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## Article

### The scale of Muslims' consumption intelligence : a maqāṣid insight

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# THE SCALE OF MUSLIMS' CONSUMPTION INTELLIGENCE: A *MAQĀṢID* INSIGHT

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## ABSTRACT

**Purpose** — This paper aims to develop a scale for measuring consumer intelligence based on the *maqāṣid* framework (*al-nitāq al-maqāṣidi*).

**Design/Methodology/Approach** — A large pool of items representing consumer intelligence based on *maqāṣid al-Sharī'ah* (objectives of Islamic law) was generated from one of the primary Islamic sources, i.e., Qur'ānic texts. The initial scale was purified and validated. A survey of 388 respondents who completed a usable questionnaire was used to run the analysis. The latter was split into two. The first half was utilised to run the exploratory factor analysis (EFA) and the second half was used to run the confirmatory factor analysis (CFA).

**Findings** — The EFA result revealed that the *maqāṣid*-consumption intelligence scale is a four-dimensional construct consisting of 21 items. The scale includes metacognition, cognition, motivation, and behaviour. The CFA confirmed the dimensionality, reliability and validity of the *maqāṣid*-consumption intelligence scale.

**Originality/Value** — There is currently no readily available scale to measure consumption intelligence among Muslims based on *maqāṣid al-Sharī'ah*. The study is expected to fill this gap.

**Research Limitations/Implications** — The *maqāṣid*-consumption intelligence scale can determine an individual's level of consumption intelligence based on *maqāṣid al-Sharī'ah*. It is expected that the scale will stimulate further research on Muslim consumption intelligence, i.e., how is the consumption of an ideal Muslim consistent with Sharī'ah (Islamic law) values.

**Practical Implications** — The *maqāṣid*-consumption intelligence scale may eventually assist halal industries in formulating strategies to increase product demand.

**Keywords** — Cognition, Consumption intelligence, Islamic consumption theory, Metacognition, Motivation

**Article Classification** — Research paper



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## INTRODUCTION

Consumption behaviour in the Islamic tradition is based on ethics and Islamic law. It emerges from a holistic awareness of Islamic values which distinguishes Islamic consumption behaviour from its conventional counterpart (Khan, 1986). Hossain (2014) asserted that the difference between Islamic and mainstream consumption behaviour lies in the different assumptions. Islamic consumer behaviour is determined by economic rationalism and the fear of Allah (SWT) or piety (*taqwa*) (Hossain, 2014). Therefore, consumer behaviour in Islam is not decided freely (i.e., based on desire and economic rationality). Rather, it must consider Islamic values and ethics. In this context, there is extensive literature that discusses Islamic consumption issues, which sets the background of this study.

Khan (1986) introduced the macro-consumption function of Islam. The author explained that there are two types of Islamic consumption, namely: to meet the material needs of the family; and to spend on others to get closer to Allah (SWT) through zakat (obligatory charity), *ṣadaqah* (voluntary charity), waqf (endowment) and *infāq* (spending) (Khan, 1986). He affirmed that Islam shapes a Muslim's consumption behaviour in terms of what to consume and how to consume. Zouhair (2017) emphasised that consumption in an Islamic economy cannot be separated from zakat expenditure. He points out zakat's macro-economic effects in stimulating consumption, which impacts on demand and eventually encourages investment and creates jobs. (Zouhair, 2017). The author, however, did not explain consumption behaviour at the individual level.

Billah *et al.* (2020) empirically identified the consumption behaviour of Muslim consumers towards halal food. Besides religious factors, the authors found that the consumption behaviour of Muslim consumers towards halal food is influenced by other factors such as the halal logo, food safety concerns, health consciousness, the ingredients used, food processing, predilection and knowledge (Billah *et al.*, 2020). Haque *et al.* (2019) highlighted that adherence to Islamic values is one aspect that influences Muslim consumers' choices of hotels when traveling.

Various studies on Islamic consumption behaviour have been published, both normative and empirical in nature. However, there is little work that specifically uses the analytical framework based on *maqāṣid al-Sharī'ah* (objectives of Islamic law) to determine how Islamic consumption behaviour is based on *maqāṣid al-Sharī'ah* values, and how awareness of these values is empirically verified to produce a psychometric instrument, which is termed the *maqāṣid*-based consumption intelligence scale. Therefore, this study attempts to fill in the gap by adopting the following two strategies:

1. Formulating Islamic consumption based on *maqāṣid al-Sharī'ah* framework. This framework entirely refers to Auda's (2021) philosophical framework. In this regard, the *maqāṣid*-based concept of Islamic consumption is a product of careful reading of one of the Islamic primary texts, i.e., the Qur'ān.
2. Building a *maqāṣid*-consumption intelligence scale as measurement. This scale is the novelty offered by this study. In consequence, this study is not only formulating but also introducing instruments (i.e., measurement scales) of *maqāṣid*-consumption intelligence.
3. As a result, this effort resulted in a valid and reliable instrument that is suitable for use on a wider scale of research.

Referring to the process carried out in this study, this paper aims to answer the following question: 'Is it possible to build a comprehensive, valid and reliable instrument through an exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) approach that can be useful for researchers to measure consumption intelligence based on *maqāṣid al-Sharī'ah*'?

This study explores the concept of *maqāṣid*-consumption intelligence through reading texts (i.e., the Qur'ān). The main idea, as suggested by Emari (2015), is to find the foundation for formulating a *maqāṣid*-consumption intelligence scale. Thus, the main objective of this study is to build and validate the *maqāṣid*-consumption intelligence scale. The scale was then tested through two quantitative approaches: EFA and CFA. These two approaches were selected and used in this study to produce a valid *maqāṣid*-consumption intelligence scale—a psychometric model that meets the goodness of fit criteria.

The remaining part of the study is structured as follows: the next section reviews the literature, which consists of mapping the recent studies on Islamic consumption and theoretical framework based on Auda's (2011) seven elements of *maqāṣid al-Sharī'ah*. It is followed by the methodology section which elaborates on how this study is conducted. In the next section, the results are reported and discussed. The final section is the conclusion, which summarises the primary and robust findings of the study. In addition, it highlights the limitations of the study and suggests recommendations for future research.

## LITERATURE REVIEW

This research concerns at least two trends in studies related to Islamic consumption, i.e., concept and scale (Hasan, 2005; Praswati & Prijanto, 2017). In this section, two relevant issues are discussed: first, various concepts of the general consumption scale, particularly the Islamic consumption scale; and second, the research framework of Islamic consumption carefully formulated through Auda's (2011) system approach. In this case, this study uses the seven elements of *maqāṣid al-Sharī'ah* introduced by Auda (2011) to identify the various components of Islamic consumption intelligence based on *maqāṣid al-Sharī'ah*. The two issues are discussed because they are interrelated, where the existing consumption scale becomes the framework for items formulated from Qur'ānic verses related to consumption topics.

### Consumption and Its Scale: A Literature Mapping

It is crucial to identify consumer behaviour patterns, even understanding the values that are the foundation of every human consumption behaviour (Théophile *et al.*, 2019). High interest in this issue has made consumption an essential theory in economics. There are a set of approaches to consumption. For example, the mainstream view introduces the concepts of 'intertemporal choice' and 'consumption function'. In this regard, Keynes' approach to consumption emphasised the model of consumer behaviour, and the life cycle hypothesis (Drakopoulos, 2010). In addition, social scientists use varied methods to understand consumer behaviour. One such way is to apply psychometric tests to consumption behaviour. In this case, several studies are positioned as theoretical foundations for developing a consumption intelligence scale based on *maqāṣid al-Sharī'ah*.

The consumption psychometric scale developed by social scientists can be classified into varied functions. First, the consumption scale measures consumer perceptions of products or services. Fraering and Minor (2006), in this case, conducted an exploratory study related to customer perceptions of financial services. In simple terms, the study introduced a psychometric scale to identify 'a sense of consumption community' concerning financial services (Fraering & Minor, 2006). Five items are used on this scale, namely:

1. Being a member of a civic, social, or community organisation is important to me.
2. Performing volunteer work is essential to me.
3. Financially supporting a non-profit organisation is essential to me.
4. Most people are honest.
5. Most people can be trusted.

The second classification is a psychometric scale related to consumer behaviour. This scale is used to identify behavioural patterns and consumption choices at the individual level. Pohlmann and Chen (2020) offered a psychometric scale on consumption behaviour, emphasising gender variables. This method is valuable in predicting gender-based consumption behaviour. Fei (2021) introduced a scale that conceptualises consumption rituals in terms of four dimensions: uniqueness, commitment, ceremonial, and non-functionality (Fei, 2021). The originality of the study by Fei (2021) lies in the methodology used. While other scholars used EFA and CFA, Fei (2021) adopted the quantitative method, with qualitative data collection through an open interview strategy and secondary data from the internet, then converted to an initial statement. In addition, Quoquab *et al.* (2019) attempted to build a valid and reliable psychometric scale to measure sustainable consumption from a consumer perspective. This scale included three construct dimensions, consisting of 24 items, i.e., quality of life, care for environmental well-being, and care for future generations.

The third group of existing studies includes literature on the psychometric scale values behind consumption behaviour, particularly Islamic values. In this context, Kainth and Verma (2011) published their study on consumption values. Within the services industry, the study is aimed at building the 'Consumer Perceived Values (CPV) phenomenon' through theoretical definition and empirical development of the 'Services Perceived Value Scale (SPERVAL)'. In addition, consumers' views can be understood as the logical foundation of consumption behaviour. In this regard, a study conducted by Emari (2015) introduced a psychometric scale related to a wasteful lifestyle from an Islamic perspective. Emari's (2015) study adopted the paradigms of Malhotra *et al.* (2017) in formulating selected items on a psychometric scale to measure wasteful behaviour in consumption.

Ilter *et al.* (2017) also conducted research to measure the Islamic religiosity scale. Their study is useful as it provides a valid and reliable instrument in evaluating the impact of Islamic religiosity on materialism in Turkey. In developing their scale, the authors used a set of Islamic religiosity dimensions, notably, the extent of spirituality, the measurement of behavioural religiosity, and the necessity of religion (Ilter *et al.*, 2017). However, the study does not attempt to produce items derived from Islamic meta-framework sources, i.e., the Qur'ān.

Therefore, different approaches are needed to provide a new insight by developing a psychometric scale of consumption intelligence based on *maqāṣid al-Sharī'ah*. To support these

efforts, it can be argued that Islam is a belief and value system that provides a theological framework for consumption behaviour for Muslims, based on the Qur'ān and hadith. The philosophical meaning of the Qur'ānic texts related to consumer behaviour need to be read systematically and holistically to produce a positivistic statement which would be helpful in measuring consumption intelligence among Muslims based on *maqāṣid al-Sharī'ah*.

### ***Maqāṣid*-Based Consumption Intelligence Scale**

This study adopts Auda's (2021) philosophical framework in developing composite items of *maqāṣid al-Sharī'ah*. It considers the assumption of Shah Alam *et al.* (2011) that Islam guides consumption behaviour with a high commitment to achieving at least four of the *maqāṣid*, notably:

1. Each individual must fulfil his needs by consuming sufficient economic resources to live an efficient life.
2. Each individual must commit not to consume the prohibited foods.
3. Each individual should not be excessive in consumption, including addiction to an extravagant lifestyle.
4. Consuming economic goods for self-gratification is not a utility of Islam. Rather, economic resources must be consumed to achieve a higher goal, i.e., supporting worship and for reinforcement so as to bring benefit to society.

Consumption intelligence requires individuals to have the intellectual ability to weigh all the consequences of their consumption choices. The intelligence needed in consumption is also a psychological concept (Colman, 1990). It involves the emotional and intellectual ability to digest information (Puntoni *et al.*, 2021). In this regard, *maqāṣid al-Sharī'ah*-based intelligence principally refers to the individual's ability to obtain information and analyse the meaning of this information using the primary texts of Islam. This kind of intelligence grows as a product of consistent reading of Islamic texts related to consumption or can also be interpreted as a product of formal or informal learning processes such as recitation and listening to Qur'ānic texts.

Therefore, the *maqāṣid*-consumption intelligence scale is constructed on four primary components, namely: metacognition, cognition, motivation, and behaviour. These four components are general elements inherent in individual intelligence, such as cultural intelligence (Azevedo, 2018; Ott & Michailova, 2018). An explanation of these four primary components is as follows:

- Metacognition refers to the individual's ability to understand the things of concern and the problems he faces (Solomon & Steyn, 2017). In the context of the *maqāṣid*-consumption intelligence scale, metacognition refers to the ability of consumers to establish Islamic ethics and norms of consumption.
- Cognition is an ability that grows from normative, practical, and conventional knowledge (Bücker *et al.*, 2015). This knowledge can be achieved through education or personal experience in dealing with problems (Bücker *et al.*, 2015). Cognition related to consumption is meaningful for a Muslim as such knowledge helps in determining consumption decisions and behaviour. This knowledge is closely associated with *maqāṣid al-Sharī'ah* principles of consumption.

- Motivation is interpreted as the capability to direct attention and energy to learn something and function in various situations (Ang *et al.*, 2007). Therefore, the motivation for consumption based on *maqāṣid al-Sharī'ah* refers to the ability of a Muslim to learn the goals of Sharī'ah related to consumption and then internalise them in consumption behaviours.
- The last component about behaviour relates to the ability to show behaviour (i.e., verbal and non-verbal) when facing a problem.

### The Composite *Maqāṣid* of Islamic Consumption: A Theoretical Background

The *maqāṣid al-Sharī'ah* refer to not only the ultimate goals of the Islamic doctrine but can also be positioned as a moral epistemology that can influence the development of Islamic economics (Al-Attar, 2017). Ullah and Kiani (2017) explained why *maqāṣid al-Sharī'ah* have been discussed and elaborated as an essential issue in Islamic economics: it is because *maqāṣid al-Sharī'ah* provide a solid vision to promote development in line with the goals of Islamic economics, notably, *ḥalāl* (Islamic welfare/well-being). Implementing *maqāṣid al-Sharī'ah* can solve contemporary Islamic economic problems. One of the modern Islamic economic problems is the 'over-imitation' of conventional economic theory. As a solution, the *maqāṣid al-Sharī'ah* paradigm can be used as the foundation for developing the theoretical structure of Islamic economics, including the theory of Islamic consumption intelligence.

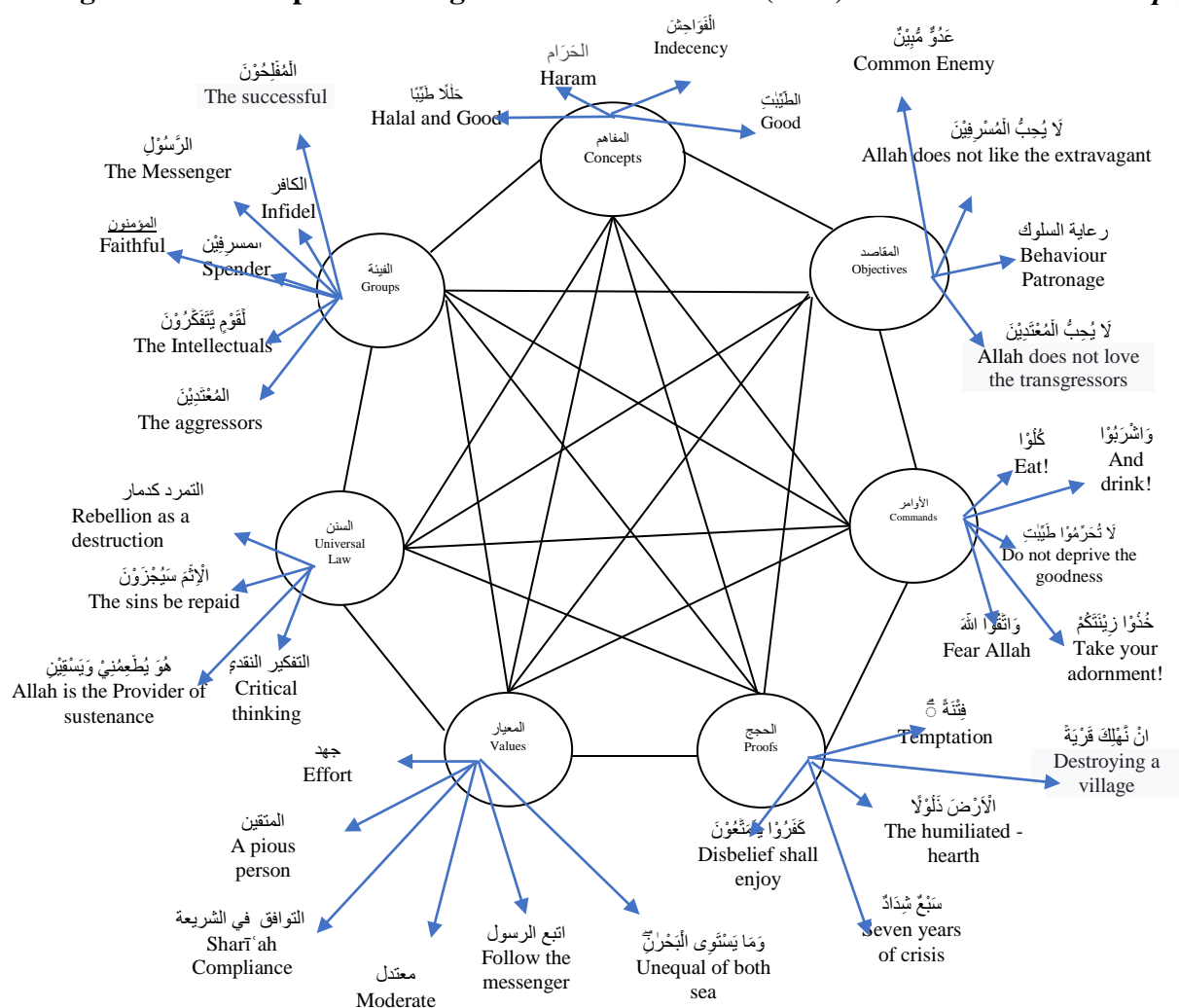
Taking *maqāṣid al-Sharī'ah* as an approach to building a theory of Islamic consumption intelligence ideally begins with elaborating what kind of *maqāṣid* approach can help formulate a theory of Islamic consumption intelligence. Several *maqāṣid al-Sharī'ah* approaches are popular in the contemporary era and have been modelled by Muslim scholars:

1. The historical method. The *maqāṣid al-Sharī'ah* have been developed as an unbroken continuum since its pioneers, such as Al-Juwayni and Al-Ghazali. Historically, Al-Juwayni first articulated the concept of *maqāṣid al-Sharī'ah* (Shinkafi & Ali, 2017). Then, it was further developed by Al-Ghazali into five elements, i.e., preservation of religion, life, reason, family and wealth. Al-Ghazali attempted to rearrange and systematise Al-Juwayni's formulation of *maqāṣid* (Lamido, 2016).
2. The *uṣūl al-fiqh* approach. In practice, *maṣlaḥah*-based reasoning is dominant in Imam Shāfi'ī's *fiqh* and *uṣūl al-fiqh* works (Shinkafi & Ali, 2017).
3. The systems approach. This approach can be identified from Auda's work on *maqāṣid al-Sharī'ah*. Auda (2021) derived his conception of *maqāṣid* through methodological analysis of Islamic texts (i.e., the Qur'ān and hadith). This methodology has proven the truth, fundamentality, and depth of connectivity (*ṣilah*, *'alāqah*) that manifests in the form of a web pattern (*nasaq*, *nazm shabakī*) between the absolute—'the seen and the unseen'—and 'the material and the non-material'. Furthermore, it proves that the study of the 'patterns of connectivity' resulted in the 'emergence of complex' (*murakkab*), 'holistic' (*kullī*), and 'meaning' through the relationship of various parts. The main component of this 'holistic meaning' is called *maqāṣid* (Auda, 2021). Auda's systems approach was then chosen with the assumption that the Qur'ānic texts related to consumption have a holistic meaning: Islam encourages a Muslim to use his intelligence

in his consumption behaviour. This holistic meaning is being argued by using Auda's (2011) seven elements of *maqāṣid*, as shown in **Figure 1**.

**Figure 1** shows a network consisting of seven elements of consumption intelligence based on Qur'ānic texts. Forty verses have been referred to in producing the web, which then established the foundation of the *maqāṣid*-consumption intelligence scale. Auda (2021) asserted that the seven *maqāṣid* elements help to understand the interconnectivity between various issues and that issues are to be viewed from a holistic perspective, including when considering consumption issues (Auda, 2021). In this regard, seven meanings of consumption intelligence are formulated through this holistic network.

**Figure 1: Consumption Intelligence Based on Auda's (2011) Seven Elements of *Maqāṣid***



Source: Authors' own



First, regarding *al-maḥāṣim* (the concepts), Allah (SWT) highlights the following critical issues that set the principles for consumer behaviour, such as:

1. *Ḥalāl-ṭayyibān* (legal and proper). Halal food has been described in detail by Islam. However, the word 'halal' has been juxtaposed with the term '*ṭayyibān*' (wholesome) such that halal food can be identified as food which is permissible and which is beneficial for a person's health (Nuraini, 2018).
2. *Al-fawāḥish* (immorality). The term combines the concepts of halal (legal), *ṭayyibān* (right intention) and *ṭayyibāt* (absolute right) (Rahmadani, 2015; Fauzi, 2020). It implies that Islam teaches that there are norms relating to consumption choices, so that consumption behaviour is in accordance with Islamic criteria, i.e., halal and good.

Second, the holistic meaning of consumption is correlated with *al-fi'ah* (the group). There are specific 'groups' that are referred to in Qur'ānic verses that are related to consumption and consumer behaviour, i.e., *al-kāfir* (the infidel); *al-rasūl* (the messenger); *al-mufliḥūn* (the successful); *al-mu'minūn* (the faithful); *al-musrifūn* (the extravagant); *qawm yatafakkarūn* (intellectuals); and *al-mu'tadin* (the aggressors). The holistic meaning that can be drawn from these keywords can be expressed thus: 'Muslim consumers should ideally be rational in their choices, and must also imitate the consumption behaviour of apostles and prophets, so as not to fall into groups that are described as 'excessive' and the disbelievers who use consumption as a means to maximise utility'.

Third, under the concept of *al-sunan* (universal laws), there are two universal laws that must be highlighted by Muslims: 'disobeying Allah's law is the beginning of corruption and destruction' and 'every disobedience will be punished'. These affirm that a person who consumes excessively and defies Sharī'ah rules will undoubtedly harm himself (Zouhair, 2017).

Fourth, the network of values from the Qur'ān emphasises that consumption must be laid on Islamic foundations. Therefore, Muslims' consumption behaviour should endorse religious values, i.e., truly paying attention to and obeying Islamic law, reflecting piety, Sharī'ah compliance, and following the Sunnah (Sandıkcı & Jafari, 2013).

Fifth, the concept of proofs is closely related to the evidence given by Allah (SWT) as a framework that must be considered in achieving the main goals of Islam. There are two implications of this term:

1. That obstacles to achieving goals are caused by several things, such as *kufur*; rejecters of faith tend to seek enjoyment of all the facilities of worldly life (Qur'ān, 47:12), and this disbelief will probably lead to a crisis, which is indicated by the phrase 'seven years of crisis' (Qur'ān, 12:48);
2. That objectives can be achieved by optimising resources, and this is indicated by the term 'easy-to-use resources' (Qur'ān, 67:13); and avoiding damage to, for example, the environment (Qur'ān, 17:16).

Sixth, the concept of *awāmīr* (commands) establishes a framework in which Allah (SWT) uses imperative sentences to emphasise the existence of *maqāṣid* in every Islamic provision regarding consumption (Al-Zarkasyi, 1992). Several command words are found in verses related to consumption, such as: eat, drink, take, and be cautious. Every imperative sentence used by Allah

(SWT) related to consumption has meaning and purpose, such as promoting *maṣlahah* (benefit) at the individual and community level (Al-Khalifi, 2004).

The seventh concept relates to *maqāṣid*-building (Islamic objectives). From various Qur'ānic texts on consumption, the *maqāṣid* can be formulated that directly refer to consumption intelligence, namely:

1. Allah (SWT) prohibited individuals from being excessive in consumption because of the *mafsadah* (damage) it entails.
2. Consumption intelligence is about individual consistency towards developing Islamic consumption ethics.
3. Exaggeration in consumption is an indicator that individuals prioritise their lusts and follow only momentary desires (Sandıkcı & Jafari, 2013).

The *maqāṣid al-Sharī'ah*, when understood correctly in the context of consumption, set the foundation for shaping individual awareness and for Muslims to be aware of ethics and Islamic consumption norms.

## METHODOLOGY

### Study Design

The study aims firstly to formulate a measurement scale for *maqāṣid*-based consumption intelligence. For this purpose, the question items entirely refer to the implicit and explicit meanings of the Qur'ānic verses on consumption. The study also aims to test the measurement scale through a quantitative approach to develop valid, reliable and comprehensive instruments. In this regard, this study applies two methods: the EFA and the CFA. Watkins (2018) believed that the EFA, as a multivariate statistical method, has become essential in developing, validating, and measuring various psychological theories. Given the advantages of the EFA approach, the *maqāṣid*-consumption intelligence scale can be validated and then be introduced as an instrument. Hoyle (2004) identified CFA as a statistical procedure for testing communal hypotheses between variables. As a multivariate procedure, CFA is used to test multiple hypotheses simultaneously.

Based on the two approaches adopted in this study, this research thus involves two stages. The first stage is the validation of the *maqāṣid*-consumption intelligence scale. The second stage tests the hypothesis on the variables that make up the *maqāṣid*-consumption intelligence scale.

### Participants

The EFA and CFA approaches were applied to data collected from an online questionnaire from 388 respondents from various Islamic universities in Indonesia. The data-collection process was carried out over two months from April until May 2021. Kyriazos (2018) confirmed that the sample size for the EFA approach can range from 50 to 1000. In this regard, the respondents were classified into two groups for the analysis stage: 88 were used for the EFA approach and 300 were used for the CFA approach. **Table 1** shows the demographic details of the data, as summarised below:

1. The respondents were from 13 provincial cities in Indonesia.
2. The age of the respondents varied from 17 to 35 years.
3. Female respondents were more dominant representing 71 per cent of the sample while male respondents comprised 29 per cent.
4. The respondents were from 13 universities in Indonesia. The largest group of respondents comprised students of IAIN Curup, Bengkulu (33 per cent), followed by students from UIN Sultan Thaha Saifuddin Jambi (26 per cent).
5. The respondents were registered as students in semester two to semester 10.
6. 67 per cent of respondents claimed to have previously come from Senior High Schools (SMA/SMK) while 33 per cent were from *pondok pesantren* (Islamic boarding schools) and *madrasahs* before enrolling in a university.
7. Relating to monthly living expenses, 64 per cent of respondents incurred a monthly cost of IDR500,000 while only 3 per cent of respondents claimed to have a monthly living cost of more than IDR2,000,000.

**Table 1: Respondents' Statistics**

Variable	Observations	Mean	Std. Dev.	Min	Max
City	388	4.358	2.908	1	13
Age	388	20.379	1.825	17	35
Gender	388	.711	.454	0	1
University	388	4.33	2.907	1	13
Semester	388	4.711	2.014	2	10
School	388	1.332	.472	1	2
Monthly Spending	388	1.51	.776	1	4

Source: Authors' own

## Data Analysis

The data were processed through Stata 16.0. Analysis can be carried out more effectively through this software. Through descriptive statistical analysis, the Mean and Standard Deviation values of continuous, frequency, and percentage variables were obtained. Internal consistency testing was evaluated through Cronbach's coefficient; the acceptable reliability value in preliminary research should be  $> 0.5$ . The construct validity of the *maqāṣid*-consumption intelligence scale was validated using EFA and CFA, respectively (Wu *et al.*, 2020).

In the application of EFA, the factor structure was extracted through principal-component analysis with 'varimax rotation', whereby Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity were used to determine whether the sample was adequate for EFA. The loading factor criteria were selected from 0.4 to 0.6 (Nunnally & Bernstein, 1994; Wu *et al.*, 2020).

As for the CFA analysis, the new model was considered 'fit' (goodness of fit) when it met the appropriate rules such as the value of relative Chi-square ( $X^2/df$ ), Comparative Fit Index (CFI), Non-Normed Fix Index/Tucker-Lewis Index (NNFI/TLI), Root Mean Square Error of Approximation (RMSEA), and Standardised Root Mean Square Residual (SRMSR). In light of the provisions, the new model was considered fit and valid for the data if it met the following criteria: CFI and TLI's cut-off value  $> 0.90$  (High fit) or  $> 0.80$  (moderate fit); RMSEA  $< 0.08$  and SRMR 0 to 1 (Hair *et al.*, 2014, 2019; Wu *et al.*, 2020). In addition, the cut-off value of p-

value  $< 0.05$  was used as a benchmark to evaluate the value of statistical significance. Thus, the *maqāṣid*-consumption intelligence scale can be declared valid, reliable, and comprehensive, if the model met the needed requirements.

## RESULTS

This section presents the study's results through two approaches: EFA and CFA. The EFA is intended to measure the construct validity of the *maqāṣid*-consumption intelligence scale. The CFA is expected to validate the model after it meets the criteria based on the EFA test.

### Item Validation of the *Maqāṣid*-Consumption Intelligence Scale through EFA

Referring to the model introduced by Hair *et al.* (2014), several steps are required to operationalise the EFA for a psychometric scale. The first stage is to define the research problem (Hair *et al.*, 2014). At this stage, the *maqāṣid*-consumption intelligence scale is formulated through a philosophical reading of the Qur'ānic verses related to consumption. There are 43 Qur'ānic verses which have been identified as being related to consumption. These verses are grouped based on their relevance to the elements that make up the *maqāṣid*-consumption intelligence scale, namely: metacognition, cognition, motivation, and behaviour. In Islamic epistemology, referring to and deriving a questionnaire from the Qur'ān is considered valid, even representing an outstanding effort that Muslim scientists must carry out (Furqani, 2017). In this regard, a scientific approach, i.e., falsifying or verifying the data and models proposed, is required when developing any economic scale, including the *maqāṣid*-consumption intelligence scale.

In the positivistic paradigm, the *maqāṣid*-consumption intelligence scale is tested for relevance and feasibility to be validated through EFA using Bartlett's test. Lovric (2011) explained that Bartlett's test is an inferential procedure used to determine the variance quality for different samples. In addition, the KMO test is used to assess the adequacy of the model when using EFA on one scale (Hadi *et al.*, 2016). Before validating the *maqāṣid*-consumption intelligence scale, these two tests were conducted to obtain confidence that the sample was sufficient for EFA.

As shown in **Table 2**, the KMO value is 0.871. This value has exceeded the required value in the KMO test, which is 0.5 (Kaiser, 1974; Hadi *et al.*, 2016). **Table 2** also indicates that the value of the Bartlett's test is significant, with a p-value of 0.000. The statistical values generated through Bartlett's and KMO tests suggest sufficient intercorrelation to perform EFA on the *maqāṣid*-consumption intelligence scale (Lovric, 2011). Fornaciari *et al.* (2005) mentioned that, after analysing the feasibility of the data, it is necessary to extract the factors used in studies to validate the scale. At this stage, the iterated principal factors (IPF) method is applied. IPF is a technique that involves the development of principal component analysis for multidimensionality reduction, which is used to reduce the dimensions of the data set through the process of transforming broad variables into more straightforward variables while retaining a wide range of information (Fornaciari *et al.*, 2005). Thus, the IPF method is intended to:

1. Summarise the pattern of correlation between the observed variables.
2. Reduce a large number of variables to a small number of factors.

3. Provide an operational definition of the main dimensions of the use of the observed variables.
4. Test the underlying theory.

**Table 2: KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.871
Bartlett's Test of Sphericity	Approx. Chi-Square	3182.604
	Df	820
	Sig	.000

Source: Authors' own

A subset of the EFA is related to the *maqāṣid*-based consumption intelligence scale. It tests the 88 State Islamic University students for the resulting statistical values, as shown in **Table 3**. Validating the scale is done through the IPF method (Trendafilov *et al.*, 2017). It produces statistical information which then serves as the foundation for reducing or extracting items for the *maqāṣid*-based consumption intelligence scale. The values refer to rotated-loading factors, uniqueness, eigen-values, variance percentage, cumulative variance, and Cronbach's alpha. In the EFA analysis, Tabachnick and Fidell (2012) determined that items with a loading factor value below 0.32 should be eliminated. The loading factor values for the items included in the *maqāṣid*-based consumption intelligence scale, which were classified into the following variable groups, are as follows:

1. Metacognitive group of variables: Within this group, the lowest loading factor value of 0.4622 is for the item 'avoiding haram food is a protection from endorsing the characteristics of *kuffār* (disbelievers)'. In terms of uniqueness values—ability of an item to explain the variability in a set of variables (Kyriazos, 2018)—this item has a uniqueness value of 0.4203 (i.e., uniqueness rate of 42.03 per cent). Therefore, this value has met the minimum requirements to retain the item (**Table 3**). Meanwhile, the highest loading factor value of 0.6241 is for the item 'Eating and using halal products is in line with the Shari'ah'.
2. Cognitive group of variables: Within this group, the item with the lowest loading factor value of 0.4305 is 'following the Sunnah of Prophets is a good example of how halal products should be consumed'. Meanwhile, the uniqueness value at this lowest loading factor is 0.355. The highest loading factor value of 0.5576 is found for the item 'I can consume more fruits to strengthen the body' with the uniqueness value at 47.4 per cent.
3. Motivation group of variables: Within this group, the item with the lowest loading factor of 0.4323 is 'providing halal food to the family is a form of abiding by God's law'. Its uniqueness value is 0.427 (42.7 per cent). On the contrary, the item with the highest loading factor is 'Halal is also related to behaviour and methods of getting something (halal behaviour)', with a loading factor value of 0.6812, and a uniqueness value of 0.348.
4. Behavioural group of variables: Within this group, the item with the lowest loading factor of 0.4944 is 'I should be moderate in my consumption behaviour of halal products'. Its uniqueness value is 0.666. The item with the highest loading factor of

0.7932 is for 'Consuming halal food and drinks requires firm determination for it to be developed as a habit' with a uniqueness value of 0.279.

The above-mentioned four dimensions indicate a scale with sufficient items. This is indicated by each dimension having items with the highest loading factor, and it can be interpreted that these items are reliable and valid in measuring latent factors. Meanwhile, items with low loading factor values that meet the validity criteria mean that the item is sufficient to measure each dimension on the *maqāṣid*-based consumption intelligence scale (Kyriazos, 2018). In addition, the application of EFA has excellent and significant correlation values. In this regard, Larsen and Warne (2010) require eigenvalue  $> 1$  to determine how many factors can be formed on one scale. Based on the eigenvalue criterion, there are four factors included, namely:

1. The metacognitive *maqāṣid*-consumption intelligence, with an eigenvalue of 18.102.
2. The cognitive *maqāṣid*-consumption intelligence, with an eigenvalue of 2.461.
3. The motivation of *maqāṣid*-consumption intelligence, with an eigenvalue of 1.875.
4. The behaviour of *maqāṣid*-consumption intelligence with an eigenvalue of 1.062.

Referring to the provisions confirmed by Larsen and Warne (2010), the four factors can be accepted and become a group of items based on the 'loading factor' value mentioned in **Table 3**.

In addition, Howard (2016) interprets 'variance percentage' and 'cumulative variance' as the value and amount of variance that can be explained by each factor. Cumulatively, the variance value that each factor can explain is above 70 per cent. This value is very significant and, of course, very good for a scale.

The value of Cronbach's alpha for each factor exceeds the value of 0.7 required (Nunnally & Bernstein, 1994). In **Table 3**, it can be seen that the value of Cronbach's alpha for each factor is 0.8814, 0.8026, 0.8911, and 0.7619. Consequently, the items offered on the *maqāṣid*-consumption intelligence scale can be trusted and rated as valid based on the EFA test.

The next stage is hypothesis testing, i.e., whether the 'observed-variable' and 'latent variable' have a close and significant relationship (Kyriazos, 2018). For this reason, the CFA approach is used.

### ***Maqāṣid*-Consumption Intelligence Scale: CFA Approach**

There are 21 items on the *maqāṣid*-consumption intelligence scale for the CFA test, as listed in **Table 3**. They are grouped into the four groups of variables as follows:

1. Metacognitive group of variables: This refers to a Muslim's metacognitive ability to identify *maqāṣid* related to halal and prohibited consumption (Hasan, 2005). The ability of a Muslim to identify messages from Sharī'ah rules related to halal and haram ultimately determines intelligence in consumption behaviour.
2. Cognitive group of variables: This refers to aspects of a Muslim's knowledge about the habits and commitments of prophets and messengers to consume halal food and drinks (Shaikh *et al.*, 2017). In addition, it refers to a Muslim's knowledge of the rewards for being consistent in consuming halal food.

3. Motivation group of variables: This explains why a Muslim with the intelligence of *maqāṣid* values consistently consumes halal food. In principle, the motivation to consistently consume halal is founded on faith and adherence to the teachings of the Sharī'ah.
4. Behavioural group of variables: This refers to consumption behaviour based on consistency and not excessiveness, including the consumption of halal products. It sets the foundation of the behaviour of a Muslim who has consumption intelligence based on Sharī'ah values (Zatadini & Syamsuri, 2018).

The items formed as a product of the EFA and CFA tests become a unit to measure the intelligence of consumption behaviour of a Muslim who consistently pays attention to and is aware of the values of *maqāṣid al-Sharī'ah*. The model generated through the CFA can be accepted and applied as a proper scale for measuring the level of *maqāṣid*-consumption intelligence at the individual level of a Muslim society.

Several arguments can be put forward why the model resulting from the CFA test is judged to be valid and consistent with the various constructs produced. The arguments refer to the Comparative Fit Index (CFI), Non-Normed Fit Index (NNFI/TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMSR). As mentioned earlier, the model is considered fit and valid for the data if it meets the following criteria: the cut-off value of CFI and TLI  $> 0.90$  (high fit),  $> 0.80$  (moderate fit); RMSEA  $< 0.08$  and SRMSR 0 to 1 (Hair *et al.*, 2014, 2019; Wu *et al.*, 2020).

The CFI and TLI values generated through the model are 0.968 and 0.958, respectively. It indicates that the model proposed through the CFA test can be accepted because it is close to the value of 1 (Babin & Sarstedt, 2019). The RMSEA value is 0.048, which means that it is below the value required by Hair *et al.* (2014) i.e.  $< 0.08$ .

Overall, the statistical requirements needed to produce a fit model through the CFA test have been met on the *maqāṣid*-consumption intelligence scale. The resulting SRMSR is 0.047, which means that it has completed the specified conditions ranging from 0 to 1, and for a 'fit' model, the value must be below 0.05 (Pavlov *et al.*, 2021). This scale is believed to provide a valid measure of the Muslim community's individual intelligence in consumption behaviour, consistent with Sharī'ah values. Nevertheless, it is necessary to explain the philosophical and theological foundations that underlie the items in the four groups of variables considered in this *maqāṣid*-consumption intelligence scale.

**Table 3: Summary of Exploratory Factor Analysis**

Items	Factor Names/Item Description	Qur'ānic Source	Factor Loadings					Cronbach's Alpha
			1	2	3	4	Uniqueness	
	<b>1. Metacognition</b> - I am conscious that:							0.8814
M1	halal consumption is the best way to be grateful to Allah (SWT)	26:79	0.5267				0.666	
M2	halal products have been mentioned clearly by Allah (SWT)	12:47	0.5368				0.345	
M3	obeying Islamic rulings on consumption is a form of piety	12:48	0.6318				0.527	
M4	efforts should be made to avail of halal products	6:121	0.4962				0.429	
M5	avoiding haram food is a protection from endorsing the characteristics of <i>kuffār</i> (disbelievers)	77:46	0.4622				0.423	
M6	eating and using halal products is in line with the Sharī'ah	23:52	0.6241				0.634	
	<b>2. Cognition</b> - I know that:							0.8026
C1	following the Sunnah of Prophets is a good example of how halal products should be consumed	77:43		0.4305			0.355	
C2	excessive consumption is part of <i>shirk-khafī</i> (deifying other than Allah)	6:120		0.5239			0.564	
C3	haram food can cause the heart to be neglectful	15:3		0.5309			0.341	
C4	I can consume more fruits to strengthen the body	6:141		0.5576			0.474	
C5	I should read labelling information for the products I buy for consumption	5:3		0.5006			0.391	
C6	In some conditions, consumption of fish is healthier than consumption of meat	5:96		0.5007			0.656	
	<b>3. Motivation</b> - I am sure that:							0.8911
M01	Halal is also related to behavior and methods of getting something (halal behavior)	2:168			0.6812		0.348	
M02	Allah (SWT) is the Giver of sustenance and requires that I use His gifts for lawful things	26:79			0.5115		0.399	
M03	providing halal food to the family is a form of abiding by God's law	17:26			0.4323		0.427	
M04	the habit of consuming haram products can lead me to go astray from the path of God	17:27			0.4428		0.396	
M05	halal food is available abundantly	67:15			0.4450		0.404	
	<b>4. Behaviour</b> – I consistently make effort and believe that							0.7619
B1	consuming halal food and drinks is a necessity for me	7:31				0.6162	0.589	
B2	consuming halal food and drinks requires firm determination for it to be developed as a habit	25:7				0.7932	0.279	
B3	Consuming halal food and drinks requires consistency	25:20				0.6185	0.453	
B4	I should be moderate in my consumption behaviour of halal products	25:67				0.4944	0.666	
Eigenvalue			18.102	2.461	1.857	1.062		
% Variance			15.641	0.604	0.493	0.301		
Cumulative Variance			0.761	0.864	0.942	1.000		

Source: Authors' own



## DISCUSSION

Using EFA and CFA approaches, this study offers a helpful scale for measuring consumption intelligence based on *maqāṣid al-Sharī'ah*, termed the *maqāṣid*-based consumption intelligence. The *maqāṣid*-consumption intelligence scale is a four-dimensional construct consisting of 21 items. This scale refers to psychometric instruments that measure consumer intelligence in understanding the purpose of Sharī'ah and that are considered in an individual's consumption decisions.

The findings of this study prove the doctrine that every human being, especially Muslims, tend to act in accordance to his *fiṭrah* (pristine human nature) (Qur'ān, 30:30). Concerning consumption intelligence, this verse affirms the potential of human awareness of *maqāṣid al-Sharī'ah* (Al-Attar, 2017). When this awareness thrives in a Muslim, it fosters a specific intelligence, such as consumption intelligence, which takes into consideration Islamic values and morality in one's consumption decisions. This kind of belief is in line with Wilson's (2012) view, which places awareness of *maqāṣid al-Sharī'ah* as the foundation of individual moral intelligence. This fosters individual caution on consumption choices—considering, for example, how to get halal food; the process of choosing food and other halal products; the production method of a product (e.g., whether it complies with halal and hygiene standards); and the impact of consumption choices. High awareness of Islamic morality makes a Muslim more sensitive to various Islamic rules, ethics, and moral issues in consumption. This view is in line with the empirical findings of Aquino and Reed (2002), Tang and Chiu (2003), and Li *et al.* (2022) who argue that a high sense of morality will foster individual intelligence in consumption behaviour. This finding confirms the position of the *maqāṣid*-based consumption intelligence scale as a representation derived from the belief that a strong relationship between awareness of *maqāṣid al-Sharī'ah* values will strengthen morality awareness and foster individual intelligence in consumption behaviour.

## CONCLUSION

The main difference between Islamic and conventional economic consumption behaviour lies in assumptions: Islamic economic consumption behaviour is shaped by an awareness of Islamic values and morality. In contrast, consumer behaviour in conventional economics is built on the axiom of utility maximisation. Therefore, this study contributes to developing the theory of Islamic consumption behaviour through a *maqāṣid al-Sharī'ah*-based consumption intelligence scale. It is a valuable instrument for measuring consumer consumption intelligence based on awareness of Islamic goals and values.

This scale can measure four components of *maqāṣid*-based consumption intelligence for Muslim consumers:

1. Metacognitive intelligence: It refers to the ability of Muslim consumers to control the cognitive domain related to understanding the rules and ethics pertaining to Islamic consumption.
2. Cognitive intelligence: It relates to Muslim consumers' ability to abstract the values of *maqāṣid al-Sharī'ah* related to consumption.

3. Motivational intelligence: It refers to the ability of Muslim consumers to measure the impact of consuming halal and haram products.
4. Behavioural intelligence: It refers to the intelligence of Muslim consumers on consumption based on a good appreciation of Islamic values and goals.

This study's four dimensions of intelligence are essential for developing Islamic consumption theory and help in developing an alternative instrument to explain Muslim consumer behaviour from a *maqāṣid al-Sharī'ah* perspective.

Practically, this study is exploratory, using the EFA and CFA approaches to produce a valid and reliable scale to measure *maqāṣid*-based consumption intelligence for Muslim consumers. It must be admitted that this scale was tested among a minimal number of people, namely the millennial generation (students), at 13 universities in Indonesia. To increase the scope of the test in the future, and as a suggestion for future studies, scholars of Islamic economics can test this scale on a broader population. Nevertheless, this study can have positive implications for the financial and halal industries by using the scale offered to measure consumer awareness of Islamic values. This scale can be used as a reference for deciding and implementing segmentation, positioning, and branding strategies for Muslim consumers.

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