Saving Behaviour in Islamic Framework:
The Case of International Islamic University Malaysia (IIUM)

Naziruddin Abdullah
M. Shabri Abd. Majid

Abstrak

Islam menggalakkan umatnya menggunakan barangan dan perkhidmatan secara sederhana, dan melarang mereka mengamalkan pembaziran. Melalui adunan galakan dan larangan tersebut di dalam ajaran Islam, adalah diharapkan umat Islam dapat menabung lebihan pendapatan mereka. Malahan, konsep halal dan haram dalam Islam adalah potensi yang baik kepada umat Islam untuk meningkatkan usaha penabungan tersebut. Sikap ini membolehkan umat Islam yang muttaqī, yang taatkan segala peraturan syariah lebih cenderung menabung berbanding dengan mereka yang bersikap sebaliknya. Artikel ini cuba mengukur kaitan di antara ketakwaan dan sifat menabung. Tumpuan adalah terhadap pelajar-pelajar UIAM. Daripada hasil kajian didapati faktor keagamaan mempunyai signifikan positif terhadap sikap menabung responden.

1. Introduction

Islam is not merely a religion, but a way of life (*Niẓām al-Ḥayāh*). Hence, while admitting that any acts of worship, as long as within the divinely prescribed frame-

work, are part of Islam, the social, political and economic pursuits are also the undetachable part of it. Thus, a compartmentalization of the religion into smaller components such as worldly (human action) and non-worldly (divine action) is nothing but carries the connotation of a secularist mentality of biformity or duplexity.

In this relation, being a subset of the Muslim *ummah*, a man must realize, contemplate and finally be convinced that his all-encompassed daily activities, worships and otherwise, are by and large guided, governed and dictated by the Islamic injunctions. Indeed, economic activities are not without any exception.

Meanwhile, economics, as widely perceived, is a positive science and Islam, being a religion, is primarily normative *par excellence* (Anas Zarqa, 1981). Since man's economic behaviour is dictated by the Islamic injunctions, the relationship between the two is just like the two sides of a coin where without one side, the coin is unacceptable to serve a role as a means of exchange. By the same token, the relationship between man's economic behaviour and Islamic injunctions is just like that. That is to say, the two are mutually reinforcing. To put it in a more systematic manner, man's economic behaviour is affected, *inter alia*, by his outlook, beliefs and moral standards, if lumped together are known as religious variables. A change in any of these variables will inevitably have far-reaching economic repercussion.

Having said this, one may then ask a number of "question begging question" questions. First, does relationship between religiosity and economic activities really exist? Second, if yes, is the relationship measurable? Third, again if the answer is in the affirmative order, how can that be measured and what sort of technique(s) should be employed? Fourth, would the results and findings obtain reliable? And, finally, can they be of any use for policy formulation? These are the fundamental questions, which this paper, in due course, attempts to address.

Conceptually, the first question can be addressed by taking into account the fact that an Islamic man or *Islamicus as opposed to economicus*, by virtue of the divine provisions has the tendency to be more cautious in his economic dealings. This is particularly true in the case of saving,[1] one of many economic activities. As enshrined in the Holy Qur'ān, Islam encourages its followers to spend modestly.[2] Implicitly in the teaching of the quoted verse is that Muslims are advocated to save. Subject to further investigation, it is postulated in this study that due to the "constrained" consumption basket, which is firmly embedded in the notion of permissibility *(halāl)* and prohibition *(harām),* Muslims are conjectured to have higher saving potential. However, as Muslims themselves have different levels of *taqwā,*[3] the way they perceive, internalise and translate the two notions of *halāl* and *harām* into their practical life may naturally be different. This will then have indicative impact

on their saving behaviour. In this sense, it is the conviction of this paper that there exist an intimate relationship between religiosity and saving. This, perhaps, answered the first fundamental question.

To deal with the second and third questions, it should be re-emphasised here that saving essentially depends on *taqwā* and other economic determinants, notably consumption and income. Since the last two determinants (the well-known variables) are neatly tied to saving, and they are measurable, it is only the former variable *(taqwā)*[4] that needs detail explanations. At this juncture, it is worth mentioning that both the Islamic and conventional techniques of measuring the degree of respondents' *taqwā* will be employed. The Islamic way of measuring the *taqwā* of a Muslim[5] is the three worship representations deduced from *Hadīth,* namely *fard* (obligatory), *harām* (prohibition), and *sunnah* (recommendable or praiseworthy). By contrasting the worship representations against the pillars of Islam and *Imān* (five and six, respectively), and employing the Renzetti and Curran (1998) five-dimension[6] religiosity measurement, the respondents' degree of *taqwā* (religiosity) are measured. The detail explanation of the techniques employed is deferred to the subsequent section. From the above discussions, the second and third fundamental questions are answered.

Next, to the question of the reliability of the study's results and finding we have to humbly submit that like any other studies conducted with human perception, experience and conviction are the elements involved, it is always the case that some unavoidable shortcomings such as sample size, content and coverage of the questionnaire and the methodology, etc are foresighted. In this respect, it is no exception as far as a study like ours, which involves religiosity, is concerned. We however believe that the statistical tools such as the correlation and regression analyzes employed in the paper will be of great assistance in enhancing the degree of reliability, albeit far from sufficient, of the study.

Hence, if this is acceptable, it goes without saying that the results and findings of the study are useful for policy formulation. With this, the fifth question is answered.

The paper is organized as follows. In section 2, the theoretical framework is outlined. While section 3 explains the model specification, section 4 discusses the results and finding of the study. Finally, in section 5 some policy implications are outlined.

2. Theoretical Framework

As mentioned earlier on, all deeds, as long as they are performed within the

shari'ah precincts, are considered as *'ibādah*. Included in these deeds is saving where the motivation to perform it differs from one individual to another. Money saved [from the amount (or percentage) of income received] is used for numerous reasons; performing *hajj*, getting married, starting business, emergency and many more. It will be intriguing to try to investigate whether or not the amount of money saved for the reasons cited above is deeply rooted in one's degree of piety. In general, which many Qur'anic verses and Hadith of the prophet Muhammad (pbuh) have shown, a Muslim saving behaviour is largely influenced by his level of religiosity. Prophet Muhammad (pbuh) had once said: "keep some of your properties for yourself because, it is better for you".[7] The Hadith implies that only those who are pious will take heed of the Prophet (pbuh) remainder, i.e., to save a fraction of one's income or property. In fact, Prophet (pbuh) himself used to purchase dates from Bani Nadir and saved for his family a full year's provisions.[8] In short, we can safely deduce that Islamic norms and values are the source of inspirations, which guide and influence Muslims to procure a high level of savings in his life.

It is from this persuasion, we hypothesize that the variability in the religiosity of the Muslims would have significant impact (or relation) on their saving behaviour. Hitherto, to the best of our knowledge, there have been no empirical studies conducted to investigate the relationship between saving and religiosity. This small piece of work is geared towards bridging this gap and enriching the knowledge on this subject.

3. Model Specifications

As shown by al-Haq (1993), Muslims' consumption and saving behaviours are predominantly determined by both economic considerations and religious teachings. Following this line of analysis but with different objective,[9] it is noteworthy to incorporate these two aspects of saving behaviour as the explanatory variables to the designated saving function. Specifically, while saving is treated as dependent variable, religiosity and income are treated as independent variables. Each of the specified variables is explained in greater detail below.

3.1. Saving

Unlike Sadeq (1992) and Jalaluddin (1992) where saving is **qualitatively** defined as income minus expenditures on consumption and spending in the way of Allah *(falāh),* in this paper it is **numerically** defined as income minus expenditures on consumption (e.g. clothing, food and rental) and spending in the way of Allah (e.g. *zakāh, sadaqah,* and *waqf).* Defined in the latter way, saving is a function of both

religiosity (as reflected in the consumption behaviour where spending for Allah's sake is considered as part of saving), and income.

3.2. Income

The disposable (personal) income of the students is used as the basis to measure income. Since most of the students' incomes are from the same sources, namely the scholarships and financial loans, they are considered as International Islamic University Malaysia (IIUM) students' income.

3.3. Religiosity

Among the three, this is the most delicate variable. It is for this reason that a more lengthy explanation is needed to clarify it. As correctly pointed out by Siti 'Adilah (1999), none is able to judge, let alone to measure, a person's religiousness except Allah, since this is a personal matter between the individual and his Lord. However, assuming that a person acts rationally (as outlined in the *shari'ah*),[10] it would not be difficult to predict, theoretically as well as empirically, the saving behaviour of Muslims. This is because a Muslim who performs the religious duties consistently and cautiously would be more religious than those who do otherwise.

In measuring the religiosity of Muslim students of IIUM, we have decomposed the act of worship into three components. They are: *fard* or *wajib* (obligatory); *harām* (prohibited); and *sunnah* or *mandūb* (commended). Because the position or ranking of the decomposed acts of worship is significantly different from one another, more weightage is given to the *wājib* than, for example, to *sunnah*. A detail description of the weightage is as follows.

3.3.1. Obligatory Deeds

As far as the obligatory deeds are concerned, we have divided them into two categories, namely pillars of Islam and *Imān* (question 1-6), or for brevity PISIM. Points are given to questions 1, 4, 5 and 6 in ascending order with –2 for not important at all to +2 for very important, while to questions 2 and 3, the points of -5, -4, -3, -2, -1 and +5 are given. The latter way of assigning points is done because the nature of questions posed to and the answer expected from the respondents are different from the former. Further, because obligatory deeds are the highest in the hierarchy of all deeds, we assigned 100 points to each item listed in the two categories of deeds. While the highest score "attainable" by a person is +1800 [(2 points x 100 x 4 deeds) + (5 points x 100 x 2 deeds) = (800) + (1000)], the lowest is –1800 [(-2 points x 100 x 4 deeds) + (-5 points x 100 x 2 deeds) = (-800) + (-1000)]. More formally, the obligatory deeds are quantified using the below-written formula:

$$OD_i = 100 \sum_{j=1}^{6} PISIM_{ij} \dots\dots\dots\dots\dots\dots\dots\dots\dots(1)$$

where: OD = Obligatory Deeds.
        PISIM = Pillars of Islam and *Iman*.
        i   = the respondents.
        j   = the number of questions involved.

3.3.2. Prohibited Deeds

Five questions have been designed to measure this category of deed. Similar to the obligatory deeds, points are given in an ascending order of –2 (not important at all) to +2 (very important) to each prohibited deeds, which comprises questions 7-11 of the questionnaire. However, only 55 points are attributed to any one of the deeds committed. Hence, the highest score attainable by a person who does not commit any prohibited acts is +550 (2 points x 55 x 5 deeds) and the lowest is –550 (-2 points x 55 x 5 deeds). Expressed more formally, the prohibited deeds or LPSAD are measured using the following formula:

$$PD_i = 55 \sum_{k=7}^{11} LPSAD_{ik} \dots\dots\dots\dots\dots\dots\dots\dots\dots(2)$$

where: PD = Prohibited Deeds.
        LPSAD = the items of the PD listed in the questionnaire.
        i   = the respondents.
        k   = the number of questions involved.

3.3.3. Recommended Deeds

We note in passing that any recommended or commended acts performed by a person can never replace the obligatory and prohibited deeds. They, however, can only enhance the religiosity of the person. With this in mind, and with similar scaling adopted as in (3.3.1) and (3.3.2), the formula that is used to compute the commended deeds or QUDUS is as follows:

$$CD_i = 2 \sum_{l=12}^{17} QUDUS_{il} \dots\dots\dots\dots\dots\dots\dots\dots\dots(3)$$

where: CD = Commended Deeds.
        QUDUS = the items of the CD listed in the questionnaire.
        i   = the respondents.
        l   = the number of questions involved.

Because a score of +2 is attached to each commended deed performed and the scale ranges from 0 (not important at all) to +4 (very important) for questions 12-14, and 0 to 5 for questions 15-17, the highest score attainable by a respondent is +54 [(2 points x 4 x 3 deeds) + (2 points x 5 x 3 deeds)] and the lowest is 0 (0 points x 5 x 3 deeds).

3.3.4. Religiosity Index

Religiosity Index (RI) which comprises all deeds, is formulated using the following formula:

$$RI_i = [(OD_i + PD_i + CD_i)/2404] \times 100 \text{----------------------------}(4)$$

All notations used are the same as in equations (1), (2) and (3). In words, Religiosity Index is defined as the sum of OD_i, PD_i, and CD_i (1800 + 550 + 54 = 2404) divided by the maximum attainable points and multiplied by 100. Ideally, the maximum score that the most religious person can accumulate is 100. A respondent is considered as *par excellence* or *Muttaqin* if he (she) performed all the obligatory and recommended deeds and, at the same time, abstained himself (herself) from committing any wrong doings (prohibited deeds) "whole-heartedly". That is to say, he (she) scored the maximum points for each deeds 1800, 54 and 550, respectively.

The index can also be taken as a benchmark. It implies that the closer a person's (respondent's)[11] score to the index (benchmark) the religious he (she) is, and vice versa; if the person's (respondent's) score is 0.

3.4. Empirical Application of the Model

As has been mentioned above, the model is generally built upon the conviction that saving is a function of religiosity, which is represented by the Religiosity Index (RI), and income. The function, written in the form of econometrics modeling is:

$$S_i = \alpha_0 + \alpha_1 RI_i + \alpha_2 Y_i + \varepsilon_i \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(5)$$

where: S = Saving.
       RI = Religiosity Index.
       Y = Income.
       α_0 = a constant.
   α_1 and α_2 = the parameters to be estimated.
       ε = the error random term.
       i = the respondents (it ranges from 1 to 160).

3.5. Sampling

The survey was conducted at the International Islamic University Malaysia (IIUM). Respondents were chosen primarily from two Kulliyyahs (or Faculties), Kulliyyah of Economics and Management Sciences (KENMS) and Kulliyyah of Islamic Revealed Knowledge and Human Sciences (KIRKHS). Out of 180 survey forms distributed, 160 or 88.9% were returned.

The profiles of the respondents are shown in Table 1. Briefly, as far as the gender ratio is concerned, the sample is well represented in that it tallies with the male and female composition of the university's population (i.e., students)—30 (male):70 (female). Another aspect of the sample that contributes to the distinctiveness of the study is the race composition. As can be seen from Table 1, the ratio of local to international students is exactly reflecting the ratio at the university level which is 80 (locals):20 (internationals). The same are also true in the case of the levels of study and marital status, both reflecting the true picture of the university's current status quo. All in all, in so far as the sample is concerned it is very representative.

Table 1: The Distribution of Respondents According to their Profiles

No.	Profiles		No. of Respondents	%
1.	Gender:	Male	55	34.38
		Female	105	65.63
		Total	160	100.00
2.	Age:	18-23 yrs	125	78.13
		24-29 yrs	31	19.38
		30-35 yrs	4	2.50
		Total	160	100
3.	Race:	Local	129	80.63
		International	31	19.38
		Total	160	100
4.	Year of Study:	1st yr	101	63.13
		2nd yr	19	11.88
		3 yr	20	12.50
		4 yr	20	12.50
		Total	160	100
5.	Level of Study:	Undergraduate	133	83.13
		Postgraduate	27	16.88
		Total	160	100
6.	Marital Status:	Single	153	95.63
		Married	7	4.38
		Total	160	100

4. Results and Finding

4.1. Results of Respondents' Religiosity

Table 2 exhibits the overall picture of how respondents responded to the questions related to the three types of the so-called fundamental duties. To save space, however, only the ones that are either consistent with or dispersed from the expected observations will be highlighted.

First, we take a look at the "missing number of obligatory prayers" item. As can be seen from Table 2 (Column 1, Line 2), there are close to 2% of students who missed, occasionally or frequently, the entire five-time daily obligatory prayers. Another 10% missed 1-4 times the said prayers. Though this undoubtedly reflects the religiosity of IIUM students, there is a need for further enquiry made.

Second, in the category of prohibited duties (deeds), it seems that most respondents are fully aware of the fact that those five are major sinful deeds, which one must, in normal circumstances, avoid. With one being the only exception, more than 90% of them are of the opinion that it is very important for them not to commit such sins.

Third, as expected, majority of the respondents performed minimally the recommended duties. In the case of praying and fasting, for example, approximately 75-80% of them are in this category.

Finally, to enable us to have greater confidence in the reliability of respondents' answers to the questions posed to them on the fundamental duties of being a Muslim, question 18 (Part B: The Religiosity of Respondent) was also included in the questionnaire. In Table 2, it is categorized as "autonomous confession". Indeed, there is a consistency in this answer with the previous ones. We conclude, therefore, that the sample gathered and used for the present study is reliable.

Table 2: The Response of Respondents to the Selected Obligatory (*wajib*), Prohibited (*haram*) and Recommended (*sunnah*) Religious Duties

Question No.	Variable / Options	1 N	1 %	2 N	2 %	3 N	3 %	4 N	4 %	5 N	5 %	6 N	6 %	Total N	Total %
	The Obligatory Duties:														
1	Importance of *shahadah*	-	-	-	-	1	(0.63)	2	(1.25)	157	(98.13)	na	na	160	(100)
2	The missing number of *sholat al-wajib* (obligatory prayers)	3	(1.88)	1	(0.63)	2	(1.25)	2	(1.25)	27	(16.88)	125	(78.13)	160	(100)
3	The missing days of fasting during Ramadan	-	-	-	-	-	-	6	(3.75)	43	(26.88)	111	(69.38)	160	(100)
4	The importance of *zakah*	-	-	-	-	-	-	12	(7.50)	148	(92.50)	na	na	160	(100)
5	The importance of *hajj* (pilgrimage)	-	-	-	-	1	(0.63)	32	(20.00)	127	(79.38)	na	na	160	(100)
6	The importance of six-pillar of *Iman* (belief)	-	-	-	-	1	(0.63)	2	(1.25)	157	(98.13)	na	na	160	(100)
	Prohibited Duties:														
7	Not drinking liquor	-	-	-	-	1	(0.63)	8	(5.00)	151	(94.38)	na	na	160	(100)
8	Not eating pork				-	3	(1.88)	6	(3.75)	151	(94.38)	na	na	160	(100)
9	Not stealing other people belongings	-	-	-	-	1	(0.63)	17	(10.63)	142	(88.75)	na	na	160	(100)
10	Not committing adultery (*zina*)	-	-	-	-	1	(0.63)	7	(4.38)	152	(95.00)	na	na	160	(100)
11	Not disobey parent	-	-	-	-	-	-	13	(8.13)	147	(91.88)	na	na	160	(100)
	Recommended Duties:														
12	The importance of giving charity or donation for the sake of Allah	-	-	-	-	10	(6.25)	54	(33.75)	96	(60.00)	na	na	160	(100)
13	The importance of spending modestly	-	-	1	(0.63)	15	(9.38)	61	(38.13)	83	(51.88)	na	na	160	(100)
14	The importance of maintaining *silaturrahim* (relationship)	-	-	1	(0.63)	1	(0.63)	31	(19.38)	127	(79.38)	na	na	160	(100)
15	The number of *rakaats* performing *salat al-sunnah*	38	(23.75)	92	(57.50)	20	(12.50)	5	(3.13)	4	(2.50)	1	(0.63)	160	(100)
16	The number of days performing of recommended fasting	50	(31.25)	75	(46.88)	27	(16.88)	4	(2.50)	1	(0.63)	3	(1.88)	160	(100)
17	The number of hours reciting al-Qur'an/day	9	(5.63)	112	(70.00)	36	(22.50)	1	(0.63)	2	(1.25)	-	-	160	(100)
18	**Autonomous Confession:**	5	(3.13)	26	(16.25)	71	(44.38)	54	(33.75)	4	(2.50)	na	na	160	(100)

<u>Note:</u> N and *na* indicates number of observations and not applicable, respectively. For a detail explanation, refer to the text.

4.2. Income Sources

As implied from Table 3, of the 160 respondents, 72 or 45% are in the income bracket of RM 300-500. They are, subject to further investigation, the ones who received the government scholarship. It is also interesting to report that eight respondents (5%) received a monthly income of more than RM 1501. Also shown in the table are 28 respondents or 17.5% who sources their income from other means as well, perhaps from doing odd jobs on or off campus.

Table 3: The Distribution of Respondents' Income, Sources and Its Sufficiency

No.	Variable	Income Interval	N	%
1.	Total Monthly Income:	<RM300.	50	31.25
		RM300-500.	72	45.00
		RM501-1, 000.	22	13.75
		RM1, 001-1,500.	8	5.00
		RM1, 501-2,000.	6	3.75
		>RM2, 001.	2	1.25
		Total	*160*	*100*
2.	Having extra income in addition to scholarship and parents:	Yes	28	17.50
		No	132	82.50
		Total	*160*	*100*
3.	Income Sufficiency:	Not sufficient	26	16.25
		Quite sufficient	64	40.00
		Sufficient	62	38.75
		More than sufficient	8	5.00
		Total	*160*	*100*

Meanwhile, in terms of income sufficiency, it seems that those who belonged to the "upper-level" income group (>RM 1501) are the same persons who have more than enough income. In both cases, the number of respondents is eight or 5%. As appeared in the table, 26 respondents (16.25%) are experiencing financial problems.

4.3. Saving Behaviour

Saving, to recall, is the study's dependent variable. Saving of the respondents is measured and expressed in two ways; total monthly saving in absolute number, and

in percentage. Because saving expressed in both terms is mutually reinforcing, a regression of each of them on Religiosity Index and income is performed.

Table 4: The Saving Behaviour of Respondents

No.	Variable	Income Interval	N	%
1.	Total Saving:	<RM50	50	31.25
		RM51-100	72	45.00
		RM101-150	22	13.75
		RM151-200	8	5.00
		RM201-250	6	3.75
		>RM251	2	1.25
		Total	*160*	*100*
2.	Total Saving (in percentage):	<1%	50	31.25
		1-5%	72	45.00
		6-15%	22	13.75
		16-20%	8	5.00
		21-25%	6	3.75
		>25%	2	1.25
		Total	*160*	*100*
3.	Paying *zakah*:	Yes	28	17.50
		No	132	82.50
		Total	*160*	*100*
4.	Starting age of Saving:	<8 yrs	54	33.75
		8-13 yrs	55	34.38
		14-19 yrs	38	23.75
		20-25 yrs	11	6.88
		26-31 yrs	2	1.25
		Total	*160*	*100*
5.	Saving because of *thawab*:	Yes	130	81.25
		No	30	18.75
		Total	*160*	*100*
6.	Continue Saving:	Yes	152	95.00
		No	0	0.00
		Undecided	8	5.00
		Total	*160*	*100*
7.	Habits of Saving[1]:	Family members	122	26.70
		Relatives	46	10.07
		Friends	54	11.82
		Self awareness	137	29.98
		Religious duties	97	21.23
		Others...	1	0.22
		Total	*457*	*100*

Note:
[1]For this particular question the respondents are allowed to give more than one answers

72

As can be seen from Table 4, in absolute and percentage terms, saving of the respondents are pretty much consistent. To take but one example, perhaps, those who saved more than RM 201 (in absolute term) and the number is eight (5%) are the same persons who saved more than 21% of their income. It appears from here that these are the respondents who belonged to the income bracket of RM 1501 and more, and those who indicated that they have more than sufficient income (Table 3). As to how saving of the respondents is distributed, it is detailed out as items 3-7 in Table 4 and it is self-explanatory.

4.4. Saving Distribution

Table 5 shows how saving was and/or to be exhausted by the respondents. At this juncture, it is important to note that each respondent is allowed to indicate the percentage of his (her) saving that is meant for the items listed in the table. About 70% of them saved less than 1% of their income for *hajj*, married, start own business and purchase shares. About the same percentage of the respondents saved 1-25% of their income for emergency. Because no distinction is made between worldly and non-worldly deeds, all that they saved reflects their degree of religiosity.

Table 5: The Distribution of Saving (in percentage)

Item	<1%	%	1-10%	%	11-25%	%	26-50%	%	>50%	%	Total N	%
Hajj (pilgrimage)	92	70.77	23	17.69	12	9.23	1	0.77	2	1.54	130	100
Married	89	74.79	21	17.65	6	5.04	2	1.68	1	0.84	119	100
Start business	87	73.73	20	16.95	7	5.93	3	2.54	1	0.85	118	100
Emergency	28	18.92	59	39.86	44	29.73	13	8.78	4	2.70	148	100
Purchase Shares	82	69.49	25	21.19	8	6.78	3	2.54	0	0.00	118	100
Others, ...	5	29.41	2	11.76	5	29.41	4	23.53	1	5.88	17	100

4.5. Religiosity Index

The indices, namely obligatory, prohibited, and recommended and total religiosity (RI) are computed based on equations (1), (2), (3), and (4), respectively. As explained earlier, the highest achievable or attainable score that a Muslim can sustain is 100 and the lowest is −100.[12] In Table 6, each index is arranged in the order of intervals. They are 9 intervals, ranges from (11-20) to (91-100).

As presented in Table 6, while more than 73% of the respondents scored the highest obligatory and prohibited indices (91-100), there were none for the recommended index. For the latter index, a great majority of them is in the intervals of (31-40), (41-50) and (51-60). Specifically, there are 133 respondents who belonged to this category. Perhaps, this is the reason why the total Religiosity Index (RIi) for the highest interval is somehow small, i.e., only 71%. However, by lumping together the highest two intervals, the result is exceptionally appealing.

<div align="center">Table 6: The Religiosity Index</div>

Interval	Obligatory Index (OD_i)		Prohibited Index (PD_i)		Recommended Index (CD_i)		Total Index (Religiosity Index) (RI_i)	
	N	%	N	%	N	%	N	%
11-20	1	0.63	0.00	0.00	0	0.00	0	0.00
21-30	1	0.63	1	0.63	3	1.88	2	1.25
31-40	2	1.25	1	0.63	27	16.88	0	0.00
41-50	4	2.50	2	1.25	30	18.75	1	0.63
51-60	2	1.25	2	1.25	76	47.50	4	2.50
61-70	8	5.00	1	0.63	20	12.50	7	4.38
71-80	17	10.63	6	3.75	3	1.88	8	5.00
81-90	8	5.00	16	10.00	1	0.63	25	15.63
91-100	117	73.13	131	81.88	0	0.00	113	70.63
Total	160	100	160	100	160	100	160	100

4.6. Regression Results

As been mentioned elsewhere in the paper, saving which is now expressed in (natural logarithm (ln) term will be twice regressed on the independent variables—Religiosity Index and income. That is, first, the lnSa (the absolute-term saving), and second, the lnSp (the percentage-term saving) was consecutively regressed on the explanatory variables.

Table 7: The Parameters Estimates of the Saving Function

Variables	Constant	TR-Index	Income	R^2
ln Sa	-0.065*** (-1.774)	0.265** (1.993)	0.107*** (1.734)	R^2 =0.041 D-W = 1.830 J-B = 253.095
ln Sp	-1.440*** (-1.815)	0.452* (2.568)	0.140*** (1.712)	R^2 =0.055 D-W = 1.944 J-B = 118.695

Note:
The numbers in the parentheses (.) are t-statistics for testing the null-hypothesis that the coefficients are equal to zero.
*, **, and *** represent a level of significance of 1%, 5%, and 10%, respectively.
D-W and J-B indicate the Durbin-Watson d test for autocorrelation and the Jarque-Bera test for normality, respectively.

The results of parameter estimates for the saving functions are presented in Table 7. The adjusted R2 for the functions are 0.041 (ln Sa) and 0.055 (ln Sp), respectively. It implies that the explanatory variables explained only 4.1% and 5.5% of the models. Nevertheless, the coefficients of the functions are all statistically significant either at 1%, 5% or 10%. Thus, they can be used to explain the relationship between the variables.

First, in the case of ln Sa, there exist a conclusive relationship between saving and Religiosity Index where, in terms of elasticity, an increase in the Religiosity Index of 10% will lead to an increase in saving by approximately 2.65%. By the same token, an increase of income by 10% will increase saving by 1.07%, which is quite consistent with the standard macroeconomics theory.

Second, with reference to lnSp, the same conclusive observation with that of ln Sa can be established. The only different is that the estimated parameters of the latter model (lnSp) are marginally larger than the former. Specifically, the value of the two primary diagnostic tests, namely D-W (Durbin-Watson d test) and J-B (Jarque-Bera test), indicate that both the lnSa with D-W = 1.830 and J-B = 253.095, and lnSp with D-W = 1.994 and J-B = 118.695 are models that have no positive and negative autocorrelation among the disturbance terms. Thus, the models can be said to have asymptotically fulfilled the normality assumption, which in turn implies that the disturbance terms are normally distributed.

To conclude, in so far as saving is concerned, religiosity and income could explain the manner in which the International Islamic University Malaysia (IIUM) students allocated their sources of income. As shown above, relative to income, religiosity was the driving force behind the saving behaviour. That is to say, the higher the religiosity one is, which is implied by the Religiosity Index, the higher one has the tendency to save. By and large, our findings seem to concur with the general observation, which asserts that saving and religiosity is intimately and significantly positively related.

5. Policy Implication

While there are many policy implications that can be extracted from the results and findings of the study, we confine ourselves to three only.

5.1. Incalculation and Accentuation of Religious Teachings

Income *per se*, though necessary, is insufficient to ensure that the saving rate of a group of people can be increased. Any increase in income, for instance, if not followed by an enhancement in the degree of religiosity can lead one (or country) to nowhere. Thus, it is important for men and women to be constantly reminded by the religious authority, at different levels, of the significance of religion in influencing their saving behaviour.

5.2. Saving Disbursement Patterns

As shown in Section 4 of the paper, saving is utilized for various purposes of which for emergency is top on the list followed by *hajj*, start own business and married. Subject to further investigation, this actually reflects not only the saving disbursement patterns of the students but society at large. The government, in its efforts to mobilize sources of fund, should take heed of this saving behaviour.

5.3. Establishment of Islamic Based Financial Intermediaries

In relation to Section 5.2, the establishments of Islamic-based financial institutions to cater for the different needs of saving should be made realize. An institution similar to LUTH (Lembaga Urusan Tabung Haji), which is meant for those who have the intention to perform *hajj*, is considered feasible to cater for the needs of those who saved for getting married.

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End Notes

1. Saving is one of many economic activities that men are expected to directly get involved in their life. Saving is also the main focus of the present paper, henceforth, will be subject to further scrutiny.

2. See, for example, al-Qur'ān, 17: 29.

3. Levels of *taqwā*, piety, religiosity and Islamicity in this paper are used interchangeably.

4. We must admit without any reservation whatsoever that it is only Allah that knows best the degree of one's *taqwā*. What we intend to do here is to measure *taqwā* (religiosity) based on the exterior conviction of the respondents.

5. The questionnaire is designed in such a way that it accommodates only Muslim ritual behaviour. All respondents who participated in our study are Muslims.

6. They are: (i) *ritualistic dimension*; (ii) *experiential dimension*—how important religion in one's life; (iii) *ideological dimension*—how committed a person is to the religious doctrine or teachings; (iv) *consequential dimension*—the extent to which religion affects the way a person conducts his or her daily life; and (v) *intellectual dimension*—the knowledgeability of a person towards the history and teachings of a religion.

7. A Ḥadīth narrated by Bukhāri.

8. *Ibid.*

9. Basically, the objective of the paper is to investigate the relationship between saving and religiosity where students of IIUM are the focus of analysis.

10. Precisely, in Islam, rationality implies that the rational soul, which is divinely guided, is able to overcome the animal soul, which is devilly guided.

11. The general profiles of the respondents are summarized in Table 1.

12. This is only applicable for total minimum index of obligatory and prohibited deeds. Since no penalty is given to those who disobeyed the recommended acts, therefore the total lowest index is not −100.

APPENDIX I

Questionnaire

The following factors may affect your saving behaviour in general.
Please tick (✓) the correct box (es) relevant to you. Only Muslim students are encouraged to answer the question.

Part A: Personal Details

1. Gender:		2. Age:		3. Race:		4. Year of study:		5. Level of study:	
Male		<18		Malay		1st year		Undergraduate	
Female		18-23		Chinese		2nd year		Postgraduate	
		24-29		Indian		3rd year			
		30-35		International		4th year			
		>35							

If you are married, please answer questions 7-10.

6. Marital Status:		7. Age of spouse:		8. Race of spouse:		9. No of children:		10. Type of housing:	
Single		<18		Malay		0		2-3 room	
Married		18-23		Chinese		1-2		4-5 room	
		24-29		Indian		3-4		Executive flat	
		30-35		International		5-6		Private housing	
		>35				>6		Others	

Part B: Religiousness of Respondents

1. How important is the *shahadah*—bearing witness that there is none worthy of worship except Allah (swt) and Muhammad (saw) is His Messenger?

Not Important	
Least Important	
Quite Important	
Important	
Very Important	

2. In normal circumstances, how many times do you miss your obligatory prayer (*salat al-wajib*) a day?

5-time	
4-time	
3-time	
2-time	
1-time	
0-time	

3. In normal circumstances, during the month of *Ramadan*, how many days do you miss your fasting?

The whole *Ramadan*	
20-26 days	
13-19 days	
8-12 days	
1-7 days	
Never miss	

4-14. In normal circumstances, how important are the following deeds in your opinion?

	Not Important	Least important	Quite important	Important	Very important
4. Paying zakah (*zakat al-mal*/wealth & *zakat fitrah*)					
5. Performing *hajj* (pilgrimage) once you fulfilled all conditions					
6. Believing in the six-pillar of *Iman* (belief), such as believe in Allah (s.w.t), Hereafter, Angels, Divine Books, Prophets, etc.					
7. Not drinking liquor					
8. Not eating pork					
9. Not stealing or taking other people belongings without permission					
10. Not committing adultery (*zina*)					
11. Not disobey parents					
12. Giving donation/charity for the sake of Allah					
13. Spending modestly (neither extravagance nor miserliness)					
14. Maintaining a good relationship (*silaturrahmi*) among the peers, families, and neighbours.					

15. How many *rakaats* do you pray *salat al-sunnah* (recommended prayer) a day?

None	
2-4 *rakaats*	
6-10 *rakaats*	
12-14 *rakaats*	
16-20 *rakaats*	
<20 *rakaats*	

16. How many days do you fasting *sunnah* (recommended fasting) in a month?

None	
1-3 days	
3-6 days	
7-11 days	
12-16 days	
<16 days	

17. In a day, how many hours do you allocate your time to recite al-Qur'an?

None	
<1 hour	
1-2 hours	
3-4 hours	
4-5 hours	
>5 hours	

18. Regardless of your answer above, do you think that you are a religious person?

Not religious at all	
Least Religious	
Quite Religious	
Religious	
Very Religious	

Part C: Income of Respondents

1. Monthly Income (it could come from your scholarship and parents).

<RM300	RM300-RM500	RM501-RM1,000	RM1,001-RM1,500	RM1,501-RM2,000	>RM2001

2. Do you have any other sources of incomes?

Yes	
No	

3. If yes, how much do you earn per-month?

<RM300	RM301-RM500	RM501-RM700	RM701-RM900	RM901-RM1000	>RM1001

4. Is the income generated included from part-time job? (*You may tick more than one box*).

On Campus	
Off campus	
Others, please state	

5. In a month, how much of your income is allocated for the followings?

Item	Percentage (%)				
	<1%	1-10%	11-25%	26-50%	>50%
Foods and Beverages					
Clothing					
Rental Housing (College)					
Transportation					
Books and Photocopying class materials					
Religious activities (e.g. donation, extra-religious classes, etc)					
Phone, Electricity, water and other Bills					
Others, please state					

6. Is/Does income that you earn every month sufficient to satisfy your needs?

Not sufficient	
Quite sufficient	
Sufficient	
More than sufficient	

Part D: Saving of Respondents

1. How much do you save [including *sadaqah* (charity), donation, etc] per-month?

<RM50	RM51-RM100	RM101-RM150	RM151-RM200	RM201-RM250	>RM251

2. Are you paying *zakah*, including *zakat al-fitr?*

Yes	
No	

3. If yes, how much do you pay?

<RM50	RM51-RM100	RM101-RM150	RM151-RM200	RM201-RM250	>RM250

4. Out of your total income, how many percent do you save per-month?

<1%	1-5%	6-15%	16-20%	21-25%	>25%

5. In a month, how much of your total income is saved for the followings?

Item	Percentage (%)				
	<1%	1-10%	11-25%	26-50%	>50%
Hajj (pilgrimage)					
Married					
Start your own business					
Emergency					
Purchase Shares					
Others, please state					

6. Do you save because you are aware that any single cent saved (or contributed as *sadaqah*) carries *thawwab* which will be rewarded in this world and/or hereafter?

Yes	
No	

6. Since at the age of.................you started making saving?

<8 years	
8-13 years	
14-19 years	
20-25 years	
26-31 years	
32-37 years	
>37 years	

7. What are your purposes of saving? (*You may thick more than one box*).

a. For future Investment:

Purchase Shares	
Performing *Hajj* (pilgrimage)	
Married	
Start own business	
Others, please state	

b. For Emergency of:

Yourself	
Relatives	
Friends	
Nation	
Others, please state	

8. If the objective of saving is achieved, will you, in future, save again?

Yes	
No	
Undecided	

9. Your saving habits is developed and induced by: (*You may tick more than one box*).

Family members	
Relatives	
Friends	
Self awareness	
Religious duties	
Others, Please state	