Research Insights

How does your view of government affect your willingness to be vaccinated against COVID-19?

Australians express a high willingness to take a COVID-19 vaccine, but large differences remain across society. Government can help close this gap. Those most satisfied with government economic policies related to the pandemic are more likely to accept a vaccine, especially in urban Victoria. Across the world, more confidence in government is strongly associated with a lower death toll from the pandemic, regardless of income and political views.

COVID-19 vaccine acceptance is high in Australia

The health and economic effects of the COVID-19 pandemic will not be safely resolved without high uptake of a vaccine, when it is made available. To achieve 'herd immunity' and suppress the transmission of the virus, a large proportion of the population needs to be immune. A safe pathway to herd immunity is through vaccination against COVID-19.

The Melbourne Institute's *Taking the Pulse of the Nation* survey collects information from a representative sample of Australians. Wave 20 (5-9 October 2020) of the survey asked Australians the following: "If a vaccine for COVID-19 is developed and approved for use by the Australian Government, would you be willing to be vaccinated?"

Three-quarters of Australians (73.8 per cent) responded positively to getting vaccinated. This acceptance rate is comparable to other studies in Australia conducted in June, when 75.8 per cent said they would take a vaccine (Rhodes, Monsurul, Measey & Danchin 2020), and in July, when 88 per cent responded positively (IPSOS 2020).

Compared to many other countries, the percentage of Australians willing to take a COVID-19 vaccine is higher. According to a global survey, 70-75 per cent of the population in Canada, Japan, Argentina, Spain, the Netherlands and Belgium are willing to take a vaccine, with 68 per cent in Germany, Sweden, Italy and the US and 58 per cent in France (IPSOS 2020).

There is no agreement among health experts on precisely what percentage of the population needs to be immune for the COVID-19 virus to be suppressed, and estimates range widely, from 43 per cent to 90 per cent (Britton, Ball & Trapman (2020), Rubin (2020); World Health Organization (2020)). If indeed the actual level needed to achieve herd immunity is 90 per cent, Australia is well below the target.

What might affect Australians' willingness to take a COVID-19 vaccine?

There are many reasons Australians might differ in their willingness to take a COVID-19 vaccine. Older individuals are more vulnerable to dying from the virus and might be more willing to take it. Those who place health concerns over risks of contracting the virus by engaging in economic activities might also be more willing to be vaccinated against it. Previous studies in Australia suggest that, among parents, women are more willing to take a vaccine than men (Rhodes, Monsurul, Measey & Danchin 2020).

Education might play a role if that increases trust in science or the ability to judge the relevance of different health options. Political views might be important as well. Evidence from the US and Germany, where there is an important anti-vaccine contingent, suggests that those with more conservative political views are less willing to take a vaccine.[1] Factors such as region or rurality might also be important if they affect the prevalence of the virus and subsequent effects experienced.

Australians differ in their willingness to get vaccinated

To understand what differentiates Australians' willingness to take a COVID-19 vaccine, we calculated the net effect of different individual measures. The net effect is the direct impact of each measure, while also taking into account that measures may be correlated with one another.[2] For example, if men are more likely to be very satisfied with government, it would be difficult to tease apart whether it is satisfaction or being male that affects the willingness to take the vaccine. Our analysis distinguishes the effect of being male separately from government satisfaction.

Figure 1 presents these findings. The figure shows the percentage change in willingness to take a COVID-19 vaccine by various individual characteristics and responses. We caution that these relationships need not be causal. For example, more effective and responsive governments will likely also earn their citizens' support for a vaccine.

One of the strongest measures associated with the willingness to take a vaccine is whether or not an individual is 'very satisfied' with federal and state government economic policies to support jobs and keep people at work as a result of the coronavirus (COVID-19). Very-satisfied individuals are 14 percentage points more likely to take a vaccine. Similarly, Australians who are 65 years and older are 14 percentage points more likely to take the vaccine. Those with at least a university degree are 10 percentage points more likely to take the vaccine.

Less important measures on the willingness to take a vaccine include attitudes towards the trade-off between health safety and engaging in economic activities. Australians who limit their economic activities outside the household all of the time due to COVID-19 concerns are 5 percentage points more likely to get a vaccine.[3]

Those who would prefer to stay at home as much as possible to minimise the risk of getting infected are 1.5 percentage points more likely to get vaccinated.[4] Both of these measures are not significant. Contrary to other studies that found women in Australia are more likely to take a vaccine (Rhodes, Monsurul, Measey & Danchin 2020), the *Taking the Pulse of the Nation* survey finds men are 4 percentage points more likely to take a vaccine.

International evidence suggests that conservative political views strongly decrease the willingness to take vaccines and abide by health regulations. Those who say they would vote for a conservative political party are more willing to take a vaccine, but the effect is small and not significant (4 percentage points).[5] Given the positive and large effect of Australians' satisfaction with government economic policies on the willingness to take the vaccine, this suggests an alternative explanation for why conservatives in other countries might be more reluctant to follow health prescriptions: they lack confidence in government.[6]

Dissatisfaction with government policies is particularly important in urban Victoria

The experience in Victoria, in terms of COVID-19 cases and deaths, has been more pronounced than in the rest of Australia – 90 per cent of deaths to date in Australia have occurred in Victoria.

We look at the effect of being very satisfied or not with government economic policies on the willingness to take a vaccine by focusing on urban Victoria compared to the rest of Australia. In urban Victoria, the effect of government satisfaction on vaccine uptake is more than twice as large. Those in urban Victoria who are very satisfied with government are 26 percentage points more likely to be willing to take the vaccine. Outside of urban Victoria, this difference is 11 percentage points.

Confidence in government is associated with deaths due to COVID-19

Confidence in government has broader implications for societal outcomes during the COVID-19 pandemic (Elgar, Stefaniak & Wohl, 2020; Okasanen et al., 2020). Looking across 44 countries around the world, populations that are more confident in their government have typically experienced lower death rates to date due to COVID-19.

Figure 2 presents the relationship between confidence in government and the number of deaths per 100,000 due to COVID-19. The figure pairs data from the World Value Survey (WVS), collected January 2017 to mid-April 2020, and data from the Johns Hopkins University database on deaths due to COVID-19 (as of October 10, 2020).[7] Looking across all countries, there is a significant negative relationship between confidence in government and the death rate. On average, a 10 percentage point increase in government confidence is associated with a 25 per cent decrease in deaths per 100,000.

The negative relationship between confidence in government and the death rate persists even if we account for the effect of a country's GDP per capita, general trust in others, perception of corruption, and political views.[8] Note that the confidence in government measures were collected almost entirely prior to the start of the pandemic, so they are unlikely to pick up confidence due to the government's response to the pandemic.[9]

Using responses from the WVS, we investigate why conservative political views in Australia might not negatively impact the population's willingness to take the vaccine, in contrast to a country like the US. The correlation between how strong a respondent's conservativism is and confidence in government in Australia is weak (-0.13). However, in the US, the correlation is much stronger (-0.5) – that is, more conservative individuals in the US have lower confidence in government.

Key Insights

1 While Australians are generally accepting of a COVID-19 vaccine, large differences across society remain, especially by satisfaction with government economic policies, age and in urban Victoria.

Almost 3 in 4 Australians say they are willing to take a COVID-19 vaccine if made available by government. Nonetheless, this number hides a large diversity among Australians. Those who are very satisfied with Federal and State government economic policies to support jobs and keep people at work as a result of the coronavirus are more willing to take a COVID-19 vaccine when available, regardless of age, political views, education, and income. This is most pronounced in urban Victoria, where the relationship is twice as strong.

To put this in perspective, a 65-year-old, university degree-holding Australian who is satisfied with the government's economic policies is 32 percentage points (92 versus 60) more likely to take a vaccine than a younger Australian with less than a university degree and not satisfied with government economic policies.
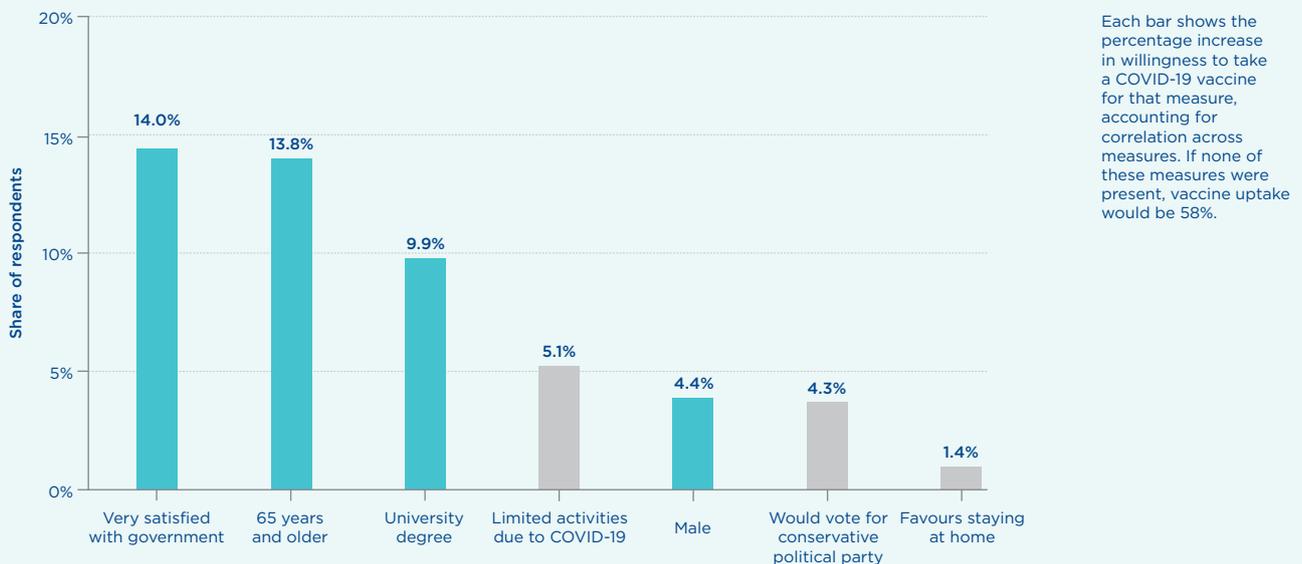
② Confidence in government is a key asset in mitigating the devastation of the pandemic.

Across the world, countries whose citizens have more confidence in their governments have had lower death rates to date due to the pandemic, regardless of the country's per-capita income and political views.

In Australia, those who are very satisfied with government economic policies are also more willing to abide by new health regulations. The *Taking the Pulse of the Nation* survey conducted 3-7 August shows that individuals who are very satisfied with the government are 10 percentage points more likely to accept routine testing for COVID-19, 4 percentage points more likely to accept quarantining, 6 percentage points more likely to accept wearing masks in public places and 15 percentage points more likely to accept contact tracing using mobile phone data (Castillo & Petrie 2020).

Figure 1: Factors that affect the willingness to take a COVID-19 vaccine

Each bar shows the percentage increase in willingness to take a COVID-19 vaccine for that measure, accounting for correlation across measures. If none of these measures were present, vaccine uptake would be 58%.

- Very satisfied with government: 14.0%
- 65 years and older: 13.8%
- University degree: 9.9%
- Limited activities due to COVID-19: 5.1%
- Male: 4.4%
- Would vote for conservative political party: 4.3%
- Favours staying at home: 1.4%

Data from the *Taking the Pulse of the Nation* survey (5-9 Oct), a representative sample of Australians (n=1,200). Numbers in dark blue above the turquoise bars indicate measures that are of 'statistical significance,' that is, there is high confidence that the effect is actually positive and not due to chance. Numbers above the grey bars indicate measures that have an insignificant effect and could be zero. These effects are based on a regression that includes all of the measures include in the figure (as explained in footnote 2).

Views towards government will affect vaccine policy success

Government should take into account the large diversity in Australian society, in terms of satisfaction with government and demographics, when designing policies and approaches to encourage uptake of a COVID-19 vaccine.

Since the effectiveness of vaccines as a way to reach herd immunity depends on the exposure and sensitivity of the population, this suggests that blanket policies might have a differential impact across populations in Australia. In the extreme, it might fail to protect the most vulnerable people. It is important to incorporate diversity in demographics and attitudes for a vaccination program to be successful.

Figure 2: Confidence in government and death rates due to COVID-19
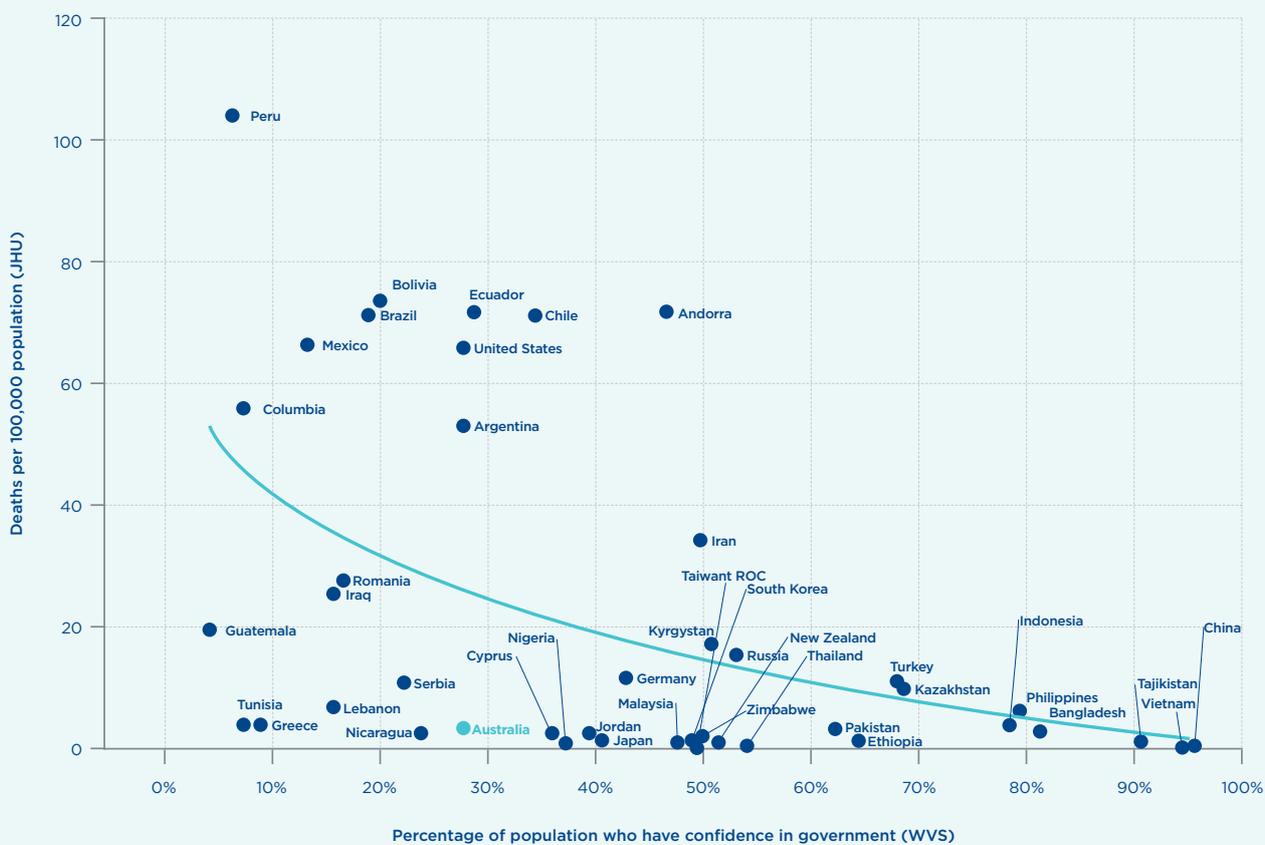
Data is from Wave 7 of the World Values Survey (January 2017 to mid-April 2020) and the Johns Hopkins University COVID Tracker (10 Oct 2020) for 48 countries including Australia. The green line shows the logarithmic trend in confidence and deaths per 100,000 of the population.

Endnotes

1   On anti-vaccination: Kluth, A. 2020. Like a Virus, QAnon spreads from the US to Germany. Bloomberg, Sept 22, 2020 https://www.bloomberg.com/opinion/articles/2020-09-22/like-a-virus-qanon-spreads-from-the-u-s-to-europe-germany; Bennhold, K. 2020. QAnon is Thriving in Germany. The Extreme Right is Delighted. The New York Times, Oct 11, 2020; "Rightwing populists ride wave of mistrust of vaccine science," The Guardian, Dec 21, 2018. On political divisions: Alec Tyson, Courtney Johnson and Cary Funk, "U.S. Public Now Divided Over Whether To Get COVID-19 Vaccine," Pew Research Center, September 17, 2020, https://www.pewresearch.org/science/2020/09/17/u-s-public-now-divided-over-whether-to-get-covid-19-vaccine/. On government mistrust and anti-vaccination: Anderson, Jenny, "She hunts viral rumors about real viruses," New York Times, Oct 13, 2020.

2   To calculate the net effect of each measure on the willingness to take the vaccine, we ran a linear regression on a variable that equals 1 if the survey respondent said 'Yes' to the vaccine question and 0 otherwise on the measures listed in Figure 1. The analysis includes those who responded, 'Don't know' and 'Refused'. All the results are similar if we use different definitions for these measures. The regressions are weighted to provide results that are representative of the Australian population as a whole.

3   'Have limited activities due to COVID' is measured by individuals who chose option (1) to the question, 'How often do you limit activities outside of your house, such as shopping, going to a restaurant or taking public transport, because of concerns about contracting covid-19?' (1) All the time, (2) Most of the time, (3) Some of the time, (4) A little of the time, (5) None of the time, (6) Don't know/refused.

4   'Favours staying at home' is measured by individuals who chose option (3) to the question 'Today many of us face the choice between continuing our normal daily activities and risk getting infected with COVID-19, or staying at home. Which of the following three choices would you personally prefer?' (1) 'Undertaking MANY of your usual daily activities and accepting a higher risk of becoming infected.' (2) 'Undertaking SOME economic and social activities and accepting some regulations, (e.g. wearing masks at all public places)' or (3) 'Staying at home as much as possible and so minimising the risk of getting infected'

5   Those who say they would vote for a conservative political party are defined as individuals who said either they would vote for the Liberal Party or the National Party if a Federal Election was held today. The remainder are respondents who chose other options, including Labor, Greens, other minor parties and none. The same findings hold if 'other minor parties' are instead grouped with the Liberal and National Parties. In this case, the net effect of voting for a conservative political party remains small and insignificant (2%).

6   The large effect of satisfaction with government economic policies on vaccine acceptance is remarkable. Views of government are coloured by political views, e.g. those who would vote for a conservative party are 19 percentage points more likely to be very satisfied with government, and education level, e.g. university degree holders are 7 percentage points more likely to be very satisfied with government. Our analysis takes into account these correlations. Recall that the effect of satisfaction with government is as large as the effect of belonging to the population most vulnerable to COVID-19, i.e. over 65 years of age. The two waves of Taking the Pulse of the Nation used in this article (Wave 16: 3-7 August; Wave 20: 5-9 Oct) show a stable relationship between political views and satisfaction with the government.

7   The data comes from Wave 7 of the World Values Survey (WVS), https://www.worldvaluessurvey.org/WVSContents.jsp, collected January 2017 through mid-April 2020, and from the Johns Hopkins University COVID Tracker, https://coronavirus.jhu.edu/data/mortality, collected on October 10, 2020. The WVS asked 69,578 individuals across 48 countries/territories their confidence in various institutions, including government. The question is 'I am going to name a number of organizations. For each one, could you tell me how much confidence you have in them: is it a great deal of confidence, quite a lot of confidence, not very much confidence or none at all?' We created a variable that equals 1 if the response is 'a great deal of confidence' or 'quite a lot of confidence' and equals 0 otherwise. The country-level measure is the average of this variable by country.

8   The WVS survey asks 'Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?' We create a variable that equals 1 if a person responds 'Most people can be trusted' and 0 if otherwise. The WVS creates an index of political views which runs from 1 (leftmost) to 10 (rightmost). Rightmost is more conservative. The WVS also asks respondents their perception of the country's level of corruption from 1 (none) to 10 (abundant) level of corruption. We use an average of these variables at the country level as controls in a regression that has deaths per 100,000 as a dependent variable.

9   Of all the responses to Wave 7 of the WVS, 95 per cent were collected prior to 1 March 2020.

Further Information

Datasets

Data sources used in this Research Insight: (1) Taking the Pulse of the Nation survey (5-9 Oct, 2020), 1,200 respondents. (2) Taking the Pulse of the Nation survey (3-7 Aug, 2020), 1,200 respondents. (3) Wave 7 of the World Values Survey (January 2017 to mid-April 2020), 69,578 individuals across 48 countries/territories. (4) Johns Hopkins COVID Tracker, Mortality data, 10 October, 2020.

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