



## The Influences of Digital Promotion, Groups Reference, and Efficacy on The Trust-Mediated Decision to Vaccinate Covid-19 Booster in Balikpapan City

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**Abstract:** This study aims to examine and analyze the effect of Digital Promotion, Reference Groups, and Efficacy on the Decision to Conduct Covid-19 Booster Vaccination Mediated by Trust (Study in Balikpapan City). This study uses a causal research method. The population in this study are people who have carried out the second vaccine in the city of Balikpapan. The sampling method employs a non-probability sampling technique with 200 respondents from the city of Balikpapan. SEM (Structural Equation Modeling) SmartPLS version 3.0 was used for data analysis. The results showed that: (1) Digital Promotion, Reference Group, Efficacy, and Trust had a positive and significant effect on booster vaccination decisions, (2) Digital Promotion and Reference Group had a positive and not significant effect on Trust, (3) Efficacy had a positive and significant effect on Trust, (4) Trust does not mediate Digital Promotion and Reference Groups on vaccination decisions, (5) Trust mediates efficacy directly or indirectly in influencing booster vaccination decisions.

**Keywords:** Digital Promotion, Groups Reference, Efficacy, Trust, Booster Vaccination, Covid19

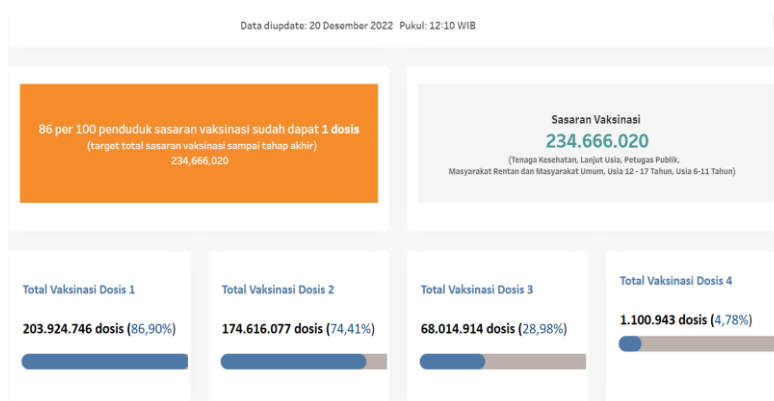
### INTRODUCTION

Indonesia is one of the countries infected with Corona Virus Disease 2019 (COVID-19). Case the first time COVID-19 in Indonesia was found in Depok by a person mother (64 years) and daughter (31 years). Both of them were suspected caught the coronavirus through contact with the Jakarta clubbers who arrived in Indonesia on February 14th, 2020. In response to the unusually rapid spread of COVID-19, the government issued Presidential Decree Number 11 of 2020, Determination of the Public Health Emergency Corona Virus Disease 2019. (COVID-19). The Indonesian government then declares a non-natural disaster COVID-19 disaster on April 13, 2020, via Presidential Decree Number 12 of 2020. Aside from determining the national disaster status, countermeasures for the spread of COVID-19

were carried out, specifically with proclaimed COVID-19 vaccination to the public to create herd immunity, so the public becomes more efficient in operating activities every day.

Vaccination is the process of injecting (injection/oral) vaccines into in body to Upgrade system immunity body and in the end Upgrade immunity (immunity) against several disease contagious (Margarini, 2021). Effort government to cope with this COVID-19 outbreak a vaccine program scale national, several umbrella laws among them is Presidential Decree No. 18 of 2020 concerning the Acceleration National Team Development Corona Virus Disease 2019 (COVID-19) Vaccine and Regulations President Number 99 of 2020 concerning Procurement Vaccines and Implementation Vaccination in framework prevention the COVID-19 pandemic. The dose is first injected to trigger the response immune first. Dose second for Upgrade response formed immunity before. Then, the antibodies produced by the vaccine optimally 14-28 days after injection second (Aeni, 2022). Along with time, a dose vaccine additional (booster) has been developed from time to time because the recipient vaccine was completely found to experience a case of COVID-19 infection. Besides that, a lot of variants new of COVID-19, starting from Delta to Omicron, have to push World Health Organization (WHO) to approve boosters or dose third. The pandemic makes the growth economy slow down (Aeni, 2021).

In order to successfully implement the vaccination program and achieve its goal, the government must recognize the problems and challenges in its implementation. Survey Indicator ([indikator.co.id](http://indikator.co.id)) about Challenges and Problems of Vaccination for COVID-19 in Indonesia, 3 February 2021 stated that : (1) up to 81.9% of respondents prepare the vaccine when the vaccines are halal, (2) 53.2 % believe will effectiveness vaccine (3) country of origin influence vaccination based on a survey that China with Sinovac (32.3%), AstraZeneca-Oxford from UK (26.5%), Sputnik V from Russia (26.5%), Pfizer-BioNTech from the United States & Germany (27.1%), and Moderna from the United States (24.8), (4) 54.2 % of respondents feel that effect side (KIPI) to be factor urgent to decision vaccination. Apart from the data above still, there are several influencing factors in the decision vaccination like group references submitted by Zaid et al., (2021) that influence group reference (social) have a positive and significant influence on interest in COVID-19 vaccination, efficacy vaccine based on Ryanto et al. (2022) found there is significant and positive influence Among news efficacy COVID-19 vaccine against taking decision.



**Figure 1. Indonesia's COVID-19 Vaccination Data**

Source: <https://vaksin.kemkes.go.id>

Before the spread of the COVID-19 pandemic, happened an inequality economy between western Indonesia and parts of eastern Indonesia. In comparison to other regions of the country, Indonesia's economic cake remains concentrated on the island of Java. To eliminate economic disparities between western and eastern Indonesia. Through State Capital Law no. 3 of 2022, the government does transfer Mother state cities (IKN) which is one of

the achievement strategies aim the Indonesian economy in 2045 to accelerate growth more economy inclusive and equitable through acceleration development of the eastern area. Indonesian territory. Balikpapan is also a door to enter planned IKN development in a manner gradually from 2022 to the year 2045.

Position the strategic city of Balikpapan is not escape from many arriving workers from outside Kalimantan for work as a worker in oil and gas or mine. this impact on the COVID-19 case in Balikpapan City. Balikpapan City Government continues Upgrade vaccination through the City Health Office (DKK) Balikpapan, in particular for vaccination third or boosters. Based on results of data analysis from the official website of the Indonesian government namely the Ministry of Health of the Republic of Indonesia, after ratio level achievement vaccination dose 1, dose 2, and dose 3 (booster) in the same period i.e. 125 days from dose first given to each Step vaccination generate data as following : (1) Achievements vaccination dose 3 (booster) in Balikpapan increased by 399%. achievements vaccination dose 1, (2) Achievement vaccination dose 3 (booster) in East Jakarta and Kab. Buleleng increase not enough of 100% of dose 1 namely 55% and 70%, (3) Happens enhancement achievements vaccination 3 doses (booster) at each area. because the findings Become the background behind research and test success inner city of Balikpapan achievement vaccination dose 3 (booster) as part of social marketing.

For complete findings background behind writer do a pre-survey of as many as 24 people of Balikpapan-related influencing factors decision for do COVID-19 Booster Vaccination with parameters as follows: (1) Trust, (2) Digital Promotion, (3) Risk, (4) Groups references, (5) Country of Origin, (6) Efficacy, (7) Effectiveness, (8) KIPI, (9) Halal. Survey results find four aspects of the variable that is considered the most dominant to decision vaccine dose 3 (booster) includes digital promotion (79%), efficacy (75%), group reference (66%), and trust (66%).

Based on a study earlier about digital promotion, efficacy, group references, and trust in decision vaccination Gap Research found that according to Biswas et al., (2021), Ryanto et al., (2022), Amin, AF, (2021), Letuna, MA, (2021), and Zaid et al., (2021) there is significant and positive influence Among digital promotion, news efficacy, group references, and social media to decide for do COVID-19 vaccination. However based on research conducted by Pal, S et al., (2021), Saida et al., (2022), Woisiri and Hutapea (2021), Harun and Ananda (2021), and Rahayuwati R., (2021) that trust, media opinion, influence family and social media have causative influence no do COVID-19 vaccination. based on background, gap research, and results of pre-survey then This research is important to carry out.

## LITERATURE REVIEW

### Digital Promotion

Promotional activities are included in the Communication Management marketing mix or promotion mix ( Kotler & Armstrong, 2016). Promotion is part of the marketing mix that focuses on informing, persuading, and reminding consumers about brands and products ( Tjiptono, 2015). Digital marketing as a result of marketing evolution can occur when companies use digital media channels for most of their marketing (Franco et al., 2014).

According to Nasdini in Iqbal (2021), promotion variables can be measured using the following indicators: (1) accessibility; the user's ability to access information and services offered through online advertisements, (2) interactivity; level of two-way communication, which refers to the ability of advertisers and consumers to communicate with each other (3) entertainment; the ability to advertise to provide pleasure or entertainment, (4) credibility; the level of online consumer trust in the advertisements displayed or the extent to which the advertisements provide reliable, impartial, valid, credible and specific information about them,

(5) irritation; Interruptions in online advertising, (6) Informational; The core of advertising is its capacity to inform consumers..

### Reference Group

A reference group is any person or group that is used as a basis for comparison (or reference) for someone to form general or specific values and attitudes or certain behavioral guidelines (Schiffman & Kanuk, 2015). Furthermore, it can be interpreted as a person who has a significant influence on a person's behavior and provides norms and values that can become a perspective that determines a person's thinking and behavior (Sumarwan, 2014).

According to Schiffman and Kanuk (2015), the indicators used by someone when making decisions based on reference groups include the following (1) Information and experience; People who have direct experience with a product or service, or who can easily obtain comprehensive information about it, are less likely to be swayed by advice or other examples, (2) credibility; Persons believed to be reliable and competent to provide information about the effectiveness or quality of any product or service, (3) Product salient features; The potential influence of the comparison group on purchasing decisions varies depending on how visually or verbally the product appears to others.

### Efficacy

According to the World Health Organization (WHO) (Lukito, 2021), vaccine efficacy is the ability of a vaccine to benefit the vaccinated individual. The benefits in question are the benefits of healthy living and protection against dangerous diseases. One of the COVID-19 vaccines, the Sinovac vaccine, met the vaccine efficacy standard in Indonesia, with an efficacy of 65.3%. This means that people who receive the SINOVAC vaccine are 65.3% less likely to contract COVID-19 than those who do not.

Efficacy can be evaluated based on the quality of each vaccine. Dimensions of product quality according to Mullins (Cesariana et al.,2022) consists of (1) performance; which is product workability, (2) Durability; relating to the age of the product or the actual potential of the product before the product expires, (3) Conformance to specifications; how long the product can meet the standard or the product has no weaknesses, (4) Features; are product characteristics designed to increase production efficiency and arouse customer interest in the product, (5) Reliability; the possibility that the product can function properly or not for a certain period, (6) Aesthetics; related to product appearance, (7) Perceived quality; is the result obtained from the evaluation of subliminal use because it is possible that consumers do not understand the product in question or do not know the product used.

### Consumer Decisions

A problem-solving approach to people's actions in purchasing goods or services to fulfill their wants and needs, which includes identifying needs and desires, searching for information, evaluating alternative purchases, making purchasing decisions, and following up on purchases. (Swastha & Handoko, 2017). Furthermore, the purchase decision can be interpreted as " *The selection of an option from two or an alternative choice* " ( Schiffman & Kanuk, 2015).

The decision-making process consists of the following five steps (Engel, 2005): (1) Definition of the problem; The buying process begins when the buyer identifies a problem or need, (2) Research; Consumers who are passionate about their needs are motivated to seek more information. (3) Alternatives evaluation; evaluation based on beliefs and attitudes obtained through action and learning, (4) Purchase decision; Consumers may choose not to formally review each brand, but intermediary factors can influence the final decision, (5) Post-purchase behavior; After purchasing, the consumer may experience cognitive dissonance as a result of

noticing certain annoying features or hearing positive things about other brands, and he will always be on the lookout for information that supports his decision.

## **Trust**

The trust model in the health sector is viewed as a type of developing a social psychology model whose emergence stems from the fact that health problems are characterized by people or communities refusing organized efforts to prevent and cure disease from healthcare providers; this failure then gives rise to theories that explain disease prevention behavior. Becker (1974) developed preventive health behavior from field theory (Fieldtheory, 1954) into a health-based belief model (Notoatmodjo, 2012). The health belief model (HBM) is a model of individual health-related beliefs that influence attitudes regarding whether or not to engage in health-related behaviors (Conner & Norman, 2005).

The health belief model is influenced by three factors (Conner & Norman, 2005), namely (1) perceived vulnerability; for someone to act to treat or prevent a disease, they must feel that they are susceptible to the disease, (2) perceived severity; individual actions to treat and prevent disease are also based on the severity of the disease for individuals or society, (3) perceived benefits and obstacles; When someone feels that they have a critical or serious illness, they will take certain actions.

## **Hypothesis Development**

### **Effect of Digital Promotion on Vaccination Decisions**

Biswas et al. (2021), Machmud and Yuningsih (2021), and Rahayuwati (2021) conducted previous research on the effects of digital promotion on purchasing decisions (2021). According to the findings of this study, digital promotion via social media has a positive and significant impact on vaccination decisions.

### **The Effect of Reference Groups on Vaccination Decisions**

Previous research has shown that the influence of (social) reference groups has a positive and significant impact on interest in COVID-19 vaccination (Zaid et al., 2021), Woisiri and Hutapea (2021), and Hutomo et al., 2021).

### **Effect of Efficacy on Vaccination Decisions**

Leng et al. (2021), Ryanto et al. (2022), and Biswas et al. (2021) found that vaccine effectiveness has a significant and positive impact on vaccination decisions.

### **The Effect of Digital Promotion on Customer Trust**

Samsiyah (2022), Macmud & Yuningsih (2021), and De Giorgio et al. (2022) discovered a positive relationship between the intensity, message content, and attractiveness of public advertising and people's attitudes, as well as a positive relationship between vaccination campaigns organized through Instagram and vaccine attitudes followers..

### **The Effect of Reference Groups on Customer Trust**

Arinda (2020) discovered an effect of belief in Jewish conspiracy theories on parental vaccination behavior, which is mediated by belief in vaccination conspiracy theories in her study. Furthermore, Macmud and Yuningsih (2021) discovered a positive relationship between the vaccination campaign conducted by the Ministry of Health of the Republic of Indonesia, which serves as the reference group in this case, and followers' willingness to be vaccinated.

### Effect of Efficacy on Customer Trust

Saida et al. (2022) and Leng et al. (2021) discovered in their study that knowledge of efficacy had a significant and positive impact on vaccine rates hesitancy, specifically belief in vaccination.

### The Effect of Trust on Vaccination Decisions

Low vaccine doubts about child vaccination among parents had a positive effect on vaccine decisions, according to Al-Regaiey et al. (2022). Furthermore, Vongurai et al. (2018) and Ansari et al. (2019) discovered that trust has a positive impact on purchasing decisions and that involvement in purchasing decisions is strongly influenced by trust.

### The Effect of Digital Promotion on Vaccination Decisions Through Customer Trust

According to research conducted by Subardi (2018) and Rahman (2019), there is a significant relationship between promotion and customer trust in the decision to use digital services.

### The Effect of Reference Groups on Vaccination Decisions Through Trust Customer

Al-Regaiey et al. (2022), Justwan, F et al. (2019), and Maryati (2020) found that the reference group, in this case the parent group, had a positive and significant impact on vaccine confidence in their studies..

### Effect of Efficacy on Vaccination Decisions Through Customer Trust

Kaplan, RM, Milstein, A. (2020), and Yufika et al. (2020) discovered in a study that increasing efficacy had an effect on vaccine acceptance, leading to an increase in vaccination decisions.

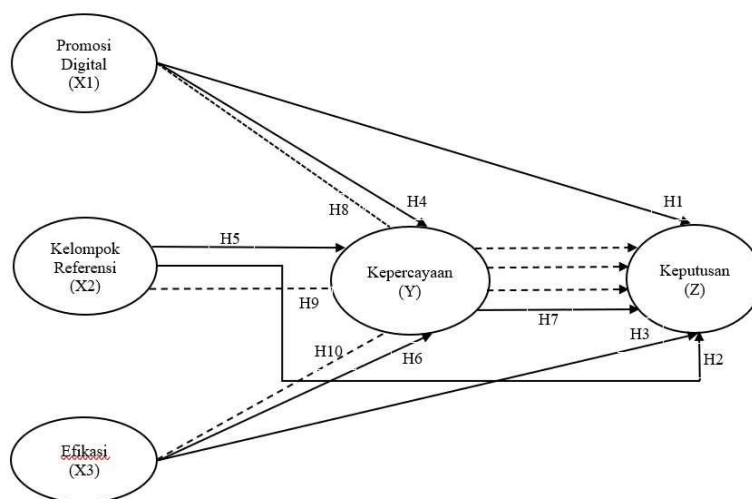


Figure 2. Conceptual Framework

The independent variables in this research are Digital Promotion (X1), Reference Group (X2), Efficacy (X3), Trust (Y) as a mediating variable, and Decision (Z) as the dependent variable. The following hypothesis is derived from the preceding conceptual framework.:

- H 1: Digital promotion has a positive and significant impact on booster vaccine decisions.
- H 2: Reference groups have a positive and significant impact on booster vaccine decisions.
- H 3: Efficacy has a positive and significant impact on booster vaccine decisions.
- H 4: Digital promotion has a positive and significant impact on booster vaccine trust.
- H 5: The reference group has a positive and significant impact on vaccine confidence boosters.
- H 6: Efficacy has a positive and significant impact on booster vaccine confidence.

H 7: Trust has a positive and significant impact on booster vaccine decisions.

H 8: Trust mediates the relationship between digital promotion and booster vaccine decisions.

H 9: Trust mediates the relationship between the reference group and the booster vaccine decision.

H 10: Trust mediates the relationship between efficacy and booster vaccine decisions

## RESEARCH METHODS

Refer to the formula hypothesis that has been delivered to look for a connection between variables and describe the phenomenon using testing theory. As a result, the methodology used for this study is quantitative research, which aims to measure data and commonly employs statistical analysis. (Malhotra, 2020). The research requires more than 3 (two) months of data collection and 1 month of data processing. The implementation study will take place in Balikpapan, East Kalimantan. Population research Residents of Balikpapan are the second to receive the vaccine dose. A great sample-in-nature analysis could be determined by multiplying the total indicator by five or 5 x the number of variables (35 variables) (Malhotra, 2020). The sample study has 200 participants. The researcher's questionnaire was used as the primary data collection method. Google Forms are used to share questions online. Partial Least Squares, also known as SEM-based methods variance, is a descriptive systematic and quantitative method analysis technique (PLS). For data analysis, the SmartPLS 3.0 PLS software is used. Deep modeling PLS analysis was used to test the measurement model (outer model) as well as the structural model (inner model).

## FINDINGS AND DISCUSSION

### Respondent Description Analysis

Based on the results of the questionnaire, the author expresses the following overall picture to descriptive respondents: (1) Gender and Age; According to the booster vaccination requirements, which do not differentiate between men and women, the number of men (54%) and women (46%) is balanced, and this is in accordance with the minimum age limit for booster vaccine recipients, namely 18 years and over. (2) Education; the majority of respondents (68% undergraduate) have sufficient education to assess risk and analyze and decide whether to administer booster vaccinations. (3) Occupation; the majority of respondents (72%) were workers whose activities made them vulnerable to COVID-19 transmission, so they needed to prevent transmission by receiving booster vaccinations., (4) Length of Service; Respondents have a wide range of experience, because the implementation of booster vaccinations targets all levels of society, (5) Income; Respondents are middle class with income below 10 million, accounting for 62 percent, which is the engine of economic growth, according to prospects data to consume Bank Indonesia (BI) which will be released in January 2021.

### Testing the measurement model ( Outer Model)

#### Convergent validity

A total of 35 indicators were tested and used to determine the validity of the relationship between indicators and constructs or latent variables, there were seven latent variable factor loads on indicators that were still below 0.70. After adjusting the loading coefficient, it can be seen that the latent variable loading coefficient fulfills the convergent validity requirements with a loading coefficient above 0.70, then the indicators used in this study are valid or have met the requirements of convergent validity.

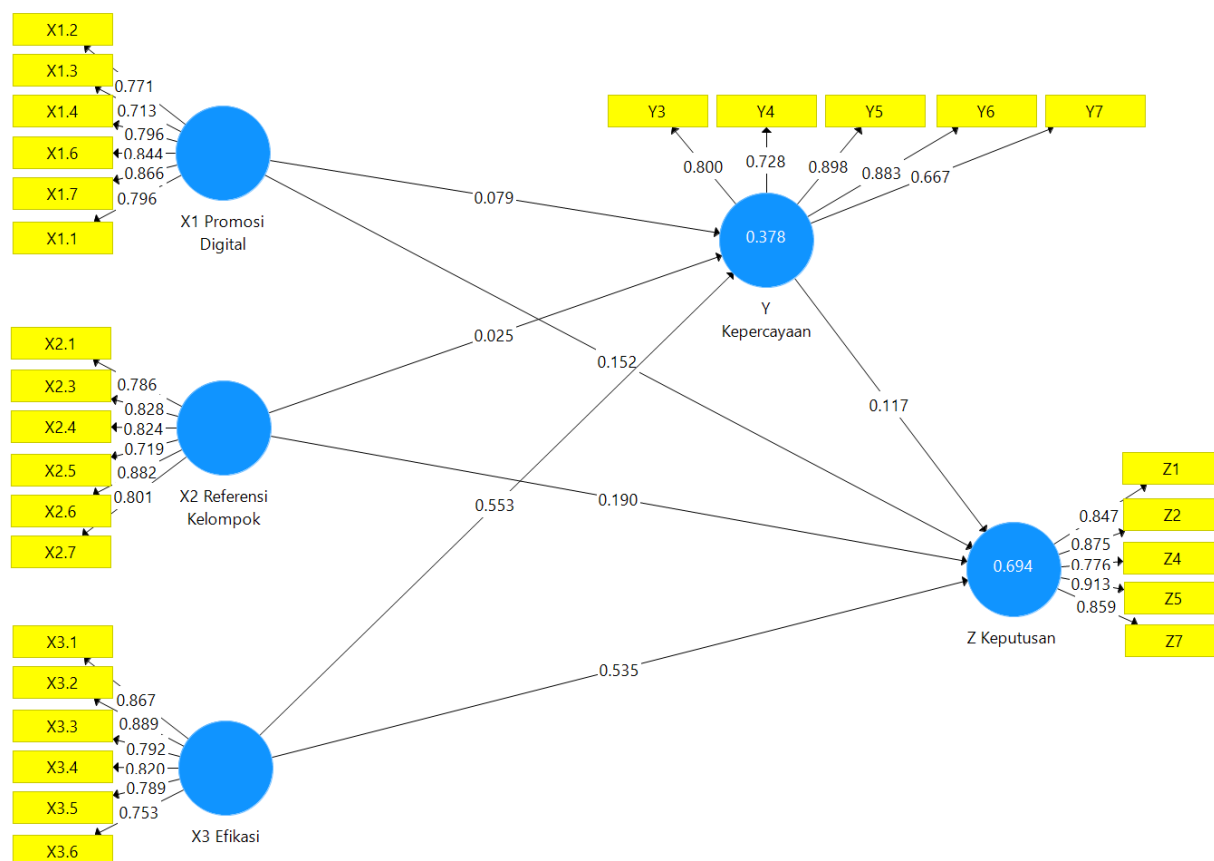


Figure 3. Convergent Test Results Validity (Modification)

**Discriminant Validity ( Fornell-Lacker criteria )**

**Table 1. Discriminant Validity Test Results ( Fornell-Lacker criteria )**

|                        | Digital Promotion (X1) | Group Reference (X2) | Efficacy (X3) | Trust (Y) | Decision (Z) |
|------------------------|------------------------|----------------------|---------------|-----------|--------------|
| Digital Promotion (X1) | 0.799                  |                      |               |           |              |
| Group Reference (X2)   | 0.382                  | 0.808                |               |           |              |
| Efficacy (X3)          | 0.551                  | 0.574                | 0.820         |           |              |
| Trust (Y)              | 0.393                  | 0.372                | 0.611         | 0.800     |              |
| Decision (Z)           | 0.565                  | 0.599                | 0.799         | 0.574     | 0.855        |

Based on table 1, it is known that discriminant testing validity (Fornell-lacker criterion ) the AVE root results of each targeted construct show a greater correlation with other constructs, which means that the indicators used in this study meet the requirements of the discriminant validity criteria. The following are the results of the Average Variances Extracted:

**Table 2. Average Variances Extracted Test Results**

| Construct              | AVE   |
|------------------------|-------|
| Digital Promotion (X1) | 0.638 |
| Group Reference (X2)   | 0.653 |
| Efficacy (X3)          | 0.672 |
| Trust (Y)              | 0.640 |
| Decision (Z)           | 0.731 |



According to table 2, it is known that the test results of average variances extracted (AVE), and it is known that the value of each variable already has a value > 0.5. Thus, the AVE results show that the scores for each construct are good because they meet the requirements of discriminant validity, so the model tested in this study does not have discriminant validity issues.

### Composite Reliability and Cronbach's Alpha

**Table 3. Composite Reliability and Cronbach's Alpha Test Results**

|                               | <i>Cronbach's Alpha</i> | <b>Reliability Composite</b> | <b>Information</b> |
|-------------------------------|-------------------------|------------------------------|--------------------|
| <b>Digital Promotion (X1)</b> | 0.886                   | 0.914                        | Reliable           |
| <b>Group Reference (X2)</b>   | 0.893                   | 0.918                        | Reliable           |
| <b>Efficacy (X3)</b>          | 0.902                   | 0.925                        | Reliable           |
| <b>Trust (Y)</b>              | 0.867                   | 0.898                        | Reliable           |
| <b>Decision (Z)</b>           | 0.908                   | 0.932                        | Reliable           |

Based on table 3 the results of the composite test reliability and Cronbach's alpha, it is known that all variables have met the composite requirements reliability and Cronbach's alpha with results having a value above  $\geq 0.70$ . Thus, it can be concluded that the overall structure has good reliability and the questionnaire used in this study is consistent and reliable so that it allows for further analysis.

### Structural model testing ( Inner Model) Square Determination Coefficient

**Table 4. R-Square Test Results**

|                     | <i>R Square</i> | <i>Adjusted R Square</i> |
|---------------------|-----------------|--------------------------|
| <b>Trust (Y)</b>    | 0.378           | 0.368                    |
| <b>Decision (Z)</b> | 0.694           | 0.688                    |

The coefficient of determination is R-Square ( $R^2$ ) to evaluate the effect of independent latent variables on dependent latent variables. If  $R^2$  is close to 1, then the independent variable provides all the information needed to predict changes in the dependent variable.  $R^2$  values are 0 to 1, and a value of 0.67 indicates that the model is categorized as good (Chin, 1998). The  $R^2$  value is 0.378 which can be interpreted that the constructed variable of trust can be explained by digital promotion, reference group and efficacy variables occupy 37.8%, while 62.2% by other variables outside the variables studied must be explained. Whereas for the model of the influence of digital promotion, reference group, and efficacy variables on vaccination decisions, it gives an  $R^2$  value of 0.694 which can be interpreted that the construct variables of customer decisions that can be explained by digital promotion, reference group, and efficacy variables are 69.4%, while 30.6% is explained by other variables outside those studied. The other variables referred to include the variables contained in the results of the pre-survey research.

### Predictive Value Test Relevance (Q-Square )

**Table 5. Q-Square Test Results**

|                               | <b>SSO</b> | <b>SSE</b> | <b>Q<sup>2</sup> (=1-SSE/SSO)</b> |
|-------------------------------|------------|------------|-----------------------------------|
| <b>Digital Promotion (X1)</b> | 1,200,000  | 1,200,000  |                                   |
| <b>Group Reference (X2)</b>   | 1,200,000  | 1,200,000  |                                   |
| <b>Efficacy (X3)</b>          | 1,200,000  | 1,200,000  |                                   |

|                     |           |         |       |
|---------------------|-----------|---------|-------|
| <b>Trust (Y)</b>    | 1,000,000 | 795,858 | 0.204 |
| <b>Decision (Z)</b> | 1,000,000 | 501,601 | 0.498 |

The value of  $Q^2$  measures how well the observed values and parameter estimates are produced by the model. The value of  $Q^2 > 0$  indicates that the model is predictive relevance, while  $Q^2 < 0$  indicates that the model lacks predictive properties relevance (Ghozali and Latan, 2015). Results  $Q^2$  value predictive relevance is greater than 0 which means that the model already has predictive good relevance.

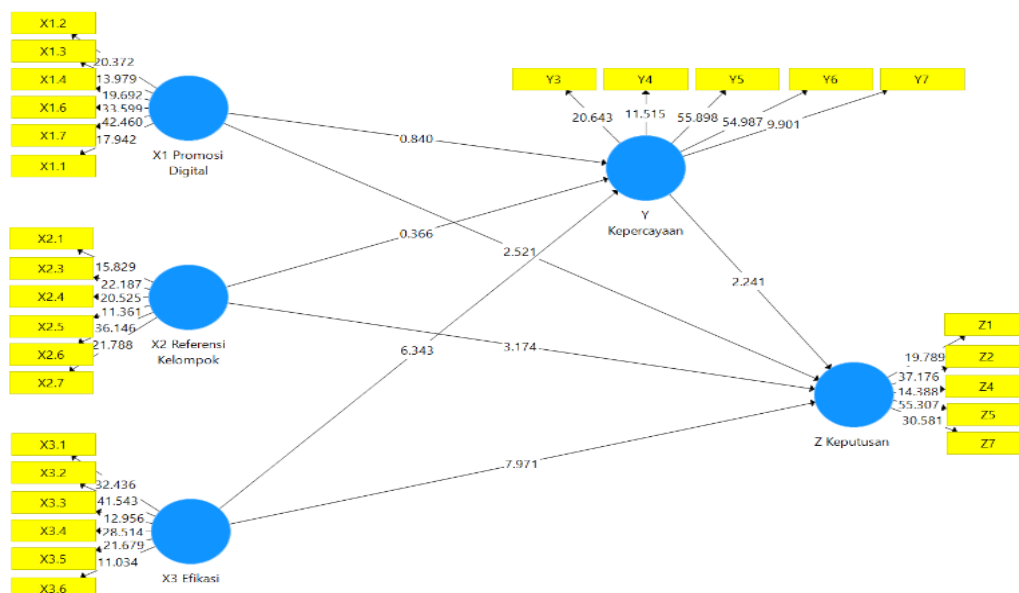
**Goodness Test of Fit**

**Table 6. Fit Model Test Results**

|                   | <b>Saturated Model</b> | <b>Estimation Models</b> |
|-------------------|------------------------|--------------------------|
| <b>SRMR</b>       | 0.07                   | 0.07                     |
| <b>dULS</b>       | 1994                   | 1994                     |
| <b>dG</b>         | 0.835                  | 0.835                    |
| <b>Chi-Square</b> | 885,005                | 885,005                  |
| <b>NFI</b>        | 0.792                  | 0.792                    |

Standardized Root Mean Square Residual (SRMR) is available in the SMART PLS 3.0 software. The SRMR is defined as the difference between the observed correlations and the correlation matrix's implied model. Model fit is declared good if the value is less than 0.10 or 0.08 (Hu L.-T. & Bentler PM, 1999). The model's SRMR value is less than 0.10, it can be concluded that the model meets the fit model criteria.

**Hypothesis test**



**Figure 4. Hypothesis Test Results (Bootstrapping)**

Estimates of structural model path relationships must be significant. Significant values can be obtained by bootstrapping (resampling) calculation procedures to determine whether significant or not significant as seen from the P value  $< 0.05$  at alpha 0.05 (5% level) and the T-table value = 1.96 compared to the results of the T Count (T Statistics ). With the bootstrapping (resampling) calculation method like the path diagram in the image above, the results of the values and conclusions of the hypothesis test are obtained as follows:

**Table 7. Hypothesis Test Results (Bootstrapping)**

|   | Sample (O) | Sample Average (M) | Standard Deviation (STDEV) | T Statistics | P Values | hypothesis      |
|---|------------|--------------------|----------------------------|--------------|----------|-----------------|
| Digital Promotion (X1) -> Decision (Z)              | 0.152      | 0.155              | 0.060                      | 2,521        | 0.012    | <b>Accepted</b> |
| Group Reference (X2) -> Decision (Z)                | 0.190      | 0.189              | 0.060                      | 3,174        | 0.002    | <b>Accepted</b> |
| Efficacy (X3) -> Decision (Z)                       | 0.535      | 0.535              | 0.067                      | 7,971        | 0.000    | <b>Accepted</b> |
| Digital Promotion (X1) -> Trust (Y)                 | 0.079      | 0.071              | 0.094                      | 0.840        | 0.401    | Rejected        |
| Group Referral (X2) -> Trust (Y)                    | 0.025      | 0.023              | 0.067                      | 0.366        | 0.714    | Rejected        |
| Efficacy (X3) -> Trust (Y)                          | 0.553      | 0.561              | 0.087                      | 6,343        | 0.000    | <b>Accepted</b> |
| Trust (Y) -> Decision (Z)                           | 0.117      | 0.116              | 0.052                      | 2,241        | 0.025    | <b>Accepted</b> |
| Digital Promotion (X1) -> Trust (Y) -> Decision (Z) | 0.009      | 0.008              | 0.013                      | 0.732        | 0.464    | Rejected        |
| Group Reference (X2) -> Trust (Y) -> Decision (Z)   | 0.003      | 0.002              | 0.009                      | 0.335        | 0.738    | Rejected        |
| Efficacy (X3) -> Trust (Y) -> Decision (Z)          | 0.065      | 0.065              | 0.032                      | 2.018        | 0.044    | <b>Accepted</b> |

**Effect of Digital Promotion on Vaccination Decisions**

According to the findings of this study, digital promotion is a triggering factor that influences vaccination decisions with an effect of 0.152 and a statistical T value of 2.521, with a 15.2% effect by increasing digital promotion.

**The Effect of Reference Groups on Vaccination Decisions**

As reference group indicators such as information and experience, trust, and vaccine salient properties become more important, they have a significant impact on vaccination decisions. Vaccination providers can use groups that act as a frame of reference for individuals making decisions, such as celebrities, leaders, or other well-known and well-known figures, to improve group reference indicators..

**Effect of Efficacy on Vaccination Decisions**

According to the findings of this study, efficacy is a precipitating factor that influences vaccination decisions, with an effect of 0.535 and a statistical T value of 7.971 having a significant influence of 53.5%, indicating that the efficacy or efficacy of booster vaccines can influence respondents' vaccination decisions regardless of other influences that are taken into consideration in improving vaccination decisions. As a result, vaccination providers must increase the supply of booster vaccines with a higher level of efficacy in order to increase the number of respondents who make vaccination decisions.

**The Effect of Digital Promotion on Customer Trust**

According to the findings of hypothesis testing, digital promotion has a positive but insignificant impact on trust. Increased digital promotion has no effect on the increase in respondents' trust when other factors that contribute to increased vaccination confidence are considered. This means that the digital promotion factor has no effect on booster vaccination confidence.

### **The Effect of Reference Groups on Customer Trust**

According to the findings of this study, the reference group has a 2.5% effect on vaccination decisions, and the T value is 0.366, which is less than the T table. This means that increasing the reference group factor has no effect on booster vaccination customer confidence.

### **Effect of Efficacy on Customer Trust**

Efficacy influences vaccination confidence with a 55.3% effect, and the calculated T value is 6.343 greater than the T table. As a result, high vaccine efficacy will have a significant impact on respondents' confidence in booster vaccinations..

### **The Effect of Trust on Vaccination Decisions**

Trust influences vaccination decisions with an effect of 11.7%, and the calculated t value is 2.241 higher than the t table. This means that the respondent's confidence in the booster vaccination will influence the respondent's decision to administer the booster vaccination.

### **The Effect of Digital Promotion on Vaccination Decisions Through Customer Trust**

The mediating factor of belief is unmediated. This means that without involving the trust variable, the digital promotion variable can directly influence the booster vaccination decision variable.

### **The Effect of Reference Groups on Vaccination Decisions Through Trust Customer**

The mediating factor of belief is unmediated. This means that without involving the trust variable, the reference group variable can directly influence the booster vaccination decision variable.

### **Effect of Efficacy on Vaccination Decisions Through Customer Trust**

The trust mediating factor is partial mediation. This means that the efficacy variable directly or indirectly influences the booster vaccination decision variable by involving the trust variable.

## **CONCLUSION**

The following conclusions can be answered by this study: (1) Digital promotion has a positive and significant impact on booster vaccination decisions, (2) Reference groups have a positive and significant impact on booster vaccination decisions, (3) Efficacy has a positive and significant impact on decisions booster vaccination, (4) Digital promotion has a positive and insignificant impact on trust, (5) Reference groups have a positive and insignificant impact on trust, (6) Efficacy has a positive and significant impact on trust, (7) Trust has a positive impact and significant on booster vaccination decisions, (8) Digital promotion has a positive and insignificant impact on booster vaccination decisions through trust, (9) Reference groups have a positive and insignificant impact on booster vaccination decisions through trust, (10) Efficacy has a positive impact and significant to p booster vaccination decisions through trust.

### **Advice to vaccination organizers**

1. In the digital promotion variable, it is known that the *entertainment indicator* has the smallest average value. Thus, vaccine providers must assess the entertainment factor through more entertaining advertising content in order to increase booster vaccination decisions. This can be accomplished by presenting data in a modern and easily digestible format on the Instagram, Facebook, and Tiktok platforms..
2. The reference group in influencing the vaccination decision variable is a very dominant factor, As a result, organizers must focus on the quality of information by utilizing

groups that are seen as a frame of reference for individuals making decisions, such as celebrities, celebrities, influencers, or other prominent and well-known figures, in order to improve booster vaccination decisions.

3. Efficacy in influencing vaccination decision variables is one of the dominant factors, so it becomes a consideration in vaccination decisions. Vaccination providers need to consider efficacy in this case giving booster vaccines with low levels of KIPI to increase booster vaccination decisions. One of them is by increasing the variety of vaccines including vaccines that have been produced domestically such as Indovac and choosing the lowest KIPI.
4. In the trust variable, respondents (Balikpapan people) believe and can take their time to carry out vaccinations. This means that the organizers need to provide adequate vaccines and scattered places so that respondents can easily get and reach booster vaccination sites. Vaccination at work or in a project environment in Balikpapan is a real-world example of how vaccines are distributed.
5. In the decision variable, respondents who have received vaccination feel that there are congenital symptoms, even if they are small, such as aches, fever, and other KIPI factors. Vaccine providers need to mitigate and anticipate if KIPI occurs by providing the necessary medicines such as paracetamol and pain relievers.
6. Based on the results of testing the hypothesis that the effect of efficacy on vaccination decisions has a positive and significant effect with an effect of 53.5% and the calculated t value is 7.353 greater than the t table which is the largest value of all hypotheses. Vaccine providers need to provide vaccines with higher efficacy or efficacy to improve booster vaccination decisions.

#### **Advice for studying next**

1. This study has limitations because it only uses digital promotion, reference groups, and efficacy variables to see the effect on vaccination decisions mediated by trust. Further research can be carried out by adding other variables such as product availability, service quality, vaccine halalness, and others
2. Follow-up research can be done by increasing the number of respondents taking into account the technique and representativeness of the sample. In addition, research can also be carried out nationally.

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