

# Achieving Job Satisfaction through Spirituality: A Case Study of Muslim Employees

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## *Abstract*

The present study explores the role of spirituality in achieving job satisfaction. Divine Economics Framework is used for quantifying the interrelationships between spirituality and worklife using empirical data of 383 workers from 5 districts of Azad Kashmir. The study analyzed the effect of spirituality level of workers on their subjective evaluation of their worklife (job satisfaction). An index of workers' spirituality is developed using Principle Component Analysis (PCA). The literature on theology and philosophy indicates that spirituality has many types which may lead to produce a systematically different human behavior. To test whether or not workers having different levels of spirituality have the same job satisfaction, Logistic regression technique is used. The results of given sample revealed that besides the conventional variables such as income, age, education, health, and job sector, a particular type of spirituality is a significant predictor of workers' job satisfaction. Our estimates relating to selected dimension of spirituality are presented to serve as new insights for further research in different types of spirituality at workplace. This study concludes that the Divine Economics Framework is relatively more capable to analyze economics of spirituality. The future research may utilize this framework to study the interrelationships of spirituality with workplace as well as other areas of economics.

**Keywords** Spiritual Capital, Religious Capital, Quantification, Measurement.

**JEL:** I3, J24, Z12.

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***“Soul is present in body like meaning is words” (Ali Ibn e Abi Talib, Safina tul Bihar, Chp. Mada e Rooh, Vol 1, p.p 537, )***

## **Introduction**

Spirituality is a neglected variable in the strand of economics literature. It is though a less explored area in economics, however, has deeper roots in other disciplines such as sociology, psychology and management science. It is observed in non-economics literature that spirituality is something which people value in their life<sup>25</sup>. This study is intended to analyze the role of spirituality in achieving job satisfaction. Perhaps it would be of great interest to labor economist, once it is evident that spirituality has association with job satisfaction. One possible reason is that, if spirituality affects job satisfaction; labor decision to quit or join union, job turnover, productivity and shirking might be associated with it. For simplification of our study, we only targeted interrelationship between spirituality and subjective evaluation of worklife. The subjective evaluation of work life is popularly known as job satisfaction after the seminal work of Freeman (1978). Job satisfaction can be understood as “a positive emotional state resulting from the appraisal of one’s job or job experiences” (Locke, 1976). Overall job satisfaction is an indicator which shows how people subjectively evaluate their work life. Job satisfaction has been point of focus for many researchers in many disciplines such as Psychology (Locke, 1976), Sociology (Hodson, 1985) and Economics (Borjas, 1978). Many economists found self-reported job satisfaction as a fascinating subjective variable (Levygarboua and Montmarquette, 2002).

The motivation for studying job satisfaction is its implications on labor productivity and labor mobility (Freeman, 1978, Warr, 1999). Labor Economists investigated number of labor market issues associated with job satisfaction, for instance, labor mobility (Freeman, 1978), quit rates (Clark, 2001), union membership (Meng 1990, Blanchflower and Oswald 1999, Borjas 1979). Studying job satisfaction has not very long history in economics although it has association with absenteeism; turnover, mobility, union membership and labor productivity (Freeman, 2000). Job satisfaction has significance in itself as it is important determinant of life satisfaction for working population.

Psychologists and Sociologists believe that job satisfaction is readily identified with individual wellbeing (Locke, 1976, Veenhoven, 1991). One of the earliest studies by economists on job satisfaction was Hamermesh (1977)

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<sup>25</sup> For instance Schwartz (2004) & Maslow (1943), the later consider self-actualization (quest for spiritual enlightenment). Maslow on spiritual life says that it is the basic component of “our biological life” (Maslow, 1971).

which considered job satisfaction data as direct utility from work. His study used job satisfaction data to test a model of occupational choice and availed a ground for this study that individuals want to maximize their lifetime utility. Moreover, Clark and Oswald (1996) considered job satisfaction as utility, which worker receives from his job. Freeman (1978) argues that job satisfaction increases worker's productivity because job satisfaction increases utility obtained from effort. Moreover, Freeman (1978) concluded that subjective variable like job satisfaction contains useful information that may lead to useful results like predicting and understanding; turnover, quits, absenteeism, productivity and union membership.

Although a popular topic in other social sciences, job satisfaction remains a less explored topic in economic literature until Hamermesh (1977) developed a model of occupational choice based on the data of job satisfaction. Soon after this study Freeman (1978) presented other consequences of this newly identified economic variable- job satisfaction. Effects of different non-monetary factors and workplace attributes on job satisfaction have been studied, this include trust and social capital (Helliwell and Huang, 2005, 2008), discretion (Bartlin et al, 2012), employee involvement (Freeman and Kleiner, 2000) and work place spirituality (Miller, 2013). Research in other disciplines like Psychology put forward the conclusion that it is an important indicator of life satisfaction and overall well being (Rice et al, 1980, Warr, 1999).

The proposed job satisfaction as an economic variable by Freeman (1978) provided avenue to economists for further investigation on its implications to labor market. One of the major findings includes job satisfaction is that it is associated with worker's well being (Sousa, 2000). Labor economist provided empirical evidence that economics performance of worker is correlated with job satisfaction (Freeman, 2000, George, 2008). Job satisfaction determines labor decision making to join labor unions (Borjas, 1979, Meng, 1990). Quit intention are also associated with job satisfaction, workers with lower job satisfaction reports higher quit rates and turnover (Freeman, 1978). Job satisfaction is important issue because job dissatisfaction cause labor turnover which gives cost to firms in terms of hiring, recruitment and training of new work force (Halpern, 1999).

### **1. Determinants of Job Satisfaction**

Several determinants of job satisfaction are identified so far in different studies in Sociology, Psychology and Economics etc. (Helliwell, and Huang, 2008, Bartlin, Fehr and Schmidt 2012). Broadly these determinants can be divided into two categories; firm characteristics and labor characteristics.

### **1.1. Firm Characteristics**

Different firm characteristics may affect job satisfaction level of labor working in that firm. Earlier studies have identified some firm characteristics that determine job satisfaction. For instance, Halkos (2008) reported that public sector workers are on average more satisfied from job as compared to their private sector counterparts. Job satisfaction is also determined by the tenure (experience) in current job. Some studies found insignificant relationship between tenure and job satisfaction (Borjas 1979, Clark 1997). On the other hand Blanchflower and Oswald (1999) found a negative relationship between tenure of current job and job satisfaction level. Type of job contract is also reported by various studies as one of main determinant of job satisfaction. Garcia et al., (2011) found that people with permanent job are relatively more satisfied. Similarly Millan et al., (2011) indicated that self employed workers have higher level of satisfaction then salaried workers.

### **1.2. Labor Characteristics**

Beside firm characteristics there are numerous labor characteristics which determine job satisfaction level of labor. A number of earlier studies reported various determinants of job satisfaction that can be classified as labor characteristics. For instance, Clark (1997) found that gender is the core determinant that explains job satisfaction. His study concluded that females are more satisfied from their job as compared to their male counterparts. Some other determinants are identified by later studies related to labor characteristics that include age and education. Age is believed to be a linear determinant of job satisfaction until the seminal study by Clark (1996). He obtained a U-shaped relationship between age and job satisfaction, later studies supported this finding (Oswald and Warr, 1996). Education is also a well supported determinant of job satisfaction in existing literature. Education has negative relationship with job satisfaction as people with higher level of education and technical skills expect better job (Clark, 1996). Green (2006) found that people with higher level of education demands more from job and report lower level of job satisfaction. Beside the above mentioned labor characteristics health is also found by earlier studies as a determinant of job satisfaction. Health plays an important role in getting and maintaining good job. This is the reason why people with good health are more satisfied from their jobs (Borjas, 1979, Clark, 1998, Helliwell and Haung 2005, Meng, 1990). Other than health marital status is reported by various studies as labor characteristic which affect job satisfaction. Married people are more satisfied with job than unmarried, Clark (1996) discussed this issue as workers who are married and living together are more satisfied as compared to single workers. Moreover, having children increases the chance of worker to be satisfied from

his/her job. According to McIntosh (1998) workers who have children are more satisfied with their work as compared to workers with no child. Meng (1990) also support this empirical finding but in both studies results were not significant. Borjas (1979) found contradictory results that having children is related to lower level of job satisfaction.

Spirituality as human phenomenon can be seen as labor characteristic like health, education and number of children. Similar to other labor characteristic spirituality may have association with job satisfaction. If spirituality affects job satisfaction, indirectly it is has other consequence on worklife. The existing literature has almost ignored the role of spirituality in distribution of job satisfaction. The present study is an attempt towards filling the gap by studying the role of spirituality as a determinant of job satisfaction.

## 2. Soul and Spirituality

There is a debate in literature on whether soul exists or not. A number of people in different religions believe in existence of soul. The religious literature of major world religions, particularly Abrahamic religions believe in existence of soul. Referring to classical writings by Muslim philosophers (Obudiyat, 2012) stated that “soul which is not physical phenomenon, exists”. Many philosophers have discussed the nature of soul and the question whether it is part of body or something attached to it. The doctrines of al-Ghazali on man's soul (*rooh and nafs*) defines man as a spiritual substance (*johar-e-ruhani*), not confined in a body, nor imprinted on it, nor joined to it, nor separated from it. It possesses knowledge and perception, and is therefore not an accident<sup>26</sup>.

Shah Wali-Allah (1981) also discussed the nature and types of soul. According to him, soul is like steam in body which has all senses like body. This steam like soul (which he call *Rooh-e-Hawai*) can be clean or dirty and has direct effect on body related strengths. This steam (*Rooh-e-Hawai*) is the lowest element of soul. The other element is ultimate soul (*Rooh-e-Quds*) which is attached with steamy soul (*Rooh-e-Hawai*). This steam type part of soul joins the ultimate soul with body. The ultimate soul (*Rooh-e-Quds*) never changes even in case the body is young or old, ignorant or wise. When death occurs, due to any failure in body, steamy soul (*Rooh-e-Hawai*) releases from body. Death is related to steamy soul (*Rooh-e-Hawai*) not *Rooh-e-Quds*. *Rooh-e-Hawai* wears a resplendent (*Noorani*) or a black (bad) dress after it is again given life in purgatory (*Aalim-e-Barzakh*). Soul is present in body like water in rose and fire in coal<sup>27</sup>. Waliullah is among those who believe

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<sup>26</sup> (pp. 547, Tahafut al-falasifa, Cairo 1302, 72).

<sup>27</sup> Another interpretation of soul given by Ali Ibne Abi Talib is that soul in body is like meaning in the words.

that soul is the evidence of life in humans and animals. A debate exists about *Roohul Quds* too showing its different meaning than those expressed by Waliullah. However, going into such details is beyond the scope of present work.

Avicenna explains soul as, the agent of knowledge. For example, when we perceive by sense or imagination and when we understand by reason, our soul acquires an accidental attribute, just like wall painted white. The soul is one thing and knowledge added to it as something else. The relationship between them is identical to the relation between a piece of wood and color. On the other hand Sadr al-Muta'allihin in contrast to Avicenna explains that when we perceive something it is not attached to our soul as color is added to wood, but is united with our soul. He gave an example of embryo which evolves into man. Sadr al-Muta'allihin theory of knowledge states that understanding is a type of evolution of the soul, just like the evolution of an embryo into a child or a seed to a plant; it is not like a wood becoming white after the paint.

It can be concluded from the debate presented in this section that soul is a huge topic in Islamic philosophy. It is beyond the scope of present study to present all the types and stages of soul. For the present study we only provide a list regarding types of soul. Table 1 shows different types and levels of soul discussed in Islamic literature.

After having understanding of soul, we can interpret spirituality which is a term associated with soul like mentality is associated with mind. Spirituality originated from the word "spirit" that has old roots with Latin language in which *spiritus* is the main origin which means life or breath, with the Latin *spiritulis* assigned to a person "of the spirit." The word Spirituality is found many times both in the Greek New Testament (*pneuma*) and the Hebrew Old Testament (*ruach*). The term spirituality has been extensively used in the context of religion. However, in disciplines such as psychology, management, education now spirituality is used as a term independent of religion. Hill and Hood (1999) argued that this change is due to rise of secularism in 20<sup>th</sup> century, and increase in the disillusionment with faith based institutions in western society after 1960s. This rise in secularism in west caused distinct meaning for spirituality separate from religion. Like other phenomenon in Social Sciences e.g social capital, spirituality has not received a consensus of definition. The present study is related to the role of Islamic spirituality at workplace; hence it will be focused for our analysis.

**Table 1: Types of Soul According to Different Philosophers**

Types of soul	Available English Meaning	Reference study/book/author
<i>Rooh e Natiqa</i>	Logical self	Al-Baydawi's Anwar al-tanzil, Ed. Fleischer
<i>Rooh e Falakya</i>	Not available	Al-Baydawi's Anwar al-tanzil, Ed. Fleischer
<i>Rooh e Samavia</i>	Not available	Shah Wali Allah, Hujatul Baligha
<i>Rooh e Quds</i>	Holy spirit	Shah Wali Allah, Hujatul Baligha, Ibn-e-Arabi Risála Rûh al-Quds.
<i>Al-nafs kulliyaa</i>	al- Totality soul	Ibn al-'Arabi
<i>Rooh-e-Nabatia</i>	Organic soul	Intro. To Islamic Philosophy , Mohammad Fana'i Eshkevari, pp. 160 & Ghazali
<i>Rooh-e-Haywania</i>	Animalistic Soul	Intro. To Islamic Philosophy , Mohammad Fana'i Eshkevari, pp. 160
<i>Rooh-e-Insaania</i>	Humanistic	Kimya-e-Saadat, Ghazali
<i>Rooh-e-Ilahiya</i>	Rooh-e-Ilahiya	Same as above
<i>Qalb-e-Saleem</i>	Healthy heart	The purification of soul, based on the work of Al-Taymiya, Al-Ghazali, Ibn-e-Rajab Al Hanbali, compiled by Ahmed Farid.
<i>Qalb-e-Muneeb<sup>28</sup></i>	The dead heart	Same as above
<i>Nafs Lawama<sup>29</sup></i>	Heart in repentance	Same as above
<i>Nafs Mutmaina<sup>30</sup></i>	e Reproaching soul	Same as above
<i>Nafs e Amara<sup>31</sup></i>	e Tranquil Self	Same as above
<i>Nafs Mulhima</i>	e Commanding self/inciting to evil self	Same as above
<i>Nafs e Radiya<sup>32</sup></i>	e Inspired self	Same as above
<i>Nafs e Mardiya</i>	Pleased/Content self	Same as above
<i>Nafs e Kamila<sup>33</sup></i>	Pleasing self	Same as above
	Pure heart	Same as above

<sup>28</sup> Quran (50:33)

<sup>29</sup> Quran (75:2)

<sup>30</sup> Quran (89:27)

<sup>31</sup> Quran (12:53)

<sup>32</sup> Quran (89:28)

<sup>33</sup> Quran (5:3)

### 3. Spirituality in Islam

In Islam, spirituality occupies an important place. Different words are used in Islamic scripture to discuss spirituality such as soul, spirit, *Nafs*<sup>34</sup>, *Qalb*<sup>35</sup>, *fawad*<sup>36</sup>, *Aql*<sup>37</sup> etc. The objective of Islamic spirituality is nearness to God. Nearness to God can be achieved through a process of spiritual purification. Quran, says “He has succeeded who purifies it (Soul)” (91:9), the same message has been given in (87:14) that “He has certainly succeeded who purifies himself”. The different ways of practicing spirituality by Muslims have common objective that is purification of soul and nearness to God. Like Quran says “O you, who have believed, fear Allah and seek the means [of nearness] to Him and strive in His cause that you may succeed” (5:35).

The widely practiced ways of spirituality by Muslims and their common objectives can be understood by the following diagram-

Muslims practice spirituality in which their prime goal is to seek nearness to God and self purification. According to Islamic literature, spirituality purification can be identified in a Muslim from different indicators that include, but it is not limited to; absence of envy, selfishness and other spiritual diseases. Moreover, presence of thankfulness, remembering death and after life and serving humanity are some of possible indicators of spirituality in Muslims. Beside generally agreed indicators there are some sect based indicators too such as meditations and participation in spiritual rituals (*Chillah, Matam, Muraqabah, Sama and Zikar*). A reliable scale to measure spirituality will include measures on these sect specific manifestations of spirituality.

Muslims practice spirituality along with religious obligatory practices to ensure the successful after life. They produce wellbeing and satisfaction from achieving social, physical and after life goals (Haq, 2012). Workers produce wellbeing by reciting Holy verses and practicing other spiritual activities (Munir et al., 2013). These spiritual practices give them utility and satisfaction, which may affect their overall life satisfaction and job satisfaction.

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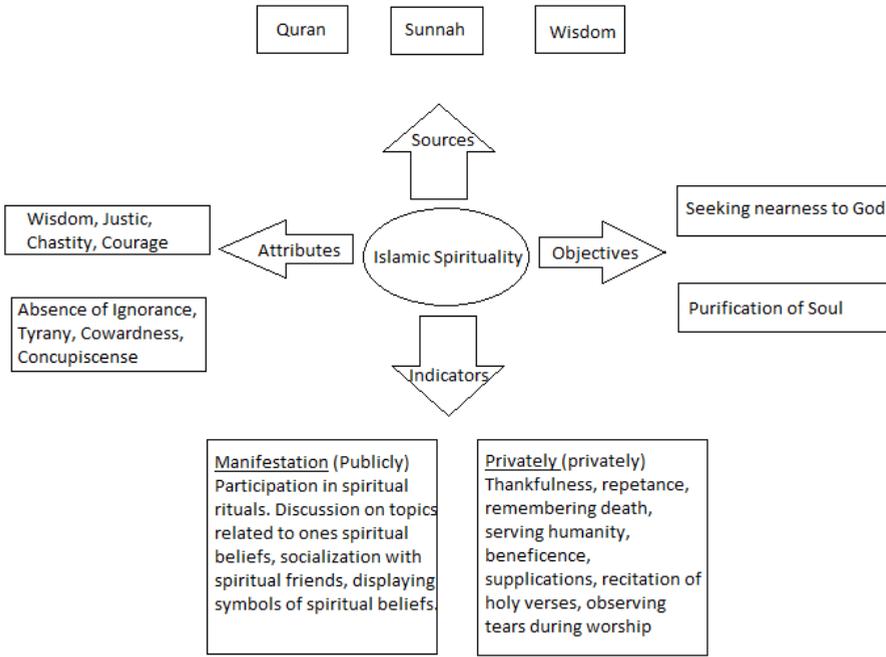
<sup>34</sup> Quran (7:205)

<sup>35</sup> Quran (13:28)

<sup>36</sup> Quran (53:11)

<sup>37</sup> Quran (2:44)

Figure 1. Indicators of Practicing Spirituality by Muslims



#### 4. Worklife and Islam

Islamic literature explicitly talks about worklife because earning legitimate earning is kind of worship in Islam. For example, when the companions of Prophet Muhammad (Peace Be Upon Him and His Progeny) asked that how we can be sure about whether we earn legitimate (*halal*) or illegitimate (*haram*) income? The prophet replied that if you go home tired, then your earnings are legitimate<sup>38</sup>. This implies that a worker who is true follower of Islam will work hard and go home tired. In the perspective of true Muslim labor, chances of job shirking are likely to be very low. He will put best of their efforts to the work, as their best performance at workplace would become a source of satisfaction for him. The Muslim labor is told in Quran to fulfill his duty (Quran, 5:1). Moreover, humbleness to colleagues is likely to be observed in true Muslim worker. The Prophet (PBUH) said, 'Whoever is a humble to people will be raised by Allah to a high status.' He is also expected not to take

<sup>38</sup> Reference of this tradition is not known to the author.

or give bribery because they are considered great sins in Islam.<sup>39</sup> The above mentioned Islamic philosophy of worklife provides reasons to Muslim workers for working efficiently with justice<sup>40</sup>.

Social Sciences believe that people are different types, unlike others some people get utility from serving others. On similar lines Adam Smith wrote

*“How selfish so ever man may be supposed, there are evidently some principles in his nature, which interest him in the fortunes of others, and render their happiness necessary to him, though he derives nothing from it, except the pleasure of seeing it. Of this kind is pity or compassion, the emotion we feel for the misery of others, when we either see it, or are made to conceive it in a very lively manner. That we often derive sorrow from the sorrows of others, is a matter of fact too obvious to require any instances to prove it; for this sentiment, like all the other original passions of human nature, is by no means confined to the virtuous or the humane, though they perhaps may feel it with the most exquisite sensibility. The greatest ruffian, the most hardened violator of the laws of society, is not altogether without it”<sup>41</sup>.*

A worklife characteristic may produce satisfaction for one type of person but dissatisfaction for the other type of person. Islamic theology also talks about types of persons. Jafar bin Mohammad Al-sadiq (702-765 CE) said that “people are of three types, one who worships in desire of heaven, second who do worship due to fear of hell and third who worships in the love of God. Only this type of worship will bring satisfaction and peace for them. (Al-Khisaal, p.p 188). Likewise, spirituality in Islam is not seen as a single type entity. Spirituality has different types; some of them are true in Islamic view. At workplace, true and false spirituality will have different workplace outcomes. Hussain ibn-e-Ali (626-680 CE) also shed light on this as he said surely people are slave of worldly life, they practice religion just from their tongue, as long as religion serves their life comforts they remain ‘religious’, in contrast when they are tested for strength of their faith, their religiosity ends up there. A similar saying of Ali bin Abi Talib shows that people are of two types; one who works for worldly life only, second who work for both worldly and after worldly life<sup>42</sup>.

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<sup>39</sup> The Prophet (PBUH) said, the curse of Allah upon those who give or take bribery. Same order in Quran (2:188)

<sup>40</sup> O you who believe stand firmly for justice. Quran (4:135)

<sup>41</sup> Reference; The theory of moral sentiments.

<sup>42</sup> Nehaj ul Balagha, p.p 261

From this discussion it appears that all types of spirituality cannot be considered as positive determinant of job satisfaction in every case. Because, people are of different types and the same level of religiosity with different type of person can produce systematically different outcomes at workplace. More specifically, it is quiet likely that a worker is more spiritual, can be a less productive and less satisfied. Conversely a more spiritual worker can be more productive and satisfied.

In the light of these narrations, if we see labor market, the workers who work for both world (this world and after world) reward, perhaps they can better absorb emotional shocks received a workplace, they might be able to work in relatively hard conditions, but this depends on their type of person.

The above discussion leads to an important insight which is explained with the help of the following diagram;

**Figure 2. Possible Relations between Spirituality and Job Satisfaction**

	Low	High	
Spirituality	3	4	High
	1	2	Low
	Job Satisfaction		

*Source: Hamdani (2014)*

### 5. Defining Spirituality

Spirituality originated from the word ‘spirit’ that has old roots with Latin language. Spirit originated from the word *spiritus* which means life or breath, associated with the word *spiritus* is the Latin word *spiritulis* assigned to a person “of the spirit.” The word Spirituality is found many times both in the Greek New Testament (*pneuma*) and the Hebrew Old Testament (*ruach*).

Spirituality is increasingly being studied as a human phenomenon in social sciences but on the other hand its definition is changing all the time. Spirituality has not received a consensus of definition like other phenomenon

in social sciences, e.g social capital. There are many definitions of spirituality available in earlier literature; few of them are presented in table 2

Table 2 provides a list of definitions obtained through literature review of scientific and philosophical source which discussed spirituality. All these studies provided less or more different definition of spirituality.

**Table 2: Different Definitions of Spirituality**

Definitions of Spirituality	Study
"The personal expression of ultimate concern."	Emmons, 2000
"That which involves ultimate and personal truths."	Wong, 1998
"How the individual lives meaningfully with ultimacy in his or her response to the deepest truths of the universe."	Bregman and Thierman, 1995
"The presence of a relationship with a higher power that affects the way in which one operates in the world."	Armstrong, 1995
"Our response to a deep and mysterious human yearning for self-transcendence and surrender, a yearning to find our place."	Benner, 1989
"A way of being and experiencing that comes about through awareness of a transcendent dimension and that is characterized by certain identifiable values in regard to self, life, and whatever one considers to be the ultimate"	Elkins <i>et al.</i> , 1988
"A transcendent dimension within human experience discovered in moments in which the individual questions the meaning of personal existence and attempts to place the self within a broader ontological context."	Shafranske and Gorsuch 1984
"A subjective experience of the sacred."	Vaughn, 1991
"A personal life principle which animates a transcendent quality of relationship with God."	Emblen, 1992
"The human dimension that transcends the biological, psychological, and social aspects of living."	Mauritzen, 1988
"That vast realm of human potential dealing with ultimate purposes, with higher entities, with God, with life, with compassion, with purpose."	Tart, 1975
"That human striving for the transforming power present in life; it is that attraction and movement of the human person toward the divine."	Dale, 1991
"Pertaining to the innate capacity to, and tendency to seek to, transcend one current locus of centrality, which with transcendence involves increased knowledge and love."	Chandler and Holden, 1992
"The animating force that inspires one toward purposes that are beyond ones self and that give one life meaning and direction."	McKnight, 1984
The process of Purification of soul	(Quran 91:9)
Spirituality means the exercise for improving the soundness of heart	Andrew Booso, 2012
"Purification of the heart ( <i>tanqiyah al-qalb</i> ) and rectification of the self ( <i>tahdhib al-nafs</i> )	Isa, Abdl Qadir, n.d.
"As for learning the science of the heart ( <i>'ilm al-qalb</i> ) and its diseases, such as envy ( <i>hasad</i> ), conceitedness ( <i>'ujb</i> ), ostentation ( <i>riya</i> )"	Suyuti, n.d.
It is a sacred science	Ibn e Khuldoon
It is the path ( <i>tariqa</i> ), travel( <i>suluk</i> ) and excellence ( <i>ihsan</i> ).	Taqi 'Uthmani
Spirituality ( <i>irfan</i> ) describes and explains the relationship and responsibilities the human being bears towards itself, towards the world and towards God.	Murtadha Mutahhari

In the above table spirituality is defined in both secular and religious perspectives. This term spirituality has been used only in the context of religion and this specific use has a long history. In psychology, management and scientific studies of religion, now we find spirituality as separate thing from religion with surprisingly a short history. Hill and Hood (1999) argued that this change is due to rise of secularism in 20<sup>th</sup> century. Moreover, they said increase in the disappointment with faith based organizations and institutions in western society after 1960 has caused distinct meaning for spirituality separate from religion.

## 6. Theoretical Framework

Job satisfaction is viewed as utility or satisfaction obtained from work. However, in Divine Economics Framework, an individual derives utility from various type of activities including work. It takes the following form;

$$U = U_c + U_e$$

Where  $U$  is current total utility which is sum of current utility  $U^c$  and stream of expected future utilities  $U^e$ . The expected future utility is also divided into expected future utility in life on earth and expected stream of utility in life after death.<sup>43</sup> A rational individual derives utility from allocating total time into various activities; worldly, after-worldly or both-worldly. Alternatively the utility function can be written in perspective of human activities as;

$$U = f(a^w, a^a)$$

Where  $U$  is total utility which is sum of utility obtained from the worldly activities denoted by  $U^w$  and after-worldly activities denoted by  $U^a$ . An underlying assumption here is that overlapping (both-worldly) activities do not exist while in practice, according to religions, after-worldly activities may also be worldly activities and vice versa because a faithful individual performs all activities in a manner that has both-worldly appropriateness.<sup>44</sup>

Faith in afterlife plays an important role in decision making of the followers of Divine religions. The rational agent who is follower of any Divine religion maximizes satisfaction while also considering afterlife. Therefore, at workplace, the worker will derive satisfaction within the domain of respective

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<sup>43</sup> The period in life after death is further divided into three distinct stages viz purgatory, Day of Judgment and final eternal life either in heaven or hell. According to Hamdani 2004, these stages have a systematic effect on individual's current life allocation decisions.

<sup>44</sup> The model finally relaxes this assumption in order to represent a truly faithful individual considering. For example a truly Muslim will perform all acts in the dye of Almighty Allah [in Arabic called *Sibghatullah*; see Al-Qur'an 2:138].

religion<sup>45</sup> in two different ways, keeping in mind this world and hereafter. Using the preceding framework as baseline, a worker's utility function denoted by JS (job satisfaction) can be written as;

$$JS = f(X, D) \dots \dots \dots (4)$$

Where X is vector of different conventional economic variables such as age, education, income, job sector, experience and marital status whereas; D is Divine capital<sup>46</sup> which according to Hamdani (2012) includes;

$$D = S, R, M, F.$$

Where S, R, M, and F denote spirituality, religiosity, morality, reinforcing physical infrastructure. The four elements of Divine Capital are likely to have a systematic effect on individual's behavior as well as life outcomes, however, the present study will focus on spirituality which is one element of Divine Capital. Although Divine capital model include spiritual human capital, however, this study will consider spiritual practices as a proxy measure of spiritual human capital.

The following econometric model will be tested to analyze the role of spirituality in explaining job satisfaction.

$$JS = \beta_0 + \beta_1 S_i + \beta_2 X_i + \epsilon_i$$

Where, JS<sub>i</sub> is job satisfaction level reported by i<sup>th</sup> individual. S<sub>i</sub> index of spirituality variable whereas, X<sub>i</sub> is vector of labor and firm characteristics.

To test this econometric model, Logit regression is used through STATA. When data is not normally distributed Logit regression is used; whereas, Probit regression is used when data is normal. Shapiro Wilk test is used through STATA to test normality of the data set. This study therefore, used logistic regression model because our data is not normally distributed. Moreover, previous studies including Halkos (2008) and Borjas (1979) used Logit model for studying job satisfaction. Blanchflower and Oswald (1999) used ordered Logit model for studying job satisfaction. Since our dependent variable is dummy variable, therefore we used Logit model instead of ordered Logit regression.

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<sup>45</sup> Almost all individual perceive a future life at time 't' which may have a very short or an infinite time horizon. In Divine religions, the concept of after life is as revealed by God on prophets and is closer to each other (for details see Hamdani (2004).

<sup>46</sup> Hamdani (2012) defined it as the level and combination of religiosity, ethics, spirituality, and the infrastructure which re-enforces all these attributes and produces a typical wisdom.

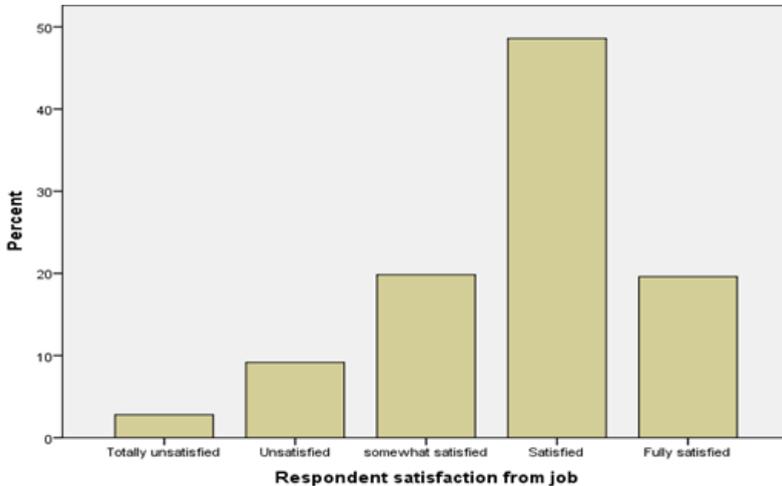
## 7. Empirical Results

Following Freeman (2000), job satisfaction is used as indicator of positive worklife. Therefore, this study analyzed spirituality as a possible determinant of job satisfaction. Job satisfaction is the utility workers obtain from work. Moreover, it is the basic decision driver of workers to choose between high effort level and low effort level. As discussed in chapter one; spirituality is likely to have direct relationship with satisfaction level of worker from their job. For that reason, empirical analyses are conducted on data from Divine Economics survey 2013. The results of this empirical investigation are presented in the subsequent sections of this chapter. Before going into detailed regression results, descriptive analysis of data is presented as follows.

## 8. Descriptive Analysis

The nature and main characteristics of the data used for this study can be understood with the help of following figure and tables. Analysis of data shows that most of the respondents reported satisfaction from job. The distribution of job satisfaction is presented in Figure 3 which shows that majority of respondents rated themselves as satisfied from their job. The figure summarizes the results of this analysis and highlights that 12% people report job dissatisfaction. Clark (1996) reports a total of 16.4% respondents who are dissatisfied from their job. Blanchflower and Oswald (1999) found 14% of American workers as dissatisfied in their sample.

Figure 3: Distribution of job satisfaction



The Figure 3 shows that most of the people are satisfied from their job. A plausible justification can be found in theory (Oswald and Andrew, 1996) that human being are rational and they are always trying to find a job that

satisfy them; they usually change jobs and stay on a job that suits them. As found in previous literature that there exists a negative relationship between job satisfaction and quit intention (Clark 2001). This leads to an important inference that people with high satisfaction level stay with a job for longer period, in case they are not satisfied from their job, they quit the job.

Table 3 provides descriptive statistics of the sample population. In this table 4.1 age and spirituality are clustered into different categories; this was done because it offers deeper analysis of job satisfaction in relationship with these variables. The results in the table 4.1 indicate that female workers are more satisfied with job as compared to male workers. Female workers do not accept odd jobs that have poor working conditions (Clark, 1996). Moreover, it is likely that they are always given respect and a soft corner in society like Azad Kashmir, due to prevailing norms and culture.

Table 3 shows that most of the people reported good health. Nearly 68% people in our respondents are married and the rest 31% reported being single. Moreover, the table 4.1 shows the descriptive statistics of the variables 'taking with God' and 'recitation of salutations (*Darood*) on Prophet Muhammad'. The results also show that most of the people in the sample are at least with 10 years of education. However, religious education is highly reported as reading Arabic text (*Nazra*), only 5.6% respondent reported that they had memorized the holy quran (*Hifz*). These results show that religious education up to the level of *Nazra* is attained by 95% people in our sample.

**Table 3: Descriptive Statistics**

Variables	N (%)	S.D
<i>Gender</i>		
Male= 1	79.5%	0.96
Female= 0	20.5%	0.99
<i>Age</i>		
<19	6.9%	1.1
20-29	34.7%	1.0
30-39	27.4%	0.9
40-49	23.3%	0.7
50-59	6.8%	0.7
60+	1.0%	1.0
<i>Health</i>		
Bad = 0	24.5%	1.0
Good= 1	75.5%	0.9
<i>Marital status</i>		
Single = 0	31%	1.0
Married = 1	68%	0.91
<i>Dummy Government employees</i>		
Yes = 1		
No = 0	37%	0.7
	62%	1.0
<i>Spirituality Variables</i>		
<i>Conversation with God</i>		
Never=1	23%	0.9
Rarely=2	19%	1.0
Sometime=3	25%	0.9
Often=4	22%	0.9
Always=5	9%	0.62
<i>Recitation of salutations (Darood) on Prophet Muhammad</i>		
Never	0.5%	0.7
Monthly	5.8%	0.95
Weekly	15.3%	0.99
Daily	68.9%	0.93
Most of the time	9.5%	1.1
<i>Religious education in no. of years</i>		
Illiterate=1	5.6%	1.2
Nazra=2	88%	.95
Hifz or any Madrasa degree=3	5.6%	0.77

Figure 4 shows the relationship of age and spirituality which is inverse u-shaped relationship. As the graphs shows that people with age group less than 19 have reported low satisfaction and people with middle age group

showed highest level of spirituality. The oldest group with age more than 50 reported relatively less spirituality. There could be several reasons for this kind of un-expected results. One possible reason could be that people at older age - that is above 50 - are more interested in religious practices as compared to younger ones. Young people are between the age group 20-40 are interested in finding meanings in life, events and they tend to show more interest in spiritual practices for inner satisfaction. It is observed during the field work in sample areas that mostly young people are less inclined towards religious activities. This could be because of two reasons; religious practices usually involve discipline and code of conduct, whereas, spirituality is likely to give them more freedom and integrity with their inner self.

On the other hand, older people in our sample reported lower spirituality as compared to young one. There may be several reasons for that; a) people are unable to tell their spiritual experience when they become old; b) their physical participation in spiritual activities goes down. Challenges and difficulties in young age tempt young people towards spirituality. But in old age usually life becomes stable causing lesser connection of 'emergency type' with God. Since, new experiments, and new knowledge becomes slow in old age, this may also produce a negative relationship between age and spirituality.

**Figure 4. Relationship between Spirituality and Age**

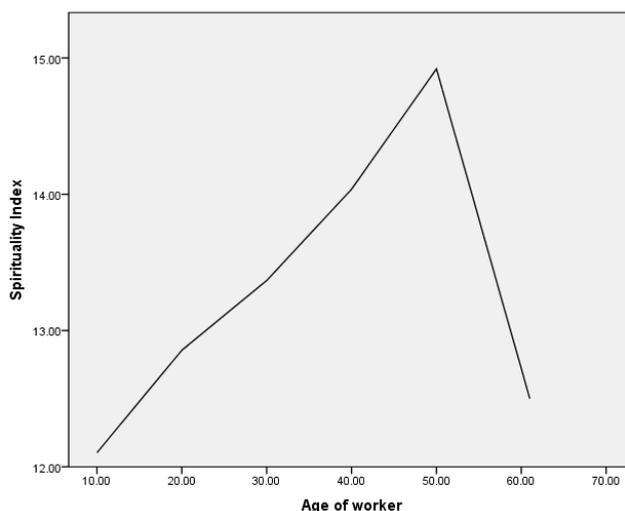


Figure 4 presents the relationship between age and spirituality level of workers. Relationship between spirituality and age is shown by taking age of workers at x-axis while spirituality level of workers is taken on y-axis. Age variable was in continuous form in the original data set of Divine Economics Survey 2013. It is therefore re-coded using SPSS into different categories. The

graph is plotted to understand the relationship between age and spirituality. The graph shows clearly that age and spirituality has a inverse u-shape relationship.

**Table 4: Mean Comparisons**

Age		Respondent satisfaction from job	Score on Spirituality Index
10-19	Mean	3.48	3.58
	Number	29	29
	Std. Deviation	1.12	0.77
20-29	Mean	3.50	3.63
	Number	145	145
	Std. Deviation	1.02	1.02
30-39	Mean	3.68	3.70
	Number	109	109
	Std. Deviation	0.95	0.94
40-49	Mean	4.22	3.95
	Number	81	81
	Std. Deviation	0.707	0.86
50-59	Mean	4.00	4.24
	Number	25	25
	Std. Deviation	0.70	0.66
>60	Mean	3.50	4.00
	Number	4	4.00
	Std. Deviation	1.0	1.41
Total	Mean	3.73	3.77
	Number	393	393
	Std. Deviation	0.97	0.94

The table above shows the mean values of job satisfaction level corresponding to different spirituality and age categories. The result of this analysis shows that with age both job satisfaction and spirituality has a non linear relationship, either job satisfaction is related to growing age or the changing spirituality level directly. Clark (1996) found the same results for his analysis of age, job satisfaction and mental health. He further found that this non-linear relationship of job and age might be due non-linear relationship of age and metal health, as he obtained a same u-shaped relationship between age and metal health. The results given in table above are supported by Clark (1996). These results enable researchers to further think about possible relationship between mental health and spirituality, and their joint effect on job satisfaction.

To analyze the role of gender in determining job satisfaction through spirituality, the following table is constructed, which shows the mean value of job satisfaction and spirituality for both female and male genders separately.

**Table 5: Gender Difference in Mean Job Satisfaction and Spirituality of Workers**

Gender		Spirituality	Job Satisfaction
Male	Mean	3.74	3.72
	N	313	313
	Std. Deviation	0.98	0.96
	% of Total N	79.6%	79.6%
Female	Mean	3.90	3.76
	N	80	80
	Std. Deviation	0.78	0.99
	% of Total N	20.4%	20.4%
Total	Mean	3.77	3.73
	N	393	393
	Std. Deviation	0.94	0.97
	% of Total N	100%	100%

The table above shows female are more satisfied than male, this finding support the earlier findings of (Clark 1996, Gazioglu and Tansel 2013). But results in next column shows that female are more spiritual than male. By considering the results that female are more satisfied and they are more spiritual than male, it may be inferred that spirituality has some association with job satisfaction. There might be some other reasons of female reporting higher job satisfaction level as discussed by Clark (1996) that male and female have different education, personal characteristics and eventually they report different level of job satisfaction. It is pertinent not to rely on these results and test the association with the help of regression.

## 9. Regression Results

Following Borjas (1979) the present study used Logit regression to examine the role spirituality in determining job satisfaction in targeted area. Table 6 shows regression results of Logit regression that explain the correlations between dependent variable - job satisfaction - and the covariates. To test the relationship of age, another variable age square is also included in the model. Health is included as a variable which measures satisfaction from health.

The main focus of the present study is to analyze the effect of spirituality on job satisfaction of workers. The results in the table above shows

a strong association between the reported job satisfaction and spirituality level of workers.

**Table 6: Logit Regression Results**

Variables	Model 1	Model 2
Spirituality		0.535 (0.00)**
Tenure of Current Job	0.001 (0.02)**	.050 (0.00)***
Log Income	.382 (0.00)***	0.43 (.09)*
Gender	-0.702 (0.072)*	-0.626 (0.10)*
Age	0.170 (0.01)**	0.099 (0.04)**
Age Sq	-0.002 (0.02)**	-0.03** (0.04)
Public sector employee	0.1971 (0.06)*	0.179 (0.09)**
Education	-0.147 (0.09)*	-0.205 (0.21)
Health	0.434 (0.00)***	0.441 (0.00)***
Marital Status	0.20 (0.63)	0.218 (0.65)
Pseudo R2	0.1907	20.0
LR Chi2	64.01	63.23
Prob > chi2	0.0000	0.0000

**Note:** Coefficient significant at 1% is denoted by \*\*\*, 5% with \*\* and 10% with \*.

Table 6 shows that there exist a non-linear relationship between age and job satisfaction, the relationship found in this study is supported by the earlier studies. Clark (1996) was the first study to obtain these results and provided the justification for these innovative results. He found a same u-shaped relationship between context free mental health and age, and obtained stronger results for male than for female. Clark related these non-job characteristic in explaining u-shaped relationship between job satisfaction and age.

Regression results of binary Logit model show that gender has significant effect on job satisfaction. Results supports the finding of earlier studies that female are more satisfied with job as compared to male workers.

This is also called gender paradox theory put forward by (Clark 1996). Clark justified the gender paradox with the help of arguments that female have different education level as compared to male, they have different job kinds and their working hours are different. Female usually accept those jobs that offers higher level of satisfaction.

Impact of education on earning of labor is heavily given attention by the labor economists. Earlier research reveals that workers with higher education earn more as they get better jobs (Blanchflower and Oswald 1994). But surprisingly our results are different as the sign of coefficient of the variable education is negative. This may be due to one possible reason that workers with higher education level though have better paid jobs, but this higher education increases the desired income for a suitable job. The interpretation of these results is provided by Clark and Oswald (1994) while presenting the same results.

Health variable used in the analysis was measured subjectively by asking how much people are satisfied from their health. This measurement method was used by early studies on job satisfaction for instance see (Clark, 1996, Jones et al., 2011). Subjective health variable in the the table 4.4, indicates a strong association between subjectively reported health variable and job satisfaction.

To test the effect of job sector on job satisfaction level, dummy variable for job sector is used in regression analysis. The dummy variable takes the value one for public sector and zero for private sector worker. This dummy variable shows strong association between job sector and job satisfaction level of workers. Those workers who do job for government sector reported higher level of job satisfaction. This finding can be supported with the argument that in Pakistan people prefer to have a government job as it pays in case of injury, retirement and sudden death. The data was collected from Azad Kashmir where the largest employer is government. Beside health and house building allowance, government sector also provides retirement funds to it employees in Azad Kashmir. These incentives could be the reason of highly reported job satisfaction by the public sector employees.

Table 6 shows that marital status is a non-significant variable in the explaining job satisfaction. Although the earlier studies reported different result; they found negative relationship of being single and job satisfaction. The present study justifies its results with some arguments. Marital status in areas like Azad Kashmir is not a confounding variable of job satisfaction because of two reasons, first, that families live in joint family system, which is unique in Pakistan and rarely to be found anywhere in Western societies like Britain and America. In joint family system, life style of being single and

married from earning point of view is not exactly like that in Western family system. People do job to earn bread and butter for their family, so they share the cost of each other within joint family. Secondly, if the person is away from his home, he could be satisfied from his family in case he is living in joint family system. Because other senior family members like his mother or father are there to take care of his family. From income point of view marital status is not a significant variable in determining job satisfaction.

Tenure variable has been studied by many previous studies as determinant of job satisfaction for workers. The present study finds tenure a significant variable that predict change in job satisfaction level of workers. Although Borjas (1979) found tenure as insignificant variable, but Blanchflower and Oswald (1999) found it significant with a positive sign. Clark (1997) used tenure as explanatory variable in his analysis but did not find it significant.

Spirituality has recently gained attention as an economic variable. Mostly, it remained a less explored variable in economic analysis since centuries, perhaps because of its metaphysical nature, subjectivity or measurement issues. Even the economists highly concerned with worklife turned to show only a little concern towards it. The present study attempts to analyze spirituality as an economic variable at workplace. Keeping in view the issues of spirituality such as; subjectivity, difference of definitions and measurement, a number of models were compared in review of literature. To measure spirituality of workers, we used a recently developed framework known as '*Divine Economics*'. Data is collected from north of Azad Jammu & Kashmir which all comprises of Muslim population. A purpose oriented questionnaire was used to collect quantitative data whereas; focus group discussions and key informant interviews were conducted for obtaining qualitative facts. This technique called mixed method is used when survey data are deficient in finding a socio-economic truth.

## Conclusion

Since worklife is not measurable phenomenon, the effects of spirituality on subjective evaluation of worklife (measured in terms of job satisfaction) is empirically analyzed in the study. Results of empirical analysis show that age is an inverse u-shaped predictor of spirituality level. This result could be explained as; the physical participation of early and old age workers is lesser because in early age, workers are less concerned to spiritual life whereas in old age, their spiritual activities go down due to physical and health changes. The middle age workers are observed to be relatively more interested in finding meaning of life which tempts them towards spirituality. But in old age life becomes stable causing lesser connection of communication with God. Since,

new experiments, and new knowledge becomes slow in old age, this may also produce a negative relationship between these two variables.

Supporting the results of previous study, the present study also found that education has negative relation with job satisfaction. Moreover, female workers are found more satisfied from their job. One possible reason could be that, female are likely to prefer easy job and they are less likely to accept job which is in hard environment. Hence, their satisfaction from job is relatively high from male workers. Health satisfaction is found a significant determinant of job satisfaction. An explanation for this result is discussed in earlier studies that people with good health are likely to find better jobs with big salaries and high satisfaction level (Clark 1996).

The empirical study finds that in the present sampled population of Azad Jammu & Kashmir, spirituality level of workers is found positively affecting job satisfaction. Spirituality level raises the transcendence level and improves the mental health of workers, which has been proven in earlier literature to enhance job satisfaction (Clark, 1996, Jones et al., 2011).

As explained in Chapter one that spirituality may prove as positive and productive or negative and counterproductive, depending on what type of people are practicing which type of spirituality. Due to limitation of present study, it does not cover different types of spirituality as in original model such as positive and negative spirituality, productive and counterproductive spirituality etc. The empirical conclusions drawn in this study are also limited. More trustable results can be obtained if more comprehensive application of the Divine Economics Model is included. More comprehensive use of the model will include all types of spirituality and diverse types of people.

The results of the present study may serve as tentative and shall not be taken as final. However, the results may serve driver of new insights for labor economists in general and researchers interested in wellbeing of workers in particular.

### **Limitations of Study**

There are some limitations of this study which are due to time and resource constraints. First, it involved two main types of labor that is full time and part time, other forms of labor like household labor, unpaid labor, volunteering for religious cause, volunteering for social cause are neglected as separate entity in the analysis. Secondly, many other job characteristics were not included in the analysis like establishment size and total number of workers in firm, region, nationality and mother language. Thirdly, the generalization of this study is not possible because it has analyzed the data from a Muslim society with no Christian or other religion's follower.

Another issue that might harm the health of the results is the usage of subjective explanatory variables. If both the dependent and the independent variable are of subjective nature, any correlation between these variables might be caused by unobserved labor characteristics. A solution to this problem is provided in the usage of panel data. By applying panel data, these workers fixed effects can be controlled for. Widening the analysis over multiple years is nevertheless beyond the scope of this study. But future researcher can apply these treatments to minimize the risk that can decrease robustness of results.

There exist a very thin line in economic analysis of job satisfaction and psychological research. Economist should be keen in dealing with job satisfaction and use economic tools and framework which they used for crime, marriage and suicide. This study is first of its kind to bring new determinants into the analysis of job satisfaction; it might be the case that the present study has crossed the limits of economic science.

Job satisfaction is measured using a single-item scale. However, multi-items measure has shown stable and reliable (e.g. Scarpello and Campbell, 1983). For initial probing into the analysis of spirituality and job satisfaction single item based study is strong enough to provide new insights. However, future study should include multi item measurement of job satisfaction for better and more reliable results.

There are still un-answered questions in the economic literature that need to study properly for better understanding of labor market. One found during the review of literature for the present study by the author is; not a single study is able to answer the question that why public sector employees are less productive despite the fact that their reported job satisfaction is higher and we find strong association of job satisfaction and productivity of labor in economic and managerial literature For instance George (2008). Future research can conduct studies for identifying those hidden dimensions of job satisfaction which are directly related with productivity of labor that could answer to unanswered questions like the one mentioned above.

This study was unable to include types of people and types of spirituality as part of theoretical model. This made the results vulnerable to risk of robustness, also, due to small sample size, the result should not be generalized. Although, the present study found positive association between spirituality and job satisfaction, but, this might not be the case in all situations, types of people and types of spirituality once included in model, may change the results. So, it is highly recommended that future researcher should start developing model from types of people and other omitted variables.

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## **Annex -1**

### **Rationale and Construction of Variables**

In this section, definition and construction of variables is discussed. Some variables are used as they have already been used in Divine Economics Dataset (Hamdani, 2013). However, some variables are re-coded or computed according to the need of the present study. Different indices are constructed through simple calculus and advance econometric techniques. The detail of the construction of variables is discussed one by one in subsequent sections;

#### *Job Satisfaction*

Job satisfaction can be defined as “a positive emotional state resulting from the appraisal on one’s own job (Locke, 1976). The measurement of this variable faces serious challenges because of subjectivity involved in it. But, still the information stored in this valuable variable has significant importance for both employee and employer (Freeman, 1978). Job satisfaction being the dependent variable in this model is measured subjectively for the present study. Respondents are asked to rate their job satisfaction on a five point scale from very satisfied on 5 to very dissatisfied on 1.

#### *Spirituality index*

Spirituality is defined in many alternative ways as explained in table 2.1. There are various ways in which spirituality is manifested by different religions and sects, however, there do also exist some similarities among them. The sampled population of the present study is 100 percent Muslim. Hence, spirituality

from Islamic perspective has been considered while also taking care of a universal spirituality which prevails among people regardless of faith patterns. It has already been explained in chapter one that in Islam, spirituality prevails among both the major school of Islamic thought with similarities and distinctions. However, for the present study, only those spiritual affairs are considered which are common in almost all sects of Islam. The difficult part of this study is the measurement of spirituality for analytical purpose in economics. The present study attempted to measure spirituality through an index of various variables. One of the variables used in construction of spirituality index is frequency of saying salutations (*Darood*) on Prophet Mohammad (PBUH). Although it is obligatory to offer salutations whenever someone listens the name of the Holy Prophet [PBUHAP]. In this sense it is 'religiosity'. But due to its high value in purification and salvation, it is recited very frequently as non-obligatory too. The other variable involved in index is frequency of reciting verse the article of faith (known as *Kalima*)<sup>47</sup>. Including this variable in measuring spirituality is due to the widely believed faith that recitation of *Kalima* purifies the heart and develops good spiritual health. Further, frequency of Repentance and Thankfulness (*Tauba and Shukar*) are also included in construction of spirituality index. It is a way to come closer to God and a mean to purify heart and soul. *Tauba* is believed to a practice of spirituality in Islam.<sup>48</sup>

Besides, a variable about subtle perception ability which enables some people to see or feel whatever is not yet occurred. Interchangeably, this is also known as the Sixth sense. To some, it is a type of spiritual ability or experience. This concept has been included in the index to capture the workplace outcomes related with labor's such type of perceptions.

For this study two spirituality indices are constructed from same data set by two different methodologies. First is through simple calculus technique and the second is through Principal Component Analysis (PCA). First Spirituality index is computed by utilizing methodology of Hamdani (2004) which used the following formula;

$$(\text{Spirituality Index}) = \frac{\sum_{i=1}^n (\text{response score on question } i)}{\sum_{i=1}^n (\text{maximum score on question } i)} \times 100$$

Where  $i = 1, 2, \dots, n$  (where 'i' indicates the number of question) and n is the total number of questions asked in a particular index.

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<sup>47</sup> There is no god but Allah, [and] Muhammad is the messenger of Allah.

<sup>48</sup> There are three conditions of *Tauba*: (1) repentance for opposition and default in breaking the Divine Law; (2) repentance that this default or opposition should not have been occasioned after any previous repentance; and (3) that there should be no idea of returning towards any pre-*Tauba* faults and shortcomings after the repentance (Kashf al Mahjoob).

The calculated result will be the non-weighted score of the variable – Spirituality. According to Hamdani (2004) this calculated result can be used to compare or rank individuals and groups.

### *Gender*

Women hold jobs that are, on average, inferior in many respects to those held by men (Berch 1982), therefore, gender variable is likely to affect job satisfaction level of workers. Many earlier studies found gender as a significant variable and most of them found female more satisfied with their jobs as their male counterparts. The reason they give is female workers have different jobs as compared to male. Clark (1996) was first to give this theory forwarded that female are more satisfied from their jobs and he gave it name “Gender Paradox theory”. Information on gender of responded is available in dummy variable form which is used as it is.

### *Age*

Age is likely to affect job satisfaction level. Promotions and increase in salary is also a function of age in firms. Hence there is possibility that age may explain the variation in job satisfaction. The variable age in the Divine Economic Survey is in continuous form; however, present study re-coded it in six categories. Earlier studies included age in their job satisfaction model Clark et al., (1996). Clark, Oswald, and Warr (1996) provide empirical evidence for a U-shaped relationship between age and satisfaction with work. To capture the possibility of non-linearity in case of age, that is evident from previous research, this study included age square also.

### *Education*

Since education changes social, civic and religious perception and habits of individuals, it is likely to affect job satisfaction level. Data on education is used as number of educational years completed so far. Human capital from formal education to technical education point of view, has been reported a strong determinate of job satisfaction in previous studies. Highly educated workers tend to report lower satisfaction with work. Clark (1996) concludes that higher education leads to higher expectations, which in turn, leads to lower levels of reported satisfaction with work. This study will include formal education as an independent variable in the analysis. However, religious education is likely to affect job satisfaction level. Although due to less samples size of respondent with religious education in our data set, religious education is not included in model. Therefore, future research may include this variable when large data set is available.

### *Health*

People who have good health are likely to get better jobs and maintain progress at work. It is likely to occur that good health is correlated with high job satisfaction. The present study used satisfaction from health to measure health situation of labor. It is evident from previous literature that a positive relation exists between health and job satisfaction. There are two ways in which earlier studies measured health of respondents. First way is to ask the respondent in this way 'how do you rate your health?' and second 'how satisfied are you from your health?', the current study used the second measure of health.

### *Marital status*

The information available in original data set provides unique codes for divorced and widowed person, however, the present study used dummy of marital status. This dummy variable keeps information on either respondent is married or never married. Marital status is likely to affect job satisfaction level. The earlier studies reported that Married workers, who are living together are most satisfied than married workers, who are living separately (Souza and Poza 2000).

### *Income*

Income was found as a strong positive determinant by many previous researchers. Workers with higher income reports higher level of job satisfaction, (Souza and Poza 2000). The log of income is usually normally distributed, for this reason, all earlier studies used log of income variable in the model. This study will also use log of income instead of original income variable. While constructing this variable, we have ignored the new concept of 'legitimate income' from workplace activities which, according to Divine Economics, might cause systematically different outcomes of workers' job-satisfaction or even overall life satisfaction.

### *Job sector*

The present study used job sector dummy which is constructed through recoded variable in original data set. The dummy variable takes value one if respondent is employed in public sector zero in all other cases. Previous studies paid a special attention to include job sector as independent variable in their model. Public sector workers report higher job satisfaction than private sector workers (Borjas, 1979).