

PRIMARY RESEARCH

Towards a *Maqāṣid al-Sharī‘ah* based Development Index

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Abstract. This study examines the theoretical framework, develops axioms and a method to gauge socio-economic development in line with *maqāṣid al-Sharī‘ah*. The measure is disaggregated and multidimensional to facilitate policy guidance at various levels of aggregation. The study applies Alkire-Foster counting methodology to construct *maqāṣid al-Sharī‘ah* Index using World Values Survey data for Pakistan. Results based on *maqāṣid al-Sharī‘ah* head count index show that 39% of the population is falling short of desirable level in *maqāṣid al-Sharī‘ah*. Intensity index of *maqāṣid al-Sharī‘ah* (MS) reveals that the average poor person with regard to MS is deprived in 31% of the indicators. The multidimensional poverty in terms of *maqāṣid al-Sharī‘ah* is 12% in which the contribution of posterity is lowest (4.20%) and that of property is the highest (50%) suggesting a need to improve protection of wealth in MS sense in Pakistan. Comparing with the multidimensional poverty calculated by the Oxford Poverty and Human Development Initiative (OPHI) and United Nations Development Programme (UNDP), Pakistan performs better in *maqāṣid al-Sharī‘ah* based-Index related to multidimensional poverty, as well as in the incidence and average intensity of poverty. *Maqāṣid al-Sharī‘ah* based-Index uses more dimensions and higher thresholds for deprivation cut-off as compared to OPHI and UNDP index, yet the poverty numbers are lower. This shows a better socio-economic condition in Pakistan in the dimensions of *maqāṣid al-Sharī‘ah*.

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INTRODUCTION

Debate on how to measure development and progress of societies has never ended. Different normative theories have been proposed and many more measures or indices have been devised. These range from simple measure such as Gross Domestic Product (GDP) per capita

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to more complex Human Development Index. Some of these indices measured progress and development through the degree of reduction in income poverty. Some went further and tried to measure growth in social opportunities and distribution of those opportunities within low income groups to measure inclusiveness of growth (e.g., Ali & Son, 2007). Some went even further and attempted to measure capabilities deprivation and the extent to which these deprivations can be reduced (e.g., Alkire & Foster, 2011). Going further, some have focused on freedom deprivation to measure reduction in multidimensional poverty.

However, all these measures involve value judgment. Without a sound moral underpinning they remain ad hoc because moral values cannot be created from empirical observations only. Revealed knowledge provided by revealed religion can provide the purpose of life and moral values that can underpin the purpose and scope of measurement of wellbeing and development. A number of researchers have attempted to derive religious and ethical based socio-economic development indices. Among these include Ethics-Augmented Human Development Index (Dar, 2004), Islamic Human Development Index (Anto, 2010) and Islamicity Index (Rehman & Askari, 2010). However, the existing available value-neutral indices are strongly correlated with these indices (Hasan & Ali, 2018). Therefore, almost similar ranking of the countries can be found based on these indices. Recently researchers have started development of indices based on *maqāṣid al-Sharī‘ah*. Chapra (2008) is the prominent theoretical work in this regard. Islamic Research and Training Institute (IRTI) arranged a series of seminars on the construction of *maqāṣid al-Sharī‘ah* Index in which 41 studies were presented¹.

In this study we will construct index based on *maqāṣid al-Sharī‘ah*, namely protection of life, protection of posterity, protection of property, protection of intellect and protection of faith- based on axioms derived from Sharī‘ah. The axioms derived cover most of the teachings related to religious and moral goodness. These axioms also cover the teachings related to divinely and legally punishable activities which are mostly ignored by the existing indices. This will be helpful in assessing a Muslim society on the basis of criteria that fully reflect the intent of Sharī‘ah.

This paper begins with rationalization of why and what to measure (Section-1). It then provides an axiomatic approach (Section-2) and an application to measure *maqāṣid al-Sharī‘ah* based development (Section-3) with some conclusions and thoughts on further possibilities (Section-4).

SECTION-I

Islam, which is continuation and completion of the monotheistic religions, provides a law of dos and don'ts called Sharī‘ah. Scholars who examined Sharī‘ah rules observed that essentially all dos and don'ts that are in Sharī‘ah are for protection and continuity of human society. They find that these rules are there for protection of five aspects or dimensions²; (1)

¹A summary of these studies can be found in Ali and Hasan (2018).

²See for detail Masud (1977).

Protection of self (or life), (2) Protection of faith; (3) Protection of wealth; (4) Protection of intellect; and (5) Protection of progeny.

Protections mentioned here are not for one-time fortification. They are also not restricted to protection against degradation from the existing level of each dimension (say the dimension of life) [in whatever way it is measured], but they are also about enhancement and improvement. In fiqh terminology it is about *daf' al-mafāsīd* (removal of degrading factors and constraints) and *jalb al-maṣāliḥ* (attainment and enhancement of benefits). Thus, for example, protection of self (or life) can include protection against attack on life (by others or self-inflicted), violent crimes, injury (by others or self-inflicted or due to exogenous factors), loss of dignity and honor, disease, unhealthy living conditions, hunger, poverty, fear and insecurity of life, etc. From the enhancement aspect it can include; health, quality of life, feeling of contentment, moderation in consumption, healthy habits, etc.

This opens up the question of minimum protection and then also enhancement of the dimension and likelihood of its sustainability at the achieved level. All these aspects are desirable. Since Sharī'ah provides some basic protections, therefore anything that strengthens and enhances those protections is also desirable.

Objectives of Islam and Sharī'ah

Islam aims to guide and make human beings successful, individually and collectively in *al-ākhirah* (long-run) and in this world (short-run). It is also to save them from the great failure or the ultimate great loss. For this purpose, Allah sent Prophets. The purposes of sending of all prophets to mankind had been: (i) to recite to them *ayāt* (verses) of Allah, (ii) cleanse impurities of all kinds from humans and enhance them, (iii) teach them the book, (iv) provide them wisdom, and (v) teach them that they did not know.³

Measurement of society's development for success in this world and chances of success of average individual in *al-ākhirah* will require methods to measure three major aspects- *al-kitāb*, *ḥikmah* and *tazkīyah*. The progress in attainment of the objectives of Sharī'ah as highlighted in *al-kitāb* provides the basic minimum for humans. The progress in *ḥikmah* attainment provides measurement of collective outcome and the progress in *tazkīyah* attainment provides measurement focused at individualistic level that is hidden in hearts.

Since *al-kitāb* (the book) deals with legal issues (the critical dos and don'ts) therefore its purpose is to provide protection of some basic elements; self, faith, wealth, intellect, and progeny, so that (a) the life continues, (b) it becomes easy to qualify the test and (c) the opportunity of testing remains until the dooms day (*yaūm al-qīyāmah*). *Ḥikmah* (wisdom, particularly, the Sunnah) is more general. It expands to moral values, enhancement of collective life, and understanding of the basics of Sharī'ah (*al-kitāb* and *ḥikmah*). It pertains

³Prophet Ibrahim's supplication to Allah mentioned in Qur'ān (2:129) was for raising a prophet from among them who shall recite to them Allah's *ayāt* and teach them His book and wisdom, and purify them. Allah accepted this supplication and sent His Prophet Muhammad (PBUH) but gave His own hierarchy of these four demands/tasks/requirements from the Prophet. Allah moved the fourth task to be the second and added a fifth task as well. Qur'ān (2:151) mentions that Allah has sent among you a prophet from amongst you who recites to you Allah's *ayāt*, purifies you and teaches you the book and wisdom and teaches you that which you did not know.

to development, refinements, and enhancements of success in this world and in *al-ākhirah* by guiding us to best ways for putting Sharī‘ah into practice. It also pertains to how we can act in our collective life based on our common understanding of Sharī‘ah while taking into consideration each other’s psychology and our own position in this universe. The Qur’ānic reference to Luqman’s wisdom points to our above understanding and explanation. *Tazkīyah*, on the other hand, pertains more to individual souls, cleansing them of impurities (physical, mental and spiritual) that provides enhancement and growth of individual character. It can be collective only in the sense of aggregating over individuals.

On the Measurement of Socio-Economic Development

We cannot measure *tazkīyah* (and *taqwá*) of others and neither we are required to do this evaluation.⁴ So, this aspect must be dropped from our measurement. The nature of *tazkīyah* (and *taqwá*) is such that it determines the outcome of the test that Allah has created in this world for humans. This test is in longevity of life as well as in short life; it is in plenty as well as in dearth of wealth; it is in having offspring as well as infertility; it is also in having high intellect as well as in low intellect; and in high state of *īmān* and low state of *īmān*.

In this context it is pertinent to refer to an authentic *ḥadīth*. The Prophet (PBUH) said: “How wonderful is the situation of the believer, for all his affairs are good. If something good happens to him, he gives thanks for it and that is good for him; if something bad happens to him, he bears it with patience, and that is good for him. This does not apply to anyone but the believer.” (Muslim, Al-Sahih; No. 2999).⁵ In another narration, Strange is the case of the believer that there is good in every affair of his and this is not the case with anyone else except in the case of a believer for if he has an occasion to feel delight, he thanks (Allah), thus there is a good for him in it, and if he gets into trouble and shows resignation (and endures it patiently), there is a good for him in it.⁶

However, among the tests too much or too little of a good thing pose sever test of humans as compared to having moderate amounts of good things that are considered to be sufficient. If someone is given plenty of wealth than others, and if such people are spending their wealth on themselves, their family and on others as charity then this would be beneficial for them as well as beneficial for the society. We would say the society is progressing.

Simultaneous to the above message of indeterminacy it is also clear from Islam’s message that Allah does not want people to put themselves in undue hardships, neither in acts of worship (*‘ibādat*) nor in their mutual dealings (*mu‘āmalāt*). He does not recommend inviting tests and difficulties on themselves. Allah would like to provide ease over difficulty and would like his slaves also to choose in similar way. Thus, there is a clear preference for ease and lightness over difficulties and burden. Due to this, health is preferable over disease (though there can be test in both situations), sufficiency over poverty, open available time over shortage of time, happiness over misery, etc.

⁴One can do self-evaluation of own *īmān* and *taqwá*, but not of others in any real sense.

⁵<http://hadithcheck.blogspot.com/2010/11/sahih-how-wonderful-is-affair-of.html>

⁶<http://sunnah.com/urn/271380>

Since the objectives of laws are to provide a minimum level of protection, it is relatively easier to measure and compare progress towards achievement of that minimum than measuring and comparing progress across societies through variables that do not have an upper bound. With minimum level attainment approach, we can measure whether or not these protections are universally available to everyone in the living and the future population. If these protections are not available to all, then the progress in this direction can be measured by finding the proportion of the existing population who do not fall in the deprived group. Or one minus the proportion of population to whom those protections are not available. In this method of measurement, the target/goal becomes well-defined and the gap between the present position and the target provides a measure of society's progress. Therefore, we intend to focus on the '*al-kitāb*' part and gauge the progress in terms of attainment of minimum threshold for each *maqāṣid* (objective) of Sharī'ah. On the other hand, *ḥikmah* and *tazkīyah* will be captured indirectly, as the attainment of the legal objectives at a larger population level is not possible without progress in the other two aspects.

In what follows, we describe the importance of *maqāṣid* and the evaluation of Muslim countries from MS perspective for socio-economic development.

The importance of five *maqāṣid* is highlighted by several narrations of the Prophet (PBUH). One of these narrations is about the questions to be asked from every person by Allah on the Day of Judgement. These questions are related to life, youth, earning & spending wealth, and utilization of knowledge, which can be linked to four of the five *maqāṣid al-Sharī'ah*: preservation of life, preservation of posterity, preservation of property, and preservation of intellect respectively whereas the fifth- preservation of faith-encompasses all five questions:

The prophet Muhammad (PBUH) said: "The son of Adam will not pass away from Allah until he is asked about five things: how he lived his life, and how he utilized his youth, with what means did he earn his wealth, how did he spend his wealth, and what did he do with his knowledge." (*Ṣaḥīḥ ḥadīth* reported by Imam Al-Tirmidhi)

That is why the purification of soul (*tazkīyah*) is very important to attain the major purpose of all Islamic teachings the fear of Allah (*taqwā*). The individuals who attain high level of *taqwā* abstain from wrong doings and follow the right path given by Sharī'ah. The level of *taqwā* is hidden and it manifests itself in the form of actions. For example, the purpose of *ṣalat* (prayer) is to enhance *taqwā* and it is observed through the degree of abstinence from wrong doings and shamelessness.

Taqwā leads to religious goodness (e.g., prayer, fasting, charity, pilgrimage, etc.) and moral goodness (e.g., good to parents, kindness, generosity, discipline, good governance, etc.), and protects from activities strongly condemn by Sharī'ah, some are divinely punishable (e.g., *shirk*, *ribā*, oppression, etc.) and some of which are legally punishable (e.g., crimes covered by *ḥudūd* laws). Our purpose in the derivation of axioms is to encompass most of the Islamic teachings related to religious and moral goodness as well as teachings related to divinely and legally punishable activities. Most of the MS based indices and other conventional indices largely ignore these aspects and, hence, lead to, more or less, same conclusion. It is, therefore, important to assess a Muslim society based on criteria that fully reflect the intent of Sharī'ah.

A behavioral change as opposed to a material change is more important for the socio-economic development of a Muslim society since a Sharī‘ah-compliant behavior would lead to success in this world as well as the world hereafter. The goal of Islamic welfare economics is to facilitate an individual to achieve success in both the worlds by transforming the behavior. The achievement towards the goal can be evaluated through an appropriate MS index.

In the section below, we provide an axiomatic approach with an application to measure *maqāṣid al-Sharī‘ah* based development. In this example we have used only the opinion surveys, however, it need not be restricted to such. Objective and verifiable economic and social data can also be combined.

SECTION 2

Practical Aspects of Measurement

The moral backslide along with human sufferings and socio-economic decline in most of the Muslim countries, and in developing countries in general pose serious policy challenges for these countries in the context of human welfare. The protection of faith, life, intellect, posterity, and property-the *maqāṣid al-Sharī‘ah* (MS) - has been considered as a pivotal to enhancing human welfare by eminent classical Muslim scholars like al-Ghazali and al-Shatiabi. Relatively more recently, Chapra (2008), among others, emphasizes the use of MS in socio-economic development of Muslim world. There has been a need to build information based on MS to assist policy makers in realizing these goals (*maqāṣid*) which not only cover social and economic dimensions like human development, but also include values, morality, family, and faith and thus provide an encompassing framework for development in Muslim countries.

The paper aims to contribute to this effort by developing a framework by deriving axioms from Qur’ān and Sunnah related to each objective of Sharī‘ah and then construct a *maqāṣid al-Sharī‘ah* (MS) index following Alkire and Santos (2014) and Alkire and Foster (2011) dual cut-off multidimensional counting approach. The paper selects a counting approach vis-à-vis a welfare approach since the former is an application tool whereas latter is a theoretical framework (see, Atkinson, 2003, for comparison between these two approaches).

Among the counting approaches, the paper chooses Alkire-Foster (AF) approach due to its axiomatic properties and empirical content. Since no survey questionnaire is specifically designed for measuring MS, the MS are quantified by grouping the survey questions in World Values Survey (WVS) that seem to relate to each dimension of MS. The advantage of using WVS dataset is that it is available in public domain for most of the countries and hence provides a common dataset for a cross-country comparison. The questionnaire used is checked for conformity with the MS axioms.

As noted above, the multidimensionality of human welfare has long been recognized by Muslim scholars and much earlier than its present-day focus. However, Sen (1985, 2000) and Haq (1995) made it popular and usable by developing Human Development Index

(HDI), first issued by UNDP (1990) and every year thereafter with improvements in data and method.⁷ The parsimony and multidimensionality have made HDI a very good indicator for evaluating human development across the world. Inspired by this experience, many scholars have attempted to extend HDI in MS direction (see, for example, Anto, 2009; Dar, 2004; Rehman and Askari, 2010). Although these indices facilitate a cross-country comparison and help policy makers to set goals, yet they do not provide details or decomposition at regional or at household/individual levels within each country with the exception of the index developed in Ali and Hasan (2018) for OIC countries. Such details could be useful for effective policy implementation at grass root level and could also be applied for project appraisal, and for evaluation of sectoral or institutional performance. At the same time, it could be aggregated to show an overall picture. The present paper is a first attempt in this direction.

Axioms for *Maqāṣid al-Sharī'ah* Measurement

The objectives of Sharī'ah could be achieved in the highest degree only when Sharī'ah is implemented in true letter and spirit. The section illustrates the desirable properties of an MS index with a key objective to attain justice in a society. These desirable properties are mentioned as axioms. In general, higher values of MS index are desirable but for the MS deprivation index the lower values are appropriate.

Because of the importance of *maqāṣid al-Sharī'ah* for this world and the world hereafter, we list some of the axioms for each MS dimensions to guide us in developing or selecting appropriate indicators for an ideal MS index. The purpose of these axioms or properties is two-fold: to check whether the index constructed consists of right class of indicators and to verify that the index is capturing the Sharī'ah perspective correctly. If an index is insensitive to most of these axioms, then it means it is not a right MS index. Extreme care is required to choose the proper method of aggregation since some indicators increase the MS index, while others decrease it. Following are the axioms:⁸

Wealth Protection Axioms

Transfer: MS index should increase whenever *zakāh* and *ṣadaqāt* are transferred from an individual above the poverty line to an individual below the poverty line holding other factors constant.

Intergenerational Transfer: MS index should increase whenever inheritance amount is transferred according to Sharī'ah to all heirs, holding other factors constant.

Exchange: MS index should decrease whenever money is borrowed/lent on interest (*ribā*), holding other factors constant.

Spending: If spending leads to in *isrāf* or *tabdhīr* then MS index should decrease in value. In case of moderation (*iqtisād*) in spending in *ḥalāl* and mub goods and services, MS index should increase in value holding other factors constant.

⁷Stanton (2007) provides a good summary of the history of Human Development Index.

⁸The axioms are not written in the order of importance.

Earning: If *ḥalāl* earning increases then MS index should increase and if earning through *ḥarām* means (like gambling, hoarding, less-than full measurement *taṭfīf*, *ribā*, etc) increases then MS index should decrease, holding other factors constant.

Accumulation: If wealth accumulates with regular payment of *zakāh* and *ṣadaqāt* then MS index should increase and if wealth accumulates without any payment of *zakāh* then MS index should decrease, holding other factors constant.

Risk: If risk of loss of wealth increases then MS index should decrease holding other factors constant.

Fairness: If there is fair access to earning then MS index should increase, holding other factors constant.

Life Protection Axioms:

Security: MS index should increase when life security increases holding other factors constant.

Health: MS index should increase if there is an access to health facilities holding other factors constant.

Time use and leisure activities: MS index should increase if time is better utilized in Sharī‘ah compliant activities holding other factors constant.

Physical fitness: MS index should increase for easy and affordable access to sports and fitness facilities holding other factors constant.

Intellect Protection Axioms:

Fairness: MS index should increase if there is fair access to learning for all, holding other factors constant.

Harmfulness: MS index should decrease if there is an easy access to activities harmful for intellect holding other factors constant.

Practice: MS index should increase if religious knowledge is turned into practice, holding other factors constant.

Education: MS index should increase with the level of education, holding other factors constant.

Research: MS index should increase for useful and applied research, holding other factors constant.

Faith Protection Axioms:

Tawhīd: MS index should increase for the belief in Allah (one God) holding, other factors constant.

Prayers: MS index should increase for easy access to masjid for daily prayers, holding other factors constant.

‘Umrah/ḥajj: MS index should increase with affordability for performing Umrah/ḥajj, holding other factors constant.

Fasting: MS index should increase for convenience in fasting during Ramadhan, holding other factors constant.

Zakāh: MS index should increase for easy access to *zakāh* collection/payment, holding other factors constant.

Religious education: MS index should increase with easy access to quality Islamic education, holding other factors constant.

Time spent: MS index should increase for time spent on religious education and programs or time spent in *Masjid*, holding other factors constant.

Posterity Protection Axioms:

Marriage: MS index should increase for easy and affordable access to marriage, holding other factors constant.

Family life: MS index should increase for happy family life, holding other factors constant.

Solidarity: MS index should increase if children spending time with their parents and grandparents, holding other factors constant.

Immorality: MS index should decrease for access to immoral activities, holding other factors constant.

Mortality: MS index should decrease for child mortality in family, holding other factors constant.

Home: MS index should increase for mother staying at home for upbringing children, holding other factors constant.

Time spent: MS index should increase if children spent time in *Sharī'ah* compliant activities, holding other factors constant.

Respect: MS index should increase for respect of parents, holding other factors constant.

Religious practice for kids: MS index should increase if children memorizing part or whole *Qur'ān* and going to *masjid*, holding other factors constant.

DATA AND METHODOLOGY

Data

The most important aspect of developing MS index is to have indicators fully representing MS dimensions. Ideally, indicators related to MS should be developed from a questionnaire that satisfies above axioms. But practically such questionnaire is not available and we need to search for proxies that do the job. The survey data that is available on public domain and that provides somewhat relevant information is World Values Survey (WVS) data. It has many survey rounds and each round has slightly different questionnaire. The present study uses survey data for 2005-08 for Pakistan to illustrate the application of methodology used in this study.⁹ It analyses the survey questions for 2010-2012 and 2005-2008 for conformity with MS axioms.

The following (Table 1) shows the grouping of survey questions for each MS dimension in the way that the association between indicators within each dimension is theoretically

⁹At the time of writing this paper, the survey for 2010-12 was not completed but it had more relevant questions than the questions asked in the available survey data for 2005-2008 and for earlier years.

strong. We list the variables related to a dimension given in the WVS 2010-2012 in Table 1 below:

TABLE 1
Maqāṣid al-Sharī'ah dimensions and their indicators in WVS 2010-2012

Dimension	Variable	Indicator Hint (See Full Question in the Survey)
Faith	V145	Attendance in religious services
	V146	Frequency in prayer
	V147	Religious, non-religious or atheist person
	V148	Belief in God
Life	V55	Freedom of choice in life
	V177	Preferred not to go out at night
	V179	Victim of crime last year
	V180	Immediate family victim of crime last year
	V183	A war involving my country
	V184	A terrorist attack
	V185	A civil war
	V188	Gone without enough food to eat
	V189	Felt unsafe from crime in your home
Intellect	V182	Not being able to give my children a good education
	V248	Highest level of education
	V172	Alcohol consumption in streets
	V175	Drug sale in streets
Posterity	V203	Homosexuality: justifiable
	V203A	Prostitution: justifiable
	V204	Abortion: justifiable
	V205	Divorce: common
	V206	Sex before marriage: justifiable
Property	V209	Parents beating children: justifiable
	V59	Satisfaction with financial situation
	V171	Occurrence of robberies
	V181	Worry about losing job or not finding a job
	V239	Which income group you belong to

Table 2 below gives MS dimensions with indicators for WVS 2005-2008.

TABLE 2
***Maqāṣid al-Sharī'ah* dimensions and their indicators in WVS 2005-08**

Dimension	Variable	Indicator Hint (See Full Question in the Survey)
Faith	a006	Importance in life: religion
	f028	How often you attend religious services
Life	a009	State of health
	a170	Satisfaction with your life
Intellect	d071	Traits in women: women educated
	f124	Justifiable: drinking alcohol
	x025	Highest education level attained
Posterity	a001	Importance in life: family
	d019	A woman has to have children to be fulfilled
	f118	Justifiable: homosexuality
	f119	Prostitution
	f120	Abortion
Property	f121	Divorce
	c006	Satisfaction with financial situation of household
	x047	Scales of income
	x047r	Income level

A comparison of these two Tables (1 & 2) shows that WVS 2010-2012 is closer to the axioms.

Methodology

The AF methodology proposes a family of multidimensional measures by extending the uni-dimensional Foster-Greer-Thorbecke (FGT) poverty measures. Among these measures, the adjusted headcount index (Mo) is an appropriate choice where survey responses are ordinal in nature. The calculation of Mo in a sequence of 12 steps is given in Alkire and Foster (2007)¹⁰ whereas in terms of mathematical notations and structure, it is given in Alkire and Foster (2011).

In what follows, we summarize 12 steps to calculate Mo: (1) Choose unit of analysis; (2) Choose dimensions; (3) Choose indicators; (4) Set poverty lines; (first cutoff) (5) Apply poverty lines; (6) Count the deprivations for each person (7) Set the second cutoff; (8) Apply second cutoff (k) obtain the set of poor persons and censor all non-poor data; and (9) Calculate the headcount as:

$$H = \frac{q}{n} \quad (1)$$

where q is the number of people who are multidimensionally poor, and n is the total population.

¹⁰Initially issued as Alkire and Foster (2007). Further revised in 2009 (Alkire & Foster, 2009). Later published as Alkire and Foster (2011) in Journal of Public Economics.

(10) Calculate the average poverty gap (A)

$$A = \frac{\sum_1^q c}{q} \quad (2)$$

where c is the deprivation score of a multidimensionally poor and is obtained by adding the deprivation score in each dimension. If a poor person is deprived in three dimensions, then his score is obtained as follows:

$$c = c_1 + c_2 + c_3 \quad (3)$$

(11) Calculate the adjusted headcount (Mo)

$$Mo = H \cdot A \quad (4)$$

(12) Decompose by group and breakdown by dimension

$$Contrib_j = \frac{\sum_1^q c/n}{Mo} \quad (5)$$

It shows contribution of dimension j to multidimensional poverty.

The range of each dimension is computed by summing up the minimum and maximum values of its indicators, measured on Likert scales, and its cut-off value or deprivation threshold using general perception in an Islamic society. The summation of indicator values is justified for dimensional unity and hence, reduces random measurement error in each indicator.

Following the methodology given above, we develop a distribution matrix that shows values of each dimension received by each individual. Then we count the number of persons falling below cut-off in each dimension and represent it by a deprivation matrix and add deprivations count in all dimensions by a vector of deprivation count assuming equal weights.

We apply second cut-off to number of dimensions to check how many individuals are considered poor given the number of dimensions. Initially we assume that any person deprived in more than two dimensions ($k = 2$) is considered poor in *maqāṣid al-Sharī'ah* (MS). Applying the second cut-off generates censored deprivation matrix and censored vector of deprivation count.

Using FGT poverty measures in multi-dimensions, we compute MS shortfall headcount index (H), MS shortfall intensity index (A), and MS shortfall headcount adjusted index (Mo). The contribution of each dimension in overall MS shortfall is also computed. These indices help policy makers to concentrate on areas of improvement in terms of formulation and effective implementation of economic, social and public policies in these areas.

SECTION 3

Application: Case of Pakistan

The latest World Values Survey has many questions related to MS, as noted above, but it

has not been completed yet. Therefore, the study uses WVS 2005-2008 for Pakistan with a sample size of 2000 individuals to illustrate the application of AF methodology. The WVS 2005-2008 has many questions not directly related to each dimension of MS. Given the limitation, this survey provides a proxy for each dimension. Nevertheless, the study illustrates how the counting approach could be applied using a survey data.

The following Table 3 shows grouping of indicators according to their closeness with a dimension using individual as a unit of analysis.

Table 3 shows MS dimensions and their minimum and maximum values. The poverty line or first cutoff is determined according to the common belief of an Islamic society.

TABLE 3
***Maqāṣid al-Sharī'ah* dimensions and their indicators with deprivation cut-offs**

Dimension	Variable	Minimum Value	Maximum Value	Cut-off Point
Faith	a006	1	4	3
	f028	1	6	4
		2	10	7
Anyone having score below 7 is considered poor in faith dimension				
Life	a009	1	4	2
	a170	1	9	5
		2	13	7
Anyone having score below 7 is considered poor in life dimension				
Intellect	d071	1	5	3
	f124	1	9	7
	x025	1	8	5
		3	22	15
Anyone having score below 15 is considered poor in intellect dimension				
Posterity	a001	1	4	3
	d019	0	1	1
	f118	1	4	4
	f119	1	8	8
	f120	1	10	8
	f121	1	9	6
5		36	30	
Anyone having score below 30 is considered poor in posterity dimension				
Property	c006	1	9	5
	x047	1	10	5
	x047r	1	3	2
		3	22	12
Anyone having score below 12 is considered poor in property dimension				

RESULTS AND DISCUSSION

Following the AF methodology, the headcount index (H) is 39% which indicates incidence of poverty in the sense of falling short from a desirable level in *maqāṣid al-Sharī‘ah*. In the present example, it means 39% of the sample population is poor in more than two dimensions. The intensity of poverty is calculated by average deprivation (A) which turns out to be 31%. That means the average poor person is deprived in 31% of the dimensions. The Mo which shows multidimensional poverty in MS in the present context is calculated by multiplying H and A; that is, the headcount (H) is adjusted for intensity (A). Surprisingly, it is as low as 12% since intensity is low as compared to incidence of poverty. The following table shows contribution of each dimension in overall poverty Mo.

TABLE 4
Contribution of each dimension to overall shortfall/deprivation/poverty (Mo)

Dimension	Contribution (%)
Faith	9.40
Life	16.67
Intellect	19.60
Posterity	4.20
Property	50.00
Overall	100

Results in Table 4 indicate that contribution of posterity is the lowest in overall poverty whereas that of property is the highest contribution. That is, protection of material wealth is below the minimum desired threshold and it is contributing about 50% for keeping people below the multidimensional MS-based poverty. While the lowest contributor to the overall shortfall in achieving *Maqāṣid al-Sharī‘ah* based progress is from posterity protection dimension. Based on this analysis, an immediate policy direction for Pakistan is to focus attention on improving the safety and security of wealth of the poor and weak, and improving the law and order situation.

In this example we have worked only with a lower bound (a minimum), being above it is desirable for the society. However, there are situations where excesses are also bad and in contravention of the objectives of *Sharī‘ah*. The counting approach can be modified to take care of both limits. In case of consumption for example, the number of people below a threshold level of consumption indicates a shortfall from the socially desired level using *Maqāṣid al-Sharī‘ah* perspective. Similarly, number of people involved in excessive consumption (*afrāṭ*) from the norm (e.g., becoming obese) or when there exists severe poverty are also not desirable. A confirming set or compliant set between these two extremes can be created and its members counted to create a development indicator.

Comparison with other Estimates

Comparing the Multidimensional Poverty using *Maqāṣid al-Sharī‘ah* based-Index (MS-Index) with the MPI measure calculated for Pakistan by the OPHI and UNDP, we find that

Pakistan fared better in MS based-Index, as well as in the incidence (H) and average intensity (A) of poverty. Though, strictly speaking, the two measures are not comparable due to differences in their definition of dimensions, deprivation threshold cut-offs, and the survey data. The MS-based approach used more dimensions and higher thresholds for deprivation cut-off than the OPHI-UNDP index, yet the poverty numbers are lower. This indicates better socio-economic conditions in the *Maqāṣid al-Sharī'ah* dimensions.

TABLE 5
Comparison of MS-based poverty index with other poverty indices

Calculation Method	Survey Year	MPI = H × A	Incidence of Poverty (H)	Average Intensity Across the Poor (A)
MS based Index	WVS 2008	0.12	39.0%	31.0%
OPHI and UNDP	DHS 2007	0.264 [†]	49.4% [†]	53.4% [†]
Percentage of Income Poor (\$1.25 a day)	HIES 2006		22.6% ^{††}	
Percentage of Income Poor (\$2 a day)	HIES 2006		61.0% ^{††}	
Percentage of Poor (Na- tional Poverty line)	HIES 2006		22.3% ^{††}	

[†] Alkire, Santos, Roche, and Seth (2011)

^{††} The World Bank (2011).

Comparing the MS-based poverty with the usual income poverty we can say that there are more poor people in terms of MS-based poverty in Pakistan ($H = 39\%$) than income-poor who fall behind \$1.25 a day (22.6%).

We also note that in general, a *maqāṣid al-Sharī'ah* based-Index can be different from an income-based index or the other multidimensional indices. However, in the present case the difference is also because of the nature of data. We have used a combination of opinion and facts survey as opposed to only facts survey that are generally used in the other measures.

SECTION 4

Sharī'ah encourages us to recite the following famous *du'ā* regularly:

“Our Lord! Give us in this world that which is good and in the Hereafter that which is good and save us from the torment of the Fire.” (Qur'ān 2: 201)

Therefore, the major concern of the public policies is to ensure people's welfare not only in this world (short-run) but also in the hereafter (long-run). The conventional development indicators attempt to assess the welfare in this world only. However, for the Muslim countries we need to extend this welfare assessment to the deeds that would lead to a better life in the hereafter and would avoid torment of fire.

The study constructs an ideal *Maqāṣid al-Sharī'ah* (MS) Index based on axioms derived from the Sharī'ah to evaluate the short-run and long-run welfare of people in Muslim countries. However, we could not find a questionnaire in exact or at least in close conformity

to the axioms. Hence, due to unavailability of purpose-built questionnaire, we resorted to readily available and most suitable survey data to operationalize these axioms.

We developed an MS index from deprivations' perspective for Pakistan using data from World Values Survey. Most of the existing MS based indices are highly inclined towards measuring material dimensions and do not fully reflect Islamic teachings.

The MS index computed for Pakistan shows that posterity is the least deprived dimension whereas property is the most deprived dimension. The deprivation in property dimension is consistent with conventional development indices and with the results of some of the OIC countries (Ali & Hasan, 2018). A continuous monitoring of this contribution in MS index over time would lead to better policy making for Muslim countries particularly for the youth in terms of implementation of Sharī'ah laws in true letter and spirit.

A comparison of MS index with other measures of poverty shows that MS index covers the information given in other measures along with additional information about non-material dimensions of deprivations. It is, therefore, important to assess a Muslim country based on MS index to truly reflect its progress in material and non-material (moral, religious, spiritual, etc.) dimensions. However, we need to develop a survey questionnaire that correctly covers the dimensions highlighted by the axioms developed in the paper.

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