



Research article

What makes Indonesian government officials believe in and implement evidence-based policy: The mediating role of religion-science compatibility beliefs

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ABSTRACT

This research is aimed at examining the relationship between religion-science compatibility belief (RSCB) and evidence-based policy (EBP) belief and implementation in Indonesia, a country with the biggest Muslim population in the world. A dataset containing responses to a questionnaire completed by 499 government officials in Indonesia was collected for the partial least square structural equation modeling (PLS-SEM). This study finds a relationship between RSCB and EBP belief and implementation. In addition, EBP belief also affected the implementation of EBP. The effect that RSCB has on EBP implementation was partially mediated by EBP belief. Studying how these beliefs relate to the attitude of policy makers toward science in a sociocultural context is important, considering that the focus of previous research is on different contexts pertaining to levels of education, industrialization, wealth, and democratization. This is important to encourage a more comprehensive understanding of the public about science globally. This study responds to the need for the literature to examine factors influencing EBP beliefs and implementation at the individual level in non-health contexts and developing countries.

1. Introduction

The idea that religion is incompatible with science has been an interesting discussion, especially in Western countries, for centuries [1]; K [2–4]. The research indicates that a strong sense of religiosity may lead to increased skepticism towards science, and the notion of a clash between scientific and religious beliefs can emerge spontaneously [4,5]. Unfortunately, most studies are conducted in the context of Western countries such as North America where Christianity dominates and a growing stereotype of Christians that does not support science broadly exists [6].

Furthermore, there is only limited evidence available about religion-science compatibility belief (RSCB) and its influence on evidence-based policy (EBP) belief and implementation in non-Western societies. Studying how these beliefs relate to the attitude of policy makers toward science in a sociocultural context is crucial, considering that the focus of prior research is on different contexts

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relating to levels of education, industrialization, wealth, and democratization. This is important to encourage a more comprehensive public understanding of science in a global manner [7–11].

In this exploration of RSCB with non-Western worldviews, Indonesia, a country with the biggest Muslim population in the world, serves as a case study. The reason is that Muslims, in comparison to Christians, are more inclined to believe that it is possible for science and religion to coexist [12]. A study reveals that in 17 of 23 countries surveyed, most Muslims do not see any conflict between their religious beliefs and scientific understanding [13]. In contrast, half of religiously active American adults state they struggle to reconcile science with religion [14]. Moreover, statistics and in-depth interviews indicate that many American Muslims perceive science as a religion that both informs and influences their own religious beliefs [15]. Moreover, a study involving biologists and physicists across eight different countries found that merely 12 % of scientists in the United States and 33 % in Turkey consider science and religion to be in harmony [16].

This study responds to the literature to examine factors affecting EBP beliefs and implementation at the individual policy maker level. There is great public interest in discussing, debating, and understanding how science and religion are compatible or contradictory, and how the belief in the relationship between the two affects various things, such as the implementation and belief of EBP discussed in the current study [17–21]. Despite this interest, there is an extensive scope for exploring how compatibility between religion and science relates to EBP implementation and beliefs.

This study is intended to demonstrate that policymakers will believe in and implement EBP when they maintain a RSCB. This argument is based on the finding that those who feel science and religion are compatible have a high level of faith in science (K [3,22]). In the Indonesian context, a nation with the world's biggest Muslim population, science is frequently portrayed as contradicting religion, and scientific findings frequently violate Islamic religious norms [23,24]. Individual EBP belief and implementation are also investigated, in addition to institutional and cultural levels in the previous literature [25,26].

This demand is because, unlike Western literature which has studied the relationship between science and religion extensively in policy making [27–30], such a relationship has not been studied much, especially in the context of Islamic countries. Such research can provide new insights and interpretations of unexplored areas in the context of Islamic and non-Western religions. This research is vital, especially when a policy maker admits that there is conflict between science and Islamic religious views, which subsequently creates problems for policy makers, especially in Islamic countries.

In response to those research gaps, this study aims to address significant knowledge gaps in two primary domains. First, research on how RSCB influences EBP beliefs and implementation in non-Western societies is still limited, with the majority of previous studies focusing on Western and Christian contexts [31]; K [2]; Kimberly Rios & Aveyard, 2019; [3]. Insufficient understanding of how RSCB can influence the attitudes of policymakers towards the beliefs and implementation of EBP in various social and cultural contexts is also a significant issue. Second, in the context of Indonesia, conflicts between science and religion frequently impede the implementation of EBP [32–34]. Science is frequently viewed as antithetical to religion, and scientific discoveries frequently violate Islamic religious norms. Therefore, it is crucial to investigate the relationship between religion and science compatibility and EBP beliefs and implementation. In addition, few studies have investigated how the relationship between RSCB affects policymaking in Islamic nations [13]. This study examines the relationship between RSCB and EBP beliefs and implementation in Indonesia, the country with the largest Muslim population.

2. Literature review and hypotheses development

2.1. Religion-science compatibility beliefs

Numerous Americans believe that science and religion can live peacefully. However, the majority of people continue to believe science and religion cannot coexist [14]. This statement argues that the fight between faith and reason is best understood at the societal level instead of the individual [3,15]. In contrast to conflict narratives, which tend to oversimplify the interaction between multiple organizations, individuals' perspectives tend to be more nuanced, and nuanced individuals tend to have more nuanced perspectives [1, 4,15]. Protestants are more likely than Catholics, Evangelicals, or Mainliners in the United States to have a collaborative (i.e., science and religion can operate together) or independent (i.e., science and religion refer to different aspects of reality) worldview [35].

According to another study, non-believers in the United States tend to view religious beliefs and scientific inquiry as incompatible [16]. Perhaps this is because atheists and agnostics view science more positively than religious people, who frequently use it as a substitute for faith [36]. Consequently, atheists and skeptics seeing the conflict between the two worldviews from a scientific vantage point may infer that religion is a competing worldview [37]. Nonbelievers (such as atheist scientists) may, therefore, make broad generalizations about religious individuals, such as categorizing them as fanatics who reject scientific evidence. In fact, American scientists blame anti-science, literalist, and/or fundamentalist attitudes for what they perceive to be an ongoing conflict between religious believers and scientists [38]. The majority of believers do not agree with the fundamentalist religious views of a small minority [14], or those who believe science and religion cannot coexist (Ecklund dan Scheitle, 2017). The majority of scientists who do not believe in God assume that believers in God are uninterested in or oppose science [35].

RSCB is a determinant in this study proposed to understand EBP beliefs and implementation. Policymakers who have an RSCB may understand the situation or experience in question differently than those who do not have such beliefs. Previous research has highlighted the association of certain demographic characteristics with EBP beliefs and implementation. The notion that religion and science are incompatible has persisted, particularly in Western countries for centuries [23]; Kimberly Rios & Aveyard, 2019; [35]. This is reinforced by research. It was revealed that religiosity predicts skepticism of science. These investigations, however, were undertaken in countries dominated by individual religious stereotypes. Some publications advocate undertaking comparable investigations

in non-Western countries where religion and science both affect human decisions and are thought to be compatible (Kimberly Rios & Aveyard, 2019). Research has investigated how individuals' decisions are affected by science and religion concurrently or partially [35,39–42], and in this context, we are applying this idea to EBP to argue that if policymakers believe that science and religion can coexist without contradicting each other, then they are more likely to trust and rely on EBP. Furthermore, in decision-making, trust in science and religion will have an impact on EBP implementation. As a result, we formulated the following hypotheses.

H1. RSCB will affect EBP beliefs

H2. RSCB will affect EBP implementation

Individuals who have faith in something tend to show behaviors leading to that belief. Therefore, in this research, policymakers who have beliefs in EBP tends to show behaviors of implementing EBP. Previous research confirms that in the case of Saudi and American nursing students, individuals who believe in EBP have positive beliefs about EBP and apply it in their daily clinical practice, although rarely [43–47]. Furthermore, consistent with earlier studies indicating that education in EBP boosts confidence in its application, it has been identified as a key factor in fostering confidence and promoting implementation. Students who underwent EBP training exhibited notably higher overall confidence and implementation scores compared to those who did not receive such training [48–52]. Therefore, we formulate the hypothesis below.

H3. EBP belief will affect EBP implementation

Misconceptions about religious doctors are one of the main barriers to believing and subsequently implementing EBP (K [2]. In the case of cadaver organ donation in India, these misconceptions encourage individuals to have bad beliefs about the case and then make individuals disapprove of practicing such activity [53]. Indeed, with the right information and evidence, coupled with the backing of religious leaders, it's possible to sway beliefs and achieve increased rates of donations in cities, even in the absence of a donor list [40, 53,54]. Therefore, an individual with the belief that science and religion are compatible tends to believe in EBP. Accordingly, religion-science compatibility beliefs will encourage the implementation of EBP. Based on this explanation, we formulated the hypothesis below.

H4. the influence that religion-science compatibility beliefs have on EBP implementation is mediated by EBP beliefs

3. Research method

This quantitative research was done by employing survey research techniques [55]. This research employed self-completed surveys to gather quantitative data.

3.1. Sample and data collection

The objective of this study is to explore the connection between RSCB and beliefs and practices in EBP. Data for this investigation were sourced from a survey conducted among Indonesian government employees. An online survey was created using Google Forms and disseminated through various social media platforms, including Instagram, Twitter, and WhatsApp. A total of 499 government employees completed the survey, providing data that was fully utilizable for analysis. This study specifically focused on Muslim civil servants, given that Islam is the predominant religion in Indonesia.

3.2. Research instruments

RSCB. The operationalization of this instrument was adopted from Ref. [2] wherein the informants were asked to consider four statements with seven answer points each; higher scores imply greater compatibility. **EBP implementation.** EBP implementation was assessed using eighteen statements designed to determine how extensively EBP has been applied over the previous eight weeks [56]. Participants were asked to assess how often Evidence-based policy (EBP) is utilized in policy development using a 5-point Likert scale. The concept of EBP beliefs was quantified through sixteen statements covering four aspects: understanding of EBP, the importance of EBP, accessibility of EBP, and obstacles including time constraints, all evaluated on a 5-point Likert scale [56]. Once the items were chosen, exploratory factor analysis (EFA) was used to evaluate the appropriateness of each item for its respective construct. The outcomes of the EFA indicated that all items linked to the research constructs appropriately aligned with their respective constructs, as evidenced by each item having a factor loading score exceeding 0.50 [57].

3.3. Pilot study

Before gathering the final data, a preliminary test was carried out to evaluate the internal consistency and reliability of the scale. Common practice suggests using a limited sample size, like 30 or 50, to calculate Cronbach's alpha. This helps in assessing the uniformity of a scale across various contexts [58]. For this purpose, a pilot survey was executed with 30 randomly chosen individuals from the target group. The data from this pilot survey indicated that the Cronbach's alpha value surpassed the threshold of 0.70, deemed as the minimum acceptable level [58]. Consequently, the study proceeded to the final stage of data collection without any alterations to the questionnaire.

3.4. Common method bias

Self-reported data often encounters issues with common method bias [59]. To address this, the study implemented a strategy similar to the one used by Farooq et al. (2018). Participants were guaranteed anonymity in their responses and remained uninformed about the study's objectives. Additionally, a one-factor test was employed to evaluate the general method variance [59]. By conducting factor analysis with all items to extract a single factor, it accounted for 30.418 % of the total variance, which is below the 50 % threshold. Hence, the study successfully mitigated the issue of general method bias.

3.5. Data analysis

This research employed SEM-PLS to test the inner and outer models built in this study. This study utilized Structural Equation Modeling (SEM) with Partial Least Squares (PLS) for a number of reasons. First, SEM-PLS enables complex and multivariate analysis, which means it can evaluate multiple variables simultaneously and determine how they interact. Moreover, this approach does not require the assumption of normal distribution of the data, offers greater flexibility, and is appropriate for non-normally distributed data, which is significant given the unique data characteristics of the Indonesian sample. PLS-SEM, on the other hand, is appropriate for exploratory research that aims to develop new theories or hypotheses. This approach is consistent with the purpose of this study, which is to comprehend the relationship between RSCB and beliefs and the implementation of EBP in contexts that have not been extensively studied. In addition, PLS-SEM is effective in addressing measurement error issues, an essential factor that is frequently a concern in social and behavioral research. Due to these factors, PLS-SEM is deemed the most appropriate and efficient method for answering the research questions in this study. Validity and reliability are the two most significant aspects to consider while evaluating

Table 1
Respondent demographics.

| | | |
|----------------------------------|-----|---------|
| Gender | | |
| Men | 238 | 47.70 % |
| Women | 261 | 52.30 % |
| Generation | | |
| 1964–1964 (Boomers) | 0 | 0.00 % |
| 1965–1980 (Generation X) | 182 | 36.47 % |
| 1981–1996 (Millennials) | 226 | 45.29 % |
| 1997–2012 (Generation Z) | 91 | 18.24 % |
| Position | | |
| Administrator | 91 | 18.24 % |
| Supervisor | 23 | 4.61 % |
| Executive | 91 | 18.24 % |
| Functional position of expertise | 157 | 31.46 % |
| Skills functional position | 12 | 2.40 % |
| Others | 125 | 25.05 % |
| Employment status | | |
| Government employee | 441 | 88.38 % |
| Contract employees | 36 | 7.21 % |
| Others | 22 | 4.41 % |
| Length of work | | |
| Under 5 years | 68 | 13.63 % |
| 5–10 years | 102 | 20.44 % |
| 11–15 years | 147 | 29.46 % |
| 16–20 years | 68 | 13.63 % |
| >20 years | 114 | 22.85 % |
| Location of work | | |
| Ministries/Institutions | 57 | 11.42 % |
| Provincial Government | 193 | 38.68 % |
| Regency/City Government | 249 | 49.90 % |
| Take-home pay | | |
| 1 - 3 million | 68 | 13.63 % |
| 3.1–5 million | 181 | 36.27 % |
| 5.1–7 million | 125 | 25.05 % |
| 7.1–9 million | 68 | 13.63 % |
| >12 million | 57 | 11.42 % |

The respondents' employment status is divided into 3 categories, civil servants held the highest position with 441 respondents (88.38 %). Contract workers were only represented by 36 respondents (7.21 %). Finally, 22 respondents (4.41 %) were included in the other employment status category. In terms of length of work, the respondents were specified into 5 categories. First, under 5 years totaling 68 respondents (13.63 %). Second, 5–10 years with as many as 102 respondents (20.44 %). Third, 11–15 years with a total of 147 respondents (29.46 %). Fourth, 16–20 years, which totaled 68 respondents (13.63 %), equivalent to respondents who have worked for under 5 years. Fifth, those with more than 20 years of work experience numbering 114 respondents (22.85 %).

this measuring method [57]. In SEM-PLS analysis, the first step in evaluating the outer model is to determine the instrument's validity and reliability. Two types of validity checks were conducted: convergent validity and discriminant validity. The subsequent stage was to examine the study's structural model in order to test each of its hypotheses [57].

4. Results

In this research, we utilized SmartPLS3 for data analysis and SPSS 20.0 for hypothesis testing data coding. As previous research has demonstrated, modeling structures as composites may be a more feasible way of measurement [57]. Two methodologies (such as the measurement model and the structural model) were employed to evaluate the study's design [57].

4.1. Respondent demographics

As presented in Table 1, there were 499 respondents consisting of 261 women (52.30 %) and 238 men (47.70 %). The birth range is divided into several generations. First, no respondents were found to be within the birth year range of 1946–1964, commonly referred to as “Boomers” (0 %). Second is the birth year range of 1965–1980 (Generation X with a total of 182 respondents (36.47 %). Third is Millennials with a range of birth years from 1981 to 1996, totaling 226 respondents (45.29 %) and constituting the bulk of the population. Generation Z with birth years of 1997–2012 had a total of 91 respondents (18.24 %).

Following the gender and generation group distribution of the respondents, we continued to distribute the respondents by their positions at work into 6 categories. First, 91 respondents (18.24 %) held administrator positions. Second, 23 (4.61 %) supervisory positions were identified. Third, as many as 91 (16.24 %) executive positions were observed. Fourth, respondents holding the functional position of expertise totaled 157 respondents (31.46 %), which is the largest group in the population. Fifth, the position occupying the lowest position of respondents, namely functional skills positions, was only held by 12 respondents (2.40 %). Lastly, other positions amounted to 125 respondents (25.05 %).

Furthermore, the respondents' place of work is divided into 3 categories, which are: ministries/institutions represented by 57 respondents (11.42 %); provincial government comprising 193 respondents (38.68 %); and district/city governments consisting of 249 respondents (49.90 %). The respondents' place of work determines an employee's take-home pay. First, 1–3 million with 68 respondents (13.63 %). Second, 3.1–5 million with 181 respondents (36.27 %). Third, 5.1–7 million with 125 respondents (25.05 %). Take-home pays of 7.1–9 million and 12 million and above were represented by 68 respondents (13.63 %) and 57 respondents (11.42 %), respectively.

4.2. Use of scientific evidence in policy-making

Table 2 contains opinions regarding commonly used scientific evidence. They are divided into 7 types. First, scientific research produced by the institution where I work was selected by a total of 272 respondents (54.51 %). Furthermore, as many as 261 respondents (52.30 %) used scientific evidence derived from materials read on the internet, which is in the second highest position of commonly used scientific evidence. Next in rank is government agencies outside the agency where I work but still in the same working area (both agencies under the ministry/provincial government/district government/city government), which numbered 227 respondents (45.49 %). Other types of evidence that was rarely used were: evidence generated by government agencies outside my working area (e.g., the Statistics Indonesia), which is represented by 193 respondents (38.68 %); scientific research produced by

Table 2
Types of scientific evidence used.

| Commonly used scientific evidence | Frequency | Percentage |
|---|-----------|------------|
| Scientific research produced by the institution where I work | 272 | 54.51 % |
| Scientific research produced by partners recruited by the agency where I work | 147 | 29.46 % |
| Government agencies outside the agency where I work but still in the same working area (both agencies under the ministry/provincial government/district government/city government) | 227 | 45.49 % |
| Government agencies outside my working area (e.g., Statistics Indonesia) | 193 | 38.68 % |
| A non-government organization such as OECD, World Bank, IMF, ADB, and others | 68 | 13.63 % |
| Reading from the internet | 261 | 52.30 % |
| Previous year programs and activities. Or similar programs and activities that have been carried out in other areas | 12 | 2.40 % |
| Types of scientific evidence | | |
| Research - Qualitative studies | 250 | 50.10 % |
| Research - Pre and post studies (experimental studies) | 68 | 13.63 % |
| Research - Observations, experiences, and reports from policy evaluation | 193 | 38.68 % |
| Research - Time series data analysis | 80 | 16.03 % |
| Research - Cohort research | 0 | 0.00 % |
| Knowledge & Information - Results of consultation process with stakeholders | 204 | 40.88 % |
| Knowledge & Information - Documents or reports published by credible agencies | 215 | 43.09 % |
| Knowledge and Information - social media | 182 | 36.47 % |
| Knowledge & Information - News | 170 | 34.07 % |
| Experts - Experts specifically asked to provide opinions in the agency I work for | 113 | 22.65 % |
| Experts - Publicly expressed expert opinions and views | 102 | 20.44 % |

partners recruited by the agency where I work with 147 respondents (29.46 %); non-government organizations such as OECD, World Bank, IMF, ADB, and others with 68 respondents (13.63 %); and last year's programs and activities, or programs and similar activities that have been carried out in other areas, which totaled merely 12 respondents (2.40 %).

In addition to commonly used scientific evidence, respondents also provided a statement on the types of scientific evidence used. The various types of scientific evidence are specified into 3 main categories with their derivatives as shown in Table 2. Most of our respondents used scientific evidence categorized as a qualitative study type, which is ranked in the top position, with a total of 250 respondents (50.10 %). In relation to types of knowledge and information, the respondents in this research more frequently use knowledge & information in the form of documents or reports published by credible agencies with as many as 215 respondents (43.09 %) selecting this option. In terms of experts, more respondents refer to experts specifically asked to provide opinions in the agency I work for, consisting of 113 respondents (22.65 %), than experts in the form of opinions and expert views submitted to the public, which numbered slightly less at 102 respondents (20.44 %).

In accordance with the guidance of Hair et al. [57]; the initial step was to evaluate the PLS-SEM measurement model results. To confirm the accuracy of the measurement model, calculations were made for internal consistency reliability, convergent validity, and discriminant validity. An external loading above 0.70 is considered a marker of reliability. Composite reliability and Cronbach's alpha were also calculated to assess internal consistency. Table 3 also showcases the composite dependability ratings and the results of Cronbach's alpha [58]. state that a variable is deemed reliable if its Cronbach's alpha is at least 0.60 and its composite dependability is at least 0.70. As seen in the table above, the reliability test was extremely reliable, with Cronbach's alpha values for all variables exceeding 0.60 and the overall reliability value over 0.70. On the basis of these criteria, all items within each research variable are considered trustworthy or extremely trustworthy. Additionally, convergent validity was discovered when AVE values were examined as the extracted mean variance. We can determine the AVE by calculating the weighted average of the squared external loads [57]. All latent factors accounted for more than fifty percent of the total item variance, as indicated in Table 3.

According to Ref. [57]; discriminant validity refers to the ability to show notable differences among latent variables. This validity was assessed in the study using various methods, including cross loadings, the Fornell-Larcker criterion, and the heterotrait-monotrait ratio (HTMT). Results of the cross-loading experiments are displayed in Table 4. Indicators have stronger outer loadings in their latent variables than other latent constructs, according to Ref. [57]. In research involving serial mediation, a guideline set by Fornell and Larcker states that the highest correlation value of a latent variable with any other latent variables should be lower than the square root

Table 3
Reliability and validity of scales.

| | Items | Outer loadings | Cronbach's alpha | Composite reliability | AVE |
|---|--------|----------------|------------------|-----------------------|-------|
| Religion-science compatibility belief | RSCB1 | 0.720 | 0.716 | 0.805 | 0.515 |
| | RSCB2 | 0.716 | | | |
| | RSCB3 | 0.768 | | | |
| | RSCB4 | 0.828 | | | |
| Evidence-based policy beliefs (EBPB) | EBPB1 | 0.843 | 0.945 | 0.954 | 0.581 |
| | EBPB2 | 0.877 | | | |
| | EBPB3 | 0.876 | | | |
| | EBPB4 | 0.716 | | | |
| | EBPB5 | 0.889 | | | |
| | EBPB6 | 0.737 | | | |
| | EBPB7 | 0.742 | | | |
| | EBPB8 | 0.765 | | | |
| | EBPB9 | 0.731 | | | |
| | EBPB10 | 0.703 | | | |
| | EBPB11 | 0.723 | | | |
| | EBPB12 | 0.733 | | | |
| | EBPB13 | 0.925 | | | |
| | EBPB14 | 0.873 | | | |
| | EBPB15 | 0.879 | | | |
| | EBPB16 | 0.772 | | | |
| Evidence-based policy Implementation (EBPI) | EBPI1 | 0.669 | 0.962 | 0.966 | 0.643 |
| | EBPI2 | 0.841 | | | |
| | EBPI3 | 0.744 | | | |
| | EBPI4 | 0.767 | | | |
| | EBPI5 | 0.934 | | | |
| | EBPI6 | 0.737 | | | |
| | EBPI7 | 0.874 | | | |
| | EBPI8 | 0.723 | | | |
| | EBPI9 | 0.919 | | | |
| | EBPI10 | 0.838 | | | |
| | EBPI11 | 0.792 | | | |
| | EBPI12 | 0.759 | | | |
| | EBPI13 | 0.852 | | | |
| | EBPI14 | 0.850 | | | |
| | EBPI15 | 0.835 | | | |
| | EBPI16 | 0.820 | | | |

Table 4
Cross loading.

| | RSCB | EBP Beliefs | EBP Implementation |
|--------|--------------|--------------|--------------------|
| RSCB1 | 0.720 | 0.131 | -0.124 |
| RSCB2 | 0.716 | 0.094 | -0.070 |
| RSCB3 | 0.768 | 0.056 | -0.060 |
| RSCB4 | 0.828 | 0.257 | 0.094 |
| EBPB1 | 0.069 | 0.843 | 0.552 |
| EBPB2 | 0.152 | 0.877 | 0.424 |
| EBPB3 | 0.234 | 0.876 | 0.422 |
| EBPB4 | 0.045 | 0.716 | 0.311 |
| EBPB5 | 0.180 | 0.889 | 0.446 |
| EBPB6 | 0.067 | 0.737 | 0.212 |
| EBPB7 | 0.184 | 0.742 | 0.347 |
| EBPB8 | 0.220 | 0.765 | 0.312 |
| EBPB9 | 0.157 | 0.731 | 0.292 |
| EBPB10 | 0.058 | 0.723 | 0.325 |
| EBPB11 | 0.182 | 0.733 | 0.215 |
| EBPB12 | 0.223 | 0.925 | 0.519 |
| EBPB13 | 0.202 | 0.873 | 0.565 |
| EBPB14 | 0.382 | 0.879 | 0.393 |
| EBPB15 | 0.384 | 0.672 | 0.269 |
| EBPB16 | 0.102 | 0.701 | -0.072 |
| EBPI1 | -0.033 | 0.371 | 0.769 |
| EBPI2 | -0.071 | 0.379 | 0.841 |
| EBPI3 | -0.050 | 0.325 | 0.744 |
| EBPI4 | -0.140 | 0.295 | 0.767 |
| EBPI5 | -0.003 | 0.466 | 0.934 |
| EBPI6 | 0.045 | 0.411 | 0.737 |
| EBPI7 | -0.118 | 0.382 | 0.874 |
| EBPI8 | 0.078 | 0.382 | 0.723 |
| EBPI9 | 0.038 | 0.425 | 0.919 |
| EBPI10 | 0.020 | 0.429 | 0.838 |
| EBPI11 | 0.206 | 0.484 | 0.792 |
| EBPI12 | -0.050 | 0.442 | 0.759 |
| EBPI13 | 0.033 | 0.323 | 0.852 |
| EBPI14 | -0.005 | 0.445 | 0.850 |
| EBPI15 | -0.014 | 0.311 | 0.835 |
| EBPI16 | -0.060 | 0.422 | 0.820 |

of the Average Variance Extracted (AVE) of that specific latent variable. There are indications that this is true [57]. Table 5 indicates that these specifications have been met. Henseler et al. (2009) include the HTMT ratio as a supplementary criterion for evaluating discriminant validity. Table 6 shows that the HTMT ratio is less than the cutoff value of 0.85. This has been proven accurate [57]. As a result [57], criteria's are employed to evaluate the discriminant validity of a test.

4.3. Structural model analysis

The information in Table 7 indicates that the belief in religion-science compatibility significantly and positively impacts ($O = 0.088$) beliefs in evidence-based policy, as evidenced by a t-statistic of 2.683, exceeding the threshold of 1.96, and a p-value of 0.000, which is below 0.05. Consequently, Hypothesis 1, suggesting that religion-science compatibility positively affects evidence-based policy beliefs, is supported. Additionally, religion-science compatibility belief shows a notable positive effect ($O = 0.092$) on the implementation of evidence-based policy, with t-statistics of 2.505 being greater than 1.96 and a p-value of 0.000, which is less than 0.05. Therefore, H2, which states that there religion-science compatibility belief has a positive effect on evidence-based policy implementation, is acceptable.

After assessing the measurement model, the structural model was double-checked against Air et al. criteria (2019). R^2 and Q^2 measures of predictive value were determined. In this examination, statistical significance was determined using bootstrap t-statistics (Preacher and Hayes, 2008). 5000 bootstrap samples were assessed in total [60]. In this analysis, a significance threshold of 0.05 was used, with the critical t-statistic set at 1.96. For assessing collinearity, scores of latent variables from exogenous constructs were

Table 5
Fornell-larcker criterion.

| | EBP Beliefs | EBP Implementation | RSCB |
|--------------------|-------------|--------------------|-------|
| EBP Beliefs | 0.762 | | |
| EBP Implementation | 0.500 | 0.802 | |
| RSCB | 0.242 | -0.008 | 0.717 |

Table 6
HTMT ratio.

| | EBP Beliefs | EBP Implementation | RSCB |
|--------------------|-------------|--------------------|------|
| EBP Beliefs | | | |
| EBP Implementation | 0.498 | | |
| RSCB | 0.305 | 0.193 | |

Table 7
Results of the structural model.

| Hypothesis | Relationship direction | β | T Statistics ($ O/STDEV $) | P Values | VAF (%) | Decision |
|------------|---|---------|------------------------------|----------|---------|-----------|
| 1 | RSCB - > EBP Beliefs | 0.340 | 7.441 | 0.000 | - | Supported |
| 2 | RSCB - > EBP Implementation | 0.201 | 5.751 | 0.000 | - | Supported |
| 3 | EBP Beliefs - > EBP Implementation | 0.565 | 13.614 | 0.000 | - | Supported |
| 4 | RSCB - > EBP Beliefs - > EBP Implementation | 0.192 | 5.790 | 0.000 | 27.13 % | Supported |

utilized to calculate the Variance Inflation Factors (VIFs). All the VIF values were found to be below 3.

RSCB influenced EBP Beliefs directly ($\beta = 0.34$, $t = 7.441$), EBP Implementation influenced RSCB indirectly ($\beta = 0.201$, $t = 5.751$), and EBP Beliefs influenced EBP Implementation indirectly ($\beta = 0.565$, $t = 13.614$). Due to the mediation effect of EBP Implementation, R^2 from RSCB to EBP Implementation decreased ($\beta = 0.192$, $t = 5.79$), but the significance of the connection remained the same. We utilized the estimated variance (VAF) and t to determine the magnitude of the mediation effect [57]. It was demonstrated that EBP Beliefs mediated a portion of the link between RSCB and EBP Implementation.

5. Discussion

This research is aimed at examining whether the belief that religion and science are compatible influences policy makers to believe in and implement EBP. It is present in a lack of literature on EBP studies in non-western countries where in addition to science, religion also influences decision-making processes [61]; Kimberly Rios & Aveyard, 2019; [3–5,15]. This research found an effect between the RSCB with EBP beliefs and implementation. This research also found that EBP belief influences EBP implementation. In addition, the effect of RSCB on EBP implementation is partially mediated by EBP belief as illustrated in Fig. 1.

This study’s findings suggest that policymakers’ views toward and use of EBP are influenced by their perceptions of the compatibility between science and religion in non-Western Islamic countries. Studies in this field, which assert that religious and scientific worldviews are incompatible, may mislead policymakers [62]; K [2,63]. This is not due to a fundamental contradiction between scientific materialism and Qur’anic literalism, but rather to the Islamic-religious perspective’s admiration for science and the scientific perspective’s disagreement with and ignorance of religious values and morality. Additional study is forthcoming on this topic [27,64–66]. [67] states that according to this argument, which assumes the Qur’an opposes scientific investigation, scientific advancement would have ceased shortly after the advent of Islam and the Qur’an. However, the scientific community made major advances throughout the first century of Islamic rule.

Some respondents continue to believe that science and religion are incompatible, as indicated by the data. While some may perceive a normative relationship between the two (religion promotes knowledge systems), others may perceive a clash at the level of knowledge (e.g., creation and the big bang) [68]. Comparing scientific knowledge and religious knowledge is futile because each relies on distinct premises to reach its results [69].

These findings echoed those of prior studies indicating that politicians respect science highly (albeit not as highly as religion) and do not position it at the bottom of the epistemic hierarchy. According to the current study, policymakers concur with the Islamic viewpoint that religious belief is superior to empirical science. Islam has never asserted that natural sciences are useless and only

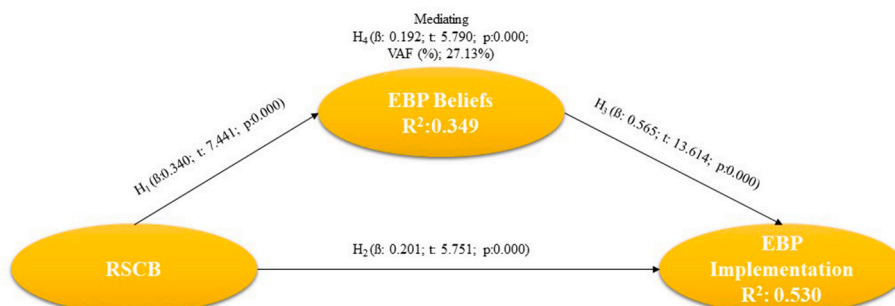


Fig. 1. Research results.

theology is useful [70–72]. Perhaps the understanding that certain political figures have about Islamic history is to blame for this [3]. To avoid confronting oppressive governments and intellectuals bound to the courts of tyrants, ignorant scholars, who intended to keep Muslims in the dark about their beliefs and blind the Islamic faith, offered such opposing stance [73].

This study found an effect between EBP belief and EBP implementation. This confirms previous studies arguing that trust will affect EBP implementation, although not in all cases [74–76]. The implication is that stakeholders must intervene to affect policymakers' perceptions of the benefits of EBP in improving policy quality. This could further motivate policymakers to learn and engage in evidence-based policy.

This study also found that EBP belief partially mediates the effect between RSCB and EBP implementation. Previous studies supported the idea that when policy makers do not hesitate about the compatibility of science and science, they would believe in EBP and therefore implement EBP [20,21,49]. Some literature supports the argument that scientific and religious institutions need to communicate with each other to reduce doubts that the two are incompatible [37,77]. Opening spaces for dialogue between the two will reduce hesitation in using this practice. The findings of this research corroborated previous research stating that many policy-makers consider science and religion to be compatible and independent [3,4]. Recent studies indicate, however, that some of their leaders disagree with the conclusion that scientific explanations are more credible than religious explanations [3,4]. These decision-makers, in contrast, argue that religious arguments are more persuasive.

The findings of this study lend credence to the notion that policymakers are devoted to the central religious belief of the Islamic worldview: that the Al-Qur'an is a guidebook for all humanity, outlining the means by which one can acquire knowledge (including scientific, empirical knowledge) and the moral and ethical principles by which one should live. This clarifies why the surveyed officials utilized religious considerations to buttress their positions on the compatibility of science and religion. The majority of their arguments are based solely on appeals to God or reasoning, with no empirical evidence to support them.

Those in positions of authority have demonstrated their concern for the moral foundations of science by how they have treated non-Muslim Western scientists. In this context, the perspectives of decision-makers reflect, to some extent, the epistemology of Islamic science. This epistemology is founded on the Islamic notion of knowledge as a moral good guided by ethics and theology. Cooperation, not competition, between Islam and the scientific community is the guiding principle of this philosophy. The revival of Islamic science will necessitate the critical incorporation of contemporary Eurocentric materials into new Islamic knowledge, just as early Muslims eagerly explored and assimilated a great deal of foreign information. Consequently, it is crucial to familiarize policymakers from diverse cultural backgrounds with the assumptions and sensibility of Western intellectual culture.

The significance of the present research is founded upon two aspects. The first is to address the gap in the literature by exploring the relationship between individual belief in science-religion compatibility and their relationship with individual belief in and implementation of EBP. It is intended to contribute to research gaps in exploring the determinants of individual beliefs and implementation on EBP in the context of developing countries. Second, stakeholders are looking for factors that affect individuals to believe and implement EBP as EBP is currently the main orientation in the decision-making process, which was initially developed and has been widely practiced in developed countries and is currently entering into developing countries.

One of the main limitations of this research is the moderate R^2 . This indicates that other variables are still wide open to be integrated as predictors of EBP belief and implementation. Future studies can explore this matter. Second, we adopted the EBP beliefs and implementation questionnaire in the nurse study [78]. The advantage of the questionnaires for the EBP Confidence Scale and the EBP Implementation Scale is that they are standardized and have been used in some international studies. Some of the items in the scales used may not be relevant to policy makers. Therefore, scale development within the framework of public administration needs to be set as a future research agenda.

6. Conclusion

This study is aimed at analyzing the relationship between RSCB and EBP belief and implementation. In conclusion, this study's findings indicate that religion-science compatibility beliefs have a significant positive impact on beliefs and implementation regarding evidence-based policy. Furthermore, EBP beliefs partially mediate the relationship. It encourages EBP and suggests assessing policymakers' grasp of a science-religion perspective in light of their cultural backgrounds. This study demonstrates how religious beliefs affect policymakers' views of what science is and how it ought to be applied in faith-based states. The findings of this study suggest that policymakers' religious interpretations have an impact while discussing science.

When policymakers hold contradictory views on science and religion, it may be believed that science has little bearing on their issues or religious values. These results suggest that policymakers should examine the cultural forces at play. This study is consistent with prior findings indicating that policymakers who are ambivalent or who reject the theory have a good grasp of the scientific validity of the supporting evidence. Policymakers should consider scientific, cultural, and religious distinctions. Diverse viewpoints exist over whether or not science is consistent with itself. However, many contend that the two conceptions are irreconcilable and hence cannot coexist. According to the findings of this study, those who feel science and religion can coexist are less prone to challenge scientific conclusions that contradict their faith. Policymakers participating in this study view that these two fundamentals are compatible, they will be in a better position to manage the difficulties that arise when cultural components undermine the scientific method.

Religion has a huge impact on people's lives since it shapes their conduct according to their beliefs. Several core concepts of the world's major religions provide a strong moral compass. For this reason, religion is the only discipline and source of inspiration that genuinely reaches and inspires its adherents. Contemporary politicians' religious beliefs have influenced their everyday lives, moral compass, and policy judgments; this must be taken into consideration in order to comprehend their work. Such concerns are of the

utmost importance when politicians rationally and successfully address the task of integrating research into legislation across the science-religion divide.

7. Limitation and future research direction

While this study provides essential insights, there are limitations that must be acknowledged. First, the moderate coefficient of determination (R^2) in this study indicates that additional variables that may predict beliefs and implementation of EBP have not been included. In other words, additional factors that we have not completely identified may have a substantial impact on EBP beliefs and implementation, and should be considered in future research. This includes demographic characteristics, professional competencies, and organisational perceptions, among others.

Second, we incorporated a questionnaire previously used in treatment research [78] to assess EBP beliefs and implementation. Despite the fact that the EBP beliefs scale and the EBP Implementation scale have been standardized and utilized in a number of international studies, some items on the scales may not be entirely applicable to the context of policy makers. Consequently, the applicability and reliability of the scale utilized in this context may be called into doubt. Given these constraints, prospective directions for research can be determined. Future research must incorporate additional variables as prospective EBP belief and implementation predictors. This can include, but is not limited to, variables such as a person's political orientation, philosophical beliefs, or technical knowledge, which can affect how they respond to evidence-based policies. This type of research can enhance our comprehension of the complexities and dynamics of EBP beliefs and implementation among government officials.

In addition, future research should develop and test novel measurement instruments that are better suited to the context of policymaking. This requires paying attention to particular issues pertinent to public administration and the cultural context of Indonesia. This process may include the design phase, consultation with experts, preliminary research, and field testing to ensure the instrument's validity and reliability. Moreover, it is strongly suggested that this research be extended to numerous contexts. Research in countries with varying levels of education, industrialization, affluence, and democratization can provide additional insight into how beliefs about the compatibility of religion and science impact EBP beliefs and implementation. Such research will contribute significantly to our global comprehension of these issues.

Author declaration

The authors declare no competing interests.

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Institutional review board statement

This study involves human participants and was approved by the Human Research Ethics Committees of the Medical Faculty of Universitas Sriwijaya (Reference: 103–2022).

Informed consent statement

Informed consent was obtained from all subjects involved in the study.

Data availability statement

The data were stored at Mendeley Data and can be accessed at 10.17632/zt67wmxhc.1.

CRediT authorship contribution statement

Andries Lionardo: Conceptualization, Data curation, Funding acquisition, Methodology, Project administration, Supervision. **Faisal Nomaini:** Conceptualization, Data curation, Formal analysis. **Oemar Madri Bafadhal:** Investigation, Methodology, Project administration, Resources. **Anang Dwi Santoso:** Methodology, Software, Validation, Visualization, Writing – original draft, Writing – review & editing. **Alfitri:** Conceptualization, Supervision, Validation, Conceptualization, Supervision, Validation.

Declaration of competing interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: Andries Lionardo reports financial support was provided by Ministry of Education, Culture, Research, and Technology.

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Appendix A. Supplementary data

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