The Social Impact of COVID-19 in the United States: A Three-Wave Longitudinal Study

Center for Applied Social and Economic Research NYU Shanghai and Center for Advanced Social Science Research at New York University

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NYU SHANGHAI | Center for Applied Social and Economic Research 应用社会经济研究中心

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CENTER FOR ADVANCED SOCIAL SCIENCE RESEARCH

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Since 1831, NYU has proudly been in and of the city of New York, unencumbered by gates, intimately woven into the identity and landscape of one of the great idea capitals of the world. In the heart of Greenwich Village, the NYU community has flourished, gaining as much from the city as it has contributed.

Just as NYU is proudly in and of the city of New York, NYU is also proudly in and of the city of Shanghai, another great idea capital and a magnet for the best of intellect, culture, and inquiry from all over the world. But Shanghai is like no other place: a city of the future, it also has its own history and traditions, which are a vital part of its fabric. With its diverse resources—the educational foundation of NYU and the vibrancy and relevance of Shanghai—NYU Shanghai is where your classroom education intersects with a life's education.

About CASER

The Center for Applied Social and Economic Research (CASER) at NYU Shanghai is dedicated to fostering methodologically rigorous, multi-disciplinary research on the most pressing issues related to China's socioeconomic development. CASER convenes scholars from multiple disciplines to conduct research based on quantitative analysis in focus areas such as education, family and gender, inequality and poverty, migration, population aging and health, as well as urban neighborhood and governance issues.

About LECC-US

"Life Experience and Community during COVID-19 in the US" (LECC-US) is a panel survey of a nationally representative sample of American adults (ages 18 and older) on their health, infection, mental health, subjective wellbeing, social attitudes, life experiences, and political participation during and after the pandemic at three points in time, beginning in the midst of the COVID-19 pandemic. In September 2020, 4,407 individuals participated, in March 2021, 3,439 agreed to be re-interviewed, and in July 2023, 3,001 individuals completed a third interview. In this report, we present the main results from the recently completed Wave-3 survey, along with the results from Wave-1 and Wave-2 surveys, to describe the updated conditions and changing dynamics of American society throughout the pandemic era. Because COVID-19 exacerbated poor US-China relations, a particular theme of interest in the LECC-US project has been American's attitude towards China, and how it was shaped by domestic politics and international events, as well as public attitudes towards Chinese Americans as a result of the geopolitical tension between these two countries. LECC-US is the first joint data collection project between NYU Shanghai and NYU New York. Study participants were part of the probability-based AmeriSpeak® Panel compiled by the National Opinion Research Center (NORC) at the University of Chicago.

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Executive Summary

Background

The COVID-19 pandemic, caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), has had a profound impact on every facet of American society. The first American COVID-19 deaths occurred in February 2020, leading to an allocation of $8.3 billion by former President Donald J. Trump on March 6, 2020, to combat the outbreak. A national emergency was declared on March 13th, and by mid-April 2020, all states and territories had declared disasters. Subsequent waves of infections in June, October, and March 2021, alongside variants including Alpha and Delta, further intensified safety measures. The Omicron variant in January 2022 resulted in record-high hospitalizations and cases, with approximately 77.5% of Americans contracting COVID-19 by the end of 2022. The United States has witnessed the highest death toll globally, with 103,802,702 confirmed cases and 1,123,836 total deaths as of March 10th, 2023.

The rapid and extensive spread of the pandemic, as well as the attempts to slow the spread, has brought profound changes in economic and social life across the United States, affecting American citizens' physical and mental health, work and employment, family and social life, and attitudes and behaviors. In April 2020, the unemployment rate soared to 14.7%, remaining at 6.7% the following November. Many individuals shifted to remote work as offices closed, while school closures added childcare to the burden of working parents. Physical and mental health challenges increased, fueled by uncertainties surrounding the public health crisis. The ramifications of the pandemic were further complicated by domestic political polarization in the divisive transfer of power from President Trump to President Joe Biden and the geopolitical rivalry with China, calling

for a comprehensive understanding of social and political dynamics during and after the pandemic.

Objectives

The LECC-US project, jointly launched by the Center for Applied Social and Economic Research (CASER) at NYU Shanghai and the Center for Advanced Social Science Research (CASSR) at New York University, aims to track the social and political ramifications of the COVID-19 pandemic in the United States. To ensure comprehensive coverage of the national population, the LECC-US employed the AmeriSpeak® Panel, a probability-based sample designed by the NORC at the University of Chicago. This panel includes a diverse population of U.S. adults ages 18 and older and aligns closely with national demographics based on the Current Population Survey (CPS).

The LECC-US offers unique up-to-date micro-level survey data with a national probability sample, covering three waves of data collection spanning the period before and after the 2020 US presidential election and the post-pandemic era. Unlike many data sources, this survey linked the pandemic not only to people's attitudes toward COVID-19 and preventive behaviors but also broadly to mental health, political trust, social attitudes, and public opinions on China. Thus, it provided an important source of information to gauge the social and political ramifications of the pandemic in the United States.

This report analyzes the three waves of panel survey data on the nationally representative samples and presents evidence of the multifaceted repercussions of the pandemic on Americans' evolving work and family life, community and social interaction, and social attitudes and public sentiment. Analyses are finely stratified by various social groups, such as gender, race/ethnicity, age, and education. We also pay

special attention to party identification given the increasing political divide in the country. The report underscores the intricate relationship between the pandemic and individuals' social attitudes and behaviors so as to provide compelling insights into the changing social landscapes throughout the pandemic in the United States.

Methodology

The LECC-US project, a panel survey, aimed to comprehensively assess social and political effects of the COVID-19 pandemic in the United States. Administered by the NORC on behalf of NYU and NYU Shanghai, this research project used the NORC's AmeriSpeak® Panel as the primary sample source. The large-size and nationally representative sample allowed for focused analyses of various social groups. The survey was conducted in both English and Spanish, using web-based and telephone survey methods to ensure inclusivity and accessibility.

A diverse cross-section of U.S. adults ages 18 and older was selected from the NORC's AmeriSpeak Panel. To create a representative sample, sophisticated sampling strata were employed based on key demographic variables, including age, race/ethnicity, education, and gender, resulting in 48 sampling strata. Sample sizes for each stratum were determined to align with the population distribution of each stratum. The sample was geographically distributed across the United States, ensuring representation of all regions. The sample selection process anticipated variation in survey completion rates among the demographic subgroups.

The LECC-US project involved three waves of data collection, using web-based surveys and telephone interviews. The first survey wave, conducted from October 8th to

October 27th, 2020, included 4,407 adults ages 18 and older. The second wave, conducted from March 23rd to April 5th, 2021, successfully followed 3,439 respondents from the first wave, resulting in a 78.03% retention rate. The third wave, from June 30th to July 24th, 2023, included 3,001 respondents, with 2,659 being tracked successfully across all three waves.

Statistical weights for eligible respondents underwent a multi-stage process to ensure data accuracy and representativeness. Base sampling weights were calculated on the probability of selection from the NORC National Frame, adjusted for subsampling rates. Household-level nonresponse-adjusted weights were post-stratified to match external population counts obtained from the Current Population Survey (CPS). Individual-level nonresponse adjustments were applied within households. Panel weights were further refined through raking to external population totals across various socio-demographic characteristics, sourced from the CPS. Study-specific base sampling weights combined with the selection probabilities resulted in study-specific weights. These weights were adjusted for nonresponse and trimmed to minimize error in survey estimates. The final weights were raked to match respondent demographics with the target population's characteristics. In the third wave, three weight components—AmeriSpeak® Panel Weights, Study-specific Base Weights, and Study-specific Final Weights—were combined to ensure representativeness and accuracy of the data.

Key Findings

In the report, we first conduct a comprehensive overview of the evolving landscapes of the COVID-19 pandemic and then analyze their impact on Americans' work and family

life, perception of community, mental health and subjective evaluation, trust in governments, and nationalist sentiment, followed by a more focused and in-depth analysis of the changing public opinion on China and Chinese Americans.

First, the COVID-19 pandemic spread quickly in the United States over three years from 2020 to 2023, followed by an increase in vaccination rates. While only 11.6% of American citizens reported that they had tested positive in 2020 (Wave 1), the percentage rose to 18.6% in 2021 (Wave 2). By the time of interview for Wave 3 in 2023, 56.8% of our sample reported that they had been infectedd by variants of SARS-CoV-2. Among those who were diagnosed, about one-third (32.4%) contracted the disease more than once. In the survey sample, 80% had been vaccinated with at least one shot by 2023, compared to 41.2% in Spring 2021 (Wave 2). Both infections and vaccinations differed by social group, such as gender, race/ethnicity, age, education, and party identification.

- Females showed a slightly higher infection rate (58.3%) than males (55.5%), and higher non-vaccination rates (25.3%) than males (19.4%).

- Hispanic and White Americans had highest infection rates (61.4% and 58.6%, respectively), despite the fact that they also had higher rates of vaccination (81.5% and 76.9%, respectively).

- Americans ages 60 and older had the lowest rates of infection because they were more conscientious of the health risk and thus more protective.

- Individuals with a college education or more reported the highest infection and vaccination rates.

- Republicans had higher infection rates compared to Independents and

Democrats, and Democrats led in vaccination rates over Republicans. Obviously, partisanship played an important role in shaping vaccination decision and thus, infection rates.

Second, economic and social lives have returned to normal, although some changes such as remote work brought about by the pandemic may continue. Workforce layoffs consistently declined as COVID-19 diagnoses dropped, offices reopened, and people regained confidence in job security. Among those who were employed, the proportion of those working at home remained stable across waves (more than 20%), and remote work seems to have become the new normal. Parents engaged in teaching their children at home relinquished that responsibility as schools re-opened. Respondents' work income declined initially during the pandemic in 2020 but had increased in 2022 by 18.7% over 2019. Overall, Americans are more optimistic about what their lives will look like in 2028, and 45.5% believe their lives will be "Better" or "Much better."

Other subgroup variations are also worth noting.

- Remote work rates were higher among younger workers ages 18-29 and 30-44 (30.1% and 32.2%, respectively), and among those with college educations and those with graduate and professional degrees (36.5% and 46.8%, respectively). These patterns may be related to the industries and occupations they are engaged in.

- Young people and people with less education, female, and non-whites, continue to feel less job security than their counterparts. The percentage who fear that they may lose their jobs or be laid off among these vulnerable groups

has declined, but more slowly than that of other groups.

- Work income increased unequally among social groups. Middle-aged workers (30-44 and 45-59) experienced higher income growth; those with college and graduate school education also experienced higher income growth compared to 2019, suggesting that income inequality has worsened in 2023 compared to the pre-pandemic era.

- Optimistic assessment of future life (five years from now) is negatively associated with age but positively associated with educational attainment. Notably, White Americans are much less optimistic about their futures than other racial/ethnic minority groups. Regarding party identification, Democrats are more optimistic about their futures than Republicans.

Third, the COVID-19 pandemic took a tremendous toll on the mental health of American adults and had far-reaching consequences for their social lives. Respondents' mental distress, measured by the Hopkins Symptom Checklist (HSCL-5), showed signs of improvement over time as the number of COVID-19 cases and deaths dropped, and their feelings of isolation (measured with two items) showed relief across waves. Loneliness (measured with the UCLA loneliness scale), nevertheless, remained stable from 2021 to 2023. The abrupt lockdowns, constant remote work, social distancing and fear of infection during the pandemic profoundly transformed people's social experiences and damaged their social relations. However, social resilience varied by social groups.

- Hispanics and other race/ethnic groups consistently reported high levels of mental distress across waves, while Whites reported the highest levels of

isolation and loneliness.

- Education and age were both negatively associated with mental distress and isolation across waves. In other words, people with higher educational attainment tended to experience lower levels of mental distress and isolation than people with less education. Old people tended to experience lower levels of mental distress and feelings of isolation than young people.

Fourth, neighborhoods played an important role in fighting COVID-19 and remained largely stable after the pandemic waned. Despite the lockdowns, stay-at-home orders and social distancing rules, collective efficacy, including both social cohesion and informal social control, experienced a minor decline during COVID-19, but in 2023, collective efficacy bounced back to the level prior to the pandemic, suggesting adaptability and resilience of American communities in response to the changing circumstances throughout the pandemic. The majority of Americans maintained a high level of trust in neighbors that remained stable throughout the survey. Linking the zip code of respondents' addresses to the neighborhood characteristics, our analysis shows the following patterns that may help explain the spatial differentiation of the COVID-19cases.

- Communities with predominantly White populations consistently reported higher levels of collective efficacy.
- Communities with populations that had higher median household incomes, lower poverty rates, higher educational attainment, younger residents, and lower densities tended to report higher collective efficacy.
- At the individual level, education appeared to be positively associated with

neighborhood trust, and those with higher levels of education tended to express higher levels of trust in their neighbors. Whites reported the highest level of trust in their neighbors. These results underpinned the association between community demographic characteristics and collective efficacy.

- In addition, Republicans showed higher trust in their neighbors than Independents or Democrats.

Fifth, there was a notable shift in Americans' preferences for pandemic prevention or personal privacy and freedom, and a decline in trust in governments. Americans increasingly leaned toward personal privacy and freedom as the pandemic became less threatening. In contrast to their high and stable trust in neighborhoods, Americans' trust in both state and federal governments showed a consistent decline across survey waves, and they were even more distrustful of the federal government than the state government. Nevertheless, Americans' nationalist sentiment remained strong and slightly increased. Containing and slowing the initial spread of COVID-19 required government coordination and enforcement of regulations and citizens' cooperation, which had been undermined by bipartisan politics and fierce competition in the 2020 US presidential election, leading to the largest number of cases and deaths of any country. Regarding public opinion on pandemic prevention measures and political trust, there was a clear bipartisan divide.

- Democrats generally favored pandemic prevention measures, while Republicans leaned towards prioritizing personal freedom and privacy.
- Democrats expressed greater trust in both state and federal governments compared to Republicans and Independents.

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- The decline in political trust over the handling of the pandemic was more pronounced among Democrats than among Republicans or Independents.
- Whites and Republicans reported increasingly strong nationalist sentiment (being proud or being very proud of being American).

Finally, Americans' attitudes toward China became increasingly negative over the three waves of the survey, reaching an historical low in 2023. Those who held "somewhat unfavorable" and "very unfavorable" views of China increased from 74.6% in 2020 to 77.9% in 2023. Attitudes toward Chinese Americans were largely favorable (83.0% hold very favorable and somewhat favorable views). The trade war before the pandemic, partisan politics within the United States, and China's domestic and international policy changes, all contributed to shaping Americans' opinion of China, and to some extent, the evaluation of Chinese Americans.

- Americans' attitudes towards China differed by party identification. Those who identified themselves as Republicans held a more negative view of China, whereas those who identified themselves as Democrats held a less negative view of China.
- Despite the deep divides caused by domestic politics, Americans seemed to have reached a majority consensus on an unfavorable view of China. Different people disliked China for different reasons.
- An experiment in Wave 2 revealed that China's suppressive policy on Hong Kong (i.e., the implementation of the National Security Law in 2020) resulted in a significantly negative view of China. This was more pronounced among Democrats than among Republicans, and among participants who previously held a less unfavorable view of China.
- An experiment in Wave 3 revealed that China's aggressive policy toward Taiwan and

military exercise encircling the island in 2022 after Nancy Pelosi visited Taiwan triggered a significant negative view of China. The treatment effect was more pronounced among Democrats than among Republicans. Economic nationalism behind the US-China trade war prior to the pandemic had also shaped the dynamics of public opinion more among Republicans.

- Chinese Americans were the victim of the tension between the United States and China and Americans' increasing negative public perception of China. Although Chinese Americans were viewed favorably by and large, they were perceived attitudes towards less favorably compared to Asian Americans in general or other subgroups of Asian Americans (Korean Americans and Filipino Americans). Americans' negative attitudes towards China decreased their favorable view of Chinese Americans.

Summary and Conclusion

The extensive analysis of the three-wave panel data collected in 2020, 2021 and 2023 has painted a dynamic picture of American society throughout the pandemic. COVID-19 was pervasive in American society, affecting Americans' employment, income, family, community, mental health, trust in government, nationalist sentiment, and attitudes towards America's major rival, China.

With the waning of the pandemic, economic and social lives have returned to normal. Perceptions of job security, income, confidence in the future, mental distress, feelings of isolation, collective efficacy, trust in neighbors, all showed signs of improvement, suggesting the strong resilience of American society. The improvements differed by gender, race/ethnicity, education, age group, and party identification. Understanding the critical need for vulnerable population calls for targeted policies to

mitigate disparities in social, economic and psychological outcomes in recovering from the COVID-19 pandemic.

One notable change throughout the pandemic was the consistent decline in Americans' trust in both federal and state governments, and Americans were even more distrustful of the federal government than the state government, despite the presidential transition at the time. The government's failure to adequately address the COVID-19 crisis can be attributed to bipartisan politics in the United States, further undermining citizens' trust in government. As the pandemic retreated, Americans increasingly prioritized personal privacy and freedom over pandemic prevention measures and public safety. Such political trust was essential to gain citizens' cooperation in dealing with the public health crisis and potential crises in the future. Community resilience and trust-building initiatives are pivotal in navigating the post-pandemic landscape.

Last but not least, the COVID-19 crisis further escalated tensions between the United States and China. Although attitudes towards China had become negative during the trade war before the pandemic, a majority consensus on a negative view of China formed despite the political divide in the United States. Thus, Americans' attitude towards China became even more negative in the course of the pandemic, which also influenced attitudes towards 5.4 million Chinese Americans living in the United States. Survey experiments show that China's aggressive behavior towards Taiwan and repressive policy in Hong Kong affected the public's perception of China, particularly for those who held a less negative view of China. While public opinion rarely determines US foreign policy, it can define the zone within which policies that have public visibility can be sustained over time. The Chinese government can also be advised by the findings

if it wishes to maintain and improve its relationship with the United States.

In conclusion, the COVID-19 pandemic has had profound and unfolding social and political ramifications for the United States and global geopolitics, calling for more multi-disciplinary and sustainable research to address social and economic challenges in the post-pandemic United States and the world.