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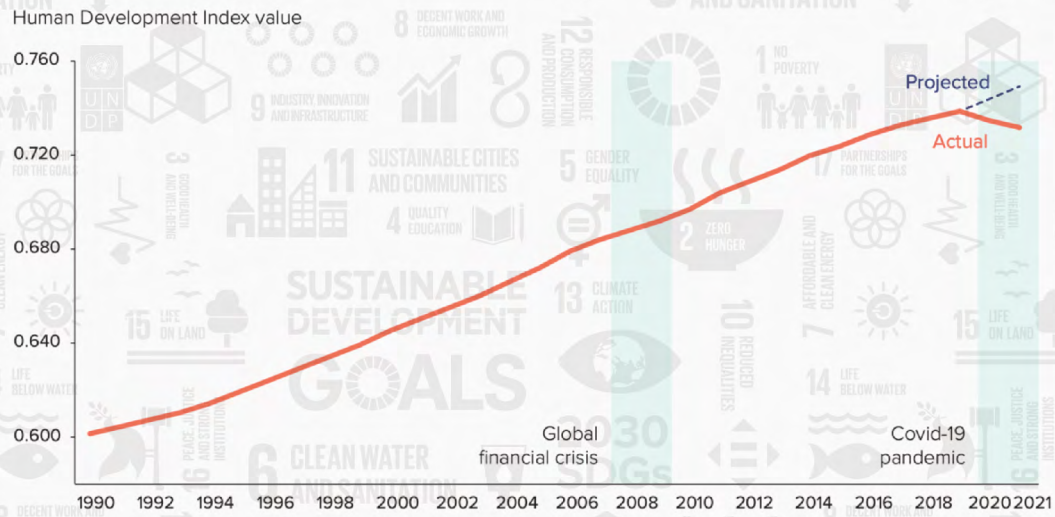
Excerpts from UNDP's global Human Development Report 2021-22: A perspective from China[1]

This brief is built on the overview of 2021/2022 global human development report which examines the global development landscape in the post-Covid era and introduces the concept of uncertainty into the human development discussion. To make the report's key insights more relevant for the audience in China, it includes China specific data and analysis wherever possible and appropriate.The main text of this brief includes ad-verbatim extracts from the Human Development Report (HDR) 2021/2022 Overview. All China-specific data and information are based on UNDP China's Research and Policy team analysis and are shown in green boxes whereas excerpts from the HDR 2021/2022 are marked in black font.



Source: Human Development Report Office calculations based on data from Barro and Lee (2018), IMF (2021b, 2022), UNDESA (2022a, 2022b), UNESCO Institute for Statistics (2022), UNSD (2022) and World Bank (2022).

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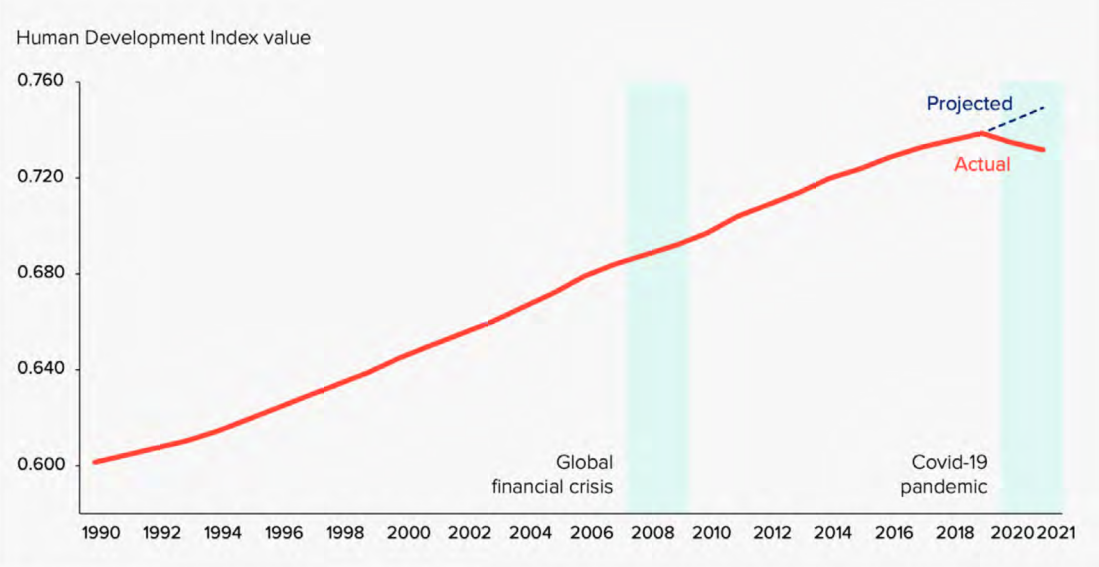
We live in a world of worry. The ongoing Covid-19 pandemic, which has driven reversals in human development in almost every country and continues to spin off variants unpredictably. Record-breaking temperatures, fires and storms, each an alarm bell from planetary systems increasingly out of whack. Acute crises are giving way to chronic, layered, interacting uncertainties at a global scale, painting a picture of uncertain times and unsettled lives.

Figure 1. The global Human Development Index (HDI) has declined two years in a row, erasing the gains of the preceding five years



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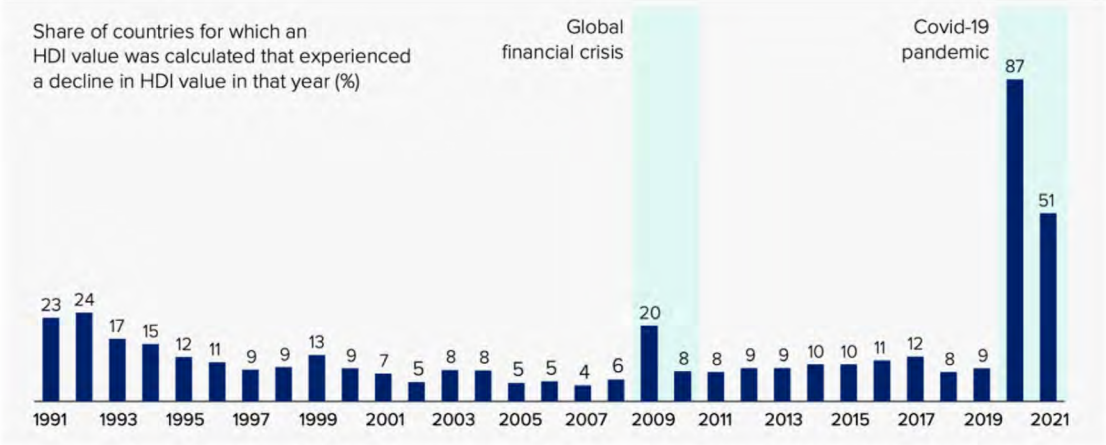
For the first time on record, the global HDI value declined, taking the world back to the time just after the adoption of the 2030 Agenda for Sustainable Development and the Paris Agreement (Figure 1). Every year a few different countries experience dips in their respective HDI values. But a whopping 90 percent of countries saw their HDI value drop in either 2020 or 2021 (Figure 2), far exceeding the number that experienced reversals in the wake of the global financial crisis. Last year saw some recovery at the global level, but it was partial and uneven: most very high HDI countries notched improvements, while most of the rest experienced ongoing declines (Figure 3).

In the global context, China is classified as a 'high human development' country and its HDI has been higher than the global average since 2013. The country's ranking climbed from 85 in 2019 to 79 in 2021.

Amid the global regression in human development progress during the pandemic, China is within the 10% of countries that experienced continuous growth, with its HDI increasing from 0.762 in 2019 to 0.768 in 2021.

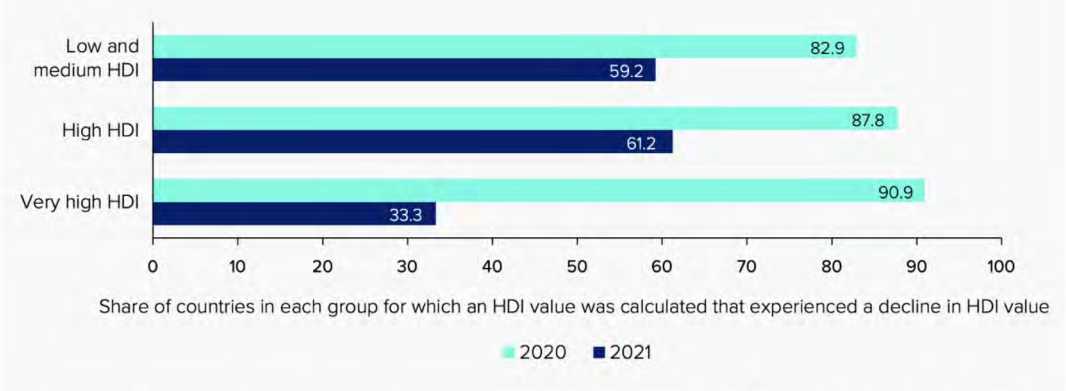
Effective control and prevention measures in the first two pandemic years allowed for relatively weaker socio-economic impacts compared to the world average. However, 2022 has recorded a relatively significant slowdown, impacting employment as well as livelihoods. A degree of uncertainties around 2023 and beyond remain.

Figure 2. Recent declines on the HDI are widespread, with over 90 percent of countries enduring a decline in 2020 or 2021



Source: Human Development Report Office calculations based on data from Barro and Lee (2018), IMF (2021b, 2022), UNDESA (2022a, 2022b), UNESCO Institute for Statistics (2022), UNSD (2022) and World Bank (2022).

Figure 3. Almost all countries saw reversals in human development in the first year of the Covid-19 pandemic, and most low, medium and high HDI countries saw continued declines in the second year

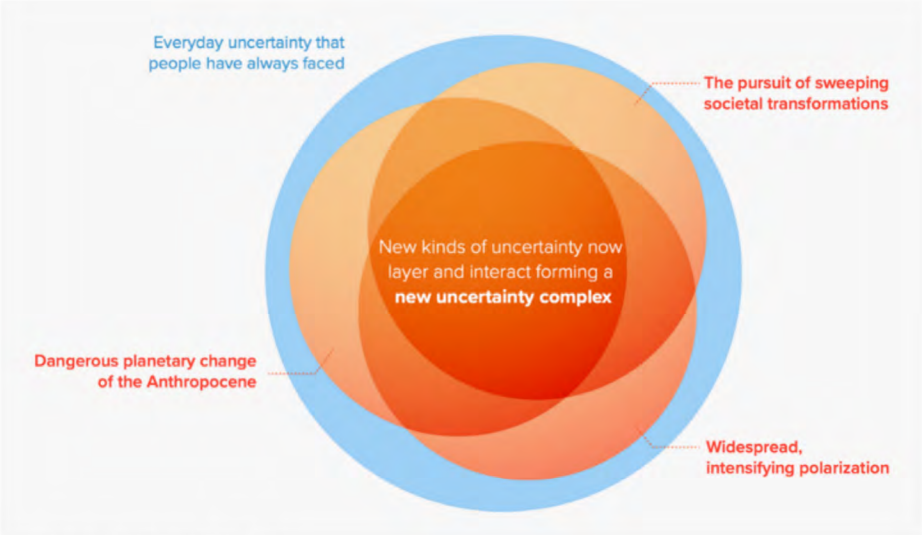


Source: Human Development Report Office calculations based on data from Barro and Lee (2018), IMF (2021b, 2022), UNDESA (2022a, 2022b), UNESCO Institute for Statistics (2022), UNSD (2022) and World Bank (2022).

Uncertainty is not new, but its dimensions are taking ominous new forms today. A new "uncertainty complex" (Figure 4) is emerging, never before seen in human history. Constituting it are three volatile and interacting strands:

- The dangerous planetary change of the Anthropocene.
- The pursuit of sweeping societal transformations on par with the Industrial Revolution.
- The widespread, intensifying polarization of society.

Figure 4. A new uncertainty complex is emerging



Source: Human Development Report Office.

One of the frustrating ironies of the Anthropocene is that while we have more power to influence our future, we do not necessarily have any more control over it. From the climate crisis to far-reaching technological changes, other important forces—many of our own making—are expanding the set of possible outcomes, some unknowable, of any given action. There is a nagging sense that whatever control we have over our lives is slipping away, that the norms and institutions we used to rely on for stability and prosperity are not up to the task of today's uncertainty complex. Feelings of insecurity are on the rise nearly everywhere.

Against this context, this brief elaborates on two aspects raised in the HDR that had and are continuing to have an impact on human development: the environmental crisis, and the Covid-19 pandemic. In line with the global report, this brief also spotlights a third risk factor to human development: the worsening mental health that is emerging on the back of the new uncertainty that people are set to live and operate in. We then added a China's lens to better contextualize these issues with the aim to increase awareness about the drivers and risks around human development. We conclude, in Section IV, presenting three priority for the attention of policy makers to help people navigate and even thrive in the face of these challenges- both from a global and a China perspective.

Section I. Planetary changes as a source of new uncertainties

Both the wellbeing of people and the planet is central to sustainable development. The 2021-2022 HDR included an update of the new Planetary Pressures-adjusted Human Development Index (PHDI) - an experimental index introduced in 2020 to show how the human development landscape changes after accounting for each country's carbon emissions and material footprint. Accounting for planetary pressures leads to a drop of the 2021 global HDI to 0.667 (from the traditional, non-adjusted value of 0.732), a decrease of 8.9 percent. Using the PHDI, 52 out of 66 countries drop out of the 'very high human development' group.

China's 2021 PHDI is 0.648, a loss of 15.6 percent compared to its HDI. This constitutes a higher than the average loss due to planetary pressure than the average of countries in the high HDI category, which is 11.5 percent. Relatively sharper falls in the planetary pressures-adjusted HDI suggest a greater need for countries, including China, to accelerate their transition to a sustainable development path where people and planet can prosper together.

In the Anthropocene, [2] humans have become the dominant force shaping the future of the planet. Numerous unsustainable human activities emit Green House Gas (GHG), which leads to global warming and increased occurrences of extreme weather and natural disasters, such as droughts, storms, sea-level rise, floods, and biodiversity loss.[3] Take biodiversity as an example: more than 1 million plant and animal species face extinction.[4] As much as the Covid-19 pandemic caught us by surprise, unprepared and fumbling for paths forward, we have even less of an idea of how to live in a world without, say, an abundance of insects. That has not been tried for about 500 million years, when the world's first land plants appeared. This is not a coincidence. Without an abundance of insect pollinators, we face the mindboggling challenge of growing food and other agricultural products at scale.

Examples of the impact of human activities on the environment are multiple and rising – in numbers and intensity.

The world is feeling the heat brought by climate change and China is no exception.In 2022, from mid-June to August, China experienced its most intense heatwave since 1961.[5] Close to one billion people experienced temperatures exceeding 35 °C, and 360 million felt temperatures of more than 40 °C at some point during the summer. Between July and August, hydropower generation, a major electricity source in several provinces of Southwestern China and along the Yangtze Basin, decreased considerably due to drought in these areas. Sichuan was hit the hardest as 82% of its total electricity capacity normally comes from hydropower.[6] This led to a reduction of available electricity for industrial and commercial usage for several weeks, and in some cases impacted residential users for short periods of time.[7]

Human societies and ecological systems have long influenced—and surprised—one another, but not at the scales and speeds of the Anthropocene. Humans are now shaping planetary trajectories[8], and the dramatically changing baselines—from global temperatures to species diversity—are altering the fundamental frame of reference humans have been operating under for millennia. It is as if the ground beneath our feet is shifting, introducing a new kind of planetary uncertainty for which we have no real guide.

Material cycles, for example, have been upended. For the first time in history, humanmade materials, such as concrete and asphalt, outweigh the Earth's biomass. Microplastics are now everywhere: in country-sized garbage patches in the ocean, in protected forests and distant mountaintops and in people's lungs and blood.[9] Mass coral bleaching is now commonplace rather than extraordinary.[10]

China is the largest producer of plastic in the world and also faces pressing challenges brought by plastic pollution.[11] Lacking a comprehensive plastics management system, a large proportion of discarded plastic is often discharged unprocessed into the environment. According to China's Ministry of Ecology and Environment, plastic made up over 80 percent of all waste in China's waters in 2021. The plastic waste poses great threat to aquatic creatures, with research finding that 21 species of seawater fish and 6 species of freshwater fish in China have ingested micro- or meso-plastics.[12]

Any one of the rapid, planetary-level, human-induced changes of the **Anthropocene would be enough on its own to inject frightening new uncertainties** into the fate of not just individuals, communities or even nations, but of all humankind. Recall just a few decades ago when chlorofluorocarbons entered global consciousness. Or the insecticide known as DDT before that. Or nuclear proliferation before that (and, sadly, still today). The human-induced forces at work in the Anthropocene are not atomized or neatly sequenced. They are not islands of perturbations in a sea of relative stability. Instead, they are stacked on top of each other, interacting and amplifying in un-predictable ways. **For the first time in human history, anthropogenic existential threats loom larger than those from natural hazards.**[13]

The latest International Panel on Climate Change Report is a "code red for humanity."[14] If we want to achieve the 1.5°C scenario, the world needs to take an additional 28 GtCO2e of annual emissions out of the atmosphere by 2030, over and above what is promised in updated unconditional NDCs.[15] While human-induced changes to our planetary system are expected to continue well into the future, **we still have the opportunity to prevent excessive global warming and avoid the worst scenarios.**

Promoting a greener economy can create more job opportunities as well. A low-carbon economy could create more than 10 trillion dollars in new business value every year by 2030, adding 395 million jobs worldwide.[16] Based on estimates by IRENA, boosting investments in renewable energy would quadruple jobs in this sector to 42 million globally in the next 30 years.[17]

China's size and manufacturing power means it is now the largest GHG emitter, accounting for around 28% of total GHG emissions in 2021.[18] Thus, China is critically important in the global fight against climate change. A main driver of emissions is coal. In 2021, coal represented 56% of China's energy consumption[19]. This is an important improvement from 68.5% in 2000 but a significant acceleration in reduction will be needed to reach the required share of approx. 5% by 2050 to keep the 1.5°C warming goal of the Paris Agreement alive. [20]

After the announcement of its dual carbon goals in 2020 to peak carbon emissions before 2030 and reach carbon neutrality before 2060, China has stepped-up efforts to build a low carbon economy and released a comprehensive 1+N policy framework to guide its green transition. In 2022, China added 125 gigawatts (GW) of wind and solar power capacity.[21] For comparison, 2022 wind and solar additions amounted to 57 GW in the European Union and to 16 GW in the US.[22] The transition has the potential to unlock additional and vast opportunities, with some studies showing that a transformation of China's economy into a 'nature-positive' one, could generate USD 1.9 trillion in additional annual revenue and create 88 million jobs by 2030.[23]

Section II. Uncertainties on the back of the Covid-19 pandemic testing human development

The Covid-19 pandemic has exacted a terrible toll in lives and livelihoods around the world. It is more than a long detour from normal; it is a window into a new reality, a painful glimpse into deep, emblematic contradictions, exposing a confluence of fragilities.

Triggered by the pandemic, the world has witnessed an economic downturn and social inequality has widened. IMF's statistics show that the pandemic has cost over USD7 trillion in lost production and USD16.9 trillion in emergency fiscal responses.[24] Many companies, even large and well-established ones, have had to lay off employees. The unemployment rate rose to 6.5% in 2020, which far exceeds the natural rate of 4%.[25] World Bank calculated that in 2021, as many as 163 million people were pushed back into poverty by the pandemic, reversing roughly 6 years of progress.[26]

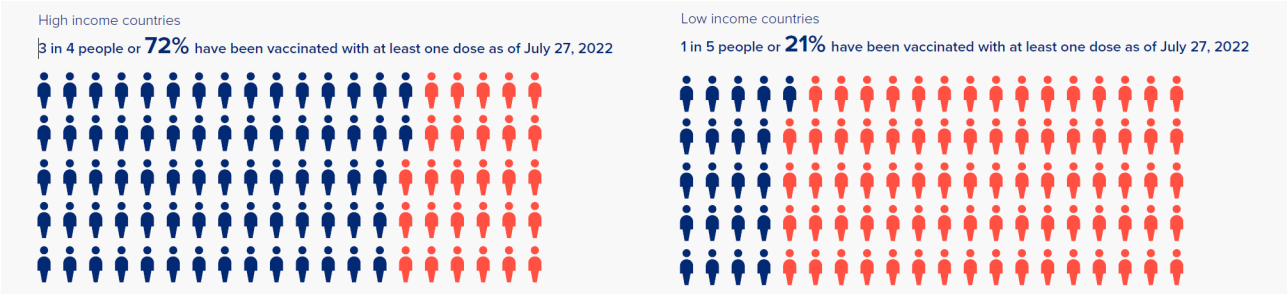
China's economy fared better than most, particularly during the first phases of the pandemic despite its volatile economic performance. Growth did slow to 2.2% in 2020 from 6% in 2019, but upper-middle-income countries contracted by 0.6% during the same year.[27] 2021 GDP growth rate bounced back to 8.4% but then slowed to 3% in 2022.[28] The urban surveyed unemployment rate was 5.6% on average in 2022, up from 5.1% in 2021.[29]

Even though pandemic has brought out disastrous consequence, an impressive feat of modern science: the development of safe, effective vaccines to a novel virus in less than a year. Having saved tens, perhaps hundreds, of millions of lives over the past century, especially of children, vaccines remain one of humanity's greatest, most cost-effective technological innovations—ever.[30] The battery of Covid-19 vaccines is no exception. In 2021 alone Covid-19 vaccination programmes averted nearly 20 million deaths.[31] It is a lesson of the power of technology to transform lives for the better at a time when we hear so much about the ways technology can do just the opposite.

But access to Covid-19 vaccines remains appallingly low or virtually nonexistent in many low-income countries (figure 5), especially in Africa, which have endured age-specific infection fatality rates twice those of high-income countries.[32] Reaching rural areas with weaker cold chains and fewer healthcare workers remains difficult. Meanwhile, vaccine uptake in many richer countries has stalled, due partly to perplexing disputes about vaccines generally.[33] The last mile is long in every country.

China has contributed significantly to increasing vaccine access around the world. As of 2022, China has provided more than 2.2 billion doses of COVID-19 vaccine to over 120 countries and international organizations.[34] Within China, around 90.6% of its population were fully vaccinated by February 2023.[35] While the overall rate is relatively high, the elderly population are less vaccinated compared to younger age-groups. The uptake rate among people aged 60 above and 80 above is 96.6% (February 2023) and 66% (November 2022) respectively. [36]

Figure 5. Countries' access to Covid-19 vaccines remains highly inequal



Source: Global Dashboard for Vaccine Equity (https://data.undp.org/vaccine-equity/), accessed 27 July 2022.

Unequal, unjust access to Covid-19 vaccines is one of many inequalities that have weighed heavily throughout the pandemic. Indeed, those inequalities have helped fuel its spread. The groups most likely to be left behind have borne the brunt of its health and economic risks. Women and girls have shouldered even more household and caregiving responsibilities, while violence against them has worsened. Women were also more likely than men to drop out of the labor force, exacerbating longstanding gender gaps in labor force participation rates. Women's employment losses in 2020 are 5%, compared to 3.9% for men.

Pre-existing digital divides have widened gaps in children's education access and quality. Some fear a "lost generation" of learners. Youth unemployment rose to 8.7 percent in 2020, compared with 3.7 percent for adults.[37]

In 2021, UNDP with the support of the United Nations Resident Coordinator Office and other relevant UN agencies have carried out household surveys to gauge the impact of Covid-19 in five poor counties in China, and with a special focus on vulnerable groups. The report has yielded some useful findings concerning the vulnerability of different groups to shocks:

- The time spent working and incomes of informal sector employees fell far more sharply than those of formal sector employees. Already disadvantaged by a lack of access to social protection, these workers suffered greater financial losses.
- During lockdowns, 26.5% of children under eight years of age and who normally attended school, were left unattended for an hour or longer every day during school closures. This was apparent mainly in rural and poor households.
- About one fifth of older people faced difficulties in obtaining necessary daily care, financial support and emotional companionship. Those living in urban communities, older women and those in the oldest age category, were most affected.

Due to limited disaggregated data availability, it is challenging to gather a comprehensive picture of the impact of Covid-19 on different forms of inequalities, including gender. Some data is available for the Asia Pacific region. UN Women estimates that 32% of women left the labour market in select Asia-Pacific countries, compared to 9% of men. In turn, 28% of women took up unpaid care and domestic work as their main economic activity, compared to only 2% cent of men.[38]

Similar to trends globally, youth in China have experienced significant job loss due to Covid-19. The surveyed youth unemployment rate hit an all-time high at 19.9% in July 2022. The unemployment rate averaged 17.6% last year, versus 14.3% in 2021 and 11.9% in 2019. [39]

The Covid-19 pandemic and its seemingly endless twists and turns have—perhaps above all else—entrenched a climate of dogged uncertainty and unsettledness. And this is just one pandemic, having emerged seemingly out of nowhere, like a phantom that cannot be exorcised. We were long warned about the threat of novel respiratory pathogens.[40] As we move deeper into the Anthropocene, we have been warned that there will be more.

Section III. Uncertainties, human development and mental wellbeing

Mental wellbeing is an important, complex issue globally without any single driver, technological or otherwise. Mental distress, whose prevention is a critical aspect of overall mental wellbeing, is aggravated by uncertainties and insecurities

of all stripes: by major Anthropocene phenomena, such as climate change; by age-old scourges of discrimination, exclusion, conflict and violence; and by relatively newer entrants, such as social media and other technologies.

During the first year of the pandemic, the global prevalence of depression and anxiety increased by more than 25 percent.[41] Low-income people, especially those who struggle to afford basic needs such as rent and food, suffered disproportionally in several countries. Women, who assumed most of the additional domestic and care work that emerged during school closures and lockdowns, faced much higher mental distress than before the crisis.

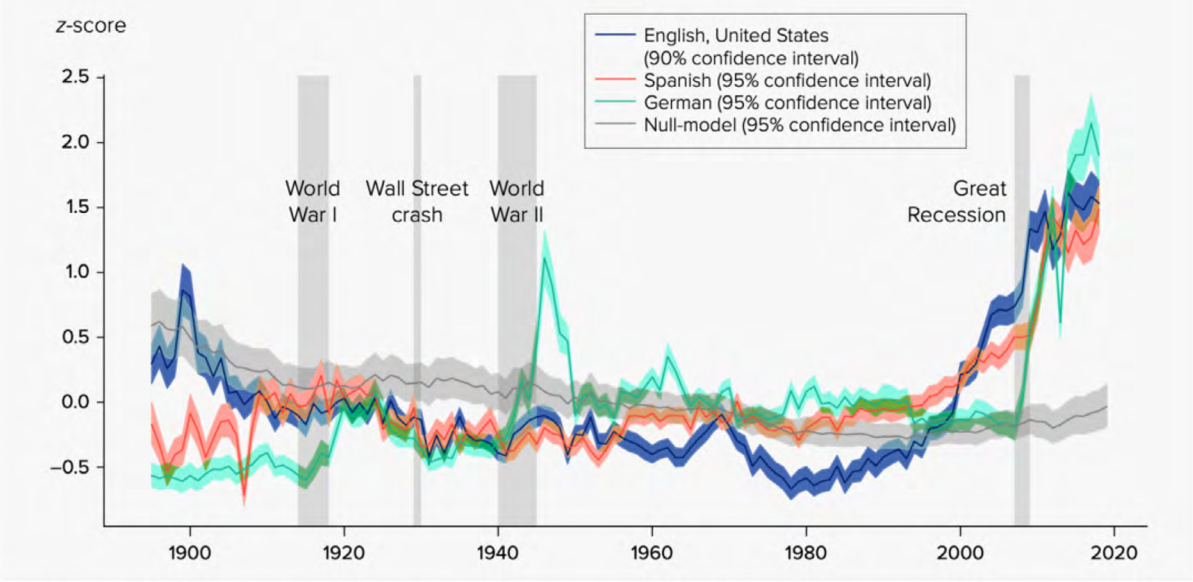
Almost 1 billion people—roughly one in eight of us—live with a mental disorder, providing a lower-bound estimate of the broader problem of mental distress. Globally, mental health issues are the leading cause of disability. Yet, of those who need mental health attention or treatment, only about 10 percent receive it.[42] On average, countries spend less than 2 percent of their healthcare budgets on mental health.[43] Mental disorders weigh on human development in many ways. A health issue themselves, they are often linked to other health challenges. They can impede school attendance and learning, as well as the ability to find a job and be fully productive at it. The stigma that often accompanies mental disorders makes matters worse. Mental disorders are uniquely challenging because the primary instrument to navigate life's challenges—the mind—is precisely the thing that people living with a mental disorder may not be able to rely on. The feeling of isolation and vulnerability may rise from here and affect people's living.

(i) Uncertainty creates feelings of distress and insecurity nearly everywhere

An analysis of more than 14 million books published over the last 125 years in three major languages shows a sharp increase in expressions of anxiety and worry in many parts of the world (figure 6).[44] Other research on smaller time scales reports steady increases in concerns about uncertainty since 2012, well before the Covid-19 outbreak.[45]

The World Health Organization (WHO) estimates that 54 million people in China suffer from depression, and about 41 million suffer from anxiety disorders.[46]

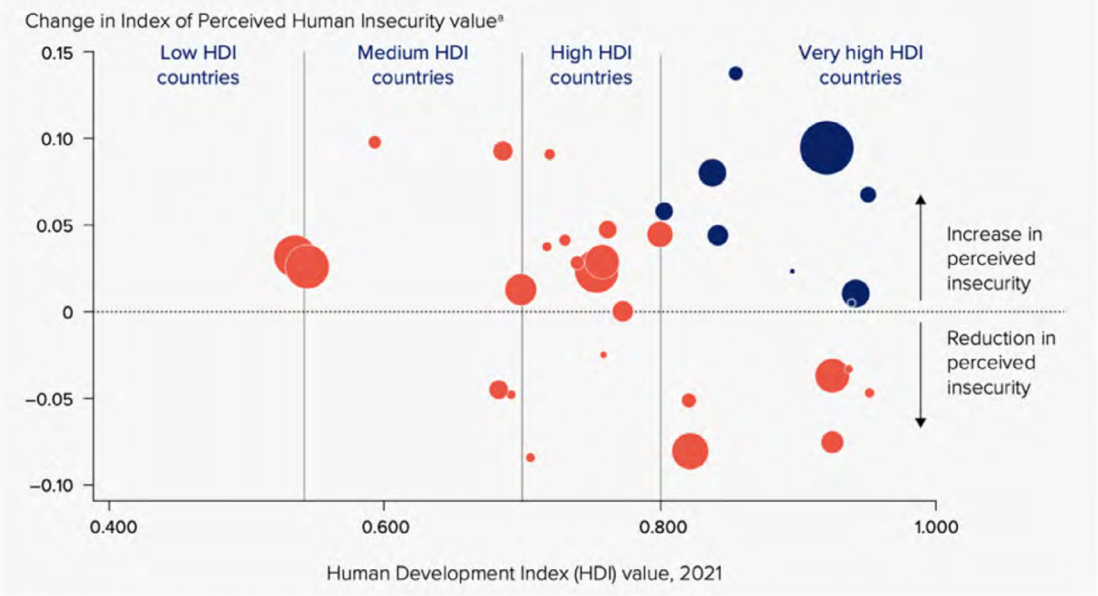
Figure 6. Negative news about the world surges to unprecedented highs



Note: Negative views are defined as textual analogues of cognitive distortions in one- to five-word sequences reflecting depression, anxiety and other distortions, published in 14 million books in English, Spanish and German over the past 125 years.
Source: Bollen and others 2021.

The 2022 United Nations Development Programme's Special Report on Human Security found similarly troubling levels of perceived insecurity. Even before the Covid-19 pandemic, more than 6 in 7 people at the global level felt insecure.[47] Perceived human insecurity is high across all HDI groups, and it has increased, even in some very high HDI countries (figure 7). In parallel, there is a breakdown of trust: globally, fewer than 30 percent of people think that most people can be trusted, the lowest value on record.

Figure 7. Perceived human insecurity is increasing in most countries—even in some very high HDI countries



Note: Bubble size represents the country population.
a. Refers to the change in Index of Perceived Human Security value between waves 6 and 7 of the World Values Survey for countries with comparable data.
Source: UNDP 2022.

These and other data paint a puzzling picture in which people's perceptions about their lives and their societies stand in stark contrast to historically high measures of aggregate wellbeing, including long-standing multidimensional measures of wellbeing, such as the HDI and other indices that accompany this Report. Although people tend to express a holistic view of their lived experience, the questions asked about their lives often focus on specific, measurable subsets of that experience: years of schooling, life expectancy, income. However important these metrics are, they do not capture the totality of a lived experience. **The goal of human development is to help people lead lives they value by expanding their capabilities, which go beyond wellbeing achievements to include agency and freedoms.** They need to be certain that their capabilities yield expected results. Uncertainty can be the clouds over all aspects of human development and will hurl lightning bolts at the idea of agency. It can disempower. Choices mediate the translation of one's values and commitments into achievements, but the idea of choice becomes ever more abstract, no matter how formally educated or healthy we may be, if we doubt that the choices we make will yield the outcomes we desire.

(ii) The Internet is a double-edged sword

In addition to the feelings of uncertainty induced by the global socioeconomic situation, the internet can also negatively impact a person's mental health through information overload, internet bullying and cyber addiction.

The widespread use of the internet and web-based technology allows people to access and disclose information more easily. But this abundance of information can also put our privacy in danger, as well as overwhelm us and lead to anxiety. From the news, products and advertisements served up to us to the relationships we build online and in real life, more and more of our lives are being determined by algorithms and artificial intelligence. When we are online, every aspect of our lives becomes commodifiable data, raising worrying questions about who has access to what information, especially sensitive personal information, and how it is being used.[48] The political, commercial and personal all get mixed together in social media, which is full of loud echo chambers because they draw eyeballs, which draws advertising and other revenues. At least half the online noise is from bots designed to stir the pot.[49]

Misinformation moves faster and farther than information that has been subjected to reasoned scrutiny, sowing distrust and fanning perhaps the gravest kind of uncertainty: not knowing how to distinguish between the two. Making the distinction goes beyond clear-cut objectivism or the reliance on an agreed set of universal facts, scientific or otherwise. Polarization can take dangerous forms when different groups operate with entirely different sets of facts and, thus, realities, especially when those realities are bound up with group identities.

Cyberbullying is an issue on social media, and angry Twitter mobs, mobilized sometimes by disinformation, can digitally tar and feather someone faster than in real life. Sometimes, cyberbullying spills over into real-life violence or into real-life policy.

Cyberbullying perpetrators and victims are at risk of having physical, psychological, and behavioral problems and, in extreme cases, committing suicide.[51]

Another serious concern with internet is digital addiction. Random rewards in the form of likes on Instagram or TikTok or the adrenaline rush of clickbait are essentially cognitive hacks that lie at the heart of most real-life casinos.

A study shows that 18% of WeChat users reported to have feelings of anxiety during the early stages of the Covid-19 pandemic. Information-seeking behaviors such as "cannot stop searching for information on Covid-19", and "spending more than 1 hour per day consuming information about the pandemic" were found to be associated with increased levels of anxiety. Participants who chose social media and commercial media as the primary sources to obtain information about the Covid-19 were found more likely to report anxiety.[50]

A recent study based on an online survey of 3 million people in China suggests that more than 60% of internet users have experienced cyberbullying to varying extents. The survey identifies six main forms of cyberbullying, including humiliation and verbal abuse, information harassment, information leakage, spreading rumors, threats and intimidation, as well as online stalking.[52]

As of December 2022, the number of internet users in China reached 1.07 billion, with an Internet penetration rate of 75.6%.[53] On average, netizens spend 29.5 hours surfing the internet every week.[54] A recent study found that during the pandemic, Chinese netizens significantly increased the amount of time spent on recreational Internet use, and the overall rate of internet addiction was 36.7% amongst the general population.[55]

(iii) Violence exaggerates mental illness

Violence—even the threat of violence, its uncertainty—is a major driver of mental distress. Some survivors of and witnesses to violence suffer trauma, which if not addressed properly can develop into post-traumatic stress disorder, among other chronic health conditions, that can weigh heavily on the choices available to them. Violence may be directed at one person or group of people, but it affects everybody in its blast radius. Even perpetrators of violence can suffer trauma due to the violent setting that often surrounds them, as with organized crime or gang violence.[56] The losses exacted by violence extend well beyond direct physical, mental and emotional injury or trauma. Violence can cause and exacerbate all kinds of insecurities—food, economic and so forth—that are themselves major drivers of mental distress. Many kinds of violence, from interpersonal violence to organized crime to armed conflict, perniciously undermine trust in people we know and in people we do not know. Breakdowns in trust may then beget more instability, more violence.

Then there is the loss of agency due to violence. The complex interplay of forces, rooted in asymmetries of power, is powerfully at work in intimate partner violence, whose survivors are predominately women and which is correlated with some measures of women's economic dependence. Channels of dominance at the societal and institutional levels can take concentrated, wicked forms—especially for women, children and older people—behind what are meant to be the safe walls of a home, leaving those subjected to domestic abuse with either the perception or the reality of no escape.

Section IV. Policies and institutions: Invest, Insure and Innovate

There are no policy panaceas, no one-size-fits-all approaches. Even so, **some policies form the building blocks for countries and communities as they navigate today's uncertainty complex towards more hopeful futures. They fall into three overlapping, mutually reinforcing categories: investment, insurance, and innovation—the Three I's.**

Investment, ranging from renewable energy to preparedness for extreme natural hazards, will ease planetary pressures and prepare societies to better cope with global shocks for sustainable development. Investment should connect the dots. Nature-based human development can protect and enhance natural resources while protecting people from shocks, promoting economic and food security, and expanding the choices available to them. Such investments are especially relevant at the local level, speaking to the need for investing in governance that is connected to people on the ground, that builds bridges among policy and institutional silos and that ensures all voices are heard. Investments are needed, too, on the other end—in global public goods. The additional investment to avoid future pandemics is estimated to be only USD15 billion a year.[57] This is a tiny fraction of the economic cost of the Covid-19 pandemic, a cost that exceeds USD7 trillion in lost production and USD16.9 trillion in emergency fiscal responses.[58]

Investment in China's context. In support of the greater emphasis on environmental priorities and boosted by the dual carbon target, China's capital market has become increasingly focused on green sectors in recent years. It is also one of the few countries with a relatively well-developed green finance policy framework and is a leader in green bond issuance, with total labelled issuance reaching over USD109.5 bn in 2021, making it the world's top sovereign issuer of green bonds and the second largest green bond market.[59]

Within the green sector, China has invested heavily in renewable energy to further accelerate its energy transition. In 2022, China invested USD164 billion in solar and USD109 billion in new wind farms, accounting for 55% of global renewable energy investment.[60] In the meantime, China is also making progress in mainstreaming Environmental, Social and Corporate Governance (ESG) investing.

China should strengthen its financial architecture beyond green in support of social and sustainability financial instruments.[61] Further efforts are therefore needed to promote financial instruments that address social issues, including the empowerment of vulnerable groups and the promotion of human development. Finally, ESG mainstreaming could be accelerated as it currently only covers a relatively small asset scale, with room for improvement in data disclosure standards and ESG evaluation systems.

Insurance helps protect everyone from the contingencies of an uncertain world, especially pandemics like Covid-19. To start, structures that manage a variety of risk in people's lives, primarily in various forms of social protection, need to be re- vitalized and modernized, including for people in informal or other precarious employment, such as gig workers. We need to reverse course away from risk segmentation and move towards a broader sharing of risk. More countercyclical social protection measures can be automatically triggered by certain indicators, such as the loss of a job or a drop in income, while ensuring their inclusivity.

Insurance in China's context. After many years of effort, China has almost achieved universal health coverage, with more than 95% of people covered by basic medical insurance.[62] The high coverage rate is key to protecting people, but it also increases the fiscal burden on the government, recently strained by the cost of providing free Covid-19 vaccine and related control and protection measures. As of April 2021, the Covid vaccination campaign alone costed RMB 120 billion (USD 18.6 billion), jointly covered by China's medical insurance funds and government budget. [63] China is also working to integrate its rural and urban health insurance schemes, which have different coverage and reimbursement rates, as a key step in narrowing the urban and rural gap in public services. In addition to health insurance, unemployment insurance is also crucial in enhancing people's ability to withstand shocks. During Covid, China expanded the coverage and provided temporary assistance in the form of a one-off cash transfer to 7.5 million people not covered by unemployment insurance. As the proportion of workers participate in gig economy continues to increase, innovative ways are needed to protect the uncovered unemployed and enhance their resilience.[64]

Since the Wenchuan earthquake in 2008, China has been gradually building its catastrophe insurance system to promote rapid recovery from natural disasters. Following a guideline issued by the State Council in 2014 calling for the integration of insurance into the country's disaster prevention and relief system, China has also launched several local pilots including in Shenzhen, Ningbo and Guangzhou.[65] As climate-related risks increases, it is important for China to continue explore innovative risk-sharing schemes and raise public awareness of catastrophe insurance and disaster preparedness to improve resilience.

Innovation in its many forms—technological, economic, cultural—will be vital in responding to challenges that human minds will face. While innovation is a whole-of-society affair, government is crucial in this regard: not just in creating the right policy incentives for inclusive innovation but also in being an active partner throughout. Innovation does not have to be big to produce big results. Major social media platforms have enacted policies such as notices, warnings and links to resources in a bid to combat misinformation.

Innovation in China's context. As emphasized in several high-level policy documents, technology and innovation are seen as the key drivers of China's future economic growth as it transitions to high-quality development.[66] The Government has issued a number of policies and initiatives to support innovation, such as

offering tax incentives and promoting synergy between industry, universities and research institutes. Additionally, China has invested heavily in research and development (R&D), with spending on R&D rising to 3.09 trillion yuan in 2022, accounting for 2.6% of GDP.[67] This is at similar level of global average ratio of 2.6%, while some of the leading countries, such as Israel and Korea spend over 4% of their GDP in R&D. [68]

Digital innovation has played a crucial role in mitigating negative impact brought by Covid-19. For example, E-commerce platforms provided touchless delivery service for quarantined and other affected households, allowing them to buy necessities and foods while minimizing the risk of virus transmission. Apps and software were created to facilitate remote work and online learning, ensuring that people could continue to work and study from home. As people increasingly rely on digital tools in the post-pandemic area, there is an urgent need for countries, including China, to ensure that everyone has equal access to these innovations to avoid creating new divides.

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