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European household and business expectations during COVID-19: Towards a v-shaped recovery in confidence?

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European household and business expectations during COVID-19: Towards a v-shaped recovery in confidence?

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Abstract

Confidence dropped universally across countries and sectors during the height of the COVID-19 pandemic in Europe. Latest survey data suggest that confidence is on track for a v-shaped recovery. The swift implementation of stringent containment measures as well as economic stimulus policy measures, along with several other country characteristics, correlate well with both the drop and recovery of confidence across countries.

Keywords: Confidence, Covid-19, Survey expectations
JEL codes: D84, E65, I10

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1. Introduction

The expectations channel is an important component to the transmission of the COVID-19 pandemic to economic conditions.[2] In this article, I use the European Commission's harmonized household and business survey data to elicit how COVID-19 and policy responses have affected household and business expectations. I focus on measures of confidence, a first moment of beliefs. Although the pandemic may also affect expectations through increases in uncertainty, the focus on confidence taken by this article may be thought of as the first order of business in assessing the impact of COVID-19 on expectations.[3] Further, prior literature has shown that sentiment and confidence are useful (and potentially leading) indicators of economic conditions.[4]

This article addresses the following questions: (1) How did household and business confidence respond to the COVID-19 pandemic? (2) To what extent did policy responses, in terms of containment measures aimed at promoting public health and economic stimuli aimed at mitigating the adverse economic impact, affect confidence?, and (3) What other country-specific factors were influential in the shifts in confidence due to the COVID-19 pandemic?

The main results are as follows. First, survey data reveal a universal drop in confidence across countries and sectors with lowest values at the April round of the survey reflecting an average of nearly four standard deviation drop in confidence relative to January of 2020. Second, in the two succeeding survey rounds we find a relatively quick and v-shaped recovery in confidence for many countries and especially for households.[5] The services sector, which featured the largest drops in confidence, also appear to be slowest in the recovery of confidence. Figure 1 provides a snapshot of how confidence evolved at the height of the COVID-19 pandemic in Europe.

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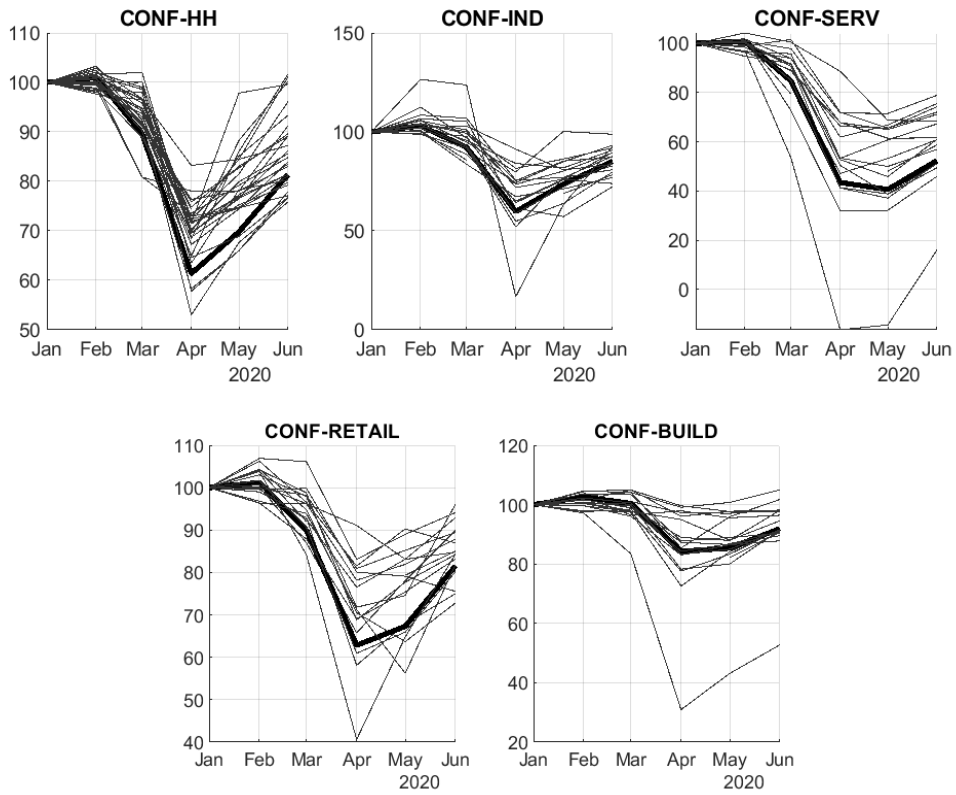
[2] See Baldwin and di Mauro (2020a, 2020b) for an early and broad overview of the economic implications and consequences of the COVID-19 pandemic.

[3] The terms confidence and sentiment are used interchangeably in the article and refer to the constructed confidence indices which largely follow the European Commission's definitions. The household confidence index uses the definition prior to 2019 in which all survey questions used to construct the index are forward-looking. See Ambrocio (2020a, 2020b) for survey-based measures of uncertainty for European countries. See also Altig et al. (2020) for economic uncertainty and COVID-19 for the US and UK.

[4] See e.g. Ludvigson (2004), Barsky and Sims (2012), Leduc and Sill (2013), Lagerborg et al. (2019), Bhandari et al. (2019), Ambrocio (2020a), Benhima and Poilly (2020), and Lindblad and Silvo (2020).

[5] It should be noted that there is no guarantee that the trend will continue and that the latest Flash estimate of consumer confidence covering the July 2020 survey for Europe and the Euro area indicate a halt in the recovery.

Figure 1. Confidence and disagreement across countries and sectors in Europe



Each panel plots indices of confidence (CONF) across sectors for European Union countries. HH is for the household survey, IND is industry, SERV is services sector, RETAIL is retail, and BUILD is the building and construction sector. The indices have been standardized such that the value for January 2020 is 100. The thickest line plots the Euro area average.

Third, rather than the number of COVID-19 cases and deaths, countries with historically larger shares of vulnerable employment and reported work absences due to health reasons are those who experienced larger drops in confidence while countries with historically higher death rates due to infectious diseases tend to have smaller drops. Further, countries that put in place more stringent containment measures as well as those with higher GDP per capita experienced larger drops in confidence.

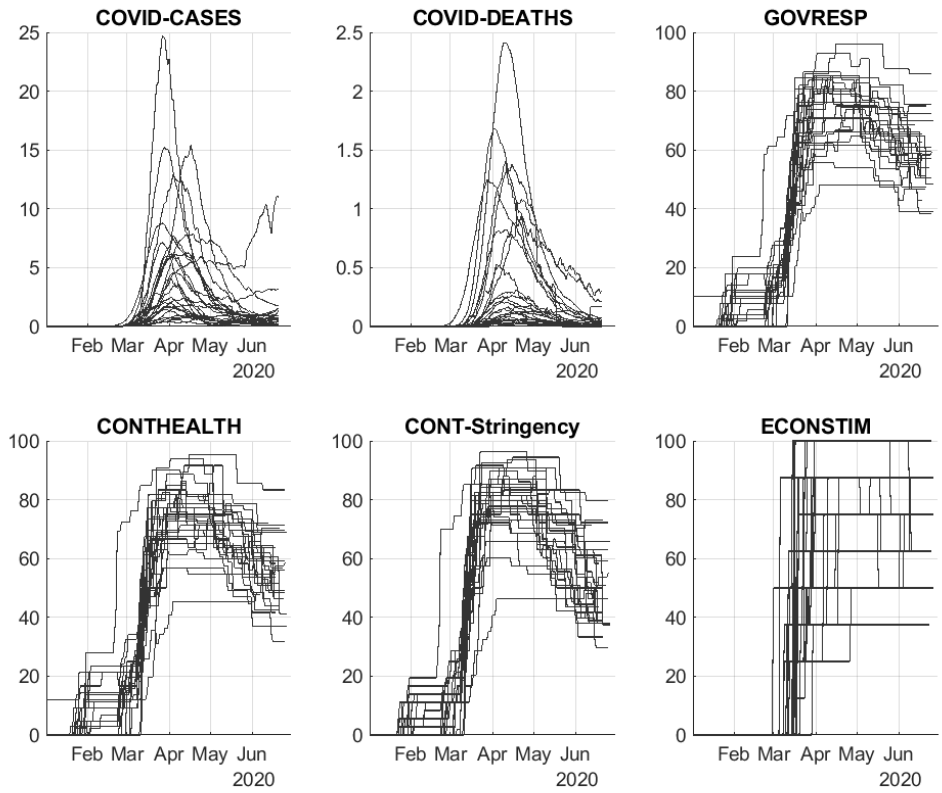
Finally, several countries such as Austria, Bulgaria, Denmark, Finland and Sweden experienced full or near-full recoveries in household confidence by June of 2020. In general, early implementation of containment measures as well as larger economic stimulus measures are associated with stronger recoveries in confidence. On the other hand, a larger share of vulnerable employed as well as higher GDP per capita are factors that are negatively associated with the recovery of confidence.

In the next section I provide a brief background of the COVID-19 pandemic across Europe. Section 3 describes how the confidence indices are constructed and Section 4 provides the main analysis. Finally, Section 5 concludes with some remarks.

2. COVID-19 in Europe

After the initial outbreak in China and East Asia, European countries became the focal point of the global COVID-19 pandemic sometime in early spring of 2020. Starting from initial hotspots, e.g. northern Italy, the number of COVID-19 cases and deaths grew in many countries and at varying degrees. Policy responses, in particular containment measures, were put in place and these were also implemented to varying degrees of intensity. Figure 2 plots data from Hale et al. (2020) regarding the number of COVID-19 cases and deaths along with several indices of policy responses. The top left and top middle panels plot the 15-day moving average of changes in confirmed cases and deaths for the 27 countries in the European Union and the United Kingdom. The top right panel of Figure 2 plots the government response index while the bottom panels plot sub-indices on containment and health, the stringency of containment measures, and economic stimuli.

Figure 2. Covid-19 intensity and policy responses



Data taken from Hale et al. (2020) as of June 29, 2020. For plotting, confirmed Covid-19 cases and deaths are transformed to 15-day averages of changes in cases and deaths per 100,000 population. GOVRESP is the Hale et al. (2020) government response composite index, CONTHEALTH is the containment and health sub-index, CONT-Stringency is the sub-index for the stringency of containment measures, and ECONSTIM is the economic stimulus index.

As can be seen in Figures 1 and 2, the drop in confidence indices coincide roughly with peaks in the number of new COVID-19 cases and deaths while the peaks in government policy responses occurred at about the same time or followed shortly thereafter. Figures 1 and 2 also indicate some amount of variation across countries. Two sub-indices are particular interest. First, the index of the stringency of containment measures, whose implementation is most likely aimed at addressing public health concerns, are likely to have strong implications on expectations and the economy.[6] Second, the sub-index on economic stimulus is also of interest as it directly captures measures aimed at mitigating the adverse impact of the pandemic on the economy. It should be noted that these policy responses may affect expectations both through Odyssean and Delphic channels wherein policy may be interpreted as containing information on the government's commitment to attaining public health and economic objectives

[6] *See e.g. Goolsbee and Syverson (2020) on the economic impact of mandated and discretionary social distancing.*

as well as information on the government's (potentially more informed) views on the direness of the economic situation.[7]

The economic impact of the COVID-19 pandemic may materialize through supply, demand, and expectations channels (see e.g. Baldwin and Weder di Mauro, 2020a, 2020b). The containment and health measures implemented to mitigate the impact of COVID-19 on public health may also have adverse economic effects (see e.g. Baker et al., 2020). On the other hand, the absence of containment measures and the unmitigated contagion of the disease could also lead to supply disruptions (Bodenstein et al., 2020). Furthermore, a global survey by Caria et al. (2020) reveal that most respondents support social distancing measures and believe them to be necessary. Their survey results also reveal that perceptions of weak government responses are associated with higher degrees of concern and depression. Using text analysis of global quarterly earnings conference calls, Hassan et al. (2020) find that business concerns regarding the COVID-19 pandemic appear to center around the collapse of demand, disruption of supply chains, and heightened uncertainty with less focus on financing concerns.

3. Household and business confidence

Survey data is taken from the European Commission's harmonized business and consumer surveys. I take survey data from the 27 European Union member countries as well as the United Kingdom covering the household, industry, services, retail, and building and construction sectors. For some graphs Euro area and European Union averages are also included. To construct the confidence indices, responses to several questions are quantified into the range of -1 (negative responses) and +1 (positive responses) with 0 for neutral or no change responses.[8] The confidence indices for the business surveys uses the same questions as the official confidence indices from the European Commission while the household confidence index uses the questions from the definition of consumer confidence prior to 2019. Note that business survey data is only available for a subset of the 28 countries.

The specific set of questions used for the household confidence index pertain to households' views on the general economic situation and unemployment over the next year as well as their views on their ability to save and the expected change in their own financial situations over the next year. For the Industry sector surveys, the survey questions used refer to the state of the order book, stock of finished products, and expected development of production over the next quarter. For the Services sector confidence index, the questions used are on expected turnover over the next quarter as well as the previous quarter's turnover and general business

[7] *See e.g. the extensive literature in this regard on forward guidance and monetary policy (Andrade and Ferroni, 2020; Jarocinski and Karadi, 2020).*
[8] *In the case of the household survey, somewhat positive and somewhat negative responses are coded as 0.5 and -0.5 respectively.*

developments. For the Retail sector, the questions are on sales in the past quarter and expectations for the next quarter sales as well as the adequacy of the current volume of stock. Finally, the questions on the status of the current order book and expected changes in employment over the next quarter are used for the Building sector confidence index.

The quantified responses to the chosen set of questions are then used to calculate balances (cross-sectional averages) and averaged again across questions to construct the confidence indices. Prior to the analysis the indices were standardized such that 100 reflects the historical average from 2002-2019 and a 10 point change reflects one standard deviation. For much of the analysis in this article, I use the January through June 2020 survey rounds and the indices are re-standardized such that January of 2020 reflects a value of 100.[9]

4. COVID-19 and Confidence

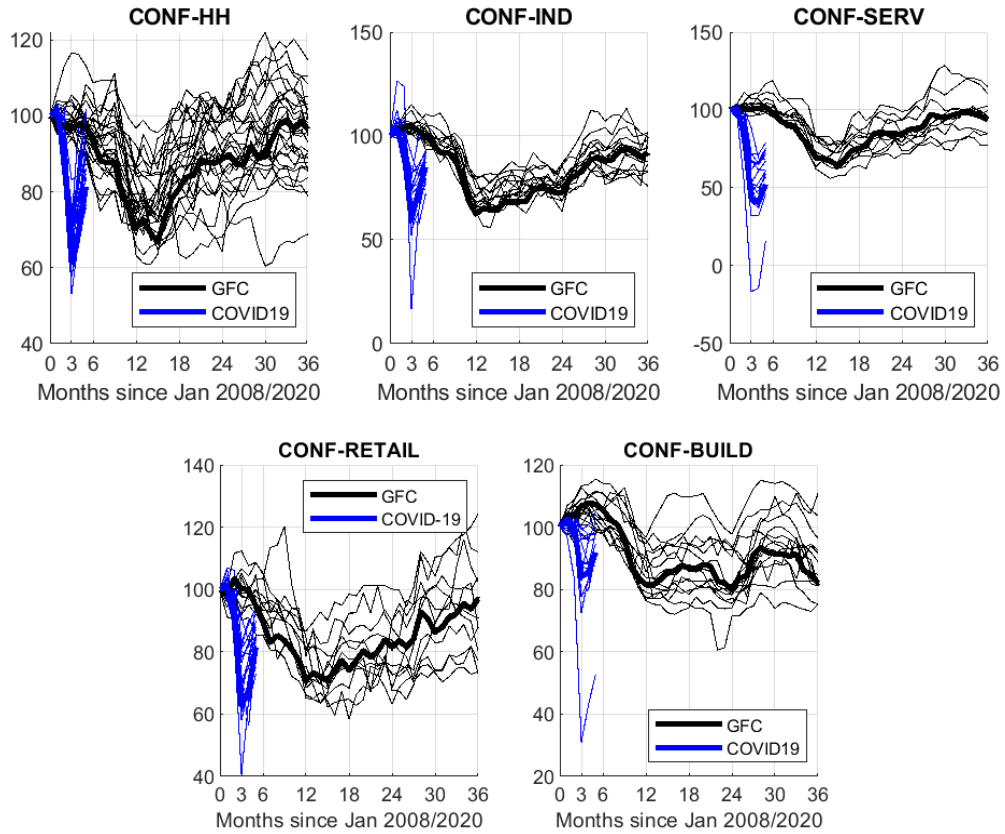
In this section, I provide detailed analysis on how household and business expectations evolved during the height of the COVID-19 pandemic in Europe both on average and across countries. I first document how confidence evolved over time and in contrast with developments during the Global Financial Crisis. I then examine cross-country differences in both the fall in confidence and their recent recovery and look for factors that can help explain them.

4.1 COVID-19 and the speed and intensity of changes in confidence

Confidence rapidly deteriorated during the height of the COVID-19 pandemic with a small decline in the March survey round and a substantial drop by the April survey round. In relative terms and on average, the drop in confidence parallels and even slightly exceeds that observed during the Global Financial Crisis. Nevertheless, confidence has been recovering for some sectors. Notably, household and industry sector confidence indices are on track for a full and V-shaped recovery in some countries. On the other hand, the recovery of confidence in the Services sector, which was also hardest hit, appears to be occurring at a much slower pace.

[9] *This does not reflect a large change as the confidence indices for January of 2020 were quite close to historical averages. Similarly, the value for the confidence indices on January 2008 prior to the Global Financial Crisis were also very close to the historical average.*

Figure 3. Confidence during the Global Financial Crisis and the COVID-19 Pandemic



The black lines report the evolution of business and consumer confidence indices over the period January 2008 to January 2011. The blue lines report the evolution of business and consumer confidence indices from January to June of 2020. The horizontal axes report the number of months since January of 2008 or 2020. The indices have been standardized such that the value for January 2008 or January 2020 are equal to 100 respectively. The thickest lines reflect the Euro area average.

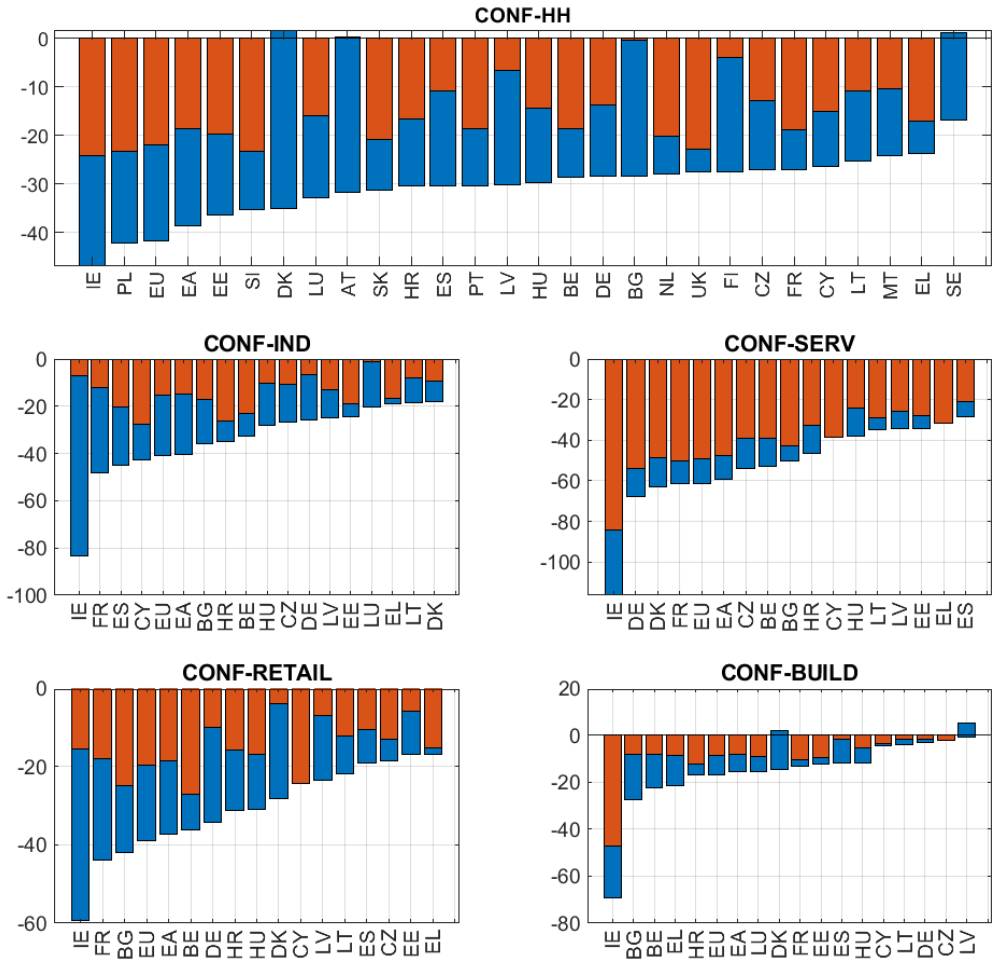
Relative to the Global Financial Crisis of 2008-09, the recent drop in confidence, and potentially the recovery as well, was much quicker during the height of the COVID-19 pandemic of 2020. For instance, while household confidence in the Euro area exhibited a continuous decline from April 2008 to March of 2009 - a span of 12 months - during the Global Financial Crisis, the drop in household confidence for 2020 occurred over two months. In addition, while household confidence in the Euro area recovered to near historical averages from April of 2009 to about September of 2010 - a 16 to 18 month period - during the Global Financial Crisis, household confidence in the Euro area have recovered by half in the two months since April 2020. As the panels in Figure 3 illustrate, European economies are largely on track for a v-shaped recovery in confidence.

4.2 Differences across European countries

At its worst, household confidence dropped by an average of nearly four standard deviations in Europe. Across countries, the drop in confidence range from about 1.5 to 4.5 standard deviations. Worst hit were Ireland, Poland, Estonia, Slovenia, and Denmark. The case of Ireland is potentially complicated by the formal withdrawal of the United Kingdom from the European Union on January 31, 2020. Thus, recent developments in business and household confidence in Ireland may represent a co-mingling of concerns regarding Brexit and the COVID-19 pandemic.

Since April 2020, several countries, namely Denmark, Austria, Bulgaria, Finland, and Sweden featured strong recoveries in confidence nearing or even exceeding January 2020 levels. What can account for these differences? One direct explanation may be differences in the domestic severity and intensity of the COVID-19 pandemic. Second, these differences may also be driven by structural features such as vulnerability to pandemics or the relative inability of social and healthcare infrastructures to cope with health pandemics. Yet a third possibility could be the timeliness and scale of both health and economic policy responses to the COVID-19 pandemic. We explore each of these in turn in the next few sections.

Figure 4. Fall and recovery in household confidence from January-June 2020



Each bar plots the lowest value of confidence indices across countries and sectors, relative to January 2020, as well as the recovery by the June round of surveys. The bottom value of each bar reports the largest drops in household confidence (which typically occurred in the April round of the survey) relative to January 2020 (standardized to 100). The top value of the blue portion of each bar reflects the change in household confidence for the period January to June of 2020 such that the blue fraction of each bar reflects how much confidence has recovered by June of 2020 from its lowest value since January of 2020. Italy has been omitted as data is missing for the April survey round. Similarly, Romania is omitted as data is missing for the May and June survey rounds.

4.2.1 Factors relating to domestic intensity of COVID-19 pandemic

As a measure for the intensity of COVID-19, I use the number of confirmed COVID-19 cases and deaths per 100,000 population. I take a snapshot of the number of cases and deaths as of the end of March 2020 which is shortly before the April round of surveys were conducted. I also look at the number of new cases since then and up to the 27th of June.

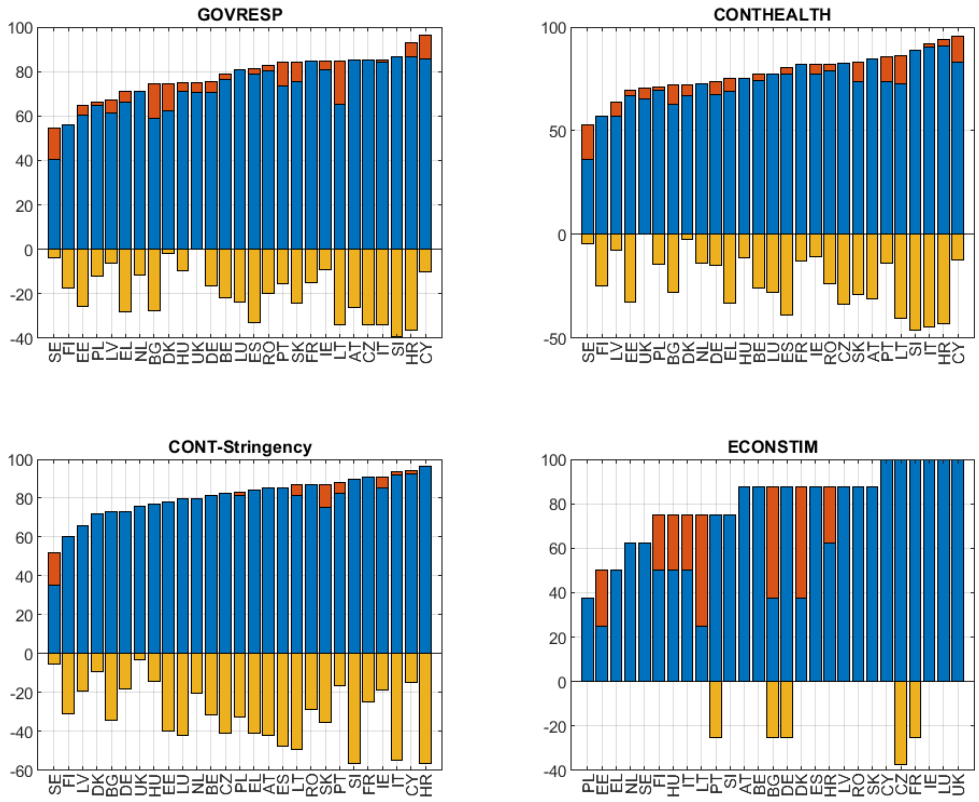
4.2.2 Factors relating to preparedness and susceptibility of healthcare and social safety nets prior to public health crises

To measure the vulnerability and preparedness of the various economies to pandemics, I take Eurostat data on the number of hospital beds per 100,000 population (2013-2017 average), 2014 survey responses to unmet healthcare needs (self-reported) and work absences due to personal health reasons (percentage reporting some or severe), as well as historical averages from 2013-2017 of standardized death rates related to infectious diseases and influenza. To gauge the extent of the preparedness of social safety nets, I also collect information on the share of government or compulsory financing schemes to total healthcare expenditures as well as real social expenditures per capita on sickness and healthcare and unemployment (2013-2017 averages). As additional variables from the World Bank WDI, I include real GDP per capita, population density, and the share of vulnerable or self-employed to total employment (2013-2017 averages).

4.2.3 Factors relating to policy responses

To measure policy responses to COVID-19, I take the government response indices from Hale et al. (2020). Specifically, I focus on the stringency of containment measures and economic stimulus indices. I take the values of the stringency and economic stimulus indices as of end of March as well as their peak values. To capture the speed of implementation, I also measure the number of days between when the peak value is reached relative to the day that the number of COVID-19 cases first reached 1 per 100,000 population. These variables give us a sense of the level of policy responses right before confidence plummeted to their worst (April survey round), policy responses at their peaks, and the speed at which these policy responses were implemented.

Figure 5. Policy response indices across countries



Each panel plots the government policy response indices of Hale et al. (2020). The blue bars represent the values of the indices as of end of March 2020. The combined blue and orange bars reflect the peak values of the indices. Finally, the yellow bars reflect how much the indices have fallen from their peaks by end of June 2020.

Table 1 reports summary statistics of the data collected for the analysis. The data is pooled over 28 countries and 5 sectors referring to Households, Industry, Services, Retail, and Building such that the maximum number of observations per variable is 140. Note that other than the confidence indices which are sector-specific, all other variables are observed at the country level. This precludes the use of country fixed effects in the regression analyses.

Table 1. Data descriptive statistics

Sources: European Commission, Eurostat, World Bank WDI, Hale et al. (2020). Data represents the 27 European Union member countries and the United Kingdom and for the five sectors of the business and consumer surveys. The drop in confidence is the percentage deviation of the lowest value in the January to June 2020 survey rounds (typically in April) relative to the January 2020 value. A larger number means a larger drop. The recovery in confidence is the difference between the lowest value and the most recent value as of June 2020 survey round. A larger number means a larger recovery. Implementation lag variables for the stringency and economic stimulus indices are calculated as the number of days between the recorded peak value of each index and the day that the number of COVID-19 cases reaches 1 per 100,000 population in each country.

	Mean	St. dev.	Min	Max	Obs
CONF -drop	31.19	17.32	0.9	116.41	94
CONF-recovery	13.9	10.74	0	75.99	93
Covid Cases-March	61.95	73.04	5.03	323.83	135
Covid Cases-April to June	178.17	156.18	19.87	597.34	135
Covid Deaths-March	2.64	4.72	0	19.2	135
Covid Deaths-April to June	17.68	20.79	0.51	75.2	135
Stringency Index-March	79.32	11.81	35.19	96.3	135
Stringency Index-Lag	19.41	17.09	3	93	135
Stringency Index-Peak	80.14	10.71	46.3	96.3	135
Economic Stimulus Index -March	70.83	24.86	25	100	135
Economic Stimulus Index -Lag	21.11	22.22	1	95	135
Economic Stimulus Index -Peak	81.02	16.51	37.5	100	135
Deaths due to infectious (2013-2017 ave)	14.97	6.23	5.25	27.07	135
Deaths due to influenza (2013-2017 ave)	1.05	0.68	0.14	2.59	135
Unmet health needs (2014 survey)	25.35	9.44	9.4	41.8	125
Work absences due to health (2014 survey)	50.81	13.58	18.6	73.1	135
Share of self-employed (2013-2017 ave)	15.59	5.88	8.77	35.21	140
Share of vulnerable employed (2013-2017 ave)	11.56	5.69	5.36	28.3	140
Share of Government and Mandated to total Health expenditures (2013-2017 ave)	72.28	10.22	42.63	84.26	135
Hospital Beds per 100k (2013-2017 ave)	490.11	160.49	242.68	751.06	135
Real social expenditures per capita on health (2013-2017 ave)	2196.44	1705.22	359.18	6544.18	135
Real social expenditures per capita on unemployment (2013-2017 ave)	346.25	336.43	8.07	1124.68	135
Population density (2013-2017 ave)	179.3	257.37	18.02	1393.08	140
GDP per capita (2013-2017 ave)	33620.79	21254.06	7671.17	106122.9	140

4.3 Cross-country regression analysis

In this section I pool data across sectors (households, industry, services, etc.) and run simple regressions to uncover factors related to the scale of drop and recovery in confidence. The main dependent variables are the drop in confidence (CONF-drop), measured as the lowest value of the confidence indices over the January-June 2020 period (which took place in the April survey round) in percentage terms relative to January 2020, and the recovery in confidence by June of 2020 (CONF-recovery) measured as the difference between the confidence indices in the June round of the survey and its lowest value where both indices are standardized to the January 2020 value. For both measures a larger value represents a larger drop and recovery respectively.

I first examine variables that are associated with differences in the extent to which confidence has fallen during the peak of the COVID-19 pandemic in Europe. Results are reported in Table 2. All regressions include sector fixed effects. These fixed effects indicate that indeed the Services sector was hardest hit with an average drop in confidence about 20 percentage points larger relative to households. On the other hand, the Building sector is the least hit with an average 9-15 percentage points smaller drop in confidence.

Table 2. Factors associated with the drop in confidence

*Dependent variable is the drop in confidence relative to January 2020. BUILD, IND, RETAIL, and SERV are dummy variables associated with the Building, Industry, Retail, and Services sector (Household sector is the omitted category).Robust standard errors. *, **, and *** denote significance at 10, 5 and 1 percent levels.*

Dep. var.: CONF-drop	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Cases-Mar	0.002			-0.021		-0.152***	-0.132***		-0.008	-0.126***
Deaths-Mar		-0.080		-0.176		0.522	0.568		-0.179	0.440
Unmet Health			0.051	0.020						
Work absence			0.733***	0.827***			0.372*			0.509**
Deaths-infect			-1.051***	-0.956***			-1.030***			-0.930***
Deaths-flu			-3.385	-3.362						
Share vuln-emp			3.782**	3.098*			0.532**			0.446
Share self-emp			-2.427	-1.735						
Pop density			-0.015**	-0.021						
Hosp beds					-0.002	-0.001				
Share Gov Health					0.142	0.382**				
Soc Exp-Health					-0.006	-0.013***	-0.009***			-0.008**
Soc Exp-Unemp					0.030***	0.039***	0.021*			0.013
GDP per cap					0.000	0.001**	0.001**			0.001**
Strin-Mar								0.164*	0.201*	0.274**
Stim-Mar								0.125**	0.133**	0.029
BUILD	-13.967***	-13.884***	-9.362**	-8.943**	-14.654***	-13.810***	-11.423***	-14.223***	-14.061***	-11.787***
IND	3.049	3.132	6.473	6.892	2.003	2.847	5.234	2.792	2.955	4.870
RETAIL	-0.608	-0.550	1.744	1.748	-1.750	-1.716	0.676	-0.675	-0.627	0.280
SERV	20.477***	20.535***	22.467***	22.471***	18.487***	18.521***	20.914***	20.409***	20.457***	20.518***
Constant	29.738***	30.046***	6.857	0.904	17.273	-2.286	15.138	7.960	5.403	-14.014
Adjusted R-squared	0.322	0.323	0.552	0.560	0.415	0.550	0.673	0.371	0.363	0.687
Observations	93	93	79	78	89	88	88	93	93	88

In columns 1 and 2 of Table 2, I first check whether the number of COVID-19 cases and deaths as of end of March 2020 are associated with the drops in confidence and I find no significant correlation. In column 3 I test whether factors relating to the vulnerability of countries to health pandemics are related to the drops in confidence and column 4 combines these variables with the COVID-19 cases and deaths. The results from columns 3 and 4 indicate that countries with higher reported work absences due to personal health reasons and larger share of vulnerable to total employment tend to have larger drops in confidence. On the other hand, countries with high standardized death rates due to infectious diseases tend to have smaller drops in confidence.

In columns 5 and 6 of Table 2, I include factors related to the preparedness of countries for health pandemics as explanatory variables. I find that countries with relatively high real expenditures per capita on health tend to have smaller drops in confidence while the opposite seems to be true for real expenditures per capita on unemployment. Further, countries with higher real GDP per capita tend to have larger drops in confidence even when accounting for the number of COVID-19 cases and deaths. Column 7 combines the vulnerability and preparedness variables with similar results.

In columns 8 to 10, I examine the effects of the stringency of containment and economic stimulus measures as of end of March 2020 on the drop in confidence. I find evidence supporting the notion that more stringent containment measures lead to larger drops in confidence even after controlling for COVID-19 cases and deaths as well as other country variables. On the other hand, while larger economic stimuli appear to be positively associated with the drop in confidence in some specifications, the result goes away when other country variables are accounted for.

I next examine factors associated with the recovery in confidence by June of 2020. Regression results are reported in Table 3. As with the previous set of regressions, sector fixed effects are always included in these regressions. These fixed effects indicate that the Building and Services sectors featured the smallest recoveries in confidence. On average the Services sector confidence recovery is about 4-6 percentage points smaller than the recovery in Household confidence while the recovery in the Building sector is about 7-9 percentage points smaller.

Table 3. Factors associated with the recovery in confidence

*Dependent variable is the recovery in confidence by June of 2020 from its lowest value and relative to January 2020. BUILD, IND, RETAIL, and SERV are dummy variables associated with the Building, Industry, Retail, and Services sector (Household sector is the omitted category). Robust standard errors. *, **, and *** denote significance at 10, 5 and 1 percent levels.*

Dep. var.: CONF-recovery	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Cases-AprJun	0.038**		0.050**	0.045**	0.058***	0.050**	0.044**	0.061***	0.053**	0.077**
Deaths-AprJun		0.166	-0.208*	-0.198*	-0.215**	-0.207*	-0.193*	-0.224**	-0.207*	-0.488***
Cases-Mar	-0.016	0.019*								
Deaths-Mar	-0.429**	-0.755**								
Strin-Peak			0.012				-0.027			
Stim-Peak				0.119**			0.122**		0.082	0.112*
Strin-Lag					-0.191***			-0.224***	-0.161**	-0.114*
Stim-Lag						0.001		0.047		
GDP per cap										-0.001**
Share self-emp										2.476***
Share vuln-emp										-2.913***
Soc Exp-Health										0.002
Soc Exp-Unemp										0.027***
BUILD	-7.188***	-7.896***	-7.666***	-8.174***	-8.223***	-7.639***	-8.126***	-8.340***	-8.499***	-9.023***
IND	2.954	2.246	2.476	1.968	1.919	2.503	2.016	1.802	1.643	0.639
RETAIL	-0.537	-1.186	-0.578	-1.036	-0.920	-0.552	-0.988	-1.027	-1.195	-3.234
SERV	-4.106*	-4.755*	-4.148*	-4.605**	-4.489**	-4.122*	-4.557**	-4.597**	-4.764**	-6.363***
Constant	11.719***	14.218***	10.140	2.261	13.551***	11.073***	4.205	12.864***	7.093	4.576
Adjusted R-squared	0.228	0.115	0.217	0.246	0.264	0.217	0.237	0.263	0.268	0.356
Observations	92	92	92	92	92	92	92	92	92	87

In columns 1 and 2 of Table 3, I focus on new COVID-19 cases and deaths from April-June of 2020 and include the number of cases and deaths as of end of March 2020 as control variables. In columns 3 to 10, I include additional explanatory variables while retaining new cases and deaths. I find, quite paradoxically, that new cases are positively associated with the recovery in confidence while higher values of new deaths are negatively related to the recovery in confidence.[10]

In columns 3 to 6, I explore the effects of the stringency of containment and economic stimulus measures both in terms of their peak index values in each country and the implementation lag in terms of the number of days between the peak value and the day each country experienced at least 1 case per 100,000 population. In columns 7 and 8, I include both peak values and implementation lag measures respectively. In these regressions, I find that larger peak values of economic stimulus as well as earlier implementations of stringent containment measures are associated with stronger recoveries in confidence. In column 9, I report regression results which combine the implementation lag of containment stringency measures as well as the peak value of economic stimulus and find that the speed of implementation of stringent containment measures dominates.

Finally, I include additional country variables in column 10. As before larger peak economic stimulus and faster implementation of stringent containment measures are associated with stronger recoveries in confidence. In addition, countries with a higher share of self-employed as well as larger real per capita expenditures on unemployment appear to enjoy larger recoveries in confidence while countries with a larger share of vulnerable employment and higher real GDP per capita feature lower recoveries in confidence.

5. Concluding Remarks

In sum, I have documented a universal drop in confidence across European countries and sectors with the Services sector hardest hit. In terms of the speed and intensity, the drop in confidence is comparable to that which took place during the Global Financial Crisis although at a much more rapid pace. However, the recovery of confidence is also on track to take place more rapidly with a v-shaped recovery in confidence as a very likely scenario although not guaranteed. It should be noted that the Covid-19 situation may rapidly develop for the better or worse and confidence may go either way accordingly.

Across countries, rather than the number of COVID-19 cases and deaths, it seems that countries with larger shares of vulnerable employment and reported work absences due to

[10] *When COVID-19 cases and deaths are replaced with a mortality rate (deaths divided by cases), I find no significant relationship.*

health reasons are those who experience larger drops in confidence while countries with historically higher death rates due to infectious diseases tend to have smaller drops. Interestingly, countries that put in place more stringent containment measures as well as those with higher GDP per capita experienced larger drops in confidence.

The recovery of confidence over April to June of 2020 also featured differences across countries with some such as Austria, Bulgaria, Denmark, Finland and Sweden featuring full recoveries in household confidence. Early implementation of containment measures as well as larger economic stimulus measures are associated with stronger recoveries in confidence while the share of vulnerable employed as well as GDP per capita remain factors that are negatively associated with the recovery.

These results suggest that containment measures may impose a policy trade-off between public health and the economy via the expectations channel while economic stimuli trades off the pace of the recovery against strains on public finances.[11] While Covid-19 is on the decline in Europe, cases continue to rise in the Americas and prospects for a second wave later in the year are not to be discounted. These results could help fine tune policy responses as the need arises in these cases and for future pandemics of a similar nature. Furthermore, while the drop in confidence appear to be short-lived, the impact of the pandemic on beliefs and expectations could also have scarring effects.[12]

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[11] See Jinjarak et al. (2020) on the effects of COVID-19 and policy responses on sovereign CDS spreads.

[12] See e.g. Kozlowski, Veldkamp, and Venkateswaran (2020) and Malmendier and Shen (2020).

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