We can’t hang out anymore: an analysis of self-other asymmetries and anti-COVID vaccination confidence in Guatemala

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Abstract

I conduct a survey indagating on risk perception and anti-COVID protection measures to 438 Guatemalan citizens of a high range of ages (from less than 18 to more than 60 years old) and middle to upper socio-economic level. I utilized the lottery framework developed by Holt and Laury to elicit behavior at the face of risk in two domains, financial and health. Both the survey and the risk assessments were subject to a self-other framing, in which respondents were asked to answer either on behalf of themselves or of another. Results show that Guatemalans are more risk-taking in the financial domain when deciding for themselves than for another, but both groups reported almost identical risk attitudes in the health domain. The results report a great dissociation between prosocial behavior to stop the COVID-19 spread, were people rank themselves better than others. Data also shows than being vaccinated does not increase economically active behavior, and this paper explains this in relation with the self-other dissociation found.

Introduction

Given the current times, many researches have taken up the opportunity to dig deeper into people’s behavior and psyche to assess their behavior in a pandemic, something that the world had long left behind ever since the Spanish Flu back in the 1910’s. Researches centering on the COVID-19 crisis started arising as early as March back in 2020, and while overall literature on COVID-19 is being expanded as the pandemic lingers on, most of this work is being centered in the early hotspots of the epidemic, such as China, Europe and the United States. This is given to the fact that these regions were the first hit by the new virus, consequentially, are the ones giving way to the recovery processes and new waves. Latin America and other developing countries are not yet as covered as western countries are at the moment.

The academic world has had its eyes on the effects on the economy over the course of the pandemic. The Center of Economic Policy Research (CEPR) even started a line of issues named Covid Economics to keep track of all papers diving into this topic. Early research featured potential economic and fiscal policies and overall macroeconomic dynamics. However, as time went by and big pharmaceutical houses such as Pfizer and the possibility of a vaccine began, the topic of vaccine hesitancy started to take over.

There exists a reason of why the topic keeps coming up in the light of the current pandemic, and that is that the vaccine was being developed too fast. This concern is

backed up that the fact that vaccines were out in the market before going through long-term safety trials. Even though this claim is widely popular, could we say that this is the main reason why people have less confidence in the anti-COVID vaccines? It might not be the case.

Related Literature

In their research, Dror et al., (2020) demonstrated there was a high level of vaccination hesitancy, surprisingly even among medical staff. One of the most prominent reasons for this was, in fact, the concern that the vaccine was being developed too quickly and skipping the usual safety-testing procedures. However, opinions on this varied by age group and profession, in other words, risk position. Many individuals that considered themselves more prone to catch the disease expressed more willingness to get vaccinated as soon as possible, while the ones that considered themselves healthy and did not have the need to expose themselves to high risk places expressed higher hesitancy in getting vaccinated.

Testing and measuring risk perception and confidence in available anti-COVID vaccines is of key interest for policy evaluation for various reasons. Foremost, the urgency and importance of the current situation demands it, as we are facing a worldwide problem that seems that can't be solved partly because people don't trust enough in the available vaccines. This willingness to vaccinate one-self has significance impact in public health in terms of herd immunity, which is proving to be strictly necessary for a complete economic revitalization. Governmental and health authorities are keen on insisting that citizens should get vaccinated as soon as possible to stop the virus from mutating and get the pandemic more under control and return to normality as soon as possible. However, whether it's from distrust of scientists, government, or conspiracy theories[1], not all people are willing to vaccinate. This anti-COVID vaccine hesitancy has been explored by much of the existing literature, including explicit reasons for the responder's opposition and psychological processes behind these opinions. Recurring explanations for vaccine resistance in general are public interpretation of risk, the desire of the most natural lifestyle as possible, strict religious convictions and as stated before, mistrust of political and health establishments.

Second, as vaccination across all countries continue, people's opinions evolve, and the question is no longer only whether they trust the vaccine, but also in which vaccine, that is, which version under a pharmaceutical brand. Among the portion of people who is willing to get vaccinated, some are very scrupulous in deciding which anti-COVID vaccine to get. Some actively look for the vaccines with higher efficacy rates, as reported by the CBS News. Many polls have been conducted in America to find out if the public favored and specific type of brand and proved to be in the right track. Pfizer was crowned as the American favorite, followed by Moderna and Johnson and Johnson (from here on, J&J), which perfectly corresponds the order of their efficacy rates; Pfizer being 96% effective against hospitalization, Moderna 94% and J&J 71% (O'Kane, 2021; Katella, 2021). Many Americans decline vaccination if they don't find their preferred choice at a vaccination center.

[1] (Suk et al., 2015; Jamison et al., 2019; Kennedy et al., 2019; Mesch et al., 2019).

In the current situation, Guatemalans are not being given the whole menu of vaccine options just yet. The Guatemalan government has only bought Russia's Sputnik V vaccine doses, a vaccine not yet approved by the European Medicines Agency (EMA). Guatemala also received some donations of AstraZeneca and Moderna from various countries such as Spain, Israel, and the United States. The total of vaccines in Guatemala at the closing of July 2021 hovered above 5.7 million, which 85% were product of a donation, and the rest a governmental purchase (López, 2021).

Guatemalans' opinions are closely driven by the American choice in general cases, and at first glance, this might not be the exception. Even though none of the available vaccines were particularly favored, this research shows that people vaccinated with J&J and Pfizer tend to go out more. This is further discussed in the results section. However, neither Pfizer nor J&J are available at this time, which has led many Guatemalans to travel to either the United States of Mexico to get the vaccine they wanted. However, it is well known that Guatemala is a country where wealth is significantly polarized, so even though many individuals want to get a Pfizer shot, only 3% of the population is financial capable of booking a trip to North America to do so (Dirkmaat, 2021). These circumstances leave many Guatemalan citizens unsatisfied, given that their only chance to get vaccinated, is to get the shot from a brand that they don't trust completely, and given that 93% of the population in Guatemala is unable to work from home (Delaporte et al., 2020), these people will have to decide whether they go out to work unvaccinated.

A person in this situation can then consider four possible outcomes: (1) to get vaccinated and go out more often because they feel protected; (2) to get vaccinated, but still avoid going out because they don't feel protected; (3) to not get vaccinated at all and stay home; or (4) to not get vaccinated, but still go out unprotected.

This research ambitions to analyze if Guatemalans feel more protected by getting a vaccine which they actually trust, and if this enables them to be more economically active. Vaccination procedures started in February 2021, and at the time this paper is being written, only around 13% of the population has been vaccinated at least with one dose, and 2.10% completely vaccinated (López, 2021). The behavioral economic methodology can be used to design governmental purchase plans of the vaccine to increase vaccination acceptance among citizens and revitalize local economy.

In addition to this, this research also aims to dive into the topic of the self-other framing used recently in behavioral economics. It has been proved numerous times that people are more risk averse while deciding from themselves than when deciding for others. Savadori & Speranza (2021) demonstrated this in an experimental study conducted among university students, in which two random groups were asked to play in a multi-scenario simulator. In the game, each participant was the owner of a building for 30 periods and could decide to buy insurance against natural accidents in each one of them. One group was asked to pretend they were deciding to buy an insurance for themselves, and another group was asked to pretend the insurance was for the student after them. Results showed that those who decided for themselves bought the insurance 60% of the time, on average, while those who decided for someone else bought the insurance only about 42% on average. Andersson et al., (2014) also support that deciding for other reduces risk aversion.

However, there is other existing literature exposing that this is not always the case. Montinari and Rancan (2013) claim that it depends whether the other is at close proximity to the self, that is a friend or family member. Beisswanger et al. (2021), also add that it depends if the situation has a low or high impact. If it's a low-impact situation, self-other differences might take place, while in a high-impact case, the person decided might be more empathetic.

In the current pandemic, many people express that they do not want to get the vaccine themselves but wants his or her country to achieve herd immunity. This is a potential case of a self-other dissociation.

Aside from a study that measured COVID preventive measures, (Helion et al., 2021), to the best of the author's knowledge, no previous research has applied the self-other framing to the anti-COVID vaccine related topics, so this paper would start literature on this application with Guatemalan citizens, and further research can be done with the same methodology to understand the self-other relationship in other places in the scope of the COVID-19 vaccination process.

Economic Theory

Past research studies approach risk measuring by only by self-reported assessments, however, his approach is limited given that the person can stand biased towards their own behavior. Galizzi et al. (2016) come up with over five ways risk can be measured, but a recent paper (Loomes & Pogrebna, 2014) suggests that risk perception under uncertainty is best assessed by incentivized actual or hypothetical choices in a conducted experiment.

The trade-off method

This research follows the risk measurement assessment designed by Holt and Laury (Holt et al., 2002), which is composed by a series of choices between two options, one risk-averse and one risk loving. This set up has usually been done in the form of lotteries. Many other research has been done with this study, including recent studies during the pandemic. Hargreaves Heap et al., (2020) used this set up to measure the preference of wealth over health in the United Kingdom and the United States. Researchers Loomes and Pogrebna (2014) claim the trade-off list instrument works well under the assumption that core preferences are consistent with Expected Utility Theory, however, on-going research shows that this theory is faced with many anomalies in practice.

Expected Utility Theory

For a long time, economists relied on Expected Utility Theory (EUT from now on) to explain decision-making processes under uncertainty. EUT suggests that an individual makes a choice under uncertainty by comparing expected utility values. Just as explained in a paper by Bleichrodt, et al. (2000), consider a lottery L (x_1, p_1 ; x_n;p_n), a list of *n* scenarios in which *x* denotes a monetary outcome with probability *p*. The expected utility of the individual is, therefore, $\mu = \Sigma^{n}_{i=1} p_1 u(x_i)$ if preference is deterministic. Consider lotteries S (x_1, p_1 ; x_n;p_n) and R(x_1,p_1 ; x_n;p_n). According to traditional EUT, the decision will always choose whatever utility is higher. However, many research have proved that core preferences are hardly ever consistent with EUT (Bernoulli 1738; Blavatsky, 2007). Some of the most well-known violations to EUT is the common consequence effect, also

known as the Allais Paradox (Allais, 1953), in which subjects are faced with for lotteries in a questionnaire regarding four options. The presented results were contradictions of the Expected Utility Theory, given that none of the choices that the respondents chose were aligned with it. EUT states that the decision maker should pick the choice with higher expected value always. Previous literature proved it needs not be the case. Other researchers have found that people tend to change their answers when faced with the same lottery for a second time (Hargreaves Heap et al., 2020). Tversky and Kahneman (1992) also talk about individuals expressing risk aversion when presented with probable gains or improbable losses, while expressing risk seeking behavior when dealing with improbable gains or probable losses. In an earlier paper (Tversky & Kahneman, 1986), they also shed a light on how the description of a situation where a decision is being required may arise different preferences in the individuals, leading them to make different choices depending on the frame.

The present research uses the standard Holt and Laury lottery format, and a slightly modified version to fit the current context of vaccination choices. These act as the four lotteries used in the Allais paradox. Both are used to compare risk perception of the financial and the health domain, which will be quantified by calculating the risk aversion coefficient of each respondent. Moreover, both schemes will be subject to the self-other framing to determine if people change their preferences when deciding for themselves and for others.

The first hypothesis is that those with a higher risk aversion coefficient are more less likely to trust anti-COVID vaccines. The second hypothesis is that people that got a vaccine they trust feel more protected, thus these people lead a more economic active life. The third and final hypothesis is that people are more prone to recommend risky vaccination to other people, suggesting that there exists a dissociation between the self and the other among the Guatemalan population in terms of their attitude towards the anti-COVID vaccine. Yet, along these lines, it is predicted there will not be a self-other effect in the financial domain assessment.

Methodology

Subjects

The survey was carried out with a total of 438 individuals from different backgrounds. The responders represented groups of citizens working both in the public and private sector, along with students from different Guatemalan universities, some high school students, and also retired people. No age, sex or profession filter was applied to consider eligibility of subjects in efforts to best represent the population at least in the urban sphere, and the survey reached a large target group due to a snowball effect were surveyed people sent it to their relatives and acquaintances. Nevertheless, Guatemala is a very diverse country in cultural and economic terms, both in the urban and rural areas, so it is very difficult to capture these polarizations in the pool of subjects. Having said this, limitations about the possibility of generalizing results with the surveyed individuals is discussed at the end of this paper.

Procedure

The experiment was carried out by an online survey divided in four sections: COVID-19 risk perception, personal protection against COVID-19, general information of the respondent, and a risk assessment, where two Holt and Laury set-ups where included. The risk perception section concerned what each individual thought about certain aspects of the virus, e.g., it's level of contagiousness, how worried they were of catching it, how likely they were to follow governmental prevention measures and their confidence in a list of available vaccines. This section was based on research on COVID-19 attitudes in Senegal (Seror et al., 2021) and the US and UK (Hargreaves Heap et al., 2020). This section also inquired of their activity during the last three months to detect if they were economically active or not.

The second section served to retrieve information about the immunization status of the responding, specifically asking if they had been vaccinated at some point or had overcome COVID-19 in the last six months. The third section was a series of standardized demographic questions to have more control variables and robustness.

The fourth section, which is the risk assessment, consisted in two settings: a lottery and a vaccination opportunity. The lottery in table 1 is a standard monetary outcome decision problem. In here, the individual is asked to decide whether to play in a lottery A (risk averse) or in a lottery B (risky) in 9 different scenarios. The pay-offs are the same throughout the stages, but the probabilities change as the respondent advances. It starts with lottery A weakly dominating lottery B, but as it continues, we find that lottery B starts dominating lottery A, up until the last scenario, where B is unmistakably strictly dominant. The point where a respondent chooses B over A serves to calculate the risk aversion coefficient. The later this point in the lottery, the more risk-averse the respondent. According to the Expected Utility Theory, a subject should jump from A to B at decision 4, in this case.

Table 1:

Round	Lottery A				Lottery B				Expected Value		
	Probability	Prize Q.	Probability	Prize Q.	Probability	Prize Q.	Probability	Prize Q.	EV A	EV B	EV A - EV B
1	10%	**2.000**	90%	**1.600**	10%	**4.850**	90%	**100**	1640	575	1065
2	20%	**2.000**	80%	**1.600**	20%	**4.850**	80%	**100**	1680	1050	630
3	30%	**2.000**	70%	**1.600**	30%	**4.850**	70%	**100**	1720	1525	195
4	40%	**2.000**	60%	**1.600**	40%	**4.850**	60%	**100**	1760	2000	-240
5	50%	**2.000**	50%	**1.600**	50%	**4.850**	50%	**100**	1800	2475	-675
6	60%	**2.000**	40%	**1.600**	60%	**4.850**	40%	**100**	1840	2950	-1110
7	70%	**2.000**	30%	**1.600**	70%	**4.850**	30%	**100**	1880	3425	-1545
8	80%	**2.000**	20%	**1.600**	80%	**4.850**	20%	**100**	1920	3900	-1980
9	90%	**2.000**	10%	**1600**	90%	**4.850**	10%	**100**	1960	4375	-2415

Similarly, the vaccination problem presents the respondent with two generically branded anti-COVID vaccines, Alpha and Beta. The outcome is measured in days of grave side-effects from the vaccine. Once again, we start off by vaccine Alpha weakly dominating vaccine Beta, and the scenarios continue up until Beta completely dominates Alpha. The

later the respondent jumps from Alpha to Beta, the more risk averse he or she is. According to the Expected Utility Theory, the subject in this case should be indifferent at decision 7, so their jump from alpha to Beta should be on decision 8. The following table displays this set up.

Table 2:

Stage	Alpha Vaccine				Beta Vaccine				Expected Value		
	Probability	Days with grave side effects	Probability	Days with grave side effects	Probability	Days with grave side effects	Probability	Days with grave side effects	EV Alpha	EV Beta	EV Alpha - EV Beta
1	10%	**4**	90%	**5**	10%	**1**	90%	**12**	5	11	-6
2	20%	**4**	80%	**5**	20%	**1**	80%	**12**	5	10	-5
3	30%	**4**	70%	**5**	30%	**1**	70%	**12**	5	9	-4
4	40%	**4**	60%	**5**	40%	**1**	60%	**12**	5	8	-3
5	50%	**4**	50%	**5**	50%	**1**	50%	**12**	5	7	-2
6	60%	**4**	40%	**5**	60%	**1**	40%	**12**	4	5	-1
7	70%	**4**	30%	**5**	70%	**1**	30%	**12**	4	4	0
8	80%	**4**	20%	**5**	80%	**1**	20%	**12**	4	3	1
9	90%	**4**	10%	**5**	90%	**1**	10%	**12**	4	2	2

None of the respondents were shown the expected value in neither assessment, only the lotteries or vaccines with their respective probabilities and payoffs.

To be consistent with economic literature, and as explained by the blog Behavioral Game Theory (2021), it will be assumed that choices fit the following utility function

$$u(x) = \frac{x^{1-r}}{1-r}$$

Where *r* refers to the Constant Relative Risk aversion coefficient and *x* is money in the financial domain, and days with grave side effects in the health domain. Assuming a person's preferences are deterministic for the financial domain, and chooses lottery A in decision 3, then it is assumed

$$0.3\ \frac{2000^{1-r}}{1-r} + 0.7\frac{1600^{1-r}}{1-r} > 0.3\ \frac{4850^{1-r}}{1-r} + 0.7\frac{100^{1-r}}{1-r}$$

And if the same person jumps to Lottery B in decision 4, then

$$0.4\ \frac{2000^{1-r}}{1-r} + 0.6\frac{1600^{1-r}}{1-r} < 0.4\ \frac{4850^{1-r}}{1-r} + 0.6\frac{100^{1-r}}{1-r}$$

The same logic is applied to the health domain, where a person could choose Vaccine Alpha at decision 7, it is assumed assume

$$0.7\ \frac{4^{1-r}}{1-r} + 0.3\frac{5^{1-r}}{1-r} > 0.7\ \frac{1^{1-r}}{1-r} + 0.3\frac{12^{1-r}}{1-r}$$

And jumps at decision 8, then

$$0.8\,\frac{4^{1-r}}{1-r}+0.2\frac{5^{1-r}}{1-r}<0.8\,\frac{1^{1-r}}{1-r}+0.2\frac{12^{1-r}}{1-r}$$

It's important to highlight that the survey had two versions. One to assess decisions and vaccine confidence of the self, and a version for the other. Both surveys had the same questions, but some were slightly modified to frame the respondent as deciding for another person. The risk assessments were also subjects to this framing, where instead of asking the individuals to make a decision, they were asked to imagine they were making a recommendation to someone else. For simplicity, the instructions did not emphasize any familiarity to the 'other', and it is assumed that individuals regard the other as someone socially distant from them.

The survey was distributed online and data recollection lasted six days. There were not any other kind of incentives employed for the respondents. It opened with a brief introduction underlining the objective of the research. None of the respondents knew there was more than one version of the survey, and consequentially, none of them knew if they were in the 'self' or 'other' group. There was only one pilot session to reassure the sample understood the questions and risk assessments.

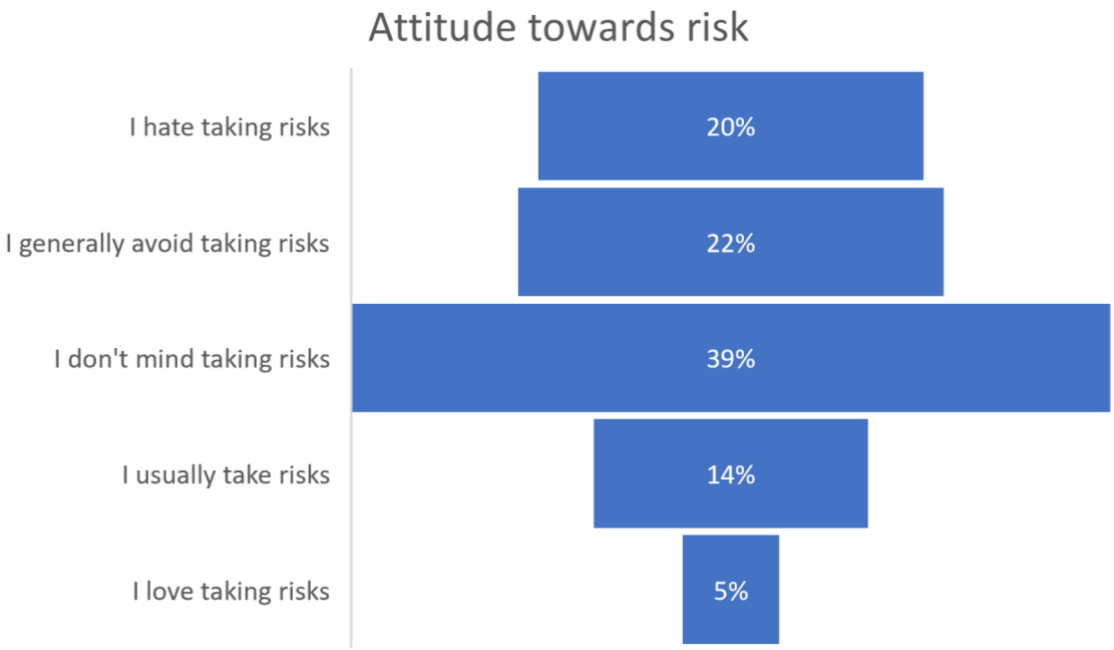
Earlier versions of the survey included political questions, such as their political alignment (left or right) and their position towards authority to expand control variables. Nonetheless, in the pilot session, individuals suggested to eliminate these from the survey, given that many riots against the government are taking place as of July and August 2021, and people could misunderstand the purpose of the study, thus abandoning the survey.

Results

Demography

The surveys were evenly distributed, with the one assessing decisions for the Self reaching 232 people, of which 62% percent were women, 45.3% of the total being between 18 and 30 years of age, and 44.3% aged between 31-50. The survey assessing decisions for the Other reached 206 people, of which 74% were women, 37.4% aged between 18-30 and 27.2% aged between 31- 50. In both groups, more than 65% of the subjects lived with at least three people in their home, and most of the respondents were catalogued as middle to upper socio-economic class. 75% of the subjects in the Self frame reported having little to zero probability of facing financial struggles in the next few weeks, while in 70% of the other frame reported the same conclusion. Both in the self and other group, 86.2% and 84.5% had at least a university title, respectively. Both groups reported similar attitudes towards risk, as can be seen in Figure 1.

Figure 1: overall attitude towards risk



Moreover, most respondents in this study had already been vaccinated with at least one dose. A small portion of 6% of subjects had not been vaccinated yet, but had the intention to do so, and only 5% had not been vaccinated and did not desire to.

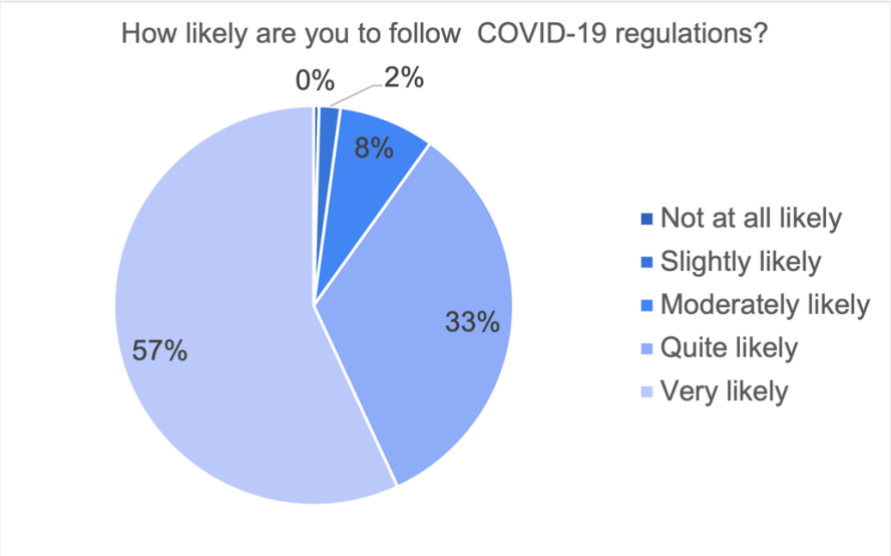
Risk perception of COVID-19 survey

People in the Self frame were asked how worried they were of catching COVID-19 themselves, while in the Other framing, the question was how worried they were about their family catching COVID-19. As expected, the subjects reported to be slightly more worried about their family catching the disease than themselves. 68% percent of Self subjects answered, “quite worried” or “very worried”, while 73% of the Other sample answered the same. This is consistent with what other research has proposed on proximity of the Other; the closer the “other” is, the more impact they have on observed subjects.

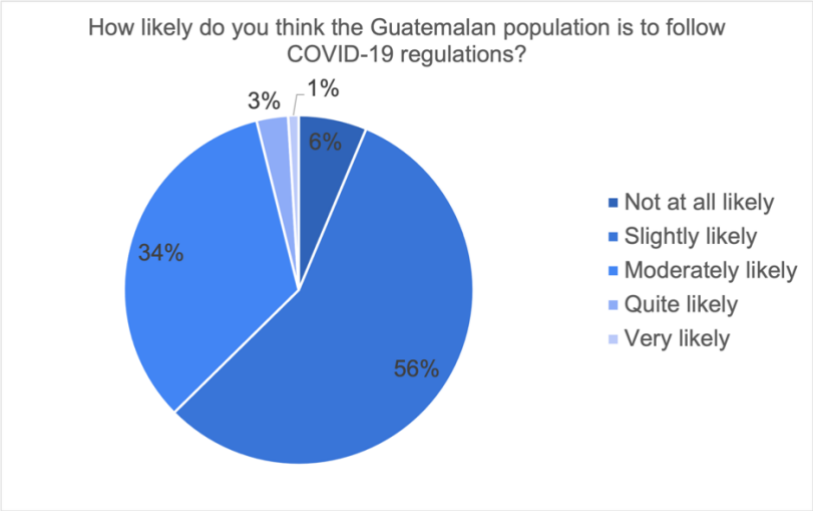
However, when faces with identical question, such as “How contagious do you consider COVID-19 to be?”, answers were very similar. Both groups consider the disease to be highly contagious, and 89.2% and 86.4% of Other picked “quite contagious” or “highly contagious”. The graphs for identical questions can be seen in the appendix of this research. All identical questions had similar proportions in answers, but great dissociations were discovered when the subjects were asked the same question, written differently.

For example, Graphs 1 and 2 question 4 of the survey, Self-participants were asked how likely they considered themselves to follow governmental regulations to decrease the COVID-19 spread. In contrast, Other participants were asked how likely they considered the Guatemalan population to follow the same regulations. The difference in answers were abysmal, and predictably irrational. 90.1% of Self participants classified themselves to be “quite likely” or “very likely” to follow these regulations, while almost the same proportion in the Other group (89.8%) cataloged Guatemalan citizens to being “not at all likely” or “slightly likely” to do the same. This result outcome is consistent with what Helion, et al., (2021) reported in their research in earlier this year on COVID measures. They found that people tend to score themselves higher than others when asked about following COVID-19 regulation measures to stop the spread. The authors found that individuals that reported better scores in self-reported behaviors have worse psychological outcomes in situations where they need to trust their peers. This leads to anxiety and self-isolation. This could be the case in Guatemala. We will see in the next section that people that feel protected by the vaccine still refuse to go out. This could be explained by this impression of the ‘other’ being more irresponsible than the self, giving the impression that the virus is not under controlled and thus collecting the anticipated anxiety and self-isolation.

Graph 1: response from the Self group



Graph 2: response from the Other group



Regressions on behavior

An Ordinary Least Squares analysis was performed to the data related to behavior in the last three months for the overall group of respondents. None of the questions of reported behavior was subject to the self-other framing. I regressed on multiple variables and analyzed those that were the most statistically significant.

From the data collected, I created new dummy variables to analyze whether they helped explain behaviors. First were the dummies for each vaccine to signal if a person got that vaccine brand or not. The dummies were named after each vaccine: *pfz* for Pfizer, *mdrn* for Moderna, jj for Johnson and Johnson, *astz* for AstraZeneca and sptnk for Sputnik V. This helped to measure trust by vaccine in terms of reported behavior.

I also created new dummies based on the score given in some questions of the survey, for example, the variable *financial struggles* are a dummy variable that indicates whether the respondent chose "quite likely" or "very likely" to the question "What is the probability that in the next few months your household does not get enough income to cover its expenses?". Along the same lines, *health struggles* indicates if the person ranked their health in the last three months "very bad" or "slightly bad". The Coliving variable was created for people that lived with 3 or more people in the household. Lastly, dummy variables were created to indicate whether the subject was a full-time employee, a full-time student, or a part-time worker, part-time student.

As shown in Table 3, it was found that being vaccinated is not significant to explain going out for fun or to run errands, but we can see that people vaccinated with Pfizer tend to go out more than their peers, closely followed by J&J vaccinates. However, there more variables that are more statistically significant, such as coliving and their self-reported risk attitude. People coliving with more than three people may face a higher responsibility because of the number of members in the household and could be avoiding going out for that reason. No further questioning was done about the ages of other members of the household, but in Guatemala and other developing countries it is very common to have more than one generation living under one roof. The people responding this survey are

very likely to live with their parents or grandparents, and this could cause a restriction of mobility given their potential delicate health.

As for going out for work (Table 4) statistically significant variables include, logically, being employed whether it is full or part-time. Going back to the existing literature, this result is consistent with the claim that the vast majority of people in Guatemala cannot work from home (Delaporte et al.,2020). The risk attitude dummy also proves to be significant in this analysis. However, another statistically significant variable was age and scholarity.

Table 3: regression on the times a person went out for fun or to run errands

ocio	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
fully	-1.759905	1.608099	-1.09	0.274	-4.920918	1.401108
onlyfirst	-1.631907	1.630228	-1.00	0.317	-4.836419	1.572605
covids_rvr	.1544853	.3347068	0.46	0.645	-.5034422	.8124128
age	-.1608485	.1043069	-1.54	0.124	-.3658828	.0441858
female	-.3146125	.2278566	-1.38	0.168	-.7625063	.1332812
protect	.0637457	.0926516	0.69	0.492	-.118378	.2458694
recent_vacc	-.2311191	.308445	-0.75	0.454	-.8374242	.375186
pfz	2.106209	1.631097	1.29	0.197	-1.10001	5.312429
mdrn	1.278253	1.564516	0.82	0.414	-1.797089	4.353594
astz	1.291264	1.59766	0.81	0.419	-1.849229	4.431758
jj	1.449516	1.60655	0.90	0.367	-1.708452	4.607485
sptnk	.758964	1.593344	0.48	0.634	-2.373045	3.890973
coliving	.5903939	.2758581	2.14	0.033	.0481443	1.132643
employed	-.2437913	.3316309	-0.74	0.463	-.8956726	.40809
student	-.3363125	.439521	-0.77	0.445	-1.200271	.5276465
empl_stud	-.1735649	.3920537	-0.44	0.658	-.9442181	.5970883
fin_stg	-.0413407	.4677319	-0.09	0.930	-.9607533	.8780719
hlth_stg	.3988272	.7017419	0.57	0.570	-.9805748	1.778229
scholar	-.4748427	.1696498	-2.80	0.005	-.8083204	-.1413651
risk_att	.184606	.096911	1.90	0.057	-.0058903	.3751022
guate_vacc	.020992	.5065911	0.04	0.967	-.9748054	1.016789
_cons	4.195041	.7901461	5.31	0.000	2.641864	5.748218

Table 4: regression on the times a person went out for work

trabajo	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
fully	-1.036982	1.817923	-0.57	0.569	-4.610442	2.536479
onlyfirst	-.6004678	1.84294	-0.33	0.745	-4.223103	3.022167
covids_rvr	.1601983	.3783792	0.42	0.672	-.5835753	.9039719
age	.0137951	.1179168	0.12	0.907	-.217992	.2455822
female	.0159451	.2575872	0.06	0.951	-.4903897	.5222798
protect	-.0233577	.1047408	-0.22	0.824	-.2292448	.1825294
recent_vacc	-.7435938	.3486908	-2.13	0.034	-1.429009	-.0581782
pfz	-.19616	1.843922	-0.11	0.915	-3.820726	3.428406
mdrn	.3648229	1.768653	0.21	0.837	-3.111788	3.841434
astz	.2867034	1.806122	0.16	0.874	-3.26356	3.836967
jj	.3449839	1.816172	0.19	0.849	-3.225035	3.915003
sptnk	.0790262	1.801243	0.04	0.965	-3.461646	3.619698
coliving	.1599905	.3118519	0.51	0.608	-.4530115	.7729926
employed	.788055	.374902	2.10	0.036	.0511165	1.524993
student	-.1506241	.4968695	-0.30	0.762	-1.127312	.8260639
empl_stud	.9434189	.4432087	2.13	0.034	.0722113	1.814627
fin_stg	-.5207168	.5287614	-0.98	0.325	-1.560094	.5186604
hlth_stg	.9291169	.7933048	1.17	0.242	-.6302688	2.488503
scholar	-.3951223	.1917856	-2.06	0.040	-.772112	-.0181326
risk_att	.3144707	.1095559	2.87	0.004	.0991186	.5298228
guate_vacc	.3561784	.5726909	0.62	0.534	-.7695502	1.481907
_cons	3.175103	.8932441	3.55	0.000	1.419269	4.930938

We can deduct that higher scholarity gives way to better job opportunities, where employees can work remotely and thus, do not need to expose themselves on the streets to go to work. These people are probably those who have completed a bachelor or post-graduate degree. Moreover, they most likely receive a better pay than other peers. Unfortunately for Guatemala, the portion of people that have access to this kind of education is very small. This fact and the result of this regression presumes that, then, most people in Guatemala have a job that requires them to go outside of their household in spite of a pandemic. On the bright side, this means that money is circulating. On the other hand, this also means that there is a shortage of money circulation, given that those more financially capable are those avoiding going out in general terms.

Onto the average vaccine confidence score, it's important to report that most vaccines were ranked somewhat low by the general sample, whether it was in the Self or Other frame. Figures 2 and 3 report the confidence score to each vaccine brand in a scale from 1 to 10, 1 indicating the vaccine is not at all reliable and 10 indicating it's very reliable.

Figure 2: Scores for each vaccine in the Self framing

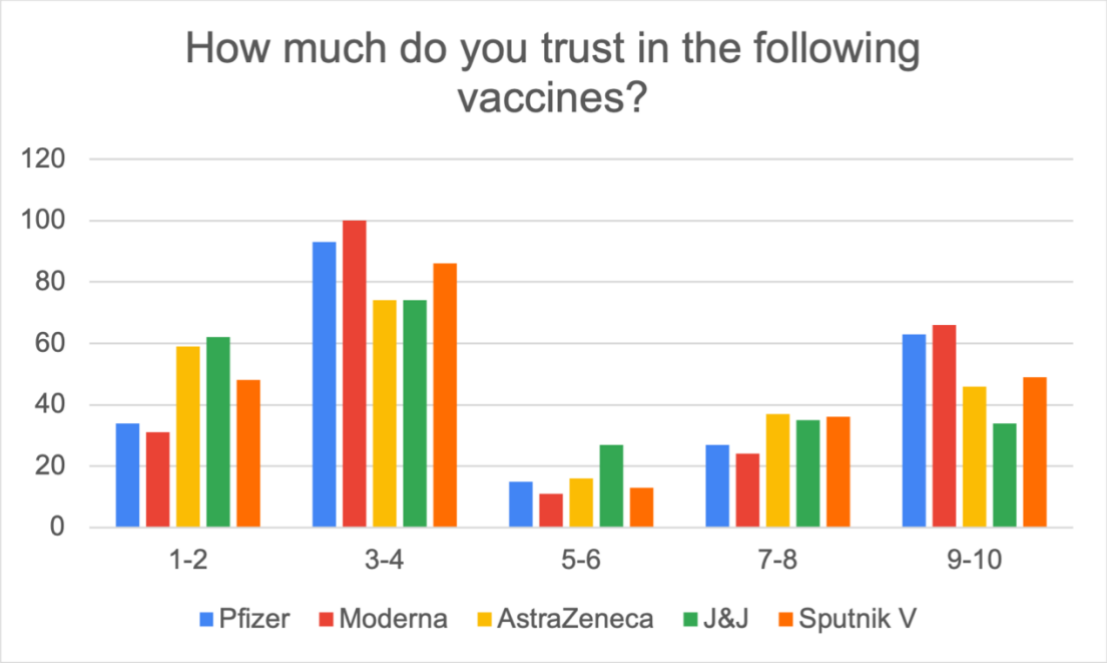
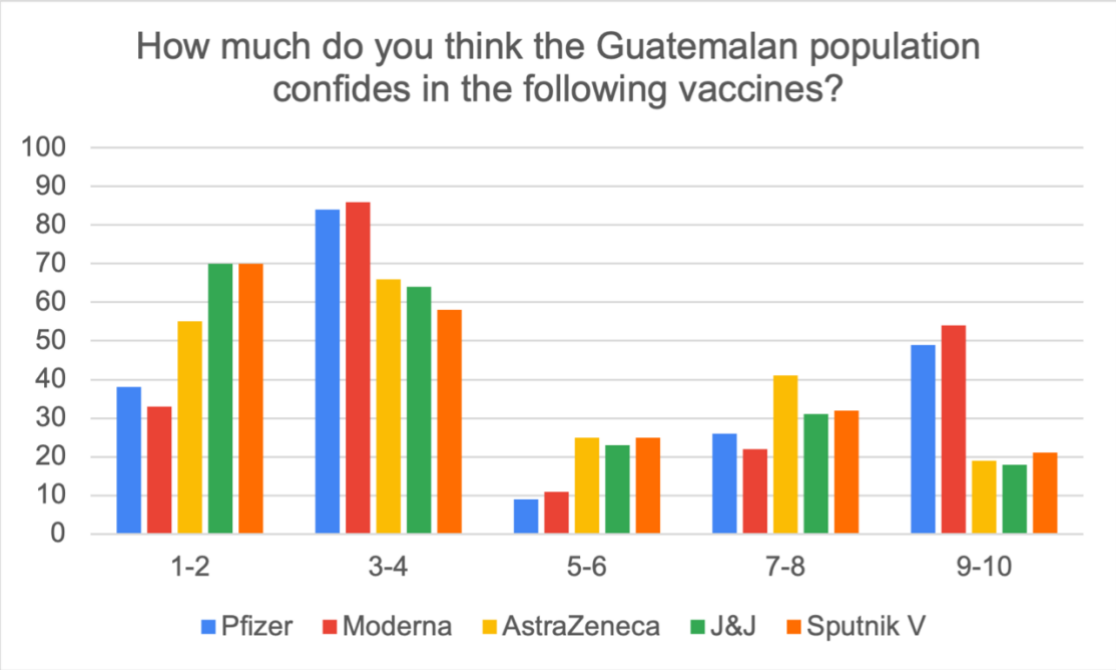


Figure 3: Scores for each vaccine in the Other framing



The vaccines that received the highest scores were Pfizer, Moderna and a tied AstraZeneca/Sputnik in the Self group. In the other, the higher scores vaccines were only Pfizer and Moderna. Once again, this indicates there exists a disconnection between the individual beliefs versus collective ones. However, overall scores are low, as most submissions to these questions round the 2, 3 and 4 marks.

The results suggest that being fully vaccinated increased the probability of giving a higher score, but the variables of age and being female decreased it, which leads us to think that

men trust the vaccines more than women, and that the older generations are more skeptical of them. This is a potential problem given that Guatemala started vaccination by higher age ranges, but if they are the most mistrustful of them, they won't be willing to go out even if they are vaccinated. I tested this in a regression on the perceived protection score by the vaccine and found that age is not significant to explain protection, but it does decrease the times the subject would go out. This won't aid the reactivation of the economy, going by the economic theory that older people have more money to spend.

I also expanded on this by regressing scholarity on age and found that older people are more likely to have a higher scholarity level, as it's logical. All this suggests that those with more money to spend are the least likely to go out. This is reported on Table 5, 6 and 7.

On another note, the regression on protection score shows that the only vaccine to influence in a positive effect to the protection score was Johnson & Johnson, however, it is not statistically significant. Also, interestingly, variables such as coliving with three or more people decreases said perceived protection, but being a student increases it. This could be due to the previous hypothesis that older and younger generations live under the same roof, and even if people are vaccinated, they would rather not risk themselves to avoid spreading the disease in their household. Students most likely have more knowledge about the vaccine, and thus recognized the protection granted by them.

Table 5: regression on average vaccine confidence score

avg_vconf	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
fully	1.807732	.5971937	3.03	0.003	.633911	2.981553
onlyfirst	1.425699	.619259	2.30	0.022	.2085076	2.642891
covids_rvr	.2435677	.4106113	0.59	0.553	-.5635141	1.050649
protect	.1915245	.1129468	1.70	0.091	-.0304793	.4135283
female	-.560255	.2769349	-2.02	0.044	-1.104588	-.0159224
coliving	.232502	.3344021	0.70	0.487	-.4247859	.8897899
fin_stg	-.4253594	.5711427	-0.74	0.457	-1.547975	.6972567
hlth_stg	-.729786	.8602974	-0.85	0.397	-2.420753	.9611814
risk_att	.047945	.1187277	0.40	0.687	-.1854217	.2813116
age	-.4074924	.1036286	-3.93	0.000	-.6111807	-.2038041
scholar	-.0359508	.1979736	-0.18	0.856	-.42508	.3531784
guate_vacc	-.3956204	.3892472	-1.02	0.310	-1.16071	.3694689
_cons	4.443765	.8595294	5.17	0.000	2.754307	6.133222

Table 6: regression on perceived protection given by the vaccine

protect	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
fully	2.832233	.8260374	3.43	0.001	1.208528	4.455937
onlyfirst	2.441111	.825207	2.96	0.003	.8190383	4.063184
covids_rvr	-.0842839	.1764291	-0.48	0.633	-.4310827	.2625149
female	-.1545529	.1203344	-1.28	0.200	-.3910888	.0819831
coliving	-.4551827	.1437396	-3.17	0.002	-.7377252	-.1726401
fin_stg	.581775	.2452719	2.37	0.018	.0996548	1.063895
hlth_stg	.1895566	.3702548	0.51	0.609	-.5382368	.9173499
risk_att	.0505812	.0510282	0.99	0.322	-.0497228	.1508851
age	-.0007766	.0549985	-0.01	0.989	-.1088847	.1073314
scholar	.1174762	.0892079	1.32	0.189	-.0578758	.2928281
employed	.1275086	.1750973	0.73	0.467	-.2166724	.4716896
student	.4768407	.2313655	2.06	0.040	.0220558	.9316256
empl_stud	.1260584	.2067686	0.61	0.542	-.2803774	.5324942
avg_vconf	.0295755	.0207822	1.42	0.155	-.0112751	.0704261
pfz	-.1481089	.8529102	-0.17	0.862	-1.824636	1.528419
mdrn	-.1622133	.8189464	-0.20	0.843	-1.77198	1.447553
astz	-.0645833	.82459	-0.08	0.938	-1.685443	1.556277
jj	.1509768	.8409925	0.18	0.858	-1.502125	1.804078
sptnk	-.1440185	.8283954	-0.17	0.862	-1.772358	1.484322
_cons	-.1652207	.424014	-0.39	0.697	-.9986862	.6682448

Table 7: regression on scholarity

scholar	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
age	.0292662	.0290276	1.01	0.314	-.0277901	.0863226
student	-.3254003	.1251086	-2.60	0.010	-.5713123	-.0794884
pfz	.0351923	.1482824	0.24	0.813	-.2562699	.3266545
jj	-.1147424	.1243111	-0.92	0.357	-.3590869	.1296021
female	-.0311145	.0651303	-0.48	0.633	-.1591338	.0969049
protect	.0351415	.0264999	1.33	0.186	-.0169463	.0872294
recent_vacc	.0540955	.0820753	0.66	0.510	-.1072307	.2154217
fully	.3043923	.1358501	2.24	0.026	.0373668	.5714177
onlyfirst	.0927955	.1340347	0.69	0.489	-.1706614	.3562524
covids_rvr	.0448869	.0962453	0.47	0.641	-.1442917	.2340656
coliving	.0540708	.0789812	0.68	0.494	-.1011737	.2093152
employed	.2419357	.0939168	2.58	0.010	.0573339	.4265375
empl_stud	.2237981	.1111549	2.01	0.045	.0053134	.4422828
fin_stg	-.2687858	.1337716	-2.01	0.045	-.5317256	-.005846
_cons	2.692742	.1637147	16.45	0.000	2.370947	3.014538

I also tested the relationship between individual vaccine scores and what vaccine brand people got. Initially, it was hypothesized that people would give higher scores to the vaccine they got or wanted to get. It was partly right, as in the regressions we can see that there exists a positive relationship of this variables. However, it's not that people vaccinated with as specific vaccine brand will certainly give high scores to it, but instead, giving a high score on a vaccine brand increases the likelihood that the responder had

been vaccinated with it. This is coherent with the previous results on vaccine confidence, which were generally very low. The regressions for this discovery can be found in the appendix.

In the survey for both framings, a small risk assessment was also included, in which people were asked to imagine a closed room in a restaurant with a maximum capacity of 100 people and moderately separated tables. The request was to pick the maximum range of diners[2] that could be eating in a restaurant for the respondent to feel comfortable dining there as well. The regression shown in Table 8 proved to be further evidence to determinate that age, scholarity and being female contribute to risk aversion, as these were the statistically significant variables to lead a lower range selection. Being vaccinated was not statistically significant to increase or decrease range selection.

Table 8: regression on restaurant risk assessment

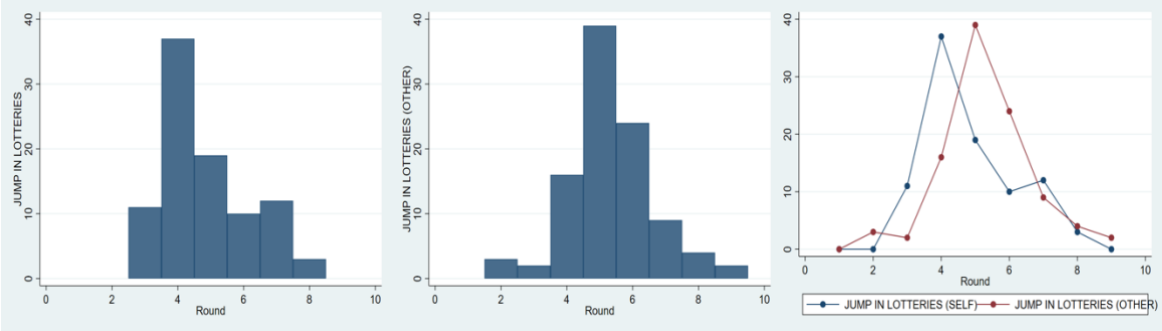
mesas	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
scholar	-.2923889	.1393173	-2.10	0.036	-.5662294	-.0185484
age	-.3487549	.0834392	-4.18	0.000	-.512762	-.1847478
student	-.0108726	.3630488	-0.03	0.976	-.724477	.7027318
pfz	.0997215	.4269117	0.23	0.815	-.7394109	.938854
jj	-.1890443	.3573237	-0.53	0.597	-.8913955	.5133068
female	-.6905012	.1871046	-3.69	0.000	-1.058272	-.3227307
protect	-.1056381	.075949	-1.39	0.165	-.2549224	.0436463
recent_vacc	.1020846	.2361521	0.43	0.666	-.3620931	.5662623
fully	.3772254	.3930437	0.96	0.338	-.3953365	1.149787
onlyfirst	-.1533833	.3859123	-0.40	0.691	-.9119279	.6051612
covids_rvr	-.14054	.2771378	-0.51	0.612	-.6852787	.4041987
coliving	.0484539	.2272939	0.21	0.831	-.3983122	.49522
employed	-.0360963	.2720788	-0.13	0.895	-.5708912	.4986985
empl_stud	-.2023389	.3213376	-0.63	0.529	-.8339562	.4292783
_cons	4.880101	.6028003	8.10	0.000	3.695244	6.064958

Risk assessment results

Figure 2 reports the distribution of switch points in the Self and Other framing of people who only switched once in the lottery assessment and the comparison of the jump between groups. Most people in the Self group switched at Round 4 in the lottery, while most people in the other group switched at Round 5. This suggests that Guatemalans are slightly more risk averse when deciding for others than for themselves, which rejects the hypothesis that there would not be a difference in the financial domain. This could possibly be explained by their self-reported financial stability, possibly placing importance on the knowledge of the resources available to the person playing in the lottery. The results in the group subject to the Self framing imply preferences are deterministic, as it fits with what the Expected Utility Theory predicted the switch would be (Round 4).

Figure 2: distribution of switch points in lottery risk assessment

[2] Ranges were presented in sets of ten, such as 0-10, 10-20, etc.



In the Self group, people who only switched once accounted for 39% of the observations of the lottery assessment. 42% had multiple switches, revealing preferences that do not cohere to form a strict attitude towards risk. The remaining subjects had no switch points, either always choosing lottery A (13%) or lottery B (6%). For the group subject to the Other framing, 48% only switched once, 28% had multiple switch points, 19% chose only lottery A and 4% chose only Lottery B.

Although the difference is not pronounced, the distribution of this proportion supports that Guatemalans are slightly more willing to take risks with their own money than when responsible for someone else's money. This could be due to their self-reported financial stability, as we see in a regression reported in table 9 that being in financial struggles lead to an earlier switch point, contributing to risk aversion. On the other hand, the risk attitude variable proved to lead to an earlier jump, indicating that if the subject considers himself more risk loving, they will take are willing to risk more in the financial domain. Since the respondents may not be aware of the 'other' financial situation, they might tend to be more cautious in making decisions for them.

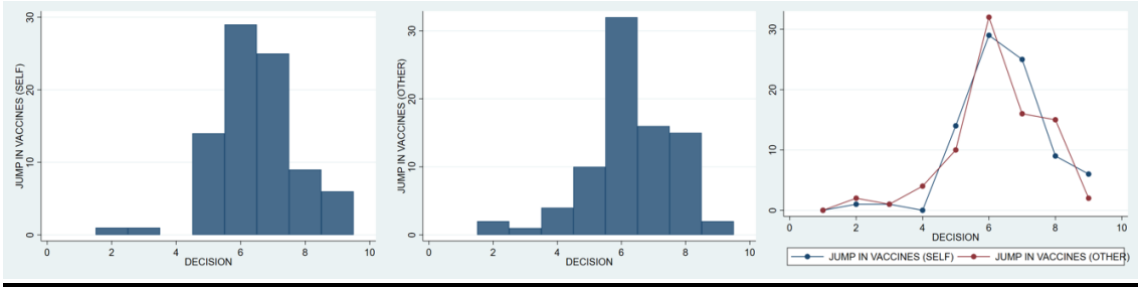
Table 9: regression on restaurant risk assessment

lottjump	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
age	.0918401	.074229	1.24	0.218	-.0546146	.2382949
female	-.1614158	.2029535	-0.80	0.427	-.5618455	.2390139
scholar	.0002055	.1413945	0.00	0.999	-.2787676	.2791786
fin_stg	.8513334	.4981385	1.71	0.089	-.1314997	1.834167
hlth_stg	.7795641	.9684094	0.80	0.422	-1.131119	2.690247
risk_att	-.232186	.1022449	-2.27	0.024	-.4339163	-.0304556
_cons	5.560286	.5868933	9.47	0.000	4.402339	6.718234

Figure 3 details the distribution of switch points in the self and other framing of people who only switched once in the vaccination assessment. Again, contrary to the previous belief, most people jumped from the safe vaccine to the risky vaccine at Decision 6 in both groups. The switch is just one Decision earlier than what EUT predicted an indifferent subject would jump from vaccine Alpha to Beta (Decision 7), implying that Guatemalans are not very wary of potential side effects of anti-COVID vaccination, whether is for themselves or for another. This goes in line with the self-reported attitude towards risk in both groups, in which most people took a middle stand in face of risk and described themselves as risk neutral. This also fits well with the confidence scores of each available vaccine, as most people gave low confidence scores to the currently available vaccines, but still the vast majority if subjects had already been vaccinated or are willing

to vaccinate despite the low level of trust the place in each vaccine, in general. This implies that as long as Guatemalans are aware of the potential benefits of the vaccine and they outweigh the risks, they will get the vaccine.

Figure 3: distribution of switch points in vaccination risk assessment



In this case, the proportion of people who only switched once in the Self group was 37% of the observations of the vaccine assessment. 35% had multiple switch points, a smaller proportion than in the lottery assessment, implying people are more cautious in the health domain than in the financial domain. The remaining subjects had no switch points, a large portion opted for always choosing vaccine Alpha (26%) or vaccine Beta (2%).

Interestingly, for the vaccination risk assessment, neither health struggles nor risk attitudes seemed to be significant to determine when the jump would take place. The only statistically significant variable in Table 10 was age with a surprisingly negative coefficient, indicating an earlier jump. With a bit of thought, it's clear that these results are consistent with reality, given that even though older generations are more skeptical of the vaccine, we have also seen that as age increases, so does scholarity, and it has been already discussed scholarity had a positive impact on perceived protection, possibly due to the access to more information of the vaccines. This protection score, however, is not an indicator that older generations will go out more, either for work or fun, so even if they are vaccinated and feel protected. We can attribute this to the self-other asymmetry on following regulations to stop the COVID-19 spread, as people do not feel their peers are reliable and, consequently, try to avoid all type of exposures when they can.

Discussion and conclusions

I showed that those who avoided going out the most were most likely female or of older ages. This is also completed by the fact that higher education individuals have better jobs and better pay, which is why they were classified in higher financial ranks. These people have the most money to spend, but do not do so since they have the opportunity to work remotely. People with less education must go out for work because their job requires them to. Even though this means there is money circulating, it's coming from the people who have less resources, and it's not being feed by those who are more able to spend in activities for fun. This means that the economy is being supported by those who have more expenses and less income, creating a shrinkage in the overall gross domestic product of the country.

Results also revealed that even though most of the respondents had a good attitude towards being vaccinated, it is not statistically significant to explain going out or having private events due to the lack of confidence on the vaccines. This was supported by the data, where none of the vaccines were particularly favored and all of them remained within the lower scores. However, it was found that the fact that a person had given a high score to a certain vaccine increased the probability of said person to have been vaccinated with that brand.

It is also concluded that those of higher education and more financially capable do feel protected by the vaccine. But then again, protection is not significant to explain whether they go out more or not. Why? I conclude this comes from a lack of trust of other Guatemalan citizens. The self-other assessment proved that respondents think they follow the regulations to stop the epidemic spread better than others, accounting for asymmetries in prosocial behavior that lead to the collective paradox, where collective beliefs and behaviors are not the sum of those individually. This creates anxiety and aversion of going out and lead more economically active lives, for example, going into a restaurant room with a maximum capacity of 100 people.

Add to these results that 80% of people of Guatemalans up to now are still unvaccinated[3]. This creates the impression of the virus being uncontained and people being irresponsible, and that is why they do not go out. It's also important to be reminded of the educative context in Guatemala, where the level of scholarity of the whole population is extremely low, hovering just above two years of primary school on average. This would explain why so many people in the country remain unvaccinated, as I discussed students and higher scholarity individuals perceive a higher protection with the vaccines. Results also showed that people with a lower scholarity level are more likely to go out for work, and these percentage of the population, if unvaccinated, would find themselves in an extremely complicated situation. In the case where an unvaccinated person decides not to go to work, Guatemala's gross domestic product shrinks, and the economy suffers, but if they go to work in spite of being unvaccinated, they run the risk of catching the disease, and with the new Delta variant, consequences might be fatal.

[3] *covidvax. live: Live COVID-19 Vaccination Tracker - See vaccinations in real time!* Covidvax.live. (2021). Retrieved 27 August 2021, from https://covidvax.live/location/gtm.

To increase the vaccination rate in the country, the suggestion would be that the government should increase efforts in education campaigns on anti-COVID vaccination adapted for all people, where it communicates that the benefits outweigh the risks. According to the health assessment, people will opt for vaccination if this message is clear.

As for trustworthiness and reliability, it is recommended that the health authorities should also strengthen protection awareness for vaccinated people to reduce the aversion of an economically active life. However, both campaigns on vaccination education and protection awareness should go hand in hand do reduce the self-other asymmetry and increase perceived protection levels simultaneously. This is because a dissociation of this kind is particularly worrying in a situation where people need to be reliant on others' prosocial behavior to achieve better outcomes, and in the case of a global pandemic, it is essential to collaborate as a community to protect health, but also, it's crucial to trust one another to aid economic reactivation.

Results also showed that, although not statistically significant, both Pfizer and Johnson & Johnson gave positive effects to going out more, and the latter vaccine specifically increased the perceived protection score. Though, it is worthy to note that people that were administered with this vaccine surely traveled for that, as neither of them was available in Guatemala at the time this research was in progress. Maybe the fact that they got the vaccine in the United States or Mexico, as was the case of the majority, gave the impression of a higher reliability, as it is true that in Guatemala there have been many scandals and rumors about the health authorities administering half-doses or distilled water instead of the actual vaccine. While none of these rumors have been confirmed, this only adds to rejection towards local vaccination. The Guatemalan government should increase supervision on vaccination centers, and consider accepting donations or purchasing more doses of either Pfizer or J&J.

Limitations and further areas of research

Due to the pandemic context, it was very difficult to distribute the survey in lower-income areas in the capital city, so the results of scores of perceived protection and vaccine scores of this research are only representative of a percentage of the population, not the whole country. Additionally, the survey had to be distributed digitally given the access restrictions in education centers and public areas, which may have affected some subjects' understanding of the instructions in the risk assessments, and that could explain why a large portion of subjects had multiple switching points.

Lastly, it would be of great value to dive deeper into how the pandemic has affected workplaces, especially entrepreneurial jobs, which have been on the rise ever since the pandemic started.

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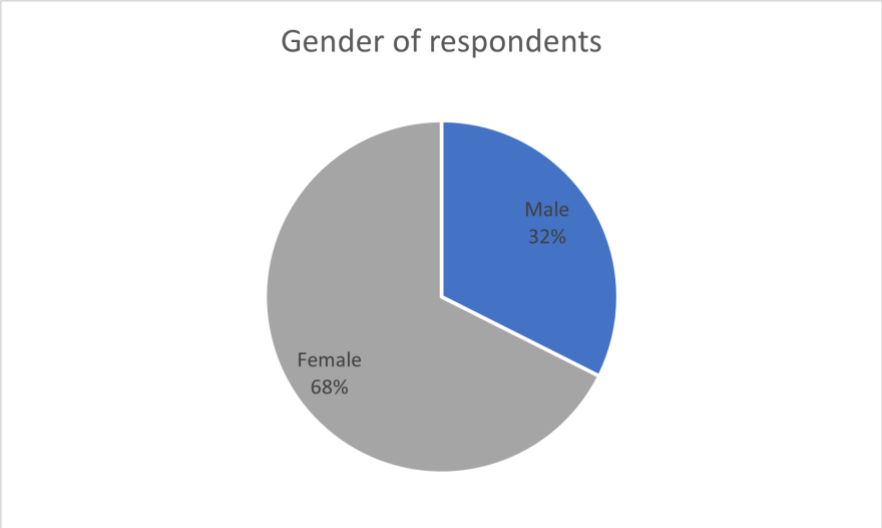
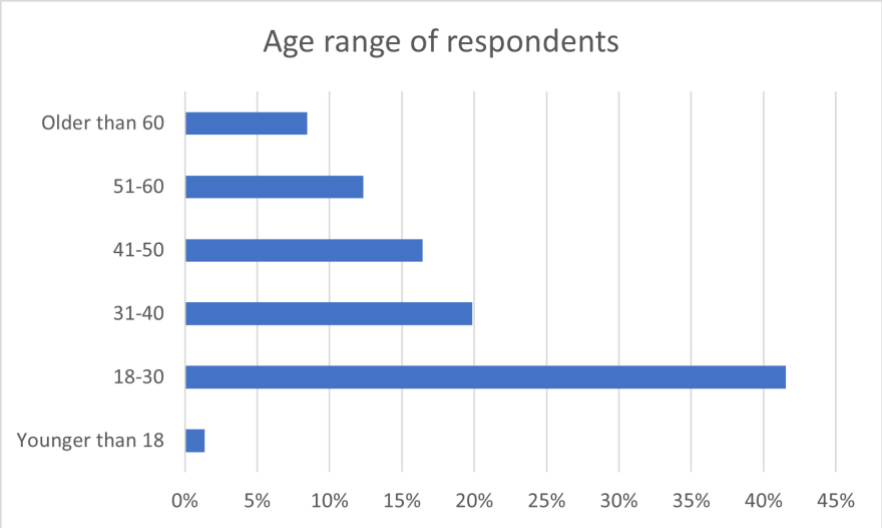
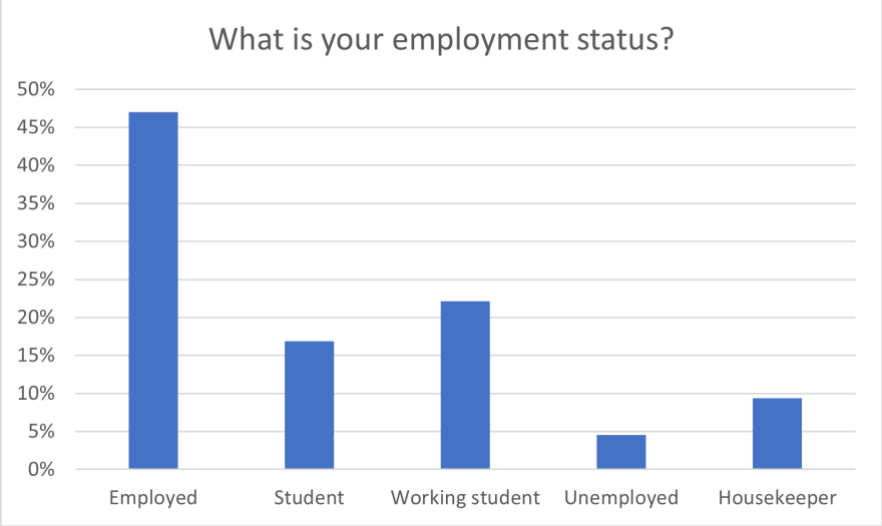
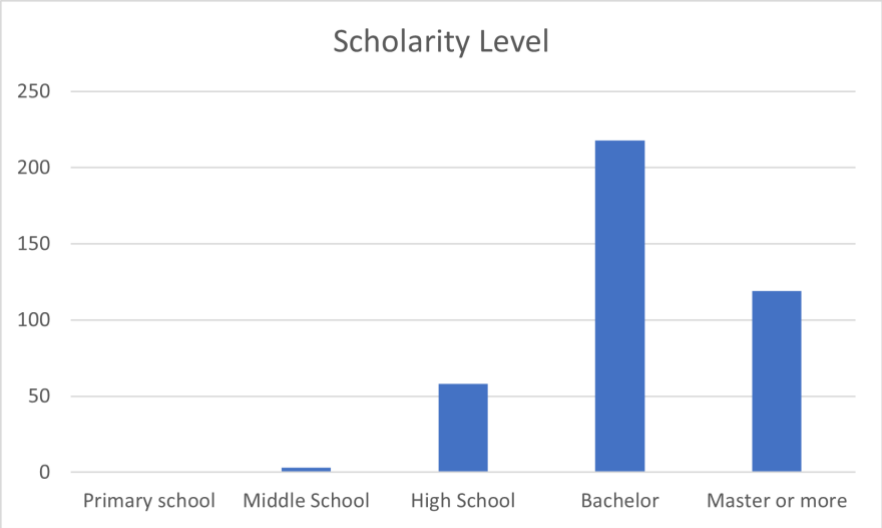
Appendix

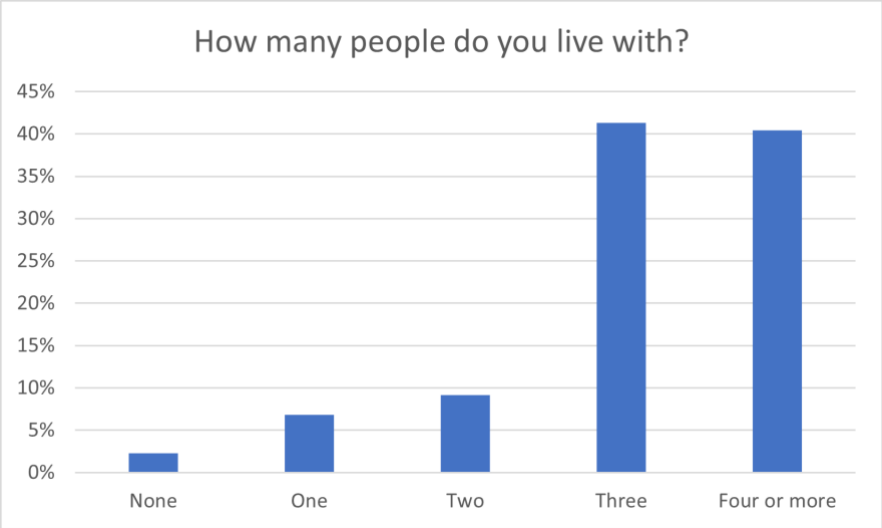
A. Identical question results from survey

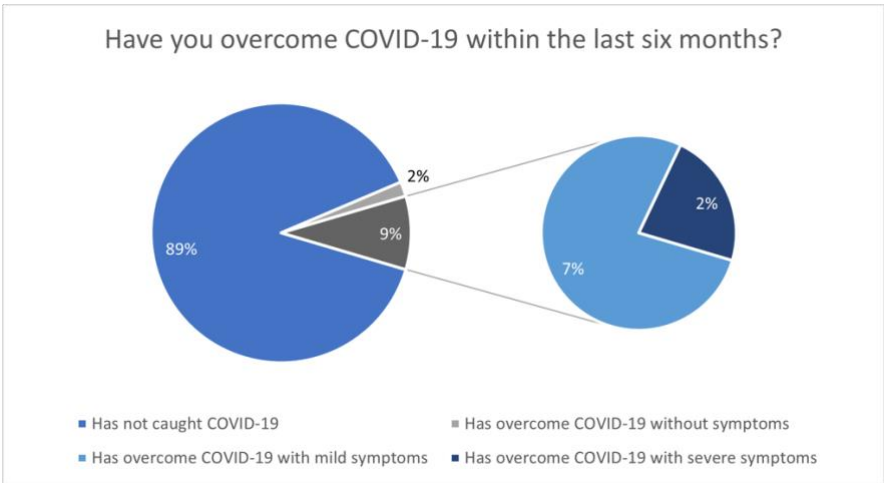


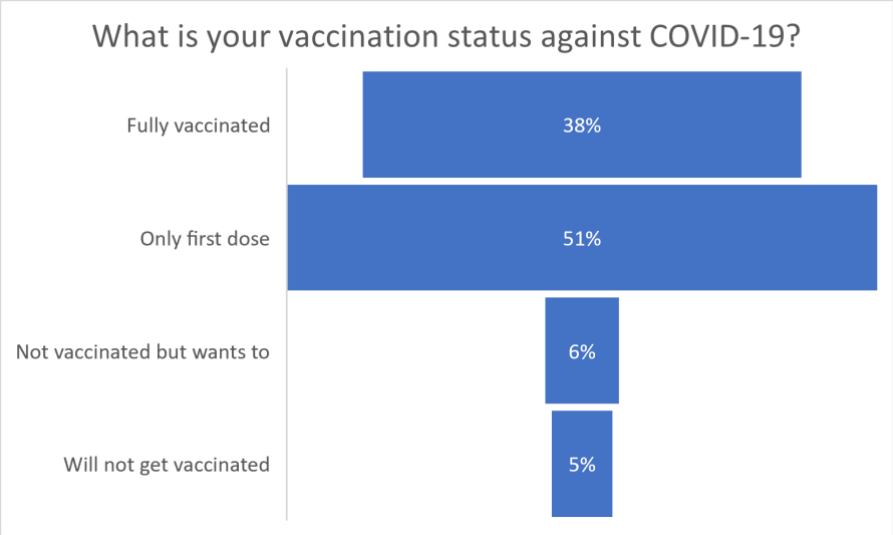


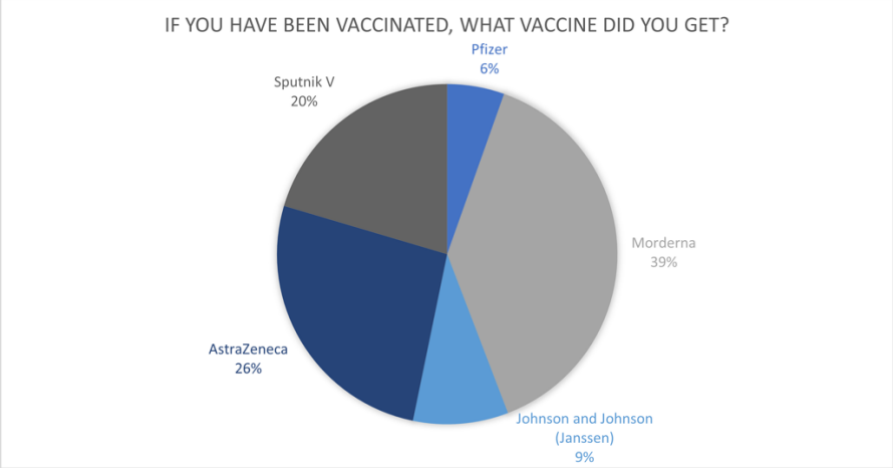


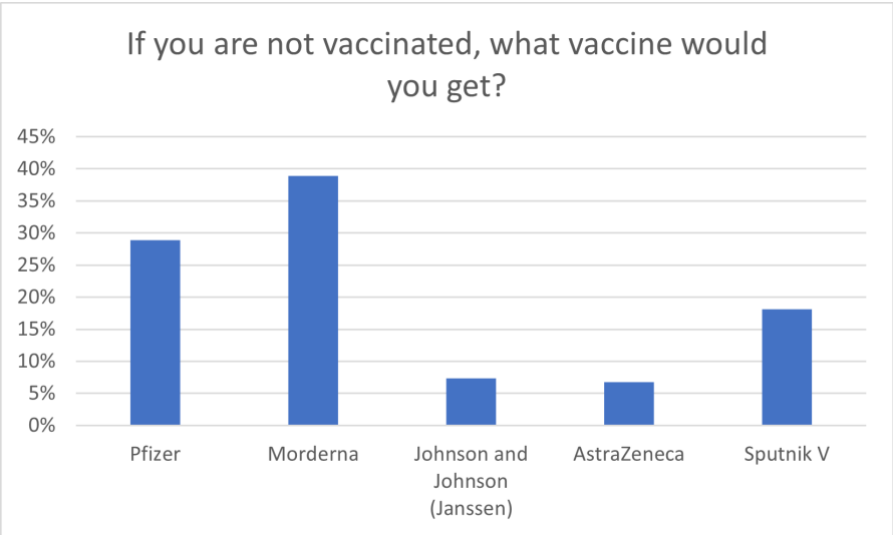

Scholarity Level
250
200
150
100
50
0
Primary school
Middle School
High School
Bachelor
Master or more


How many people do you live with?
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
None
One
Two
Three
Four or more


Have you overcome COVID-19 within the last six months?
89%
2%
9%
7%
2%
Has not caught COVID-19
Has overcome COVID-19 without symptoms
Has overcome COVID-19 with mild symptoms
Has overcome COVID-19 with severe symptoms


What is your vaccination status against COVID-19?
Fully vaccinated
38%
Only first dose
51%
Not vaccinated but wants to
6%
Will not get vaccinated
5%


IF YOU HAVE BEEN VACCINATED, WHAT VACCINE DID YOU GET?
Pfizer
6%
Morderna
39%
Johnson and Johnson
(Janssen)
9%
AstraZeneca
26%
Sputnik V
20%


If you are not vaccinated, what vaccine would you get?
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
Pfizer
Morderna
Johnson and Johnson (Janssen)
AstraZeneca
Sputnik V

B. Regressions of vaccination dummies

a. Pfizer

pfz	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
fully	.2883626	.0443983	6.49	0.000	.201089	.3756363
onlyfirst	.2959735	.050085	5.91	0.000	.1975216	.3944254
covids_rvr	-.0221308	.0293586	-0.75	0.451	-.079841	.0355793
age	-.0133285	.0091393	-1.46	0.145	-.0312935	.0046366
female	.0052799	.020075	0.26	0.793	-.0341814	.0447413
protect	-.0020809	.0080935	-0.26	0.797	-.0179903	.0138285
recent_vacc	-.0050007	.0256509	-0.19	0.846	-.0554226	.0454212
rank_pf	.0132673	.0094888	1.40	0.163	-.0053848	.0319193
mdrn	-.0617475	.0235726	-2.62	0.009	-.108084	-.0154109
rand_md	.0052714	.0099808	0.53	0.598	-.0143479	.0248907
rank_jj	-.0085746	.0063165	-1.36	0.175	-.0209908	.0038417
rank_az	-.0080487	.0091133	-0.88	0.378	-.0259626	.0098653
rank_spk	-.0071768	.005842	-1.23	0.220	-.0186604	.0043068
coliving	-.0210467	.0243241	-0.87	0.387	-.0688605	.0267671
employed	-.0461192	.028778	-1.60	0.110	-.1026879	.0104495
student	-.0403745	.0385634	-1.05	0.296	-.1161784	.0354294
empl_stud	-.0432999	.0341824	-1.27	0.206	-.1104921	.0238922
fin_stg	.0268628	.0409137	0.66	0.512	-.0535612	.1072868
hlth_stg	.0144062	.0632159	0.23	0.820	-.1098572	.1386695
scholar	.0019984	.0148476	0.13	0.893	-.0271875	.0311843
risk_att	.0034474	.0085184	0.40	0.686	-.0132973	.0201921
guate_vacc	-.2434535	.0287232	-8.48	0.000	-.2999146	-.1869925
_cons	.066807	.070485	0.95	0.344	-.0717451	.2053592

b. Moderna

mdrn	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
rand_md	.0744392	.0233517	3.19	0.002	.0285421	.1203363
rank_az	-.0639093	.0219413	-2.91	0.004	-.1070343	-.0207843
rank_jj	.0186544	.0153723	1.21	0.226	-.0115594	.0488682
rank_pf	.0008993	.0221542	0.04	0.968	-.0426441	.0444427
rank_spk	-.0257241	.0138853	-1.85	0.065	-.0530152	.0015671
_cons	.2790353	.0462207	6.04	0.000	.1881899	.3698808

c. Johnson & Johsnon

jj	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
fully	.4180444	.0482931	8.66	0.000	.3231149	.512974
onlyfirst	.3325348	.0544786	6.10	0.000	.2254463	.4396232
covids_rvr	.012615	.0319341	0.40	0.693	-.0501577	.0753877
age	-.0083919	.009941	-0.84	0.399	-.0279329	.0111492
female	.0018779	.021836	0.09	0.932	-.0410452	.0448009
protect	.0114771	.0088035	1.30	0.193	-.0058279	.0287821
recent_vacc	.1086613	.0279011	3.89	0.000	.0538163	.1635064
rank_pf	-.0164002	.0103212	-1.59	0.113	-.0366884	.0038881
mdrn	-.0957668	.0256405	-3.73	0.000	-.1461682	-.0453655
rand_md	.0003938	.0108564	0.04	0.971	-.0209466	.0217342
rank_jj	.012944	.0068706	1.88	0.060	-.0005614	.0264495
rank_az	-.0021205	.0099127	-0.21	0.831	-.0216059	.0173649
rank_spk	.0068769	.0063545	1.08	0.280	-.0056141	.0193679
coliving	.0365472	.0264579	1.38	0.168	-.0154609	.0885554
employed	.0418414	.0313025	1.34	0.182	-.0196898	.1033725
student	.0361061	.0419463	0.86	0.390	-.0463476	.1185598
empl_stud	.0277659	.037181	0.75	0.456	-.0453206	.1008524
fin_stg	-.0510116	.0445028	-1.15	0.252	-.1384906	.0364675
hlth_stg	-.009059	.0687614	-0.13	0.895	-.1442231	.1261051
scholar	-.0201659	.0161501	-1.25	0.212	-.051912	.0115803
risk_att	.0015079	.0092657	0.16	0.871	-.0167057	.0197215
guate_vacc	-.4058666	.0312429	-12.99	0.000	-.4672806	-.3444526
_cons	.0087529	.0766682	0.11	0.909	-.1419535	.1594593

d. AstraZeneca

astz	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
fully	.2014061	.0693336	2.90	0.004	.0651173	.3376949
onlyfirst	-.0349774	.0782141	-0.45	0.655	-.1887225	.1187677
covids_rvr	.0248873	.0458472	0.54	0.588	-.0652344	.1150089
age	.0306001	.0142722	2.14	0.033	.0025453	.0586548
female	-.0128125	.0313496	-0.41	0.683	-.0744363	.0488114
protect	.0007449	.012639	0.06	0.953	-.0240997	.0255894
recent_vacc	-.2496628	.0400571	-6.23	0.000	-.328403	-.1709227
rank_pf	.0193139	.0148179	1.30	0.193	-.0098136	.0484414
mdrn	-.2656938	.0368116	-7.22	0.000	-.3380542	-.1933334
rand_md	-.0246477	.0155863	-1.58	0.115	-.0552857	.0059903
rank_jj	-.0002319	.009864	-0.02	0.981	-.0196215	.0191577
rank_az	.0303745	.0142315	2.13	0.033	.0023997	.0583494
rank_spk	-.0236964	.009123	-2.60	0.010	-.0416295	-.0057633
coliving	-.0072662	.0379851	-0.19	0.848	-.0819334	.0674011
employed	.0460847	.0449404	1.03	0.306	-.0422545	.134424
student	.071337	.0602216	1.18	0.237	-.0470404	.1897144
empl_stud	.0510516	.0533801	0.96	0.339	-.0538775	.1559806
fin_stg	-.0300659	.063892	-0.47	0.638	-.1556581	.0955263
hlth_stg	-.1338521	.0987196	-1.36	0.176	-.3279049	.0602008
scholar	.0310416	.0231864	1.34	0.181	-.0145358	.076619
risk_att	.0081007	.0133026	0.61	0.543	-.0180482	.0342496
guate_vacc	.4893922	.0448549	10.91	0.000	.4012211	.5775632
_cons	-.1623825	.1100712	-1.48	0.141	-.3787492	.0539842

e. Sputnik V

sptnk	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
fully	.0695018	.066586	1.04	0.297	-.0613861	.2003898
onlyfirst	.3867234	.0751146	5.15	0.000	.2390709	.5343759
covids_rvr	-.0184056	.0440304	-0.42	0.676	-.1049559	.0681447
age	-.0103485	.0137066	-0.76	0.451	-.0372915	.0165945
female	.0061909	.0301073	0.21	0.837	-.0529909	.0653727
protect	-.0101638	.0121382	-0.84	0.403	-.0340238	.0136962
recent_vacc	.1282925	.0384697	3.33	0.001	.0526727	.2039124
rank_pf	-.014853	.0142307	-1.04	0.297	-.0428262	.0131202
mdrn	-.5591663	.0353528	-15.82	0.000	-.6286592	-.4896734
rand_md	.0174316	.0149687	1.16	0.245	-.0119923	.0468555
rank_jj	-.0041839	.0094731	-0.44	0.659	-.0228051	.0144373
rank_az	-.0200077	.0136676	-1.46	0.144	-.046874	.0068585
rank_spk	.0231063	.0087615	2.64	0.009	.0058839	.0403287
coliving	-.0079605	.0364799	-0.22	0.827	-.0796688	.0637478
employed	-.0220598	.0431595	-0.51	0.610	-.1068983	.0627788
student	-.0574778	.0578351	-0.99	0.321	-.1711641	.0562085
empl_stud	-.0224971	.0512647	-0.44	0.661	-.123268	.0782739
fin_stg	.0503701	.06136	0.82	0.412	-.0702452	.1709853
hlth_stg	.1209514	.0948076	1.28	0.203	-.0654115	.3073143
scholar	-.0175713	.0222676	-0.79	0.431	-.0613425	.0262
risk_att	-.0107536	.0127755	-0.84	0.400	-.0358663	.0143591
guate_vacc	.168681	.0430774	3.92	0.000	.084004	.253358
_cons	.1060382	.1057093	1.00	0.316	-.1017542	.3138307

C. Surveys (in Spanish)

a. Self-version

PERCEPCIÓN DE RIESGO

1. **¿Qué tanto le preocupa la posibilidad de contraer COVID-19 usted mismo?**

☐ Nada preocupado
☐ Poco preocupado
☐ Moderadamente preocupado
☐ Bastante preocupado
☐ Muy preocupado

2. **Según usted, ¿qué tan contagioso es el COVID-19, es decir, la facilidad con la que el virus se puede transmitir de una persona a otra?**

☐ Nada contagioso
☐ Poco contagioso
☐ Moderadamente contagioso
☐ Bastante contagioso
☐ Muy contagioso

3. **Según usted, ¿qué tan grave es el COVID-19 comparado con el resfriado común?**

☐ Nada grave
☐ Poco grave
☐ Moderadamente grave
☐ Bastante grave
☐ Muy grave

4. **¿Qué tan dispuesto está usted a seguir las medidas establecidas por el gobierno guatemalteco para reducir contagios de COVID-19?**

☐ Nada dispuesto
☐ Poco dispuesto
☐ Moderadamente dispuesto
☐ Bastante dispuesto
☐ Muy dispuesto

5. **Según usted, ¿de 1000 personas, como usted, que se vacunen; cuántas de ellas podrían tener efectos secundarios graves?**

De un número entre el 1 al 1000: _____ personas

6. **En los últimos tres meses, ¿cuántas veces a la semana, en promedio, ha salido <u>por ocio o mandados</u> a restaurantes, centros comerciales, o algún lugar público? Dé su mejor estimación.**

_____ veces por semana

7. **En los últimos tres meses, ¿cuántas veces a la semana, en promedio, ha salido <u>por trabajo</u> a restaurantes, centros comerciales, o algún lugar público? Dé su mejor estimación.**

_____ veces por semana

8. **En los últimos 3 meses, ¿cuántas veces ha asistido a una reunión familiar o entre amigos en un espacio privado?**

   _____ veces en total

9. **En los últimos 3 meses, ¿cuántas veces ha viajado por turismo interno? Por ejemplo, ir a la playa, Antigua Guatemala, Lago de Atitlán, etc.**

   _____ veces en total

10. **En los últimos 3 meses, ¿cuántas veces ha viajado por turismo externo? Por ejemplo, ir a los Estados Unidos, El Salvador, Europa, etc.**

    _____ veces en total

11. **Imagine un salón cerrado de un restaurante con una capacidad para 100 personas. Las mesas están moderadamente aisladas. Indique el número máximo de personas que podrían estar para que usted decida comer ahí.**

    _____ personas

PROTECCIÓN PERSONAL

1. **En los últimos 6 meses, ¿ha contraído y superado el COVID-19?**

- ☐ Sí, con síntomas graves
- ☐ Sí, con síntomas moderados
- ☐ Sí, asintomático
- ☐ No, no lo he contraído

2. **¿Cuál es su estado de vacunación?**

- ☐ Completamente vacunado
- ☐ Vacunado solo con primera dosis
- ☐ No estoy vacunado, pero quiero hacerlo
- ☐ No me vacunaré

3. **Si ha sido vacunado al menos con una dosis, ¿dónde fue vacunado?**

- ☐ En Guatemala
- ☐ En el extranjero
- ☐ No he sido vacunado

4. **Si ha sido vacunado al menos con una dosis, ¿qué tan protegido se siente contra el COVID-19?**

Igual que sin vacuna Muy protegido

1	2	3	4	5

5. **Si SÍ ha sido vacunado al menos con una dosis, ¿qué vacuna se puso?**

- ☐ Pfizer
- ☐ Moderna
- ☐ Johnson & Johnson (Janssen)
- ☐ AstraZeneca
- ☐ Sputnik V
- ☐ Otra
- ☐ No he sido vacunado

6. **Si NO ha sido vacunado, ¿qué vacuna elegiría, de poder hacerlo?**

- ☐ Pfizer
- ☐ Moderna
- ☐ Johnson & Johnson (Janssen)
- ☐ AstraZeneca
- ☐ Sputnik V
- ☐ Otra
- ☐ Ya he sido vacunado
- ☐ No quiero vacunarme

7. **Independientemente de su estado de vacunación, ¿qué tanta confianza tiene en las vacunas actualmente disponibles?**

Da una calificación para las siguientes vacunas

7.1. Pfizer

1	2	3	4	5	6	7	8	9	10

7.2. Moderna

1	2	3	4	5	6	7	8	9	10

7.3. Johnson & Johnson (Janssen)

1	2	3	4	5	6	7	8	9	10

7.4. AstraZeneca

1	2	3	4	5	6	7	8	9	10

7.5. Sputnik V

1	2	3	4	5	6	7	8	9	10

8. ¿Qué tan dañinos considera que son los efectos secundarios de la vacuna en usted mismo?

Nada dañinos Muy dañinos

1	2	3	4	5	6	7	8	9	10

ACERCA DE USTED

1. **Seleccione su rango de edad**

☐ Menor a 18
☐ 18-30
☐ 31-40
☐ 41-50
☐ 51-60
☐ Mayor a 60

2. **¿Cuál es su sexo?**

☐ Masculino
☐ Femenino

3. **En los meses que vienen, ¿cuál es la probabilidad que en su hogar no tengan suficientes ingresos para cubrir sus gastos diarios?**

☐ Nada probable
☐ Poco probable
☐ Moderadamente probable
☐ Bastante probable
☐ Muy probable

4. **¿Cómo califica a su salud en los últimos 3 meses?**

Muy mala Muy buena

1	2	3	4	5

5. **¿Cuál es el nivel de estudios máximo que ha alcanzado?**

☐ Primaria
☐ Básicos
☐ Diversificado
☐ Universitaria

6. **¿Con cuantas personas cohabita en su hogar?**

☐ Ninguna
☐ 1
☐ 2
☐ 3
☐ Más de 4

7. **¿Cómo calificaría usted su relación con el riesgo?**

Soy muy adverso al riesgo Me gusta tomar riesgos

1	2	3	4	5

8. Loterías

En la siguiente tabla le presentarán dos loterías, lotería A y lotería B, en donde usted podrá decidir 9 veces en cual de ellas quisiera jugar. La lotería A tiene dos premios: Q2,000 y Q1,600. La lotería B también tiene dos premios: Q4,850 y Q100. En cada decisión, las probabilidades de ganar estos premios son distintas. Indique en la casilla derecha en que lotería jugaría en cada decisión.

Decisión	Lotería A				Lotería B				Respuesta
	Prob 1	Q1	Prob 2	Q1	Prob 1	Q1	Prob 2	Q1	
1	10%	**2.000**	90%	**1.600**	10%	**4.850**	90%	**100**	
2	20%	**2.000**	80%	**1.600**	20%	**4.850**	80%	**100**	
3	30%	**2.000**	70%	**1.600**	30%	**4.850**	70%	**100**	
4	40%	**2.000**	60%	**1.600**	40%	**4.850**	60%	**100**	
5	50%	**2.000**	50%	**1.600**	50%	**4.850**	50%	**100**	
6	60%	**2.000**	40%	**1.600**	60%	**4.850**	40%	**100**	
7	70%	**2.000**	30%	**1.600**	70%	**4.850**	30%	**100**	
8	80%	**2.000**	20%	**1.600**	80%	**4.850**	20%	**100**	
9	90%	**2.000**	10%	**1600**	90%	**4.850**	10%	**100**	

9. Vacunación

Póngase en una situación donde aún no se ha vacunado y **solamente existen dos vacunas disponibles anti-COVID**, la vacuna Alpha y la vacuna Beta. Lamentablemente, ambas vacunas tienen efectos secundarios graves. Sin embargo, la cantidad de días de efectos secundarios graves puede ser mayor o menor según la vacuna que decida ponerse.

En la siguiente tabla se le presentan 9 escenarios, en dónde usted puede observar la probabilidad de la cantidad de días con síntomas graves que podría tener con cada vacuna. La vacuna Alpha da ya sea 5 o 4 días con efectos secundarios graves, mientras que la vacuna Beta da ya sea 12 días o 1 día con efectos secundarios graves.

Indique en la casilla derecha que vacuna se pondría en cada escenario.

IMPORTANTE: cada escenario es independiente, elegir una vacuna en el escenario 1 no significa que en el escenario 2 ya está vacunado. Su situación se reinicia a no vacunado, y solamente las probabilidades cambian.

Escenario	Vacuna Alpha				Vacuna Beta			
	Prob 1	Días con efectos secundarios	Prob 2	Días con efectos secundarios	Prob 1	Días con efectos secundarios	Prob 2	Días con efectos secundarios
1	10%	**5**	90%	**4**	10%	**12**	90%	**1**
2	20%	**5**	80%	**4**	20%	**12**	80%	**1**
3	30%	**5**	70%	**4**	30%	**12**	70%	**1**
4	40%	**5**	60%	**4**	40%	**12**	60%	**1**
5	50%	**5**	50%	**4**	50%	**12**	50%	**1**
6	60%	**5**	40%	**4**	60%	**12**	40%	**1**
7	70%	**5**	30%	**4**	70%	**12**	30%	**1**
8	80%	**5**	20%	**4**	80%	**12**	20%	**1**
9	90%	**5**	10%	**4**	90%	**12**	10%	**1**

b. Other version

PERCEPCIÓN DE RIESGO

1. **¿Qué tanto le preocupa la posibilidad de que su familia contraiga COVID-19?**

☐ Nada preocupado
☐ Poco preocupado
☐ Moderadamente preocupado
☐ Bastante preocupado
☐ Muy preocupado

2. **¿Qué tan contagioso se considera el COVID-19 en Guatemala, es decir, la facilidad con la que el virus se puede transmitir de una persona a otra?**

☐ Nada contagioso
☐ Poco contagioso
☐ Moderadamente contagioso
☐ Bastante contagioso
☐ Muy contagioso

3. **Según usted, ¿qué tan grave es el COVID-19 comparado con el resfriado común?**

☐ Nada grave
☐ Poco grave
☐ Moderadamente grave
☐ Bastante grave
☐ Muy grave

4. **¿Qué tan dispuesto cree que es el pueblo guatemalteco para seguir las medidas establecidas por el gobierno guatemalteco para reducir contagios de COVID-19?**

☐ Nada dispuesto
☐ Poco dispuesto
☐ Moderadamente dispuesto
☐ Bastante dispuesto
☐ Muy dispuesto

5. **Según usted, ¿cuántas personas tienen que vacunarse para que 1 tenga síntomas graves?**

_____ personas

6. **En los últimos tres meses, ¿cuántas veces a la semana en promedio ha salido <u>por ocio o mandados</u> a restaurantes, centros comerciales, o algún lugar público? Dé su mejor estimación.**

_____ veces por semana

7. **En los últimos tres meses, ¿cuántas veces a la semana en promedio ha salido <u>por trabajo</u> a restaurantes, centros comerciales, o algún lugar público? Dé su mejor estimación.**

_____ veces por semana

8. **En los últimos 3 meses, ¿cuántas veces ha asistido a una reunión familiar o entre amigos en un espacio privado?**

   _____ veces en total

9. **En los últimos 3 meses, ¿cuántas veces ha viajado por turismo interno? Por ejemplo, ir a la playa, Antigua Guatemala, Lago de Atitlán, etc.**

   _____ veces en total

10. **En los últimos 3 meses, ¿cuántas veces ha viajado por turismo externo? Por ejemplo, ir a los Estados Unidos, El Salvador, Europa, etc.**

    _____ veces en total

11. **Imagine un salón cerrado de un restaurante con una capacidad para 100 personas. Las mesas están moderadamente aisladas. Indique el número máximo de personas que podrían estar para que usted decida comer ahí.**

    _____ personas

PROTECCIÓN PERSONAL

1. **En los últimos 6 meses, ¿ha contraído y superado el COVID-19?**

   - ☐ Sí, con síntomas graves
   - ☐ Sí, con síntomas moderados
   - ☐ Sí, asintomático
   - ☐ No, no lo he contraído

2. **¿Cuál es su estado de vacunación?**

   - ☐ Completamente vacunado
   - ☐ Vacunado solo con primera dosis
   - ☐ No estoy vacunado, pero quiero hacerlo
   - ☐ No me vacunaré

3. **Si ha sido vacunado al menos con una dosis, ¿dónde fue vacunado?**

   - ☐ En Guatemala
   - ☐ En el extranjero
   - ☐ No he sido vacunado

4. **Si ha sido vacunado al menos con una dosis, ¿qué tan protegido se siente contra el COVID-19?**

Igual que sin vacuna Muy protegido

1	2	3	4	5

5. **Si SÍ ha sido vacunado al menos con una dosis, ¿qué vacuna se puso?**

   - ☐ Pfizer
   - ☐ Moderna
   - ☐ Johnson & Johnson (Janssen)
   - ☐ AstraZeneca
   - ☐ Sputnik
   - ☐ Otra
   - ☐ No he sido vacunado

6. **Si NO ha sido vacunado, ¿qué vacuna elegiría, de poder hacerlo?**

   - ☐ Pfizer
   - ☐ Moderna
   - ☐ Johnson & Johnson (Janssen)
   - ☐ AstraZeneca
   - ☐ Sputnik
   - ☐ Otra
   - ☐ Ya he sido vacunado
   - ☐ No quiero vacunarme

7. **Independientemente de su estado de vacunación, ¿qué tanta confianza cree que los guatemaltecos tienen en las vacunas actualmente disponibles?**

Estime una calificación para las siguientes vacunas

7.1. Pfizer

1	2	3	4	5	6	7	8	9	10

7.2. Moderna

1	2	3	4	5	6	7	8	9	10

7.3. Johnson & Johnson (Janssen)

1	2	3	4	5	6	7	8	9	10

7.4. AstraZeneca

1	2	3	4	5	6	7	8	9	10

7.5. Sputnik V

1	2	3	4	5	6	7	8	9	10

8. ¿Qué tan dañinos considera que son los efectos secundarios de la vacuna en general?

Nada dañinos Muy dañinos

1	2	3	4	5	6	7	8	9	10

ACERCA DE USTED

1. **Seleccione su rango de edad**

☐ Menor a 18
☐ 18-30
☐ 31-40
☐ 41-50
☐ 51-60
☐ Mayor a 60

2. **¿Cuál es su sexo?**

☐ Masculino
☐ Femenino

3. **En los meses que vienen, ¿cuál es la probabilidad que en su hogar no tengan suficientes ingresos para cubrir sus gastos diarios?**

☐ Nada probable
☐ Poco probable
☐ Moderadamente probable
☐ Bastante probable
☐ Muy probable

4. **¿Cómo califica a su salud en los últimos 3 meses?**

Muy mala Muy buena

1	2	3	4	5

5. **¿Cuál es el nivel de estudios máximo que ha alcanzado?**

☐ Primaria
☐ Básicos
☐ Diversificado
☐ Universitaria
☐ Postgrado universitario

6. **¿Con cuantas personas cohabita en su hogar?**

☐ Ninguna
☐ 1
☐ 2
☐ 3
☐ Más de 4

7. **¿Cómo calificaría usted su relación con el riesgo?**

Soy muy adverso al riesgo Me gusta tomar riesgos

1	2	3	4	5

8. Loterías

En la siguiente tabla le presentarán dos loterías, lotería A y lotería B, en donde usted podrá recomendarle a otra persona 9 veces en cual de ellas debería jugar. La lotería A tiene dos premios: Q2,000 y Q1,600. La lotería B también tiene dos premios: Q4,850 y Q100. En cada decisión, las probabilidades de ganar estos premios son distintas. Indique en la casilla derecha que lotería recomendaría en cada decisión.

Decisión	Lotería A				Lotería B				Respuesta
	Prob 1	Premio	Prob 2	Premio	Prob 1	Premio	Prob 2	Premio	
1	10%	**2.000**	90%	**1.600**	10%	**4.850**	90%	**100**	
2	20%	**2.000**	80%	**1.600**	20%	**4.850**	80%	**100**	
3	30%	**2.000**	70%	**1.600**	30%	**4.850**	70%	**100**	
4	40%	**2.000**	60%	**1.600**	40%	**4.850**	60%	**100**	
5	50%	**2.000**	50%	**1.600**	50%	**4.850**	50%	**100**	
6	60%	**2.000**	40%	**1.600**	60%	**4.850**	40%	**100**	
7	70%	**2.000**	30%	**1.600**	70%	**4.850**	30%	**100**	
8	80%	**2.000**	20%	**1.600**	80%	**4.850**	20%	**100**	
9	90%	**2.000**	10%	**1600**	90%	**4.850**	10%	**100**	

9. Vacunación

Póngase en una situación en donde usted se hará cargo de alguien no vacunado y **solamente existen dos vacunas disponibles anti-COVID**: la vacuna Alpha y la vacuna Beta. Lamentablemente, ambas vacunas tienen efectos secundarios graves. Sin embargo, la cantidad de días de efectos secundarios graves puede ser mayor o menor según la vacuna que decida.

En la siguiente tabla se le presentan 9 escenarios, en dónde usted puede observar la probabilidad de la cantidad de días con síntomas graves que una persona podría tener con cada vacuna. La vacuna Alpha da ya sea 5 o 4 días con efectos secundarios graves, mientras que la vacuna Beta da ya sea 12 días o 1 día con efectos secundarios graves.

Indique en la casilla derecha qué vacuna le recomendaría a la otra persona en cada escenario.

IMPORTANTE: cada escenario es independiente, elegir una vacuna en el escenario 1 no significa que en el escenario 2 la persona ya está vacunada. La situación se reinicia a no vacunado, y solamente las probabilidades cambian.

Escenario	Vacuna Alpha				Vacuna Beta				Recomendación
	Prob 1	Días con efectos secundarios	Prob 2	Días con efectos secundarios	Prob 1	Días con efectos secundarios	Prob 2	Días con efectos secundarios	
1	10%	**4**	90%	**5**	10%	**1**	90%	**12**	
2	20%	**4**	80%	**5**	20%	**1**	80%	**12**	
3	30%	**4**	70%	**5**	30%	**1**	70%	**12**	
4	40%	**4**	60%	**5**	40%	**1**	60%	**12**	
5	50%	**4**	50%	**5**	50%	**1**	50%	**12**	
6	60%	**4**	40%	**5**	60%	**1**	40%	**12**	
7	70%	**4**	30%	**5**	70%	**1**	30%	**12**	
8	80%	**4**	20%	**5**	80%	**1**	20%	**12**	
9	90%	**4**	10%	**5**	90%	**1**	10%	**12**	