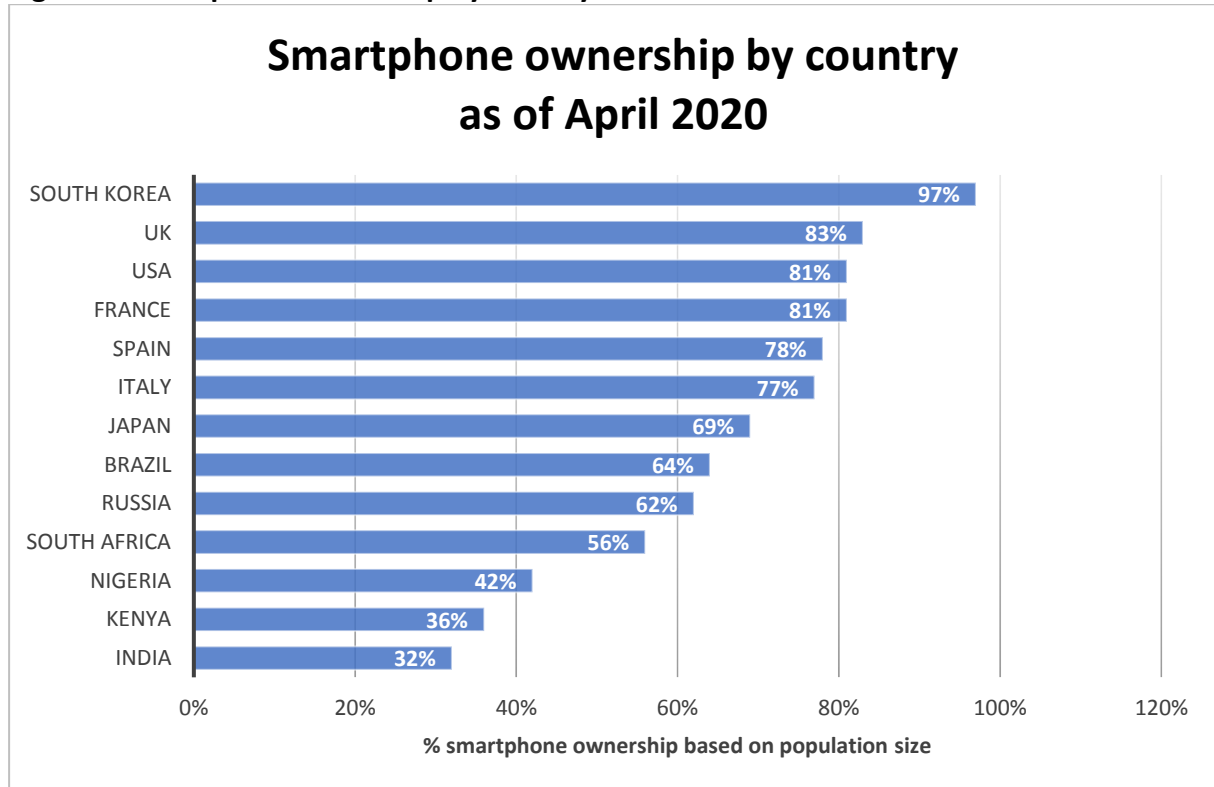
---

<sup>57</sup> Cabiria staff, "28 anni fa nasceva il web. L'inizio di una rivoluzione", *Cabiria*, August 6, 2019.

<sup>58</sup> "IntOernet Live Stats", *Internetlivestats.com*, accessed November 5, 2022.

<sup>59</sup> Ryan and Nanda, *COVID-19: Social Inequalities and Human Possibilities*, 146.

**Figure 8: Smartphone ownership by country**



Source: Pew Research Center's data elaboration

The data reported in figure 8 demonstrate that whether the ownership of a smartphone can be considered as a normal thing in the most developed nations, the same cannot be said for developing ones. In countries such as South Korea, UK, USA, France, Spain and Italy, with a market penetration of 97%, 83%, 81%, 81%, 78% and 77% respectively, the possess of a device able to connect to the internet in a very quick way and in any desired situation is almost a must-have good, something that is necessary to have in order to not be excluded from the high-tech progressive societies of our times. Signs toward the same direction can be seen also in Japan, Brazil (or more in general South America), Russia and South Africa, where the percentages showed are lower than the ones cited before but high enough to project these states in an expected future inclusion into the category of the regions in which the access to technological instruments is a daily routine. In other instances, instead, as in the case of Nigeria, Kenya and India there is still a lot of work to do. In the latter, smartphones are still today too expensive luxury goods for the vast majority of the population that imply the concrete risk of seen these nations more and more isolated from the rest of the world in the coming years.

It should be noted that, although the data about the smartphones are surely valuable in the creation of the general idea concerning the concept of interest, they are not the only available instrument which permits individuals to enjoy the potentiality of the web and, in truth, they are not even the best in doing so. When internet is used for working or studying, for instance, the limitations of the aforementioned devices come to the surface, and computers becomes necessary to accomplish the daily tasks. But PCs are not as diffused as their mini counterparts, so that when they are taken into account a new layer of the unequal access to digital technologies emerges, one that embraces also developed nations<sup>60</sup>.

A study conducted by the Pew Research Center has revealed the existence of important divergencies in the percentages associated to the ownership of desktop or laptop computers in the USA when different ethnicities, more specifically White Americans, Black and Hispanic, are held as base of analyses: 80% of the adult population of the first group have at least one of the two devices compared to 69% of the second and 67% of the third. The same research also indicate that in terms of smartphone usage the three categories scrutinized have no important differences among each other with White and Hispanic standing at 85% and Black at 83%<sup>61</sup>.

This comparison underline explicitly the complexity of the issues characterizing this specific aspect of the digital inequality mentioning that in certain cases it is not sufficient to have at least a device able to connect to the internet but it is important to have the right one, opening up to possible digital exclusions even in countries which, at a first sight, seem to be not touched by this problematic.

Even if an individual have a device which include the functionality to navigate on the web, it is not granted that he/she will be effectively capable of doing it. This introduce the second dimension of the digital divide that have its focus on the availability of the internet connection.

According to recent statistics, in 2019 the number of users on a global level amounted to 4.1 billion people which increased at 4.6 billion during the course of 2020 due to the pandemic effect and annexed restrictions with an annual increase of 10,2%, the largest in the last decade, driven especially by developing countries that incremented their average utilization

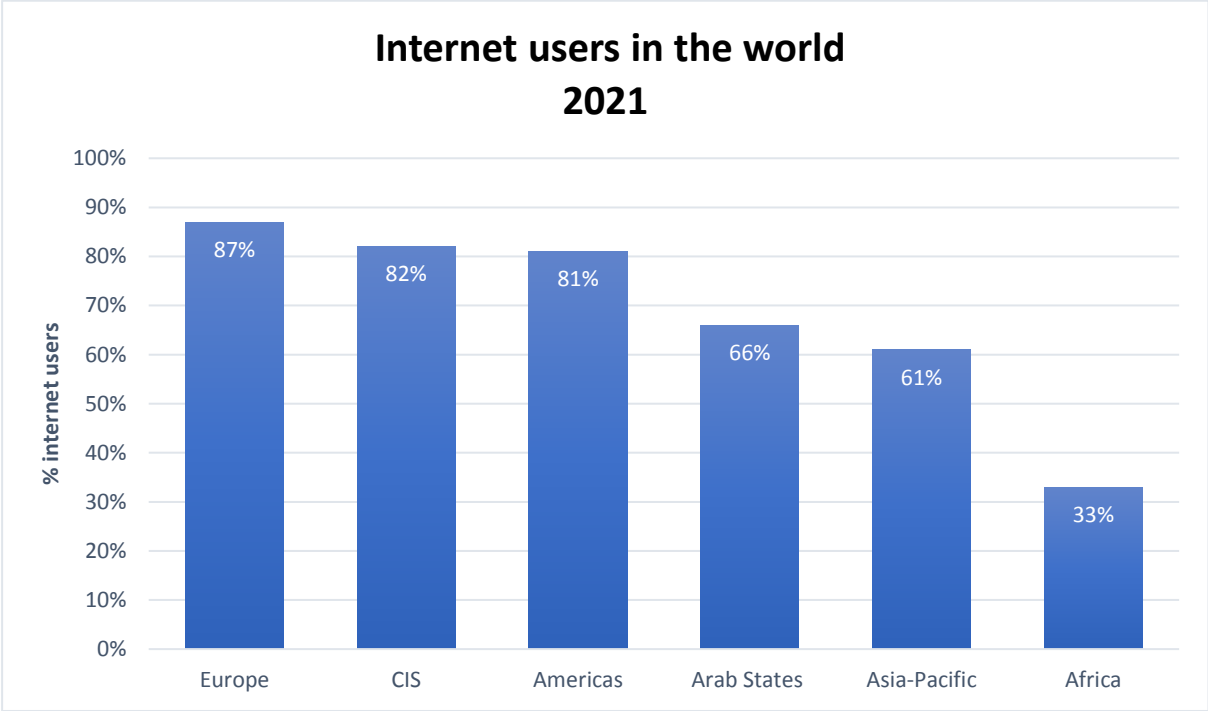
---

<sup>60</sup> Ryan and Nanda, *COVID-19: Social Inequalities and Human Possibilities*, 146.

<sup>61</sup> Sara Atske and Andrew Perrin, "Home broadband adoption, computer ownership vary by race, ethnicity in the U.S.", *Pew Research Center*, July 16, 2021.

of 13,3 percentage points. In 2021 the growth returned to pre-crisis rates at 5,8% and the number of connected persons reached 4.9 billion. Although these later trends suggest a narrowing of the gap between wealth and poor regions, from 66% in 2017 to 63 % in 2021, it means also that roughly 39% of the world population is still lagging behind, 96% of whom live in poor and developing nations<sup>62</sup>.

**Figure 9: Internet users in the world**



Source: International Telecommunication Union’s data elaboration

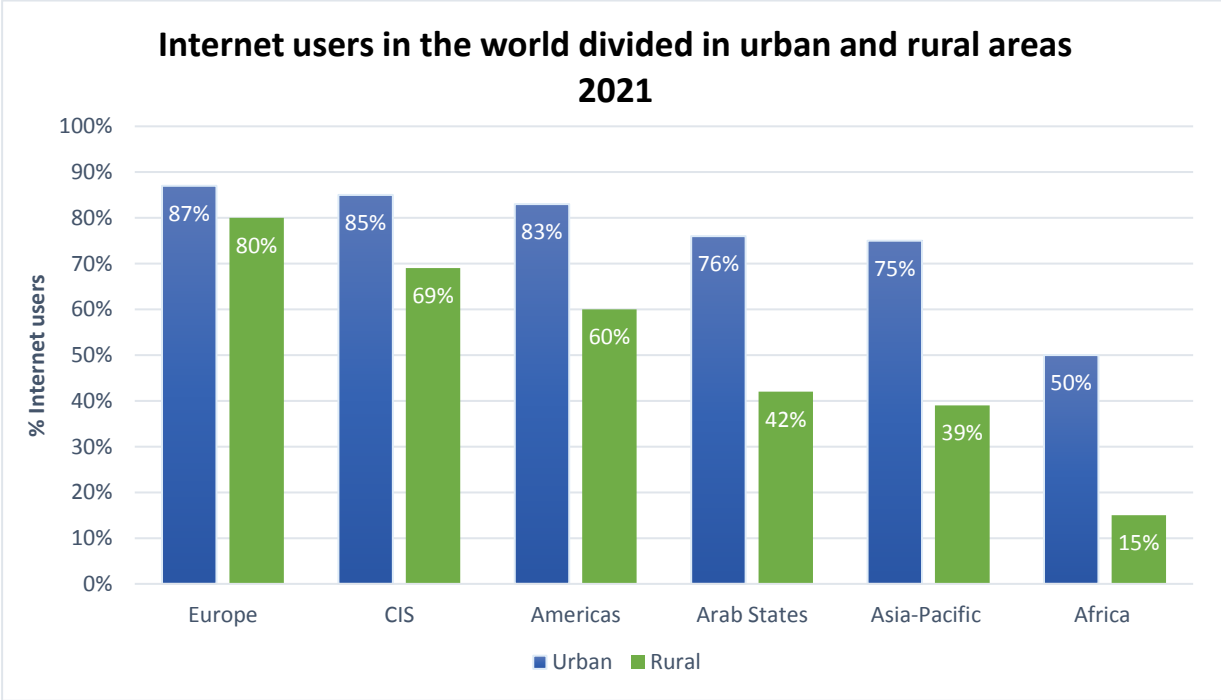
The percentages reported in figure 9 refer to individuals which satisfy at least two conditions: they own a device able to connect to the web and they have subscribed contracts to effectively enjoy internet access. This means that potential cases of people living in geographical areas where the coverage exists and is assured but which cannot be considered useful for them because they lack even just one of the two necessary enabling factors are not considered. That said, numbers provide a worrisome, though expected, scenario. In Europe 87% of the population is composed by internauts which indicate an almost complete internet saturation on the whole territory as well as the largest one in the world under a continental point of view. The group known as “The Commonwealth of Independent States” or CIS (formed by Armenia, Azerbaijan, Belarus, Kazakhstan, Kyrgyzstan, Moldova, Russia and Uzbekistan) place itself

<sup>62</sup> “Internet use,” Facts and figures 2021, International Telecommunication Union, accessed October 10, 2022.

immediately behind with 82% of connected inhabitants, a percentage almost identical to the Americas (81%). Another couple that deserve to be mentioned together is the one composed by Arab States and Asia-pacific regions where more than half of the respective populations, 66% of the first and 61% of the second, have resulted online during 2021. Finally, the worst value registered belongs to African nations with 33% of users.

Moreover, it should be noted that behind the data just presented there are other layers of inequality in internet access that deserve to be treated. For instance, when the lenses of the analyses move from the planisphere to each single world’s region previously mentioned, it is possible to notice a new kind of geographical disparity between urban and rural areas:

**Figure 10: Internet users in the world divided in urban and rural areas**



Source: International Telecommunication Union’s data elaboration

The first comment that is needed here as description of the figure above is that the variabilities between the columns concerning each region of the world follow exactly the level of development that can be associate to the categories observed. Rural and urban areas of Europe are those more closed to each other with just 7 percentage points between them, an explicit demonstration of the economic power, and equality of opportunities, that subsist in this context. Then, CIS countries propose a more marked difference of 16 percentage points that is more in line with the one of Americas which have 83% of people connected in cities



and towns and 60% of internet users in small villages. Arab states presents advanced urban backgrounds that explain the 76% of connected individuals within them but a very unequal distribution of wealth so that non-urbanized locations have just 42% of internauts. Asia-pacific and African nations stand on the same ground of the latter in terms of reported divides, 36 and 35 percentage points respectively, even if Africa has a worse situation in general terms.

Going even more deeper into the topic with the aim of illustrating a far reaching and comprehensive view, the matter concerning the access to the web assumes other shapes of inequities deserving a close observation. An issue that affects poor and developing countries as well as developed ones is the inability to involve certain segments of the population in the use of digital instruments. It is a well-known fact indeed, that people who belong to past generations have more difficulties in approaching the modern technologies due to a multitude of reasons that goes from the lack of knowledge of how to appropriately use them to the complete ignorance of the advantages that they could bring. Obviously, this influence also the numbers relatives to internet access which results very different based on the range of age considered.

According to a recent study which explored the distribution of internet users worldwide in 2021, the individuals aged 25-34 are those with the highest percentage (33,8%), followed by those standing within the range 18-24 (22,8%), 35-44 (18,6%), 45-54 (11,9%), 55-64 (7,3%), 65+ (5,5%)<sup>63</sup>. Another research, then, has highlighted that in the USA roughly 25% of the elderlies with 65 years or more have never resulted online during the entire 2021 compared to just 7% of the totality of adults below that age threshold<sup>64</sup>. Finally, the Office for National Statistics revealed that in 2020 the group of UK inhabitants between 16 and 44 years old reached a share of 99% of users, while the statistical outcomes for the category labelled 75+ was 54%<sup>65</sup>.

Going further with the analyses, the awareness about the generational gap must be added to the acknowledgment of another basis of access imbalance between economic actors that today afflicts societies especially in developing and poor countries. In Africa, for instance, throughout 2020 the gender divide regarding internet utilization was of 11 percentage points

---

<sup>63</sup> "Distribution of internet users worldwide as of 2021, by age group," Statista, May 2022.

<sup>64</sup> "Share of adults in the United States who use the internet in 2021, by age group," Statista, April 2021.

<sup>65</sup> Cecil Prescott, "Internet users, UK: 2020. Internet use in the UK; annual estimates by age, sex, disability and geographical location", *Office for National Statistics*, April 6, 2021.

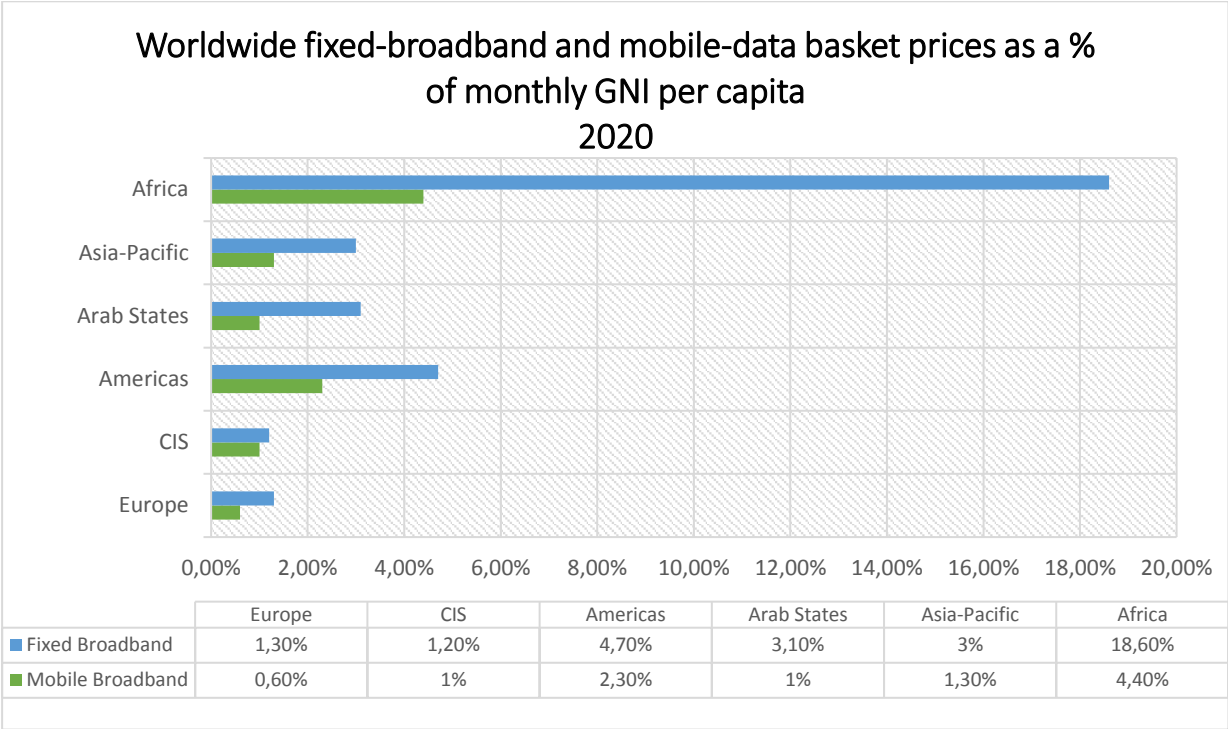
with men at 35% and women at 24%, a divergence very similar to the one reported for the Arab States (12%) even if with different levels in the statistics of the general amount of users (men 68%, women 56%). Developed nations, instead, proposed a more equal scenario with Europeans man and women separated only by 4 percentage points (man 87%, women 83%) while at the same time in CIS nations the difference was even smaller due to 81% of male users and 79% of females. To conclude, in Asia-Pacific regions the research outcomes suggested that 59% of men and 54% of women used the internet in the year of interest and in the Americas the gap was just 1% (men 78%, women 79%) demonstrating a substantial parity<sup>66</sup>.

It is also worth to remember that in the vast majority of cases internet access is not for free. Although the possibility to connect a device through the available hotspots in some public places such as coffee shops or malls may sound attractive, this is not the best solution to choose for anyone who needs it in order to accomplish important tasks or jobs. This kind of locations are often noisy, they require time to reach them and the connection is unstable due to the large number of people using it in the same moment, not to mention the fact that it exposes the personal data of the user to potential hacker attacks. The alternative is to subscribe apposite private contracts which allow to have a fixed-broadband at home and/or a mobile-data plan in face of the payment of a price that in certain circumstances might result prohibitive.

---

<sup>66</sup> "The gender digital divide," International Telecommunication Union, accessed October 10, 2022.

**Figure 11: Worldwide fixed-broadband and mobile-data basket prices as a % of monthly GNI per capita**



Source: International Telecommunication Union’s data elaboration

The United Nation Broadband Commission for Sustainable Development defined as concept of affordability a price that is less than two percent of the monthly Gross National Income (GNI) per capita. According to this reference, it is possible to notice how four out of the six categories included in figure 11 have at least one of the two associated factors that is not in line with the just mentioned threshold. Data suggests that in the Arab States and Asia-Pacific regions the fixed broadband services result very expensive for the average consumers with indexes that move from the 3,1% for the first to 3% for the second even if the small gap indicates that the barrier is not so unsurmountable, while the mobile data-plans are within the optimal economic range. Especially shocking is the rate of 18,6% related to the fixed broadband in Africa that together with Americas presents the worst situation with the values of both the variables above the limit imposed. On the other extreme, Europe and CIS nations demonstrate to have market prices which allow their respective populations to enjoy private internet connections in any form desired which contribute to explain, at least in part, the good outcomes registered even in the figures previously reported.

However, access is nothing without accessibility. Speed, stability and reliability are attributes that ideally should always be annexed to the internet because they can be considered as the

enabling factors that concretely allow the exploitation of the opportunities and possibilities that the Web embodies<sup>67</sup>. A connection that lack them is not so different from not having it at all. The inequalities inherent to this aspect, therefore, needed to be conceived as a fundamental topic that deserves its nomenclature as the third dimension of the digital divide.

A first element that became immediately clear through the analyses of this argument is the incredible pace of progress inherent to the technologies which allow an improvement of the internet connection. According to the data provided by Ookla, from July 2018 to July 2019 the world's mean download speed over mobile data plan increased of 21,4%, shifting from 22.81 Mbps (Megabit per second) to 27,69 Mbps while the fixed services witnessed its average performance rising even more with a +37,4%, from 46,48 Mbps to 63,85 Mbps<sup>68</sup>.

At a first glance these results sounds very promising, but when the scope of a research is to discover the possible unbalances hidden behind the appearance, as this elaborate do, one question emerge: Where do these numbers come from? The truth is that whether on one hand there is a category of countries which can be intended as the real engine of the phenomenon just described, on the other many have participated on it just in a small fraction confirming the backwardness of their technological settings.

In mobile terms, South Korea saw an outstanding +165,9% in download speed followed by Switzerland (23,5%), Canada (22,2%), Australia (21,2%) and the Netherlands (17,3%) while in the fixed line context Taiwan had the largest jump with a 166,5% improvement which placed it in the first position above South Korea (52,4%), Macau (26,4%), Romania (21,7%), Switzerland (21%) and United States (19,3%). At the base of these percentages there are undoubtedly successful stories of implementation of efforts, resources and capabilities which allowed a correct deployment of high tech tools such as 5G and optic fiber connections on the national territories cited.

About this latter aspect, it is worth to underline that in order to speed up the online development it is not just enough to have the above mentioned technologies at disposal because their proper functioning is granted only when an adequate level of diffusion is reached or, in other words, when a very large number of internet users can enjoy their

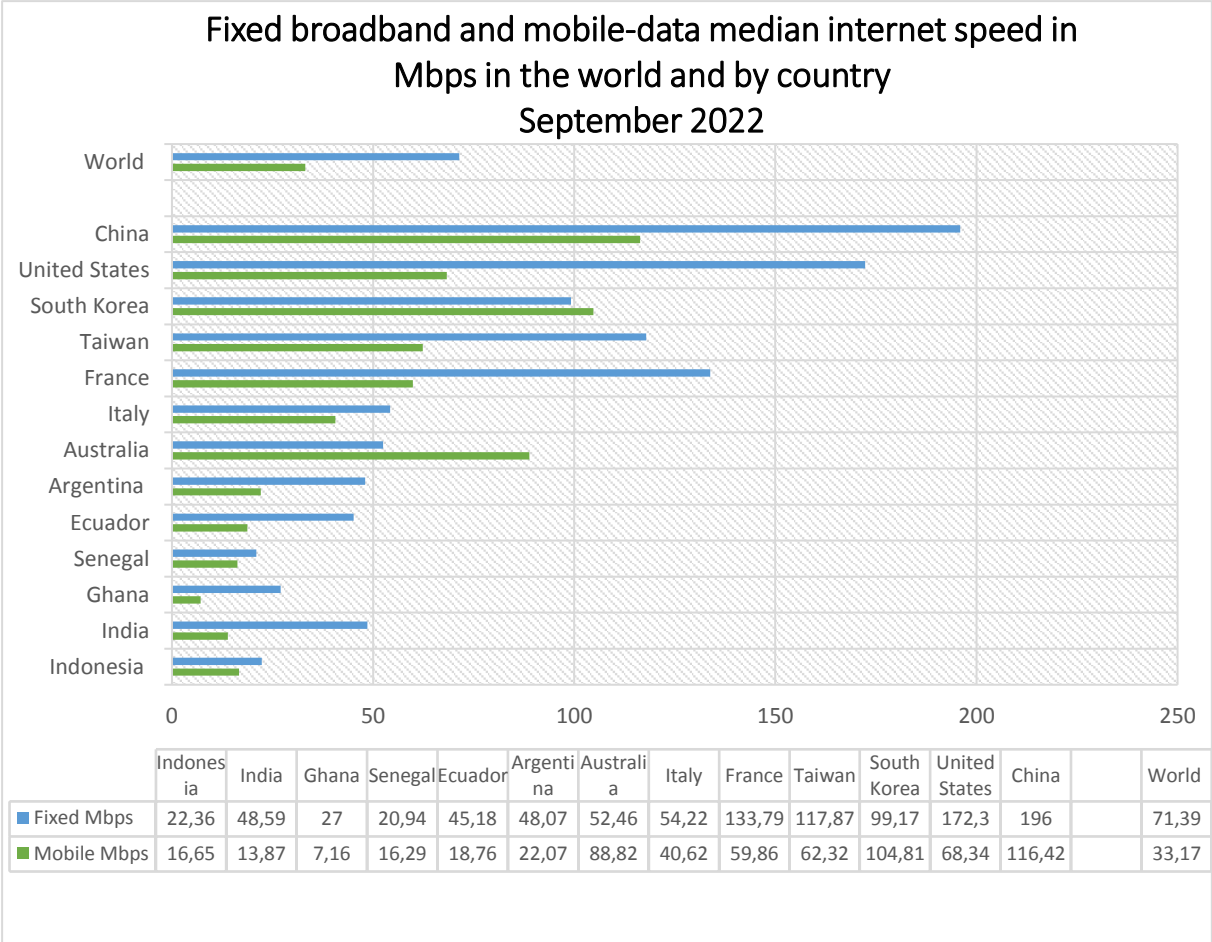
---

<sup>67</sup> Ryan and Nanda, *COVID-19: Social Inequalities and Human Possibilities*, 149.

<sup>68</sup> Isla McKetta, "In-Depth Analyses of Changes in World Internet Performance Using the Speedtest Global Index", *Ookla*, September 4, 2019.

potential. This is exactly what has happened in South Korea where the mobile providers KT, LG U+ and SK Telecom managed to band together to release 5G at the same time in the whole country that, in conjunction with the presence of a widespread use of devices able to take advantage from it, led to the enviable outcome reported before, and Taiwan follows suit in terms of fixed connection paving its territory with kilometers and kilometers of fiber cables, a very costly and time-intensive operation. At this point it is not so difficult to imagine which group of countries are included into the category of the “Laggers”. At the time of writing, the vast majority of developing and poor nations, situated especially in Africa, South America and Asia, still struggle with a general lack of infrastructures and economic resources which hamper them to keep up both in mobile and fixed reliability alimentering the risk of being excluded in a world that year after year became more and more digitalized<sup>69</sup>. To taste in part these inequalities, the following figure presents some examples:

**Figure 12: Fixed broadband and mobile-data median internet speed in Mbps in the world and by country**



Source: Speedtest Global Index’s data elaboration

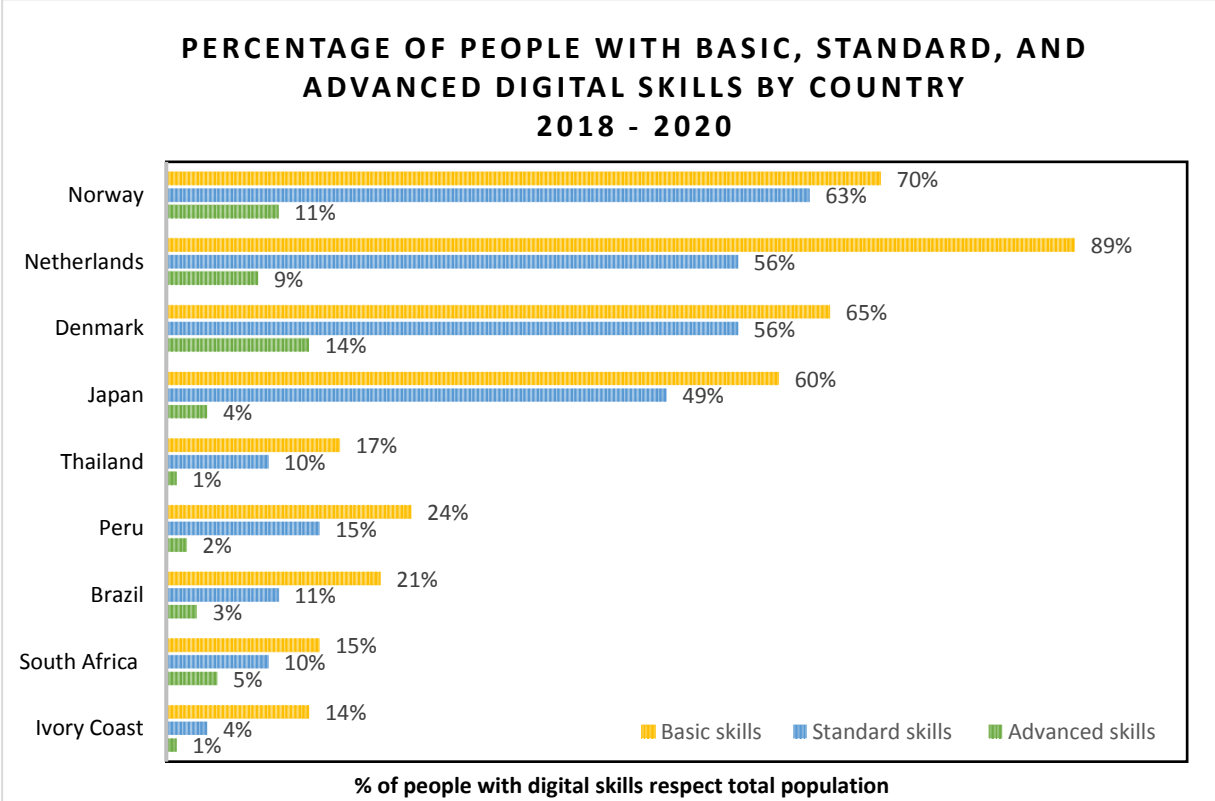
<sup>69</sup> McKetta, “In-Depth Analyses of Changes in World Internet Performance Using the Speedtest Global Index.”

The data included in figure 12 are thought to show multiple facets of the actual access inequalities. The first of them make its appearance just through a first look at the blue and green lines representative of the values of fixed and mobile connection speed in the various countries reported which undoubtedly underline a striking unbalance between wealthy and poor nations. In empirical terms, China presents the best results in both the reliability dimensions considered with 196 Mbps and 116,42 Mbps for fixed and mobile connectivity respectively, but optimum statistics are also those associated to the United States (fixed 172,3 Mbps - mobile 68,34), South Korea (fixed 99,17 Mbps - mobile 104,81), Taiwan (fixed 117,87 - mobile 62,32) and France (fixed 133,79 - mobile 59,86). The idea about the size of the digital divide in this instance can be witnessed by confronting the best of the class with one of the least developed countries in the list, say Senegal, which outcome, +175,06 Mbps in the fixed broadband and + 100,13 Mbps in the mobile in favor of China, confirms how the two actually stands on different technological eras. However, without being so severe, it is even possible to analyze the situation taking the median internet speed of the whole world as the reference point. Under this new parameter, two interesting aspects come to the surface. The first is that poor and developing countries, namely Argentina, Ecuador, Senegal, Ghana, India and Indonesia, are all below the standard, with the worst results which belong to Senegal for what concern fixed connectivity (-50,45 Mbps respect the reference) and to Ghana in mobile terms (-26,01 Mbps respect the reference). The second one, instead, is that Italy and Australia also found themselves in difficulty due to values that does not reach the standard threshold, more precisely in the fixed dimension for the first one and in the mobile dimension for the second one, a condition that project them into the “mobile-focused” and “fixed-focused” categories of countries.

So far, the analyses of the digital divide has always verted to create awareness around the “haves” and “have-nots” in terms of hardware, infrastructures and related affordability of services, but the fourth dimension departs itself from those previously described enlarging the prospective to individual’s knowledge and skills. Making a parallelism, it is completely usefulness to own a supercar if you do not have the driver license. In this instance, for research purposes, the technological competences will be differentiated following the categorization proposed by the International Telecommunication Union (ITU): basic skills, standard skills and advanced skills. The first encompasses things such as copying or moving a file folder, using tolls like copy and paste, sending e-mails with attached files and transferring files from one

device to another. The second, instead, includes the ability to use simple arithmetic formulas in a spreadsheet, connecting and installing new components, creating presentations with proper instruments and finding, downloading and configuring new software. The last one presupposes the expertness to create a computer program through an appropriate programming language<sup>70</sup>. These three layers are at the base of a study conducted by the ITU on this argument and which results are elaborated and exposed in the figure below:

**Figure 13: Percentage of people with basic, standard, and advanced digital skills by country**



Source: International telecommunication Union’s data elaboration

The pattern expressed by these numbers seems to suggest the existence of a solid relationship of dependence between the level of technological knowledge and the availability of devices, infrastructures and high speed internet connections within a country. Today, the almost total reliance of developed nations toward digital tools in every aspect of the daily life, from jobs and education to entertainment, has influenced and spurred the necessity of having the ability to use them in order to not be excluded from the society in which one lives. Under this conception, the matter assumes a meaning which can be compared to a cultural footprint, but

<sup>70</sup> “ICT skills,” International Telecommunication Union, accessed October 10, 2022.

something that belongs only to those who can afford it. More in detail, the European countries inserted in the figure 13 proved to have the best statistics in all the three layers of education considered with the Netherland that excels in the basic skills (89%), Norway in the standard ones (63%) and Denmark in the more advanced know-how (14%). Moving to the Asian continent, Japan proves to have the numbers to keep up the pace with the others wealthy territories in the world even if an improvement in the most technical expertise is needed, while the percentages of Thailand, where less than 20% of the population have basic technological skills, say a lot about the marginalization to which developing countries are still subject in this context. This condition is also remarked by the outcomes reported on Perú and Brazil in South America and on South Africa and Ivory Coast in the African region.

Even if the geographical description proposed here is valuable in creating a general sense of awareness about the argument treated, as well as for the other dimensions of the digital divide it is just one side of the prism which represents the multitude of facets under which it is possible to analyze it.

For instance, the gap in technological abilities is strong and recognizable also within the national boundaries of the most developed countries when different generations of individuals are taken as base of research. Findings suggests that in 2021 in the United States 68% of the population aged 75+ declared to have low tech readiness meaning that they were either not at all or only a little confident using their computers, smartphones or other devices to accomplish simple online tasks and that they usually needed someone else to help them get things done, a percentage that assumes even more significance when compared with those of the other age groups namely 54% for the 65-74 category, 34% for the 50-64, 17% for the 30-49 and, 16% for the 18-29<sup>71</sup>.

### **3.2.2 The effects of the digital inequalities during the COVID-19 pandemic**

Now that the general features of the digital divide has been exposed, and no rooms for any possible doubt have been left in merit of its importance in a world which tends to become more and more technologically oriented, it's time to make a step further and to insert it within

---

<sup>71</sup> Colleen McClain et al., "The Internet and the Pandemic", *Pew Research Center*, September 1, 2021.



the tragical context of the pandemic in which, as all of us have well understood, expanded and exacerbated the already existing inequalities.

One of the principal effects caused by the combination of the diffusion of the virus and the strict measures implemented in the attempt to control it has surely been the almost total transposition of the daily activities in a virtual format. The status of active online user proved to be, without exaggeration, a real life-saver condition for many, starting from the possibility to remain in contact with doctors and physicians. The access to an instrument like the telemedicine, which allow to obtain real-time conversations with experts and diagnosis behind a screen, represented a true survival toll for a lot of people locked in their houses desperately looking for an alternative way to get necessary consultations while avoiding at the same time crowded waiting rooms in hospitals and medical offices<sup>72</sup>.

Moreover, it is also worth to remember the strong reliance with which many health care systems and corresponding authorities wrapped the utilization of internet and technological devices for the concrete implementation of the Covid-19 vaccination campaigns. The compilation of digital documents on the appropriate websites was, and it is still today, the principal method through which to obtain a reservation for the administration of the vaccine shots in many developed and developing countries which eventually produced a great time-based disadvantage for those unable to adopt this solution and thus forced to count on others, not always available, options.

Another burden on the shoulders of the less digitalized individuals during the hardest pandemic period was the difficulty concerning the provision of essential goods, food above all. Whether the online shopping sector in the years before the crisis was seen just as a luxury and comfortable alternative respect the traditional one, during 2020 it became a real health preventative measure choose by many to reduce the direct contacts with others and the consequential possible viral infection<sup>73</sup>. The range of services at disposal must be intended beyond the simple meal delivery from restaurants, with groceries and supermarkets that prepared themselves to offer innovative solutions which enabled consumers to make their purchases by apps and websites and then retire the bags in specific drive-through points or receive them directly to their domiciles. These business models and initiatives ended up

---

<sup>72</sup> Ryan and Nanda, *COVID-19: Social Inequalities and Human Possibilities*, 159-160.

<sup>73</sup> *Ibid.*,160.

furnishing a concrete help to a lot of people, but what about the digitally excluded, mostly seniors and fragile, individuals who could not have relied neither on their own capacities (or available devices and instruments) nor, in certain cases, to someone else to have their needs fulfilled? There have been some good stories in which voluntary associations or even law enforcement authorities provided to give them all the support required, but also others where they were obliged to take a decision between having nothing on the table or exposing themselves to a potentially deadly virus.

Then, obviously, it is also important to have enough financial resources to purchase the necessary items. The mandatory closures of all the economic activities but the essential ones by the governments for months have certainly limited the spread and the incidence of the Covid-19, but the price paid was really heavy with millions and millions of workers who lost everything and families pushed near the poverty threshold or below it. The activation of social safety net policies, especially through the implementation of financial bailouts, reduced the damages at least in part without being able to ensure the promised coverage to everyone as praised by official institution. In addition to this, the contributors that lacked digital instruments, who can be easily identified with the most vulnerable categories, faced further difficulties inherently to the chosen methodology to effectively distribute the reliefs which took the form of online payments<sup>74</sup>. Thus, being on the wrong side of the digital divide meant to see yourself in the last positions of the infinite queue of those eligible to receive them, or, at worst, not obtain anything at all.

The protection of the population's health, however, did not depend by lockdowns alone but also by individual's choices and behavior. The possibility to have timely, relevant, and true information at disposal played a significant role in generating the adequate awareness about what was happening in the whole world and within the respective communities of interest which aided to generate a sense of responsibility toward the self and the others that, in turn, influenced the decision-making processes around the adoption of the proper safety measures<sup>75</sup>.

Therefore, the principal issues here were the inequalities in term of resources apt to remain informed and the quality of what were reported. Starting from the bottom, at the time of

---

<sup>74</sup> Ryan and Nanda, *COVID-19: Social Inequalities and Human Possibilities*, 160.

<sup>75</sup> *Ibid.*,162.

writing there are roughly 773 million of illiterates in the world who can only rely on words of mouth or audio sources to get news<sup>76</sup>, an aspect that resulted particularly problematic during the course of the pandemic due to the related obstacles faced by institutions' authorities to communicate the state of things and the policies to follow. The successive layer is occupied by literates who are used to buy paper journals and magazines to expand their knowledge of the facts beyond what they have heard by the use of the previously mentioned tools. Finally, digital users have both the options presented so far plus a potentially infinite online catalogue of consultable contents<sup>77</sup>.

However, this abundance hides a trouble which reside in the origin of the abundance itself. As already noted at the beginning of this chapter on the digital divide, the web is a virtual platform in which literally everyone can upload substantially everything which then remains at disposal of all the internauts who navigate on it. This characteristic made it feasible for scientists, doctors and experts to publish the results of authoritative and trustworthy studies inherent to the virus as well as the sharing of ideas and insights by common people and influencers who do not have any academical preparation on the topic treated.

A famous case that opened up a large mediatic debate was the one of hydroxychloroquine, a substance deemed by some celebrities and politicians, such as Elon Musk and the former president of Brazil Jair Bolsonaro, to be a very useful and cheap remedy to alleviate the covid-19 symptoms<sup>78</sup>. Despite these considerations never received any scientific confirmation, in the aftermath of them the number of tweets, messages and online articles about the benefits of the drug abounded which spurred an incredible surge of its unauthorized, and potentially harmful, usage.

Misinformation, disinformation and true information are all mixed in the big cauldron of the web, the capability to discern them is the key to unlock the usefulness of this kind of channel.

The knowledge of how to properly use the internet and how to deal with technological devices in pandemic times, then, proved to be must-have self-resources in order to alleviate the feeling of loneliness caused by the lack of social relationships. Software such as Zoom, Skype and FaceTime saw the highest number of users ever, with people that, unable or unwilling to

---

<sup>76</sup> "Literacy", UNESCO Institute for Statistics, accessed November 10, 2022.

<sup>77</sup> Ryan and Nanda, *COVID-19: Social Inequalities and Human Possibilities*, 162.

<sup>78</sup> *Ibid.*, 162.

leave their home, organized virtual meetings for staying together. The spectrum of these new typologies of interactions went from simple video calls with friends or parents to the celebration of events like weddings and graduations. The sensations were clearly not the same, but it should be remembered that not everyone had this opportunity to see their loved ones and many struggled with the exclusion from that digital world which simply was not understood enough.

Furthermore, beyond the maintenance of human contacts, although behind a screen, another element which influenced profoundly the mental health status has been the availability of entertainment options. The presence of effective ways to escape from the daily routine has always been important even before the pandemic, but the latter has accentuated the demand for them that, due to the circumstances, could have been satisfied only through digital instruments<sup>79</sup>.

For instance, in 2020, online streaming platforms such as Netflix and Twitch witnessed the greatest growth rates ever with the first that added 15.77 million of users in January, February and March together, plus 10.09 million between April and June<sup>80</sup>, while the second registered a total of 17 billion hour watched during the entire year with an increase which corresponded to +83% compared to 2019<sup>81</sup>.

Nonetheless, it should be noted that this sudden trend had as a consequence the exacerbation of pre-existing inequalities not only between those who did have internet and those who did not but even among the category of connected individuals but with different broadband speed at their disposal. In fact, the overload of the network allowed only the ones with a reliable connection to fully enjoy the contents proposed while the others had to deal with frustrating buffering times and bad performances which profoundly hampered their experiences of entertainment<sup>82</sup>.

At this point, the role played by technological unbalances in the pandemic context should be clearer, however, the analyses proposed so far voluntarily missed two fundamental

---

<sup>79</sup> Ryan and Nanda, *COVID-19: Social Inequalities and Human Possibilities*, 156-158 and 164-165.

<sup>80</sup> Joe Walsh, "Netflix Subscribers Growth Slows After Surging During Pandemic", *Forbes*, October 20, 2020.

<sup>81</sup> Stephen Bijan, "Twitch ended 2020 with its biggest numbers ever", *The Verge*, January 11, 2021.

<sup>82</sup> Ryan and Nanda, *COVID-19: Social Inequalities and Human Possibilities*, 158.

dimensions which, for their importance, will be treated more extensively, and beyond the only digital aspect, in the next section.

## **3.3 Employment**

### **3.3.1 The controlled inequalities in the labor market**

Making a parallelism, it is possible to think about the social system as a machine that works just because each bolt and component within it is adequately positioned and carries out its function in a complex mechanism of interrelations and mutual assistance between them all.

In the same way, the great variety of jobs that constitute a labor market is exactly what allows societies to create and maintain the favorable background to host the daily life of their inhabitants. This means that every single occupation, from managerial roles in an important company to food delivery and cleaning, deserves to have its dignity recognized and to be considered as one of the multitude of important factors that permit to have the actual living standards.

Nonetheless, the core aspect to discern here is that if this kind of differences are, therefore, necessary, so the corresponding inequalities as well. This is not a statement to justify the fact that certain individuals have to deal with insufficient financial resources to conduct a decent existence or that overlook the numerous problematics of many marginalized but to pass the idea that a fair amount of controlled unbalances is at the base of the general meritocratic concept on which a community should stand. Hypothetically speaking, a society in which everybody has the same wage, regardless of the professions exercised, would be highly unfair despite a complete equality in financial terms. Those who have enough knowledge, abilities and experiences to be committed in occupations with important levels of responsibilities should, theoretically, earn more than others that do not possess the same degree of qualities.

Even if the logic behind this assumption is easy to grasp, it is worth noting that it does not imply the presence of people near or below the poverty line. In an ideal society, governments and institutions would be perfectly able to manage even the most difficult situations through appropriate laws and policies able to grant an economically peaceful life to everyone.

### 3.3.2 Teleworkability

Bouncing into the reality, the scenario is far diverse from the one just depicted, but whether in the pre-pandemic times the unfair and negative inequalities were under the scrutiny and the control of national authorities, always assuming the application of the good faith principle, the arrival of the Covid-19 disrupted all the known pattern of thoughts and the achievement obtained, not only through the exacerbation of the previous disparities, but posing also new threats inherent to them.

In the case of employment, for instance, the opportunity to work from home goes from a simple convenient way of performing one job in normal times to an often necessary condition in order to remain employed and avoiding at the same time physical proximity with others in the lockdown period. The possibility to adopt such solution, however, is dictated by the specific features characterizing each profession with shades that cause important differentiations even within the same operative area. To better understand this concept, the following table provide an example about the argumentation:

**Table 8: Remote work feasibility index by occupations**

Remote work feasibility index by occupations	
<b>Profession</b>	<b>Remote Work Feasibility</b>
Managing Directors and Chief Executives	1
Sales, Marketing and Development Managers	0,875
Mathematicians, Actuaries and Statisticians	1
Software and Applications Developers and Analysts	1
Physical and Earth Science Professionals	0,481
Architects, Planners, Designers	0,672
Medical Doctors	0
Nursing and Midwifery Professionals	0
University and Higher Education Teachers	0,905
Secondary Education Teachers	1
Primary School Teachers	0
Creative and Performing Artists	0,633
Sport and Fitness Workers	0,136
Travel Attendants, Conductors and Guides	0,092
Hairdressers, Beauticians and Related Workers	0,032
Street and Market Salespersons	0,023
Market Gardeners and Crop Growers	0
Painters, Building S Cleaners and Related Trades Workers	0
Handicraft Workers	0,037
Food Processing Workers	0
Transport and Storage laborers	0
Construction Laborers	0

Source: Brugiavini, Buia, Simonetti's elaboration using data from European Journal of Aging

The interpretation of the data reported above begin from the consideration that the remote work feasibility index on the right column can assume a value in a range that have as extremes 0 (if the corresponding job has no chance to be performed remotely) and 1 (if it is perfectly suitable to be carried out in that form). The sample of occupations included in table 8 suggests, in general terms, that white collar workers are those who are more likely to have

teleworkability as an option in their pocket respect blue collars ones that are typically engaged in manual activities. This evidence can be witnessed by noticing that managing directors and chief executives, mathematicians, statisticians, software and application developers together with sales, marketing and development managers have all a corresponding rate that is equal, or very close, to 1 which is in strict contraposition to the ratios associated to hairdressers, beauticians, gardeners, food processing workers and street salespersons among others that are, instead, equal or approaching 0. Furthermore, the available information also allow to disentangle the complexity of the shades that the matter can take by giving an idea about the possible internal differentiations that could exist in a sector and even in the same typology of profession. In the building and construction industry, for instance, architects, planners and designers show a high compatibility between their relative tasks and the use of digital instruments (0,633), but those called to concretely implement the structural projects, namely the construction laborers, have a role that require the utilization of physical activity as the only way to get their things done. As anticipated, then, a deeper scrutiny of single occupations can reveal additional complications of which the various categorization of teachers furnish a good example. Although they are used to have frequent and intense social interactions with their students, at least in normal times, university and higher education professors as well as those in the secondary education contexts can (potentially) completely translate the lessons in a virtual format through the appropriate technological devices, an option not available for the primary school teachers where a close spatial proximity with children is too much essential in the learning process. Finally, it is important to mention the fact that a value of 0 in the remote work feasibility index does not necessarily indicate that the associate job had suffered a complete interruption during the lockdown period because those labelled as essentials by national governments, such as medical doctors and nurses, remained operative to grant the survival of the entire society.

Starting from these considerations, the next step in the analyses consists in understanding more precisely who are the individuals which occupied the hardest hit occupational positions, or in other words, to discern the characteristics of the workers that during the pandemic found themselves in those categories which were more likely to verse in a status of unemployment and/or in very precarious economic situations. An element that surely influence the portfolio of opportunities at disposal in the labor market and, consequently, the type of job chosen is the level of education. As a tendency, those with higher educational titles are more inclined



to be less physically stressed and to count more on digital technologies in the working place, a condition which resulted of fundamental importance for avoiding the risk of layoffs during the worst pandemic times.

**Table 9: Employed people 25 years and older who teleworked because of the Covid-19 pandemic in the US by educational attainment (numbers in thousands)**

Employed people 25 years and older who teleworked because of the Covid-19 pandemic in the US by educational attainment (numbers in thousands)			
December 2020			
Educational title	Total employed	People who teleworked because of the Covid-19 pandemic	% of teleworkers respect the total employed
Less than a high school diploma	8.288	264	3,2%
High school graduates, no college	32.006	2.738	8,6%
Some college or associate degree	33.538	5.677	16,9%
Bachelor's degree only	35.675	13.372	37,5%
Bachelor's degree and higher	57.985	24.983	43,1%
Advanced degrees	22.309	11.611	52%
Total	131.817	33.663	25,5%

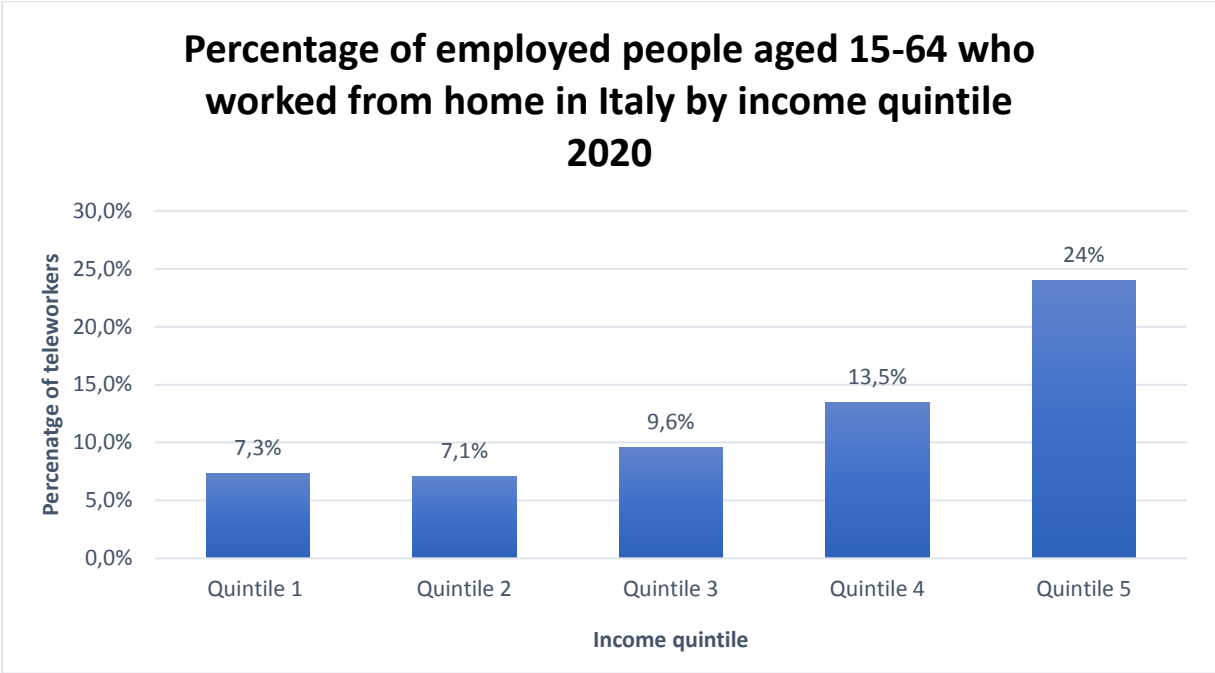
Source: U.S. Bureau of Labor Statistics' data elaboration

The nomenclature of the central column "People who teleworked because of the Covid-19 pandemic" indicate the number of employed individuals that began to adopt the remote work solution both as a direct response to the strict anti-virus measures implemented by the US government and as a valid alternative to the normal working environment which generally

require to share common spaces with others; the statistics, therefore, exclude those that before the health crisis were already used to adopt this form of job and the ones whose transposition was unrelated to the inherent social context. Looking at the last row of table 9, data suggests that in December 2020 only 25,5% of 131.817 persons were able to effectively make the switch, a relatively small value that, however, hide profound inequalities. In fact, it is easy to observe how the percentage of teleworkers respect the total workforce in each category increase when also the level of the educational title increase as well. The first group have a proportion that stands to 3,2% which is 5,4 percentage points lower respect the share associated to the high school graduates (8,6%) which, in turn, is almost the half of the 16,9% relative to those having some college or associate degree. It is not a surprise, then, that the best outcomes belong to the last three brackets, with the holders of bachelor's degree only, bachelor's degree and higher, and advanced degrees that registered 37,5%, 43,1% and 52% of people committed to smart-working duties respectively.

The patterns delineated so far allow to have a first sight on the divergence of the economic impact on the shoulders of different social classes through a simple logical deduction. Following a linear schema of thought according to which better occupations are generally linked to better scholarship achievements and considering that the latter are positively related to the probability of having telework as an available opportunity, it means also that the perceivers of best wages should have been the most protected against the labor shock during the pandemic. This assumption found confirmation in the following figure:

**Figure 14: Percentage of employed people aged 15-64 who worked from home in Italy by income quintile**



Source: Istat’s data elaboration

The scenario depicted by the figure above is a concrete portrayal of the already mentioned capacity of the covid-19 crisis to create new kind of disproportionalities taking as a base the pre-existing inequities present in the social environment. The data here reported communicate, in fact, how common structural working differences can change into a condition of pronounced financial and/or health insecurity when the context of reference suffer a negative modification such as in the case of a virus-related emergency. The employed individuals that fall under the first and the second quintile demonstrated a very low propensity (or possibility) to be involved in remote work solutions with percentages equal to 7,3% and 7,1% respectively, which imply that 92,7% and 92,9% of them have been exposed to business closures, dismissals, reduction of working hours or, in case of non-interruptions, to the risk of being infected. A rather worrisome situation is also the one presented by the third layer of income where only the 9,6% of the associate laborers worked from home during the entire 2020. Finally, the fourth and the fifth quintile have, as expected, the highest percentages of teleworkers, although their values, 13,5% and 24%, evidence widespread difficulties even in these cases.

### 3.3.3 Unemployment trends

The awareness about the role played by digital technologies and their relative trends within the labor sphere during the arduous pandemic times is the best premise possible to successfully understand the pattern of inequalities that have overflowed the economic life of millions and millions of workers in every corner of the globe, especially the most vulnerable ones. In line with the information just reported, the empirical evidence about the rates of unemployment point to huge unbalances in the degree in which various jobs have been influenced by the recession:

**Table 10: Unemployment rates by occupational groups in the US, annual averages**

Unemployment rate by occupational groups in the US, annual averages 2019 – 2020			
Occupation	Unemployment rate		
	2019	2020	Difference
Management, business, and financial operation occupations	1,8%	4,1%	+2,3%
Office and administrative support occupations	3,6%	7,3%	+3,7%
Health care support occupations	3,1%	7,3%	+4,2%
Food preparation and serving related occupations	5,5%	19,6%	+14,1%
Building and ground cleaning and maintenance occupations	5,1%	10,9%	+5,8%
Personal care and service occupations	3,9%	16%	+12,1%
Farming, fishing and forestry occupations	9,6%	10,3%	+0,7%
Transportation and material moving occupations	4,7%	11,1%	+6,4%
Sales and related occupations	3,8%	8,8%	+5%

Source: U.S. Bureau of Labor Statistics' data elaboration

The comparison of the jobless rates between 2019 and 2020 gives a concrete and numerical dimension of what has just been cited in precedence in the teleworkability discussion. Although the statistical outputs reveal that all the occupations included in table 10 have undoubtedly been subject to economic stress as a consequence of the Covid-19 linked restrictions, some of them performed better than others as it is possible to note by looking at the content of the column “difference”. Management, business and financial operation occupations together with office and administrative support occupations are among the best ones with a registered change in the unemployment values of +2,3% and +3,7% respectively, a result which confirms how the predisposition toward the smart-working option of certain jobs has surely helped them to remain operative through lockdown periods. Nonetheless, the most resilient professions in the sample considered were farming, fishing and forestry related activities (+ 0,7%) that, despite they are not suitable at all with remote work solutions, kept their production open thanks to the low levels of social interactions required and, especially, due to the label of essential facilities attached to them by national governments and institutions. On the same utility ground, then, there were also health care support services (+4,2%) even if the risks of infection and severe consequences for the associated operators were among the highest possible. As expected, all the other categories suffered more the negative effects on employment with peaks registered for food preparation and serving related occupations (+ 14,1%) and personal care and service occupations (+ 12,1%).

Furthermore, an additional element that deserve a mention is how differently men and women have experienced the wave of layoffs. The crux of this topic from which the various ramifications of arguments start is the consideration that the female gender is generally, and historically, more represented in those kind of professions which for their inherent features have been more impacted by business closures in 2020.

For instance, according to the data published by the Bureau of Labor Statistics, during the period examined the unemployment rate for women in service jobs increased by 9,1 percentage points reaching a total of 13,3% while the growth ratio for men was of 7,8% leading to an aggregate of 12,6%. More than that, in sales and office activities the rise in the jobless quotient was of 4,7% for women and 3,7% for men which resulted in an overall 8,5% and 7,2% throughout the year respectively<sup>83</sup>. However, whether the available information

---

<sup>83</sup> Sean M. Smith, Roxanna Edwards, and Hao C. Duong, “Unemployment rises in 2020, as the country battles the COVID-19 pandemic”, *Bureau of Labor Statistics*, June 2021.

confirms the general trend here exposed, a deeper analyses that comprises the decomposition of the time frame of reference in smaller units reveals a more complex pattern. From the last quarter of 2019 to the first stages of the pandemic in the first and second quarter of 2020 the number of employed women decreased by 14,5% compared to a decline of 12,1% for men and, at the same time, the unemployment indexes rose by 10.5 percentage points, to 14,1%, for females and by 8,5 percentage points, to 12,1%, for males. Notwithstanding these measures, in the third and fourth quarter of 2020 the statistics suggest a reversal of the situation with a +10,2% of the women employment rate and a +7,7% of the one of men while the unemployment ratio for the latter dropped by 5,2% compared to the -7,5% for women<sup>84</sup>.

To conclude, it is worth to recognize that, on average, women are more likely to deal with household and childcare duties than man, a tendency which surely contributed to create a consistent amount of troubles in their work-life balance when national governments declared the closures of schools and child-minding facilities.

The same principal reason which can be blamed for the production of the gender divide previously exposed is also responsible for the labor inequalities witnessed in the age dimension. The huge presence of young workers in the most hit sectors caused a disproportionate reverberation on their employment levels respect the rest of the workforce, and this independently from the country examined:

---

<sup>84</sup> Smith, Edwards, and Duong, "Unemployment rises in 2020, as the country battles the COVID-19 pandemic".

**Table 11: Unemployment rate 15-24 years old and 25-74 years old by country**

Unemployment rate 15-24 years old and 25-74 years old by country 2019 – 2020						
Country	Unemployment rate 15-24 years old			Unemployment rate 25-74 years old		
	2019	2020	Difference	2019	2020	Difference
USA	8,4%	15,1%	+6,7%	3%	7,1%	+4,1%
Canada	10,9%	20%	+9,1%	4,8%	7,9%	+3,1%
Colombia	20,6%	27,3%	+6,7%	8,3%	13,7%	+5,4%
Australia	11,7%	14,3%	+2,6%	3,9%	5%	+1,1%
UK	11,4%	13,7%	+2,3%	2,7%	3,3%	+0,6%
Spain	32,6%	38,3%	+5,7%	12,8%	14%	+1,2%
Lithuania	11,9%	19,5%	+7,6%	5,8%	7,7%	+1,9%
Finland	17,3%	20,8%	+3,5%	5,3%	6%	+0,7%
Austria	9,1%	11,7%	+2,6%	4,3%	5,3%	+1%
Germany	6,2%	7,5%	+1,3%	2,6%	3,2%	+0,6%

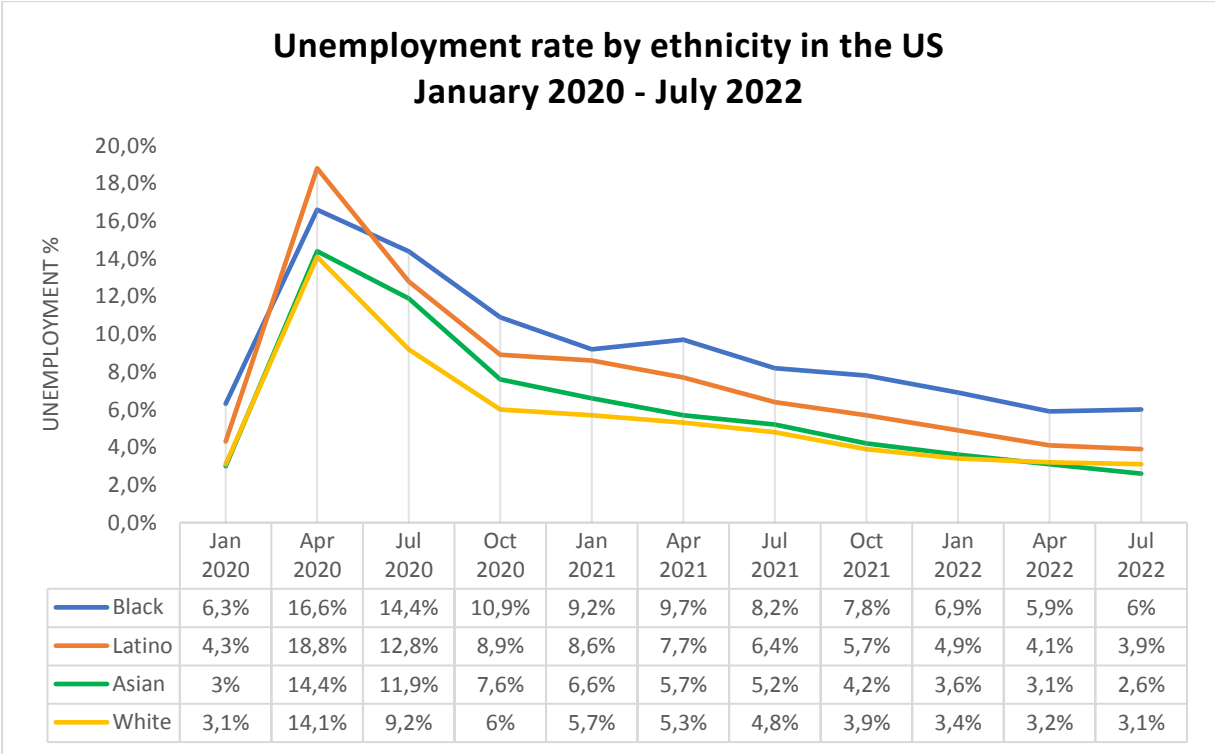
Source: OECD's data elaboration

The information included in table 12 brings two different kinds of deductions. First of all, the proposed overview gives an empirical idea about the labor difficulties experienced in different countries all around the world confirming the internationality of the pandemic-related economic downturn. Second, despite the fact that the impact has assumed various connotations among the nations considered, all of them have seen their youngest workforce as the one more afflicted by the recession in accordance with what has been declared in precedence. The comparison of the unemployment rates between 2019 and 2020 for the group aged 15-24 years old is quite emblematic with 5 out of 10 reported values which registered an increase of more than 5 percentage points (USA +6,7%, Canada +9,1%, Colombia +6,7%, Spain +5,7% and Lithuania +7,6%) while the other half maintained the corresponding growth within the range comprised from 1% to 4%. Switching the attention to the second category of workers, those aged 25-74 years old, and more precisely on the column named "difference", it is possible to notice a substantial amelioration of the results with only the Colombia's ratio higher than 5% and three of them actually lower than 1% (UK 0,6%, Finland 0,7% and Germany 0,6%). To better taste the divergences between these two sections of laborers it is worth observing that the numerical unbalance between their respective rates of

unemployment rise is always unfavorable for the youngest ones with peaks in Canada (6%), Spain (4,5%) and Lithuania (5,7%).

The reconstruction of the identikit of the most economically disadvantaged individuals cannot be considered complete without the inclusion of ethnic disparities' specifications. Calling to mind the concept of structural inequalities treated in the first part of the second chapter it is easy to understand that those who belongs to minorities classes generally suffer a lack of opportunities and possibilities respect the majority of the population, they tend to be poor and with low levels of educations which project them towards humble and physically demanding occupations, the same typology of professions that have been affected the most by the pandemic. The consequences of this are illustrated in the following figure:

**Figure 15: Unemployment rate by ethnicity in the US**



Source: The FRED Blog's data elaboration

The representation of the unemployment trend by ethnicity exhibited above has both the function to highlight the immediate effects generated by the introduction of business closures policies aimed at stopping the exponential spread of the virus during the first stages of the health crisis and to provide an indication about the resiliency of the United States economy through the time span it needed to absorb the mentioned labor shock. The first facet to pose

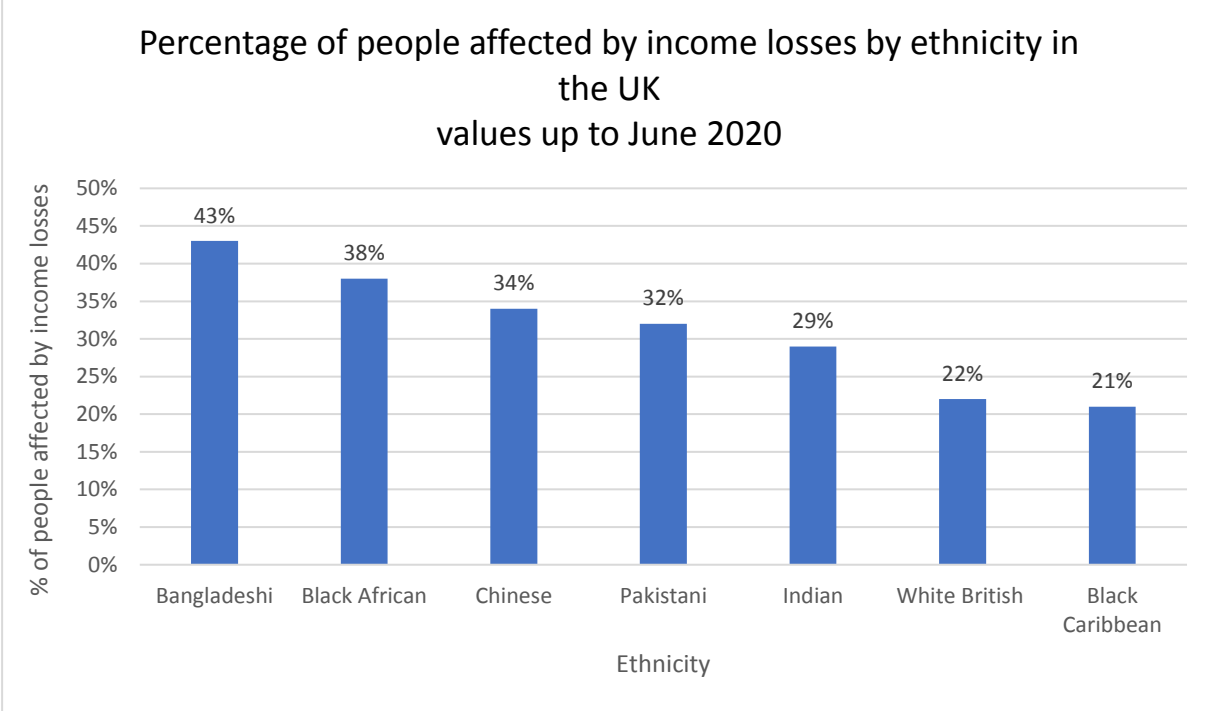


under scrutiny in the analyses is, therefore, the gap between the pre-pandemic rates of January 2020 and those of April 2020 when the Covid-19 consequences began to be clearly visible. In particular, Black workers witnessed a surge in their unemployment levels of 10,6 percentage points, Latinos of 14,5 p.p., while Asians and Whites of 11,4 and 11 p.p. respectively. From this initial glance to the data it may seem that the group representing the majority of the US population (Whites) has been more severely influenced by lockdown restrictions than African Americans, however, enlarging the perspective to the successive months until April 2022, the difference between the various “pandemic” quotients and the values of references gives back a diverse scenario where the latter category demonstrated worst long-term economic hurdles than the first. At this point one legitimate question could be: why the just mentioned analyses has taken into consideration a period which ends exactly in April 2022? According to available information, from April 2020 onward the unemployment levels declined until returning in line to those registered in normal times precisely two years later with the indexes of both Asians (3,1%) and Whites (3,2%) that were just 1 p.p. higher respect their January 2020 counterparts and with the ones of Blacks (5,9%) and Latinos (4,1%) which resulted even lower than their benchmarks. The confirmation of the renewed economic health is then proved by the numbers documented in July 2022 where the individuals belonging to Black, Latino and Asian ethnicities all had better unemployment rates respect the beginning of 2020 and with Whites that matched the precedent ratio of 3,1%.

### **3.3.4 Income losses and support practices**

In light of all the empirical information furnished about the various degree of job insecurity which have permeated the lives of millions and millions of individuals, the logical extension of this work of research aimed at discovering the multitude of ways in which social inequalities manifested themselves in the Covid-19 outbreak is to unveil the distribution of the financial struggles which derived directly from the obliged overflow of dismissals. Giving a sense of continuity, the next figure provide an insight on the matter taking as base of reference people with different ethnic background:

**Figure 16: Percentage of people affected by income losses by ethnicity in the UK**



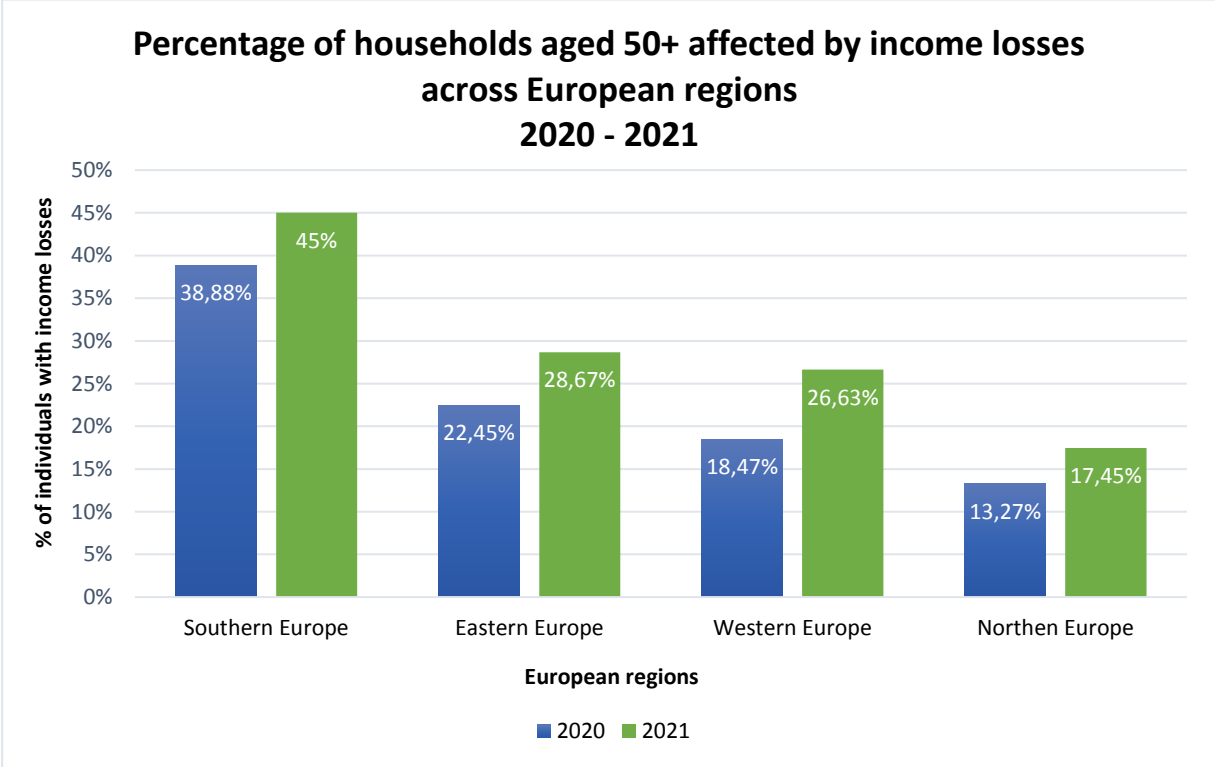
Source: Powell, Devine and Clark’s elaboration using data from House of Commons Library

As the statistics of figure 16 affirm, the argumentation according to which ethnic minorities have experienced the worst part of the economic recession even outside the US territory, therefore beyond what had been discussed in precedence, in a condition which, instead, involved other countries around the world to the point of being interpreted as the general tendency is, de facto, the right way of thinking about this precise shade of inequality. More precisely, the data here reported indicates that by June 2020 the 43% of the total Bangladeshi population in the United Kingdom suffered some form of income loss, a +21% respect the share of White British which stand at 22%. Immediately after them, among the Black African collective 38% of individuals saw a decline in their finances followed by 34% of Chinese, 32% of Pakistanis and 29% of Indians. Eventually, Black Caribbean represent the exception of the trend with an associate percentage (21%) which substantially paired the one of the referral group, however, in a more comprehensive view that include the cogitation of the Black community as a whole, the relative economic burden ends up to be surely higher than those of Whites. For what concern the size of the income drop, the Financial Conduct Authority estimated that between February 2020 and July 2020 the earnings of an ethnic minority worker decreased of 14,2% on average in contrast to an average fall of 5,1% for a White British laborer.

Despite the comparison of different layers of inhabitants within specific countries is extremely useful to give a concrete shape to the financial unbalances occurred, it is not the only available method to look at them. In the same way in which individual characteristics had influenced the likelihood of being subjected to job’s furloughs and layoffs, the main identifying features on which an economy stands together with the typology of restrictive choices chosen by governors played an indisputable role in the ability of managing the crisis by nations.

A study designed to better understand the consequences of the involved factors in the creation of potential divergencies concerning the reduction of household revenues among the population aged 50+ across Europe during 2020 and 2021 returned the following outcomes:

**Figure 17: Percentage of households aged 50+ affected by income losses across European regions.**



Source: Schumacher, Bethmann’s elaboration using data from Financial hardship during the COVID-19 pandemic

The division of the European continent in four macro-areas (Southern Europe, Eastern Europe, Western Europe and Northern Europe), highlight interesting insights about the magnitude of the economic earthquake perceived in various latitudes of its territory. The Northern Europe region (which comprehend Denmark, Finland and Sweden) was the less affected one with approximately 13,27% of individuals aged 50+ that experienced a decline in their monetary

resources in 2020, a value that increased to 17,45% on aggregate in 2021. These relatively good outputs can find a plausible explanation in the fact that two out of three countries that form the category, namely Finland and Sweden, had implemented less stringent virus-containment measures respect the EU average with the first that never imposed a total lockdown and the second which limited the institutional intervention to the provision of suggestions like the respect of the social distance and the correct use of face masks. In addition, in 2018 the share of employed people who usually worked from home in Sweden was equal to 5,3% while in Denmark and Finland the percentages were even higher reaching 7,8% and 13,3% respectively, a clear sign of how their labor market were already well suited to engage the teleworkability transition. On the other extreme, Southern Europe (Cyprus, Italy, Greece, Malta, Portugal and Spain) adopted more drastic restrictive policies which combined to a low degree of digital preparation, Italy and Spain had just the 3,6% and the 4,3% of the 15-64 workforce committed to online work solution in 2018<sup>85</sup>, led to an approximate 38,88% of 50+ years old households who lost part, or even the totality in the most dramatic cases, of their entrances in 2020 a condition that then touched almost half of them in 2021 (45%). In Eastern Europe (Bulgaria, Croatia, Czechia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia) the analytical results evidenced a far better situation than the South with a difference of 16,43 p.p. between the 2020 percentages and of 16,33 p.p. between those of 2021. Nonetheless, it is necessary to cite the presence of peaks of inhomogeneities among the countries that form the group under analyses with Czechia that was the best in both 2020 (7%) and 2021 (16%) while in others such as Slovakia and Bulgaria the rates were almost the same of the ones witnessed in Southern Europe. In the last geographical section that remain, that is Western Europe (Austria, Belgium, France, Germany, Luxembourg, Switzerland, and the Netherlands), the level of the economic development surely helped the inherent nations to contain the damages and to block the indexes at 18,47% in 2020 and 26,63% in 2021.

Through the adoption of a positive mindset, it is possible to state that one of the direct consequences that derived from the pandemic has been the eyes-opening effect toward the welfare state systems. The Covid-19 emergency, in fact, can be thought of as the spark that

---

<sup>85</sup> Niall McCarthy, "Which European countries work from home the most?", *World Economic Forum*, February 14, 2020.

triggered the flame of the profound renewal that social safety net mechanisms of both developing and developed nations necessitated even before the virus-related crisis.

The inadequacy of the public interventions in favor of the vulnerable ones in the last decades was the result of a legislative stagnation at the base of the procedures enabling the eligibility for the distribution of the resources which failed to match the changes in the labor markets and in the various general social contexts.

As examples, during 2020 the USA expanded for the first time ever the unemployment insurance to freelancer and contractors, other countries, including Italy, began to understand the importance that must be reserved to child-care policies while at the same time the hardships of workers with family responsibilities started to be truly considered as a top priority issue by governments all around the world. The size of the financial efforts put in place reached a peak never witnessed in living memory with over 1600 social-protection measures launched in the period February 2020 – January 2021 which found concrete implementation thanks to the \$13.8 trillion in global emergency expenditures announced by March 2021<sup>86</sup>.

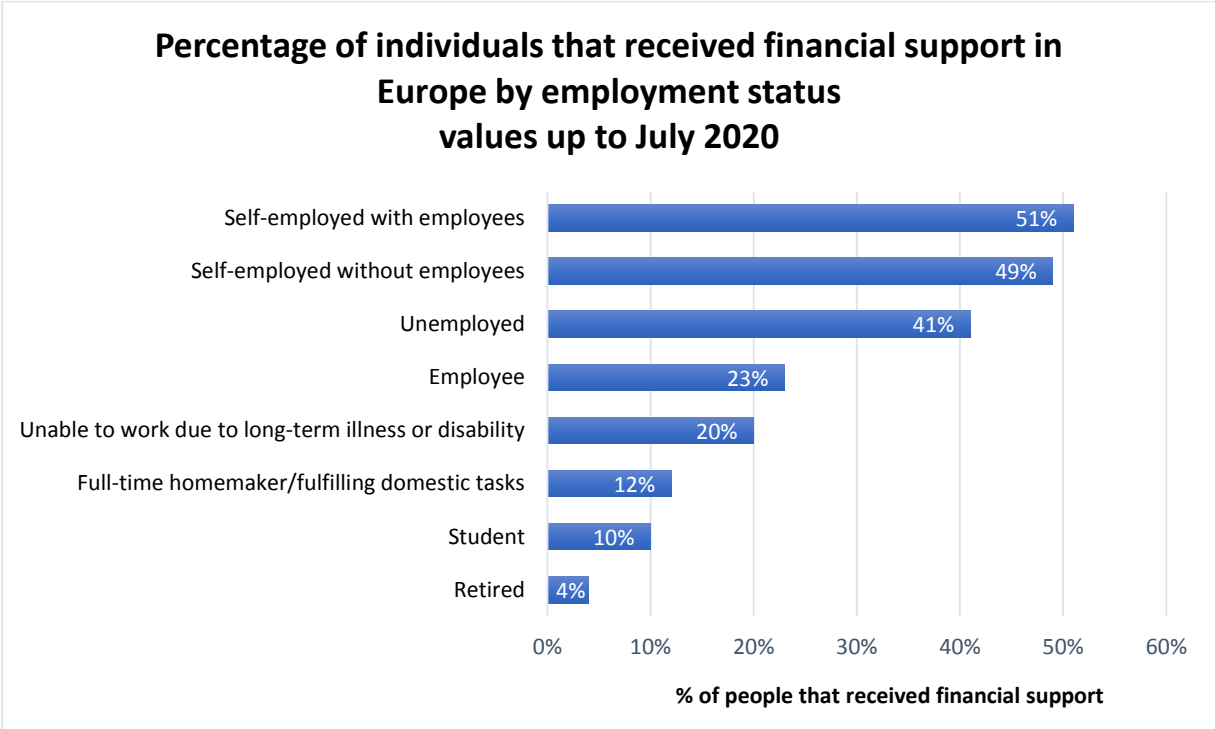
There must be any doubt concerning the importance of these actions and initiatives supported by governors and international institutions without which the numbers of the health and economic desolation would have surely been far worse than what effectively documented however, even if it sounds quite paradoxical, they were not enough to satisfy everyone's needs.

A survey conducted by Eurofound in July 2020 with the scope of investigating the distribution of the supports conceded by employment status furnish important clarifications on the latter argument:

---

<sup>86</sup> The Economist staff, "Covid-19 has transformed the welfare state. Which changes will endure?", *The Economist*, March 2021.

**Figure 18: Percentage of individuals that received financial support in Europe by employment status**



Source: Ahrendt, Cabrita et al’s elaboration using data from Living, working and COVID-19

The term “financial support” mentioned above includes specifically the following measures: deferrals and/or cancellation of taxes, bills, mortgages, loans and debts payments, together with the perception of state aids in the form of unemployment benefits, wage support schemas (as supplement or replacement), paid sick leave or paid care leave. The data evidence that 51% of the respondents classifiable as self-employed with employees enjoyed the benefits from at least one of the previous cited options since the start of the pandemic until July 2020, a very similar percentage to the one of the self-employed without employees (49%), while the 23% of active subordinate laborers declared themselves as recipients. Notwithstanding the interest aroused by these information, the real center of the discussion is represented by the values associated to the other categories included in the figure 18 which explicitly reveal the difficulties faced by public authorities in providing an adequate amount of reliefs. As it is possible to note, less than half of the unemployed individuals (41%) claimed of having received economic help in the period considered and, at the same time, only one fifth of those unable to work due to long-term illness or disability stated the same. Furthermore, rather worrisome numbers are also the ones linked to full-time homemakers (12%), students (10%) and retired (4%).

## 3.4 Education

### 3.4.1 The access to remote learning solutions

Whether the negative consequences on labor markets can be interpreted as a direct attack at the hearth of our societies with effects that become visible in the immediate, the disruption of the normal educational settings have posed under great uncertainty the future reserved for the next generations. Despite almost every student in the world experienced learning losses due to the closure of formative institutions and the sudden transition to a virtual format, some of them have been hardest hit than others. In this instance, the analyses proposed wants to provide an overview of the various dimensions touched by the covid-19 pandemic with a scrutiny of the inherent inequalities, created or exacerbated, that explores macro-economic elements as well as communalities and differences in their perception based on the respective individuals' instructional level of belonging.

At this regard, a first aspect on which to pose the attention concern the divergences in the duration of the stoppage periods of the physical teaching methods registered among scholars of distinct ages. According to an OECD research, between January 2020 and May 2021 on average across its members (plus Brazil and Russia) the pre-primary schools were shut down for 55 days while primary ones for 78 days, lower secondary schools for 92 days and upper secondary schools for 101 days<sup>87</sup>.

The parallel increase of closures times together with the tuitional degree of reference is easily explainable by the fact that governments tried to find a compromise between the preservation of the public health and the higher necessities of pupils to be involved in face-to-face social interactions for their emotional and cognitive development. Whether young adults had been subject to heavier restrictions than children, the latter probably suffered more from the imposed physical distancing measures.

It is fundamental to note, however, that the numbers cited above hide profound variations in the policies adopted by the nations involved in the study. A more careful examination of the data reveals how low-income states such as Colombia, Costa Rica, and Mexico kept their

---

<sup>87</sup> OECD INES program staff, *The State of Global Education: 18 months into the pandemic*, (OECD Publishing, Paris, September 2021), 3, PDF file.

instructional centers closed for a much longer time span respect high-income countries like France, Germany and the Netherlands (taking as sample the upper secondary general education level, for instance, the first three registered a total of 152, 175 and 264 days of full closures respectively, against the 49 of France, 83 of Germany and 43 of the Netherlands<sup>88</sup>), a condition which incremented the pre-existing gap and that derived from much pronounced troubles in granting an adequate amount of personal protective equipment and in making the compliance of the safety standards concretely effective.

To further aggravate the situation, poor and developing regions, as already treated, lacked proper technological solutions to allow the continuity of the learning experience for many. A study on this argument revealed that in April 2020 less than 25% of the world nations standing in the last earning quintile were furnishing any type of remote pedagogical options and of these the majority were using TV and radio while, at the same time, almost 90% of those in the best quintile enabled their learners to rely on good digital alternatives<sup>89</sup>.

Nonetheless, when provided, online resources and support practices must be efficaciously receipted to fully enjoy the opportunities that they bring which imply the presence of internet connectivity and apposite devices in the household context, a matter that was a particular source of concern in the most disadvantaged parts of the globe, but which also saw wealthy ones included in the discussion.

A report by Children's Commissioner for England highlighted that in April 2020 an estimated 60.000 children aged 11-18 in the UK had no broadband access and that approximately 700.000 were living in homes without any laptop, desktop or tablet<sup>90</sup>. Furthermore, for those families which owned at least one of them, it is even plausible that the working necessities of parents or the homework duties of siblings had limited, or in the worst cases excluded, the possibility to have a satisfactory prosecution of studies for many others.

Governments did not remain inactive in front of these accessibility issues and promulgated various initiatives aimed at overcoming the unbalances and generating a more equal ground of opportunities for everybody. As examples, it is worth to cite the "Get Help with Technology"

---

<sup>88</sup> OECD INES program staff, *The State of Global Education: 18 months into the pandemic*, 41.

<sup>89</sup> Emiliana Vegas, "Schools closures, government responses, and learning inequality around the world during COVID-19," *Brookings*, April 14, 2020.

<sup>90</sup> Children's Commissioner staff, *Tackling the disadvantage gap during the Covid-19 crisis* (Childrenscommissioner.gov.uk, April 2020), 2, PDF file.



program announced in May 2020 by the English Department for Education through which over 1.3 million laptops and tablets were distributed to schools and colleges to help underprivileged students to learn at home combined with institutional efforts to make deals with UK's leading mobile network operators to enable the acceptance of free uplifts in data for those in needs<sup>91</sup>. Still, in April 2021 the Serbian Ministry of Education, Science and Technological Development together with the European Union and UNICEF proclaimed the "Bridging Digital Divide in Serbia for the Most Vulnerable Children" project that granted the procurement of high-tech equipment across all its national territory<sup>92</sup>.

However, pupils in the pre-primary and primary classes, independently from their socio-economic status, faced extra hardships caused by a substantial shortness of virtual contents appositely designed for them. The obliged restrain on chairs and the exposition to computer's screens for hours and hours were something that teachers tried to lift from the general educational burden perceived by the youngest, especially by means of hybrid formulas that comprised the sharing of didactic materials with parents to be used without electronic appliances<sup>93</sup>.

### **3.4.2 The importance of an adequate family environment**

Obviously, the correct application of these operations involved the implicit presence of environments capable of giving the essential support required. Reasons linked to work-life balance, financial insecurity, uncertainty about the future, and additional mental stress have been the main obstacles in the creation of a favorable nurturing context for the vast majority of juniors even if those belonging to minorities and low-income households have surely experienced the worst that the pandemic has offered. Whether the most affluent have had at their disposal valuable compensating mechanisms as the direct aid of private tutors<sup>94</sup>, the poor (or even mid-income ones) not only had this option precluded but often were also left

---

<sup>91</sup> UK Department of Education and The Rt Hon Sir Gavin Williamson CBE MP, "Hundreds of thousands more laptops to support disadvantaged pupils learn at home," *GOV.UK*, January 12, 2021.

<sup>92</sup> UNICEF staff, "Distribution of laptops and tablets as part of the Bridging Digital Divide in Serbia for the Most Vulnerable Children project", *UNICEF.org*, April 13, 2021.

<sup>93</sup> OECD INES program staff, *The State of Global Education: 18 months into the pandemic*, 18.

<sup>94</sup> Children's Commissioner staff, *Tackling the disadvantage gap during the Covid-19 crisis*, 2.

alone in struggling with hardware and software complications that the lack of competences of the individuals which surround them would not have been able to solve.

Another element that must not be overlooked is the importance of the availability of suitable places where to study. Before the Covid-19 outbreak, libraries and quiet rooms put at disposal by learning institutions represented real anchors of salvation for many students who, after the closures, found themselves stuck in little and/or overcrowded homes in which the maintenance of concentration is just a mirage.

Then, it is interesting to note how labor market difficulties, and the corresponding drop of earnings, forced a lot of secondary and tertiary scholars to find a job in order to economically sustain their families and/or for having the funds for continuing the instructional path undertaken. The absorption of time demanded by these newly introduced responsibilities contributed in a significant way to reduce the commitment toward tutorial tasks from large groups of socially disadvantaged learners and to fuel a troublesome wave of absenteeism that further alimented knowledge inequalities<sup>95</sup>.

The public interventions on labor market, therefore, assume an even more fundamental role when became clear that the sustainment of employment and the financial security which derived from well-functioning policies have always an indirect, but extremely meaningful, effect on the protection of future generation culture.

That said, some countries had also rightly activated targeted measures to lift the monetary distress associated to the educational ambience. In France the government lowered some university fees, in Korea a national emergency grant was provided to all scholars that faced economic difficulties together with a consistent decrease of loan interests' rates and the postponements of repayments, in Austria an extra semester of aid was offered to every student independently from their academic results, and in Canada the Federal Government created the "Canada Emergency Student Benefit" to sustain those particularly affected by pandemic consequences<sup>96</sup>.

---

<sup>95</sup> OECD staff, "Education and COVID-19: Focusing on the long-term impact of school closures", *OECD.org*, June 29, 2020.

<sup>96</sup> OECD, *The state of Higher Education: One Year into the COVID-19 Pandemic* (OECD Publishing, Paris, 2021), 23, PDF file.

If there is one lesson to learn here, this is the understanding that, from now on, it is crucial to prioritize more than ever the investments in human capital and to upgrade our welfare state systems for contrasting still persistent inequalities with the awareness that the preservation and the development of knowledge is the only real shield that the whole world have to counter future shocks like the one of Covid-19.



## Conclusions

The 2020 will always be remembered as the year in which the world that we were used to know has fallen apart. The rapid spread of a deadly respiratory virus named Covid-19 from the city of Wuhan in every corner of the globe found completely unprepared national and international institutions which tried to contrast its diffusion through the implementation of not-so-well designed policies. Justifications with explicit reference to the unpredictability of the event that ended to label it as a black swan are plausible only when they are associate to the specific features of the disease itself but the arrival of a new pandemic in its essence was something that should have been forecasted. The human history is plenty of examples of similar phenomenon that cyclically impacted the welfare of societies causing tremendous disruption on their passage. In light of this, it is possible to put under accusation a substantial lack of remembrance of the past and the inherent incapability to learn fundamental lessons from it.

In order to face those difficult times and to alleviate the psychological stress, governments passed many messages of unity and solidarity inviting individuals to support each other in an ideological framework which seen the concept of “We are all in it together” as its principal cornerstone.

However, the outcomes of the various research exposed in this elaborate suggest how this virus-related crisis has permeated through the social tissues hitting the principal point of weakness left uncovered by the pre-existing structural inequalities. The main resulting effect from this subtle condition has been an exacerbation of the previous unbalances with the most vulnerable ones experiencing the worst in all the dimensions explored.

In particular, the analyses concerning the health consequences underlined that in all the countries considered (namely USA, Canada and UK) those belonging to ethnic minorities, low-income individuals and the residents of the most deprived areas have suffered more contagions, hospitalizations and deaths respect the rest of the population and this because of numerous factors such as overcrowded housing conditions, impossibility to respect physical distancing measures, higher tendency to have comorbidities, and good probabilities to have occupations which required to be exposed to the risk of infection (essential workers).

Furthermore, another variable that proved to be of fundamental importance in defining the line of demarcation between “pandemic haves and have nots” was the possession of a proper citizenship title. Many immigrants remained blocked in inhuman conditions on the frontiers of nations that in pre-covid times were considered as “safe harbors” following the numerous travels ban imposed, while others, already within host states, had to deal with discriminatory ideas and practices.

On the vaccines front, the information collected permits to conclude that their unequal distribution has been caused by a concatenation of factors: lack of resources and producing capacity to furnish an adequate amount of shots for everybody in the short term, economic interests of pharmaceutical companies protected by patents, the will of rich nations to safeguard their populations first without a real interest to offer the same possibility to poor and developing regions at least in the early stages, and the failure of the World Health Organization to propose a functioning plan able to incentivize a moral strategy.

The investigation of the indirect issues deriving from the crisis unveiled the primary role played by the digital divide in shaping the opportunities to maintain a decent standard of living and to better absorb the shocks caused by lockdowns among different individuals both within and between countries. The ownership of devices able to connect to the internet, the availability of a stable and reliable broadband connection, and the possession of the necessary knowledge to use them properly, were indispensable prerequisites to continue to receive medical consultations, buy essential goods safely, access information and public reliefs, maintain contacts with loved ones, alleviate mental stress and, last but not least, to preserve employment and education.

The in-depth study reserved for the last two arguments, then, showed data in line with the expectations demonstrating how, even in this case, disadvantaged workers and students faced the greatest difficulties.

More precisely, the mediocre values of the remote work feasibility indexes linked to jobs that can be performed with low levels of education, which tend to be also those that pay less, produced an internal mismatch in the general wave of unemployment which was unfavorable toward the individuals that were already struggling to make the ends meet in pre-pandemic years.

This vision is reinforced by the statistics regarding the loss of income which was specifically relevant for workers belonging to ethnic minority backgrounds and for the inhabitants of the less developed regions (as the analyses based on the European continent suggests), a troublesome context which found only a partial help from the financial assistance given by social safety nets programs.

Finally, the findings about the educational setting indicate a system which was not ready to implement the almost overnight change dictated by the closures of the relative institutions with many unprivileged students that face various obstacles especially under the form of digital resources availability and inadequate family environments.

These documentation prompt the impelling need to increase the investment efforts toward the utilization of digital options to promote the development of hybrid teaching formulas capable of being more inclusive and better designed for fulfilling the necessities of students of all ages. These improvements include the implementation of policies and measures apt to ensure that every students can have at his/her disposal all the technological instruments that assure an easy access to remote learning experiences, the creation of apposite platforms and other supportive tools for learners in difficulty, the amelioration of the contacts between schools and parents which is extremely important for establishing well-suited nurturing environments for pupils, the diffusion of technological knowledge, and a high degree of attention with respect to the financial hardships that certain social categories could have that may hamper the prosecution of their studies.

This thesis has not explored every dimension and every shade of the inequalities touched by the pandemic. The impact of the pandemic, in fact, is so wide and articulate that a proper assessment require the analyses of several other arguments such as, for instance, how the income unbalances in the world has changed, the magnitude of the long-term effects produced, but also the evaluation of the psychological burden perceived. In this regard, the analyses conducted here provides a starting point for the creation of additional knowledge or even new understandings on other unequal frameworks which are directly or indirectly linked to them.

The results obtained allow to build a sense of awareness around the weaknesses present within the social systems in which we are living nowadays and to understand where it is imperative to intervene to avoid other similar crisis in the future.





## References

World Health Organization. "WHO Coronavirus (COVID-19) Dashboard". Accessed June 12, 2022.

[WHO Coronavirus \(COVID-19\) Dashboard | WHO Coronavirus \(COVID-19\) Dashboard With Vaccination Data](#)

Sephton, Connor. "The black swan theory: What it is, and how to use it." *Currency.com*, October 27, 2021.

[What Is The Black Swan Theory | How To Use It | Currency.com](#)

Avishai, Bernard. "The Pandemic isn't a Black Swan but a Portent of a More Fragile Global System." *The New Yorker*, April 21, 2020.

[The Pandemic Isn't a Black Swan but a Portent of a More Fragile Global System | The New Yorker](#)

Powles, Claire. "Was COVID-19 a 'Black Swan'? And why this is an important question..." *Continuity Central*, July 23, 2020.

[Was COVID-19 a 'Black Swan'? And why this is an important question... \(continuitycentral.com\)](#)

Taleb, Nassim Nicholas. *The Black Swan: The Impact of the Highly Improbable*. New York: Random House, 2007.

Drake, John. "Was Covid-19 A Black Swan Event?" *Forbes*, November 11, 2021.

[Was Covid-19 A Black Swan Event? \(forbes.com\)](#)

Taleb, Nassim Nicholas, Joe Norman and Yaneer Bar-Yam. *Systemic Risk of Pandemic via Novel Pathogens – Coronavirus: A Note*. New England Complex System Institute, New York University, January 2020. PDF file.

[Systemic Risk of Pandemic via Novel Path.pdf \(squarespace.com\)](#)

Wucker, Michele. "Was the pandemic a gray rhino or a black swan?" *The Economist*, November 17, 2020.

[Was the pandemic a grey rhino or a black swan? | The Economist](#)

getAbstract. *The Black Swan: The Impact of the Highly Improbable*. Economist.com, 2007. PDF file.

[black swan taleb 01.indd \(economist.com\)](#)

History.com Editors. "Pandemics That Changed History: As human civilization rose, these diseases struck them down". *History.com*, December 21, 2021.

[Pandemics That Changed History: Timeline - HISTORY](#)

Mina, An Xiao. "2020 isn't a black swan – it's a yellow canary". *NiemanLab*, 2020.

[2020 isn't a black swan — it's a yellow canary » Nieman Journalism Lab \(niemanlab.org\)](#)

LePan, Nicolas. "A visual history of pandemics". *World Economic Forum*, March 15, 2020.

[A visual history of pandemics | World Economic Forum \(weforum.org\)](#)

Pang, Kelly. "Hubei Travel Guide – How to Plan a Trip to Hubei". *China Highlights*, December 31, 2021.

[Hubei Travel Guide \(chinahighlights.com\)](#)

China Discovery. "Things to do in Wuhan". Accessed July 2, 2022.

[Top Wuhan Attractions, Things to Do in Wuhan, What to See in Wuhan \(chinadiscovery.com\)](#)

Myers, Joe. "5 things COVID-19 has taught us about inequality." *World Economic Forum*, August 18, 2020.

[5 things COVID-19 has taught us about inequality | World Economic Forum \(weforum.org\)](#)

United Nation Development Program Staff. *Putting the UN framework for socio-economic response to covid-19 into action*. United Nation Development Program.org, June 2020. PDF file.

[Brief2-COVID-19-final-June2020.pdf](#)

United Nation Development Program. "Covid-19 Socio-Economic Impact." Accessed June 17, 2022.

[Socio-economic impact of COVID-19 | United Nations Development Programme \(undp.org\)](#)

Aguilar-Palacio, Isabel, Lina Maldonado, Sara Malo, Raquel Sánchez-Recio, Iván Marcos-Campos, Rosa Magallón-Botaya, and M. José Rabanaque. "COVID-19 Inequalities: Individual and Area Socioeconomic Factors." *International Journal of Environmental Research and Public Health*, June 19, 2021.

[COVID-19 Inequalities: Individual and Area Socioeconomic Factors \(Aragón, Spain\) \(nih.gov\)](#)

Inequality.org. "Covid-19 and inequality." Accessed June 17, 2022.

[Inequality and Covid-19 - Inequality.org](#)

The Lancet. "Social and economic effects of the COVID-19 pandemic threaten to reverse progress towards gender equality." *Medical Press*, March 3, 2022.

[Social and economic effects of the COVID-19 pandemic threaten to reverse progress towards gender equality: study \(medicalxpress.com\)](#)

Ryan, J. Michael, and Serena Nanda. *COVID-19: Social Inequalities and Human Possibilities*. New York: Routledge, 2022. Google Play Libri.

[COVID-19: Social Inequalities and Human Possibilities - Google Play Libri](#)

Bambra, Clare, Julia Lynch, and Katherine E. Smith. *The Unequal Pandemic: Covid-19 and Health Inequalities*. Bristol: Policy Press, 2021. Google Play Libri.

[The Unequal Pandemic, COVID-19 and Health Inequalities - Google Play Libri](#)

Blundell, Richard, Monica Costa Dias, Robert Joyce and Xiaowei Xu. *COVID-19 and Inequalities*. UCL-London's Global University: Institute of Fiscal Studies, 2020. PDF file.

[COVID-19 and Inequalities\\* \(ucl.ac.uk\)](#)

Kurlantzick, Joshua. *COVID-19 and Its Effect on Inequality and Democracy*. New York and Washington: Council on Foreign Relations, March 2021. PDF file.

[COVID-19 and Its Effect on Inequality and Democracy \(cfr.org\)](#)

Stiglitz, Joseph E. "COVID Has Made Global Inequality Much Worse." *Scientific American*, March 1, 2022.

[COVID Has Made Global Inequality Much Worse - Scientific American](#)

Cheng, Wan Lae, Cameron Davis, Andre Dua, Mike Kerlin, Jonathan Law, Neil Vakharia, Chun Ying Wang, and Ammanuel Zegeye. "Lessons from the past on how to revive the US economy after COVID-19." *McKinsey*, June 18, 2020.

[How to revive the US economy after COVID-19 | McKinsey](#)

Astorino, Joseph A., and Anthony V. Nicola. "Making the Invisible Visible: Viral cloud moments in the SARS-COV-2 pandemic." in *Covid-19: Global Pandemic, Societal Responses, Ideological Solutions*, edited by Michael J. Ryan, 184-196. London: Routledge, 2020.

Ahmed, Nabil, Anna Marriott, Nafkote Dabi, Megan Lowthers, Max Lawson, Leah Mugehera, and Dana Abed. *Inequality Kills: The unparalleled action needed to combat unprecedented inequality in the wake of COVID-19*. Oxfam GB, Oxfam House, John Smith Drive, Cowley, Oxford, January 2022. PDF file.

[Inequality Kills: The unparalleled action needed to combat unprecedented inequality in the wake of COVID-19 \(openrepository.com\)](#)

Stiglitz, Joseph. "Conquering the great divide." *International Monetary Fund*, Fall 2020  
[COVID-19 and Global Inequality – IMF F&D](#)

Ferreira, Francisco H.G. *Inequality in the time of COVID-19*. International Monetary Fund: Finance and Development Magazine, June 2021. PDF file.

[Inequality and COVID-19 – IMF F&D](#)

Furceri, Davide, Prakash Loungani, Jonathan D. Ostry, and Pietro Pizzuto. *Will COVID-19 Have Long-Lasting Effects on Inequality? Evidence from Past Pandemics*. International Monetary Fund Working Papers, April 2021. PDF file.

[Will COVID-19 Have Long-Lasting Effects on Inequality? Evidence from Past Pandemics | SpringerLink](#)

International Monetary Fund. "The IMF and Income Inequality". Accessed June 18, 2022.  
[How the IMF Helps Countries Tackle Inequalities](#)

Davidson, Helen. "First Covid-19 case happened in November, China government records show - report." *The Guardian*, Friday 13, 2020.

[First Covid-19 case happened in November, China government records show - report | Coronavirus | The Guardian](#)

Ma, Josephine. "Coronavirus: China's first confirmed Covid-19 case traced back to November 17." *South China Morning Post*, March 13, 2020.

[Exclusive: Coronavirus: China's first confirmed Covid-19 case traced back to November 17 | South China Morning Post \(scmp.com\)](#)

Bryner, Jeanna. "1st known case of coronavirus traced back to November in China." *LiveScience*, November 17, 2020.

[1st known case of coronavirus traced back to November in China | Live Science](#)

Illmer, Andreas, Yitsing Wang, and Tessa Wong. "Wuhan lockdown: A year of China's fight against the Covid pandemic". *BBC*. January 22, 2021.

[Wuhan lockdown: A year of China's fight against the Covid pandemic - BBC News](#)

Bassan, Valerio, Luca Salvioli, and Biagio Simonetta. "Cose che noi umani: la pandemia che ha sconvolto le nostre vite e resterà per sempre nell'immaginario comune. Una cronistoria degli eventi che non avremmo mai potuto immaginare." *Il sole 24 ore*, November 25, 2021.

[La storia del coronavirus dall'inizio \(ilsole24ore.com\)](#)

Reuter staff. "France confirms first three cases of coronavirus in Europe." *Reuters*, January 24, 2020.

[France confirms first three cases of coronavirus in Europe | Reuters](#)

BBC staff. "Coronavirus disease named Covid-19". *BBC*, February 11, 2020.

[Coronavirus disease named Covid-19 - BBC News](#)

Associated press. "San Francisco to Require Vaccine Proofs at Indoor Venues." *U.S. News*, August 12, 2021.

[San Francisco to Require Vaccine Proof at Indoor Venues \(usnews.com\)](#)

Hart, Laura, and Richard Horton. "Syndemics: committing to a healthier future." *The Lancet*, March 4, 2017.

[Syndemics: committing to a healthier future - The Lancet](#)

Turner-Cohen, Alex. "European Nations eases restrictions and declares that Covid-19 is no longer a socially critical disease". *News.com.au.*, January 30, 2022.

[Denmark says Covid-19 no longer a 'socially critical disease' | news.com.au — Australia's leading news site](#)

Arango, Tim, Nicholas Bogel-Burroughs, Audra D. S. Burch, Maria Cramer, John Eligon, Manny Fernandez, Christine Hauser et al. "How George Floyd Died, and What Happened Next." *The New York Times*, July 29, 2022.

[How George Floyd Died, and What Happened Next - The New York Times \(nytimes.com\)](https://www.nytimes.com/2022/07/29/us/politics/george-floyd-death-what-happened-next.html)

Hanks, Angela, Danyelle Solomon, and Christian E. Weller. "Systematic Inequality: How America's Structural Racism Helped Create the Black-White Wealth Gap." *Center for American Progress*, February 21, 2018.

[Systematic Inequality - Center for American Progress](https://www.americanprogressaction.org/research/systematic-inequality/)

Shvili, Jason. "The Black Codes and Jim Crow Laws." *World Atlas*, November 8, 2021.

[The Black Codes And Jim Crow Laws - WorldAtlas](https://www.worldatlas.com/articles/what-were-the-black-codes-and-jim-crow-laws.html)

Williams, Pete. "Supreme Court rejects challenge to Indiana University's vaccination requirements: eight students asked the court for an emergency order, arguing that the risk of vaccination outweigh potential benefits for those in their age group". *NBC News*, August 12, 2021.

[Supreme Court rejects challenge to Indiana University's vaccination requirement \(nbcnews.com\)](https://www.nbcnews.com/health/indiana-university-vaccination-requirements-supreme-court-rcna11117)

Campanelli, Federica. "Nel 1619 nasceva la schiavitù nell'America del nord." *Focus*, December 1, 2021.

[La nascita della schiavitù in America - Focus.it](https://www.focus.it/cultura/la-nascita-della-schiavitù-in-america)

Ma, Qiuyue, Jue Liu, Qiao Liu, Lyangyu Kang, Runqing Liu, Wenzhan Jing, Yu Wu and Min Liu. "Global Percentage of Asymptomatic SARS-CoV-2 Infections Among the Tested Population and Individuals With Confirmed COVID-19 Diagnosis." *Journal of American Association*, December 14, 2021.

[Global Percentage of Asymptomatic SARS-CoV-2 Infections Among the Tested Population and Individuals With Confirmed COVID-19 Diagnosis: A Systematic Review and Meta-analysis | Global Health | JAMA Network Open | JAMA Network](https://jamanetwork.com/journals/jama/fullarticle/2784247)

Inequality.org. "Inequality and health." Accessed July 8, 2022.

[Inequality and Health - Inequality.org](https://inequality.org/inequality-and-health/)

Chen, Yea-Hung, Maria Glymour, Alicia Riley, John Balmes, Kate Duchowny, Robert Harrison, Ellicott Matthay, and Kirsten Bibbins-Domingo. *Excess mortality associated with the COVID-19 pandemic among Californians 18-65 years of age, by occupational sector and occupation: March through October 2020*. MedRxiv, January 22, 2021. PDF file.

[Excess mortality associated with the COVID-19 pandemic among Californians 18–65 years of age, by occupational sector and occupation: March through October 2020 \(medrxiv.org\)](#)

Chen, Jarvis T, and Nancy Krieger. *Revealing the unequal burden of COVID-19 by Income, race/ethnicity, and household crowding: US county vs. ZIP code analyses*. Harvard Center for population and development studies, April 21, 2020. PDF file.

[HCPDS Volume19 No 1 20 covid19 RevealingUnequalBurden HCPDSWorkingPaper 0421 2020-1.pdf \(harvard.edu\)](#)

Statista. “Rate of laboratory-confirmed COVID-19-associated hospitalization in the United States as of July 23, 2022, by race and ethnicity”. Accessed August 1, 2022.

[COVID-19 hospitalization rate by race ethnicity U.S. 2022 | Statista](#)

Gawthrop, Elisabeth. “Covid-19 Deaths by Race and Ethnicities in the U.S.”. *APM Research Lab*, July 19, 2022.

[Color of Coronavirus: COVID-19 deaths analyzed by race and ethnicity — APM Research Lab](#)

Public Health Agency of Canada. *Social inequality in COVID-19 mortality by area and individual level characteristics in Canada, January to July/August 2020*. Ottawa, ON: PHAC, July 2021. PDF file.

[Social inequalities in COVID-19 mortality by area- and individual-level characteristics in Canada](#)

McKlennan, David, Stefan Noble, Michael Noble, Emma Plunkett, Gemma Wright, and Nils Gutacker. *The English Indices of Deprivation 2019*. Ministry of Housing, Communities & Local Government, September 2019, 21, PDF file.

[English Indices of Deprivation 2019: technical report \(publishing.service.gov.uk\)](#)

Jonas, Sabrina, and Benjamin Shingler. “Public health finds higher mortality rates in city’s lowest-income boroughs, recommends changes.” *CBC News*, November 3, 2021.

[The pandemic exposed Montreal's inequalities, and residents say it's time to tackle root causes | CBC News](#)

Ontario Agency for Health Protection and Promotion (Public Health Ontario). *COVID-19 in Ontario – A focus on Neighborhood Diversity, February 26, 2020 to December 13, 2021*. Toronto, ON: Queen’s Printer for Ontario, 2022. PDF file.

[COVID-19 in Ontario – A Focus on Neighbourhood Diversity, February 26, 2020 to December 13, 2021 \(publichealthontario.ca\)](https://publichealthontario.ca)

White, Chris, and Daniel Ayoubkhani. “Updating ethnic contrast in deaths involving the coronavirus (COVID-19), England and Wales: deaths occurring 2 March to 28 July 2020.” *Office for National Statistics*, October 16, 2020.

[Updating ethnic contrasts in deaths involving the coronavirus \(COVID-19\), England and Wales - Office for National Statistics \(ons.gov.uk\)](https://ons.gov.uk)

Ahmed, Tamanna, Rose Drummond, and Matt Bosworth. “Updating ethnic contrast in deaths involving the coronavirus (COVID-19), England: 8 December 2020 to 1 December 2021.” *Office for National Statistics*, January 26, 2022.

[Updating ethnic contrasts in deaths involving the coronavirus \(COVID-19\), England - Office for National Statistics \(ons.gov.uk\)](https://ons.gov.uk)

Shiraef, Mary A. “Europe’s border responses to COVID-19 in global context”. *Europe in the World*, December 16, 2021.

[Europe’s border responses to COVID-19 in global context | Articles | Europe in the World | University of Notre Dame \(nd.edu\)](https://nd.edu)

Helbling, Marc, Rahsaan Maxwell, Simon Munzert and Richard Traunmüller. “The Importance of citizenship for deserving COVID-19 treatment”. *Nature*, September 2, 2022.

[The importance of citizenship for deserving COVID-19 treatment | Humanities and Social Sciences Communications \(nature.com\)](https://nature.com)

Usher, Danaiya. “A beautiful idea: how COVAX has fallen short.” *The Lancet*, June 18, 2021.

[A beautiful idea: how COVAX has fallen short - The Lancet](https://thelancet.com)

Berkley, Seth. “COVAX explained: To end this global health crisis we don’t just need COVID-19 vaccines, we also need to ensure that everyone in the world has access to them.” *GAVI the vaccine alliance: VaccinesWork*, September 3, 2020.

[COVAX explained | Gavi, the Vaccine Alliance](https://gavi.org)



BBC staff. "Coronavirus: India temporarily halts Oxford-AstraZeneca vaccine exports." *BBC*, March 24, 2021.

[Coronavirus: India temporarily halts Oxford-AstraZeneca vaccine exports - BBC News](#)

Usher, Danaiya. "South Africa and India push for COVID-19 patents ban." *The Lancet*, December 5, 2020.

[South Africa and India push for COVID-19 patents ban - The Lancet](#)

Boffey, Daniel, and Kate Connolly. "Macron voices concern over Covid vaccines patent waiver." *The Guardian*, May 7, 2021.

[Macron voices concerns over Covid vaccines patent waiver | Coronavirus | The Guardian](#)

Wintour, Patrick, Heather Stewart, and Phillip Inman. "G7's Carbis Bay declaration: the key pledges. World leaders issue joint statement promising action on vaccines, China and global corporate tax." *The Guardian*, June 13, 2021.

[G7's Carbis Bay declaration: the key pledges | G7 | The Guardian](#)

Faiola, Anthony. "The new kind of vaccine inequality." *The Washington Post*, January 24, 2022.

[Vaccine distribution is creating a new kind of vaccine inequality - The Washington Post](#)

Cabiria staff. "28 anni fa nasceva il web. L'inizio di una rivoluzione". *Cabiria*, August 6, 2019.

[La Nascita del World Wide Web: storia di un successo | Cabiria](#)

Internetlivestats.com. "Internet Live Stats". Accessed November 5, 2022

[Internet Live Stats - Internet Usage & Social Media Statistics](#)

Schumacher, Shannon, and Nicholas Kent. "8 charts on internet use around the world as countries grapple with COVID-19." *Pew Research Center*, April 2, 2020.

[8 charts on internet use around the world as countries grapple with COVID-19 | Pew Research Center](#)

Atske, Sara, and Andrew Perrin. "Home broadband adoption, computer ownership vary by race, ethnicity in the U.S." *Pew Research Center*, July 16, 2021.

[Black, Hispanic adults less likely to have broadband or traditional PC than White adults | Pew Research Center](#)

Statista. "Share of adults in the United States who use the internet in the 2021, by age group." April 2021.

[Internet usage by age in U.S. 2021 | Statista](#)

Prescott, Cecil. "Internet users, UK:2020. Internet use in the UK; annual estimates by age, sex, disability and geographical location". *Office for National Statistics*, April 6, 2021.

[Internet users, UK - Office for National Statistics \(ons.gov.uk\)](#)

Speedtest. "Speedtest global index." Accessed October 22, 2022.

[Speedtest Global Index – Internet Speed around the world – Speedtest Global Index](#)

McKetta, Isla. "In-Depth Analyses of Changes in the World Internet Performance Using the Speedtest Global Index." *Ookla*, September 4, 2019.

[In-Depth Analysis of Changes in World Internet Performance Using the Speedtest Global Index \(ookla.com\)](#)

Statista. "Global internet users age distribution 2021". May 2022.

[Global internet users age distribution 2021 | Statista](#)

McClain, Colleen, Emily A. Vogels, Andrew Perrin, Stella Sechopoulos, and Lee Rainie. "The Internet and the Pandemic". *Pew Research Center*, September 1, 2021.

[The Internet and the Pandemic | Pew Research Center](#)

Bijan, Stephen. "Twitch ended 2020 with its biggest numbers ever". *The Verge*, January 11, 2021.

[Twitch ended 2020 with its biggest numbers ever - The Verge](#)

Walsh, Joe. "Netflix Subscribers Growth Slows After Surging During Pandemic". *Forbes*, October 20, 2020.

[Netflix Subscriber Growth Slows After Surging During Pandemic \(forbes.com\)](#)

UNESCO Institute for Statistics. "Literacy". Accessed November 10, 2022.

[Literacy | UNESCO UIS](#)

Brugiavini, Agar, Raluca E. Buia, and Irene Simonetti. *Occupation and working outcomes during the Coronavirus Pandemic*. European Journal of Ageing, October 8, 2020. PDF file.  
[Occupation and working outcomes during the Coronavirus Pandemic \(springer.com\)](#)

Smith, Sean M., Roxanna Edwards, and Hao C. Duong. "Unemployment rises in 2020, as the country battles the COVID-19 pandemic." *U.S. Bureau of Labor Statistics*, June, 2021.  
[Unemployment rises in 2020, as the country battles the COVID-19 pandemic : Monthly Labor Review: U.S. Bureau of Labor Statistics \(bls.gov\)](#)

Brandolini, Andrea. "Il Long COVID della distribuzione dei redditi". *Neodemos*, November 25, 2022.  
[Il "Long COVID" della distribuzione dei redditi • Neodemos](#)

The FRED Blog. "Comparing unemployment rates by race: The Great Recession vs. COVID-19". Posted on May 23, 2022.  
[Comparing unemployment rates by race: The Great Recession vs. COVID-19 | FRED Blog \(stlouisfed.org\)](#)

OECD Data. "Unemployment rate by age group". Accessed December 18, 2022.  
[Unemployment - Unemployment rate by age group - OECD Data](#)

Bracke, Philippe, Karen Croxon, Jesse Leary, and John Wood. "Covid-19 and the UK's BAME communities – an economic perspective". *Insight*, January 26, 2021.  
[Covid-19 and the UK's BAME communities – an economic perspective | FCA Insight](#)

McCarthy, Niall. "Which European countries work from home the most?". *World Economic Forum*, February 14, 2020.  
[Which European Countries Work From Home the Most? | World Economic Forum \(weforum.org\)](#)

Schumacher, Alexander, and Arne Bethmann. *Financial Hardship during the COVID-19 pandemic*. Max-Planck-Institut für Sozialrecht und Sozialpolitik, 2022. Mimeo.

The Economist staff. "Covid-19 has transformed the welfare state. Which changes will endure?". *The Economist*, March 2021.  
[Covid-19 has transformed the welfare state. Which changes will endure? | The Economist](#)

Ahrendt, Daphne, Jorge Cabrita, Eleonora Clerici, John Hurley, Tadas Leončikas, Massimiliano Mascherini, Sara Riso, and Eszter Sandor. *Living, working and COVID-19*. Publication Office of the European Union, Luxembourg, 2020. PDF file.

[Living, working and COVID-19 \(europa.eu\)](#)

OECD staff. "Education and COVID-19: Focusing on the long-term impact of school closures". *OECD.org*, June 29, 2020.

[Education and COVID-19: Focusing on the long-term impact of school closures \(oecd.org\)](#)

UNICEF staff. "Children in the poorest countries have lost nearly four months of schooling since start of the pandemic – UNESCO, UNICEF and World Bank report finds". *UNICEF.org*, October 20, 2020.

[Children in the poorest countries have lost nearly four months of schooling since start of pandemic – UNESCO, UNICEF and World Bank report finds](#)

OECD. *Using Digital Technologies for Early Education during COVID-19: OECD Report for the G20 2020 Education Working Group*. OECD Publishing, Paris, 2021. PDF file.

[Using Digital Technologies for Early Education during COVID-19 \(oecd-ilibrary.org\)](#)

OECD. *The State of Global Education: 18 Months into the Pandemic*. OECD Publishing, Paris, 2021. PDF file.

[OECD COVID Survey\\_EAG.indd \(oecd-ilibrary.org\)](#)

OECD. *The State of Higher Education: One Year into the COVID-19 Pandemic*. OECD Publishing, Paris, 2021. PDF file.

[OECD COVID Survey\\_HE.indd \(oecd-ilibrary.org\)](#)

Children's Commissioner. *Tackling the disadvantage gap during the Covid-19 crisis*. Childrenscommissioner.gov.uk, April 2020. PDF file.

[cco-tackling-the-disadvantage-gap-during-the-covid-19-crisis.pdf \(childrenscommissioner.gov.uk\)](#)

UNICEF staff. "Distribution of laptops and tablets as part of the Bridging Digital Divide in Serbia for the Most Vulnerable Children project". *UNICEF.org*, April 13, 2021.

[Distribution of laptops and tablets as part of the Bridging Digital Divide in Serbia for the Most Vulnerable Children project \(unicef.org\)](#)

UK Department of Education, and The Rt Hon Sir Gavin Williamson CBE MP. “Hundreds of thousands more laptops to support disadvantaged pupils learn at home”. *GOV.UK Press Release*, January 12, 2021.

[Hundreds of thousands more laptops to support disadvantaged pupils learn at home - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/news/hundreds-of-thousands-more-laptops-to-support-disadvantaged-pupils-learn-at-home)

Vegas, Emiliana. “School closures, government responses, and learning inequalities around the world during COVID-19”. *Brookings*, April 14, 2020.

[School closures, government responses, and learning inequality around the world during COVID-19 \(brookings.edu\)](https://www.brookings.edu/blog/education-policy/2020/04/14/school-closures-government-responses-and-learning-inequality-around-the-world-during-covid-19/)