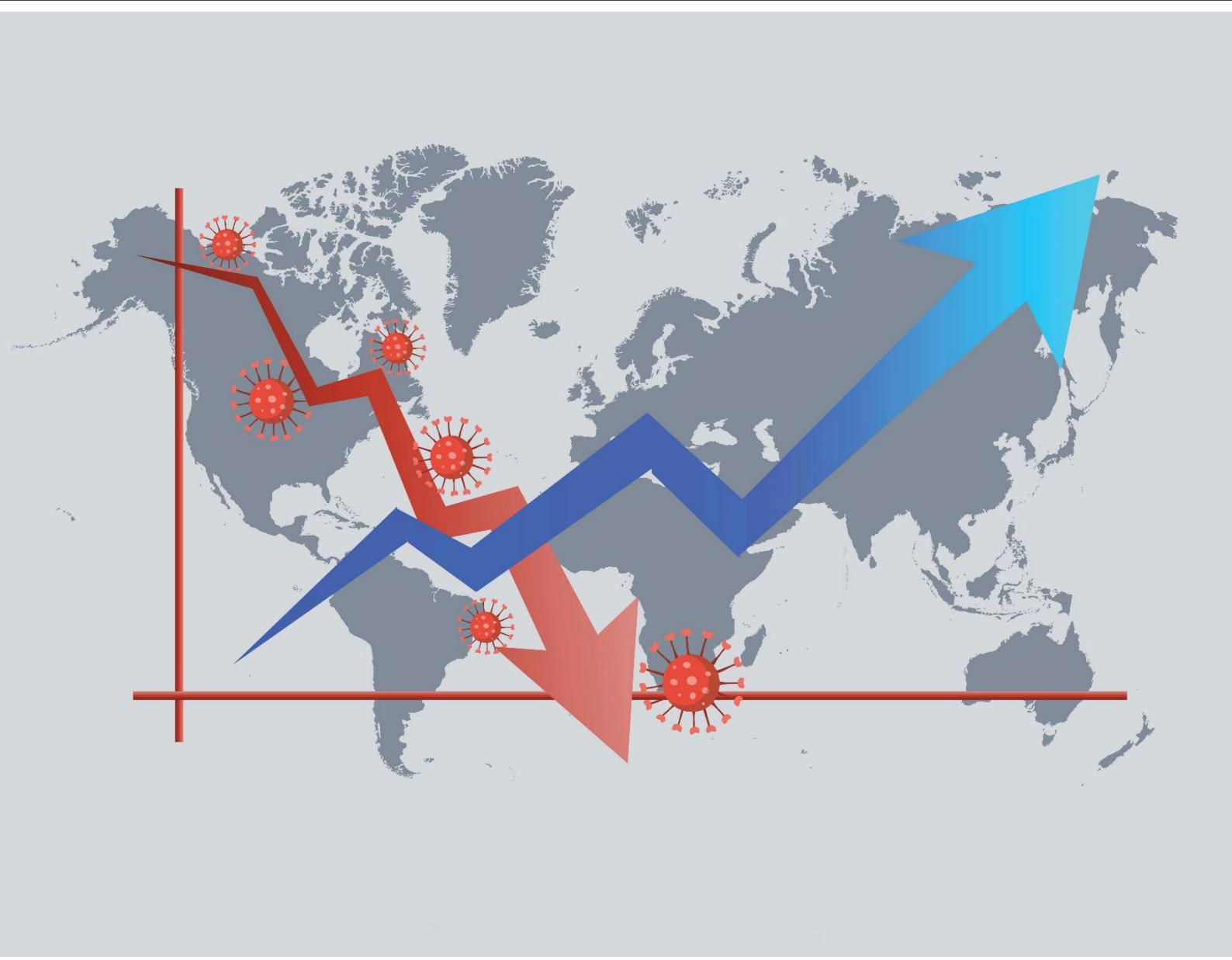


## Lessons learned from policy responses to previous pandemic-related & other socio-economic shocks

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## Introduction

### Background and context

Ensuring that London recovers effectively from the impacts of COVID-19 is a priority for the Mayor. This recovery is likely to be as wide-ranging as the impacts, which we know are as far reaching as anything yet experienced by most generations living today. However, unlike previous large-scale shocks such as World War 2, the COVID-19 pandemic has not impacted on physical assets (homes, infrastructure). Recovery will be around activity and money lost as a result of the almost total suspension of everyday life and the tragedy of many lives lost.

London's response will therefore need to be comprehensive, involving most parts of the economy and society. And we will need to put the foundations of this recovery in place as early as possible, alongside driving forward our emergency response to mitigate the immediate and distressing impacts of the virus on London.

Some areas of life are likely to recover quickly, others will not. There will be a significant financial hangover to deal with. It will be important for London to develop some principles and criteria for deciding how to prioritise actions (and consequently funding). Supporting those most badly affected is an obvious priority, but the GLA and the wider public sector will need to decide which levers to pull – from lobbying to direct support. Some responses may be reversions of 'business as usual' while other actions will be exceptional, and all parts of London's economy and society will need to develop recovery plans that are guided by good data, the best possible evidence and lessons from policy interventions that have been successfully implemented in similar contexts, and robust economic/social analysis. This literature review is just one element of building that evidence base.

### Purpose

The purpose of this report is to collate literature on the health, social, community, economic and environmental impacts of epidemics, pandemics and other shocks that have had large-scale impacts on different countries and cities internationally. Consideration has been given to literature which examines the typology, geography and temporality of impacts, and who was most impacted by these shocks. We were particularly interested in understanding what the impacts have been on vulnerable individuals such as migrants, low income households/those experiencing poverty, those who are homeless etc.; on civil society and community organisations, businesses, self-employed, gig economy workers and those with irregular hours' contracts, and others.

The review brings together literature on the varied plans, responses, actions and interventions that countries and cities globally have implemented as part of their recovery efforts to mitigate the above impacts over different timescales and geographies, with a focus on those that may be transferable to a London context. We were also interested in literature which documents how individuals and organisations have worked across traditional boundaries to develop effective recovery plans and the lessons this may provide for London's stakeholders around new ways of working and collaborating.

The literature review will help to answer the research question, "What could an effective, evidence-based, long-term plan to drive London's recovery from the impacts of the global pandemic, COVID-19, look like?" It will provide insight and understanding of effective medium and long-term interventions that national, city and local governments, the private sector, civil society and community organisations have enacted to address similar pandemics/large-scale shocks, respectively, to help inform the development and delivery of London's Recovery Programme for the COVID-19 pandemic.

The study was commissioned through IDOX, the GLA's Information Service Provider, with a focus on four themes:

- i. Health impacts (including mental health impacts) and recovery responses;
- ii. Social and community impacts (including a focus on those most impacted such as migrants, low income households, homeless and rough sleepers, civil society and community organisations etc.) and recovery responses (including how civil society and community organisations have survived and rebuilt after a crisis, and the success factors for those organisations that have been able to reshape their role to step into a crisis);
- iii. Economic and business impacts and recovery responses;
- iv. Environmental impacts and recovery responses.

## Definitions

For the purposes of this study, the WHO's definition of a Pandemic is used. It defines a Pandemic as:

"the worldwide spread of a new disease".

WHO defines an Epidemic as:

*The occurrence in a community or region of cases of an illness, specific health-related behaviour, or other health-related event clearly in excess of normal expectancy. The community or region and the period in which the cases occur are specified precisely. The number of cases indicating the presence of an epidemic varied according to the agent, size and type of population exposed to the disease and the time and place of occurrence."*

The 100 Resilient Cities Network defines 'shocks' as "typically single event disasters such as fires, earthquakes and floods", but this term can also be used to describe events such as the financial crisis of 2008.

## Methodology

The review covers literature from the early 20th century to the present day. It specifically looks at literature assessing national, regional, city and local responses to, and/or capturing lessons from 16 different shocks. These shocks are grouped into "Disease Related", "Natural Disasters" and "Other" shocks and will be discussed in separate chapters in that order. The shocks examined, listed in chronological order, are as follows:

## Lessons learned from policy responses to previous pandemic-related & other socio-economic shocks

Event	Shock Type	Timescale	Geography
Spanish Flu pandemic	Disease Related	1918-1920	Worldwide
Asian Flu	Disease Related	1956-1958	Worldwide
HIV/AIDS pandemic	Disease Related	1960 – present	Worldwide
Hong Kong Flu epidemic	Disease Related	1968-1970	East Asia
9/11 Terrorist Attacks	Other	2001	Eastern United States
SARS outbreak	Disease Related	2002-2004	East Asia
Asian Earthquake and Tsunami	Natural Disaster	2004	Indian Ocean
Hurricane Katrina	Natural Disaster	2005	Southern United States
Financial crisis	Other	2008	Worldwide
Flu pandemic (Swine Flu)	Disease Related	2009	Worldwide
Christchurch Earthquakes	Natural Disaster	2010-2011	Christchurch, New Zealand
Middle East Respiratory Syndrome (MERS -CoV)	Disease Related	2012 – Present	Arabian Peninsula, Worldwide
Ebola virus	Disease Related	2013-2016	Worldwide, mostly West Africa
Cape Town Water Crisis	Natural Disaster	2016 – 2018	Cape Town, South Africa
Australian Bush fires	Natural Disaster	2019 – 2020	Australia
Coronavirus pandemic	Disease Related	2019 – Present	Worldwide

The literature examined included:

- Print and social media reports, think pieces and analysis
- Research from think tanks/research, and policy organisations
- Research and policy analysis from civil society organisations, charities, NGOs, voluntary and community organisations
- Research and publications from central, regional, city and local governments/governmental organisations in the UK, Europe and internationally
- Academic research published in the UK, Europe and internationally.

## Pandemic and Epidemic Disease-related Shocks

### Overview

This section of the report focuses on the impacts of, and recovery responses to, previous epidemic and pandemic disease outbreaks, including coronavirus strains similar to COVID-19. These diseases varied substantially in their infectivity and lethality amongst populations. To ensure clarity throughout this report, the outbreaks discussed here are:

- H1N1 (Spanish Flu)
- H2N2 (Asian Flu)
- H3N2 (Hong Kong Flu)
- HIV / AIDS
- Severe Acute Respiratory Syndrome (SARS)
- H1N1 (Swine Flu)
- Middle Eastern Respiratory Syndrome (MERS)
- Ebola Virus

The bracketed names highlighted above shall be used as shorthand for the remainder of this report. For brevity, the generic expressions of “coronaviruses” or “coronavirus strains” will be used for all of the disease outbreaks excluding Ebola and HIV / AIDS. Further details are provided in the table below:

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Name	Year	Origin	Confirmed Infections	Mortality Rate	Details
Spanish Flu, H1N1	1918-1920	Possibly the Midwestern United States <sup>1</sup>	Around 500 million	Estimated at around 10%	Caused up to 200,000 excess deaths in the UK, mainly amongst the young, and 50 million globally <sup>2</sup>
Asian Flu, <sup>3</sup> H2N2	1956-8	Yunnan Province, China	Unknown, probably hundreds of millions worldwide	Estimated at around 0.67%	Very contagious, but mild in most cases, estimated death toll was around 1-2 million, of which 1,800 were in the UK, primarily amongst the elderly <sup>4</sup>
Hong Kong Flu, <sup>5</sup> H3N2	1968-70	Possibly Guangdong Province, China	Unknown, possibly upwards of one billion worldwide	Estimated at around 0.04%	Very mild, but contagious, death toll was between 500,000 and 2 million, of which 46,000 were in the UK, the highest case fatality rate was amongst young children <sup>6</sup>
HIV / AIDS	1960-present	Unknown, probably equatorial Africa	Around 76 million, of which 35 million have died	Unknown	HIV / AIDS had an extremely high death rate at the beginning of the pandemic which was brought down by the therapeutic discoveries of Dr David Ho in 1995. There are currently millions of people living with HIV worldwide. <sup>7</sup>
SARS <sup>8</sup>	2002-4	Guangdong Province, China	8422	11-27%	This virus spread from China to 29 countries, mainly in Eastern Asia, but was not sufficiently infectious to spread far enough to be considered a pandemic outbreak.
Swine Flu, H1N1 <sup>9</sup>	2009	Either Veracruz, Mexico, or Texas / California, USA	18,449 confirmed cases across 214 countries	Unknown	Could be considered "the first influenza pandemic of the 21 <sup>st</sup> century." <sup>10</sup> The literature disagrees on where the pandemic originated, with the US media heavily associating Mexico and Mexicans.
MERS <sup>11</sup>	2012 - present	Jeddah, Saudi Arabia	2494	34.4%	MERS was relatively non-infectious, but there was a highly impactful secondary outbreak of the virus in South Korea in 2015. <sup>12</sup>
Ebola <sup>13</sup>	2013- 2016	West Africa (2014-16) and The Democratic Republic of Congo (2018-Present)	At least 28,646, with 11,323 deaths	39.5%	A highly lethal but relatively non-infectious disease, Ebola's impact has been exacerbated by the poor quality of the affected countries' health infrastructure.

<sup>1</sup> Kilbourne, E. D. (2006) "Influenza Pandemics of the 20th Century" *Emerging Infectious Diseases* vol.12 no.1 p.9-14

<sup>2</sup> Keogh-Brown, M., Wren-Lewis, S., Edmunds, W. J., Beutels, P. and Smith, R. D. (2009) "The possible macroeconomic impact on the UK of an influenza pandemic" *University of Oxford Department of Economics Discussion Paper*: [https://www.economics.ox.ac.uk/materials/working\\_papers/paper431.pdf](https://www.economics.ox.ac.uk/materials/working_papers/paper431.pdf) (last accessed 10/6/20)

<sup>3</sup> Kilbourne "Influenza Pandemics of the 20th Century" p.12

<sup>4</sup> Keogh-Brown et al., "The possible macroeconomic impact of an influenza pandemic"

<sup>5</sup> Saunders-Hastings, P. R. and Krewski, D. (2016) "Reviewing the History of Pandemic Influenza: Understanding Patterns of Emergence and Transmission" *Pathogens* vol.5 no.4 <https://www.mdpi.com/2076-0817/5/4/66> (last accessed 10/6/20)

<sup>6</sup> Ibid.,

<sup>7</sup> Davies, A., Keeble, E., Bhatia, T. and Fisher, E. (2016) "Focus on: Public health and prevention" *Nuffield Trust* p.21 [https://www.nuffieldtrust.org.uk/files/2018-10/1540143793\\_qualitywatch-public-health-and-prevention-full.pdf](https://www.nuffieldtrust.org.uk/files/2018-10/1540143793_qualitywatch-public-health-and-prevention-full.pdf) (last accessed 16/10/20)

<sup>8</sup> Cao, W., Fang L., and Xiao, D., (2019) "What we have learnt from the SARS epidemics in mainland China?" *Global Health Journal*, vol.3 no.3 p.55-59.

<sup>9</sup> Alan J. Mueller (2013) *SPICe Briefing: Pandemic Influenza ("Flu"): An introduction to the animal influenza risk to public health in Scotland and the governance structure in place during a national outbreak*. The Scottish Parliament, Edinburgh p.13-14

<sup>10</sup> Park, M., Openshaw, P. J. M. and Thwaites, R. (2020) "COVID-19: Lessons from SARS and MERS" *European Journal of Immunology* vol.50 no.3 p.308-316.

<sup>11</sup> Cao et al. "What we have learnt from the SARS epidemics in mainland China?"

<sup>12</sup> Oh, M., Park, W. B., Park, S., Choe, P. G., Bang, J. H., Song, K., Kim, E. S., Kim, H. B. and Kim, N. J. (2018) "Middle East respiratory syndrome: what we learned from the 2015 outbreak in the Republic of Korea" *Korean Journal of Internal Medicine* vol.33 no.2 p.234

<sup>13</sup> Coltart, C., Lindsey, B., Ghinai, I., Johnson, A. and Heymann, D. L. (2017) "The Ebola outbreak, 2013-2016: old lessons for new epidemics" *Philosophical Transactions of the Royal Society B: Biological Sciences* no.372



It is worth noting that these infection and mortality figures are likely to be under-representations due to inadequate testing and mild infections not being reported.

## Impacts

### Environmental impacts

The literature reviewed on pandemics and epidemics made no mention of the environmental impacts of these outbreaks. The more widespread earlier outbreaks did not see any academic interest in these matters, whilst the more recent instances were contained and neutralised before they could significantly impact air travel or road use to the same extent that COVID-19 has. There was no physical destruction to deal with, nor were the lockdown policies implemented severe or long-lasting enough to have a significant impact. Since these pandemics affected human health, rather than the physical environment, it is safe to say that there were few significant environmental impacts of any of these outbreaks beyond a slight improvement in air quality due to lower consumer demand. Life quickly returned to “normal” following the coronavirus outbreaks, so any impacts were largely short-lived.

### Economic impacts

From an epidemiological standpoint, none of the disease outbreaks investigated, except for the 1918 Spanish Flu pandemic, combined the extreme communicability and relatively severe health impacts that characterises COVID-19. Despite having high fatality rates, the low reproduction rates of SARS and MERS, and the fact that they occurred in countries with sophisticated public health infrastructures, meant that they could be quickly contained before nationwide lockdown policies became necessary. The relatively low fatality rates of the other coronavirus strains investigated meant that they passed through the population without eliciting the kind of measures we are currently seeing. Ebola and HIV have caused many excess deaths but are spread through the mixing of bodily fluids rather than airborne particle transmission and have therefore been transmitted much more slowly. The vast socio-economic differences between 1918 and now make direct comparisons between COVID-19 and Spanish Flu, difficult. However, one lesson from the Spanish Flu pandemic is that those areas which implemented the strictest measures, most quickly, and for longest, minimised the spread of the virus and subsequently experienced stronger recoveries, may prove to be relevant to this current pandemic.<sup>14</sup>

The economic impacts of the more recent disease outbreaks investigated, aside from the direct costs of treatment and mortality, therefore derived primarily from actions taken by governments or cities to control and contain the viruses that resulted in widespread changes in public behaviour.<sup>15</sup> Such behaviours included the avoidance of public spaces and deferral of travel arrangements. Much of the literature agrees that, in the instance of novel infectious diseases, the changes to consumer habits were disproportionately impactful when compared to the real infection and mortality rates, and therefore that the economic impact was always disproportionate to the impact on public health.<sup>16</sup> The economic impacts of pandemics can also derive from mortality, direct absenteeism (due to illness) and indirect absenteeism (due to avoidance of the workplace, childcare concerns etc.).<sup>17</sup> Where school and workplace closures were imposed, mass absenteeism (due to

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<sup>14</sup> Correia, S., and Luck, S., (2020) “How can we save lives and the economy? Lessons from the Spanish Flu pandemic” *World Economic Forum* (2 April 2020): <https://www.weforum.org/agenda/2020/04/pandemic-economy-lessons-1918-flu/> (last accessed 10/6/20) p.1

<sup>15</sup> Noy, I. and Shields, S. (2019) “The 2003 Severe Acute Respiratory Syndrome Epidemic: A Retroactive Examination Of Economic Costs” *Asian Development Bank Economics Working Paper Series* No 591.

<sup>16</sup> Ibid., ; Lee, S. (2015) “Costly Lessons From the 2015 Middle East Respiratory Syndrome Coronavirus Outbreak in Korea” in *Journal of Preventative Medicine and Public Health* vol.48 no.6 p.274-276.

<sup>17</sup> Lee, “Costly Lessons”

illness and childcare concerns) caused a greater impact on the economy than disease-related mortality or morbidity.<sup>18</sup> Even so, the immediate revenue losses experienced due to these outbreaks was significant. The 2015 MERS outbreak is estimated to have cost the South Korean economy 8.5 billion USD, whilst the SARS outbreak is estimated to have caused a 30-100 billion USD hit to the global economy.<sup>19</sup> However, these outbreaks solely impacted consumer demand, rather than the global supply chain, and were eliminated before they spread far enough to impact the regions' manufacturing base. This meant that, once the risk had cleared and consumer confidence was restored the affected (and advanced) economies of East Asia experienced gains "usually equivalent" to their initial downturns.<sup>20</sup> Mexico's less prepared economy suffered a revenue loss of at least 2.8 billion USD due to the Swine Flu epidemic, much of which was never recovered, and economic growth slowed as a result.<sup>21</sup>

As with the current pandemic, the hospitality sector in general, and tourism, in particular, were hit quickest and hardest by these outbreaks. Following news of the SARS outbreak in Hong Kong, hotel occupancy fell to 20% as opposed to 85% + for the year before. Similarly, the 2015 outbreak of MERS in South Korea saw a 37.5% drop in tourist arrivals between June and September 2015 when compared with the year before.<sup>22</sup> The vulnerability of an economy to these changes in consumer behaviour therefore depends on its reliance on these sectors that require face-to-face interaction. For instance, Hong Kong was hit particularly hard during the SARS outbreak since 75% of its economic output came from the service sector, of which 60% was derived from retail and tourism, so it was significantly impacted by the changes of consumer behaviour.<sup>23</sup> Relatively few deaths and infections therefore generated a disproportionate economic impact. Mexico, where tourism constitutes a much higher portion of GDP than these "Asian tiger" economies, took a "heavy but short term" hit from the disproportionate international response to the 2009 H1N1 outbreak.<sup>24</sup> A large number of national governments advised the avoidance of travel to Mexico, resulting in a 50% fall in flight sales by Mexican airlines and a drop in hotel occupancy rates from 80% to perhaps as low as 4%.<sup>25</sup> The knock-on effects of the virus were felt much more broadly throughout the economy. Mexican taxi drivers, for instance, reported a 50% drop in fares during this time. It is also worth noting that, in the case of travel or leisure activities, these losses were not recovered after the restrictions were eased or consumer behaviour returned to normal. This is because people were unable to significantly increase their consumption in these

<sup>18</sup> Keogh-Brown et al., "The possible macroeconomic impact of an influenza pandemic"

<sup>19</sup> Oh et al. "Middle East respiratory syndrome"; Qiu, W., Chu, C., Mao, A. and Wu, J. (2018) "The Impacts on Health, Society, and Economy of SARS and H7N9 Outbreaks in China: A Case Comparison Study" *Hindawi Journal of Environmental and Public Health* <https://www.hindawi.com/journals/jeph/2018/2710185/> (last accessed 10/6/20); Jung, E. and Sung, H. (2017) "The Influence of the Middle East Respiratory Syndrome Outbreak on Online and Offline Markets for Retail Sales" *Sustainability* vol.9 no.3 p.10; Keogh-Brown, M. and Smith, R. D. (2008) "The economic impacts of SARS: How does the reality match the predictions?" in *Health Policy* vol.88 no.1 p.114.

<sup>20</sup> Noy and Shields, "The 2003 Severe Acute Respiratory Syndrome Epidemic"; Siu, A. and Wong, Y. C. R. (2004) "Economic Impact of SARS: The Case of Hong Kong" *Asian Economic Papers* vol.3 no.1 p.65

<sup>21</sup> Rassy, D. and Smith, R. D. (2013) "The economic impact of H1N1 on Mexico's tourist and pork sectors" *Health Economics* vol.22 no.7 p.828.

<sup>22</sup> Joo, H., Maskery, B., Berro, A., Rotz, L., Lee, Y. and Brown, C. (2019) "Economic of the 2015 MERS Outbreak on the Republic of Korea's Tourism-Related Industries" in *Health Security* vol.17 no.20 p.105.

<sup>23</sup> Lee, J. and McKibbin, W. (2004) "Estimating the Global Economic Costs of SARS" in Knobler, S. Mahmoud A. and Lemon, S. (eds) *Learning from SARS: Preparing for the Next Disease Outbreak -- Workshop Summary* <https://www.ncbi.nlm.nih.gov/books/NBK92473/> (last accessed 10/6/20)

<sup>24</sup> Rassy and Smith, "The economic impact of H1N1 on Mexico's tourist and pork sectors" p.5; Villanueva, E., "The Impact of Swine Flu on Tourism," *BBVA Research* (2009): [https://www.bbvarsearch.com/wp-content/uploads/mult/090625\\_ObserSectorialMexico\\_3\\_eng\\_tcm348-197121.pdf](https://www.bbvarsearch.com/wp-content/uploads/mult/090625_ObserSectorialMexico_3_eng_tcm348-197121.pdf) (last accessed 10/6/20): Tourism contributes around 10% of the GDP of China, South Korea and Taiwan, roughly the same as the UK. Around 17% of Mexico's GDP is derived from tourism.

<sup>25</sup> Monterrubio, C. (2010) "Short-term economic impacts of influenza A (H1N1) and government reaction on the Mexican tourism industry: an analysis of the media" in *International Journal of Tourism Policy* vol.3 no.1 [https://www.researchgate.net/publication/249922736\\_Short-term\\_economic\\_impacts\\_of\\_influenza\\_A\\_H1N1\\_and\\_government\\_reaction\\_on\\_the\\_Mexican\\_tourism\\_industry\\_An\\_analysis\\_of\\_the\\_media](https://www.researchgate.net/publication/249922736_Short-term_economic_impacts_of_influenza_A_H1N1_and_government_reaction_on_the_Mexican_tourism_industry_An_analysis_of_the_media) (last accessed 10/6/20)

areas. Lost opportunities for retail consumption are more likely to be deferred, so there is more likely to be a “bounce back” of increased consumption following the easing of lockdown restrictions.<sup>26</sup>

Offline retail revenue fell significantly during the MERS and SARS outbreaks in East Asia, as people sought to avoid public spaces, but these were offset by significant, but not inversely proportional, upticks in e-commerce.<sup>27</sup> Indeed, China’s experience of SARS in 2002 has been retrospectively assessed as speeding up the transition to online retail.<sup>28</sup> Models suggest that supply and demand of consumer products should fall in relative proportionality during a pandemic shock, cancelling each other out and not leading to significant inflation or deflation.<sup>29</sup> The evidence from the more contemporary coronavirus outbreaks suggests that the recovery of the retail sector depends on two things: whether the virus is quickly contained and, given this, that consumer confidence in the response’s effectiveness and the safety of public spaces is quickly restored. This will prevent retail spaces being associated with infection risk long after this threat has subsided. Following the successful containment of the SARS, MERS and Swine Flu outbreaks, the successes of active efforts to restore consumer confidence mitigated the risk of long-term economic impacts.<sup>30</sup> This resulted in “V-shaped” economic recoveries once the threat of the virus had passed and the public felt reassured that it was safe to continue as normal. It took only three months (late April – late July 2003) for Chinese retail sector performance to return to the levels it had experienced before the SARS outbreak, whilst in Mexico, tourism numbers had completely recovered by the end of 2009, half a year after the first reports of an outbreak.<sup>31</sup>

## Social impacts

The social impacts of these disease outbreaks did not affect the population equally, with the greatest burden being placed on those who were most “vulnerable.”<sup>32</sup> It is worth noting that “vulnerability” in this context refers to both health vulnerability, including the elderly and those with underlying health conditions, and socio-economic vulnerability, meaning those with insecure employment status, a lack of financial stability, and those in marginalised groups. There was considerable overlap between the two in all of the contexts examined. To prevent confusion, for the remainder of this report vulnerability to disease will be termed “vulnerability,” whilst socio-economic vulnerability to shocks to the labour market, money economy etc. will be termed “disadvantage.”

The sudden changes in consumer behaviour due to the MERS outbreak in South Korea impacted those working in hospitality and retail the hardest.<sup>33</sup> Many were laid off and were unable to find other work as companies throughout the sector sought to hire fewer people. Similarly, the SARS outbreak hit Hong Kong during a time when the labour market was already experiencing depression, so getting unemployed- or under-employed people back to work was difficult.<sup>34</sup> The structural inequalities of the economies hit by these epidemics were consistently exacerbated due to the impacts of these diseases, as those already

<sup>26</sup> Keogh-Brown et al., “The possible macroeconomic impact of an influenza pandemic”

<sup>27</sup> Noy and Shields, “The 2003 Severe Acute Respiratory Syndrome Epidemic” ; Jung and Sung “The Influence of the Middle East Respiratory Syndrome Outbreak on Online and Offline Markets”

<sup>28</sup> Reeves, M., Fæste, L., Chen, C., Carlsson-Szlezak, P. and Whitaker, K. (2020) “How Chinese Companies Have Responded to Coronavirus” *Harvard Business Review* <https://hbr.org/2020/03/how-chinese-companies-have-responded-to-coronavirus> (last accessed 10/6/20)

<sup>29</sup> Keogh-Brown et al., “The possible macroeconomic impact of an influenza pandemic”

<sup>30</sup> Keogh-Brown and Smith “The economic impacts of SARS” p.113

<sup>31</sup> Rassy and Smith, “The economic impact of H1N1”

<sup>32</sup> Lee, A. and Cho, J. (2016) “The Impact of Epidemics on Labor Market: Identifying victims of the MERS in the Korean Labor Market” in *International Journal for Equity in Health* vol.15 no.196 <https://equityhealth.biomedcentral.com/articles/10.1186/s12939-016-0483-9> (last accessed 10/6/20)

<sup>33</sup> Ibid.

<sup>34</sup> Siu and Wong, “Economic Impact of SARS: The Case of Hong Kong” p.66

economically disadvantaged (and therefore “vulnerable” to shocks) bore the brunt of job losses. Following the return to “normal” consumer behaviour, the re-uptake of the recently employed was not consistent. Those who were socio-economically disadvantaged, but young, and therefore not seen as vulnerable to the virus itself, were re-hired at a much greater rate than those who were both socio-economically disadvantaged and perceived to be more at higher risk from the virus, such as elderly and disabled people.<sup>35</sup> It is worth noting that, although changes in consumer behaviour in response to an epidemic are reasonable, they can also be irrational. “Swine Flu” disproportionately impacted the sale of pork products due to its inaccurate name, for instance.<sup>36</sup>

The spontaneous and irrational infection-avoidance behaviours that characterise public responses to outbreaks of novel infectious diseases are often informed by existing socio-cultural biases within the population, and therefore often reinforce existing inequalities between social groups. Black and Minority Ethnic (BAME) and other minority groups in the West have often been additionally marginalised and demonised as carriers of the disease during these instances and these fears are often weaponised to promote discriminatory narratives. The HIV / AIDS pandemic particularly demonstrates the damaging impact that association between a marginalised community and infectious disease, in this case primarily the LGBTQI+ community, can have. Moralistic associations of HIV infection with “promiscuity” in the United States, even within the LGBTQI+ community itself, stymied the public health response to AIDS and neglected the myriad socio-economic factors that influenced the likelihood of infection.<sup>37</sup> From the 1980s onwards the majority of HIV cases in the United States have affected sexual and racial minorities, with poverty, discrimination and inequality, amongst other social factors, facilitating HIV transmission by influencing local disease prevalence, the availability of diagnosis, and individual risk behaviours.<sup>38</sup>

Although it is uncertain from where the 2009 Swine Flu outbreak emerged, it was heavily associated with Mexican pig farms in the mainstream media in the United States, and with the Hispanic-American population in general.<sup>39</sup> The media hysteria around the “fajita flu” therefore singled out Hispanics as guilty of carrying the flu, and unfairly associated culturally-specific behaviours with likelihood to spread the disease.<sup>40</sup> This added to existing fears over border security and other discriminatory assumptions towards Hispanics an understandable fear of infection, leading to the widespread marginalisation of Latino-Americans irrespective of their national origin. White Americans, although at a lower risk of infection than Latinos, feared the virus much more due to the mutual reinforcement of these fears.<sup>41</sup> Similarly, during the SARS outbreak, people in Toronto, Canada heavily associated the virus with Asian communities and their cultural habits.<sup>42</sup> As a result, Asian-owned businesses suffered disproportionately from changes in consumer behaviour to avoid infection.<sup>43</sup> The literature also suggests the decisions to contain the spread of infectious

<sup>35</sup> Lee and Cho, “The Impact of Epidemics on the Labor Market”

<sup>36</sup> Monterubbio, “Short-term economic impacts of influenza A”

<sup>37</sup> Wright, J. (2013) “Only Your Calamity: The Beginnings of Activism by and for People With AIDS” *The American Journal of Public Health*, vol.103 no.10 p. 1792; White, E. (2020) “Fear, bigotry and misinformation – this reminds me of the 1980s Aids pandemic” *The Guardian* (6 April 2020). <https://www.theguardian.com/commentisfree/2020/apr/06/1980s-aids-pandemic-coronavirus-gay-community-survive> (last accessed 14/9/20)

<sup>38</sup> Pellowski, J. A., Kalichman, S. C., Matthews, K. A. and Adler, N. (2013) “A pandemic of the poor: social disadvantage and the U.S. HIV epidemic” *American Psychologist* vol.68 no.4 p.198.

<sup>39</sup> Lin, L., Savoia, E., Agboola, F. and Viswanath, K.(2014) “What Have We Learned About Communication Inequalities During the H1N1 Pandemic: A Systematic Review of the Literature” in *BMC Public Health* <https://bmcpublichealth.biomedcentral.com/articles/10.1186/1471-2458-14-484> (last accessed 10/6/20)

<sup>40</sup> McCauley, M., Minsky, S. and Viswanath, K. (2013) “The H1N1 pandemic: media frames, stigmatization and coping” *BMC Public Health* vol.13 no.1113.

<sup>41</sup> Ibid.

<sup>42</sup> Meuller: *SPICe Briefing: Pandemic Influenza (“Flu”)*; Blendon, R. J., Benson, J., DesRoches, C., Raleigh, E. and Taylor-Clark, K. (2004) “The Public’s Response to Severe Acute Respiratory Syndrome in Toronto and the United States” *Clinical Infectious Diseases* vol.38 no.7 (1 April 2004) p.925-931.

<sup>43</sup> Blendon et al., “The Public’s Response to SARS in Toronto”

diseases are political in both their rationale and their impact. Toronto quarantined far more people than any other infected city with little central oversight, and minority groups, particularly Asian-Canadians, were targeted disproportionately.<sup>44</sup> With few high-profile denunciations of these policies, the social exclusion experienced by Asian-Canadians from spontaneous changes in consumer behaviour were compounded by the implicit governmental association between this minority and the risk of infection.<sup>45</sup>

## Policy responses

Since the majority of the outbreaks discussed, all, except Spanish Flu, were not nearly as severe as the current strain of coronavirus which we are dealing with, these outbreaks were quickly contained and eliminated, and economic recovery was relatively quick, displaying a “V-shaped” economic pattern. Most of the economic policy responses, therefore, focused on short-term solutions to restore consumer confidence. There were no mentions in the literature of national-level economic responses to the Spanish Flu, since the pandemic coincided with the end of the First World War. The economic recovery of Europe was therefore addressed by the Dawes and Young Plans (1924 and 1929 respectively), a series of American loans to repair the continent’s shattered post-war economy.

During many of these pandemics, local and national governments introduced public information campaigns to make sure that the public was aware of the risks of disease, and the steps that were being taken to address them. The Conservative government’s “Don’t Die of Ignorance” campaign was considered particularly successful in communicating the risks of HIV to the British population in the late 1980s, however there were also widespread concerns about its stigmatising of the LGBTQI+ community.<sup>46</sup> More recently, the 2015-19 London HIV Prevention Programme (LHPP) saw great success in encouraging HIV testing. After introduction of a widescale public information campaign, called “Do it London,” across numerous media, new HIV infections fell by 42% in a year.<sup>47</sup> This programme was widely publicised on London’s transport network and demonstrated, in the words of its lead commissioner, that “political leadership, public health expertise, strong and unified program management and a city-wide approach can align to deliver powerful results.”<sup>48</sup>

The governments of Taiwan and Hong Kong, following the outbreak of SARS, introduced numerous tourism promotional packages in order to encourage visitors to return. The Hong Kong hotel industry rolled out the “Be Our Guest” programme that covered the entire city and offered rooms at reduced rates, coordinated across the industry, to prevent damaging competition.<sup>49</sup> Meanwhile, the Taiwanese government worked with the industry to roll out joint promotion programmes, specifically targeting tourists from Hong Kong.<sup>50</sup> This policy was very successful, with tourist arrivals increasing by 8% per month and recovering to 90% by the end of the year.<sup>51</sup> Mexico introduced tax cuts for the tourism sector to ease the impact of revenue losses

<sup>44</sup> Kaporiri, L. and Ross, A. (2020) "The Politics of Disease Epidemics: a Comparative Analysis of the SARS, Zika, and Ebola Outbreaks" *Global Social Welfare* vol.7 p.34.

<sup>45</sup> *Ibid.*, p.38

<sup>46</sup> Burgess, Adam (2017) "The Development of Risk Politics in the UK: Thatcher’s ‘Remarkable’ but Forgotten ‘Don’t Die of Ignorance’ AIDS Campaign" in *Health, Risk and Society* vol.19 no.5 p.229.

<sup>47</sup> Steinberg, P. (2018) "How we're cutting HIV diagnoses in London" *Local Government Chronicle* no.7722 p.14-15.

<sup>48</sup> *Ibid.*, p.15

<sup>49</sup> Lo, A. S., Law, R. and Cheung, C. (2003) "The survival of hotels during disaster A case study of Hong Kong in 2003" in *Asia Pacific Journal of Tourism Research* vol.11 no.1 p.65-70.

<sup>50</sup> Mao, C., Ding, C. and Lee, H. (2010) "Post-SARS tourist arrival recovery patterns: An analysis based on a catastrophe theory" *Tourism Management* vol.31 p.856

<sup>51</sup> *Ibid.* p.862

from Swine Flu and invested 1.2 billion USD into international advertising campaigns to encourage tourists to return.<sup>52</sup>

## Lessons learned

### **There needs to be constant monitoring of the situation as we transition from response to recovery.**

- The 2015 South Korean epidemic of MERS occurred three years after the original outbreak in Saudi Arabia, implying that coronaviruses should not be forgotten following initial successes in bringing an outbreak under control.<sup>53</sup>
- China's experiences of the SARS epidemic and the lessons learned there, leading to the development of a disease surveillance system and rapid crisis response protocols, are a key reason as to why they have been so much more successful at containing COVID-19 than the West has been.<sup>54</sup>

### **Another important dimension to monitor is secondary health complications arising from the virus.**

- Spanish Flu was reported to have led to greater deterioration of health in old age.<sup>55</sup> There were also reported knock-on effects on unborn children including higher rates of disability, and lower educational attainment and wages. The longer-term effects of COVID-19 will need to be monitored to assess whether the pandemic gives rise to long-lasting health impacts.<sup>56</sup>
- As we do not yet know the long-term impacts of COVID-19 on public health, a recovery programme should also monitor developments in our understanding of the virus, and should be prepared to advocate for healthcare reform should long-term complications, such as immunodeficiency, affect those who have been infected.

### **London should avoid a premature relaxation of lockdown restrictions.**

- Undoubtedly, concerns about the economic impacts of measures to contain the virus are significant, however this needs to be carefully balanced against a clear and effective public health response that is widely communicated as past evidence demonstrates, for example, that the premature relaxation of restrictions and the dissemination of an "all clear" message by the media led to a secondary outbreak of SARS in Toronto. This led to a greater economic impact in the long term.<sup>57</sup>
- Since it is impossible to predict a second wave, the evidence suggests that it may be advisable to encourage frontline staff and those involved in immediate response activities to take some time off

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<sup>52</sup> Monterrubio, "Short-term economic impacts of influenza A"

<sup>53</sup> Kim, K. and Jung, K. (2018) "Dynamics of Interorganizational Public Health Emergency Management Networks: Following the 2015 MERS Response in South Korea" *Asia Pacific Journal of Public Health* vol.30 no.3 p.210.

<sup>54</sup> Cao et al., "What we have learnt from the SARS epidemics in mainland China?"

<sup>55</sup> Karlsson, M. and Pichler, S. (2014) "The impact of the 1918 Spanish flu epidemic on economic performance in Sweden: An investigation into the consequences of an extraordinary mortality shock" *Journal of Health Economics* vol.36 p.15

<sup>56</sup> Garrett, T. A. (2007) "Economic effects of the 1918 influenza pandemic: implications for a modern-day pandemic" *Federal Reserve Bank of St. Louis Review* vol.90 no.2 p.79

<sup>57</sup> Liu, R., Wu, J. And Zhu, H. (2007) "Media/psychological impact on multiple outbreaks of emerging infectious diseases" *Computational and Mathematical Methods in Medicine* vol.8 no.3 p.155.

to recuperate in the period immediately following a first wave of an outbreak, which will improve organisations' abilities to respond if another wave emerges and help with staff morale.<sup>58</sup>

- The evidence also suggests that to ensure that we don't encounter a second wave, a public information campaign on the continued dangers of infection must remain in place as we transition back to business as usual. Evidence tells us that with coronavirus outbreaks, especially, a second wave is usually more devastating than the first.<sup>59</sup>

### **Public information is crucial to the success of the recovery, and the avoidance of a second wave.**

- WHO recommends the maintenance of a public information campaign long after the risks of the virus have apparently subsided. This will ensure that public behaviours do not return to normal too quickly due to a false sense of security<sup>60</sup>
- Government information on the spread and containment of an outbreak is the most common source of information for the general public. As such, local and national media should be frequently reviewed throughout the recovery process to gauge public perceptions and combat sensationalist misinformation.<sup>61</sup>
- This approach includes combatting of "fake news" and conspiracy theories online, which was particularly adept at inspiring hysteria during South Korea's 2015 MERS outbreak.<sup>62</sup>
- The Mayor of London can use his platform to ensure that the easing of lockdown is safe, by initiating and supporting public information campaigns to ensure Londoners remain aware that the risks have not subsided, and are given clear information on the measures they need to take to be safe.
- Experience from past outbreaks suggests that public perceptions can be contradictory. A premature relaxation of restrictions and dissemination of an "all clear" message could lead to a second wave of infections, but failure to address the climate of fear caused by the virus may lead to disproportionate risk-perceptions of infection, preventing public consumption behaviours from recovering and damaging businesses, long after the risk has subsided.<sup>63</sup>
- A robust public information campaign is essential during a vaccine rollout. Polls following the 2009 Swine Flu outbreak showed that those who felt sufficiently informed by the local health authorities were far more likely to seek vaccination than those who felt ignored.<sup>64</sup>

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<sup>58</sup> Department of Health (2012) "Health and Social Care Influenza Pandemic Preparedness and Response" (April 2012): [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/213696/dh\\_133656.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/213696/dh_133656.pdf) (last accessed 30/09/20)

<sup>59</sup> Saunders-Hastings and Krewski "Reviewing the History of Pandemic Influenza" p.212

<sup>60</sup> Kim and Jung, "Dynamics of Interorganizational Public Health Emergency Management Networks" p.212

<sup>61</sup> Ibid., p.215; Noy and Shields "The 2003 Severe Acute Respiratory Syndrome Epidemic"

<sup>62</sup> Choi, D., Yoo, W., No, G. and Park, K. (2017) "The impact of social media on risk perceptions during the MERS outbreak in South Korea" in *Computers in Human Behavior* vol.72 p.422-425.

<sup>63</sup> Noy and Shields, "The 2003 Severe Acute Respiratory Syndrome Epidemic" ; Brahmabhatt, M., and Dutta, A.(2008) "On SARS Type Economic Effects during Infectious Disease Outbreaks" *World Bank Policy Research Working Paper* <http://documents.worldbank.org/curated/en/101511468028867410/On-SARS-type-economic-effects-during-infectious-disease-outbreaks> (last accessed 10/6/20)

<sup>64</sup> Lin, L., Savoia, E., Agboola, F. and Viswanath, K.(2014) "What Have We Learned About Communication Inequalities During the H1N1 Pandemic: A Systematic Review of the Literature" in *BMC Public Health* <https://bmcpubhealth.biomedcentral.com/articles/10.1186/1471-2458-14-484> (last accessed 10/6/20)



- War-time efforts to censor the reporting of Spanish Flu severely exacerbated the impact of the disease. Openness, even with bad news, is crucial.<sup>65</sup>
- The successes of the LHPP's "Do it London" campaign demonstrates the importance of a wide-reaching public information campaign and shows how effective collaboration between London boroughs can be when working across borough and party-political lines.<sup>66</sup>

**It is critical to secure public trust by spreading information on the virus itself, the ongoing public health situation, and recovery plans.**

- The experience of Singapore during the MERS outbreak shows that public cooperation with public health response measures correlated more strongly where citizens had greater trust in the institutions perceived to be taking a leading role in response and recovery, rather than just with knowledge of the disease itself.<sup>67</sup>
- An extreme example is that of Sierra Leone during the 2014-16 Ebola outbreak, where widespread distrust of state institutions led to active resistance of health interventions, including attacks on medical personnel.<sup>68</sup>

**A particular effort must be made to spread information to minority communities**

- Trust in government institutions is usually lower amongst excluded communities than for the majority population. Working with faith or community groups is a beneficial way of spreading information in a culturally contextualised way, and will allow for a greater understanding of the different coping mechanisms of different groups.<sup>69</sup>
- The young, minority communities, and low-skilled workers should be particularly targeted by public information campaigns, and communication efforts should be tailored appropriately to those most at risk from the virus.<sup>70</sup>
- The evidence suggests that in the case of COVID-19, all public information should be tailored to the wide array of cultural contexts in London, so as to utilise existing community support networks in recovery, and preventing a "one size fits all" policy towards recovery support that may alienate minority communities.<sup>71</sup> Meaningful engagement with community groups and civil society will help to ensure that recovery plans are adapted to their specific contexts, and are therefore likely to make the recovery programme more effective.

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<sup>65</sup> Martini, M, Gazzaniga, V., Bragazzi, N. L. and Barberis, I. (2019) "The Spanish Influenza Pandemic: A Lesson From History 100 Years After 1918" *Journal of Preventive Medicine and Hygiene*, vol.60 no.1 p.64-67.

<sup>66</sup> Steinberg "How we're cutting HIV diagnoses in London" p.15

<sup>67</sup> Hou, Y., Tan, Y., Lim, W., Lee, V., Wei Lin Tan, L., Chen, M and Yap, P., (2018) "Adequacy of public health communications on H7N9 and MERS in Singapore: insights from a community based cross-sectional study" *BMC Public Health* vol.18 no.236 (2 April 2018) <https://bmcpublihealth.biomedcentral.com/articles/10.1186/s12889-018-5340-x> (last accessed 10/6/20)

<sup>68</sup> Rubyan-Ling, D. (2015) "Briefing Paper: Diaspora communications and Health seeking behaviour in the time of Ebola: findings from the Sierra Leonean community in London" *Ebola Response Anthropology Platform* [http://www.ebola-anthropology.net/key\\_messages/diaspora-communications-and-health-seeking-behaviour-in-the-time-of-ebola-findings-from-the-sierra-leonean-community-in-london-2/](http://www.ebola-anthropology.net/key_messages/diaspora-communications-and-health-seeking-behaviour-in-the-time-of-ebola-findings-from-the-sierra-leonean-community-in-london-2/) (last accessed 10/6/20)

<sup>69</sup> McCauley et al., "The H1N1 pandemic: media frames, stigmatization and coping"

<sup>70</sup> Lin et al., "What Have We Learned About Communication Inequalities During the H1N1 Pandemic"

<sup>71</sup> Burgess "The Development of Risk Politics in the UK" p.239



- The experience of the Sierra-Leonean community in the UK during the Ebola outbreak also shows that diaspora communities are a powerful means of spreading health consciousness to countries with poor health infrastructures and low levels of institutional trust.<sup>72</sup> This was achieved by the utilisation of interpersonal networks between individuals in Britain and those in the country they emigrated from.

### **Local and regional governments and their partners should lead recovery responses to disease-related shocks**

- As seen during South Korea's experiences of MERS in 2015, the national government's reluctance to delegate authority to local bodies meant that the response to the virus was centralised and based on very limited experience and limited local knowledge, which exacerbated the scale of the problem.<sup>73</sup>
- The experience of SARS demonstrates that solely having national governments at the helm of recovery processes may not be the most effective response as the cooperation of local authorities and organisations in their specific contexts is a much more holistic and effective approach to coordinating response and recovery.

### **The tourism and hospitality industries are likely to be the most heavily impacted sectors of the economy. The effective recovery of the tourism and hospitality industries requires coordination between key stakeholders and local government.**

- The experience of Hong Kong post-SARS shows that the cohesiveness of the Hong Kong hotel industry increased as a result of the SARS recovery, with information sharing and best practice becoming more common.<sup>74</sup> Involving all major tourism stakeholders early on in planning a coordinated recovery strategy that will work for the sector is essential.<sup>75</sup>
- By fostering unity within the sector, contradictory messages can be avoided, allowing consumer confidence to return more quickly.<sup>76</sup> Existing industry representative groups should be integral to developing and communicating sector-specific solutions.
- As lockdown restrictions are eased and mass gatherings are permitted, robust risk assessments should be undertaken to help keep event attendees safe, including how they travel to and from venues.<sup>77</sup>

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<sup>72</sup> Coltart et al., "The Ebola outbreak, 2013–2016: old lessons for new epidemics"

<sup>73</sup> Lee and McKibbin, "Estimating the Global Economic Costs of SARS"

<sup>74</sup> Mao et al., "Post-SARS tourist arrival recovery patterns"

<sup>75</sup> Ibid.

<sup>76</sup> Department of Health "Health and Social Care Influenza Pandemic Preparedness and Response"

<sup>77</sup> WHO (2018) "Considerations for mass gathering events and Middle East respiratory syndrome coronavirus (MERS-CoV)" [https://www.who.int/csr/disease/coronavirus\\_infections/mers\\_mass\\_gatherings/en/](https://www.who.int/csr/disease/coronavirus_infections/mers_mass_gatherings/en/) (Last accessed 10/6/20)

**Social cohesion will likely be negatively impacted by the coronavirus outbreak. It is critical that public information campaigns are framed in a way that does not demonise minority communities, and actively combats discrimination.**

- During the first wave of COVID-19, hate crimes against Chinese people (seen as a source of the virus at the time) in London tripled on previous years.<sup>78</sup> Whilst the overall reporting of crime is down due to the lockdown measures, this spike is particularly concerning.
- The evidence shows that demonisation of a particular minority community can spread to other minority groups. This was seen in the collective avoidance of Asian-owned businesses during Toronto's SARS outbreak, or Hispanic ones during the Swine Flu outbreak.<sup>79</sup> In both these cases, fear of infection was initially associated in the media with one minority group, Chinese-Canadians and Mexican-Americans respectively, but reinforced into a more generalised fear of "the other" over time.
- The Mayor of London can, and has, used his voice to call out discriminatory narratives and behaviour, reaffirm his commitment to making London a city that remains open, safe and fair for all its communities, and in which diverse communities live well together.<sup>80</sup>
- It is critical to actively combat the "politics of blame" that seeks to assign responsibility for virus onto the individuals or communities, whilst neglecting the impact of existing socio-economic inequalities on the risk of infection and the severity of symptoms. The international response to the outbreak of Ebola in 2014 primarily blamed West African cultural traits for the extreme severity of the disease, meaning that the health authorities did not act decisively enough in its early response to the disease.<sup>81</sup> The devastating effect of AIDS during the 1980s was, in part, due to the social stigmatisation of the LGBTQI+ community at the time, with alleged "sinfulness" being seen as a key cause of infection.
- Evidence is showing that COVID-19 is exacerbating and deepening existing socio-economic disadvantages and structural inequalities, resulting in a disproportionate death toll of individuals from BAME and other marginalised communities. This concurs with the evidence from earlier virus outbreaks examined in the literature review, which found that negative impacts fell disproportionately on the poor, and on BAME, or minority groups.<sup>82</sup>
- It is also important to highlight that the disproportionate impacts of COVID-19 are just one facet of structural inequalities which negatively impact the health outcomes of minority groups.<sup>83</sup> By widening the conversation beyond the narrow parameters of COVID-19, the narrative of personal responsibility for infection can be neutralised, whilst also encouraging a more direct confrontation of many other inequalities that many Londoners face.

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<sup>78</sup> Mercer, D. (2020) "Coronavirus: Hate crimes against Chinese people soar in UK during COVID-19 crisis" (5<sup>th</sup> May 2020), *Sky News* <https://news.sky.com/story/coronavirus-hate-crimes-against-chinese-people-soar-in-uk-during-covid-19-crisis-11979388> (Last accessed: 02/06/20)

<sup>79</sup> Blendon et al., "The Public's Response to SARS in Toronto" ; Kipiriri and Ross: "The Politics of Disease Epidemics" ; McCauley et al., "The H1N1 pandemic: media frames, stigmatization and coping"

<sup>80</sup> Kipiriri and Ross: "The Politics of Disease Epidemics"

<sup>81</sup> Ibid.,

<sup>82</sup> Garrett, "Economic effects of the 1918 influenza pandemic"

<sup>83</sup> Scott, S. D., Pringle, A. and Lumsdaine, C. (2004) *Sexual Exclusion – Homophobia and health inequalities: a review* (ed. Jennett, Mark) UK Gay Men's Health Network: London.

- Public health interventions, including social distancing, are likely to have negatively impacted all social relations.<sup>84</sup> Therefore, funding for community organisations and the strengthening of social infrastructure over the long term should be incorporated into the COVID-19 response and recovery. Empowering communities through the establishment of cooperatives, as was done in Norway following the Spanish Flu outbreak, encouraged civic participation and fostered social integration, whilst also helping with food security amongst the poor.<sup>85</sup>

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<sup>84</sup> Rao, H. and Greve, H. R. (2017) "Disasters and Community Resilience: Spanish Flu and the Formation of Retail Cooperatives in Norway" *Academy of Management* vol.61 no.1 (17 January 2017): <https://journals.aom.org/doi/10.5465/amj.2016.0054> (last accessed 10/6/20)

<sup>85</sup> Garrett, "Economic effects of the 1918 influenza pandemic"

## Natural Disasters

### Overview

This section of the report focuses on the impacts and recovery responses to previous non-pandemic shocks that were caused by natural disasters. These shocks include single catastrophic natural disasters, such as earthquakes, storms and tsunamis, as well shocks caused by the long-term worsening of seasonal dry weather as a result of climate change. The shocks discussed in this section are:

- i. **The Asian Earthquake and Tsunami**, 26 December 2004, South-East Asia, and Indian Ocean. An estimated 250,000 people were killed, 1.7 million people were left homeless and countless lives were impacted across the region. It precipitated an international disaster recovery response and required long-term recovery efforts.
- ii. **Hurricane Katrina**, 2005, Louisiana, USA. A category 5 hurricane that made landfall on Florida and Louisiana in August 2005, causing catastrophic damage, particularly in the city of New Orleans and the surrounding areas. The official death toll in Louisiana was at least 1,500 people, with widespread social dislocation as a result of loss of homes. Literature available focuses on poor leadership and preparedness, resilience, decision-making, rebuilding tourism, the disproportionate impact on the elderly and those from BAME, or low socio-economic backgrounds, and the impact on mental health.
- iii. **Christchurch Earthquakes**, 2010 & 2011, Christchurch, New Zealand. 2011 earthquake resulted in 185 deaths and several thousand injured, striking at lunchtime when the central business district was busy, bringing down many buildings damaged in the 2010 quake. There was significant loss of physical infrastructure, including schools and cultural buildings. Literature focuses on the impact to tourism and hospitality, the regional economy, the role of the community in response and recovery, and the governance and administrative structure supporting recovery.
- iv. **Cape Town Water Crisis**, 2016–2018, Cape Town, South Africa. An extended spell of dry weather led to severe water shortages and emergency planning for “Day Zero” – the day the water would run out. Literature focuses on the efforts and messaging used to change citizen’s behaviour to preserve water supplies (of which parallels could be drawn with the ask of citizens now to change behaviour to halt the spread of COVID-19), and on the impact of the crisis on tourism.
- v. **Australian Bush Fires**, 2019–2020, Australia. Given these happened very recently, the shock has not yet produced many studies, but what does exist focuses on the mental health impact and social disruption, and the response from Government given the scale of the disaster.

### Impacts

#### Environmental impacts

While there are some lessons that can be learned from the response to these shocks, it’s important to state that they differ in nature from the current COVID-19 context. Excluding the Cape Town Water Crisis, the initial shock of all of these disasters was caused by the immediate, catastrophic physical destruction of the built environment. In contrast, the current coronavirus crisis has been unfolding over a prolonged period and will continue to do so for some time. The longer-term recovery from these shocks was therefore inextricably tied up with the rebuilding of the physical environment, whilst recovery from COVID-19 will focus on addressing the health, economic and social impacts of the pandemic. The literature therefore tended to focus on recovery in this physical context of “rebuilding.”

## Economic impacts

In contrast with COVID-19, the shocks covered in this section – with the exception of the Cape Town Water Crisis – resulted in immediate destruction to the built environment. Therefore, the economic recovery was more often than not closely tied in with, and focused on, the physical reconstruction of the impacted area.

There are some overlaps with current COVID-19 impacts, in terms of the impact on particular sectors of the economy, such as the tourism and hospitality sectors. These sectors were hit hardest by natural disasters, when tourists and customers could not access the services those sectors traditionally offer, leading to a subsequent reduction in employment in those sectors. Tourism and hospitality sectors in London are being severely impacted by the restrictions imposed on the economy in response to COVID-19.

An Australian study looked at the direct and indirect costs of natural disasters and concluded that the intangible social costs, such as mental health, domestic violence or crime, may cause estimates of the economic costs of disaster to be underestimated by 50%.<sup>86</sup>

### *Tourism and Cultural Sector*

- A common theme across the shocks examined is the detrimental impact on the tourism and cultural sector, due in most cases to the destruction of infrastructure and inability to access tourist and cultural attractions – though in Cape Town this was related to the restrictions on water usage.
- There is little published information on economic recovery for Australia from the devastating 2019–2020 bush fires, given how recently they took place. In New Zealand, the Canterbury economy was found to be reasonably resilient following the earthquakes in 2011, but retail, accommodation and hospitality were hard hit, international visitor numbers fell, as did international students to Christchurch.<sup>87</sup> Eighteen months after the earthquakes inbound tourism data was still below pre-earthquake levels, with recovery of the inbound tourism markets closely tied to the timeframe to rebuild the central business district of Christchurch. Domestic tourism did pick up more quickly though.<sup>88</sup>
- In New Orleans, post Katrina, the employment sector suffered a massive setback – over 600,000 in the Gulf region lost their jobs due to the storm event and this wiped out 11 years' worth of employment gains in total; unemployment in the metropolitan region of New Orleans rose from 5.8% to 14.8% within the span of a month. About 20% of the population in the Gulf states were employed in tourism-related sectors, including events and conventions etc., which accounted for \$5 billion in revenues annually, and was also the largest industry in terms of employment in the city.<sup>89</sup> The sector was reconstructed afterwards, prioritised by the city authorities and the private sector, and the economy of the city is now actually more dependent on tourism as a generator of jobs and regional growth than it was before Katrina.<sup>90</sup> However, this has not been without its downsides, as

<sup>86</sup> Morley, P., Barclay, E and Parsons, M. (2020) *Barriers and enablers in the long term recovery of communities affected by natural hazards: a review of the literature*, Bushfire and Natural Hazards CRC, Melbourne p.23.

<sup>87</sup> Parker, M. and Steenkamp, D. (2012) "The economic impact of the Canterbury earthquakes" *Reserve Bank of New Zealand Bulletin* vol. 75 p.13

<sup>88</sup> Orchiston, C. and Seville, E. (2012) "Tourism Recovery and Resilience after the Canterbury Earthquakes" *Report 6 Prepared for Asia Pacific Economic Cooperation (APEC)* (September 2012)

<sup>89</sup> Mahalingam, A., Coburn, A., Jung, C. J., Yeo, J. Z., Cooper, G., Evan, T. (2018) *Impacts of Severe Natural Catastrophes on Financial Markets*, Cambridge Centre for Risk Studies, Cambridge p.5-10.

<sup>90</sup> Gladstone, D. L. (2012) "Event-based urbanization and the New Orleans tourist regime: a conceptual framework for understanding structural change in US tourist cities" *Journal of Policy Research in Tourism, Leisure and Events*, vol.4 no.3 (Nov 2012) p.228-37

disadvantaged areas did not benefit, some areas were gentrified, and tourism growth has been characterised by increasing income and occupational polarisation, and a rise in poverty and low wages.<sup>91</sup> A more comprehensive tourism planning process, a mechanism to prevent the widespread residential displacement (gentrification) of neighbourhoods adjacent to the city's tourism zones, and a more equitable distribution of the benefits of tourism, were cited as factors to ensure that future development proceeds in a way that meets the needs of the city's residents.<sup>92</sup>

- For tourism to recover from a shock or crisis requires a structural policy response. The shock can be used as a springboard to a stronger, more resilient and sustainable tourism offer, and can lead to innovation in tourism.<sup>93</sup>

## Lessons learned

- It is hard to draw definitive conclusions from the shocks studied in this section given their very different nature to the current context globally with COVID-19, but the negative impact on tourism of these shocks is evident and is, relevant to the current pandemic.
- GLA Economics estimates that tourism is worth some £36bn. a year to the London economy with 700,000 employees in the tourist and "night time" economy.<sup>94</sup> Pre-COVID, it was estimated that by 2025 London would attract as many as 40m visitors per year.<sup>95</sup> It is therefore critical to London's recovery that these industries are supported during this period of reduced consumption.
- This is a major challenge to London's tourism sector. Confidence will need to be restored that London is a safe city to travel to and spend time in, but this may only begin to happen once a treatment and/or effective vaccines have been deployed and made available worldwide, or once the rate of new infections has been consistently low for a period of time.
- Out migration was cited as a factor in economic recovery from many natural disasters.<sup>96</sup> Although the context is different, a question remains as to whether over the long-term, the pandemic serves to influence Londoners' decisions about whether to stay or leave the city (either in search of a better quality of life, more affordable housing, or to take advantage of the flexibility that increased remote working may provide), or whether those planning to move to London will still do so. This may impact the economic recovery of many sectors by causing skills shortages, reducing local spending and reducing local authorities' tax revenues.
- There is a question too, about whether, and to what extent, the virus will accelerate changes that were already in train in the market, such as the restructuring of retail, and the extent to which it may also contribute to a shift away from an agglomeration economy model, focused around the Central Activity Zone (CAZ) and Canary Wharf.

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<sup>91</sup> Ibid., p.239-49

<sup>92</sup> Ibid., p.247

<sup>93</sup> Rindrasihorcid, E., Witte, P., Spit, T. and Zoomers, A. (2019) "Tourism and Disasters: Impact of Disaster Events on Tourism Development in Indonesia 1998-2016 and Structural Approach Policy Responses" *Journal of Service Science Management* vol.12 no.2 p.109-10

<sup>94</sup> <https://www.london.gov.uk/what-we-do/business-and-economy/supporting-londons-sectors/supporting-tourism-sector>

<sup>95</sup> Ibid.

<sup>96</sup> Morley et al., "Barriers and enablers in the long-term recovery of communities" p.18

## Social Impacts

### a) Mental health

- Across all the published research, the impact on mental health is viewed as significant and especially the long-term mental health impact, which is particularly marked for those that worked through the shock (such as key workers / emergency responders), and often disproportionately felt more strongly by specific groups, including BAME communities, socially disadvantaged or elderly communities.
- In New Zealand evidence shows that 18 months after the first earthquake, the significant adverse impact on mental health continued. Therefore, mental health services and consideration of adverse mental health effects in relation to other social policies, were deemed as necessary and fundamental to recovery.<sup>97</sup>
- In similarities with the uncertainties of life in post COVID-19 London, in his article on social memory, Geoff Wilson states that the continued threat and associated uncertainty posed by on-going tremors in New Zealand 'gradually eroded residents' ability to cope and plan for the future'.<sup>98</sup>
- In a longitudinal study of the psychological outcomes following bushfires in Victoria, findings suggest that policymakers need to recognise that the mental health consequences of disasters can persist for many years after the event, and need to allocate resources towards those who are most at risk as a result of substantive losses and ongoing life stressors.<sup>99</sup>
- A study of post-disaster recovery, following experiences of survivors five years after a flash flood in South East Queensland, found that personal and community recovery were far slower and complex than previously understood. Indeed, many people were demonstrably worse off after five years than they had been in the first year after the disaster.<sup>100</sup>
- Several studies from Hurricane Katrina concentrate on the mental health consequences for survivors, especially those in disadvantaged, poor and ethnic minority groups, and detail a wide range of reactions, including symptoms of post-traumatic stress (including PTSD). Young, low-income African-American mothers, in particular, showed a high prevalence of PTSD.<sup>101</sup> Recovery of mental health after Hurricane Katrina was slow and persisted one year later, indicating the necessity for long-term treatment.<sup>102</sup> The circumstances differ greatly between London 2020 and Louisiana in 2005: there was widespread social dislocation as a result of home and neighbourhood loss and destruction in New Orleans; there is no "post disaster" context in London today, but an ongoing 'disaster' with no firm end point. However, the studies are nevertheless a reminder that the COVID-19 experience is likely to have significant mental health consequences, including for:

<sup>97</sup> Spittlehouse, J. K., Joyce, P. R., Vierck, E., Schluter, P. J. and Pearson, J. F. (2014) "Ongoing adverse mental health impact of the earthquake sequence in Christchurch, New Zealand" *The Australian and New Zealand Journal of Psychiatry* vol.48 no.8.

<sup>98</sup> Wilson, G. A. (2013) "Community resilience, social memory and the post-2010 Christchurch (New Zealand) earthquakes" *Area* vol.45 no.2 p. 207-215.

<sup>99</sup> Bryant, Richard A., Waters, E., Gibbs, L., H. Gallagher, C. Pattison, P., Lusher, D., MacDougall, C., Harms, L., Block, K., Snowdon, E., Sinnott, V., Ireton, G., Richardson, J., and Forbes D. (2014) "Psychological outcomes following the Victorian Black Saturday bushfires" in *The Australian and New Zealand Journal of Psychiatry* vol.48 no.7 p.634-43.

<sup>100</sup> Gearing, Amanda "Post-disaster recovery is a marathon, not a sprint" in *Pacific Journalism Review* vol.24 no.1 (July 2018) p.56

<sup>101</sup> Rhodes, J., Chan, C., Paxson, C., Rouse, C. E., Waters, M. and Fussell, E. (2010) "The Impact of Hurricane Katrina on the Mental and Physical Health of Low-Income Parents in New Orleans" *American Journal of Orthopsychiatry* vol.80 no.2 p.246-7

<sup>102</sup> Paxson, C., Fussell, E., Rhodes, J., and Waters, M. (2012) "Five Years Later: Recovery from Post Traumatic Stress and Psychological Distress Among Low-Income Mothers Affected by Hurricane Katrina" *Social Science and Medicine Journal* vol.74 no.2 p.155

- Large numbers of the sudden and unexpectedly bereaved, with disproportionate numbers from BAME backgrounds, and survivors who have come close to death;
- Front-line workers in health and social care, transport and other face-to-face occupations who have suffered higher rates of infection and mortality;
- The general working population in London and those that commute into London in terms of underlying anxiety and fear of resuming “normal” travel to work by tube, train or bus.
- Those who may be facing redundancy, underemployment and unemployment as a result of the economic impact of the restrictions put in place to contain the virus.

## Lessons learned

- Though the published studies vary on the length of time the mental impact of a shock or disaster is felt, they do agree that it is not a short-term issue. The University of Melbourne concluded that it can take more than five years for some people to recover from a disaster experience and its aftermath, particularly in high impact communities.<sup>103</sup>
- There needs to be better and more extensive access to publicly funded psychological care in the aftermath of such disasters, particularly for those who have lost family, their homes or businesses. Post disaster funding should include the long-term nature of social impacts such as mental health, family violence, substance abuse.<sup>104</sup>
- Confidence in working and travelling around London will need to be restored, and anxiety about workplace health and safety, from social distancing to communal facilities and hot-desking in open plan offices, addressed to counter the anxiety of the return to work.
- Studies into the impacts on the mental health of survivors of the Boxing Day Earthquake and Tsunami found that helplines were a valued resource, both for those immediately affected, and by others who just needed someone to talk to in order to help them process what had happened.<sup>105</sup>
- Survivors also valued their own social and spiritual coping strategies more than formal mental health services. Lessons for London include, how we provide support to diverse communities; for those who have suffered bereavement through COVID-19; and for those who have suffered from poor mental health as a result of lockdown, isolation, loss of employment etc. We need to assess what help is available, and how to tap into, and support, individual needs. Responses should be aimed at strengthening prevailing community coping strategies.<sup>106</sup>
- Many policymakers have adopted the slogan “Build back better” for recovery, but this focus may overlook social and psychological recovery. “Rebuilding” will be an important aspect of recovery, but we must also listen to communities and include all stakeholders to ensure that the recovery

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<sup>103</sup> Gibbs, Lisa, Waters, E., Bryant, R., Pattison, P., Lusher, D., Harms, L., Richardson, J., MacDougall, C., Block, K., Snowdon, E., Gallagher, H. C., Sinnott, V., Ireton, G. and Forbes, D. (2013) “Beyond Bushfires: Community, Resilience and Recovery - a longitudinal mixed method study of the medium to long term impacts of bushfires on mental health and social connectedness” in *BMC public health* vol.13 <https://bmcpublichealth.biomedcentral.com/articles/10.1186/1471-2458-13-1036> (last accessed 18/9/20) p.21

<sup>104</sup> Morley et al., “Barriers and enablers in the long term recovery of communities affected by natural hazards” p.25

<sup>105</sup> Child, C., Clay, D., Warrington, C. and Das, J. (2008) “Caring in a crisis: The contribution of social care to emergency response and recovery” *The Social Care Institute for Excellence* (2008) <https://www.scie.org.uk/publications/knowledgereviews/kr19.pdf> (last accessed 22/09/20).

<sup>106</sup> Rajkumar, A. P., Premkumar, T. S. and Tharyan, P. (2008) “Coping with the Asian tsunami: perspectives from Tamil Nadu, India on the determinants of resilience in the face of adversity” *Social Science and Medicine* vol.67 no.5 p.844



programme addresses the multifaceted impacts of recovery in their totality. We must also ensure we live up to the expectations raised when talking about “build back better.”<sup>107</sup>

## b) Communities

- Across all the literature reviewed, the evidence suggests that the impact of shocks and disasters is felt more severely by certain groups of people, especially those from lower socio-economic backgrounds, BAME communities, women and the elderly.
- For numerous reasons disasters – such as Katrina and now COVID-19 – are also shown to amplify pre-existing inequalities – and structural inequalities – that impact on long-term outcomes for people in terms of their ability to recover. Recovery from COVID-19 should therefore consider what we want for the future of London, rather than uncritically seeking to go back to life as it was before.
- The literature review identified evidence of an increased prevalence in interpersonal violence in areas most affected by other disasters, particularly domestic violence against women.
- Research on the 2009 Victoria bushfires found evidence of overrepresentation of individuals reporting post-disaster experiences of violence in high disaster-affected communities compared with communities with lower levels of disaster-affectedness. Among women living in high bushfire-affected areas, negative changes to income were associated with an increased likelihood of experiencing violence. Therefore, the study suggested that financial stress was a risk factor in post-disaster violence, and therefore needed to be a target for intervention. The study also concluded that for women, post-disaster violence was associated with more severe post-traumatic stress disorder and depression symptoms.<sup>108</sup>
- Research from New Zealand focuses on the impact on children and the role of schools in recovery, exploring how they can meet the emotional needs of communities in a post-disaster context. The preparedness of schools to play this role is examined and initiatives such as teacher-only days, to share experiences of the earthquake, and to prepare what to say to children before they return to school, are cited as vital. Despite preparation, on re-opening some children did not return as parents were afraid to let them go back. This chimes with the current London context, albeit the threat now being a virus. The research also explores the changing role of schools as the recovery progressed: the short-term focus was on a much greater pastoral care role with pupils and families; the medium-term focus was on settling into routines and drawing on community, government, and non-government agencies to support students, staff, and families as school communities strengthened. However, despite these measures, over the longer-term (two to three years after the major earthquakes) the studies showed high levels of stress and anxiety leading to a gradual decline in teachers’ well-being.<sup>109</sup>
- Interestingly, the value of older people as ‘generators’ and ‘mobilisers’ of social capital in recovery from disasters is noted in a 2015 study on Australian bushfires, with clear evidence of older people

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<sup>107</sup>Fernandez, G., and Ahmed, I. (2019) ““Build back better” approach to disaster recovery: Research trends since 2006” *Progress in Disaster Science* vol.1 p.3

<sup>108</sup> Molyneaux, R., Gibbs, L., Bryant, R. A., Humphreys, C., Kellett, C., Gallagher, H. C., Block, K., Harms, L., Richardson, J. F., Alkemade, N. and Forbes, D. (2019) “Interpersonal violence and mental health outcomes following disaster” *The British Journal of Psychiatry* vol.6 no.1 <https://www.cambridge.org/core/journals/bjpsych-open/article/interpersonal-violence-and-mental-health-outcomes-following-disaster/FE519D59C68BCE944AE4A88884A157C5#fndtn-information> (last accessed 18/9/20)

<sup>109</sup> Mutch, C. (2016) “Schools as Communities and for Communities: Learning From the 2010–2011 New Zealand Earthquakes” *School Community Journal* vol.26 no.1 p.120

sharing resources and experience in support of others of all ages.<sup>110</sup> However, in the current COVID-19 context, the capacity and practicalities of older people contributing to community-led recovery may be hindered by the fact that they are one of the groups more seriously impacted by, or at risk from the ongoing threat of the virus. This can be circumvented, in part, by digital outreach and community-building initiatives, but the prevalence of digital exclusion amongst the elderly in general, and BAME groups in particular, will hamper these efforts within certain communities.

- A study of the Cape Town water crisis highlighted the risk factor of the impact that a disaster - or potential disaster - can have on community cohesion when the impact is felt more keenly by certain communities.<sup>111</sup>

### c) Behavioural changes

- An interesting aspect of the studies from Cape Town underlines the importance of the large-scale behaviour change that was required of residents to effectively delay the date at which the City would run out of water. If residents hadn't changed behaviour, the effects would have been catastrophic. The new behaviour bought time for the authorities to support the water network.
- The effectiveness of the communications strategies deployed to drive such behaviour change are examined in detail: different approaches were used, from nudge to advertising to direct mailing.
- The conclusions here are that behaviour change requires clear communications and no mixed messages from different tiers of authority; hard to reach groups need special consideration; and transparency is key, as the public respond better to behaviour change when they are fully aware of the seriousness of the situation and they know that their efforts are working and contributing to a greater good. 'If a municipality wants people to change their behaviour, they have to give the public credible and trustworthy information'.<sup>112</sup>
- What's more, before committing time, staff, or money into rolling out behaviour change campaigns, the evidence suggests that it's useful to test which methods are likely to work best, by running controlled 'field experiments' and drawing on academics and researchers to help design policies and behaviour-change initiatives that are evidence-based, scientifically rigorous, and are most likely to have wide reach.<sup>113</sup>
- Another lesson identified from Cape Town was that, when people collectively changed their behaviour in response to a crisis, they wanted to be recognised for doing their bit. Financial interventions/tariffs were less impactful on middle/high earners than nudge techniques, including naming and shaming - in this instance releasing the names of high water-usage streets, or writing directly to high-using residents. Stark public messaging worked well too - such as the use of the dramatic 'Day Zero' terminology used to identify the day Cape Town's water supply would run dry.

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<sup>110</sup> Howard, A. and T. Blakemore "Older people as assets in disaster preparedness, response and recovery: lessons from regional Australia" in *Ageing and Society* vol.37 no.3 (December 2015) p.1-20

<sup>111</sup> Morabito, P. (2018) "Cape Town's Water Crisis: How Did It Happen?" *Environmental and Energy Study Institute* <https://www.eesi.org/articles/view/cape-towns-water-crisis-how-did-it-happen> (Last accessed 18/9/20)

<sup>112</sup> Joubert, L. and Ziervogel, G. *Day Zero: One City's Response to a Record-Breaking Drought* available at <http://dayzero.org.za/Day-Zero.pdf> (last accessed 18/9/20) p.45

<sup>113</sup> *Ibid.*, p.39

## Lessons learned

- Disasters and shocks impact some communities disproportionately, and recovery should be an opportunity to address those inequalities not just return to the status quo.
- Schools need to be recognised as being central to the recovery, not just in terms of re-opening and providing education, but as being a source of ongoing emotional support for communities and children. They should also be recognised for taking on additional roles in a crisis – something very much felt by schools and school leaders with COVID-19. Schools needed to be supported and resourced to do this.
- Schools should be supported to develop emergency management plans and scenarios collaborating with the relevant agencies; school leaders should be provided with professional development in crisis planning and management; teachers and other support staff should also have professional development on emergency response and recovery and providing emotional support.<sup>114</sup>
- Children’s voices need to be heard and given priority in the recovery process, and policymakers should commit to hearing children’s perspectives as the impact on them of the shock is often not well recognised or understood.<sup>115</sup>
- Responses and recovery decision-makers need to consider the impact of financial stress caused by economic downturn, job losses, or financial insecurity brought about by disasters (also applicable to COVID-19), upon levels of interpersonal violence, especially against women.

### d) Shaping and defining recovery

- Recovery depends on the existing social and economic conditions of a community prior to the event. Government’s role is vital to supporting recovery and the most successful recoveries have incorporated flexibility, good planning and pre-determined policies, with strong local leadership.<sup>116</sup>
- There is little literature published at present on the economic recovery in Australia from the 2019-2020 bushfire season. However, there is evidence from Australia on the barriers and enablers of effective long-term recovery from natural disasters, which suggests that recovery in the long-term is a ‘complex process with no clear end point’. The process is not linear, and nor are the same ‘actors’ involved in short-term and long-term recovery, but there is a transition period between the purpose of long-term disaster recovery and actual implementation because recovery needs and progression changes over time.<sup>117</sup>
- A literature review conducted by the *Bushfire & Natural Hazards Cooperative Research Centre* highlights a lack of research into how communities achieve long-term recovery following natural disasters. Stressing that the devastating effects of such disasters can last for many years, the authors argue that the long-term outcomes must be front of mind in any planning for emergency response,

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<sup>114</sup> Mutch "Schools as Communities and for Communities" p.130-5

<sup>115</sup> Freeman, C., Nairn, K. and Gollop, M. (2015) "Disaster impact and recovery: what children and young people can tell us" *Kōtuitui: New Zealand Journal of Social Sciences Online* vol.10 no.2 p.103-115 <https://doi.org/10.1080/1177083X.2015.1066400> last accessed (30/09/20)

<sup>116</sup> Morley et al., "Barriers and enablers in the long term recovery of communities affected by natural hazards" p.4

<sup>117</sup> Ibid.

and in the immediate and short-term response to a disaster, as actions and planning taken at those stages will impact upon long-term recovery.<sup>118</sup>

- Structuring recovery around a “return to normal” is a fallacy as a “new normal” will have emerged in the post-disaster context. Recovery is a complex, multidimensional, nonlinear process with no clear end point, and should not necessarily be a return to what existed before, especially in the context of a crisis which has exposed and exacerbated existing inequalities.<sup>119</sup>

### e) Community engagement

- Numerous studies explore the importance of community-led recovery which is meaningful and how it is central to successful recovery and incorporated at every stage of the recovery.<sup>120</sup>
- These studies suggest that resources should be made available to communities to enable them to participate in decision-making related to the recovery, and a continuous cycle of engagement, monitoring and feedback incorporated. Community organisations should be harnessed and not left to fade into the background after initial engagement.<sup>121</sup>
- Valuing and taking advantage of local people, resources, capabilities and knowledge changes the role of residents in the rebuild process from ‘passive agents’ whom are consulted and thought of only as end-users, to a more meaningful role as ‘active participants’, collaborating on the recovery effort.<sup>122</sup>
- Millen’s study of existing published reviews of community engagement, suggests that successful community engagement depends on three elements:
  - *influence*—the process should have the ability to influence policy and decision-making;
  - *inclusion*—the process should ideally be representative, inclusive and encourage equal opportunity to participate; and
  - *deliberation*—the process should provide open discussion, access to information and movement towards consensus.<sup>123</sup>

### f) Governance

- There are a number of studies from New Zealand, in particular, on the response from authorities and agencies to the Christchurch earthquakes, and a common thread in all the shocks is the need for

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<sup>118</sup> Morley et al., “Barriers and enablers in the long term recovery of communities affected by natural hazards” p.5-7

<sup>119</sup> Johnson, L. A. and Hayashi, A. (2012) “Synthesis efforts in disaster recovery research” *International Journal of Mass Emergencies and Disasters* vol.30 no.2 p.237.

<sup>120</sup> Morley et al., “Barriers and enablers in the long term recovery of communities affected by natural hazards” p.4

<sup>121</sup> Hawe, P. (2009) “Community recovery after the February 2009 Victorian bushfires: a rapid review” *Sax Institute; Victorian Government Department of Human Services* <https://www.saxinstitute.org.au/publications/evidence-check-review-community-recovery-after-the-victorian-bushfires/> (last accessed 22/9/20)

<sup>122</sup> Jaskułowska, J. (2019) “Public Participation After Natural Disaster – Case Study of Christchurch” in *Public Management: Scientific Journal of the Institute of Public Affairs, Jagiellonian University*, vol.47 no.3 p.242.

<sup>123</sup> Millen, D. (2011) *Deliberative Democracy in Disaster Recovery: Reframing Community Engagement for Sustainable Outcomes* ebook, [http://builditbackgreen.org/media/9807385/review-%20deliberative%20democracy%20in%20disaster%20recovery%202011%20pdf%20for%20distribution%20\(1\).pdf](http://builditbackgreen.org/media/9807385/review-%20deliberative%20democracy%20in%20disaster%20recovery%202011%20pdf%20for%20distribution%20(1).pdf) (last accessed 30/09/20) p.4

strong collaboration between various departments within a city's governing structures, as well as upward, to the regional and national departments involved.<sup>124</sup>

- A thorough appraisal of the New Zealand Government's response to the Canterbury earthquakes includes a detailed analysis of the governance structure put in place and lessons to learn. In summary, key learning for London is to get the balance right of a top-down, bottom-up approach, the tensions between local and national leadership, the challenges of public participation in recovery and managing expectations. The report concludes that the government's decision to establish a combined top-down/bottom-up recovery approach was successful in that it enabled public participation in the decision-making, whilst also ensuring that decisions were timely enough to provide the certainty needed in the context of the disaster. The arrangements allowed a balance of speed and deliberation, which is the key challenge for recovery decision-makers.<sup>125</sup>
- Another in-depth study looking at the earthquake recovery includes a literature review of the governance of other major disasters, which suggests recovery requires an approved government policy, an enabling national system, backing from all the stakeholders, and strong links between local and national governments.<sup>126</sup> The evidence suggests that if a new structure for recovery is to be put in place, its objective should be achieving cohesion, coordination and consensus among different disaster stakeholders.<sup>127</sup>
- Hurricane Katrina occurred four years after the attacks of 9/11, three years after the subsequent creation of the Department of Homeland Security (DHS), and one year after the DHS had created a National Response Plan. But despite the heightened attention to homeland security, the response to Katrina was deemed a failure. The world watched as government responders seemed unable to offer basic protection from the ravages of nature.<sup>128</sup> The 'inept' disaster response, combined with inefficiencies in administration of aid by the government, negatively affected the speed of recovery of the economy.<sup>129</sup>

### g) Tracking recovery

- Literature from Australia stresses the need for a monitoring and evaluation framework for disaster recovery.<sup>130</sup> In addition, if there is not a clearly defined end point for the disaster – as with COVID-19 – then recovery should be monitored at regular intervals over a 10-year period. However, the weakness of routinely collected data is its inability to measure individual and community wellbeing. This is best addressed by surveying individuals directly, with the example provided of the Canterbury Wellbeing Index, used to track social recovery in Christchurch after the earthquakes.

<sup>124</sup> Joubert and Ziervogel *Day Zero* p.20

<sup>125</sup> New Zealand Department of the Prime Minister and Cabinet (2017) *Whole of Government Report: Lessons from the Canterbury Earthquake Sequence* available at <https://dpmc.govt.nz/sites/default/files/2017-07/whole-of-government-report-lessons-from-the-canterbury-earthquake-sequence.pdf> (last accessed 22/9/20)

<sup>126</sup> Brookie, R. (2014) "Governing the Canterbury Earthquake Recovery, 2010–2011: The debate over institutional design" *Future-Proofing the State: Managing Risks, Responding to Crises and Building Resilience* ed. Boston, J., Wanna, J., Lipski, V. and Pritchard, J, Australian National University Press, Canberra: [https://press-files.anu.edu.au/downloads/press/p283571/html/contributors.xhtml?referer=&page=4#toc\\_marker-5](https://press-files.anu.edu.au/downloads/press/p283571/html/contributors.xhtml?referer=&page=4#toc_marker-5) (last accessed 22/9/20)

<sup>127</sup> Millen, *Deliberative Democracy in Disaster Recovery* p.13

<sup>128</sup> Moynihan, D. P. (2009) *The Response to Hurricane Katrina* International Risk Governance Council, Lausanne [https://irgc.org/wp-content/uploads/2012/04/Hurricane\\_Katrina\\_full\\_case\\_%20study\\_web.pdf](https://irgc.org/wp-content/uploads/2012/04/Hurricane_Katrina_full_case_%20study_web.pdf) (last accessed 30/09/20)

<sup>129</sup> Mahalingam et al. *Impacts of Severe Natural Catastrophes on Financial Markets* p.19

<sup>130</sup> Morley et al., "Barriers and enablers in the long term recovery of communities affected by natural hazards" p.37

- This annual index provided information about the social aspects of recovery, and in addition to the survey, secondary data sets were used across a range of organisations, based on a hierarchy of indicators under seven themes as follows:
  1. Knowledge and skills: participation in education and educational achievement;
  2. Employment wellbeing: household, individual income;
  3. Housing: housing affordability and availability;
  4. Health and wellbeing: keeping well and having access to health services;
  5. Mental wellbeing: risk factors;
  6. Safety: offending patterns, child abuse and neglect;
  7. Social connectedness: people participating in and attending the arts, sports events, sense of community, civil participation

### **Lessons learned**

- As the response effort transitions to recovery, capturing learning and lessons on an ongoing basis at the time is of paramount importance in order to avoid loss of institutional knowledge of what occurred when people move on.
- Enabling effective response to recovery relies on the utilisation of existing relationships and networks which were not born out of disaster planning. This saves time and effort in mobilising civil society towards recovery.

## Other Shocks

### Overview

This section of the report examines the literature relating to two other socio-economic shocks that were caused by human actions. These are:

Name	Year	Location	Details
9/11 Terrorist Attacks	2001	New York and Greater Washington D.C., USA	A coordinated hijacking of four planes by supporters of the Al-Qaeda terrorist group. These aircraft targeted the “twin towers” at the World Trade Centre (WTC) in Manhattan, New York, the Pentagon building in Virginia, and (unsuccessfully) the White House in Washington D.C.
2008 Financial Crisis	2008	Worldwide, primarily the developed world	Widely considered to have been the most serious since the Great Depression of the 1930s, this crisis was caused by underlying structural flaws in the American and global economy. It caused big banks to go bankrupt and led to recessions in almost all the world’s largest economies.

### The 9/11 Terrorist Attacks

#### Environmental impacts

The attacks had a significant local environmental health impact, with the ‘wildly toxic’ thousands of tons of debris resulting from the collapse of the World Trade Centre (WTC) consisting of more than 2,500 contaminants.<sup>131</sup> Various toxic fumes and substances were put into the atmosphere, including asbestos, dioxins, mercury and vast quantities of dust, glass and pulverized cement. For more than three months after the event, acrid smoke continued to fill the air and dust particles continued to be dispersed throughout the neighbourhood from the site’s clean-up operations. In addition to these air quality issues, the destruction of the WTC created a monumental waste-disposal challenge and potential threat to New York’s waterways.<sup>132</sup>

#### Economic impacts

##### *Short- to medium-term:*

The attacks on the WTC threatened the heart of the US financial system. The debris from the collapsing towers and the chaos in the area closed the New York Stock Exchange, as well as brokerage houses and banks in the Wall Street area.<sup>133</sup> Overall, US stock markets were halted for four business days, the Dow Jones fell 685 points (7%) on the day of re-opening and there was a short-term destabilising effect on world stock markets.<sup>134</sup> Two weeks after the attacks, the Dollar had declined 3% against the Euro and 3.6% against the Yen as foreigners’ demands for dollars and for some US financial assets waned.<sup>135</sup> However, actions by the Federal Reserve and other central banks helped to head off a financial crisis by ensuring

<sup>131</sup> Gates, A. (2006) "Buildings Rise From Rubble While Health Crumbles" *New York Times* (11th September 2006) <https://www.nytimes.com/2006/09/11/arts/television/11dust.html> (last accessed 22/09/20)

<sup>132</sup> Nordgrén, M. D., Goldstein, E. A. and Izeman, M. A. (2002) *The Environmental Impacts Of The World Trade Center Attacks: A Preliminary Assessment*, Natural Resources Defence Council, New York. <https://www.nrdc.org/sites/default/files/wtc.pdf> (last accessed 30/09/20)

<sup>133</sup> Makinen, G. (2002): "The Economic Effects of 9/11: A Retrospective Assessment", *Report for Congress, Congressional Research Service* p.4

<sup>134</sup> Richman, V., Santos, M. R. and Barkoulas, J. T. (2005): "Short- and Long-term Effects of the 9/11 Event: The International Evidence", *International Journal of Theoretical and Applied Finance*, vol.8 no.7 p.948

<sup>135</sup> Makinen, "The Economic Effects of 9/11" p.23

liquidity, and currency and financial markets regained their pre-attack levels within weeks.<sup>136</sup> Most industrial and emerging markets did not experience significant systematic increases in risk, suggesting the negative impact on world stock markets was transitory.<sup>137</sup>

The loss of lives and property on 9/11 was not large enough to have had a measurable effect on the productivity capacity of the US. However, it had a very significant localised effect on New York City and, to a lesser degree, on the greater Washington D.C. area.<sup>138</sup> There was an estimated \$22.7 billion loss to property in and around the WTC as a result of the attacks.<sup>139</sup> According to the New York City Comptroller, the estimated four-year gross city product (GCP) loss from the attacks was \$82.8 to \$94.8 billion.<sup>140</sup> Overall, the tax loss stemming from reduced economic activity, combined with relief and recovery expenditures, severely strained the New York City budget.<sup>141</sup>

For the whole US economy, the overall economic impact of 9/11 was estimated to be between \$50 and \$100 billion.<sup>142</sup> Nearly 18,000 businesses were dislocated, disrupted or destroyed by 9/11, most located in and around the WTC and the majority being small businesses.<sup>143</sup> Overall, there were 462 mass layoffs that displaced nearly 130,000 workers.<sup>144</sup> Potential losses as a result of direct business interruption (BI) were of the order of \$43 billion in GDP, but because 95% of the more than 1,100 businesses located in the World Trade Centre (WTC) area were able to relocate rather quickly, the direct BI losses were only \$12 billion.<sup>145</sup>

The costs of the attacks were borne disproportionately by a few industries, especially airlines, tourism and insurance: the attacks cost nearly \$40 billion in insurance losses, and it's estimated that airlines lost approximately \$1.4 billion in revenue during the four-day shutdown of the national aviation system in the immediate aftermath of 9/11.<sup>146</sup> However, the largest single impact of the attacks was due to the fear factor manifesting itself in a reduction in air travel for nearly two years after the event. After adjusting for the pre-existing downturn in airline travel, this amounted to \$50 billion of direct BI and \$60 billion of indirect BI.<sup>147</sup> This had a significant effect on global tourism: even in 2010, there was evidence that real US exports and imports of tourism remained significantly below their pre-2001 level.<sup>148</sup>

### ***Medium- to long-term:***

Evidence suggests that 9/11 reduced US real GDP growth in 2001 by 0.5% and increased the unemployment rate by 0.11%. However, the impact on GDP growth was very short-term: GDP growth in

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<sup>136</sup> Ibid., p.10

<sup>137</sup> Richman et al., "Short- and Long-term Effects of the 9/11 Event" p.949

<sup>138</sup> Makinen, "The Economic Effects of 9/11" p.2-9

<sup>139</sup> Grossi, Patricia (2009): "Property Damage and Insured Losses from the 2001 World Trade Center Attacks", *Peace Economics, Peace Science and Public Policy*, vol. 15 no.2

[https://www.researchgate.net/publication/46554555\\_Property\\_Damage\\_and\\_Insured\\_Losses\\_from\\_the\\_2001\\_World\\_Trade\\_Center\\_Attacks](https://www.researchgate.net/publication/46554555_Property_Damage_and_Insured_Losses_from_the_2001_World_Trade_Center_Attacks) (last accessed 22/9/20)

<sup>140</sup> Makinen, "The Economic Effects of 9/11" p.43

<sup>141</sup> Ibid., p.5

<sup>142</sup> Rose, A., G. Oladosu, B. Lee, and Asay Beeler, G. (2009): "The Economic Impacts of the 2001 Terrorist Attacks on the World Trade Center: A Computable General Equilibrium Analysis", *Peace Economics, Peace Science and Public Policy*, vol.15, no.2.

<sup>143</sup> Empire State Development in cooperation with New York City Economic Development Corporation (2002): "World Trade Center Disaster: Final Action Plan for New York Business Recovery and Economic Revitalization." p.2

<sup>144</sup> Levine, L. (2004) "Layoffs Due to the September 11, 2001 Terrorist Attacks and the Worker Adjustment and Retraining Notification Act (WARN)", CRS Report 31250.

<sup>145</sup> Rose et al. "The Economic Impacts of the 2001 Terrorist Attacks"

<sup>146</sup> Makinen, "The Economic Effects of 9/11" p.10-11

<sup>147</sup> Rose et al. "The Economic Impacts of the 2001 Terrorist Attacks"

<sup>148</sup> King, A. (2010): "The effect of 9/11 on US exports and imports of tourism", *Journal of Defence and Peace Economics*, vol.21 no.5-6, p.538-40



2002 was ultimately able to be sustained at the pre-9/11 forecasted level.<sup>149</sup> A similar pattern was seen globally, although at a slighter slower rate: world economic growth dropped from 4.1% to 1.4% in 2001 (a growth rate less than 2% is recessionary), but recovered to 1.9% in 2002, 2.7% in 2003 and 4% in 2004.<sup>150</sup>

Although there were economic costs to the US economy, overall, its resilience meant that it was not crippled.<sup>151</sup> For example, because of well-functioning financial markets, even though the direct attack occurred in the US, US markets rebounded much more quickly than 12 other major markets.<sup>152</sup> The quick reopening of markets allowed for a self-assessment and correction following the attacks, with the Dow Jones going from 8920 points on the day of re-opening to 13,000+ by 2006.<sup>153</sup> There is also evidence that the US was already in a recession when the attacks took place, with the National Bureau of Economic Research declaring that the economy had entered a recession beginning in March 2001.<sup>154</sup> Moreover, the contraction in the US was coincident with a slowdown in economic growth of the major economies.<sup>155</sup> Thus, many of the factors associated with the world slowdown, such as rising unemployment and falling confidence, may have been wrongly attributed to 9/11.<sup>156</sup>

However, there was a long-term indirect economic impact in terms of increased expenditure on military action and security. Less than a month after the attacks, President Bush announced the 'War on Terror' and US-led forces began military action in Afghanistan in an effort to dismantle Al-Qaeda. Two years later, the US and coalition forces invaded Iraq.<sup>157</sup> The invasions are estimated to have cost the US \$6.4 trillion through to the end of 2020.<sup>158</sup> Following 9/11, there was also an increase in appropriations to protect US borders and provide a nationwide security network, through the creation of Homeland Security. The lasting economic effect of 9/11 might have been this shift of resources in security, which – although were much needed - could have instead been used to enhance the productive capacity of the country.<sup>159</sup> The quest for greater security could have also negatively affected world economies in the long-run, in terms of greater impediments to the free movement of goods, services, labour and capital.<sup>160</sup>

In addition, a significant number of economists have drawn a connection between 9/11 and the 2007/08 financial crisis, which would increase the long-term indirect costs of the attacks.<sup>161</sup> While the Federal Reserve's monetary policy of decreasing interest rates helped to prevent a major economic downturn and

<sup>149</sup> Roberts, B. W. (2009) "The Macroeconomic Impacts of the 9/11 Attack: Evidence from Real-Time Forecasting" *Department for Homeland Security*, [https://www.dhs.gov/sites/default/files/publications/Macroeconomic%20impact%2009\\_11%202009.pdf](https://www.dhs.gov/sites/default/files/publications/Macroeconomic%20impact%2009_11%202009.pdf) (last accessed 22/09/20) p.8

<sup>150</sup> Nanto, D. K. (2004) "9/11 Terrorism: Global Economic Costs" *Congressional Research Service*, <https://digital.library.unt.edu/ark:/67531/metacrs7725/> (last accessed 22/09/20) p.4

<sup>151</sup> Jackson, O. (2008) "The Impact of the 9/11 Terrorist Attacks on the US Economy" *Journal of 9/11 Studies*, <https://www.fmuniv.edu/pdf/OliviaJackson911andUS-Economy.pdf> (last accessed 22/09/20) p.3-5

<sup>152</sup> Johnston, B. and Nedelescu, O. (2005): "The Impact of Terrorism on Financial Markets" *International Monetary Fund*, WP/05/60, <https://www.imf.org/external/pubs/ft/wp/2005/wp0560.pdf> (last accessed 22/09/20) p.8

<sup>153</sup> Jackson "The Impact of the 9/11 Terrorist Attacks on the US Economy" p.19-20

<sup>154</sup> Makinen, "The Economic Effects of 9/11" p.17

<sup>155</sup> Jackson "The Impact of the 9/11 Terrorist Attacks on the US Economy" p.2

<sup>156</sup> Makinen, "The Economic Effects of 9/11" p.43

<sup>157</sup> History.com (2019): "A Timeline of the U.S.-Led War on Terror" (Webpage), 1 February 2019 available at:

<https://www.history.com/topics/21st-century/war-on-terror-timeline> (last accessed 22/09/20)

<sup>158</sup> Crawford, N. (2019) "United States Budgetary Costs and Obligations of Post-9/11 Wars through FY2020: \$6.4 Trillion", *Costs of War project, Watson Institute for International and Public Affairs*, Brown University. p.1-3

<sup>159</sup> Jackson "The Impact of the 9/11 Terrorist Attacks on the US Economy" p.20

<sup>160</sup> Makinen, "The Economic Effects of 9/11" p.3

<sup>161</sup> Mervin, J. (2011) "Wall Street and the aftermath of 9/11" *BBC News* (6/9/20) available at <https://www.bbc.co.uk/news/business-14798711> (last accessed 22/09/20)

masked the economic toll the wars were taking on the economy, it “[engineered] a housing bubble that led to a consumption boom” – the housing bubble that ‘burst’ in 2007/08 and initiated the financial crisis.<sup>162</sup>

## Social impacts

9/11 caused severe physical and psychological ramifications for those involved. For example, the prevalence of post-traumatic stress disorder (PTSD) 2–3 years after was 12.4% in rescue and recovery workers and volunteers, with a range from 6.2% for police to 21.2% for unaffiliated volunteers.<sup>163</sup> There were also psychological effects for those not directly involved in the attacks, through indirect exposure to the events via the media. This contributed to a diminished sense of security across the US, with 44% of the adult population experiencing substantial stress 3–5 days after the attacks.<sup>164</sup> The effects of media-based exposure to collective traumatic events can be long-lasting and may have cumulative effects over time.<sup>165</sup> Following the attacks, PTSD symptoms were reported in representative samples of Americans across the country and even by school children as far away as London.<sup>166</sup> This phenomenon, the impact of a traumatic experience that affects and involves entire groups of people, communities or societies is often referred to as ‘collective trauma.’<sup>167</sup> Anecdotal evidence suggests that drug and medication misuse increased.<sup>168</sup> In response to this, the federal government introduced Project Liberty, which allocated federal funding to mental health services for NYC residents. Despite this initiative, studies found that there was no increase in usage of mental health services in the year following the attack, and there was only a slight increase in usage over a 24-month period.<sup>169</sup> Overall, 31% of NYC adults sought mental health treatment during that period, of which 18.6% said that their issues were related to the WTC attacks. 10% of NYC adults received brief immediate post-disaster interventions that were deployed through community bodies. Of these, 78% of the interventions consisted of three sessions or less.<sup>170</sup>

As well as mental health impacts, there has been a long-term effect on the physical health of those involved in 9/11, mainly caused by the carcinogens that were released when the WTC came down.<sup>171</sup> Doctors with the World Trade Centre Health Program, which the federal government created in the aftermath of the attacks, linked respiratory system diseases, aerodigestive disorders and nearly 70 types of cancer to 9/11.<sup>172</sup> More than 411 emergency workers died on the day of the attacks, but the total number had doubled to 1,064 by July 2016. The wider population has also suffered, with as many 400,000 people estimated to be

<sup>162</sup> Stiglitz, J. (2011): “The Price of 9/11” *Project Syndicate*, 1 September 2011, <https://www.project-syndicate.org/commentary/the-price-of-9-11?barrier=accesspaylog> (last accessed 29/9/20)

<sup>163</sup> Perlman, S. E., Friedman, S., Galea, S., Nair, H. P., Erős-Sarnyai, M., Stellman, S. D., Hon, J., Greene, C. M. (2011): “Short-term and medium-term health effects of 9/11” *The Lancet* vol.378 p.926.

<sup>164</sup> Stiglitz “The Price of 9/11”

<sup>165</sup> Silver, R. C., Holman, E.A, Andersen, J. P., Poulin, M., McIntosh, D. N. and Gil-Rivas, V. (2015) “Mental- and Physical-Health Effects of Acute Exposure to Media Images of the September 11, 2001, Attacks and the Iraq War” *Psychological Science* vol. 24, p.1628; Garfin, D. R., Holman, E. A. and Silver, R. C. (2015) “Cumulative Exposure to Prior Collective Trauma and Acute Stress Responses to the Boston Marathon Bombings” in *Psychological Science* vol.26 no.6 p.679.

<sup>166</sup> Silver, R. C. and Garfin, D. R. (2016). “Coping with disasters” in J. C. Norcross, G. R. VandenBos, D. K. Freedheim, & N. Pole (Eds.), *APA handbook of Clinical Psychology: Psychopathology and Health*. American Psychological Association, Washington, DC p. 604.

<sup>167</sup> Turmaud, D. R. (2020) “What Is Collective Trauma?” *Psychology Today* <https://www.psychologytoday.com/gb/blog/lifting-the-veil-trauma/202005/what-is-collective-trauma> (last accessed 29/09/20)

<sup>168</sup> Low, S. M., Taplin, D. and Lamb, M. (2005) “Battery Park City: An Ethnographic Field Study of the Community Impact of 9/11” in *Urban Affairs Review* vol.40 no.5 p.668.

<sup>169</sup> Boscarino, Joseph A., Richard E. Adams, and Charles R. Figley (2011) “Mental Health Service Use After the World Trade Center Disaster: Utilization Trends and Comparative Effectiveness” *The Journal of Nervous and Mental Disease* vol.199 no.2 p.92-95.

<sup>170</sup> *Ibid.*, p.96

<sup>171</sup> Goodman, L. (2016) “9/11's Second Wave: Cancer and Other Diseases Linked to the 2001 Attacks Are Surging” *Newsweek* (9th July 2016) <https://www.newsweek.com/2016/09/16/9-11-death-toll-rising-496214.html> (last accessed 29/09/20)

<sup>172</sup> World Trade Center Health Program (2020) “Covered Conditions” <https://www.cdc.gov/wtc/conditions.html> (last accessed 29/09/20)

affected by diseases and mental illnesses linked to 9/11, including those who lived and worked within a mile and a half of Ground Zero in Manhattan and Brooklyn.<sup>173</sup>

9/11 also had the negative social impact of increasing levels of racism and Islamophobia. After the attacks, the level of hate crimes against people who appeared Middle Eastern, Arab or Muslim rose significantly, with the FBI reporting a 1,700% increase in hate crimes against Muslim Americans between 2000 and 2001.<sup>174</sup> This increased racism was also institutional: the unlawful use of racial profiling in people of Arab, Muslim, South Asian or Eastern descent was found to have substantially increased following the attacks.<sup>175</sup> Increased racist and Islamophobic attitudes were not confined to the US: for example, discrimination against Muslims also increased in the UK.<sup>176</sup>

There were also obvious and significant social costs of the 'War on Terror' which was initiated following the attacks: alongside the \$6.4 trillion global cost to the US through to the end of 2020, it is estimated that between 770,000 and 801,000 people have died in post-9/11 wars.<sup>177</sup> There has also been concern about the possibilities of torture and mistreatment of individuals at Guantanamo Bay detention camp, established as a place for the US authorities to hold people perceived to be 'enemy combatants' in the War on Terror.<sup>178</sup>

The 9/11 attacks elicited a large-scale convergence of spontaneous volunteers on Ground Zero. This sudden congregation risked putting victims, first responders and volunteers themselves at risk due to the environmental hazards surrounding the WTC site. Although well intentioned, there was no immediate framework for coordinating a volunteer response of that size, and many physically presenting themselves had to be turned away in the days following the disaster.<sup>179</sup> The NYC Mayor's Voluntary Action Centre quickly took a leading role in coordinating volunteers, both individual and corporate, in the days following the disaster, and widely disseminated appeals for help.<sup>180</sup> In a similar, albeit prolonged manner, mutual aid groups have sprung up across London to assist within the community following the immediate impacts of COVID-19. Through its pre-existing community stakeholder relationships and well-established volunteer and social action initiative, Team London, the GLA, London Councils, and other partners leading London's recovery programme, are well placed to support these groups' continued activity, and coordinate their efforts across the city during the ongoing response and recovery efforts.

## Policy responses

### Monetary policy:

At first, analysts feared that the economic impact on certain sectors such as aviation and insurance would spill over into the whole economy and initiate a financial crisis. To prevent this, the Federal Reserve Bank in the USA immediately reassured the financial system that, through the "discount window" mechanism of short-term loans from the central bank, ample liquidity would be available. American banks also bought a

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<sup>173</sup> Goodman "9/11's Second Wave"

<sup>174</sup> Anderson, C. (2002): "FBI reports jump in violence against Muslims", *Associated Press*, 25 November 2002.

<sup>175</sup> Ibid.

<sup>176</sup> Sheridan, L. (2006): "Islamophobia Pre- and Post-September 11<sup>th</sup>, 2001", *Journal of Interpersonal Violence*, vol.21, p.321.

<sup>177</sup> Crawford "United States Budgetary Costs and Obligations of Post-9/11 Wars" p.1

<sup>178</sup> Amnesty International (2020): "Guantanamo Bay: 14 years of injustice" 18 May 2020 available at <https://www.amnesty.org.uk/guantanamo-bay-human-rights> (last accessed 29/09/20)

<sup>179</sup> Fernandez, L. Barbera, J. and Van Dorp, J. (2006) "Strategies for Managing Volunteers during Incident Response: A Systems Approach" *Homeland Security Affairs: The Journal of the NPS Center for Homeland Defense and Security* vol.2 no.3: <https://www.hsaj.org/articles/684> (last accessed 29/09/20); Sharon, L. (2004) "Averting a disaster within a disaster: the management of spontaneous volunteers following the 11 September 2001 attacks on the World Trade Center in New York", *Voluntary Action*, Vol 6 No 2 Spring 2004, p.11-29

<sup>180</sup> Kapucu, N. (2006) "Public-nonprofit partnerships for collective action in dynamic contexts of emergencies", *Public Administration*, vol. 84 no.1 2006, p.206

large number of government securities through open market operations. In addition, the backlog of uncleared checks caused 'float' (or federal credit) to the financial system to rise.<sup>181</sup> Overall, in the three days after the attack, the Fed injected over \$100 billion per day into the financial system.<sup>182</sup> In addition, the Fed entered into, or expanded, existing agreements with the European Central Bank, the Bank of Canada, and the Bank of England to swap dollars for foreign currency in order to support foreign financial institutions operating in the US. By these means an additional \$90 billion was added to the financial system.<sup>183</sup> Without policy support to the financial sector, the stock market might have dropped much more than it did, and the crisis might have expanded to the broader financial system.<sup>184</sup> Due to these measures, by the end of the year the US equity markets and the exchange rate value of the dollar recovered to their pre-attacks values.<sup>185</sup>

The Fed also lowered key interest rates by 0.5% in September and October 2001: the overall 1% drop left the federal funds rate at 2.5% and the bank discount rate at 2.0%, the lowest those rates had been since 1962.<sup>186</sup> The drop in rates in September was followed by other central banks, with the Bank of England cutting interest rates by 0.25%.<sup>187</sup>

### **Fiscal policy:**

Following 9/11, US fiscal expenditures rose sharply. This was led by the \$40 billion emergency appropriation to fund relief efforts, largely in New York City.<sup>188</sup> Financial assistance was also provided to small businesses in, and around, the WTC in the form of Community Development Block Grant funds (CDBG). Economic Injury Disaster Loans (EIDL) were also available to eligible small businesses – at first only for businesses in declared disaster areas but then nationwide – which provided working capital for ordinary and necessary operating expenses that would have been incurred in the absence of a disaster. As of 2002, 4,495 EIDLs had been approved for \$505 million (the average loan size being approximately \$112,347). However, there was criticism that some small businesses – especially those in the WTC complex – received little or no financial aid. General complaints about federal financial assistance included insufficient funding, burdensome application requirements, arbitrariness, and delays.<sup>189</sup>

Targeted fiscal support was also provided to the sectors which were hit hard by the attacks. For example, an aid package gave airlines access to up to \$15 billion (\$5 billion in short-term assistance and \$10 billion in loan guarantees).<sup>190</sup> For the insurance industry, the Terrorism Risk Insurance Act was signed into law in November 2002, entailing the federal government to share the cost of losses resulting from any future terrorist attacks within the insurance industry for three years.<sup>191</sup>

Beyond the immediate response, Congress crafted an economic stimulus package to boost the national economy and to help New York to recover. This included provisions such as an expansion of the Work Opportunity Tax Credit for certain employers in New York and investment in infrastructure. To address the

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<sup>181</sup> Makinen, "The Economic Effects of 9/11" p.10

<sup>182</sup> Parry, R. (2001): "The U.S. Economy after September 11", *FRBSF Economic Letter*, no.2001-35, December 7 2001.

<sup>183</sup> Federal Reserve Bank of Chicago (2001): "2001 Annual Report", p.16.

<sup>184</sup> Lacker, J. (2004): "Payment System Disruptions and the Federal Reserve Following September 11, 2001", *Journal of Monetary Economics*, vol. 51, no. 5, p.940.

<sup>185</sup> Makinen, "The Economic Effects of 9/11" p.23

<sup>186</sup> *Ibid.*, p.25

<sup>187</sup> Sesit, M. and Williams, M. (2001): "Europe, Canada Reduce Rates After Fed's Cut; Japan Sells Yen", *The Wall Street Journal*, September 18 2001, p. A 14.

<sup>188</sup> Makinen, "The Economic Effects of 9/11" p.28

<sup>189</sup> *Ibid.*, p.38-42

<sup>190</sup> *Ibid.*, p.4

<sup>191</sup> Seifert, C. (2003): "Insurance pricing likely to remain strong into 2004," *Standard & Poor's Industry Surveys, Insurance: Property-Casualty*, January 16, 2003.

layoffs as a result of the attacks, legislation directed at workers adversely affected was introduced, extending unemployment compensation (UC) benefits by 13 weeks for those who had exhausted their basic benefits, and an additional 13 weeks beyond the initial extension for individuals in states with high unemployment. Through August 2002, nearly 3,800 individuals in New York and Virginia had received such benefits.<sup>192</sup> Other countries also provided some fiscal stimulus to their economies, but most had less leeway to do so than the US.<sup>193</sup> Expenditures were deficit financed and automatic stabilisers were allowed to function: for example, the decline in tax revenues associated with the decline in the stock market and personal income was not offset by spending cuts or tax increases. In 2002, components of the major tax cuts of 2001 were phased in as scheduled.

As mentioned previously, the most substantial long-run cost of 9/11 has been the increased cost of military action and security.<sup>194</sup> Total US military expenditure reached double-digit percentage increases following the attacks and there were also increases in spending for domestic law enforcement, public safety, and private security services, including the creation of Homeland Security. Overall, the 2001 US public finance deficit following the attacks ballooned from -\$39.3 billion in 2001 to -\$529.7 billion by 2003.<sup>195</sup> The US Treasury created Patriot Bonds in December 2001 to assist in financing the war on terrorism.<sup>196</sup> Regardless, since 2001, the US has appropriated and is obligated to spend \$6.4 trillion on counterterrorism efforts through the end of 2020.<sup>197</sup>

## Lessons learned

### Financial markets require immediate support to prevent a financial crisis, and can be key to economic recovery

- The Fed and other central banks acted swiftly to avert a financial panic and liquidity shortage. Without this support to the financial sector, the stock market might have dropped much more than it did, and the crisis might have expanded to the broader financial system.<sup>198</sup>
- In this context “it should not be overlooked that markets have powerful mechanisms and incentives to overcome negative shocks. For many observers, the [ability to prevent a financial crisis] has re-validated the wisdom of having a central bank capable of exercising a large amount of discretion”.<sup>199</sup>
- “The high level of coordination between central banks [following the attacks] likely demonstrates the lessons they learned and the techniques they developed by addressing other financial crises over the previous two decades. It likely also demonstrates the recognition that national economies had become highly interconnected and that a shock to one creates spill over effects onto other economies and markets.”<sup>200</sup>

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<sup>192</sup> Makinen, “The Economic Effects of 9/11” p.6-9

<sup>193</sup> Ibid., p.21

<sup>194</sup> Ibid., p.2-3

<sup>195</sup> Jackson, “The Impact of the 9/11 Terrorist Attacks on the US Economy” p.19

<sup>196</sup> Makinen, “The Economic Effects of 9/11” p.51-53

<sup>197</sup> Crawford, N. and Lutz, C. (2019): “Human Cost of Post-9/11 Wars: Direct War Deaths in Major War Zones, Afghanistan and Pakistan (October 2001- October 2019); Iraq (March 2003 – October 2019); Syria (September 2014 – October 2019); Yemen (October 2002 – October 2019); and Other”, Costs of War project, *Watson Institute for International and Public Affairs*, Brown University.

<sup>198</sup> Lacker, “Payment System Disruptions and the Federal Reserve Following September 11” p.942

<sup>199</sup> Makinen, “The Economic Effects of 9/11” p.53

<sup>200</sup> Ibid., p.27

- Well-functioning financial markets can also play a key role in economic recovery: because of well-functioning financial markets, US markets rebounded much more quickly than 12 other major markets, even though the direct attacks occurred in the US. Such "... market resilience can be at least partially explained by a banking/financial sector that provides adequate liquidity to promote market stability and stifle panic."<sup>201</sup>

### **The ability of the government to exercise fiscal discretion in response to emergencies is of vital importance to the economy**

- Changes in monetary policy were implemented on the day of the attacks and largely completed within the following week. However, the fiscal response was significantly slower: although budget policies can be changed quickly to respond to a recession or other fiscal emergency, the development of a significant legislative response to the problem usually requires substantive investment of time and effort. Consequently, such emergency legislation sometimes is enacted and implemented after the need for it has become much less pressing or ceased altogether: the stimulus bill was not signed into law until March 2002 and turned out to be much smaller than intended. By the time the bill went into effect, the recession may have already ended.<sup>202</sup>
- Following the attacks, some suggested that a back-up system should be put in place to allow the Fed to act quickly even if a majority of the seven governors become incapacitated and cannot act in a timely fashion or in ways required by law.<sup>203</sup>

### **Fear translates into negative economic consequences**

- The behavioural changes as a result of the attacks were found to have a larger economic impact than the attacks themselves. The largest single impact of the event was due to the fear factor manifesting itself in a reduction in air travel and related tourism for nearly two years after the event. After adjusting for the pre-existing downturn in airline travel, this amounted to \$50 billion of direct BI and \$60 billion of indirect BI.<sup>204</sup>
- To mitigate this, efforts need to be made to improve the accuracy of reporting of events. Governments need to find ways to communicate the strengths and limitations of their capabilities to protect it.<sup>205</sup>

### **Compared to large firms, small businesses are particularly vulnerable to disaster impacts and losses**

- The attacks dislocated, disrupted or destroyed nearly 18,000 businesses in and around the WTC complex – the vast majority being small businesses.<sup>206</sup>

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<sup>201</sup> Karolyi, A. and Martell, R. (2006): "Terrorism and the Stock Market", *Social Science Research Network* vol.2 no.2

<sup>202</sup> Makinen, "The Economic Effects of 9/11" p.11

<sup>203</sup> Ibid., p.12

<sup>204</sup> Rose et al., "The Economic Impacts of the 2001 Terrorist Attacks"

<sup>205</sup> Rose, A. and Blomberg, B. (2010): "Total Economic Consequences of Terrorist Attacks: Insights from 9/11", *Published Articles & Papers*, Paper 190 <https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.660.618&rep=rep1&type=pdf> (last accessed 30/9/20) p.9

<sup>206</sup> Empire State Development et al. "World Trade Center Disaster: Final Action Plan for New York Business Recovery" p.2

- Small businesses tend to have inadequate cash reserves, are less able to raise capital, and generally are unprepared to cope with disasters and their effects.
- Small firms forced to temporarily close typically face immediate cash flow problems and, thus, need to quickly resume operations in order to remain viable. The longer it takes business enterprises to recover, the larger the impact on the revenue-generating power of local governments because local jurisdictions in New York depend on sales and property taxes. Prolonged business disruptions therefore have the potential for jeopardizing community-financed services such as public works and economic development initiatives.<sup>207</sup>

### **Resilience has a profound effect on economic recovery**

- In the aftermath of 9/11 individual businesses survived by relocating quickly and individual consumers made many worthy adjustments.<sup>208</sup> Business interruption was lowered by more than 70% for firms that were able to relocate quickly.<sup>209</sup>
- Potential losses as a result of direct business interruption (BI) were of the order of \$43 billion in GDP, but because 95% of the more than 1,100 businesses located in the WTC area were able to relocate rather quickly, the direct BI losses were only \$12 billion.<sup>210</sup>

### **Shocks can cause long-term social impacts which last beyond the economic recovery, such as collective trauma and increases in racist attitudes**

- Shocks and disasters such as 9/11 have sudden onset impacts, typically affect large geographical areas, and can spread psychological distress to the immediate vicinity and beyond.<sup>211</sup> This has potential long-term ramifications for the mental and physical health of the population, especially for those directly involved in the disaster, but also for those indirectly exposed via the media, in an effect known as collective trauma.
- When shocks are associated with a specific group of people there can be an increase in discrimination and racism towards that group. 9/11 was found to have increased levels of racism and islamophobia globally, negatively impacting community cohesion within multicultural societies like the UK.
- Immediate, short-term mental health interventions proved more effective in addressing mental trauma than the long-term conventional psychotherapy the federal government had allocated funding for in the Patriot Act. Emergency mental health treatment prevents the consolidation of fear conditioning over the months following the traumatic event, setting adults on a course of recovery soon after the incident itself.<sup>212</sup> Similarly, such support is likely to be crucial for ensuring the long-term wellbeing of Londoners impacted by COVID-19. Replicating the community focus of these short-term interventions by reaching out to community, faith groups and the voluntary and community sector (VCS) will be crucial to avoid individuals missing out on vital support. These measures should be immediately implemented following the easing of restrictions.

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<sup>207</sup> Makinen, "The Economic Effects of 9/11" p.39

<sup>208</sup> Rose et al., "Total Economic Consequences of Terrorist Attacks" p.9

<sup>209</sup> Ibid., p.11

<sup>210</sup> Ibid.

<sup>211</sup> Silver and Garfin (2016). "Coping with disasters" p.597

<sup>212</sup> Marshall, R. D. and Suh, E. (2002) "Contextualizing Trauma: Using Evidence-Based Treatments in a Multicultural Community After 9/11" *Psychiatric Quarterly* no. 74 p.409

**Partnerships across civil society will be very useful in helping the recovery programme reach more deeply into the diverse communities of London and ensuring that the work of these organisations continues to reinforce the longer-term recovery programme once the initial crisis response phase is passed and ensuring that this work is culturally contextualised.**

- When discussing the emergency response to, and recovery from, 9/11, Kapucu argues convincingly that a partnership approach between public and non-profit bodies, instead of a centralised, hierarchical model, is the most effective way of dealing with a crisis and adapting to it as it unfolds.<sup>213</sup> Although the context of the 9/11 disaster is very different to the current COVID-19 pandemic, as discussed earlier, there are numerous lessons to be learned from New York’s recovery. The fact that the pandemic is an ongoing, drawn out process of socio-economic stress, rather than a single, catastrophic event (as in the case of 9/11) means that the lessons from this research will remain useful as London and the rest of the country continues to deal with the virus and its knock-on effects.
- One important lesson from the literature is that, instead of oversimplifying a socio-economic shock as a single problem requiring a single solution, coordinators should see them as a multifaceted “mess” of interconnected challenges. Therefore, many of the actions required will lie outside of the remit of government, and will require the involvement of numerous different agencies, organisations and informal bodies across civil society.
- During the 9/11 disaster, government bodies that had a strategic overview of the situation but lacked the capacity to deal with every aspect of the disaster response, entered into a partnership with numerous non-profit organisations rather than attempting to impose a strict agenda on them. This approach allowed a degree of “critical strategic interdependence” between organisations from across civil society which enabled information-sharing and collaborative work without imposing an inflexible governance structure on them.<sup>214</sup>
- In the context of a socio-economic shock which will unfold over months, perhaps years, the GLA would be well advised to establish a recovery-focused partnership that offers a large degree of autonomy to its constituent parts, thereby encouraging participation from as wide a range of organisations as possible. Given that the COVID-19 crisis is composed of a number of interrelated challenges, the literature implies that establishing a programme that utilises (central, regional and local) (*our emphasis*) government’s strategic overview, whilst empowering as many stakeholders as possible to partake would be the best approach to ensuring that the recovery programme is as effective, comprehensive and inclusive as possible. Avoiding the strict imposition of a centralised agenda was promoted as a key means of achieving wider buy-in across civil society.<sup>215</sup>
- This “heterarchical” approach would allow the GLA to collaborate with as many organisations as possible, whilst also empowering these stakeholders in turn to utilise their pre-existing interpersonal and intercorporate networks. Adopting a hands-off approach would allow these bodies, regardless of size, to adapt to their individual post-COVID challenges autonomously, and therefore more successfully.
- This approach could even incorporate and coordinate the informal associations, such as mutual aid networks, that spontaneously arose out of community-based responses to the crisis. Empowering

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<sup>213</sup> Kapucu “Public-nonprofit partnerships” p.210

<sup>214</sup> Ibid., p.208-9

<sup>215</sup> Kelly, J. and Stark, D. (2002) “Crisis, recovery, innovation: responsive organization after September 11”, *Environment and Planning*, vol.34 no.9 p.1523-7



these associations to identify and communicate need will help ensure that the recovery programme intervenes at the community level in a manner that is meaningful and culturally contextualised.

## The 2008 Financial Crisis:

### Environmental impacts

We could only find limited literature that dealt with the direct environmental impacts of the 2008 global financial crisis. A 2014 report published by the Finnish Environment Institute (SYKE)<sup>216</sup>, highlighted the effects the prolonged financial crisis had on Finland's environment. On the one hand, the economic recession had reduced the use of natural resources and eased other pressures on the environment, but on the other hand, it resulted in the slowing down of environmental policy processes, including international action on climate change.

Prior to the financial crisis, air and water pollution had been declining over recent decades in Finland. Additionally, trends that were once seen as irreversible, such as private car use and energy consumption were also showing signs of levelling off. However, climate change and losses in biodiversity still remained above national environmental targets. A key factor in helping to reduce emissions in Finland in recent decades has been down to the fact that a significant share of its economic growth had been built on the use of natural resources in other countries, which means that the environmental impacts of the manufacture of imported goods primarily affected the country of origin. Finland had also made strides in increasing its eco-efficiency by producing goods and services using smaller amounts of natural resources.

Whilst the global recession made it easier to achieve goals such as the Kyoto Protocol's targeted reductions in greenhouse gas emissions – since shrinking economic activity led to reductions in the use of natural resources and energy, and resulting emissions, a stalled global economy resulted in no significant progress being made on international climate policies since the beginning of the financial crisis. The paper noted that five conferences of the parties to the UN climate agreement were held over the period 2009–2013, but no decisions on binding emission reduction targets had been forthcoming.

The positives and negatives of economic recession on the environment and environmental policies is also highlighted by Bowen and Stern (2010)<sup>217</sup>, who argue that, "Recession in some cases may reduce the environmental problem under consideration and hence the potential benefits of action. For example, it is likely to reduce congestion, as lower economic activity is reflected in less movement of goods and fewer work-related journeys..... Lower economic activity is likely to reduce the emission of local pollutants from industrial sources"; but it can also lead to a deprioritisation of environmental policies.

The authors cited an example of where concerns were raised about whether economies could afford the short-run costs of environmental improvements and pollution and greenhouse gas abatement. Before the European Union summit in October 2008, eight EU members suggested that carbon dioxide emissions targets ought to be revised in the light of current "serious economic and financial uncertainties." And the Prime Minister of Italy told a press conference, "our businesses are in absolutely no position at the moment to absorb the costs of the regulations that have been proposed."

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<sup>216</sup> Finnish Institute (SKYE) (2014). "Environmental impacts of the financial crisis evident." ScienceDaily, 5 February 2014. <[www.sciencedaily.com/releases/2014/02/140205075819.htm](http://www.sciencedaily.com/releases/2014/02/140205075819.htm)>.

<sup>217</sup> Bowen, A. and Stern, N. (2010). "Environmental policy and economic downturn", *Centre for Climate Change Economics and Policy Working Paper No. 18*, *Grantham Research Institute on Climate Change and the Environment Working Paper No. 16*

## Economic impacts

The crisis led to the collapse of the global financial market, with big banks going bankrupt due to unhealthy balance sheets and the inability to provide proper liquidity. This had a crippling effect on economies, leading to a global economic downturn and recessions in most advanced countries. The UK was amongst those countries most exposed: the financial year 2008/09 saw huge falls in UK financial asset prices, with the FTSE all-share Index falling by one-third.<sup>218</sup> The pound fell to a 23-year low against the dollar at \$1.35.<sup>219</sup> After almost 16 years of uninterrupted economic growth quarter-on-quarter, the UK economy contracted for five quarters in a row and having shrunk by more than 6%, took five years to get back to the size it was before the recession.<sup>220</sup>

For most people, the loss of wealth was experienced through falling home values; the average UK house price fell by 20% in the first 16 months, and it was not until May 2014 that it recovered to its pre-crisis level.<sup>221</sup> There was also a loss of real wages, with average weekly earnings falling 10.2% relative to consumer price inflation between 2008 and 2013.<sup>222</sup> This impact has been long-lasting: in August 2019, average weekly earnings were almost back to pre-crisis levels (£511 per week compared to £513 in August 2007). Had real pay growth continued at the pre-crisis rate, average weekly earnings would have been 27% higher (in 2019 prices).<sup>223</sup>

As the economy shrunk, unemployment rose significantly. By the end of 2011, almost 2.7 million people in the UK were looking for work and the quarterly unemployment rate reached 8.4% - the highest rate since 1995.<sup>224</sup> The unemployment impact was not limited by geographical or administrative boundaries – its effects were most acutely felt at the sectoral level (particularly for manufacturing, construction, finance and creative industries). Small firms with limited working capital were hit particularly hard.<sup>225</sup> Across Europe, there was a rise in ‘job polarisation’, in which mid-paid jobs declined in respect to jobs at the top and bottom of the occupational structure, causing a generalised reduction in mobility. However, this effect was considerably milder in the UK compared to other European countries, and the overall UK unemployment impact was far less than originally feared given the drop in output. This is partly as a result of better general economic conditions and partly because of monetary and exchange rate flexibility.<sup>226</sup>

Compared to the rest of the UK, central London had an earlier and stronger recovery, with a net increase of 208,000 FTEs (14%) between 2008 and 2013 compared with a net reduction of 329,000 (-2%) across the UK. There are varying explanations to London’s resilience, with some relating to structural advantages; for example, the role of central London as an international destination meant that it benefitted from sterling

<sup>218</sup> Whitehead, C. and Williams, P. (2011): “Causes and consequences? Exploring the shape and direction of the housing system in the UK post the financial crisis”, in *Housing Studies*, vol.23 nos. 7-8 (Oct-Nov 2011) p.1157-1169; Institute for Fiscal Studies (2012): “The effect of the financial crisis on older households in England”, *IFS Working Paper W12/09* p.2

<sup>219</sup> Bewick, T., (2009): “UK employment and skills in a global recession: what can we do now?” *Learning and Skills Network* p.3-6

<sup>220</sup> Office for National Statistics (2018): “The 2008 recession 10 years on: A decade after the beginning of the recession, how has the UK economy recovered?” available at <https://www.ons.gov.uk/economy/grossdomesticproductgdp/articles/the2008recession10yearson/2018-04-30> (last accessed 30/09/20)

<sup>221</sup> Cook et al., “The Global Financial Crisis – 10 Years On”

<sup>222</sup> Emmerson, C. and Tetlow, G. (2016): “UK public finances: from crisis to recovery”, in *Fiscal Studies*, vol. 36 no.4 Dec 2015, p.555-577.

<sup>223</sup> Cominetti, N. (2019): “Never had it so good? Almost back to peak pay”, *Resolution Foundation* (7 November 2019) available at <https://www.resolutionfoundation.org/comment/never-had-it-so-good-almost-back-to-peak-pay/> (last accessed 30/09/20)

<sup>224</sup> ONS “The 2008 recession 10 years on”

<sup>225</sup> Bewick “UK employment and skills in a global recession” p.12

<sup>226</sup> Fernández-Macías, E., Bisello, M., Maccarrone, V. (2017) “Employment transitions and occupational mobility in Europe: The impact of the Great Recession” *European Foundation for the Improvement of Living and Working Conditions (Eurofound)* available at <https://www.eurofound.europa.eu/publications/report/2017/employment-transitions-and-occupational-mobility-in-europe-the-impact-of-the-great-recession> (last accessed 30/09/20)

depreciation in terms of increased tourism, which may well have contributed 20,000 FTE jobs.<sup>227</sup> Another explanation is the impact of the massive fiscal support to/through the banking sector, in first mitigating impacts of the downturn for the financial centre, and then fuelling another global city boom. The quantitative easing (QE) measures implemented by the Bank of England may have also favoured London through sizable international spill-overs (i.e. there is evidence that investment projects as a result of the QE were offshore, yielding impacts within the UK that are limited to the financial sector based in London).<sup>228</sup>

Even over ten years since the crisis, there are some longer-term scarring effects still present. Productivity (output per hour) slumped and has barely recovered since; had the pre-2008 trend continued; productivity would have been 20% higher than it was at the end of 2017. Lots of reasons have been suggested for the cause of the 'productivity puzzle', including banks not being willing to lend to new businesses, new levels of business investment and companies being able to keep staff on instead of making them redundant, because wages have not been rising.<sup>229</sup>

## Social impacts

Young people were particularly hit hard by the crisis: in 2012 the average unemployment rate for the entire adult population was 8.2%, but close to three times higher at 22% for young people (aged 16 to 24).<sup>230</sup> The impact of the crisis on the housing market also made it more difficult for younger people to get on the property ladder. Although it is widely accepted that the historic under-supply of housing is the main cause of unaffordable housing, while the high deposit now required by a first-time buyer (due to limits on the amount that people can borrow following the crisis) presents an additional significant barrier to buying a first home.<sup>231</sup> The recession also led to long-term financial scarring amongst young people who entered the jobs market in its midst, when compared to those who left in better economic conditions.<sup>232</sup> Spending the first years of their professional life in an era of stagnation had severe impacts on the future wage-growth trajectories of these cohorts for decades afterwards.<sup>233</sup> These impacts were felt most severely by those traditionally marginalised in British society, including women, the poor and BAME communities, but were felt by young people across the socio-economic spectrum.<sup>234</sup>

Unemployment, lack of financial or career progression, and claiming benefits had a severe knock-on effect on young people's mental health during this period of labour market decline. Between the 2008 financial crash and 2010 it is estimated that an additional 1,000 deaths due to suicide occurred amongst young people, indicating an increase in suicide attempts of around 30-40,000.<sup>235</sup> Aside from the increased stress of insecure employment status and financial difficulties, mental health is severely impacted by the way the social welfare system is structured and the outcomes it seeks to achieve. Job Centre targets, for instance,

<sup>227</sup> Gordon, I. R. (2015) "Quantitative Easing of an International Financial Centre: How Central London Came So Well Out of the Post-2007 Crisis" in *Cambridge Journal of Regions Economy and Society* vol.9 no.193 p.8-9

<sup>228</sup> Ibid., p.18

<sup>229</sup> ONS "The 2008 recession 10 years on"

<sup>230</sup> Trades Union Congress (2012) "Youth Unemployment and Ethnicity: TUC Report" available at <https://www.tuc.org.uk/sites/default/files/BMEyouthunemployment.pdf> (last accessed 30/09/20) p.3

<sup>231</sup> Ministry for Housing, Communities and Local Government (2017): "Fixing our broken housing market" available at [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/590464/Fixing\\_our\\_broken\\_housing\\_market\\_-\\_print\\_ready\\_version.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/590464/Fixing_our_broken_housing_market_-_print_ready_version.pdf) (last accessed 30/09/20) p.15; Cook, L., Ward, J., and Buckle, C., (2017) "Spotlight: The Global Financial Crisis – 10 Years On" *Savills UK* (27<sup>th</sup> July 2017) available at [https://www.savills.co.uk/research\\_articles/229130/219126-0](https://www.savills.co.uk/research_articles/229130/219126-0) (last accessed 30/09/20)

<sup>232</sup> Clarke, S. (2019) "Growing Pains: The impact of leaving education during a recession on earnings and employment" *Resolution Foundation* p.1

<sup>233</sup> Ibid., p.10

<sup>234</sup> Gunnell, D., Donovan, J., Barnes, M., Davies, R., Hawton, K., Kapur, N., Hollingworth, W. and Metcalfe, C. (2015) "The 2008 Global Financial Crisis: effects on mental health and suicide" University of Bristol Policy Report available at <https://www.bristol.ac.uk/policybristol/policy-briefings/financial-crisis/> (last accessed 30/09/20)

<sup>235</sup> Ibid.

were reported as severely damaging the self-worth of applicants and contributed to a stigmatising experience of unemployment.<sup>236</sup> These factors, combined with a social narrative that stigmatised the unemployed generally as “scroungers” as opposed to “strivers”, meant that experiences of failure to gain employment were often internalised by young people as personal failures, rather than the result of systemic issues.<sup>237</sup>

Analysis of the austerity measures introduced to address UK government debt between 2009 and 2011 suggest that the distribution of the burden of austerity was mildly progressive.<sup>238</sup> However, analysis of the cuts announced up to 2015 predicted a much more regressive picture, in which the number of people at risk of poverty was set to rise.<sup>239</sup> Indeed, analysis in 2016 estimated that those in the upper-middle of the income distribution had been largely protected on average by austerity measures, as they benefited from increases in the tax-free personal allowances and pensioner benefits, which offset losses. There was also a redistributive impact, with working-age families with children have experienced the largest losses on average. However, overall income inequality was not seen to have increased: in 2006/07, the Gini coefficient (an index to measure inequality) before housing costs was 35% and after housing costs was 39% and in 2015/16 these rates were the same.<sup>240</sup>

## Policy responses

### Monetary policy:

Bailouts were given to banks to safeguard the financial system, through direct investment in vulnerable banks and state-initiated restructuring. A Special Liquidity Scheme was introduced in the UK to resolve bank’s balance sheet problems – at the scheme’s peak in early 2009, £185bn of Treasury bills had been lent by the Bank<sup>241</sup>. A broader rescue package followed, which included both a state guarantee for inter-bank lending and provision for the government to buy bank shares. The total value of guarantees rose to a peak of over £1 trillion, with an actual cash commitment of around £120 billion. Expressed aims included encouragement of lending to creditworthy borrowers, but the dominant concerns were clearly protecting depositors and maintaining financial stability, by assuring the liquidity and capital of the banks.<sup>242</sup>

As a result of the bailout, there was also the unintended support to banks of implicit subsidies, as a perceived government guarantee of their viability allowed the banks to borrow at lower interest rates. Large jumps in the borrowing costs of banks (£59bn for the ‘big five’ in 2008 and £107bn in 2009) suggest that these subsidies were important in the UK.<sup>243</sup>

Alongside the support to the banks, expansionary monetary policy was implemented with the aim of boosting levels of activity in the economy by reducing the general cost of borrowing, increasing liquidity

<sup>236</sup> Ibid.; Formby, A. (2017) “‘Got a degree... all of a sudden I’m in a Jobcentre’: The Role of ‘stigma’ in precarious graduate transitions” in *Journal of Poverty and Social Justice* vol.25 no.3 p.255

<sup>237</sup> Formby, “...all of a sudden I’m in a Jobcentre” p.260

<sup>238</sup> European Commission (2011): “The distributional effects of austerity measures: a comparison of six EU countries”, *Research note 2/2011* p.35

<sup>239</sup> Brown, J. and Levell, P. (2010): “The distributional effect of tax and benefit reforms to be introduced between June 2010 and April 2014: a revised assessment”, *IFS Briefing Note 108*; Brewer, M., Browne, J. and Joyce, R. (2011), “Child and working-age poverty from 2010 to 2020”, *IFS Commentary C121*.

<sup>240</sup> Dunin-Wasowicz, R. (2018): “Economic inequalities in Britain – from the 2008 Financial Crisis to Brexit” *London School of Economics Blogs* <https://blogs.lse.ac.uk/brexit/2018/01/16/an-up-to-date-account-of-economic-inequalities-in-britain-since-2008/> (last accessed 30/09/20)

<sup>241</sup> John, S., Roberts, M. and Weeken, O. (2012): “The Bank of England’s Special Liquidity Scheme”, *Bank of England Quarterly Review*, 2012 Q1, p.57-66.

<sup>242</sup> Gordon “Quantitative Easing” p.14

<sup>243</sup> Haldane, A.G. (2010): “The \$100 billion question”, *Institute of Regulation and Risk* p.2

and/or expanding the money supply. Three forms of monetary intervention have been pursued sequentially in the UK since the financial crisis:

- **Bank rates were cut to 0.5%** - at the time, the lowest level since the Bank was founded. One benefit was reducing the initial impact of the housing market crash: low interest rates which helped to keep mortgage arrears and repossessions among property owners to lower levels than they otherwise would have been, meant that the cost of borrowing (i.e. a mortgage) was relatively cheap and by mid-2009 had slowed the rates of house price falls and foreclosures globally.<sup>244</sup>
- **Quantitative easing (QE)** - the Bank printed (electronic) money to finance purchases of gilts and other high-quality financial assets from private businesses. One of the central ideas was that injecting liquidity in this way lowered the yield on less risky asset types, encouraging a flow of funds into the corporate sector and into (crucially) productive investment.
- **A 'Funding for Lending' scheme** – the scheme aimed to encourage a more direct flow of funds to the real UK economy, by providing funds at cheaper rates than those prevailing in the current markets. This aimed to address the sizable international spill-overs from QE - the idea was that the lower cost of borrowing should be passed on to real UK economy customers in lower borrowing costs.<sup>245</sup>

### Fiscal policy:

The UK government provided immediate support for individuals to prevent them losing their houses, with programmes generally focused on helping to pay rather than reducing the principal (value) of the loan. For example, rules were changed to allow a shorter waiting period before borrowers could claim Support for Mortgage Interest. The assistance was an outright grant, not a loan – there was thus no financial burden on the borrower, but such programmes were costly to public finances.<sup>246</sup> A Mortgage Rescue Scheme was also implemented in January 2009 with a budget of £285 million, to help 6,000 households remain in their homes, which would be purchased (in whole or in part) by housing associations. However, the practical effect of these programmes appears to have been limited, partly because of low levels of take-up caused by failure to communicate with all eligible households, a complex application process, tight eligibility requirements and the fact that many lenders chose to avoid foreclosing mortgage holders' property.<sup>247</sup>

The UK also implemented significant fiscal policy to stimulate aggregate demand. In 2008, a £20 billion fiscal package was introduced, including a £145 tax cut for basic rate (below £34,800 pa earnings) tax payers, a temporary 2.5% cut in VAT (Sales Tax), £3 billion worth of investment spending brought forward from 2010 and a variety of other measures such as a £20 billion Small Enterprise Loan Guarantee Scheme.<sup>248</sup> Further limited measures worth £5 billion were unveiled in 2009 including training help for the young unemployed and a 'car scrappage' scheme which offered £2,000 in subsidy for a new car purchase.<sup>249</sup>

<sup>244</sup> Kemp, P. (2015): "Private renting after the global financial crisis", in *Housing Studies*, vol.30 no.4 Jun 2015, p.605; Scanlon, K., Lunde, J. and Whitehead, C. (2011): "Responding to the housing and financial crises: mortgage lending, mortgage products and government policies", in *International Journal of Housing Policy*, vol.11 no.1 Mar 2011, p.25-32.

<sup>245</sup> Bank of England (2015): "One Bank Research Agenda: Discussion Paper".

<sup>246</sup> Scanlon et al. "Responding to the housing and financial crises" p.30

<sup>247</sup> Ibid.

<sup>248</sup> BBC News (2009): "Small business loan plan unveiled" (14 Jan 2009) available at <http://news.bbc.co.uk/1/hi/business/7827273.stm> (last accessed 30/09/20)

<sup>249</sup> BBC News (2009): "At-a-glance: Budget 2009" available at [http://news.bbc.co.uk/1/hi/uk\\_politics/8011882.stm](http://news.bbc.co.uk/1/hi/uk_politics/8011882.stm) (last accessed 30/09/20)

## Impact on public finances:

The crisis caused significant damage to the UK's public finances. Spending rose sharply as a share of GDP after 2007, while revenues fell, leading to an increase in borrowing from 2.7% to 10.2% of GDP - the highest level of borrowing that the UK had experienced since the end of WW2.<sup>250</sup> Over 6% of this borrowing was judged to be structural (i.e. unsustainable).<sup>251</sup> A key reason is because the crisis made the UK less tax-rich for a range of reasons, including poor wage growth and a decline in the finance sector which made up 25% of corporation tax receipts pre-crisis.<sup>252</sup>

The UK government implemented a significant fiscal tightening to cut borrowing to a planned overall surplus. The main austerity measures introduced between 2009-2011 were increased social insurance contributions, an additional top income tax rate and withdrawal of the personal allowance at high incomes, cuts in some cash benefits and tax credits and increases in others, increase in the standard rate of VAT and freezing of Council Tax.<sup>253</sup>

## Lessons learned

### Macroeconomic policies play a key role in mitigating the shock impact and speeding the recovery in the aftermath of a crisis, but their limitations should be recognised

- Expansionary monetary policy helps shorten recessions by boosting demand. Its effectiveness, however, depends on the type of shock. Monetary policy is typically less effective in a financial crisis, when the financial sector is functioning less well and private sector balance sheets are impaired. There are also limits about how long expansionary monetary policy can be kept in place to support recoveries, without fuelling additional risks such as rising inflation.<sup>254</sup>
- On the fiscal side, effective countercyclical policies require enough fiscal space, including low debt and deficit levels combined with a track record of fiscal prudence to borrow at acceptable rates in times of crises.<sup>255</sup> The UK's existing deficit left the public sector finances less resilient than they should have been when the crisis struck. Not only was spending excessive, but the revenue base was vulnerable too. In the aftermath of the crash it no longer seems wise to have relied so heavily for tax revenue on housing and business services growth.<sup>256</sup>

### The importance of active labour market measures to aid recovery

- Rigid labour market policies, notably overly stringent employment protection, can cushion the impact of adverse shocks, but also slow the recovery by hampering labour reallocation. Active labour market policies can cushion the impact of a shock on the economy by facilitating the retraining of workers and their reallocation to new jobs.<sup>257</sup> Evidence suggests that the fluidity of the UK's labour market

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<sup>250</sup> Emmerson and Tetlow "UK public finances" p.560

<sup>251</sup> Mulheirn, I. (2013): "The social market after the crash", in *Political Quarterly*, vol. 84 no. 1 Jan-Mar 2013, p.4-15.

<sup>252</sup> Emmerson and Tetlow "UK public finances" p.569

<sup>253</sup> European Commission "The distributional effects of austerity measures" p.36

<sup>254</sup> Caldera-Sánchez, A., Rasmussen, M. and Röhn, O. (2015), "Economic resilience: what role for policies?", *OECD Economics Department Working Papers*, No. 1251.

<sup>255</sup> Ibid.

<sup>256</sup> Mulheirn "The social market after the crash" p.10

<sup>257</sup> Caldera-Sánchez et al., "Economic resilience: what role for policies?"

was found to mitigate some of the long-term negative impacts on unemployment and job polarisation after the crisis.<sup>258</sup>

- Following the crisis, some organisations (such as the Learning and Skills Network) called for active labour market measures to target support at firms and supply chains, helping them to address the immediate challenge of retaining, retraining and redeploying skilled workers, while adopting competitive strategies to better prepare these sectors for recovery.<sup>259</sup>

### **Industrial diversification can help to aid recovery, as well as minimising exposure to pandemics in the first place**

- The UK's vulnerability stemmed in part from its exposure to financial services. 'Policymakers should take note that diversity, both sectoral and geographic, has its own insurance benefits in a volatile global economy.'<sup>260</sup>
- Unbalanced economic growth in the UK also contributed to the unsustainability of public finances – over the decade prior to the crisis, 70% of UK economic growth came from just three sectors – housing, finance and government spending – all three of which are based on rising levels of debt in the economy.<sup>261</sup>

### **In the event of mass unemployment and business foreclosure, job-creation efforts should focus particularly for young people relatively new to the job market**

- With the risk of long-term economic scarring to the employment and wage growth prospects of young people during a recession, and young people the least experienced and most likely to experience redundancy, job-creation policies should support this most vulnerable group.
- Negative first experiences of job-seeking, and prolonged periods of unemployment- and under-employment, can permanently damage young people's professional development and discourage them from future engagement with the jobs market.<sup>262</sup>
- Failure to meaningfully integrate young people into the economy in this way can alienate them from society permanently. Therefore, job-creation efforts need to emphasise personal development and skill acquisition, rather than simple money-making.<sup>263</sup>

### **The social safety net for the unemployed should strive to mitigate the social stigmatisation of job searching to protect the mental health of those impacted by the economic fallout of recession**

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<sup>258</sup> Fernández-Macías et al., "Employment transitions and occupational mobility in Europe"

<sup>259</sup> Bewick, T. "UK employment and skills" p.7-8

<sup>260</sup> Mulheirn "The social market after the crash" p.10

<sup>261</sup> Hammond, P., "Responsible Economic Change" (2008) in Collins, P. and Harrington, P. (eds.) *After the apocalypse: lessons from the global financial crisis* p.35

<sup>262</sup> Clarke "Growing Pains" p.11

<sup>263</sup> Formby "... all of a sudden I'm in a Jobcentre" p.251

- Research indicates that countries with more generous benefits and a greater emphasis on active labour market programmes, such as job search assistance, apprenticeships or subsidised employment, saw the smallest rises in suicide during recessions.<sup>264</sup>
- The reasons for this are twofold. More generous benefits prevent people falling into debt or losing their homes, whilst a supportive, rather than moralising, job-seeking assistance framework prevents the unemployed from internalising narratives about being a social burden.<sup>265</sup>

**Strategic investment in social support programmes should be made at the beginning of a recession.**

- Staff working in the NHS, social services and advice sector need to be given adequate training to enable them to effectively support those suffering from job losses and financial hardship, and to guide them to the appropriate support they need.<sup>266</sup>
- Although the instinct of government following a recession is often to rein in spending, “strategic investment is needed to mitigate the worst effects of recession on mental health and to ensure, as far as possible, that the population has the emotional capacity to return to work when the recession ends.”<sup>267</sup>

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<sup>264</sup> Gunnel et al., “The 2008 Global Financial Crisis: effects on mental health and suicide”

<sup>265</sup> Ibid. ; Formby “... all of a sudden I’m in a Jobcentre” p.255-8

<sup>266</sup> Gunnel et al., “The 2008 Global Financial Crisis: effects on mental health and suicide”

<sup>267</sup> Ibid.



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