**Original research:**

Receptiveness of and implementation considerations for COVID-19 vaccination certificates in Asia: A survey across 9 countries

**Supplementary 1. Public survey**

|  |
| --- |
| **Landing page** |
| Welcome to the public survey on vaccination certificates and related travel instruments  Throughout this survey we refer to vaccination/immunity passports/certificates or other similar paper or electronic documents as “instruments” for simplicity.  The survey has 5 sections: (1) Participant Information; (2) Instrument Details; (3) COVID-19 Interventions and Policies; (4) Implementation of Travel Instruments; and (5) Concluding Position.  Please allocate 10-15 minutes to complete the survey. The survey must be completed in one sitting (you cannot save your answers and return later).  We thank you for your time and willingness to participate in this online survey. If you have any questions, please email aparna.a@hitap.net or sarin.k@hitap.net |
| **Informed consent** |
| This survey on COVID-19 vaccination certificates is part of a regional research study from the COVID-19 vaccination policy research and decision-support initiative in Asia (CORESIA), led by the Health Intervention and Technology Assessment Program (HITAP), Ministry of Public Health, Thailand, and National University of Singapore (NUS), Singapore in partnership with members from countries across Asia. CORESIA is being supported by the National Research Council of Thailand (NRCT) and the Health Systems Research Institute (HSRI).  **Objectives of the Survey**  As countries begin to vaccinate their populations, we would like to explore, how documents showing proof of immunity or vaccination (for e.g.: vaccine passports, vaccination certificates, immunity passports and other similar instruments) might be able to support countries in re-starting their local, national, regional, and international activities. CORESIA is developing guiding principles that countries may find useful as they plan to develop and implement such instruments and draft related policies. As such, we are conducting this survey among the general population (18 years and above) to gain insights into their perception on the potential costs and benefits and acceptability of introducing such instruments  **Sharing the Results/ Dissemination**  The results of this survey will be used to support the preparation of a guidance document on the development and implementation of vaccination certificates or related instruments, which may prove critical to pandemic recovery, and will be shared with national and regional stakeholders across Asia and beyond in an anonymised and aggregated form.  Providing Your Consent: I have read and acknowledged the details of the study, and I provide my consent to participate in this survey.   * I consent |
| **Section 1: Participant information** |
| 1. Contact form: You can choose to give us your details below (optional) |
| 1.1 Name: |
| 1.2 Organisation: |
| 1.3 Email: |
| 1. Country of nationality: |
| 1. Is your country of nationality also your country of residence?  * Yes * No |
| 1. If no, what is your country of residence? |
| 1. How long have you been in your country of residence?  * < 6 months * 6 months -1 year * 1-3 years * <3 years * Prefer not to say |
| 1. Age  * 18-24 years * 25-40 years * 21-65 years * >65 years * Prefer not to say |
| 1. Gender  * Female * Male * Other * Prefer not to say |
| 1. Educational level  * No formal schooling * Primary school * High school/ Secondary school * Undergraduate (B.Sc/ B.A equivalent) * Postgraduate (M.Sc/ MA/ M.Phil./Ph.D equivalent) * Prefer not to say * Other |
| 1. Occupational sector (To represent the sector you work in/ sector of employment)  * Transport, Tourism and Hospitality * Public Health and Healthcare * External affairs and immigration * Education * Ethics, legal and social justice * Information and technology * Not employed (retired, homemaker, looking for a job) * Other |
| 1. Status of COVID-19 Vaccination  * I have not received any COVID-19 vaccine * I have received my 1st dose * I have received my 2nd or final dose |
| 1. Please specify the name/s of the vaccine  * Pfizer/BioNTech * Moderna * AstraZeneca/Oxford * Sinovac * Sinopharm * Gamalaya's Sputnik V * Johnson & Johnson's Janssen * Other * Not sure |
| 1. What is the reason you might not be vaccinated?  * Registered and awaiting my first dose * I am not yet in the vaccine priority group in my country * Vaccines not yet available in my country * I am still thinking about getting vaccinated * I was offered but want a different brand of vaccine * I do not intend to get vaccinated |
| 1. How often did you travel overseas in 2019 (year before COVID-19)? |
| 1. Do you have any international travel plans this year (2021)? |
| 1. Which country are you most likely to visit? |
| 1. What is your travel purpose?  * Business/ employment * Leisure * Other requirements (personal, emergency care or such disruptions) |
| **Section 2: Instrument details** |
| Throughout this survey, we will refer to vaccination/immunity passports/certificates or other similar paper or electronic documents as “instruments” for simplicity. |
| 1. Please indicate whether you think such instruments should be used for ***employment (resuming or starting new jobs that may not be possible to do remotely)*** on a scale of 1-5.  * 1 indicates strongly disagree * 2 indicates somewhat disagree * 3 indicates neutral * 4 indicates somewhat agree * 5 indicates strongly agree |
| 1. Please indicate whether you think such instruments should be used for ***resuming in-person education (schools and universities)*** on a scale of 1-5.  * 1 indicates strongly disagree * 2 indicates somewhat disagree * 3 indicates neutral * 4 indicates somewhat agree * 5 indicates strongly agree |
| 1. Please indicate whether you think such instruments should be used for ***easing entry into community events such as concerts, sports, religious or other mass gatherings*** on a scale of 1-5.  * 1 indicates strongly disagree * 2 indicates somewhat disagree * 3 indicates neutral * 4 indicates somewhat agree * 5 indicates strongly agree |
| 1. Please indicate whether you think such instruments should be used for ***easing resumption of hospitality sector (restaurants, spas, etc.)*** on a scale of 1-5.  * 1 indicates strongly disagree * 2 indicates somewhat disagree * 3 indicates neutral * 4 indicates somewhat agree * 5 indicates strongly agree |
| 1. Please indicate whether you think such instruments should be used for ***easing domestic travel*** on a scale of 1-5.  * 1 indicates strongly disagree * 2 indicates somewhat disagree * 3 indicates neutral * 4 indicates somewhat agree * 5 indicates strongly agree |
| 1. Please indicate whether you think such instruments should be used for ***easing international travel*** on a scale of 1-5.  * 1 indicates strongly disagree * 2 indicates somewhat disagree * 3 indicates neutral * 4 indicates somewhat agree * 5 indicates strongly agree |
| 1. Please provide suggestions for other purposes where these instruments can be used, if any: |
| **Section 3: COVID-19 Interventions and Policies** |
| 1. Do you think COVID-19 has **financially impacted** your occupational sector (your sector of employment/ work)?  * Yes * No * Not sure * I am not employed |
| 1. How adversely has your occupational sector been affected on a scale of 1-5?  * 1 as the lowest and 5 as the highest * The lowest * The highest |
| 1. Do you think that vaccination certificates (or similar travel instruments) could help provide **financial benefit** to your occupational sector?  * Yes * No * Not sure * I am not employed |
| 1. Do you think the current policy measures (e.g., mask wearing, social distancing, testing and quarantine) should continue to apply to those travelling to your country using such instruments (e.g. vaccination certificates, passports etc.)?  * Yes * No (same as pre COVID-19) * Not sure |
| 1. Which policy measures should continue to apply to those travelling to your country using such instruments (eg. vaccination certificates, passports etc.)?  * Please choose all that apply * Testing for infection on arrival or over the course of quarantine * Home quarantine for 7 to 14 days * Hotel or other institutional quarantine for 7 to 14 days * Social distancing * Mandatory mask wearing * Monitoring in-bound travellers (e.g., phone applications, phone check-in) * Other |
| 1. In your opinion, for those travelling using such instruments, which **combination of COVID-19 testing and quarantine requirements** would be most preferable?  * More quarantine and less or no testing * More testing and less or no quarantine * Not sure |
| **Section 4: Implementation of Travel Instrument** |
| 1. Would you prefer an electronic or paper-based travel instrument?  * Yes, an electronic version is better than a paper-based document * Yes, an electronic version in addition to a paper-based document (both formats are required) * No, a paper-based document is sufficient * Not yet sure |
| 1. What would you say is the **ONE most concerning challenge** in accepting the use of these instruments?  * Public Health: such as increased risk of local infection because vaccination and testing cannot provide full protection and new variants of the virus in other countries * Ethics and Social Justice: limited and inequitable access to vaccines and digital technologies to access insturments, benefits only to certain groups of the population and not all * Data Privacy: sharing, distributing, and use of personal information for reasons other than health; private information leaks * Implementation Infrastructure: increased resources and coordination required at all levels of private and public sector * Governance: requires negotiating bilateral and multilateral agreements with other countries * Other |
| 1. Adopting such instruments (paper or electronic) requires sharing sensitive personal information (e.g., vaccine history and pre-existing health conditions like diabetes or others). Do you feel comfortable sharing such information with others?  * Yes * No |
| 1. On a scale of 1 to 5, how much do you trust the **governmental authorities of your own country** to protect your data privacy? *Adopting such instruments (paper or electronic) requires sharing sensitive personal information (e.g., vaccine history and pre-existing health* conditions like diabetes or others).  * 1 indicates strongly untrust * 2 indicates little trust * 3 indicates neutral * 4 indicates trust * 5 indicates strongly trust |
| 1. On a scale of 1 to 5, how much do you trust **private sector such as tourism, hospitality and airline industry** to protect your data privacy? 1 indicates no trust and 5 indicates full trust. *Adopting such instruments (paper or electronic) requires sharing sensitive personal information (e.g., vaccine history and pre-existing health conditions like diabetes or others).*  * 1 indicates strongly untrust * 2 indicates little trust * 3 indicates neutral * 4 indicates trus * 5 indicates strongly trust |
| 1. In your view, what percentage of population in your country should be vaccinated before accepting travellers using such instruments such that benefits from such instruments are widespread and not limited to certain groups?  * Less than 20% * 20-40% * 40-60% * 60-80% * 80-100% * Not yet sure |
| **Section 5: Concluding position** |
| 1. Considering all the factors (public health, economic situations, ethics and social justice, privacy, and resource requirements), should these instruments (vaccination/immunity passports/certificates) be adopted in your country?  * Yes * No * Not yet sure |
| 1. Please provide a brief comment on your response, if any |
| **Closing page** |
| Thank you for taking the time to participate in this survey! Please kindly share this survey to your friends, family, and colleagues. Every opinion counts. |

**Supplementary 2. Institutional survey**

|  |
| --- |
| **Landing page** |
| Welcome to the stakeholder on vaccination certificates and related travel instruments  Throughout this survey we refer to vaccination/immunity passports/certificates or other similar paper or electronic documents as “instruments” for simplicity.  The survey has 5 sections: (1) Participant Information; (2) Instrument Details; (3) COVID-19 Interventions and Policies; (4) Implementation of Travel Instruments; and (5) Concluding Position  Please allocate 10-15 minutes to complete the survey. The survey must be completed in one sitting (you cannot save your answers and return later).  We thank you for your time and willingness to participate in this online survey. If you have any questions, please email aparna.a@hitap.net or sarin.k@hitap.net |
| **Informed consent** |
| This survey on COVID-19 vaccination certificates is part of a regional research study from the COVID-19 vaccination policy research and decision-support initiative in Asia (CORESIA), led by the Health Intervention and Technology Assessment Program (HITAP), Ministry of Public Health, Thailand, and National University of Singapore (NUS), Singapore in partnership with members from countries across Asia. CORESIA is being supported by the National Research Council of Thailand (NRCT) and the Health Systems Research Institute (HSRI).  **Objectives of the Survey**  As countries begin to vaccinate their populations, we would like to explore how documents showing proof of immunity or vaccination (for eg: vaccine passports, vaccination certificates, immunity passports and other similar instruments) might be able to support them in safely re-starting local, national, regional, and international activities. CORESIA is developing guiding principles which countries may find useful as they develop and implement such instruments and draft related policies. As such, we are conducting this survey to gain insights from a wide range of national and international stakeholders on their views regarding the use of such instruments to enable international travel, including the potential benefits, concerns, and foreseeable challenges.  We encourage you to respond to the questions based on your experience and how these policies may affect your current organisation.  **Sharing the Results/ Dissemination**  The results of this survey will be used to support the preparation of a guidance document on the development and implementation of vaccination certificates or related instruments, and will be shared with national and regional stakeholders across Asia and beyond in an anonymised and aggregated form.  **Providing Your Consent**: I have read and acknowledged the details of the study, and I provide my consent to participate in this survey.   * I consent |
| **Section 1 : Participant information** |
| Please provide the name of your organisation. Other information is optional. |
| Organisation |
| Email |
| Country   * Singapore * Malaysia * India * Indonesia * Philippines * Lao PDR * Japan * South Korea |
| Name |
| Tittle |
| Occupational sector |
| Please choose your primary sector if you are working with more than one sector.   * Transport, Tourism and Hospitality * Public Health and Healthcare * External Affairs and Immigration * Ethics, legal and social justice * Education * Information and Technology * Other |
| How long have you been in your country of residence?   * < 6 months * 6 months -1 year * 1-3 years * <3 years * Prefer not to say |
| **Section 2: Instrument details** |
| Throughout this survey, we will refer to vaccination/immunity passports/certificates or other similar paper or electronic documents as “instruments” for simplicity. |
| Currently, these travel instruments are broadly classified as “vaccination-based” or “immunity-based”, differing in the type of information they contain (see picture). Which of these is most suitable in your country?   * Vaccination-based. * Proof of vaccination * Immunity-based. * Proof of vaccination * Proof of previous infection * Proof of negative PCR test * Not sure * Other |
| Please indicate whether you think such instruments should be used for ***employment (resuming or starting new jobs)*** on a scale of 1-5.   * *1 indicates strongly disagree, 2 indicates somewhat disagree, 3 indicates neutral, 4 indicates somewhat agree and 5 indicates strongly agree* * *Strongly disagree* * Strongly agree |
| Please indicate whether you think such instruments should be used for ***resuming in-person education (schools and universities)*** on a scale of 1-5.   * *1 indicates strongly disagree, 2 indicates somewhat disagree, 3 indicates neutral, 4 indicates somewhat agree and 5 indicates strongly agree* * *Strongly disagree* * Strongly agree |
| Please indicate whether you think such instruments should be used for ***easing entry into community events such as concerts, sports, religious or other mass gatherings*** on a scale of 1-5.   * *1 indicates strongly disagree, 2 indicates somewhat disagree, 3 indicates neutral, 4 indicates somewhat agree and 5 indicates strongly agree* * *Strongly disagree* * Strongly agree |
| Please indicate whether you think such instruments should be used for ***easing resumption of hospitality sector (restaurants, spas, etc.)*** on a scale of 1-5.   * *1 indicates strongly disagree, 2 indicates somewhat disagree, 3 indicates neutral, 4 indicates somewhat agree and 5 indicates strongly agree* * *Strongly disagree* * Strongly agree |
| Please indicate whether you think such instruments should be used for ***easing domestic travel*** on a scale of 1-5.   * *1 indicates strongly disagree, 2 indicates somewhat disagree, 3 indicates neutral, 4 indicates somewhat agree and 5 indicates strongly agree* * *Strongly disagree* * Strongly agree |
| Please indicate whether you think such instruments should be used for ***easing international travel*** on a scale of 1-5.   * *1 indicates strongly disagree, 2 indicates somewhat disagree, 3 indicates neutral, 4 indicates somewhat agree and 5 indicates strongly agree* * *Strongly disagree* * Strongly agree |
| Please provide suggestions for other purposes where these instruments can be used, if any. |
| **Section 3: COVID-19 Interventions and Policies** |
| Both COVID-19 and resulting interventions have disrupted various areas of the economy. Please select ***the top-3 business sectors*** that you think have been **most affected in terms of financial revenue.**   * Agriculture, Livestock and Fisheries * Processed food and beverages manufacture/production * Restaurants, night clubs, bars and department stores * Logistics and transportation * Tourism, sports and recreational events (e.g. music festivals and concerts) * Education * Medical and health business * Clothing and Fashion * Media and publishing business * Information and Communication Technology (ICT) * Finance and Banking * Real estate and property development * Other |
| If such instruments are implemented, please select the ***top-3 areas of the business sector*** that you think are likely to **financially benefit** the most.   * Agriculture, Livestock and Fisheries * Processed food and beverages manufacture/production * Restaurants, night clubs, bars and department stores * Logistics and transportation * Tourism, sports and recreational events (e.g. music festivals and concerts) * Education * Medical and health business * Clothing and Fashion * Media and publishing business * Information and Communication Technology (ICT) * Finance and Banking * Real estate and property development * Other |
| In your opinion, for those travelling using such instruments, which **combination of COVID-19 testing and quarantine requirements** would be most preferable?   * More quarantine and less or no testing * More testing and less or no quarantine * Not sure |
| There might be an increased risk of infection from travellers using these instruments. This risk is based on the infection rate, vaccination coverage, types of COVID-19 vaccines and their efficacy, and variants of concern in the traveller’s country of origin. Considering this, please select the appropriate policy measure for your country, irrespective of ease of implementation.   * Same testing and quarantine policy for all regardless of the risk * Risk-based testing and quarantine policy depending on the country of origin. * Not yet sure |
| Besides testing and quarantine, what other policy measures do you think should continue to apply to those travelling with such instruments?   * Social distancing * Mandatory mask wearing * Monitoring in-bound travellers * None – we can continue as we did before COVID-19 * Other |
| **Section 4: Implementation of Travel Instrument** |
| In your opinion, which format of the instrument is most suitable for your country?   * Paper-based instrument only * Electronic instrument only (these may be accessed online via computer or smartphones) * Electronic version in addition to the paper-based instrument * Not yet sure |
| Please select the **most concerning challenge** that you foresee in ***implementing a paper-based*** instrument   * Establishing authenticity or validating the document * Forgery or fake documents * Possibility of theft or loss of the physical document * Language restrictions (if documents are only in a national language) * Limited capacity and means to update new information * Other |
| Please select the **most concerning challenge** that you foresee in ***implementing an electronic-based*** instrument?   * Digital infrastructure and additional resource requirements to establish these systems * Interoperability i.e. aligning systems between countries to ensure the instruments are recognised and accepted everywhere * Data sharing and privacy concerns for e.g., data breach * Equity concerns i.e. certain segments of the population may not have smart phones/digital technology * Other |
| For the challenges you identified in the previous questions (Q.5.2 and Q.5.3), please provide any potential solutions, if possible. |
| On a scale of 1 to 5, how much do you trust **private sector such as toursim, hospitality and airline industry** to protect your data privacy? 1 indicates no trust and 5 indicates full trust   * Adopting such instruments (paper or electronic) requires sharing sensitive personal information (e.g. vaccine history and pre-existing health conditions like diabetes or others). * No trust * Complete trust |
| What would you say is ***the most concerning challenge*** in accepting the use of these instruments?   * Public health : such as increased risk of local infection because vaccination and testing cannot provide full protection and new variants of the virus in other countries * Ethics and Social Justice : limited and inequitable access to vaccines and digital technologies to access insturments, benefits only to certain groups of the population and not all * Data privacy : sharing, distributing and use of personal information for reasons other than health; private information leaks * Implementation infrastructure : increased resources and coordination required at all levels of private and public sector * Governance : requires negotiating bilateral and multilateral agreements with other countries * Other |
| In your view, what percentage of the population in your country should be vaccinated before accepting travellers using such instruments?   * Less than 20% * 20-40% * 40-60% * 60-80% * 80-100% * Not yet sure |
| **Section 5: Concluding position** |
| Considering all the factors (public health, economic situations, ethics and social justice, privacy, and resource requirements), should these instruments (vaccination/immunity passports/certificates) be adopted in your country?   * Yes * No * Not yet sure |
| Please provide a brief comment on your response, if any |
| **Closing page** |
| Thank you for taking the time to participate in this survey! |

**Table S1. Participants’ characteristics of the public survey as tabulated by their response to the adoption of CVCs**

| **Variables** | **CVCs adoption, N (%)** | | |
| --- | --- | --- | --- |
| **Regional total, 12,204 (100)** | **More receptive,**  **9,547 (78)** | **Less receptive,**  **2,657 (22)** |
| **Education** |  |  |  |
| No formal schooling | 12 (0) | 10 (83) | 2 (17) |
| High school or lower | 1,533 (13) | 1,062 (69) | 471 (31) |
| Undergraduate | 6,577 (54) | 5,174 (79) | 1,403 (21) |
| Postgraduate or higher | 3,502 (29) | 2,840 (81) | 662 (19) |
| Prefer not to say | 580 (5) | 461 (79) | 119 (21) |
| **Occupation sector** |  |  |  |
| Agriculture | 52 (0) | 38 (76) | 12 (24) |
| Education | 1,817 (15) | 1,446 (80) | 371 (20) |
| Energy, water and sanitation | 60 (0) | 54 (90) | 6 (10) |
| Finance | 247 (2) | 200 (81) | 47 (19) |
| Health | 1,565 (13) | 1,225 (78) | 340 (22) |
| Industry, trade & services | 3,131 (26) | 2,582 (82) | 549 (18) |
| Information and technology | 716 (6) | 548 (77) | 168 (23) |
| Non-governmental organisation | 59 (0) | 51 (86) | 8 (14) |
| Public administration | 1,412 (11) | 1,165 (83) | 247 (17) |
| Real estate | 58 (0) | 51 (88) | 7 (12) |
| Other | 860 (7) | 520 (60) | 340 (40) |
| Unemployed† | 2,229 (18) | 1,667 (75) | 562 (25) |
| **Vaccine brand** |  |  |  |
| AstraZeneca | 3,498 (29) | 2,931 (84) | 558 (16) |
| China-developed vaccine (e.g. Sinovac and Sinopharm) | 2,826 (23) | 2,522 (89) | 304 (11) |
| Covaxin | 328 (3) | 255 (78) | 73 (22) |
| Johnson & Johnson | 309 (3) | 270 (87) | 39 (13) |
| Mixed | 21 (0) | 20 (95) | 1 (5) |
| Moderna | 682 (6) | 553 (81) | 129 (19) |
| Pfizer | 2,368 (19) | 1,890 (80) | 478 (20) |
| Russia-developed vaccine (e.g. Sputnik) | 49 (0) | 40 (82) | 9 (18) |
| Not sure† | 2,132 (17) | 1,066 (50) | 1,066 (50) |
| **Travel history in 2019** |  |  |  |
| Never travelled | 6,624 (54) | 5,006 (76) | 1,618 (24) |
| 1-3 | 4,232 (35) | 3,427 (81) | 805 (19) |
| >3 | 1,316 (11) | 1,096 (83) | 220 (17) |
| No response | 32 (0) | 18 (56) | 14 (44) |
| **Use of CVCs for employment** |  |  |  |
| Agree | 5,728 (55) | 6,071 (90) | 657 (10) |
| Neutral | 2,776 (23) | 1,895 (68) | 881 (32) |
| Disagree | 2,700 (22) | 1,581 (59) | 1,119 (41) |
| **Use of CVCs for education** |  |  |  |
| Agree | 7,679 (63) | 6,915 (90) | 764 (10) |
| Neutral | 2,477 (20) | 1,654 (67) | 823 (33) |
| Disagree | 2,047 (17) | 1,070 (48) | 1,070 (52) |
| No response | 1 (0) | 1 (100) | 0 (0) |
| **Use of CVCs for events** |  |  |  |
| Agree | 8,327 (68) | 7,378 (89) | 949 (11) |
| Neutral | 2,102 (17) | 1,384 (66) | 718 (34) |
| Disagree | 1,774 (15) | 784 (44) | 990 (56) |
| No response | 1 (0) | 1 (100) | 0 (0) |
| **Use of CVCs for hospitality** |  |  |  |
| Agree | 8,191 (67) | 7,335 (89) | 856 (10) |
| Neutral | 2,302 (19) | 1,523 (66) | 779 (34) |
| Disagree | 1,710 (14) | 688 (40) | 1,022 (59) |
| No response | 1 (0) | 1 (100) | 0 (0) |
| **Use of CVCs for domestic travel** |  |  |  |
| Agree | 8,391 (69) | 7,451 (89) | 940 (11) |
| Neutral | 2,039 (17) | 1,330 (65) | 709 (35) |
| Disagree | 1,773 (15) | 765 (43) | 1,008 (57) |
| No response | 1 (0) | 1 (100) | 0 (0) |
| **Have there been any financial impact from COVID-19 on your occupational sector?** |  |  |  |
| Yes | 8,144 (67) | 6,645 (82) | 1,499 (18) |
| No | 1,946 (16) | 1,392 (72) | 554 (28) |
| Not sure† | 923 (8) | 633 (69) | 290 (31) |
| Unemployed | 1,191 (10) | 877 (74) | 314 (26) |
| **To what extent do you trust your own government to protect data privacy?** |  |  |  |
| High trust | 3,801 (31) | 3,437 (90) | 364 (10) |
| Moderate trust | 2,952 (24) | 2,505 (85) | 447 (15) |
| Low trust | 2,343 (19) | 1,913 (82) | 430 (18) |
| No response | 3,108 (25) | 1,692 (54) | 1,416 (46) |
| **To what extent do you trust private sector (e.g. tourism or airline industry) to protect data privacy?** |  |  |  |
| High trust | 3,629 (30) | 3,282 (90) | 347 (10) |
| Moderate trust | 3,469 (28) | 2,977 (86) | 492 (14) |
| Low trust | 1,998 (16) | 1,596 (80) | 402 (20) |
| No response | 3,108 (25) | 1,692 (54) | 1,416 (46) |
| **What percentage of population in your country should be vaccinated before adopting CVCs?** |  |  |  |
| Less than 20% | 437 (4) | 188 (43) | 249 (57) |
| 20-40% | 532 (4) | 403 (76) | 129 (24) |
| 40-60% | 1,441 (12) | 1,195 (83) | 246 (17) |
| 60-80% | 3,824 (31) | 3,294 (86) | 530 (14) |
| 80-100% | 4,328 (35) | 3,792 (88) | 536 (12) |
| Not sure† | 1,642 (13) | 675 (41) | 976 (59) |

† we combined no response, not sure and/or prefer not to day with other, as appropriate.

*‡ data were obtained from those who answered “no travel plan” and no response.*

*\* Vaccination status 1: people who had either received 1st, 2nd or full dose of vaccination*

*\*\* Vaccination status 2: includes unvaccinated participants and their reported reasons for the same.*

***Note:*** *Column 2 provides a breakdown of total responses for all variables and their sub-categories, (%), additive across each column. Columns 3, 4, & 5 provide responses to the questions on whether respondents would adopt (CVCs more receptive (yes), and Less receptive (no and not sure)) broken down by individual variable, (%) additive across each row.*

**Table S2. Participants’ characteristics of the institutional survey as tabulated by responses to the adoption of CVCs**

| **Variables** | **Regional total, N (%)**  **795 (100)** | **CVCs adoption, N (%)** | |
| --- | --- | --- | --- |
| **More receptive, 704 (89)** | **Less receptive,**  **91 (11)** |
| **What should CVCs be proof of?** |  |  |  |
| Vaccination | 453 (57) | 419 (92) | 34 (8) |
| Immunity | 287 (36) | 253 (88) | 34 (12) |
| Both | 4 (1) | 1 (25) | 3 (75) |
| Not sure | 51 (6) | 31 (61) | 20 (39) |
| **Can CVCs be adopted for employment?** |  |  |  |
| Agree | 506 (64) | 490 (97) | 16 (3) |
| Neutral | 119 (15) | 106 (89) | 13 (11) |
| Disagree | 170 (21) | 108 (64) | 62 (36) |
| **Can CVCs be adopted for education?** |  |  |  |
| Agree | 541 (65) | 521 (96) | 20 (4) |
| Neutral | 119 (15) | 102 (86) | 17 (14) |
| Disagree | 135 (17) | 81 (60) | 54 (40) |
| **Can CVCs be adopted for events?** |  |  |  |
| Agree | 590 (74) | 564 (96) | 26 (4) |
| Neutral | 91 (11) | 75 (82) | 16 (18) |
| Disagree | 114 (14) | 65 (57) | 49 (43) |
| **Can CVCs be adopted for hospitality?** |  |  |  |
| Agree | 574 (72) | 552 (96) | 22 (4) |
| Neutral | 111 (14) | 91 (82) | 20 (18) |
| Disagree | 110 (14) | 61 (55) | 49 (45) |
| **Can CVCs be adopted for domestic travel?** |  |  |  |
| Agree | 629 (79) | 605 (96) | 24 (4) |
| Neutral | 72 (9) | 58 (81) | 14 (19) |
| Disagree | 94 (12) | 41 (44) | 53 (56) |
| **Has COVID-19 financially affected agriculture, livestock, and fisheries?** |  |  |  |
| Yes | 99 (12) | 82 (83) | 17 (17) |
| No | 696 (88) | 622 (89) | 74 (11) |
| **Has COVID-19 financially affected processed food and beverages manufacture?** |  |  |  |
| Yes | 47 (6) | 42 (89) | 5 (11) |
| No | 748 (94) | 662 (89) | 86 (11) |
| **Has COVID-19 financially affected entertainment?** |  |  |  |
| Yes | 582 (72) | 522 (90) | 60 (10) |
| No | 213 (27) | 182 (85) | 31 (15) |
| **Has COVID-19 financially affected logistics and transportation?** |  |  |  |
| Yes | 240 (30) | 209 (87) | 31 (13) |
| No | 555 (70) | 495 (89) | 60 (11) |
| **Has COVID-19 financially affected tourism?** |  |  |  |
| Yes | 649 (82) | 580 (89) | 69 (11) |
| No | 146 (18) | 124 (85) | 22 (15) |
| **Has COVID-19 financially affected education?** |  |  |  |
| Yes | 430 (54) | 379 (88) | 51 (12) |
| No | 365 (46) | 325 (89) | 40 (11) |
| **Has COVID-19 has financially affected medical and health care?** |  |  |  |
| Yes | 123 (15) | 111 (90) | 12 (10) |
| No | 672 (85) | 593 (88) | 79 (12) |
| **Has COVID-19 financially affected clothing and fashion?** |  |  |  |
| Yes | 82 (10) | 76 (93) | 6 (7) |
| No | 713 (90) | 628 (88) | 85 (12) |
| **Has COVID-19 has financially affected media and publishing?** |  |  |  |
| Yes | 14 (2) | 11 (79) | 3 (21) |
| No | 781 (98) | 693 (89) | 88 (11) |
| **Has COVID-19 financially affected information and communication technology?** |  |  |  |
| Yes | 10 (1) | 9 (90) | 1 (10) |
| No | 785 (99) | 695 (89) | 90 (11) |
| **Has COVID-19 financially affected banking?** |  |  |  |
| Yes | 23 (7) | 18 (78) | 5 (22) |
| No | 772 (93) | 686 (89) | 86 (11) |
| **Has COVID-19 financially affected property?** |  |  |  |
| Yes | 54 (7) | 50 (93) | 4 (7) |
| No | 741 (93) | 654 (88) | 87 (12) |
| **Can CVCs financial benefit agriculture, livestock, and fisheries?** |  |  |  |
| No | 688 (87) | 612 (89) | 76 (11) |
| Yes | 107 (13) | 92 (86) | 15 (14) |
| **Can CVCs financial benefit processed food and beverages manufacture?** |  |  |  |
| No | 678 (85) | 605 (89) | 73 (11) |
| Yes | 117 (15) | 99 (85) | 18 (15) |
| **Can CVCs financial benefits entertainment?** |  |  |  |
| Yes | 424 (53) | 396 (93) | 28 (7) |
| No | 371 (47) | 308 (83) | 63 (17) |
| **Can CVCs financial benefits logistics and transportation?** |  |  |  |
| Yes | 308 (39) | 277 (90) | 31 (10) |
| No | 487 (61) | 427 (88) | 60 (12) |
| **Can CVCs financial benefits tourism?** |  |  |  |
| Yes | 475 (60) | 436 (92) | 39 (8) |
| No | 320 (40) | 268 (84) | 52 (16) |
| **Can CVCs financial benefits education?** |  |  |  |
| No | 471 (59) | 408 (87) | 63 (13) |
| Yes | 324 (41) | 296 (91) | 28 (9) |
| **Can CVCs financial benefits medical and health care?** |  |  |  |
| Yes | 300 (38) | 250 (83) | 50 (17) |
| No | 495 (62) | 454 (92) | 41 (8) |
| **Can CVCs financial benefits clothing and fashion?** |  |  |  |
| Yes | 27 (3) | 24 (89) | 3 (11) |
| No | 768 (97) | 680 (89) | 88 (11) |
| **Can CVCs financial benefits media and publishing?** |  |  |  |
| Yes | 60 (8) | 47 (78) | 13 (22) |
| No | 735 (92) | 657 (89) | 78 (11) |
| **Can CVCs financial benefits information and communication technology?** |  |  |  |
| Yes | 124 (16) | 112 (90) | 12 (10) |
| No | 671 (84) | 592 (88) | 79 (12) |
| **Can CVCs financial benefits banking?** |  |  |  |
| Yes | 52 (7) | 42 (81) | 10 (19) |
| No | 743 (93) | 662 (89) | 81 (11) |
| **Can CVCs financial benefits property?** |  |  |  |
| Yes | 29 (4) | 23 (79) | 6 (21) |
| No | 766 (96) | 681 (89) | 85 (11) |
| **Should distancing continue to be applied?** |  |  |  |
| Yes | 523 (66) | 481 (92) | 42 (8) |
| No | 272 (34) | 223 (82) | 49 (18) |
| **Should mask wearing continue to be applied?** |  |  |  |
| Yes | 663 (83) | 611 (87) | 52 (57) |
| No | 132 (17) | 93 (13) | 39 (43) |
| **Should monitoring in-bound travelers continue to be applied?** |  |  |  |
| Yes | 523 (66) | 478 (91) | 45(9) |
| No | 272 (34) | 226 (83) | 46 (17) |

***Note:*** *Column 2 provides a breakdown of total responses for all variables and their sub-categories, (%), additive across each column. Columns 3 & 4 provide response to the questions on whether respondents would adopt CVCs (More receptive (yes), and Less receptive (no and not sure), broken down by individual variable, (%), additive across each row.*