



The impact of intrinsic and extrinsic religiosity on ethical decision-making in management in a non-Western and highly religious country

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Abstract

The primary purpose of this study was to explore the indirect effect of intrinsic religiosity and extrinsic religiosity on ethical intention through ethical judgment. A review of the literature shows the need for more research at the intersection of religiosity and ethics, especially in non-Western, highly religious contexts. This research, therefore, addresses the research question: *Do intrinsic religiosity and extrinsic religiosity indirectly impact ethical intention through influencing the ethical judgment of management professionals?* Data were gathered from members of the Management Association of Pakistan through a questionnaire. Pearson correlation results show the overall trend between the constructs of interest. Multiple regression results show that both intrinsic religiosity and extrinsic religiosity are significant positive predictors of ethical judgment. Ethical judgment was also found to be a significant, positive predictor of ethical intention. The main contribution of the study is evidence that ethical judgment acts as a mediator between religiosity (whether intrinsic or extrinsic) and ethical intention in a non-Western highly religious context. This research also found that intrinsic religiosity impacts ethical intention directly as well as indirectly through ethical judgment, but extrinsic religiosity influences ethical intention only through its effect on ethical judgment. We discuss our results along with practical and research implications, and limitations of this research are highlighted to guide future research.

Keywords Religiosity · Intrinsic religiosity · Extrinsic religiosity · Ethical decision-making · Non-Western highly religious contexts · Indirect effect

The paper is based on the MPhil dissertation of the first author (Samia Tariq) under the supervision of second author (Nighat G. Ansari).

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Introduction

To add to the religion-ethics literature in general and non-Western highly religious context ethics literature in particular, this study reveals evidence that *intrinsic religiosity and extrinsic religiosity significantly influence ethical intention through the ethical judgment of management professionals faced with ethical decision-making*.

The last few decades have witnessed an increased emphasis on ethics, potentially because of business scandals in the corporate sector, and this focus has led researchers to investigate the phenomenon of ethical decision-making (EDM) in greater detail. A review of the literature confirms that EDM is a highly researched specialized area. This stream of research has investigated individual factors such as demographics, personality, cultural values, value orientation, personal values, decision styles, cognitive moral development, religiosity, and spirituality. Organizational factors studied include rewards, ethical culture, code of ethics, organization culture, subjective norms, organization size, competitiveness, policies, and procedures; moderators and mediators have also been investigated (Craft 2013; Lehnert et al. 2015). However, researchers have not sufficiently investigated the factors mentioned above, especially in non-Western highly religious contexts. These contexts, therefore, provide an opportunity for research contributions. Although ethics research in non-Western contexts is gaining momentum (Chan et al. 2016), publications relating to highly religious, non-Western contexts remain limited.

Furthermore, Western and less-religious countries have witnessed more research at the interplay of religion and ethics than their highly religious, non-Western counterparts. Relationships of religion and ethics may differ across the spectrum of highly religious to less-religious countries, and this potential inspires research to be conducted in highly religious countries followed by cross-cultural research (Oumlil and Balloun 2009; Parboteeah et al. 2008). The steady increase in the religiosity of people around the world (CIA 2007, 2012, 2014; Moghadam 2004) has prompted researchers to study the impact of religious beliefs on the EDM of managers, and how such religiosity could reduce unethical behavior in the corporate world (Singhapakdi et al. 2013).

Religiosity, in contrast to religion, includes different religious activities, the degree of dedication, and the belief in religious principles (Craft 2013). One factor which has not received much attention in non-Western, highly religious contexts is the role of religiosity in EDM despite the importance of religion in these contexts and the general public belief that religion is a prerequisite for morality, a belief reported by the Pew Research Institute (Pew Global Attitudes Project 2007). The limited research and the mixed findings regarding the relationship between religiosity and EDM (Lehnert et al. 2015; Parboteeah et al. 2008) suggest that this relationship is complicated (Weaver and Agle 2002). This complexity should motivate investigations of the relationship, especially in different contexts, so that the phenomenon can be understood and explained more clearly.

In order to achieve this objective, we consider religiosity from a two-dimensional rather than a one-dimensional perspective; we look at the dimensions of *intrinsic religiosity* and *extrinsic religiosity*, with the divergent focuses of *living* the religion vs. *using* the religion, respectively (Allport and Ross 1967). With this approach, we investigated the respective influence of each dimension on EDM. Religiosity means a person's belief in God and the degree to which the path prescribed by God is being

followed (McDaniel and Burnett 1990). *Intrinsic religiosity* reflects the inner spirit of the religious tradition reflected in the dominant motivations of the person. It indicates a commitment to the religion's inherent principles and involvement in serving the religion (Singhapakdi et al. 2013). *Extrinsic religiosity* denotes the utilitarian use of religion for selfish motivations such as social approval or to gain personal benefits (Singhapakdi et al. 2013). The context of this research is Pakistan, with its profoundly religious population, and we undertook this work with the hope that it might provide a better explanation of the relationship between religiosity and ethical intention in this context, different from the existing evidence from studies conducted mostly in Western and secular or less-religious countries.

This study is significant from three standpoints: it is practical, it provides a theoretical rationale, and it is based on an empirical study. The Pakistani public at large believes that a person cannot be moral without a belief in God (Pew Global Attitudes Project 2007). Our study aims to empirically test this using survey of managers in corporate Pakistan, measuring their religiosity, ethical judgment, and ethical intentions through their responses to four business ethics scenarios. We also utilize a theoretical perspective by using the premier H-V model of ethics, wherein religion forms an essential part of cultural environment and personal characteristics, theorizing that religion can influence EDM (Hunt and Vitell 1986, 1993, 2006).

Additionally, there have been a significant number of calls to research the interplay of religion and ethics because prior studies, especially in under-investigated contexts, have not consistently captured the role of religiosity in that interplay. These calls have emphasized the need to carefully investigate the relationship between religious self-identity and ethical behavior (Weaver and Agle 2002), the importance and role of particular religious viewpoints (Craft 2013), and a better understanding of the role of religious values in EDM (Lehnert et al. 2015). We anticipate this study to be a fruitful effort toward realizing the above objectives because the context of this research, Pakistan, brings into consideration religious viewpoints different from those already studied in Western and secular or less-religious contexts.

This research also helps to identify whether the mainstream constructs apply to non-Western, highly religious contexts or need adaptation. Specifically, we investigated the relationship between two dimensions of religiosity (intrinsic and extrinsic) and ethical intention through ethical judgment in the context of a highly religious, non-Western, developing country. This work strives to provide another perspective (ethical judgment as a mediator of religiosity and ethical intention) on the mixed findings on the relationship between religiosity and ethical judgment or intention. Such mixed findings have been reported by studies that have been conducted mainly in Western contexts. Such Western contexts are quite different from their non-Western counterparts in terms of religious orientation and religious adherence.

Literature review

This section provides an overview of the existing literature, covering studies investigating the relationship between religiosity and EDM, mixed findings on religiosity, the two-dimensional nature of religiosity, and the relationship between ethical judgment and ethical intention.

Earlier studies on the relationship between religiosity and EDM

Earlier experimental studies (Hegarty and Sims 1978, 1979) intending to find the relationship between religious orientation and EDM (in particular, acceptance or rejection of a kickback) did not find a significant relationship between the two. McNichols and Zimmerer (1985) found a significant correlation between strong religious beliefs and negative attitudes toward the acceptability of unethical behaviors in eight out of ten scenarios among undergraduate students. Kidwell et al. (1987) found no relationship between denomination or church attendance and perception of what is ethical. Hegarty and Sims (1978, 1979) and Kidwell et al. (1987) found no significant relationship between religious orientation and EDM, and that finding was widely accepted for quite some time.

Later, however, religiosity was found to be significantly related to the perception of an ethical problem (Barnett et al. 1996). Afterward, a study investigating the relationship between religiosity and ethics found a marginally significant positive relationship in three of four scenarios, with $p < 0.10$, between the perception of an ethical problem and religion (Singhapakdi et al. 2000b). In another study, individuals with strong religious beliefs were found to be less likely to assess an unethical act as being fair (Wagner and Sanders 2001).

Literature reviews of research on religiosity in EDM

In a comprehensive literature review spanning 1996 to 2005 on the “management, spirituality, and religion domain,” Dean and Fornaciari (2007) called for further innovative and interdisciplinary empirical research on religion and ethical behavior in organizations owing to the paucity of research in this particular domain. In another Academy of Management study, Weaver and Agle (2002) reported that there have been relatively few empirical studies delineating the interaction of religion and business ethics, and they even went on to assert that inability to discover clear connection between religious role expectations and ethical behavior is analogous to a failure to analyze religious role expectations sufficiently. They further emphasized the importance of detailed analysis in this regard.

In another comprehensive literature review of EDM, spanning the years 2004 to 2011, two studies (Kurpis et al. 2008; Oumlil and Balloun 2009) were noted to have investigated religion as a predictor of EDM, and the reviewer highlighted that the role of religiosity in ethical decisions had not been consistently captured (Craft 2013). The first study found that commitment to moral self-improvement is a better predictor of ethical behavioral intentions than religiosity (Kurpis et al. 2008). In contrast, the second study above found mixed results while examining the relationship between religiosity and ethical intentions with US and Moroccan managers as respondents (Oumlil and Balloun 2009). In a following review built on and extending the aforementioned review, Lehnert et al. (2015) highlighted two studies (Oumlil and Balloun 2009; Rawwas et al. 2006) which found that religion was not an important factor in the context of EDM, while four studies found a significant and positive relationship between them (Fernando and Chowdhury 2010; Ho 2010; McCullough and Faught 2005; Vitell et al. 2009), and some studies reported mixed results (Bloodgood et al. 2008; Ibrahim et al. 2008). The reviews emphasized investigating the relationship

between religion and EDM while taking into account contingency factors (moderators and mediators) and noted that the decades of investigations have not been able to clarify the relationship.

Mixed findings on the relationship between religiosity and EDM and the multidimensional nature of the religiosity scale

Research on the relationship between religiosity and ethics has achieved mixed results and no conclusive evidence, thus showing that the relationship between religion and ethics is more nuanced than many researchers assumed (Barak-Corren and Bazerman 2017). These mixed findings necessitate testing this relationship in under-researched contexts and unearthing the underlying and contingent mechanisms of the relationship. In contrast to these mixed findings, the influence of religiosity on EDM is widely acknowledged due to the analysis of models considering religion as a factor affecting EDM (Bartels 1967; Bommer et al. 2013; Hunt and Vitell 2006). Additionally, a stream of empirical studies has also found a positive relationship between the two (Hunt and Vitell 1993; Rallapalli 1995; Singhapakdi et al. 2013; Singhapakdi et al. 2000a; Walker et al. 2012).

Empirical studies also converge on the assertion that religiosity is best represented by both its intrinsic and extrinsic dimensions (Cooper and Pullig 2013). Table 1 lists selected literature works which employ multidimensional religiosity scales in EDM along with their specific religiosity findings showing the relationships between religiosity dimensions, ethical beliefs, and ethical intention.

The relationship between ethical judgment and ethical intention

Since ethical judgment appeared to be the most significant predictor of ethical intention or behavior in almost all studies (Craft 2013; Ford and Richardson 1994; Lehnert et al. 2015; O'Fallon and Butterfield 2005), we use ethical judgment as a predictor of ethical intention. This idea is in line with almost all EDM models (Dubinsky and Loken 1989; Ferrell and Gresham 1985; Fritzsche 1991; Hunt and Vitell 2006; Jones 1991; Trevino 1986).

Ethics research in under-researched contexts

Ethics research has been pervasive in the USA but lacking in other countries (Marta et al. 2004). A recent citation analysis of business ethics research from a global perspective (Chan et al. 2016) revealed a trend that US institutions may be replaced by European institutions when it comes to the impact of business ethics research. Asian geographical regions that lead in this research area include Taiwan, Hong Kong, China, and South Korea. The other regions of Asia should be the focus of more ethics research, especially because of the high incidence of ethical transgressions in those regions. Notably, non-Western, highly religious countries are underrepresented in research at the intersection of religiosity and ethics (for exceptions see Kashif et al. 2017; Marta et al. 2004; Singhapakdi et al. 2000b).

The context of this study, Pakistan, has been the focus of very little research on religion and ethics. As an exception, Kashif et al. (2017) found that religiosity

Table 1 Selected studies using multidimensional religiosity scales

Reference	Context	Religiosity measure	Findings
Singhapakdi et al. (2000a)	EDM of marketing professionals (American Marketing Association)	Religiosity dimensions: church attendance; perceived importance of religious values; and confidence in religious values (Wilkes et al. 1986)	Religiosity (the composite of 3 dimensions) was a significant predictor in 1 scenario while it was a marginally significant ($p < 0.10$) predictor of ethical intention in 3 scenarios.
Singhapakdi et al. (2000b)	EDM of Thai managers enrolled in executive and special MBA programs	Same as above	Religiosity was a significant predictor of ethical intention in 2 of 4 scenarios.
Vitell and Muncy (2005)	Consumer ethics setting (undergraduate student consumers)	Religious orientation scale (Allport and Ross 1967) wherein religiosity has 2 distinct dimensions: intrinsic dimension and extrinsic dimension	Intrinsic religiosity explained consumer ethical beliefs to view the questionable consumer behaviors as wrong for 3 out of the 4 dimensions. Extrinsic religiosity did not significantly explain any of the 4 dimensions of the consumer ethics scale.
Vitell et al. (2009)	Undergraduate business students	Same as above	Intrinsic religiosity played a role in counterbalancing the negative impact of extrinsic religiosity on both dimensions of moral identity (internalization and symbolization).
Singhapakdi et al. (2013)	EDM in marketing (marketing managers)	Same as above	Intrinsic religiosity was found to be a positive predictor of ethical intention. Extrinsic religiosity was found to be a negative predictor of ethical intention.

moderates the relationship between injunctive norms and behavioral intention and between perceived behavioral control and behavioral intention. Empirical researchers have paid little attention to how religiosity influences ethical intention indirectly through ethical judgment, though this idea agrees with the H-V model discussed in the next section.

The above review shows that the literature has not consistently captured the relationship between religiosity and ethical intention, and therefore, there is a research gap. The next section methodically develops the argument that religiosity influences ethical intention through the mediating mechanism of ethical judgment.

Theory

The Hunt-Vitell theory, also known as the H-V model (Hunt and Vitell 1986, 1993, 2006), guides this study because of its extensive use in studying EDM, its role both as a

normative and positive theory of EDM, and its applicability both in professional and research contexts. This theory includes ethical judgment, intention, and behavior as its core constituents, all of which are closely linked with the constructs of interest in our study. The subsequent discussion is divided into three subsections: “Religiosity as a predictor of ethical judgment,” “Ethical judgment as a predictor of ethical intention,” and “Religiosity as an indirect predictor of ethical intention through ethical judgment.”

Religiosity as a predictor of ethical judgment

In most EDM theories, religion forms an essential part of the cultural environment (Bommer et al. 2013; Ferrell and Gresham 1985; Hunt and Vitell 1986). In the revised H-V theory, religion also constitutes an important part of personal characteristics that ultimately influence various components of the EDM process (Hunt and Vitell 2006). The literature contends that religion and religious values predominantly determine ethical judgment whether through a direct route (Razzaque and Hwee 2002; Tse and Au 1997; Wagner and Sanders 2001; Wimalasiri et al. 1996) or indirect route of religiosity to deontological consideration to ethical judgment (Hunt and Vitell 2006). These theorists contended that:

Unquestionably, an individual’s personal religion influences ethical decision-making. A priori, compared with nonreligious people, one might suspect that (1) highly religious people would have more clearly defined deontological norms and that (2) such norms would play a stronger role in ethical judgments (Hunt and Vitell 2006, p. 4).

We propose the idea that religiosity is a determinant of ethical judgment. The H-V model proposes that religiosity can impact ethical intention through ethical judgment as part of an element of the cultural environment and personal characteristics. A manager facing an ethical dilemma can form an ethical judgment on the situation based on deontological evaluation (a strict universal truth standpoint) or teleological evaluations (a utilitarian perspective). Almost all previous empirical studies conducted have found that the most significant predictor of ethical intention is ethical judgment. Therefore, we argue that religiosity is an indirect predictor of ethical intention through ethical judgment. This approach, though consistent with the theory, is contrary to some studies that have undertaken a direct approach of testing religiosity with ethical intention (Kurpis et al. 2008; Oumlil and Balloun 2009; Singhapakdi et al. 2013).

The previous section reviewed the literature on the relationship between religiosity and EDM based on data from respondents mostly belonging to Western contexts. We suspect that religiosity will exhibit a relatively stronger relationship with ethical intention through ethical judgment in the part of the world having populations with stronger religious affiliations than less-religious Western contexts. Because this study’s respondents live in a country where religiosity is on the higher end of the spectrum, the extent of the relationship between religiosity and EDM is likely to be more profound and thus could show a clearer picture of that relationship. Owing to the complexity of the religiosity variable, H-V theorists (Hunt and Vitell 2006) have called for using multidimensional religiosity scales to empirically test the relationship between religiosity and EDM and thereby know

more about the impact of religion on EDM. One multidimensional scale was previously proposed by Allport and Ross (1967), who considered intrinsic and extrinsic religiosity.

People having strong intrinsic religiosity will likely have more stringent and clearly defined moral principles because their main motivation is following a religion, which means they abide by the religion in all walks of their lives at any cost, internalizing the doctrine, and living by the religion. These clear principles based on religious tradition will help form their ethical judgments based on deontological considerations impacted by their religious traditions. Therefore, we hypothesize that:

H1: There is a positive relationship between intrinsic religiosity and ethical judgment in managers making decisions that have ethical content.

On the other hand, an “extrinsically motivated person *uses* his religion” (Allport and Ross 1967, p. 434) for the individual’s own benefit, compared to the person high in intrinsic religiosity who *lives* the religion. Similarly, an “extrinsic type turns to God, but without turning away from self” (Allport and Ross 1967, p. 434). Such people exhibit instrumental utilitarian motivations for religious behaviors, seeking social approval and furthering of their business interests. Managers high in extrinsic religiosity do not always make ethical principles based on their moral identity (Vitell et al. 2009). Since a manager high in extrinsic religiosity *uses* the religion and does not live it, this instrumental motivation will more likely lead to unethical judgment, so we contend:

H2: There is a negative relationship between extrinsic religiosity and ethical judgment in managers making decisions having ethical content.

Ethical judgment as a predictor of ethical intention

According to H-V theory, ethical judgment is formed based on both the deontological and teleological evaluation of the ethical problem at hand. Deontological evaluation, a normative ethical position focused on duty, obligation, or rule-based ethics, largely hinges on deontological norms that are essentially Kantian ethics and require that a person should act morally in all circumstances. Teleological evaluation, also known as consequentialist ethics, is essentially a means-ends theory advocating that ends can justify means and that the ends are more important than the means. Ethical judgment stemming from deontological and teleological evaluation gives rise to intention that finally translates into behavior. We consider the ethical judgment of the respondents to be a black box (without investigating the underlying deontological and teleological evaluations) and argue that it is a predictor of ethical intention.

Additionally, this argument is also in agreement with published research in which ethical judgment has been found to be the most significant predictor of ethical intention, as is the case for almost all empirical studies in comprehensive EDM literature reviews (Craft 2013; Ford and Richardson 1994; Lehnert et al. 2015; O’Fallon and Butterfield 2005). Based on the above theoretical arguments and the findings of the empirical studies, we formulate the following hypothesis:

H3: There is a positive relationship between ethical judgment and ethical intention in managers making decisions having ethical content.

Religiosity as an indirect predictor of ethical intention through ethical judgment

As already discussed, previous empirical studies have not been able to delineate the relationship between religiosity and ethical intention despite the calls for discovering that connection (Weaver and Agle 2002). Craft (2013) implicitly and Lehnert et al. (2015) explicitly have called for research to examine mediating variables that can influence the causal sequence of relationships in the EDM process. The finding of little or no relationship between religiosity and ethical intention in some studies could be rooted in the inability of religiosity to influence ethical intention directly. Guided by the H-V model, we propose that religiosity does affect ethical intention but does so through the indirect route of religiosity to ethical judgment to ethical intention. As already described, we consider religiosity from a multidimensional perspective, splitting it into intrinsic religiosity and extrinsic religiosity. A person whose main motivation is religion internalizes and follows the religion and its principles at any cost (Allport 1950; Allport and Ross 1967). Thus, such people are likely to form ethical intention through ethical judgment either directly due to the overpowering influence of religion in their life (religiosity → ethical judgment → ethical intention) or indirectly through the formation of deontological norms (Barak-Corren and Bazerman 2017; Piazza and Landy 2013) as dictated by the religion (religiosity → deontological norms → ethical judgment → ethical intention). Additionally, a symbolic-interactionist perspective of religiosity and awareness-judgment-intention-behavior process in organizations also contends that the relationship between religiosity and ethical intention depends on the salience of the religion for the focal decision-maker (Weaver and Agle 2002). Thus, managers who are religiously intrinsically motivated will likely exhibit positively influenced ethical intention through the formation of strong ethical judgment due to the salience of their religious principles.

We, therefore, propose the following hypothesis:

H4: Intrinsic religiosity positively influences managers' behavioral intentions through ethical judgment formed in decision-making situations having ethical content.

On the other hand, their instrumental approach toward religion will likely make managers high in extrinsic religiosity have teleological dispositions leading to serving themselves and using religion as a means, instead of having deontological dispositions. Such managers do not make religious principles part of their identity (Vitell et al. 2011) and use religion as a means to further their business and social approval. These managers will likely be low on deontological norms, but high on teleological evaluations focused on self-interest, subsequently displaying low ethical judgment, and therefore, low ethical intention. Therefore, we propose the hypothesis:

H5: Extrinsic religiosity negatively influences managers' behavioral intentions to act ethically through the formation of low ethical judgments in decision situations having ethical content.

In essence, we propose that both dimensions of religiosity—*intrinsic and extrinsic*—influence ethical intention through ethical judgment, the former positively and the latter negatively. A schematic diagram of the theoretical framework is shown in Fig. 1.

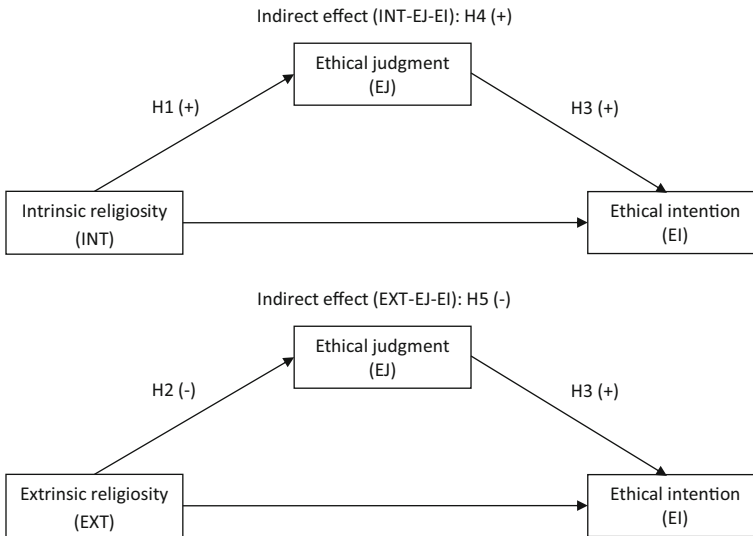


Fig. 1 The conceptual model

Methods

The basic purpose of the study was to test hypotheses centered on the relationship between ethical judgment, intrinsic religiosity, extrinsic religiosity, and ethical intention. In this investigation, correlations are hypothesized between the predictors and outcome variables in order to gain an understanding of the general trend of the analysis. The extent of researcher interference is minimal, as this study has just measured the variables as they are. We manipulated neither the variables of interest nor the setting, so the study setting was non-contrived. The unit of analysis was the individual, each of whom was a management professional. This cross-sectional study aimed to measure individual-related concepts (such as ethical judgment, intrinsic religiosity, extrinsic religiosity, and ethical intention).

Research setting

Despite an increase in secular orientations, especially among advanced societies of the world, people with traditional religious views still constitute the vast majority of the world population (Anheier and Isar 2007). In a 2010 estimate, nonreligious people accounted for 9.66% of the world population while atheists constituted 2.01%, and people adhering to some religion made up 88.33% of the world population (CIA 2014). Estimates for 2009 were similar: 2.04% atheist, 9.42% nonreligious, and 88.54% religious (CIA 2012). Comparing these two estimates with a 2004 estimate, where atheists were 2.32% of the world population, nonreligious 11.77%, and religion-adherent people 85.91%, an upward trend in religious adherence is evident (CIA 2007). This trend holds in other years as well, except for a 2010 estimate, where a slight decrease of 0.22% was witnessed from the 2009 estimate in overall adherence to a religion (CIA 2012). According to *The World Christian Encyclopedia* (WCE), Pakistan, until 1970, was 0% atheist, but that figure has risen to 0.1% in recent years.

Despite this slight increase, almost all of Pakistan's population remains religiously orientated (Moghadam 2004). A more recent world report stated that as of 2010, Pakistani people unaffiliated with any religion make up less than 0.1% of the population (Hackett and Grim 2012). Pakistan is also among the group of nations where more than 9 out of 10 respondents consider religion to be "very important" (The Pew Global Attitudes Project 2008). Specifically, almost all Pakistanis (98%) consider religion to be important (95% consider it "very important," and 3% consider it "somewhat important"). In research by the Pew Research Center, USA, Pakistan ranked quite high in religiosity with a score of 2.5 on a continuum of 0 to 3. The cohort of countries that have scored 2.5 or higher includes Nigeria, Jordan, Senegal, Indonesia, and Kuwait in addition to Pakistan. The general public in Pakistan (88%) hold that one must believe in God to be moral (Pew Global Attitudes Project 2007). This great emphasis on religion and the belief that religiosity is a prerequisite for morality should prompt researchers to empirically investigate the interplay of religiosity and moral decision-making in these highly religious countries. For these reasons, we chose Pakistan as our research setting.

This study is positioned along the lines of studies conducted in non-Western (Fernando and Jackson 2006; Marta et al. 2004; Phau and Kea 2007) but highly religious contexts (Oumlil and Balloun 2009). We were not able to find any study investigating the relationship between religiosity and EDM in highly religious countries. Thus, this study fills this gap.

The sample

The study population consisted entirely of management professionals working in various organizations in Pakistan. Because of the absence of a population frame of all management professionals, it was impossible to draw a random sample from the population. Therefore, we used the Management Association of Pakistan (MAP) as the sampling frame. MAP, founded in 1964, is the largest and oldest representative and professional body of management professionals in Pakistan. It has close relationships with other international management bodies. It is a full member of the Asian Association of Management Organizations, has signed an MOU with the All India Management Association, and has a country representative in Pakistan from the Asian Institute of Management (an organization based in the Philippines). The Lahore chapter of MAP has about 250 institutional and 495 individual members. A census approach was employed to solicit responses from the individual members of this MAP chapter.

Data collection method

We designed a questionnaire by adopting and adapting measures as listed in the following "[Measures and instrument](#)" section. Questionnaires, along with a cover letter and postage-paid envelope, were mailed to 307 members who were in good standing¹ out of the 495 individual members of the Lahore MAP. We strove to maintain anonymity due to the sensitivity of the topic of research, as the respondents were more

¹ "In good standing" means these members maintain their membership with MAP and regularly attend MAP's seminars and events.

likely to give candid and impartial responses in the absence of the researcher. After 3 months of rigorous follow-up, we received 109 usable responses, a response rate of 35%, which is acceptable in mailed questionnaire studies. Many articles in organizational research mention response rates running from 30 to 94%, as can be seen in an *Academy of Management Review* paper which examined published articles in the years 1979–1983 (Mitchell 1985). A more recent study that examined survey response rates in articles published in 17 refereed journals from 2000 to 2005 found an average response rate of 52.7% with a standard deviation of 20.4 where the survey was conducted with individuals (Baruch and Holtom 2008). In Baruch and Holtom's study, possible reasons for the low rate of response, despite rigorous efforts to improve it, were suggested: the busy schedule of the professionals, the length of the questionnaire, and the sensitivity of the topic of research. Respondents in our study were clearly quite concerned about the authenticity of the lead researcher and anonymity of their responses, which was reflected by the multiple phone calls received by the lead author from various respondents.

Measures and instruments

The questionnaire items for the current study were adopted and adapted from two different sources. Appendix 1 shows the four scenarios and ethical judgment/intention items followed by the scales of intrinsic and extrinsic religiosity items. A 7-point Likert scale ranging from “strongly disagree” to “strongly agree” was employed to measure the constructs concerned. The following paragraphs present a brief account of the measures and instrumentation.

Religiosity

We follow one of the existing research streams (see Allport and Ross 1967; Cooper and Pullig 2013; Singhapakdi et al. 2013) for the two-dimensional conceptualization of religiosity. Our study, however, differs from the study of Singhapakdi et al. (2013) in that our survey's respondents work in many business function areas, not just marketing, and four scenarios are used rather than just one. To be consistent with the theory, we investigate the impacts of both intrinsic religiosity and extrinsic religiosity on ethical intention through ethical judgment.

For the religiosity measure, we employ the widely used scale of Allport and Ross (1967) to measure both intrinsic and extrinsic religiosity. The Allport scale is considered a valid and reliable measure and has a reported reliability of 0.88 for the intrinsic dimension and 0.70 for the extrinsic dimension (Singhapakdi et al. 2013). The original scale, especially its extrinsic dimension, is not directly applicable to Pakistan due to the wording of some of its items. Thus, we adapted the scale, as shown in the “**Factor analysis**” section. Modifying the existing instruments is desirable if it tests different aspects of EDM (Craft 2013). The advantage of using a multidimensional scale of religiosity is that it gives a clearer picture of a person's religiosity and wards off any potential cancellation effect of intrinsic vs. extrinsic religiosity, such as happens in scales that consider religiosity to be single-dimensional; such cancellation might lead to insignificant or only somewhat significant results.

EDM

For measuring ethical judgment and ethical intention, we used scenarios developed by Fritzsche and Becker (1983) owing to their broad and generic applicability in ethics research. We also adopted one scenario from Singhapakdi et al. (2013).

Ethical judgment Ethical judgment can be defined as the “perceived degree of ethicalness of a particular action for solving an ethical problem” (Singhapakdi et al. 2013, p. 184). We measure ethical judgment using business ethics scenarios, as is customary in EDM research (Dubinsky and Loken 1989; Fritzsche and Becker 1983; Singhapakdi et al. 2013). Measurement proceeded by asking respondents to express their degree of agreement or disagreement with the action in the scenario. The ethical judgment item is “I consider the action taken to be ethical.”

Ethical intention Ethical intention can be defined as “an individual’s readiness or willingness to engage in a particular action” (Kish-Gephart et al. 2010, p. 2). In the current study, ethical intention is measured using business ethics scenarios, as discussed in the above paragraph. The item for ethical intention is “I would be likely to take the same action in this situation.”

Ethical behavior Ethical behavior is the actual behavior undertaken by a person in a decision-making situation. Ethical behavior is defined as a behavior that is both “legal and morally acceptable to the larger community” (Jones 1991, p. 367). Since it is difficult to gauge actual (un)ethical behavior due to its sensitive nature and the lack of access to actual decision situations in the referent organizations, ethical intention is used as a proxy for ethical behavior, as is customary in ethics research. This approach is also in line with the theory of planned behavior (Ajzen 1985, 1991, 2011). Apart from using ethical intention as a proxy of ethical behavior, ethical behavior could also be considered an outcome variable which was not measured.

Analyses

We employed correlation analysis and multiple regression to analyze the data. The correlation data was used to understand the association between the study’s constructs, while OLS linear regression was used to test the hypotheses. Mediation was tested using the bias-corrected bootstrap confidence interval mediation analysis.

Results

This section discusses the demographic profile of the respondents, factor analysis to ascertain the validity of the constructs, reliability analysis, and correlation analysis followed by the results of the hypothesis testing.

Demographic profiles of the respondents were collected, including gender, age, and qualifications, along with responses on the variables of interest. Table 2 summarizes the demographic data.

Table 2 Demographic profile of the sample

Gender	
Male	81.6%
Female	18.4%
Academic qualification	
Doctorate/postdoctorate	0%
Master's/MS/MPhil (minimum 17 years schooling)	55.2%
Bachelor (Hons)/master's (16 years schooling)	37.9%
Bachelor's (14 years schooling)	6.9%
Age	
Mean	30.54 years
Median	29 years
25th percentile	26 years
50th percentile	29 years
75th percentile	34 years

Factor analysis

We employed valid and reliable scales to measure study concepts. These scales claim to be neutral and independent of a culture or a country setting but, to make sure that these scales are equally applicable in Pakistan, factor analysis was conducted to ascertain their validity in Pakistan. The religiosity scale needed slight adaptation for the Pakistani setting because Muslims offer their prayers five times a day with Friday prayer being the largest meeting, and the term “religious service” used in previous studies is not often used for regular prayers. Therefore, “religious service” was further qualified by putting the phrase “(for example, Jumma/Sunday service)” after it. Table 3 shows only the five adapted items out of the original seven scale items. The item “Prayer is for peace and happiness” was split into two items, “Prayer is for peace” and “Prayer is for happiness,” for clarity. This also avoids a double-barreled item that is potentially problematic since respondents may wish to respond differently for the terms “peace” and “happiness.”

Table 3 Extrinsic religiosity scale adaptation

Original item	Adapted item
I go to religious service because it helps me to make friends.	I go to religious service (for example, Jumma/Sunday service) mainly because it helps me to make friends.
Prayer is for peace and happiness.	Prayer is for peace. Prayer is for happiness.
I go to religious services mostly to spend time with my friends.	I go to religious services (for example, Jumma/Sunday service) mostly to spend time with my friends.
I go to religious services mainly because I enjoy seeing people I know there.	I go to religious services (for example, Jumma/Sunday service) mainly because I enjoy seeing people whom I know.

The need to adapt the scale was recognized when the original scale was administered to 60 MBA Muslim Pakistani students with more than 50 students enquiring about exactly what we meant by “religious service.” On closely interviewing those students, it was revealed that the items in question need to be adapted for the local setting. Subsequently, the items containing “religious service(s)” were rephrased and improved and a subsequent administration to these students and another group of 40 students revealed no issues with the new items.

Like other statistical techniques, factor analysis can be performed if the data meets certain prerequisite assumptions. Thus, necessary assumption testing for each scale was performed, revealing that all factor analysis assumptions were met (see section B of Appendix 2).

The ethical intention was measured by soliciting behavioral intentions of each respondent for four different scenarios having ethical content. The ethical content varied from one scenario to another, and it was foreseen that respondents might have replied differently to each scenario, which might have resulted in too much variation. Thus, a factor analysis of all the varying responses was required to ascertain whether an aggregate score (i.e., ethical intention construct) of each of the four ethical intention items, corresponding to each of the four scenarios, is warranted. The same rationale applies to ethical judgment, whose factor analysis results are described next because the same set of scenarios was used to gauge ethical judgment. For ethical intention, all the factor loadings were higher than 0.67 for all four scenarios, thus confirming that aggregate scores of all these scenarios can be used as a composite measure of ethical intention. In the case of ethical judgment, all four items (corresponding to the four scenarios) had loadings higher than 0.75 on a single factor, thus validating aggregate ethical judgment as a composite scale to measure it.

Factor analysis of intrinsic religiosity revealed that all the items had loadings greater than 0.75, thus validating the scale. Factor analysis of extrinsic religiosity, however, showed that three items—“I go to religious services (for example, Jumma/Sunday service) mainly because it helps me to make friends.”; “I go to religious services (for example, Jumma/Sunday service) mostly to spend time with my friends.”; and “I go to religious services (for example, Jumma/Sunday service) mainly because I enjoy seeing people whom I know.”—had poor loadings of -0.11 , -0.10 , and -0.09 , so these items were deleted from the analysis. For the other items—“Prayer is for peace.”; “Prayer is for happiness.”; “What religion offers me the most is comfort in times of trouble/sorrow.”; and “I pray to gain relief and protection.”—the loadings were at least 0.839, with an average of 0.90.

Reliability analysis

Reliability was measured through Cronbach’s α , omega, and greatest lower bound (GLB). Omega and GLB^2 were used owing to a host of criticisms of Cronbach’s α and the fact that omega and GLB have been demonstrated to better measure internal consistency and scale reliability (Peters 2014). All the constructs have reliabilities higher than 0.8, except for ethical intention, which has Cronbach’s $\alpha = 0.6$, omega = 0.6, and $GLB = 0.7$, primarily because of varying responses of respondents to the ethical situation in each scenario.

² These two statistics, omega and GLB, were calculated using the R statistical programming language package called “userfriendlyscience” which was created by Peters (2014).

Table 4 Reliability analysis

Construct	No. of items	Cronbach's α	Omega	Greatest lower bound (GLB)
Ethical intention (EI)	4	0.63 \approx 0.6, CI [0.48, 0.73]	0.63 \approx 0.6, CI [0.49, 0.73]	0.65 \approx 0.7
Ethical judgment (EJ)	4	0.84 \approx 0.8, CI [0.79, 0.89]	0.85 \approx 0.9, CI [0.79, 0.89]	0.86 \approx 0.9
Intrinsic religiosity (INT)	7	0.91 \approx 0.9, CI [0.87, 0.93]	0.91 \approx 0.9, CI [0.87, 0.93]	0.93 \approx 0.9
Extrinsic religiosity (EXT) [original scale]	7	0.73 \approx 0.7, CI [0.64, 0.8]	0.80 \approx 0.8, CI [0.72, 0.85]	0.91 \approx 0.9
Extrinsic religiosity (EXT) [final scale]	4 (3 items deleted due to negative loadings)	0.92 \approx 0.9, CI [0.88, 0.95]	0.92 \approx 0.9, CI [0.86, 0.95]	0.92 \approx 0.9

Three items of extrinsic religiosity (discussed above) were negatively correlated with its other items and factor analysis showed them to be a separate factor. Reliability statistics improved as well when those items were deleted from the scale (see end of Table 4 for improvement in reliability scores).

Correlation

Correlation analysis was used to identify the association between the constructs concerned. As can be seen from Table 5, overall, these correlation results show significant positive correlations between intrinsic religiosity, extrinsic religiosity, the mediating variable ethical judgment, and the outcome variable ethical intention. Intrinsic religiosity, however, correlates more significantly than extrinsic religiosity with ethical judgment and ethical intention. This implies that intrinsic religiosity is more instrumental than extrinsic religiosity in forming ethical judgment and intention.

Hypothesis testing

Multiple regression was employed to test the hypotheses. Specifically, bias-corrected bootstrap confidence interval mediation analysis (Hayes 2013) was used to test for the

Table 5 Pearson correlation

Measure	1	2	3	4	<i>M</i>	SD	95% CI	
							LL	UL
1 Ethical intention					4.56	1.09	4.34	4.79
2 Ethical judgment	0.91***				4.18	1.19	3.95	4.42
3 Intrinsic religiosity	0.64***	0.57***			4.26	1.22	4.03	4.50
4 Extrinsic religiosity	0.22*	0.25**	0.08		4.61	1.42	4.31	4.87

CI confidence interval, LL lower limit, UL upper limit

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 6 Coefficients for the mediation model [the effect of intrinsic religiosity (INT) on ethical intention (EI) through ethical judgment (EJ)]

Antecedent	Consequent					
	M (EJ)			Y (EI)		
	Coeff.	SE	<i>p</i>	Coeff.	SE	<i>p</i>
Gender	- 0.38	0.24	0.11	- 0.00	0.11	0.97
Age	- 0.01	0.01	0.70	- 0.00	0.01	0.91
Qualification	0.03	0.15	0.83	- 0.00	0.07	0.96
EXT	0.18	0.07	0.01	0.00	0.03	0.88
<i>X</i> (INT)	<i>a</i> 0.55 (0.03, 2.81)	0.08	< 0.001	<i>c'</i> 0.16 (0.08, 0.25)	0.04	< 0.001
<i>M</i> (EJ)	-	-	-	<i>b</i> 0.73 (0.65, 0.82)	0.04	< 0.001
Constant	<i>i</i> ₁ 1.42	0.70	0.04	<i>i</i> ₂ 0.80	0.32	< 0.001
	<i>R</i> ² = 0.38			<i>R</i> ² = 0.85		
	<i>F</i> (1, 109) = 12.79, <i>p</i> < 0.001			<i>F</i> (2, 109) = 96.93, <i>p</i> < 0.001		

Controls: gender, age, qualification, and extrinsic religiosity (EXT). Number of bootstrap samples for bias-corrected bootstrap confidence intervals (CI) = 10,000

mediation by running two mediation models while controlling for the demographics and the other religiosity dimension. For instance, to test the mediation model, intrinsic religiosity → ethical judgment → ethical intention, we controlled for demographics (gender, age, and qualification) and extrinsic religiosity.

As can be seen from Table 6, the regression model is significant since $F = 12.79$ with $p < 0.001$, and intrinsic religiosity describes 38% of the variance in the outcome variable ethical judgment since $R^2 = 0.38$. Specifically, intrinsic religiosity is a significant positive predictor of ethical judgment, $B = 0.55$ with $p < 0.001$, partialing out the effect of demographics and extrinsic religiosity. This evidence supports H1 wherein a positive relationship between intrinsic religiosity and ethical judgment was hypothesized. Similarly, from Table 7, extrinsic religiosity was also found to be a significant positive predictor of ethical judgment, $p < 0.05$. This result does not support H2, in which we proposed a negative relationship between the two.

To test H3, which proposed a positive relationship between ethical judgment and ethical intention, we look for evidence in both Tables 6 and 7, which show results from the mediation models for intrinsic religiosity and extrinsic religiosity respectively. Tables 6 and 7 show that ethical judgment is a significant positive predictor of ethical intention as expected, $B = 0.73$, $p < 0.001$, so this evidence supports H3.

We tested mediation for the following two models³, partialing out the effects of demographics (gender, age, and qualification) and the other dimensions of religiosity:

1. Intrinsic religiosity → ethical judgment → ethical intention

³ A single composite model could have been used to test for the mediation. We used two separate models because we are interested in estimating the individual (total, direct, and indirect) effect of each dimension of religiosity on ethical intention through ethical judgment. For potential dangers of including multiple predictors in a mediation model, please see Hayes (2013).

Table 7 Coefficients for the mediation model [the effect of extrinsic religiosity (EXT) on ethical intention (EI) through ethical judgment (EJ)]

Antecedent	Consequent					
	M (EJ)			Y (EI)		
	Coeff.	SE	<i>p</i>	Coeff.	SE	<i>p</i>
Gender	- 0.38	0.24	0.12	- 0.00	0.11	0.97
Age	- 0.01	0.01	0.70	- 0.00	0.01	0.91
Qualification	0.03	0.15	0.83	- 0.00	0.67	0.96
INT	0.55 (0.39, 0.70)	0.08	< 0.001	0.16 (0.08, 0.25)	0.04	< 0.001
<i>X</i> (EXT)	<i>a</i> 0.18 (0.05, 0.31)	0.07	0.01	<i>c'</i> 0.00 (- 0.06, 0.07)	0.03	0.88
<i>M</i> (EJ)	-	-	-	<i>b</i> 0.73 (0.65, 0.82)	0.04	< 0.001
Constant	<i>i</i> ₁ 1.42 (0.03, 2.81)	0.70	0.04	<i>i</i> ₂ 0.80 (0.17, 1.44)	0.32	0.01
	<i>R</i> ² = 0.38			<i>R</i> ² = 0.85		
	<i>F</i> (1, 109) = 12.79, <i>p</i> < 0.001			<i>F</i> (2, 109) = 96.93, <i>p</i> < 0.001		

Controls: gender, age, qualification, and intrinsic religiosity (INT). Number of bootstrap samples for bias-corrected bootstrap confidence intervals (CI) = 10,000

2. Extrinsic religiosity → ethical judgment → ethical intention

For model 1 above, a simple mediation analysis using ordinary least squares path analysis shows that intrinsic religiosity indirectly influenced intentions to act ethically through its effect on ethical judgment. As can be seen from Table 6, the findings suggest that intrinsic religiosity could influence their ethical judgment ($a = 0.55$), and managers having high ethical judgment in an ethical decision situation are more likely to form the intention to act ethically ($b = 0.73$). A bias-corrected bootstrap confidence interval for the indirect effect ($ab = 0.40$) using 10,000 bootstrap samples was completely above 0 (0.27 to 0.53). Intrinsic religiosity was also able to directly influence ethical intention independent of ethical judgment ($c' = 0.16$, $p < 0.001$). This evidence supports H4, which proposed an indirect relationship between intrinsic religiosity and ethical intention through ethical judgment.

For model 2, a simple mediation analysis using ordinary least squares path analysis shows that extrinsic religiosity indirectly influenced intentions to act ethically through its effect on the ethical judgment. As can be seen from Table 7, the findings suggest that extrinsic religiosity can influence ethical judgment ($a = 0.18$), and managers having high ethical judgment in an ethical decision situation are more likely to form the intention to act ethically ($b = 0.73$). A bias-corrected bootstrap confidence interval for the indirect effect ($ab = 0.13$) based on 10,000 bootstrap samples was entirely above 0 (0.03 to 0.23). Extrinsic religiosity was not able to directly influence ethical intention independent of its effect on ethical judgment ($c' = - 0.00$, $p = 0.88$). These results show that extrinsic religiosity positively influences ethical intention through ethical judgment. This counter evidence does not support H5 that proposed an indirect negative relationship between extrinsic religiosity and ethical intention through ethical judgment such

that high extrinsic religiosity results into low ethical judgment which in turn corresponds to low ethical intention.

In sum, the results of this study show that both intrinsic religiosity and extrinsic religiosity can positively influence ethical intention via ethical judgment, although to a lesser degree in the case of extrinsic religiosity than intrinsic religiosity. As already discussed, another relevant finding is that intrinsic religiosity can directly influence ethical intention independent of its effect on ethical judgment, but extrinsic religiosity is unable to directly influence ethical intention independent of its effect on ethical judgment.

Discussion

In the previous section, intrinsic religiosity was found to be a significant positive determinant of ethical judgment as theorized in H1. This finding agrees with the H-V model (Hunt and Vitell 2006) and empirical studies (Fernando and Chowdhury 2010; Walker et al. 2012). This finding also shows the role of religious commitment in forming an ethical judgment in the case of managers high in intrinsic religiosity, as they place religion highest, above all other callings. Such managers' moral judgment can be further developed through ethics training focused on religious principles, with the obvious caveat that secular or atheist managers should not be intimidated.

Contrary to the hypothesized relationship in H2 (extrinsic religiosity as a negative predictor of ethical judgment), extrinsic religiosity was found to be a positive predictor of ethical judgment, although of lesser magnitude than intrinsic religiosity. This finding contradicts some previous evidence (e.g., Walker et al. 2012) which found individuals high in extrinsic religious orientation endorse questionable behavior, but agrees with research showing that personally oriented extrinsic religiosity ("Ep") undermines unethical intentions (Chen and Tang 2013). It is also important to note that some research in a consumer ethics setting (Vitell et al. 2005) has not found any relationship between extrinsic religiosity and considering questionable behaviors as wrong.

A potential explanation for the positive relationship between extrinsic religiosity and ethical judgment is that our study used a highly religious and non-Western context where the general public considers religion to be a prerequisite for morality; such a context might have peculiarities when it comes to extrinsic religiosity. For instance, the instrumental motivation in *using* religion might have been significantly reduced due to increased salience of religion in such contexts. Another explanation could be that the three items deleted due to the factor analysis pertain to extrinsic religiosity about "Es" (socially oriented extrinsic religiosity) while the other "Ep" items are personally oriented (Gorsuch and McPherson 1989). Specifically, managers high in personal extrinsic religiosity (high on "Ep" items) practice religion to gain what they believe their religion offers them: peace, happiness, relief, protection, and comfort in the times of sorrow or trouble. The "Ep" extrinsic religiosity, though *using* religion to seek positive outcomes and to avoid adverse personal outcomes, may not be detrimental for EDM. This partially explains the positive relationship between extrinsic religiosity and ethical judgment we found in this study. However, "Es" items are more instrumental and utilitarian than the "Ep" items due to their focus on *using* religion for building social relationships, gaining social approval, and thus furthering one's

business. We, therefore, suggest that future research to be undertaken to have more granular hypotheses and analysis by further dividing extrinsic religiosity into extrinsic social (Es) and extrinsic personal (Ep) religiosity to understand the underlying dynamics of extrinsic religiosity and EDM.

Our empirical study did not support H5's claim that extrinsic religiosity is a significant *negative* predictor of ethical intention through ethical judgment. On the contrary, this study's evidence showed that extrinsic religiosity, like intrinsic religiosity, significantly and positively influences ethical intention through ethical judgment. This positive effect of extrinsic religiosity necessitates future research to ascertain whether this finding is specific to Pakistan or also applies to other highly religious, non-Western contexts. As we suggest above, future research should decompose extrinsic religiosity into "extrinsic social" and "extrinsic personal" to shed light on this finding. At least for this study context, we can safely say that extrinsic religiosity—extrinsic personal (Ep) to be more precise—helps to foster EDM through an indirect positive mechanism operating from extrinsic religiosity to ethical intention through ethical judgment.

In line with current theory and literature, we found ethical judgment to be a significant positive predictor of ethical intention as hypothesized in H3. Ethical intention was used as a proxy of ethical behavior because it is challenging to observe (un)ethical behavior due to lack of access to the actual decision-making settings, the arbitrary nature of decisions, and time constraints. It is a common observation that people act according to their intentions, which are formed based on their attitude toward behavior that, in turn, is contingent on their cognitive beliefs. We assume this observation is true and this study showed that respondents formed intentions in line with their judgments: the management professionals high in ethical judgments were more likely to form ethical intentions commensurate with their judgments. Thus, organizations wanting to inculcate EDM among their employees should foster ethical judgment through ethics training.

We argue that religious beliefs are an essential constituent of cognitive beliefs and people high in religiosity see things through a religious lens, which in turn can influence ethical judgment, consequently influencing intentions to act ethically in organizational settings. This is reflected in this study because religiosity was found to be a significant determinant of ethical intention through ethical judgment. Intrinsic religiosity influences ethical decisions of the managers more than extrinsic religiosity because the former involves religious values being deeply inculcated, and the religion is practiced in its true spirit due to a strong commitment to that religion. Based on our study results, it is natural for a manager high in intrinsic religiosity to have ethical intention via two routes (indirect and direct): first, religion guides one to form ethical judgment which in turn influences ethical intention and, second, religion directly influences a person to form intention to act ethically in a situation having ethical content. Based on the findings of this research, we conclude that managers high in intrinsic religiosity are more likely to form ethical judgment and, in turn, ethical intention as hypothesized in H4. They are also able to form intentions directly to act ethically independent of ethical judgment, thus showing the great power of intrinsic religiosity.

This study using respondents from corporate Pakistan substantiates the Pakistani public contention that one cannot be moral without the religion. Therefore, we can conclude that a manager high in intrinsic religiosity is less likely to form behavioral

intentions to perform unethically. Extrinsic religiosity was also found to be a positive determinant of ethical intention, though only through ethical judgment, not directly. This finding implies that people high in extrinsic religiosity are also likely to make ethical decisions in a non-Western and highly religious context, such as that of this study. This finding contradicts previous empirical evidence that people high in extrinsic religiosity are likely to form unethical intentions due to their focus on religiosity as an instrument. A possible explanation of this disagreement is that the utilitarian perspective of extrinsic religiosity reflected in socially oriented extrinsic religiosity (i.e., “extrinsic social”) does not mesh with personally oriented extrinsic religiosity, at least in Pakistan.

Additionally, our results show that although extrinsic religiosity cannot directly influence ethical intention independent of ethical judgment, we can conclude that extrinsic religiosity does play a role in forming judgments and subsequent ethical intentions. We suggest that this is a result of personally oriented extrinsic religiosity. In Western societies, people high in extrinsic religiosity might go to religious services to rub shoulders and to network with people. Typically, there is just one major weekly service (with smaller, less-attended midweek options), whereas in a Muslim society like Pakistan, people go for their prayers five times a day; any utilitarian motive might be significantly reduced due to this higher frequency. These findings may also imply that intrinsic religious motivation is higher and extrinsic religious motivation lower in Pakistan than in Western less-religious countries. For this implication to be corroborated, however, there is a need for cross-cultural research covering other highly religious, non-Western contexts and less-religious Western contexts.

Research implications

The only previous study investigating the direct relationship between religiosity and EDM in Pakistan is a recent study of banking personnel (frontline and managers) wherein religiosity was found to moderate the relationship between (1) injunctive norms and (2) perceived behavioral control and behavioral intentions to act ethically as an outcome variable (Kashif et al. 2017). We believe that our study better captures ethical judgment and intention constructs by using four different scenarios, two dimensions of religiosity, and diverse respondents, a set of managers who are members of the Management Association of Pakistan. We hope that this current study will pave the way for future studies focusing on non-Western, highly religious countries and highlighting the role of extrinsic religiosity. This research would contribute to cross-cultural religion-ethics research comparing Western less religious and non-Western, highly religious contexts. We recommend that research building on this paper should solicit responses from other professional bodies, including the Marketing Association of Pakistan, Pakistan Society for Human Resource Management, Institute of Chartered Accounts of Pakistan, Institute of Cost and Management Accountants of Pakistan (ICMA Pakistan), and Chartered Financial Analysts (CFAs). Using these professional bodies as the sampling frame will enable understanding of EDM in different professions (Rest 1994) and elucidate the religion-ethics relationship.

As already described, this study found extrinsic religiosity to be significantly and positively related to ethical intention via ethical judgment. In contrast, previous research had found no relationship with ethical judgment in consumer ethics settings

(Vitell et al. 2005), a negative relationship with ethical intention (Singhapakdi et al. 2013), and a positive relationship between personally oriented extrinsic religiosity (“Ep”) and ethical intention (Chen and Tang 2013). This research contributes to the literature by identifying the indirect relationship between extrinsic religiosity and ethical intention through ethical judgment, thus partially explaining these mixed results. The intuitive reasons for this are described in the “Discussion” section; however, informal discussion with a handful of respondents after the study was concluded and the results tabulated showed that utilitarian motives toward religion are not very profound and therefore are not detrimental to EDM, at least in Pakistan. This finding calls for qualitative research to ascertain why this is so. We also believe that there might be a need to revise the extrinsic religiosity scale, at least for highly religious countries (Islamic countries in particular), provided the suggested qualitative research points in this direction.

Future research is also needed to understand why intrinsic religiosity can influence ethical intention directly. Our results show that extrinsic religiosity influences ethical intention only indirectly through ethical judgment, whereas intrinsic religiosity has both direct and indirect effects.

Managerial recommendations

Because ethical judgment was found to be the most significant predictor of ethical intention, we join prior research in recommending that organizations should inculcate such judgments in their employees through ethics training programs to foster EDM. Our findings suggest that managers high in intrinsic religiosity are more likely to undertake EDM as intrinsic religiosity can influence ethical intention through ethical judgment due to the heightened deontological norms and can directly influence ethical intention as well. We do not suggest that organizations should endeavor to hire only religious people, but, if an organization has employees who are high in both dimensions of religiosity, this can relieve the organization and other stakeholders from the detrimental effects of unethical decisions. We also suggest that religion-oriented ethics training can also be conducted to further strengthen the ethical judgment of managers, at least in contexts such as Pakistan, where religiosity has been shown to play a substantial role in ethical decision-making.

Limitations

The most significant limitation of this study was the unavailability of a sampling frame of all management professionals in Pakistan. To mitigate this limitation, we used members of the Management Association of Pakistan as respondents. This association, though a representative body of management professionals of the country, does not have all management professionals in Pakistan as its members. Another limitation of the research was the low response rate despite the concerted efforts of the lead researcher to remind the respondents to send back the completed questionnaires. A better response rate would have resulted in better generalizability of the results. One other limitation is that variables other than the controls might influence the outcome variable of ethical intention. However, we were constrained by the parsimony principle

of the research. Future research should also try to understand the actual (un)ethical behavior rather than just the (un)ethical intention.

Conclusion

Ethics is an essential area of concern for both researchers and practitioners. The role that religion plays in EDM in non-Western and highly religious countries is an understudied domain. Two dimensions of religiosity, called intrinsic and extrinsic religiosity, were found to play decisive roles to inculcate ethical judgment that influences ethical intention. This research contributes to the understanding of the relationship between religiosity and ethics by showing how both dimensions of religiosity influence ethical intention through the mediating mechanism of ethical judgment. The research has important implications for managers. For example, organizations should provide ethics training programs, with or without religious teaching, so that the ethical judgment of managers can be raised and subsequently EDM can be promoted. Continuing research on the interaction of religion and ethics is needed, especially in highly religious and non-Western countries other than Pakistan, and we also call for cross-cultural research in such contexts. We suggest replicating this study in professions other than management so that a broader understanding of the role of religion in ethics can be determined.

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Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

Informed consent Informed consent was obtained from all individual participants included in the study.

Appendix 1

Scenarios

Scenario 1

The pricing committee of a large video game marketer suggests that prices be raised 20–30% during the holiday season and that a highly popular game be kept in short supply.

Action: The vice president of marketing decides that this is a good idea since consumer demand indicates that consumers will be likely to pay the higher prices.

Scenario 2

XYZ Company has been barred from entering the market in a large Asian country by collusive efforts of the local bicycle manufacturers. XYZ could expect to earn 500 million rupees per year from sales if it could penetrate the market. Last week, a businessman from the country contacted the president of XYZ and stated that he could smooth the way for the company to sell in his country for a price of Rs. 50,000,000 (50 million).

Action: The president of XYZ pays the Rs. 50,000,000 (50 million).

Scenario 3

Mr. A has recently accepted a job with a new, vigorous microcomputer manufacturer. Microcomputer manufacturers are engaged in intense competition to become the market leader with a software package which utilizes the English language and thus is easily used by the average consumer. Mr. A's former employer is generally known to be the leader in this software development. When Mr. A was hired, he was led to believe that his selection was based upon his management potential. The morning beginning the third week on the new job, Mr. A received the following memo from the president:

Please meet with me tomorrow at 8:15 AM for the purpose of discussing the developments your former employer has made in microcomputer software.

Action: Mr. A reveals the new product developments made by his former employer.

Scenario 4

Ted Jones, senior editor of J & P Publishing Company, has just received a manuscript from one of his most successful authors. It provides the most authoritative account yet published of the history of the development of the atomic bomb. However, the final chapter contains a detailed description of how the bomb is made. Jones has tried to convince the author to omit the last chapter stating that such information should not be made readily available to the mass market in paperback form. The author believes the chapter is critical to the success of the book and thus will not agree to its deletion.

Action: Ted Jones publishes the book.

Note: All the responses to the following items were sought on a Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree).

Ethical judgment and ethical intention items

For each of the four scenarios above, managers respondents were asked right after each scenario:

- I consider the action taken to be ethical. (Ethical judgment item)
- I would be likely to take the same action in this situation. (Ethical intention item)

Intrinsic religiosity

I enjoy reading about my religion.

It doesn't matter what I believe in as long as I am fair in my dealings. (Reverse coded)

It is important for me to spend time in private worship, for example Salaat or prayer.

I always have a strong sense of God's presence.
 I try to live all aspects of my life according to my religious beliefs.
 My whole approach to life is based on my religion.
 I believe in my religion but many other things are more important in life. (Reverse coded)

Extrinsic religiosity

I go to religious service (for example, Jumma/Sunday service) mainly because it helps me to make friends.*

Prayer is for peace.

Prayer is for happiness.

I go to religious services (for example, Jumma/Sunday service) mostly to spend time with my friends.*

I go to religious services (for example, Jumma/Sunday service) mainly because I enjoy seeing people whom I know.*

What religion offers me the most is comfort in times of trouble/sorrow.

I pray to gain relief and protection.

*Deleted items

Appendix 2

Section A: data processing and assumption testing of parametric data

The responses from the usable questionnaires were initially input into an Excel sheet. In SPSS 21, appropriate variable names along with their titles were defined, specifying their data types and sets of permissible values. The data was then entered into the data view of SPSS. Since the scenarios each contain an ethically questionable action by a manager, the items essentially measure (un)ethical judgment and (un)ethical intention. Each item's score, as provided by the respondent, was reverse coded by subtracting each item score from the *highest permissible value* + 1. For instance, if an item response is 2, recoding it produced 6 on a scale from 1 to 7 achieved through $7 + 1 - 2 = 6$. Missing value analysis revealed the following pattern.

Table 8 indicates that missing values constitute only 0.09% of all the values; thus dictating no need to compensate for them. The missing values analysis proceeded by calculating the average score for each construct. Correlation, multiple regression, and mediation analysis were then run on these average scores only.

In order to perform parametric tests on the data collected, a multi-pronged approach was applied whereby visual tools (P-P plots) along with normality tests (using 1-sample Kolmogorov-Smirnov tests [K-S]) were undertaken to check for the normality of the

Table 8 Missing values analysis

Item title	No. of missing values (percentage)
Extrinsic religiosity (item 5)	2 (0.09%)

data. This procedure revealed that the outcome, ethical intention, $D(109) = 1.20$, $p > 0.05$, is significantly normal. Ethical judgment, $D(109) = 1.25$, $p > 0.05$, and intrinsic religiosity, $D(109) = 1.09$, $p > 0.05$, all appeared significantly normal. Extrinsic religiosity, however, $D(109) = 2.04$, $p < 0.001$, showed nonnormality, probably owing to the sensitivity of 1-sample K-S, but the normal P-P plot of extrinsic religiosity clearly showed normality. For brevity, we have not shown the normal P-P plots for the variables of the study. The individual values, however, converge to the normal line that pictorially depicts that the data is normal in all cases. This observation is also in agreement with the 1-sample K-S statistic described above except for extrinsic religiosity.

Assumption testing for generalizing multiple regression model

In order to generalize the findings of the sample to the population, the regression models should meet certain assumptions. The subsequent discussion will highlight how the data of this study show these assumptions are met. After performing case-wise diagnostics, the assumptions of nonzero variance, normally distributed data, no perfect multicollinearity, homoscedasticity, independent errors, normally distributed errors, independence, and linearity were checked.

Outlier treatment. The case-wise diagnostics were performed by computing the standardized residual value, Cook's distance, average leverage value, and Mahalanobis distance for identifying outliers. Based on these statistics, no case unduly influences the regression model, and thus, no case was identified as an outlier.

Nonzero variance. All the predictors have nonzero variance, as can be seen through their mean and standard deviation values. All the predictors and the outcome variable follow a normal distribution, as discussed at the start of this appendix.

Multicollinearity. In the case of multiple regression, all the tolerance statistics—0.63, 0.67, and 0.93 in case of ethical judgment, intrinsic religiosity, and extrinsic religiosity respectively—were well above 0.2, indicating that there was no severe problem of multicollinearity as Menard (1995) suggests that only values below 0.2 are of concern.

Homoscedasticity. This assumption requires that at each level of the predictor variable, the variance of the residual terms should be constant. The scatterplot for each model shows that all the values are evenly distributed around 0, so the homoscedasticity assumption holds.

Independent errors. This assumption requires that residuals be uncorrelated. This assumption can be tested using the Durbin-Watson (D-W) test statistic that should produce a result between 1 and 3. In the case of multiple regression model, the D-W value was 1.5, showing that the independence of errors can be assumed.

Normally distributed errors. This assumption requires that the residuals in the model be random and normally distributed with a mean of 0. To check this assumption, standardized residuals were generated when running the regression model, and the residuals were found to form a normal distribution, as shown in the P-P plots. Also, the 1-sample K-S test statistic was nonsignificant, $p > 0.05$, thus showing residuals to be normally distributed in all models.

Independence. This assumption requires that the values of the outcome variable are independent. Each value comes from a separate entity, the respondent, so independence can be assumed owing to the correlation design of the study.

Linearity. The scatter plots depict linear relationships between all the predictors and ethical intention, the outcome variable.

Section B: factor analysis assumption testing

Table 9 Factor analysis assumption testing

Assumption	Guideline	Construct	Value	Remarks
Nonexistence of multicollinearity	Determinant of the correlation matrix to be greater than threshold value of 0.00001	Ethical intention	0.65	
		Ethical judgment	0.19	
		Intrinsic religiosity	0.02	
		Extrinsic religiosity	0.04	
Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) statistic	KMO statistic to be greater than threshold value of 0.5. Considered: - Good, if KMO between 0.7 and 0.8 - Great, if KMO between 0.8 and 0.9 (Kaiser 1974)	Ethical intention	0.71	
		Ethical judgment	0.80	
		Intrinsic religiosity	0.91	
		Extrinsic religiosity	0.84	
Bartlett's test of sphericity	Bartlett's test of sphericity to be significant	Ethical intention Ethical judgment Intrinsic religiosity Extrinsic religiosity	$p < 0.001$	Factor analysis is appropriate

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