

## Developing Scales for Measuring Religiosity in the Context of Consumer Research

<sup>1</sup>S. Abdul Shukor and <sup>2</sup>Ahmad Jamal

<sup>1</sup>Faculty of Economics and Muamalat, Universiti Sains Islam Malaysia,  
71800 Bandar Baru Nilai, Negeri Sembilan, Malaysia

<sup>2</sup>Cardiff Business School, Cardiff University, Aberconway Building,  
Colum Drive, Cardiff, CF10 3EU, United Kingdom

---

**Abstract:** Religiosity refers to the degree to which a person adheres to his or her religious values, beliefs and practices and uses them in daily life. This paper aims to develop scales of measuring religiosity for Muslims in the context of consumer research. The development of the scale was based on two phases of data collection: firstly, a qualitative phase which involved interview method; and secondly, a quantitative phase, which was implemented via a survey questionnaire. A total number of 222 completed questionnaires was received and analysed using Structural Equation Modelling (SEM). Results of the study indicated that five items formed a unidimensional scale of Religiosity scale. It can be concluded that measurement of a Muslim's religiosity should include two important aspects including relationship with Allah and relationship with other people. The development of religiosity scale will aid both managers and academics in better understanding the role of religiosity in consumer research. It is recommended that in future this measuring scale should.

**Key words:** Religiosity • Measuring Scale • Consumer Research

---

### INTRODUCTION

Religion has been documented as an important factor that heavily influences consumer decision behaviour [1-3]. Religion may serve to link consumers to a style of life that determines not only what and how much is consumed, but why it is consumed [4]. Studies examining the effect or impact of religion on consumer behaviour are based on two facets; religious affiliation and religiosity. Religious affiliation has typically been measured relative to denominational membership or religious identification of the individual (e.g. Catholic, Protestant and Jew) [5]. Although religious affiliation has been used as a variable in studying religion and consumer behaviour [2, 6], a number of researchers believe that it is not sufficient to reflect the impact of religion on consumer behaviour [5, 7]. For instance, a person may claim to be affiliated with Islam however, if he or she does not truly follow the teaching and conduct of Islam, he or she is as just the same as other non Muslims. In addition, McDaniel and Burnett [5] recommend that future research in the area of religion and consumer behaviour should focus not on denominational affiliation of the consumer

but on religious commitment. Despite the significant support of religiosity on consumer behaviour, the concept of religiosity from the perspective of Islam remains scant. Past studies measuring religiosity has often been developed from a Christian perspective using Christian subjects.

### Religiosity and Its Implications on Consumer Behaviour:

Religious commitment, or religiosity, is defined as the degree to which a person adheres to his or her religious values, beliefs and practices and uses them in daily life [8]. This definition is adopted in this study because it emphasises the importance of adhering to one's religious beliefs as a basis for action in daily life, which can include the way they behave in the market place. Religiosity differs from spirituality in that spirituality seeks a connection to a non material reality that is perceived as a kind of perfection whereas religiosity is the observance of the outward forms of some religious tradition [9].

Because religiosity reflects the individual's adherence to their religious values and beliefs, highly religious individuals tend to abide by the rules and codes of conduct which are set by their religious doctrines;

for example, attending regular worship services and being strictly committed to the religious practices and membership of the group. If, on the other hand, their belief in religious tenets is weak, they might feel free to behave in other ways [10]. Similarly, since people vary in their level of commitment, so will their consumption choices reflecting that commitment. The person with a higher commitment will more closely follow the prescribed consumption norm, all else being equal [11]. Hence, religiosity should be considered in understanding the nature of consumer behaviour [10]. Additionally, it has been recommended by McDaniel and Burnett [5] that future research in the area of religion and consumer behaviour should focus not only on denominational affiliation of the consumer but on individual religiosity because it is stable over a fairly long period of time and is observable.

Previous research has shown that highly religious individuals typically exhibit a strong sense of commitment to their belief system and thus they are expected to behave according to the norms as described by their religion [12]. For instance, a study conducted by Siguaw and Simpson [13] demonstrated the effect of consumers' religiosity on their Sunday shopping and outshopping behaviours. In particular, the finding indicates a negative effect of religiosity on the propensity to shop on Sunday. Individuals with high levels of giving to their church (monetarily and of their time) were found to spend fewer Sundays shopping per year and to spend significantly less of their total retail purchasing dollars on Sundays. In addition, consumers with high spiritual and devotional values were found to spend significantly less of their money for outshopping and to believe that non essential business should be closed on Sundays.

Evidence also exists of religiosity effect on consumers' attitudes toward advertising messages. Michell and Al-Mossawi [14] conducted an experiment to test the mediating effect of religiosity on advertising effectiveness among British Christians and Muslims. They found that both Christians and Muslims respondents with higher level of religiosity had significantly less favourable attitudes towards the contentious message and conservative Muslims had much lower recall scores than liberals. In a different study, Wan Ahmad *et al.* [15] examined the role of religiosity in shaping consumers' choice in banking. Respondents who were moderately and devoutly religious preferred Islamic banking compared to conventional banking. Findings from these studies [13-15] show the direct influence of religiosity on consumer choice.

Other studies have examined the effect of religiosity on shopping behaviour [3, 12, 16], shopping orientation [10, 13], decision making [3, 17] and consumer attitudes/beliefs in various situations regarding questionable consumer practices [18]. Findings from these studies show that religiosity should be considered as an important determinant of consumer behaviour whereby religious consumers were found to differ from their non religious counterparts. Results from the studies reviewed also provided some indication that religiosity is a more significant construct than religious affiliation in examining the impact of religion on consumer behaviour.

**Previous Measurement of Religiosity:** Early researchers have relied upon single indices, or unidimensional measures, to measure religiosity, the most commonly measured element is religious attendance. As has been argued by Bergan and McConatha [19], the reliance on religious attendance as a sole measure of religiosity may be insufficient and lead to incorrect conclusions. For instance, a young Muslim may attend prayers at the mosque for social reasons (i.e. to please their friends). Thus, their action of attending the mosque could be more of a routine action than a devotional act [20].

Consequently, a considerable amount of research has conceptualised religiosity using multi dimensions or multi items. One of the most frequently used measures of religiousness is Allport and Ross's [21] Religious Orientation Scale (ROS) [22]. Allport and Ross [21] viewed religious motivation as differentiated by intrinsic religiousness and extrinsic religiousness. They stated that, '*the extrinsically motivated person uses his religion, whereas the intrinsically motivated lives his religion*' [21]. In a simpler term, intrinsic religiousness is a true believer in religious practice for its own sake while extrinsic religiousness views religious practice as an avenue to a social or personal end (e.g. comfort, acceptance) [10].

The ROS has been proven to be a reliable measure of religiosity [22] and it has been applied in a number of consumer research studies [3, 16, 18, 23]. Although the scale has been used widely in marketing, specifically in consumer research, it should be noted that the scale has been designed from a Christian perspective and it was developed with Christian subjects.

Another popular measurement of religiosity was developed by Wilkes *et al.* [7] who operationalised the construct of religiosity based on four items, which are: church attendance, importance of religious values, confidence in religious values and self perceived

religiousness. Wilkes *et al.* [7] argued that the use of multi items measurement of religiosity may achieve high validity at the cost of sheer impracticality for almost all consumer research. Their measurement has since been applied in other studies that investigated the influence of religiosity on consumer behaviour [12, 24, 25].

A number of studies [26, 27] which have investigated the influence of religiosity on consumer behaviour have also operationalised religiosity based on the Religious Commitment Inventory (RCI-10) that was developed by Worthington Jr. *et al.* [8]. The RCI-10 consists of six statements expressing intrapersonal religiosity (cognitive) and four statements expressing interpersonal religiosity (behavioural). The cognitive dimension focuses on the individual's belief or personal religious experience while the behavioural dimension concerns the level of activity in organised religious activities. Although RCI-10 has been validated across different samples (i.e. Buddhist, Hindus, Muslims and the non religious), Muhamad and Mizerski [28] have argued that, for example, the commitment of Protestant consumers and Muslim consumers to their religion needs to be measured based upon the Protestant and Islamic perception of religious commitment instead of using a single generic measure of religious commitment.

More recently, Khraim [20] developed dimensions for measuring Muslim religiosity. The dimensions introduced in Khraim's [20] study are directed more toward practical behaviour. The results show that three dimensions (i.e. seeking religious education, Islamic current issue and sensitive products) yield the best combination of dimensions to measure Muslim religiosity. Although the measurement was specifically developed for Muslims, it can be argued that the measurement developed does not reflect the true meaning of Islam. Islam is not a mere belief system or a 'religion' in the commonly understood sense of the word, it is, rather, what in Arabic is called a '*deen*' - a total frame of reference, a complete system and way of life which embraces the entirety of a human being's existence. Thus, it does not separate what pertains to 'religion' such as act of worship, from what pertains to human interaction and mundane or 'secular' life [29].

Although there is no specific measurement of what a devout or committed Muslim is, in dealing with their daily lives Muslims are reminded of establishing two important relationships in order to be a good Muslim [30]. The first is '*Hablum minallah*' which refers to a relationship with Allah (standard Arabic word for God). The second is '*Hablum minannas*' that reflects a relationship with other

people. As stated in the Quran (the divinely – revealed Scripture of Islam), "*You are the best of peoples ever raised up for mankind; you enjoin what is right and forbid evil and you believe in Allah.*" [3:110]. Relationship with Allah or '*Hablum minallah*' can be understood in the form of worship rituals, remembrance, contemplation and continuous dependence on Him. This also includes the importance of practicing the teaching of Islam, which is mainly derived from two sources: the Quran (the divinely – revealed Scripture of Islam) and the Sunnah (the practice of the Prophet, consisting of what he himself did, recommended or approved of in others).

'*Hablum minannas*' or relationship with people, on the other hand, requires Muslims to have a good relationship with others (i.e. relatives, neighbours, non Muslims, the poor and the weak). Many examples of the concept of '*Hablum minannas*' or relationship with people can be retrieved from the Quran (the divinely – revealed Scripture of Islam) and Hadith (the sayings of the Prophet). For instance, "*Surely Allah enjoins the doing of justice and the doing of good (to others) and the giving to the kindred and He forbids indecency and evil and rebellion; He admonishes you that you may be mindful.*" [16:90]. It can also be found in the following Hadith that says "*He is the most perfect believer who is perfect in his manners and most affectionate towards his wife and children.*" And in the Hadith that says "*He is not a Muslim who eats his fill and lets his neighbour go hungry.*" Thus, both the prior verse and the Hadith require Muslims to show sincerity, tenderness, integrity and honesty in dealing with other people [29]. Consequently, it can be argued that measurement of a Muslim's religiosity should include the two important aspects; relationship with Allah and relationship with other people. The purpose of this study is to develop measures of religiosity for Muslims in the context of consumer research.

## MATERIALS AND METHODS

**Face to Face Interviews:** The first step in developing items to measure religiosity involved face to face interviews. A total number of 12 participants was interviewed. Respondents were asked on their understanding of concept of religiosity. Most interviewees had a general agreement that religiosity consists of two components. First, interviewees relate religiosity with persons who fulfil his or her obligation to the God by following the basic of Islam such as keeping up with the five rituals. This is

frequently reflected in the following statements; ‘*Good Muslims are people who keep up the five rituals*’, ‘*Pray five times a day... follows the religion*’ and ‘*A fundamental Muslim is someone who follows the basic of Islam...the five pillars of Islam, zakath, salath, hajj, fasting and syahadah...that would be fundamental Muslim*’. Secondly, there was also a general agreement that religiosity means someone who possess a good character to other human beings. Statement such as ‘*Good Muslim ... deals justly with other people*’, ‘*You can rely on them (religious people) when you need help*’, ‘*If every action they try to show some kind of realisation of Islam, practical, implementation of their knowledge in Islam and that is a practicing person*’ and ‘*Someone who is religious, didn’t lie, didn’t swear, didn’t backbite and that kind of things*’ were typical responses.

**Survey Questionnaire:** The results of the qualitative research guided the construction and phrasing of the structured questionnaire used in the quantitative research that refers to the concept of religiosity. This study operationalises religiosity using nine items. Two items were adapted from Siguaw and Simpson [13] and seven items were newly developed based on the interviews’ outcome. Religiosity scale was measured with nine items on a seven point Likert scale ranging from ‘1’ (strongly disagree) to ‘7’ (strongly agree). For the purpose of this study, a combination of self selection sampling method and snowball sampling method were used. In the first stage, a few persons were invited to complete the questionnaire. The second stage involves asking these persons to introduce other persons complete the questionnaire, who in turn lead more persons who can be asked to complete the questionnaire in the third stage and so on. Usable survey collection resulted in a total of 222.

## RESULTS AND DISCUSSION

**Factor Analysis:** The nine items of religiosity were subjected to Exploratory Factor Analysis (EFA). Initially, the unrotated factor matrix was computed to determine how many components (factor) to extract [31]. To assess the suitability of data for factor analysis, the correlation matrix for coefficients was inspected. The correlation matrix table showed that there were coefficients above 0.3 with KMO value of 0.778 exceeded 0.6 and the Bartlett’s Test of Sphericity value was significant. This confirmed the suitability of the items for EFA. Then, to determine number of components

(factors to extract), Eigenvalue of 1 or more were checked. Three components meet this criterion and explained a total of 70.171% of the variance. Component 1 explained 39.346% of the total variance, component 2 explained 16.783% and component 3 explained 13.952%. Items REL4 and REL6 were deleted as Hair *et al.* [32] recommended that a factor needs to consist of at least three items.

After deleting items REL4 and REL6, the remaining items were subjected to Varimax rotation. The rotated solution showed that all items loaded on two components. Item REL7 was deleted to gain higher Cronbach Alpha value leaving six items. The remaining six items were subjected to Varimax rotation. The rotated solution showed that all items loaded on one component explaining 54.986% of the total variance, with values ranging from 0.536 to 0.858. In addition, KMO value increased from 0.778 to 0.836. Overall, six items were retained for further analysis. The Cronbach Alpha value is 0.811 which is higher than the recommended value of 0.7 [33].

**Confirmatory Factor Analysis:** Confirmatory factor analysis (CFA) using Amos 18 was conducted to confirm the factorial structure [33, 34]. In arriving at the final set of items for religiosity construct, one item (REL8) was deleted based on item-to total correlations and the standardised residual values [34]. The deleted item was examined and compared with original conceptual definition of the construct. Deletion of the item did not significantly change the domain of the construct as it was initially conceptualised.

The resulting pool of items was subsequently subjected to confirmatory factor analysis and a completely standardised solution produced by Amos 18 using maximum likelihood method showed that all of the five items loaded highly on one factor, confirming the unidimensionality of the construct and provided strong empirical evidence of their validity. As shown in Table 1, the t-values for the loadings were high, demonstrating adequate convergent validity. The standardised factor loadings for all items were above 0.6 (ranged between 0.618 and 0.839). Composite reliability showed value of 0.784, which exceeded level of 0.7 [33] while the value for variance extracted was 0.704 which was higher than the recommended level of 0.5 [33]. The resulting measurement model was  $\chi^2_{222} = 16.179$  with 5 degrees of freedom,  $p=0.006$ , Goodness of Fit Index (GFI)=0.974; Comparative Fit Index (CFI)=0.974; Incremental Fit Index (IFI)=0.974, which indicated a good fit.

Table 1: The Measurement Model

Item(s)	Estimate	Critical Ratio (t-value)	Composite Reliability	Variance Extracted
REL1 I believe in Allah.	0.618	Fixed	0.784	0.704
REL2 I carefully avoid shameful acts.	0.662	7.948		
REL3 I always perform my duty as a Muslim (e.g. pray five times a day, fasting during the month of Ramadhan, pilgrimage to Mecca) to Allah.	0.711	8.365		
REL5 It is important for me to follow Allah's Commandments conscientiously.	0.839	9.245		
REL9 Religious beliefs influence all my dealings with everyone.	0.766	8.801		
Goodness of Fit Statistics			Results	
Chi square ( $\chi^2$ ) of estimate model			16.179 (df=5, p=0.006)	
Tucker Lewis Fit (TLI)			0.947	
Bollen's Incremental Fit Index (IFI)			0.974	
Comparative Fit Index (CFI)			0.974	
Parsimony fit ( $\chi^2/df$ )			3.236	
Goodness of Fit Index (GFI)			0.974	

### CONCLUSION

This paper demonstrates the development of religiosity for Muslims in the context of consumer research. The one factor, five item scale presented here will permit the more precise and systematic use of this concept by allowing researchers to operationalise religiosity with confidence. Thus, the author offers an easy to administer, reliable and valid measure that can help consumer researchers to better understand and use religiosity as important construct in the consumer research. The development of religiosity scale will aid both managers and academics in better understanding the role of religiosity in consumer behaviour. In future, it is recommended that this measuring scale should be tested and validated using different sample.

### REFERENCES

- Hirschman, E.C., 1982. Religious differences in cognitions regarding novelty seeking and information transfer. *Advances in Consumer Research*, 9(1): 228-233.
- Andeleeb, S.S., 1993. Religious affiliations and consumer behavior: an examination of hospitals. *Journal of Health Care Marketing*, 13(4): 42-49.
- Delener, N., 1994. Religious contrasts in consumer decision behaviour patterns: their dimensions and marketing implications. *European Journal of Marketing*, 28(5): 36-53.
- Hirschman, E.C., 1983. Religious affiliation and consumption processes: an initial paradigm. In J.N. Sheth (ed.). *Research in Marketing*, 6: 131-170.
- McDaniel, S.W. and J.J. Burnett, 1990. Consumer religiosity and retail store evaluative criteria. *Journal of the Academy of Marketing Science*, 18(2): 101-112.
- Hirschman, E.C., 1981. American Jewish ethnicity: its relationship to some selected aspects of consumer behavior. *Journal of Marketing*, 45(3): 102-110.
- Wilkes, R.E., J.J. Burnett and R.D. Howell, 1986. On the meaning and measurement of religiosity in consumer research. *Journal of the Academy of Marketing Science*, 14(1): 47-56.
- Worthington Jr, E.L., N.G. Wade, T.L. Hight, M.E. McCullough, J.T. Berry, J.S. Ripley, J.W. Berry, M.M. Schmitt and K.H. Bursley, 2003. The Religious Commitment Inventory-10: development, refinement and validation of a brief scale for research and counseling. *Journal of Counseling Psychology*, 50(1): 84-96.
- Ball, D., R. Hampton, A. Chronis and M. Bunker, 2001. The development of spirituality and its effect on consumer behavior. Paper presented at American Marketing Association, Washington, D.C. pp: 11-14.
- Mokhlis, S., 2006. The influence of religion on retail patronage behaviour in Malaysia. *Journal of American Academy of Business*, Cambridge, 9(1): 64-74.
- Cosgel, M.M. and L. Minkler, 2004. Religious identity and consumption. *Review of Social Economy*, 62(3): 339-350.
- Sood, J. and Y. Nasu, 1995. Religiosity and nationality: an exploratory study of their effect on consumer behavior in Japan and the United States. *Journal of Business Research*, 34(1): 1-9.
- Siguaw, J.A. and P.M. Simpson, 1997. Effects of religiousness on Sunday shopping and outshopping behaviours: a study of shopper attitudes and behaviours in the American South. *International Review of Retail, Distribution and Consumer Research*, 7(1): 23-40.

14. Michell, P.C.N. and M. Al-Mossawi, 1995. The mediating effect of religiosity on advertising effectiveness. *Journal of Marketing Communications*, 1(3): 151-162.
15. Wan Ahmad, W.M., A. Ab. Rahman, N. A. Ali and A. Che Seman, 2008. Religiosity and banking selection criteria among Malays in Lembah Klang. *Shariah Journal*, 16(2): 279-304.
16. Essoo, N. and S. Dibb, 2004. Religious influences on shopping behaviour: an exploratory study. *Journal of Marketing Management*, 20(7/8): 683-712.
17. Gentry, J.W., P. Tansuhaj, L.L. Manzer and J. John, 1988. Do geographic subcultures vary culturally? *Advances in Consumer Research*, 15(1): 411-417.
18. Vitell, S.J., J.G.P. Paolillo and J.J. Singh, 2005. Religiosity and consumer ethics. *Journal of Business Ethics*, 57(2): 175-181.
19. Bergan, A. and J.T. McConatha, 2001. Religiosity and life satisfaction. *Activities, Adaptation and Aging*, 24(3): 23-34.
20. Khraim, H., 2010. Measuring religiosity in consumer research from Islamic perspective. *International Journal of Marketing Studies*, 2(2): 166-179.
21. Allport, G.W. and J.M. Ross, 1967. Personal religious orientation and prejudice. *Journal of Personality and Social Psychology*, 5(4): 432-443.
22. Donahue, M.J. 1985. Intrinsic and extrinsic religiousness: review and meta analysis. *Journal of Personality and Social Psychology*, 48(2): 400-419.
23. Delener, N., 1990. The effects of religious factors on perceived risk in durable goods purchase decisions. *The Journal of Consumer Marketing*, 7(3): 27-38.
24. Ong, F.S. and G.P. Moschis, 2006. Religiosity and consumer behavior: a cross cultural study. Paper presented at International Conference on Business and Information, Singapore, 12-14 July.
25. Lindridge, A., 2005. Religiosity and the construction of a cultural-consumption identity. *The Journal of Consumer Marketing*, 22(2/3): 142-151.
26. Mokhlis, S., 2009. Relevancy and measurement of religiosity in consumer behavior research. *International Business Research*, 2(3): 75-84.
27. Mokhlis, S., 2008. Consumer religiosity and the importance of store attributes. *The Journal of Human Resource and Adult Learning*, 4(2): 122-133.
28. Muhamad, N. and D. Mizerski, 2010. The constructs mediating religions' influence on buyers and consumers. *Journal of Islamic Marketing*, 1(2): 124-135.
29. Haneef, S., 1996. What everyone should know about Islam and Muslims. 14th ed. Kazi Publications, Inc. Chicago, IL.
30. Darul Makmur Mosque, 2006. A good Muslim is a good citizen. Available from: <http://www.darulmakmur.org>. [Accessed on 2nd March 2012]
31. Pallant, J., 2005. SPSS survival manual - a step by step guide to data analysis using SPSS for Windows (Version 12). 2nd ed. Open University Press, London.
32. Hair, J.F., R.E. Anderson, R.L. Tatham and W.C. Black, 1998. *Multivariate data analysis*. 5<sup>th</sup> ed. Pearson Education, Inc. Upper Saddle River, New Jersey.
33. Hair, J.F., W.C. Black, B.J. Babin and R.E. Anderson, 2010. *Multivariate data analysis*. 7<sup>th</sup> ed. Pearson Education, Inc. Upper Saddle River, New Jersey.
34. Byrne, B.M., 2010. *Structural equation modeling with AMOS: basic concepts, applications and programming*. Lawrence Erlbaum Associates, Inc. New Jersey.