



Global Happiness Council
Thematic group: Well-being Measurement

Policy Brief 2

Resilience of Happiness during the Pandemic

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Policy Brief 2: Resilience of Happiness during the Pandemic

In the policy brief one of this series, we summarized efforts made by both public and private sectors in measuring happiness during and before the pandemic, yet we have not discussed the findings. Were people's happiness resilient to the shocks of COVID-19 and government responses? Are there differences across regions and countries? Did the measurement from different sources yield consistent results? This brief aims to answer these questions, exploiting some key datasets and studies to present how people's happiness were affected by the pandemic. Consistent with the structure of the policy brief one, we start with the results of official surveys. We then present happiness surveys from private sectors as well as information from social media and big data. Lastly, we summarize the overall findings from those various data sources. Though our analysis is limited by the type and scope of data, we find that different surveys give largely consistent results. In general, happiness in Europe and North America are not very resilient to the pandemic, yet many Asian countries show happiness resilience in 2020. The difference in the strategy to cope with the pandemic and the outcomes of the pandemic control across countries and regions may help to explain the difference in happiness resilience.

Dynamics of Happiness Measured by Governments and International Organizations

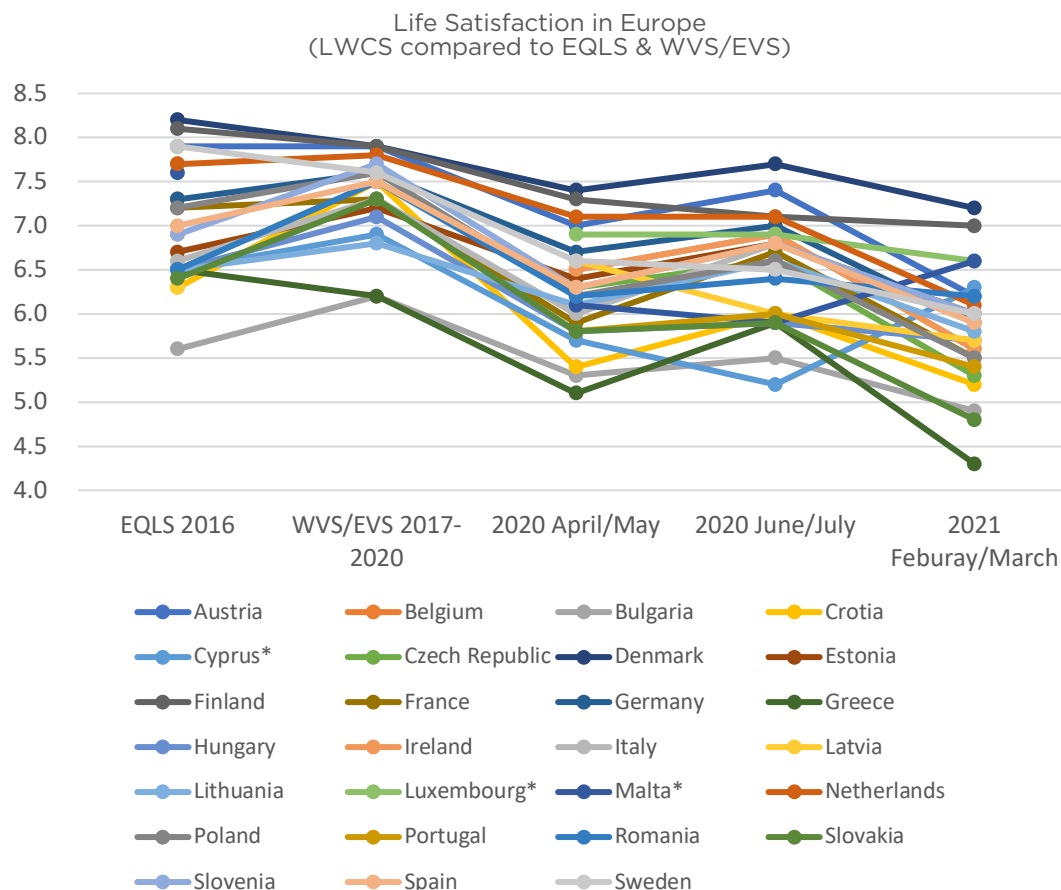
We start our analysis on happiness dynamics prior and during the COVID-19 pandemic to the overall life satisfaction and three affect indicators of respondents in surveys carried out by governments and international organizations. They were frequently and consistently measured across countries and over time. To mitigate the limitations in the comparability of measures, frequencies and survey modes, we only compare the dynamics of happiness evaluated at the same scales with same survey questions.

Dynamics of Happiness in the EU

We begin our analysis on a large number of European countries which were covered by the same group of surveys. The happiness survey during the pandemic is Living, Working and COVID-19 Survey (LWCS) implemented by the European Foundation for the Improvement of Living and Working Conditions (Eurofound), a tripartite European Union Agency.¹ The survey was conducted online in April/May 2020, June/July 2020 and February/March 2021.² For happiness in the pre-COVID period, we use the European Quality of Life Survey in 2016 (EQLS 2016) by the Eurofound, and World Value Survey/European Value Survey 2017-2021 (EVS/WVS 2017-2021) for EU member states, which were collected between 2017 and 2020.³ The survey questions on life satisfaction were the same, which is worded in as follows: "All things considered, how satisfied would you say you are with your life these days?" Life satisfaction is measured on a scale of 1 to 10, where 1 means very/completely dissatisfied and 10 means very/completely satisfied. For each individual country, its mean value of life satisfaction from EQLS 2016 or EVS/WVS 2017-2021 is used as the baseline of happiness before the COVID-19 pandemic,

while the measurements of life satisfaction from LWCS in 2020 and 2021 track the trajectories of happiness during the pandemic.

Figure 1



Notes

1. European Quality of Life Survey (EQLS 2016) was carried out with face-to-face interviews in 2016 and 2017. The data refer to the population aged 18 and over and are weighted to account for unequal selection probabilities at primary sampling unit, household and respondent level, and unequal response in different groups in terms of region, urbanization, age, gender, employment status and household size.
2. Joint European Value Study/World Value Survey (EVS/WVS 2017-2021) was carried out between 2017 and 2020 for the countries under analysis. Most countries had the fieldwork between 2017 and 2018. Portugal is the only country with fieldwork conducted during the pandemic and are assigned missing values for the purpose of this policy brief. Survey modes in EVS/WVS include CAPI, CAWI, PAPI, Mail and Post. Data refer to the population aged 18 and over, and are weighted to be representative of each respondent's country's demographic profile in terms of age, gender, region and education.
3. The three rounds of Living, Working and COVID-19 Survey were online surveys, carried out in April/May and June/July 2020, and February/March 2021. Low reliability (*) in June/July 2020 and February/March 2021 for Luxembourg. Low reliability (*) in June/July 2020 for Cyprus, Malta. The data refer to the population aged 18 and over. All individual responses were weighted to be representative of each respondent's country's demographic profile in terms of age, gender, region and education.

Source

1. Eurofound (2018). European Quality of Life Survey Integrated Data File, 2003-2016. [data collection]. 3rd Edition. UK Data Service. SN: 7348, <http://doi.org/10.5255/UKDA-SN-7348-3>

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2. EVS/WVS (2021). European Values Study and World Values Survey: Joint EVS/WVS 2017-2021 Dataset (Joint EVS/WVS). JD Systems Institute & WVSA. Dataset Version 1.1.0, doi:10.14281/18241.11
3. Eurofound (2020b), Living, working and COVID-19 dataset, Dublin, <http://eurofound.link/covid19data>

We find that compared with the pre-COVID mean ratings of life satisfaction by the general population in EQLS or EVS/WVS in 2016 to 2019, lower overall life satisfaction was recorded in 26 out of 27 EU member states (except for Latvia) in April/May 2020, when most member states were in their first lockdowns. The EU average of life satisfaction was rated at 6.3 on a scale of 1 to 10 in the first round of LWCS, while it was rated at 7.0 in EQLS 2016 and even higher in EVS/WVS for most countries. It is noteworthy that the direct comparison between the pre-COVID mean life satisfaction with the online survey results during the COVID-19 pandemic is difficult due to changes in survey mode and sampling methodology, which we will discuss later.

However, remarkable improvements in overall life satisfaction were then observed in the EU member states as the economies started re-opening and mobility restrictions were eased in June/July. The average life satisfaction score at EU level increased to 6.7 in summer 2020. 21 out of 27 countries reported higher overall life satisfaction than their ratings in April/May 2020, and the increase is statistically significant in 16 countries, among which France, Greece and Italy experienced the largest improvement of 0.7.⁴ Nonetheless, the improvement was short-lived. The most recent life satisfaction measurement in *LWCS* showed a more dismal change in the well-being of European residents by March 2021. After about one year of social distancing, restrictions on economic activity and mobility, and a series of national lockdowns in a few countries, most Europeans saw declines in mean life satisfaction levels.⁵ Twenty-five out of 27 EU member states reported lower ratings of life satisfaction in February/March 2021 than in summer 2020 and 23 of them had lower mean life satisfaction than their first measurement in April/May 2020. Czech Republic, Slovakia and the Netherlands are among the countries with largest decline since April 2020.

Dynamics of Happiness in the UK, France, Ireland, New Zealand, Canada, Mexico and Norway

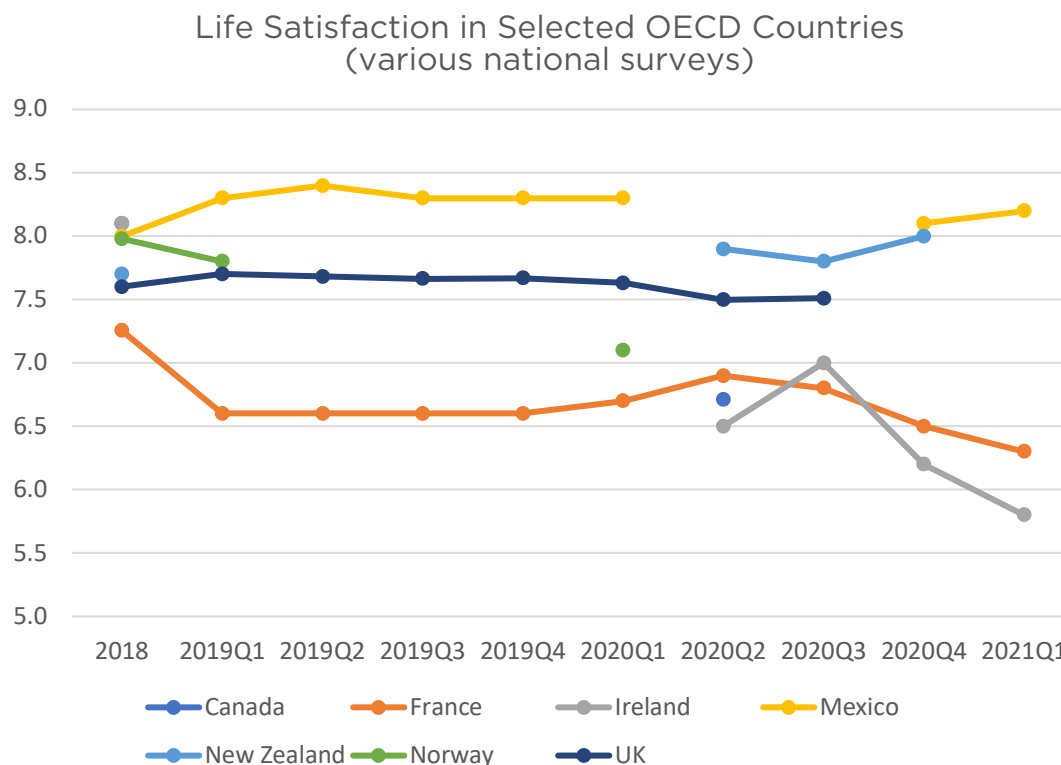
We now turn to a few of the OECD countries, namely, the UK, France, Ireland, New Zealand, Canada, Mexico and Norway, which vary in geographical location, culture, COVID-19 infection and government responses to the pandemic, but had harmonized national happiness measurements which are largely consistent with the *OECD Guidelines on Measuring Subjective Well-being*.⁶ For happiness before and during the COVID-19 pandemic, we rely on national surveys or statistics from individual countries, which collect and report overall life satisfaction in 2019, 2020 or 2021 at varying frequencies. For happiness in the pre-COVID time, we utilize the annual life satisfaction data from the year 2018 compiled by OECD in *How's Life? 2020* for a number of OECD countries based on multiple surveys.⁷ In general, these countries reported estimates of life evaluations,

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and some of affect and eudaimonia aspects, however, we focus on overall life satisfaction measures in order to facilitate comparisons between surveys, countries and over time. The question on life satisfaction utilized in these countries is in general as follows: “Overall, how satisfied are you with your life nowadays?”, with response scale ranging from 0 to 10, where 0 means completely dissatisfied/very dissatisfied/not at all satisfied and 10 means completely/very satisfied. We show the dynamics of happiness in these countries using 2019 or 2018 as the base year, depending on data availability. These countries also differ in the frequency and timing of the collection of happiness data, but all countries under analysis except Norway and Canada had more than two measurements during the pandemic.

For France, UK and Mexico, which reported happiness estimates at quarterly basis, the mean levels of life satisfaction remain quite stable in 2019 before the pandemic and in the early days of the pandemic.⁸ However, in UK, with the beginning of the first COVID-19 lockdown, the average ratings of life satisfaction declined to 7.50 in the second quarter (April to June) of 2020, a 1.8% fall from the average rating of 7.63 in the first quarter (January to March) and a 2.3% decrease compared with the same quarter in 2019.⁹ There was no significant improvement in life satisfaction of UK residents in the third quarter (July to September) of 2020 and average ratings of life satisfaction were 1.95% lower than the third quarter of 2019. In contrast, France reported better national happiness in the first two quarters of 2020, and in particular a jump in life satisfaction ratings in the June 2020, reflecting a similar increase of happiness as in LWCS. However, in the first quarter of 2021, this indicator fell sharply, indicating a wear and tear in the morale of the French¹⁰ and worsening of happiness in as the pandemic enters another year. In Mexico, on the other hand, the average ratings of life satisfaction in January 2020, October 2020 and January 2021 remained high and stable, relative to the previous year. Norway was among the happiest countries in the world; however, their first quality of life survey revealed a significant drop in life satisfaction from 7.8 in EU SILC 2019 to 7.1 in March 2020,¹¹ a larger deterioration in happiness than the results shown in *World Happiness Report 2021*.¹²

Figure 2



Notes:

1. The pre-COVID base year refers to 2018 for Canada and Ireland, and to 2019 for France, Mexico, New Zealand and UK. Data refer to the population aged 18 and older in Mexico; 15 and older in Canada, and New Zealand; and 16 and older in all other cases. Data are (weighted to be) nationally representative of the target population.
2. For the year 2019, 2020 and 2021, data refer to the population aged 18 and older in Ireland, Mexico, New Zealand and Norway; 16 and older in UK; 17 and older in France; 15 and older in Canada. Data are (weighted to be) nationally representative of the target population, except that Mexican data are representative of 32 major cities of the Mexican Republic (national-urban).

Source:

1. The 2018 data are from OECD's How's Life? 2020. <https://doi.org/10.1787/9870c393-en>. OECD and national statistical office calculations, based on the European Union Statistics on Income and Living Conditions 2018 (EU SILC 2018), <https://ec.europa.eu/eurostat/data/database>; the Canadian Community Health Survey; the Mexican National Survey of Household Income and Expenditure (Socioeconomic Conditions Module) and New Zealand General Social Survey.
2. The happiness data of the year 2019, 2020 or 2021 are from the Canadian Perspectives Survey Series (online), <https://www.statcan.gc.ca/eng/survey/household/5311>; the French Monthly Consumer Confidence survey (Well-being of Households Module), <http://www.cepremap.fr/en/bien-etre-travail-et-politiques-publiques/well-being-observatory/a-quarterly-survey-of-well-being-in-france/>; the Social Impact of COVID-19 Survey of Ireland, <https://www.cso.ie/en/statistics/socialconditions/socialimpactofcovid-19survey/>; Mexican National Survey of Consumer Confidence (MÓDULO DE BIENESTAR AUTORREPORTADO, Self-reported Well-being Module, face-to-face), <http://en.www.inegi.org.mx/investigacion/bienestar/basico/>; New Zealand Household Labour Force Survey (face-to-face and telephone), <http://datainfolus.stats.govt.nz/item/nz.govt.stats/b7c39358-aa03-446f-a27d-91c37caac35d/92/#/nz.govt.stats/95ce07e3-7810-406c-9aa8-0821658551ef/28>; European Union Statistics on Income and Living Conditions 2019 (for Norway only, EU SILC 2019); the Norwegian Quality of Life Survey 2020, <https://www.ssb.no/en/sosiale-forhold-og-kriminalitet/artikler-og-publikasjoner/life-quality-in-norway-2020>; Annual Population Surveys of UK (face-to-face and telephone), <https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/bulletins/personalwellbeingintheukquarterly/april2011toseptember2020>.

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Compared with their mean life satisfaction levels in 2018, Canada and Ireland also experienced worsening of overall life satisfaction among the general population during the pandemic, while overall life satisfaction remained high in 2020 among New Zealanders. In particular, the Canadian CPSS in June 2020 recorded the lowest life satisfaction (6.71 on a scale of 0 to 10) over the period between 2003 to 2020 with comparable data, which represents a decline of 1.38 from the average life satisfaction in 2018 (8.09).¹³ The national statistics on happiness from Ireland showed similar trends as in LWCS. Average overall life satisfaction rating decreased from 8.1 in 2018 to 6.5 in April 2020, when COVID-19 control measures were first introduced in Ireland. The mean overall life satisfaction bounced back to 7.0 in August when mobility restrictions were lifted, but further dropped to 6.2 in November 2020 and 5.8 in February 2021, the lowest rating recorded since 2013.¹⁴ On the contrary, in New Zealand, the average overall life satisfaction rating was 7.9, 7.8 and 8.0 on a scale of 0 to 10 in the second (June), third (September) and fourth (December) quarter of 2020 respectively, which is slightly higher than the rating of 7.7 recorded in the 2018 New Zealand General Social Survey.¹⁵

Alternative Measures

Emotional well-being is also an important dimension of happiness of individuals. To bolster our analysis on the happiness dynamics during the pandemic, we provide evidence on the change of three indicators of affect from the Eurofound's EQLS 2016 and LWCS: WHO-5 mental well-being scale, loneliness, tension and depression. The WHO-5 well-being scale measures the positive affect of people, based on five statements of positive feelings over the past two weeks, including "I have felt cheerful and in good spirits", "I have felt calm and relaxed", "I have felt active and vigorous", "I woke up feeling fresh and rested", "My daily life has been filled with things that interest me". The WHO-5 well-being scale ranges from 0 to 100, and a score of 50 or lower are considered at risk of depression. For the negative affect measures, we show the fraction of people reporting feeling lonely/tense/depressed for "all of the time" or "most of the time".¹⁶

Figure 3a

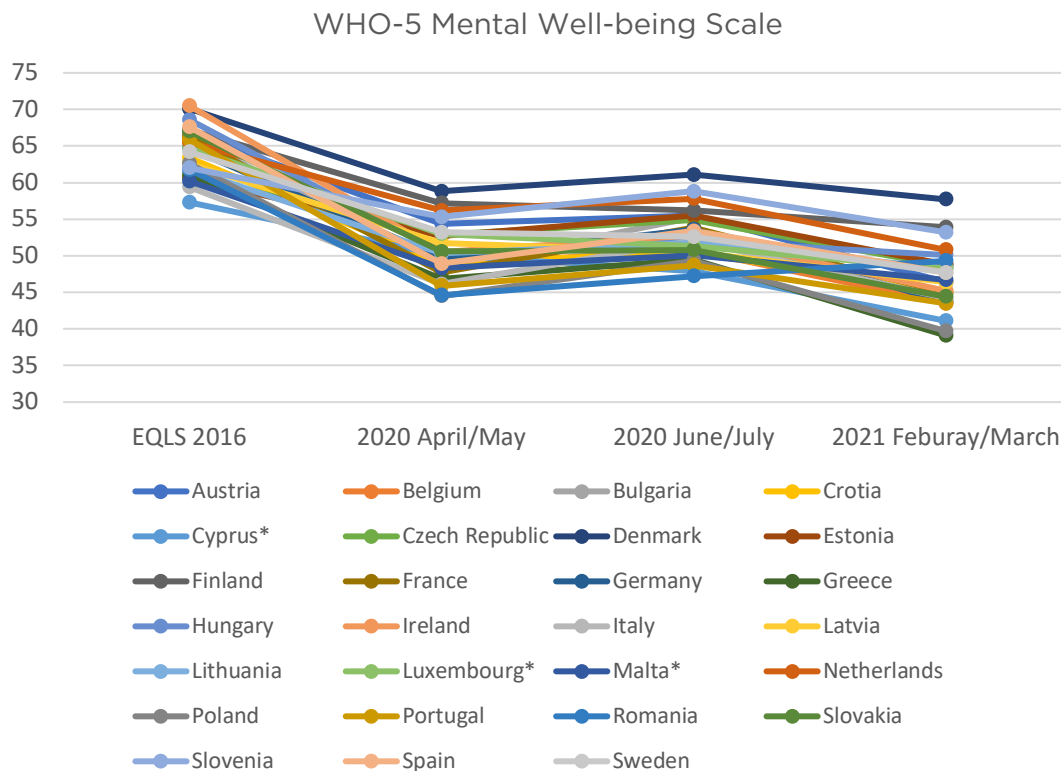


Figure 3b

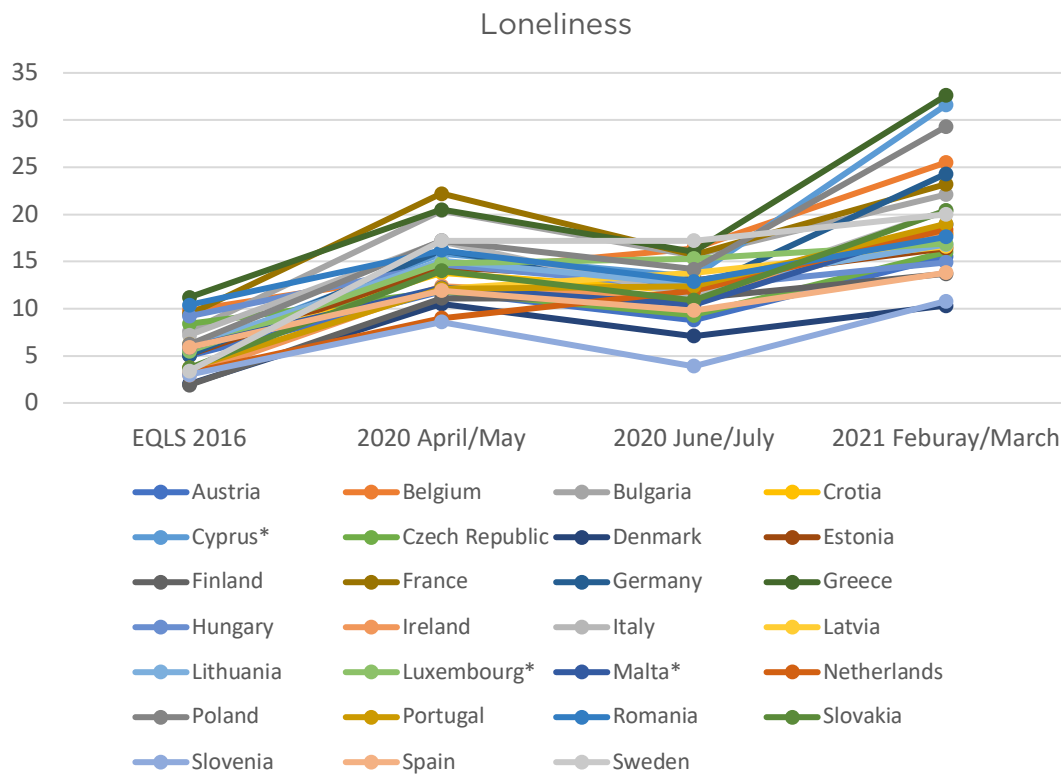


Figure 3c

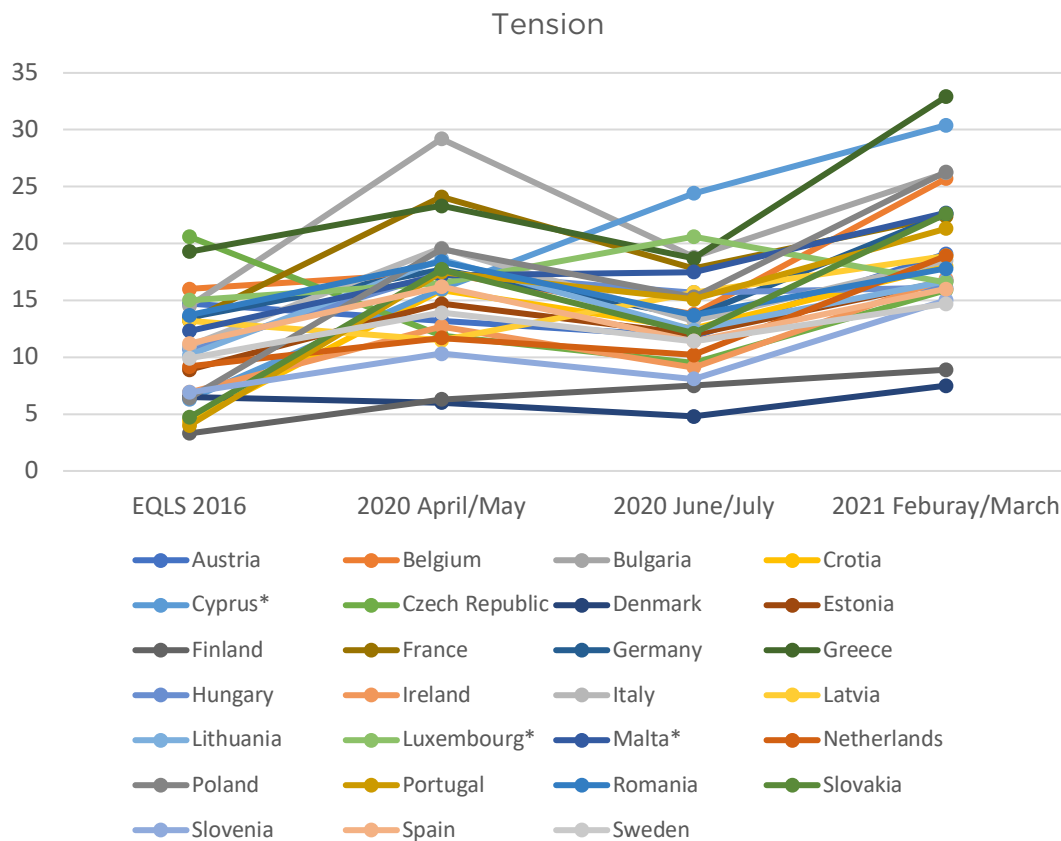
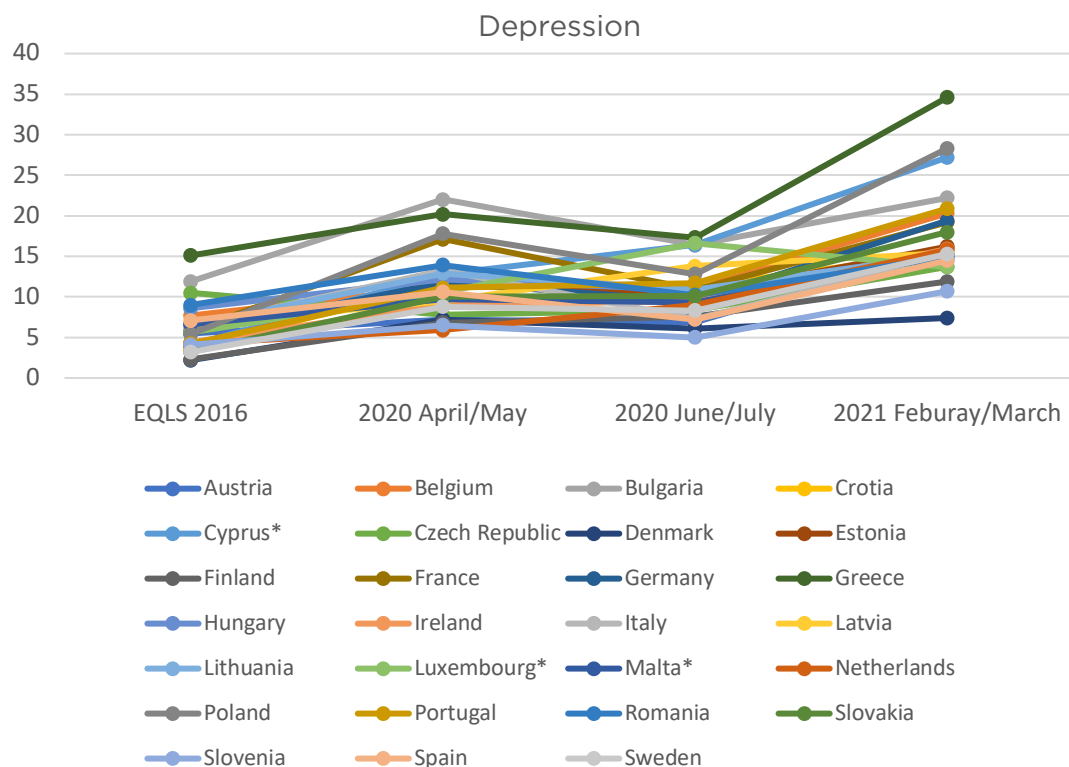


Figure 3d

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Notes

1. European Quality of Life Survey (EQLS 2016) was carried out with face-to-face interviews in 2016 and 2017. The data refer to the population aged 18 and over and are weighted to account for unequal selection probabilities at primary sampling unit, household and respondent level, and unequal response in different groups in terms of region, urbanization, age, gender, employment status and household size.
2. The three rounds of Living, Working and COVID-19 Survey were online surveys, carried out in April/May and June/July 2020, and February/March 2021. Low reliability (*) in June/July 2020 and February/March 2021 for Luxembourg. Low reliability (*) in June/July 2020 for Cyprus, Malta. The data refer to the population aged 18 and over. All individual responses were weighted to be representative of each respondent's country's demographic profile in terms of age, gender, region and education.

Source

1. Eurofound (2018). European Quality of Life Survey Integrated Data File, 2003-2016. [data collection]. 3rd Edition. UK Data Service. SN: 7348, <http://doi.org/10.5255/UKDA-SN-7348-3>
2. Eurofound (2020b), Living, working and COVID-19 dataset, Dublin, <http://eurofound.link/covid19data>

A comparison between EQLS 2016 and LWCS revealed a similar trend of emotions of European residents, measured by positive and negative affect. For most EU member states, positive affect (WHO-5 mental well-being scale) declined and negative affect (feeling of loneliness, tension and depression all or most of the time) increased during the first lockdowns, and there was a recovery of emotional well-being during summer 2020, followed by a further deterioration into spring 2021.

Dynamics of Happiness Measured by Non-governmental Sectors

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In this section we present happiness dynamics in surveys conducted by survey companies and academic institutions. We use same measures to compare happiness before and during the pandemic to mitigate the limitations in the comparability. We begin our analysis on 26 countries with dynamics of happiness during the pandemic. The happiness measures are taken from *COVID-19 Public Monitor*, a survey jointly implemented by Imperial College London's Institute of Global Health Innovation and YouGov, an international research data and analytics group headquartered in London. The main objective of the *Monitor* is to track how the public's behaviours and attitudes in relation to COVID-19 are evolving over time. The happiness measure was introduced into the survey in late April 2020, in collaboration with the Sustainable Development Solutions Network (SDSN) and the World Happiness Report editorials. The happiness measure is Cantril ladder, asking individuals to rate themselves on a scale of 0-10, with 0 representing the worst possible life and 10 being the best. The 29 nations included in the happiness survey include Australia, Brazil, Canada, China, Denmark, Finland, France, Germany, Hong Kong, India, Indonesia, Italy, Japan, Malaysia, Mexico, Netherlands, Norway, Philippines, Saudi Arabia, Singapore, South Korea, Spain, Sweden, Taiwan, Thailand, United Arab Emirates, UK, US and Vietnam. Surveys are nationally representative with sample sizes of approximately 1,000 individuals per survey per week (ranging from 500 to 2,000), except that samples are only representative of online population in China and urban online population in India. We produce monthly averages to show the dynamics.

The first average happiness is available in April 2020, and the last average is either in September 2020 or in May 2021 (the most recent data available when conducting this study). For happiness in the pre-COVID period, we use the *Gallup World Poll (GWP)* collected during 2017-2019. The GWP is a nationally-representative annual survey covering over 150 countries in the world. The three panels of Figure 4 show the happiness dynamics in 2020 in comparison to the GWP annual averages in the pre-crisis period, in America (plus Australia), Asia, and Europe respectively.

Figure 4a

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Cantril ladder in America and Australia
(ICL-YouGov ICL-YouGov compared to GWP)

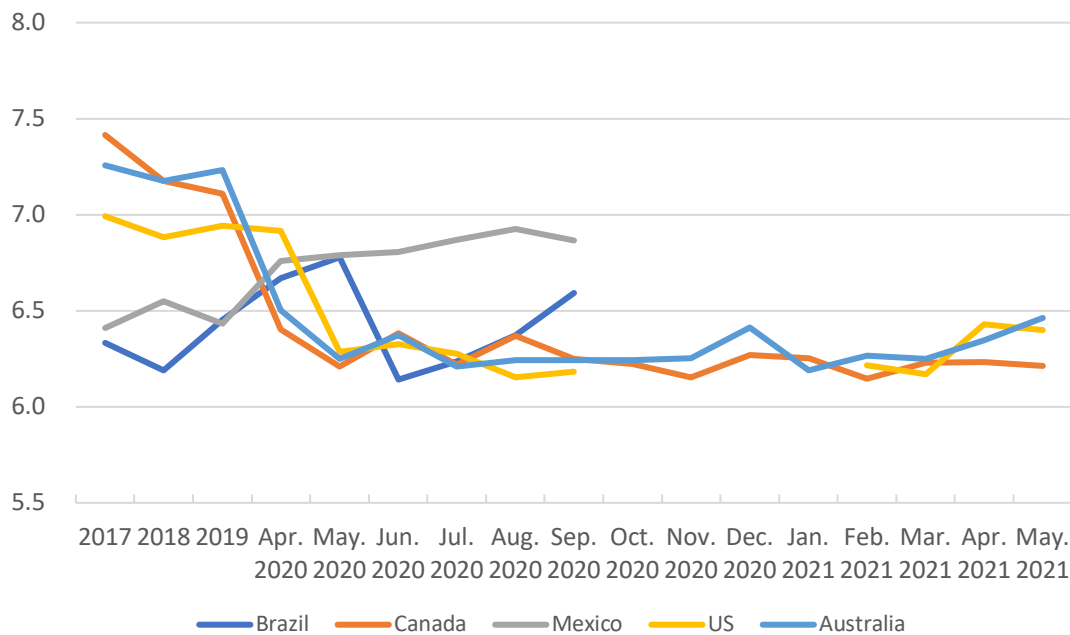


Figure 4b

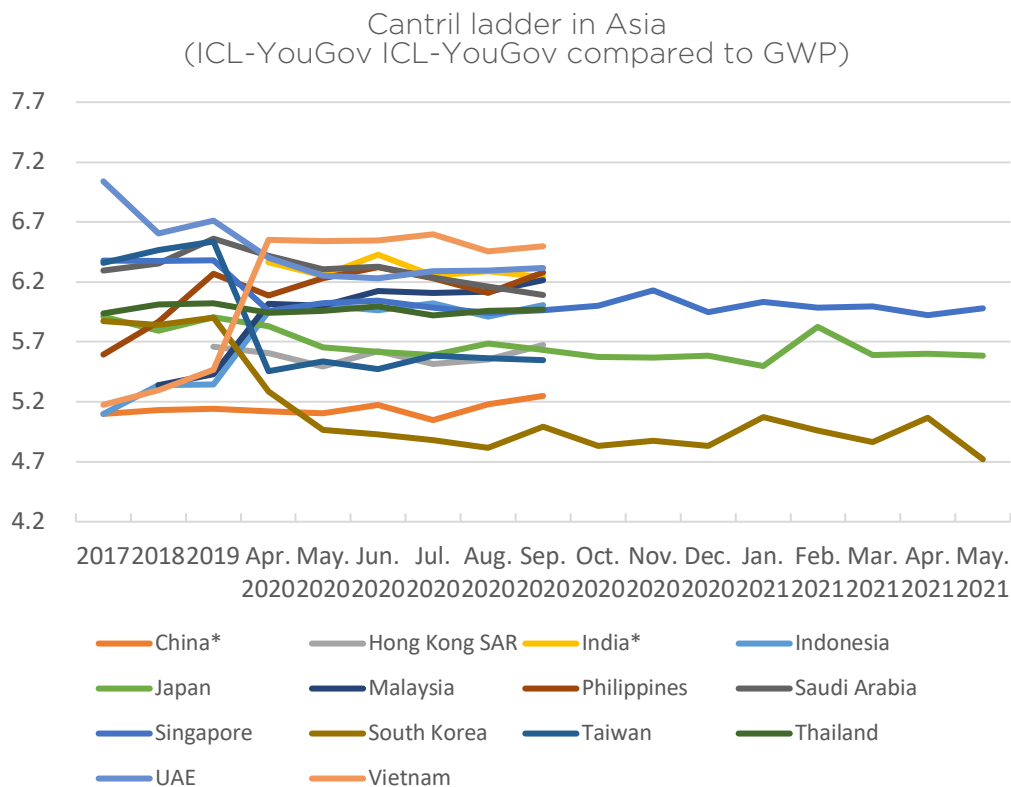
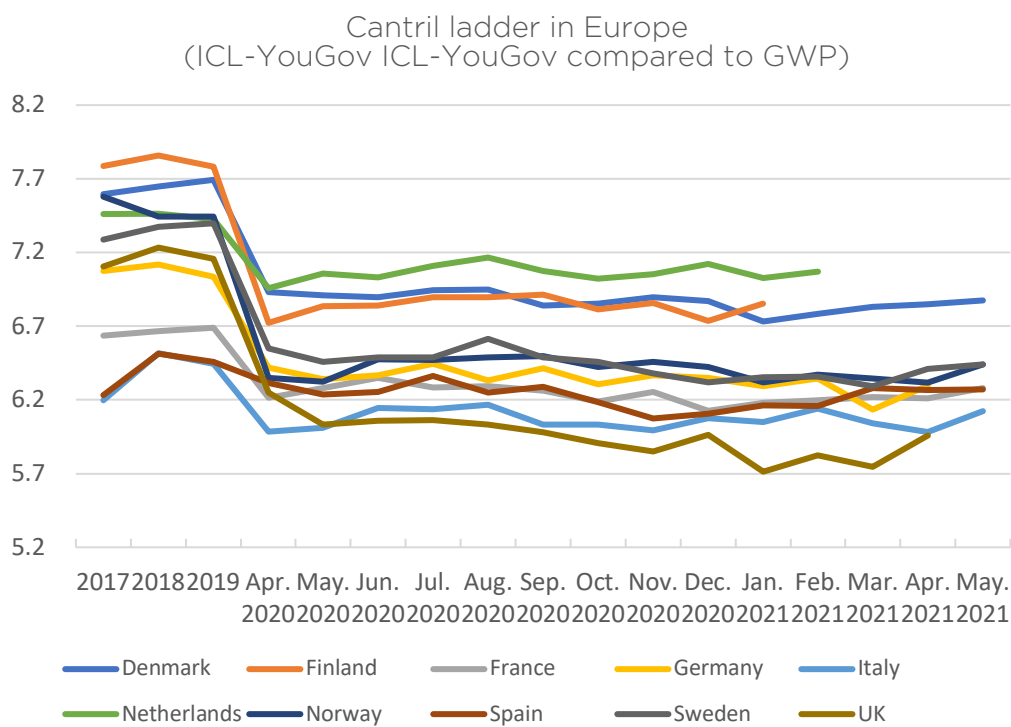


Figure 4c



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Notes

1. COVID-19 Public Monitor was conducted by ICL-YouGov online. They are nationally representative except for China and India.
2. Gallup World Poll was collected all over the world, by the Gallup Inc. Their samples are nationally representative.

Figure 4a shows the trends in Australia and four countries in America and. Compared to the pre-COVID happiness in 2017 to 2019, lower overall life satisfaction was recorded in Canada (from April 2020), Australia (from April 2020), the US (from May 2020), and Brazil (in June 2020), but not in Mexico. The drop in Canada from 2019 to April 2020 was large, 0.71 points on the scale of 0 to 10. There was no significant recovery in Canada till May 2021, though some mild temporary recoveries were observed in June and August 2020. The dynamics in Australia is very similar to that in Canada, with mild temporary recoveries in June and December 2020, and an upward trend since early 2021. The drop in the US from April and May 2020 was also very big (0.62 points). There was no recovery in the US till September 2020. There were no data between October 2020 and January 2021, we thus are not able to tell the dynamics during the period, however there were a mild recovery since April 2020. Brazil was documented a big drop (0.64 points) from May to June 2020, but then had a mild recovery till September. Mexico's averages in the few months in 2020 remained rather stable.

Figure 4b shows the trends in 14 countries or regions in Asia. They can be roughly categorized into three groups. The first group shows a drop in happiness from 2019 to 2020. There was either no recovery or only mild temporary recovery in 2020. Singapore, South Korea, and Taiwan experienced big drops in happiness (0.42, 0.61 and 1.08 respectively) in April 2020 compared to that in 2019. Small recoveries were observed in October 2020 in Singapore. Korea's average happiness further decreased to 4.97 in May 2020, and then fluctuated around 5 for a year. There was no significant recovery in Taiwan till September 2020. Japan's happiness was not dropped much in April, but the level in May 2020 is 0.25 points lower than that in 2019. Saudi Arabia shows a continuous but mild decline till September 2020. The United Arab Emirates shows a similar trend as Saudi Arabia, except for a small recovery since June 2020. Philippines experienced a small decrease in April 2020 (0.18 points), but recovered in May and June, before another drop and recovery later. The second group shows an increase in happiness from 2019 (or 2018) to 2020, including Hong Kong SAR, Indonesia, Malaysia, and Vietnam. Happiness remains largely stable in 2020. The third group comprises of Thailand and mainland China, whose happiness are relatively stable from 2019 to September 2020, though China's happiness shows a small increase since July 2020. India is excluded from the three groups since its happiness is not possible to be compared with pre-crisis level due to different sample representativeness. Its happiness shows a mild decrease in 2020 except for a small bump in June.

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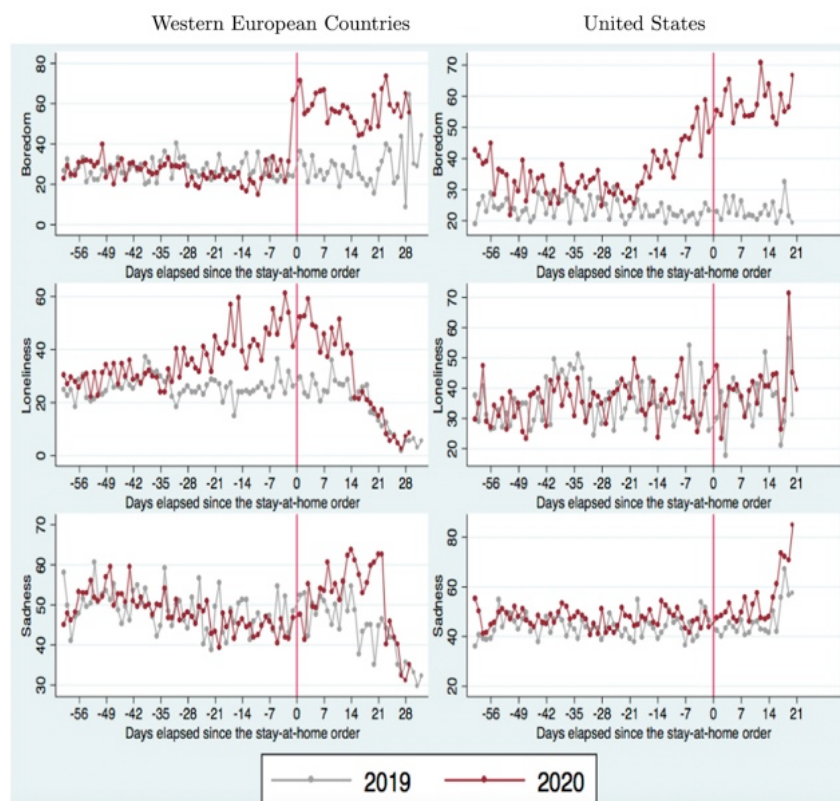
Different from the divergent pattern observed in Asia and America, the happiness dynamics in the 10 European countries all experienced sharp decrease in happiness from 2019 to April 2020, indicating the big shock from the pandemic in the beginning. The decrease ranged from 0.14 (Spain) to 1.06 (Finland). Mild temporary recoveries were documented in a few countries such as Finland, France, Netherlands, and Italy from May, and Germany, Norway, Spain, Sweden, and UK from June, and Denmark from July 2020. The recovery ranges from to UK (0.03) to Netherlands (0.2). Among these countries, the recovery from the first wave of infection and lockdown generally reached its peak at around August 2020. France is the only one peaked at June 2020, which means the second wave of shock came earlier than other countries. The pattern found from this section is largely consistent with the results from governmental survey data. A second wave of decrease is generally shown around November and December. Spain is the one been mostly affected in the second wave.

Dynamics of Expressed Happiness from Social Media

This section presents the results from social media. Studies show that people in different countries could have different emotional reactions during the first wave of the COVID-19 pandemic. One of the recent studies, using *Google Trends* data over the period January 1, 2020 to April 10, 2020 and the same period in 2019, finds that the searches for the topic of sadness did not increase significantly during the pandemic (compared with the same period in 2019) in 9 Western European countries, including Austria, Belgium, France, Ireland, Italy, Luxembourg, Portugal, Spain and the United Kingdom, and the United States (Figure 5).¹⁷ However, the searches for the topic of boredom significantly increased during the pandemic and the effects did not disappear throughout their study period (i.e., 3 or 4 weeks after the lockdown in each country) in both the Western European countries and the United States. The increase in the searches of loneliness during the first wave lasted about 7 weeks in the Western European countries while the searches did not increase in the United States. Another recent study derives a “negative affect search index”¹⁸ from *Google Trends* for 8 English-speaking countries, including the United Kingdom, Ireland, Canada, Australia, the United States, New Zealand, India and South Africa, and covers the period from June 30, 2019 to June 21, 2020.¹⁹ The authors observe that, in each of these countries, there was a sharp increase in the “negative affect search index” before the lockdown as the pandemic accelerated, followed by a steady decrease after lockdown measures were put in place.

Figure 5

Google Trends in boredom, loneliness and sadness



Notes

This figure is Figure 1 of Brodeur et al. (2021). The vertical axis shows the average searches (on a scale from 0 to 100) in the days before (negative values) and after (positive values) the stay-at-home order was announced (set equal to day zero) in 2020 (red dots) and the same date in 2019 (grey dots) for 9 European countries (left) and 42 US States (right).

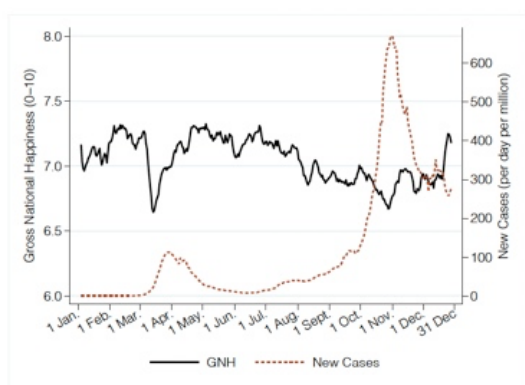
Studies using data from *Twitter* also suggest the negative shock of the pandemic and subsequent recovery. The Gross National Happiness (GNH) Index derived from *Twitter* shows that, in Australia, New Zealand, and South Africa, the level of happiness sharply decreased and then recovered within about a month during the first wave of the pandemic.²⁰ A more recent study looks further into the Gross National Happiness Index during the second wave of the pandemic and finds that the index declined slightly and recovered afterwards in the three countries (Figure 6).²¹ The study shows that for 7 European countries, including Belgium, France, Germany, Great Britain, Italy, Luxembourg, and Spain, the GNH index dipped in correspondence of the two pandemic peaks of March and November 2020. During the first wave, the GNH dropped suddenly and recovered quickly afterwards. In comparison, during the second wave when there

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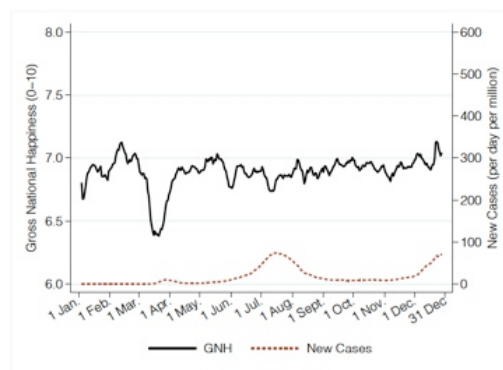
was a slow but steady increase in the number of new cases, the GNH declined steadily, culminating with a sharp fall at the beginning of November when infections reached a second peak. It then gradually recovered. Generally speaking, in Australia, New Zealand, South Africa, and the 7 European countries, even though the level of happiness changed with the number of new cases during the study period, we could still observe some resilience of people for two reasons: first, the level of happiness went relatively quickly back to the level before the pandemic right after the pandemic peaks; second, although the second wave was much more severe than the first one in these countries, the drops in happiness during the second wave was much smaller. Using data from *Baidu Index*, one recent study on China finds that the searches for several negative keywords, such as depression, scare, fear, anxiety, and stress, increased substantially from the outbreak of the pandemic in Hubei Province but started to decrease in about ten days.²²

Figure 6

Google Trends in boredom, loneliness and sadness



(a) Average daily data across seven European countries.



(b) Average daily data across Australia, New Zealand and South Africa.

Note

This figure is Figure 2 of Sarracino et al. (2021). GNH and new cases are presented using seven-day (centered) moving averages.

Differing Resilience during the Pandemic

From the survey results of Eurofound, national statistical surveys, and ICL-YouGov, we find similar trends in happiness during the pandemic. For most European countries, we observe a significant decline in average life evaluations (either measured by life satisfaction or Cantril ladder) and emotional well-being among the general population in the second quarter of 2020, when those countries started to be affected by the pandemic and related restrictions and lockdowns were first introduced. It was then followed by a short-lived recovery in happiness with varying magnitudes across countries in the summer with lower new infection rates, easing mobility restrictions and the re-opening of economies. The results from social media, which mainly focused on the first half year of 2020, shows similar results to surveys. A further drop of life evaluations and emotional well-being was observed in the fourth quarter 2020. On average, deterioration in happiness during the pandemic was prevalent in these European countries in 2020, which persists into the year of 2021 in many of them. Australia, Canada, and the US shows similar pattern to European countries. The failures to control the pandemic in those countries not only hurt the economy, but also has severe happiness implications.

Our findings of lack of resilience in national happiness in Europe and North America stand in contrast with a recent report by *The Lancet's* COVID-19 Commission Mental Health Task Force, which found notable signs of resilience in life satisfaction across the globe.²³ For example, they cited data from 34 countries surveyed by the Eurobarometer show very small changes in life satisfaction in July-August 2020 compared with September - December 2019. However, as our analysis covers a longer time span and more frequent measurements of life satisfaction during the pandemic, our results indicate more fluctuations and varying degrees of resilience of happiness at different stages of the pandemic.

Yet we find some evidence in the resilience of happiness in some countries. For instance, overall life satisfaction in New Zealand and Mexico, as well as Cantril ladder in China, Hong Kong SAR, and Thailand remained largely stable in 2020 compared to the previous years. Cantril ladder in Indonesia, Malaysia, Philippines and Vietnam remained largely stable in 2020, and the levels were even higher than that in previous years.

The resilience in some but not other countries might depend highly on the pandemic control in the study period. It has been shown that country-specific pandemic severity was the major contributor to the increases in negative emotions and lockdowns, in contrast, were beneficial for mood overall. Other factors that contribute to people's resilience in some countries include an increase in generalized trust.

We shall point out that several inconsistencies in the happiness measurements prior to and during the COVID-19 pandemic warrants caution in interpreting the happiness dynamics shown in this brief. First is the change of survey mode in many countries or surveys from mainly face-to-face interviews to mainly telephone, mail, or online surveys

(e.g., EU member states in the *LWCS*, the Netherlands, UK, New Zealand, Ireland, Canada). There is some evidence for very small effects of survey mode (in-person vs. telephone) on responses to well-being questions, as shown by data in 2019 from *Annual Population Survey* of UK where average life satisfaction from face-to-face interviews was slightly lower (0.04 on a scale of 0 to 10) than that from telephone interviews. We shall still be cautious since there lacks systematic analysis on the possible impact of online survey mode on well-being measurements. In addition, shifting from face-to-face interviews to telephone/mail/online surveys may have also changed the composition and representativeness of the sample. To cope with the problem, our analysis of survey data is mainly based on nationally-representative samples with consistent happiness measures. Nonetheless, there remains the possibilities of selection bias that might not be adjusted for by weighting techniques. Therefore, the comparison between happiness measured before and after the pandemic is less precise than the dynamics of happiness ratings during the pandemic when the survey mode is fixed.

Endnotes

¹ See Eurofound (2017).

² See Eurofound (2020a).

³ See EVS/WVS (2021).

⁴ See Eurofound (2020a).

⁵ See Eurofound (2021).

⁶ See OECD (2013).

⁷ See OECD (2020).

⁸ See CEPREMAP (2021a).

⁹ See ONS (2021).

¹⁰ See CEPREMAP (2021).

¹¹ See Kristina Strand Støren, Elisabeth Rønning og Karin Hamre Gram (2020).

¹² See Helliwell et al. (2021).

¹³ See Helliwell et al. (2020).

¹⁴ See CSO (2020a, 2020b, 2021).

¹⁵ See Stats NZ (2020a, 2020b, 2020c).

¹⁶ See Eurofound (2020).

¹⁷ See Brodeur et al. (2021)

¹⁸ The “negative affect search index” takes average mentions from the list of possible negative states, including sadness, apathy, frustration, stress, boredom, loneliness, and fear.

¹⁹ See Foa et al. (2021)

²⁰ See Greyling et al. (2021)

²¹ See Sarracino et al. (2021)

²² See Kim and Zhao (2020)

²³ See Aknin et al. (2021)

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