

Do empirical studies provide real measurements for Islam Religiosity?

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Received: 23/01/2025

Accepted: 18/04/2025

Abstract:

The study aims to evaluate the Islamic measurement literature in terms of the available religiosity scales. The evaluation focused on five criteria including the approach of the contribution, the field of study, conceptualization and definition, sample representation, and validity and scrutiny. The authors systematically reviewed, summarized, and analysed the available measures to determine their quality and highlight areas for improvement. The findings identified the need of valid conceptualization and definition of items from an Islamic perspective, define Islam from a multidimensional context, collect data from unbiased data, use valid sample representation, and give more importance to the translation from and to the Arabic language. This work has contributed a new discourse to the body of knowledge in light of the Islam measure practices.

Keywords: *religion; islamic scale; religiosity measurement; literature*

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I. INTRODUCTION

Religion is considered to be the most significant non-economic factor in constructing a society's basic institutional framework (Qayyum, Anjum, & Sabir, 2020). It is argued that the future of sustainable development relies on religion, faith, and spirituality (Lunn, 2009). Therefore, recent studies indicate that religion nurtures economic performance (Barro, 2004). Religion contributes to the creation of beliefs that can be referred to as "*spiritual capital*," a concept similar to human capital, which economists have found to be significant for worker productivity. Human capital refers to the accumulation of knowledge and skills gained through formal education, on-the-job mentoring, and parental guidance. Similarly, spiritual capital includes formal schooling through organised religion, as well as factors from family and social interactions. Thus, the formation of spiritual capital shapes the economic effects of organised religion. In the theory of economic growth, some scholars have argued that a nation's culture should be incorporated in economic growth models, especially religion. Based on database research using the term religion in five databases, Mohd Dali, Yousafzai and Abdul Hamid (2019) found approximately 167647 studies. A great number of scholars have investigated the role of religion, particularly Islam on economic development and human well-being, including social scientists, economists, and political scientists. According to Abu-Raiya, Pargament, Stein, and Mahoney (2007), social scientists agreed that religion is a crucial factor that impacts the lives of many individuals in practically all cultures and countries across the world. In economics and politics, it was noted that "... *the institutions that shape economic, political, religious, and other interactions –appear to be the key to understanding why some societies are capable of sustained economic and political development*" (North, Wallis, & Weingast, 2006, p.3). Moreover, Ouarraki (2017) argued that institutions not only form but are also subject to shaping economic, political, and religious interaction.

According to studies, Islam is considered as the fastest-growing religion in the world. Therefore, many academics have made attempts to measure Islam, and the existing literature reveals that psychologists have developed numerous religious scales to assess the linkage between religion and mental health. However, most of the existing scales do come from Christian and Western constructs. Spilka, Hood, Hunsberger, and Gorsuch (2003) noted that, "*most psychological research has been conducted within the Judeo-Christian framework*" (p. 3). In this context, Abu-Raiya et al. (2007) interpreted the absence of empirical studies between Muslims to "*...the unavailability of a multidimensional, theoretically based, rigorously constructed, valid, and reliable measure of Islamic religiousness that can be utilised in mental health research...*" (p. 13). Studies that have used Christian and Western based instruments to measure Islam have failed in delivering reliable results (Long and Elghanemi, 1987; Piedmont and Leac, 2002), where the developed scales have created conflicts between participants before academics. On the other hand, economists and politicians have made some efforts to provide Islamic scales based on the number and percentage of Muslim population in a country (Acemoglu & Robinson, 2002; Rodrik, Subramanian & Trebbi, 2004; Ross, 2008). Nevertheless, while these efforts to explicitly measure Islam, Albelaikhi (1997) said that "*...any definition of religion is likely to be satisfactory only to its author...*" (p. 15). Krauss, Azimi, Rumaya, and Jamaliah (2006) emphasised the need for more inclusive and representative measurement instruments in order to better understand the religiosity of other non-Judeo-Christian faiths. In the context of these conflicting views, Abu-Raiya and Hill (2014) performed a study to analyse current Islamic scales in psychology and mental health. The findings indicate that the analysed scales show limitations in the clarity of conceptualization, sample representation, validity, and generalizability. The existing literature of measuring Islam is ambiguous. Thus, this study aims to answer the following question: **Do empirical studies provide real measurements for Islam?**

This paper mainly discusses the existing attempts to measure Islam. The rest of the paper proceeds as follows: Section 2 provides the literature review. Section 3 outlines discussion and suggestions for future research. Conclusion is in section 4.

II. Overview and evaluate of the existing measures of Islamic religiosity

This section presents the existing literature that delivered an Islamic scale in empirical research. To perform this section and according to the existing contributions, studies were divided based on the aim of the contribution into two main subsections: Firstly, studies that developed a scale through surveys and experts' opinion. Secondly, studies that developed a scale through measurable variables. As most of the scales were developed based on surveys and experts' opinions. Thus, studies in this subsection were filtered based on the study field: psychology and mental health; economy and politics. Meanwhile, based on the adopted approach: Christian and Western approach, Sunni Approach or unknown approach.

1. Islamic religiosity scale based on surveys and experts's opinion

1.1. Measuring Islam in psychology and mental health

1.1.1. Christian and Western Approach

The majority of studies related to Christian and Western approaches define similarities and differences. For example, Wilde and Joseph (1997) performed a study to examine the linkage amid religion and scores on the Eysenck Personality Questionnaire in a Muslim community. The authors developed the Muslim Attitude Toward Religion Scale (MARS) based on the Francis Scale Attitude Towards Christianity. It is a collection of 14 items administered to 50 British participants. To examine to what extent the MARS scale succeeded in measuring Islam. Ghorbani, Watson, Ghramaleki, Morris, and Hood (2000) worked on a sample of 178 Iranian university students to test the structure, validity, reliability and relevance of MARS scale. The research revealed that MARS did not predict self-reported psychiatric symptoms. Jana-Masri and Priester (2007) said that MARS scale was developed from a Shi'ite perspective and only Shi'ite participants were used for validation. Tiliouine, Cummins, and Davern (2009) said that instead of self-reported actions and beliefs, MARS evaluates attitudes. Moreover, Abu-Raiya and Hill (2014) showed that in terms of reliability, the theoretical part of the MARS scale was reliable enough; however, delivering this instrument on only Shi'ite participants brings generalisability issues.

Following the same approach, Sahin and Francis (2002) identified the Sahin-Francis scale of Attitude Towards Islam Scale (ATIS). This scale was thoroughly scrutinised until consensus was obtained on 23 items. The ATIS scale was created with the purpose of investigating the effect of Islamic education on 381 British students, and the findings indicated internal consistency, accuracy, and construct validity. In this context, the scale's reliability and validity have been studied in a variety of nations and age groups. Khan and Watson (2006a) explored the factorial complexity and the validity of the ATIS using a sample of 150 Pakistani college students. The results showed a positive and moderate relationship between factors of ATIS and religious orientation, interest in religion, and religious activities. Abu-Raiya and Hill (2014) mentioned that the sample used in this study represents only young populations which is unclear if these results can be generalised to other individuals. Moreover, Francis, Erken, and Village (2022) indicated a missing explanation of why two of the main items have been removed from the scale. For the same purpose of scrutinising the suitability of the ATIS, Hamid, Robbins, Nadeem and Khan (2016) also examined the reliability of the Sahin-Francis scale of ATIS. The 23 items were administered to a sample of 729 Pakistani youth. The findings showed that the scale is reliable. Hence, The ATIS was suggested for further studies. Therefore, scholars translated the items onto different languages and delivered them to different populations. Francis, Sahin, and Al-Ansari (2006) translated the Sahin-Francis' scale to Arabic using a sample from Kuwait. Musharraf, Lewis, and Sultan (2014) translated the scale to Urdu in Pakistan. Further studies as Francis, Tekke and Robbins (2016) investigated the psychometric features of a revised version of the Sahin-Francis Scale of ATIS consisting entirely of items with positive valence. Items 5 and 7 from Musharraf et al. (2014) were rephrased. The research revealed that this instrument's internal consistency, reliability and construct validity are supported by responses from 189 Sunni students in Malaysia, and it is recommended for use in future investigations. Musharraf and Lewis (2016)

provided an Urdu translation of the two updated items suggested by Francis et al. (2016) to encourage future study at this scale. A recent work in this context was delivered by Francis et al. (2022) who factor-analysed and investigated the 23 items of the Shain-Francis index by presenting a Turkish translation of the scale to 493 students. The analytical factorial assessment supported the notion that negatively used items should not be employed in Muslim countries. Furthermore, the reliability analysis proposed a seven-item short version of the Sahin-Francis scale of ATIS with strong internal consistency, reliability, and construct validity. These efforts show the importance of a valid translation as well as that the Arabic language has a special context.

A three-stage project was carried out between 2004 and 2006 by Abu Raiya, Pargament, Mahoney, and Stein (2008) to create the Psychological Measure of Islamic Religiousness (PMIR) as a reliable indicator of Islamic religiosity that may be used in mental health research. First, the authors identified the most relevant aspects to Muslims' physical and mental health based on literature on the psychology of religion, literature on Islam, and conversations were with 25 individuals who identified as Muslims and were enlisted from Palestine and the United States. Secondly, a pilot test using a sample of 64 Muslims recruited from the same list. The authors factor-analysed scores to the scale using an international sample of 340 Muslims selected using an online questionnaire in the third stage, and investigated their linkages to various indicators of physical health and mental well-being. Abu-Raiya and Hill (2014) pointed out that the PMIR is limited due to the following: identifying Islam dimensions and comparing it to other religions based on people's answers; translation problems; the study performed in US and Palestine where Muslims suffer from racism, pressure, and Jewish (11 September actions); interviews would lead to unreliable results. Moreover, items used in the study adapted from Christian and Hindu beliefs.

In the context of developing religious coping measures, Khan and Watson (2006b) developed the Pakistani Religious Coping Practices Scale (PRCPS) to assess Muslim stress coping attitudes. The study builds on the findings of Pargament (1997), who found that these attitudes differ according to religious characteristics. The PRSPC is an 8-item scale based on the specifics of Pakistani religious and cultural trends. The authors translated the English version of RCOPE and other Christian-based instruments into Urdu, changing the word Church to Mosque. According to Amer, Hovey, Fox, and Rezcallah (2008) "...The RCOPE contains 115 statements that fall into five categories: (1) coping to find meaning, (2) coping to gain control, (3) coping to gain comfort and closeness to God, (4) coping to gain intimacy with others and closeness to God, and (5) coping to achieve a life transformation..." (p. 73). The scale is regarded unsuitable for gauging Islam as research outputs originate from a single demographic (Pakistani), and the items solely describe Pakistani religious culture. In addition, the scale builds on Christian based instruments.

Ji and Ibrahim (2007a) created a measure of Islamic Theological Orthodoxy (IDO) and investigated its relationship to individual religious behaviours. The IDO is a list of 8 items that assess individuals' commitment to basic Islamic concepts on Allah, Muhammed the Prophet (ﷺ), the Qur'an, the Last Judgement, and the five pillars of Islamic life. Ji and Ibrahim (2007b) showed the IDO to be grouped into two subscales: Cognitive-Abstract Orthodoxy factor and Ritualistic-Judgmental Orthodoxy factor. After a three-step translation and back-translation, the scale's scores showed strong internal consistency based on data obtained from 381 Indonesian students (0.90). Although this scale shows good internal scores, its generalizability to other Muslims is ambiguous. Moreover, the authors relied on Christian based instruments "...For our study, the authors used the scales without revision, except for fitting the measures to Islamic context by replacing the words of church and the Bible in the original measures with mosque and the Qur'an..." (Ji & Ibrahim, 2007, 194).

The Brief Arab Religious Coping Scale (BARCS) was established by Amer, Hovey, Fox, and Rezcallah (2008) as a short, culturally acceptable measure of effective religious coping that may be utilised in research with Arab Americans of both Christian and Muslim religions. The BARCS is a 15-item scale developed through a rank rating analysis of 62 pilot surveys completed by 76 people, based on two Christian instruments: the Ways of Religious Coping Scale and the Brief Religious Coping

Scale, with additional items added based on the researchers' understanding of Arab religious coping methods. The BARCS's consistency, validity, and reliability were examined using an online sample of 599 individuals, and the results demonstrate good reliability. Performing the study based on Christian instruments, one group of population and a mixed scale between different beliefs are limitations for study.

The Sahin Index of Islamic Moral Values (SIIMV) is another proposed measure for Islam developed by Francis, Sahin and Failakawi (2008). They created 17 items of Islamic moral values to assess commitment to Akhlaq or Adab. The study was performed on a sample of 1,199 adolescents in Kuwait. The findings showed modest and positive correlation of the SIIMV with higher scores in attitudes toward Islam and personal prayer. According to Abu-Raiya and Hill (2014), this scale puts a well-known Islamic concept into practice but the findings' generalizability has not been examined as the sample presents one country and one group of people. In terms of scale suitability, Francis, Sahin and Al-Failakawi (2008) conducted a study to outline the features of the SIIMV and the ATIS scale. A sample of 1,199 secondary school students in Kuwait between the ages of 17 and 18 made up the survey. The two instruments found to be reliable and valid; hence, authors recommended it for further studies.

The scales indicated above are the most well-known contributions in the fields of psychology and mental health. There are, however, several other contributions. Studies based on an Iranian population and relying on a Christian foundation (Aflakseir & Coleman, 2011; Ghorbani, Watson, & Shahmohamadi, 2008; Ghorbani, Watson, Ghranmayepour, & Chen, 2013; Chen, Ghorbani, Watson, & Aghababaei, 2013). Studies based on a Shi'ite Islamic thought and Iranian population (Azarbaijani, 2003). Moreover, contributions based on Sufi beliefs (Joshanloo & Rastegar, 2013; Dasti & Sitwat, 2014).

1.1.2. Unknown Approach

In the context of measuring Islam, some contributions showed an unclear approach. For instance, a study done by AlMarri, Oei, and Al-Adawi (2009) identified the Short Muslim Belief and Practice Scale (Short-MBPS) to explore how religion affects alcoholic beverage consumption. Selected Participants composed of 303 Asian Muslims living in Malaysia and Indonesia and 611 Arab Muslims living in the United Arab Emirates and Oman. The scale is 13 items created to evaluate the extent of involvement in religious rituals and conviction. This scale shows good internal reliability ($\alpha = 0.83$) using a sizeable sample that includes Muslims from many regions of the world. However, the authors did not show how they created the items.

1.1.3. Islamic Sunni Approach

In the context of the Sunni approach, studies were performed based on a clear concept. Such as Krauss, Azimi, Rumaya, and Jamaliah (2006) who conducted research to investigate geographical disparities in religiosity among Malaysian Muslim adolescents. The researchers' approach to measure Islam was based on Ahl al-Sunnah wa'l-Jamaah Mazhab (traditional Sunni Islam school of law/thought). They argued that it should be establishing a tawhidic (divine unity) in assessing Islam. A statistical analysis of the responses of (MRPI) revealed two factors indicating the Islamic worldview construct: Worldly Islamic Worldwide and Spiritual Islamic Worldview, as well as two factors representing the religious personality construct: Ritual and Mu'amlat. The results suggest that the scale is based on a robust theoretical model with sufficient reliability, however the initial validation learned from one adolescent group is a drawback.

Jana-Masri and Priester (2007) described previous efforts to measure Islam as unsuccessful because scholars have attempted to assess Islam religiosity using Christian or Western concepts but they have failed to reflect valid psychometric qualities or have incorporated more politicised elements. Therefore, they developed the Religiosity of Islam Scale (RoIS) based on the concepts found in the Holy Qur'an and the conceptual distinction drawn among religious behaviours and beliefs. The RoIS is a 19-item consisting of two subscales with theoretical foundations: Islamic Beliefs and Islamic practice. In terms of reliability, Islamic beliefs overall Cronbach's alpha was 0.66, and 0.88 for Islamic

practice. construct validity is supported by the data. However, the study is criticised for the findings' generalizability.

Alghorani (2008) proposed 150 multiple-choice items for the Knowledge-Practice Measure of Islamic Religiosity (KPMIR), which were reviewed by US experts and Islamic preachers and tested with a group of 15 Muslim students. Experts agreed on 100 items after the experiment research, then given to 211 Muslim participants. The results reveal a strong internal reliability score (0.93), however, evidence on construct validity is missing. A small sample of only a young population and relying on only one sample in terms of validation weaken the suitability of measure in future research.

Tiliouine et al. (2009) designed the Islamic Religiosity Scale (IRS) to explore the nexus between Islamic religiosity, subjective well-being and health in a sample of 2909 of Algerian citizens. The results demonstrate poor reliability and lack of construct validity. This scale was used in a study performed by Alserhan, Bataineh, Halkias, and Komodromos (2014) to examine the relationship between luxury brand consumption and women religiosity in the UAE, and agreed through comparing between six existing scales that is the most reliable. However, this scale has been criticised for not having expanded to other samples and only receiving validation from one Muslim nation.

1.2. Measuring Islam in economics and politics

This section presents the existing literature that discussed this debate from an economics and politics context. In this regard, a study by Terzi, Alserhan, and Altunışık (2016) conducted to measure Islam religiosity of Muslim consumer behaviour using four category-based classification (Aqidah, Ibadah, Mu'amlat, and Akhlaq/Adab) based on the work of early Muslim scholars who lived between 699 and 855 A.D. The authors noted that existing measures previously were dependent on the researcher's personal Islamic viewpoint, making the creation of a global scale extremely advantageous in this regard. Terzi et al. (2016) stated that *"... researchers use scales that are considered more politically acceptable within their study populations. This could be due to societal norms accepted within these populations or due to other factors such as repressive regimes that tend to force researchers more towards a Sufism approach to religion..."* (p. 219). Therefore, 21 items of religiosity scale were administered to 511 male and female Arab, Turkish, and Indonesian students. Based on ANOVA analysis, the authors recommended future scales to focus on the intellectual contributions of Islamic scholars such as Abu Hanifah, Malik, Shafei, and Ibn Hanbal, Alghazali, and Ibn Khaldon.

Ahmed and Gouda (2015) conducted a study to assess Islam from a constitutional perspective as the discussion over incorporating Islam into constitutions is widely discussed, particularly in light of what they referred to as the Arab spring. The Al-Azhar Islamic constitution model was used as a model to evaluate the constitutions of 56 Islamic nations in terms of democracy and human rights. To introduce the Islamic Constitution Index (ICI) scores, the authors came to an agreement on 30 Islamic articles as a template. This index shows unclear theoretical conceptualization. Moreover, the existence of an Islamic clause does not necessarily mean more practice of Islam. However, it may be used as an objective of gaining acceptance among the Muslim community as stated in (Ouarraki, 2017).

Ouarraki (2017) regarded existing literature on Islam measurement as inadequate, with weak conceptualisation and validity, therefore two measures of Islam were provided in the study. The Islamic Practice Scale (IPS) was first designed for 25 nations, based on a Rasch model and Confirmatory Factor Analysis, with the premise that a bigger population of Muslims does not always imply a higher degree of Islamic practice. Second, based on alcohol consumption in litres per nation, the authors suggested a different proxy measure of Islamic practice in which data is available in a larger number of countries. Third, a correlation and Weighted Least Squares Regression (WLS) regression analysis of the two variables reveals a statistically significant and meaningful association between alcohol use per capita and the IPS. In the context of conceptual clarity, reliability and validity the two scales are clear and authentic as it focuses on 5 pillars of al-Islam. However, generalizability issues exist due to the small sample size of the data and the Pew survey's limited explanation of the various Islamic pillars.

Mohd Dali, Yousafzai and Abdul Hamid (2019) examined a great number of religious scales focusing on consumer behaviour studies as they stated that beliefs determine consumption patterns. Firstly, the authors performed a database search to collect all relevant religiosity measures. Secondly, they selected only the consumer behaviour literature in order to identify the relevant religiosity items that best describe Islamic principles and guidelines. Using qualitative and quantitative approaches, and taking into account expert opinion surveys summarised in three stages, they developed a new scale which showed satisfactory reliability and validity results. The research found that measuring Islamic religiosity is multidimensional. Beliefs and commitment or practice were revealed to be dimensions. As a limitation, The authors indicated that the scale should be reproduced and examined across various contexts.

Scheherazade, Rehman and Askari (2010) investigated the debate of whether economic, political, and social outlook are affected by religion or whether these factors affect religiosity. Firstly, they define the Islamic rule-based system based on four fundamentals. Secondly, performing a measure of economic, political, legal and social development in 208 eight countries including OIC countries based on Islamic teaching standards. The study uses 113 measurable variables without relying on surveys. The Islamicity index² is composed of four sub-areas, each area was divided into subcategories and proxies were used to measure the variables. According to the authors, Islamic nations are not as Islamic in reality; instead, it appears that the most advanced economies rank higher. The study is criticised for the following: First, the authors took data from some Western datasets such as the Freedom House's Political and Civil Rights Indices, which has been accused of having a Western bias (Raouf, 2015, p. 105). Second, they stated that humans are free to choose their religion and mentioned a well-known verse of the Qur'an (2:256), which means "*Let there should be no compulsion in religion*". This verse is often misunderstood by some scholars, it does mean that no one should force others to enter Islam, in other words, to be Muslim is not by force. Sheikh As-Sa'di (Rahimahullah) said in the Tafsir of this verse: "*There should be no compulsion in religion because there is no need to compel anyone to believe in it. Compulsion can only be in matters that are ambiguous and unclear, for which there is no proof or evidence, or for matters to which people have a natural aversion...*" (Khattab, 2018, p. 328).

Rauf (2015) and twelve experts collaborated on a study to first define what an Islamic state is, citing that current literature indicated three key definitions: the state is defined by its Muslim population, the use of Islamic criminal code, and the practice of Shariah in governance. Second, the authors agreed on defining the Islamic state through the Maqasid of Shari'ah (Life, religion, property, mind, family and honour); hence, and through a factorial analysis they delivered the Islamic governance Index that is composed of 19 indicators collected from different datasets and ranked 15 countries based on it. The project has delivered a new approach of measuring Islam and building the Islamic state which is considered a crucial contribution for empirical studies. However, the theoretical section that was dedicated to define the Islamic state contained some concepts that appeared to contradict the Islamic religion. (a) In answering a question of whether it is possible to adopt Western concepts and terms into the Islamic tradition. They stated that Islam is open to new situations and thus terminologies of other traditions were accepted (Rauf, 2015, p. 22). As an argument they cited the famous work of al-Ghazali (al-Mustasfa) and that understanding religious thoughts is dependent on being familiar with pure Greek philosophy. However, in his book al-Ghazali (Rahimahullah) tried to distinguish between Greek philosophy and Islamic terminology but it was difficult as most of the preceding authors used that philosophy alleging that it will help in understanding Fundamentals of Islamic jurisprudence. (b) The authors stated the idea of seeking knowledge and wisdom from whichever source offers and they cited some weak Hadith. "*Seek knowledge even as far as China,*" and "*Knowledge is the lost inheritance of the believer; wherever the believer finds it, he should take it*". (c) Delivering the concept of Freedom of conscience which and stated that this concept has a basis in the Islamic tradition (Rauf, 2015, p. 22). However, freedom conscience is a Western concept. (d) In the context of the Legitimacy of the ruler, they alleged that the elected system is analogous to the Islamic concept of allegiance bay'ah, while there is no way to compare a system that takes rules from

² To learn more about the index, see : <http://islamicity-index.org/wp/>

Allah with a system produced by a human. (e) When trying to define the concept of protection of human rights and it is granted for all mankind not just Muslims, they cited another weak story of the Caliph Umar (Radi Allahu anhu). They also stated that the jizyah is not given in exchange for protection. It's just another tax, like Muslims pay zakāt. This concept needs more clarification from the authors, hence, reviewing the conditions of jizyah that were made by the Caliph Umar (Radi Allahu anhu) would be informative. (f) They stated that an action or Qur'anic injunction is vital, and that changing societal situations may need a different method of accomplishing that ultimate objective (Raouf, 2015, p. 32). Muslims believe that this is a clear direct order that should be followed, seeing the moon means the start of Ramadhan, otherwise we must complete 30 days of Shaaban. Finally, The authors cited the verse (10:99): *"wa law shaa'a rabbuka la aamana man fil-ardi kulluhum jami 'an; 'afa anta tukrihu-nnasa hatta yakunu mu'min in?"* (Raouf, 2015, p. 65), to show that non-Muslims are free to practise their religion. This verse was revealed as a relief for the prophet Muhammed (ﷺ) where he was thinking about people not accepting Islam and was upset for them as shown in another verse in the Quran (18:4), which means: *"Perhaps you may destroy yourself with grief, chasing after them, if they do not believe in this information"*

III. Results and discussion :

The previous section shows the importance of Islam in empirical analysis. However, delivering a reliable scale is ambiguous. The existing contributions show many limitations that can be summarised into the following: (1) Definition of the scale, (2) Dimension of the scale, (3) measurement methodology, (4) validation and reliability. A great number of scholars have developed an Islamic scale based on experts' opinions and surveys, while few scales were created based on measurable variables. In contrast to studies in economics and politics that concentrated in general on delivering metrics that sourced from an Islamic perspective, research in psychology and mental health often adopted a Christian and Western approach.

Developing a valid scale requires a correct definition of Islam. In this regard, scholars who followed Western and Christian approaches did not make any efforts except replacing some words for fitting the Islamic context. However, the work of some scholars such as Krauss et al. (2006) and Terzi, et al. (2016) discussed the importance of using valid definitions of Islam that should include the Islamic creed and to be taken from trusted resources. In addition, conceptualization of the scale is crucial because it represents the Islamic teaching that was taught by the prophet Muhammed (ﷺ). This was articulated by the prophet (ﷺ) himself in many Hadiths; On the authority of Abu Najeel al-'Irbaad ibn Saariyah (Radi Allahu anhu) who said, "The prophet of Allah gave us a sermon by which our hearts were filled with fear and tears came to our eyes...Verily he among you who lives long will see great controversy, so you must keep to my Sunnah and to the Sunnah of the Khulafa ar-Rashideen (the rightly guided caliphs), those who guide to the right way. Cling to it stubbornly. Beware of newly invented matters, for verily every Bidah (innovation) is misguided" (Sunnah.com, Forty Hadith of an-Nawawi, 2023, 28). The literature section shows that the majority of the existing contributions neglected the importance of Islamic creed, even though scholars that followed a Sunni approach have focused only on Tawhid-al-Rububiyyah (Oneness of Allah's Lordship), and abandoned both Tawhid-al-Uluhiyyah (Oneness of Worship) and Tawhid-al-Asma' wal-Sifat (Oneness of Allah's Names and Attributes) which was clearly noticed from the items. In the context of Tawhid-al-Uluhiyyah, the prophet (ﷺ) has emphasised its importance when said, as Amr b. 'Abasa Sulami reported: *"In the state of the Ignorance (before embracing Islam) ...He said: (I am a Prophet in the sense that) I have been sent by Allah. I said: What is that which you have been sent with? He said: I have been sent to join ties of relationship (with kindness and affection), to break the Idols, and to proclaim the oneness of Allah (in a manner that) nothing is to be associated with Him..."* (Sunnah.com, The Book of Prayer - Travellers, 2023, 52). On the other hand, Tawhid-al-Asma' wal-Sifat is one of the three aspects that forms divine unity besides Tawhid-al-Rububiyyah and Tawhid-al-Uluhiyyah.

Defining Islamic teaching was covered properly by scholars in studies that proposed scales based on measurable variables. However, some mentioned concepts were found to be incompatible with Islam. Islam is a full complete religion, Allah almighty has said in Surah Al-Mā'idah (5:3), which means: *"This day, those who disbelieved have given up all hope of your religion; so, fear them not, but fear Me. This day, I have perfected your religion for you, completed My Favour upon you, and have chosen for you Islam as your religion..."* (QuranEnc.com, Al-Mā'idah, 2023). Sheikh Ibn Baz (Rahimahullah) explained this verse saying: *"This is the greatest blessing of Allah Almighty upon this nation, where He has completed their religion, so they do not need any other religion, nor any prophet other than their prophet (peace and blessings of Allah be upon him). That is why Allah Almighty made*

him the seal of the prophets and sent him to mankind and jinn. There is nothing permissible except what he made permissible, nothing forbidden except what he made forbidden, and no religion except what he prescribed"³.

From an empirical aspect, the existing scales shows the following limitations: Firstly, defining Islam from one dimension forms another limitation. Mohd Dali et al. (2019) pointed out that the Islamic scale is multidimensional. Moreover, collecting information from one group or one country or biased datasets led to unreliable Islamic scales. Secondly, the generated scales based on experts' opinions and surveys were not applied to large Muslim populations, participants represented one geographical area, a specific Islamic religious group, or a specific population. Thirdly, Neglecting the importance of the Arabic language as well as translation problems is an issue. The importance of the Arabic language is clearly shown in studies that led to conflicts between participants due to foreign concepts found in the items, it is crucial to cite what Imam Shāṭibī (2012) has said in his book *Al-I'tisam* demonstrating the two conditions for an observer and speaker of Islamic law in its foundations and branches. The first is that they should not speak about any aspect of it unless they are proficient in Arabic or are like Arabs in their knowledge of the Arabic language, using it eloquently and precisely, and with a fluency that matches that of the early Imams such as Al-Khalil, Sibawayh, Al-Kisai, Al-Farra and others like them. Finally, relying on one sample and biased datasets has impacted the validity of these scales.

As conclusion, the previous sections overall provided a useful overview of the existing measures of Islamic religiosity while focusing on limitations in the context of both theoretical and empirical aspects. The discussion section showed the need for a more comprehensive and valid scale through highlighting some aspects that would help to elaborate a theoretical approach of determining a reliable scale to measure Islam.

IV. Conclusion:

Given that Islam is important in the theory of economic growth. In the past few years, delivering an Islamic scale has attracted significant attention among academics. However, the existing contributions have failed to propose a valid Islamic scale. Therefore, this research aims evaluate the Islamic measurement literature in terms of the available religiosity scales. The analysis shows that the majority of scales were not well-developed for the following reasons: adopting Christian and Western approach; defining Islam from one dimension and neglect important basics; select participants from one group, one country or one background; the use of Western biased datasets in terms of measurable variables; neglect the importance of Arabic language, and finally, misunderstood some verses and Hadiths. The study proposed some recommendations to help developing a valid scale of Islam. Generally scholars and Islamic institutions and bodies should be given enough awareness about the Islam measure to complete their fundamental institutional infrastructure of a society.

As limitation, this study only concentrated on the studies that developed a scale through surveys and experts' opinion. As well as, studies that developed a scale through measurable variable.

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³ See the full explanation on: <https://binbaz.org.sa/audios/373/06>

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