



Divine Economics Project
**The Role Values, Social Capital and Spiritual Capital
in Economic Behaviors:**

An Empirical Extension of Divine Economics Framework in Sustainability Perspective

PROJECT REPORT-4

By:

Dr. Syed Nisar Hussain Hamdani

Professor of Economics and Director/ Principle Investigator
Kashmir Institute of Economics, University of Azad Jammu & Kashmir

Assisted By:

Higher Education Commission
[Thematic Research Grants Program-II]

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TABLE OF CONTENTS

Acknowledgements	8
Executive Summary	9
How to use this Report	12
CHAPTER- 01: INTRODUCTION	14
1.1 Background of the Study	14
1.2 Divine Economics	15
1.3 Social capital and spiritual capital	17
1.4 Objectives and Hypothesis of the Study	19
1.5 Methodology	20
1.5.1 The Data Generating Process and Analysis	21
1.5.2 Survey Modules	21
1.5.3 The Survey Instruments	25
1.6 Online Survey of Universal Values	26
1.7 Limitations	26
1.8 Organization of the Report	27
CHAPTER- 02: REVIEW OF LITERATURE	28
2.1 The Conventional Economic Literature	28
2.1.1 Ethics, Values, and Productivity	28
2.1.2 Time Allocation and Poverty	30
2.1.3 Households' Willingness to Pay for Services	34
2.1.4 Religiosity and Households' Saving Behavior	38
2.2 Religious Perspective on Values and Economic Interrelationships	40
A. Religiosity, Ethical Values, and Productivity	40
B. Religiosity, Time Allocation, and Poverty	42
C. Religiosity and Natural Resource Use (Water)	44
D. Religiosity and Financial Resources (Saving) and other outcomes	49

2.3 Religious Perspective on Social Capital, Spiritual Capital, and Economic Behavior	53
2.3.1 Divine Capital	56
2.3.2 Implications of Divine Capital	57
2.4 Economic Sustainability In Normal And Post Disaster Situations	61
2.4.1 Divine Capital and Sustainability	63
Chapter 3: ECONOMIC BEHAVIORS: VALUES, SOCIAL AND SPIRITUAL CAPITAL	64
3.1 BACKGROUND	64
3.2 VALUES AND ECONOMIC PERFORMANCE	65
3.3 RELIGIOSITY AND ECONOMIC PERFORMANCE	66
3.4 SOCIAL CAPITAL AND ECONOMIC PERFORMANCE	67
3.5 RELIGIOSITY, VALUES AND ENVIRONMENTAL SUSTAINABILITY	68
3.6 SELF-REPORTED SATISFACTION	69
Concluding remarks	71
CHAPTER- 04: DIVINE CAPITAL AND ECONOMIC DECISION MAKING	72
4.1 Introduction and Background	72
4.2 Religiosity and Human Behavior	72
4.2.1 Religiosity and Saving	72
4.2.2 Religiosity and Water Use Behavior	76
4.2.3 Religiosity, Time Allocation and Poverty	78
4.2.4 Religiosity, Ethics and Productivity	81
CHAPTER- 05	89
5.1 Summary and Conclusions	89
5.2 Insights for Future Research	95
5.3 Policy Recommendations	96
BIBLIOGRAPHY	98

List of Tables

Table 3.1: Approach to Improve Workers' Performance	65
Table 3.2: Time Allocation with Religiosity Ethics and Spirituality	66
Table 3.3: Respondent Attempts to Urgently Reach to Relatives/Near ones in troubles [Social Capital]	67
Table 3.4: Socialization and Divine Capital	68
Table 3.5: Effective Approaches of Environmental Protection	69
Table 3.9: Respondents' Satisfaction from Different Factors	70
Table 4.1: Descriptive Statistics	73
Table 4.2: Empirical Findings - Saving Per Annum)	74
Table 4.3: Empirical Finding - Willingness to Pay	77
Table 4.4: Summary Statistics of Variables under Consideration	80
Table 4.5: Empirical Findings - Time Poverty	80
Table 4.6: Summary Statistics - Firm's Productivity	84
Table 4.7: Dependent Variable: Firms Productivity (Log of Annual Sales in Pakistani Rupees)	86

Figures

Figure 01: Social Capital	17
Figure 02: Composition of Divine Capital	57

List of Annexures

Annexure No. 01: Research Team	121
Annexure No. 02: List of Project Reports	124

Dedication

*This work is dedicated to
the future economists
who shall recognize the importance of values
for a global economy with justice, peace and prosperity!*

Acknowledgements

This report is based on part of research conducted under the project titled "The Role of Values, Social Capital and Spiritual Capital in Normal and Post-disaster Economic Behaviors: An Empirical Extension of Divine Economics Framework in Sustainability Perspective". The project is assisted by Higher Education Commission.

The University of AJ&K acknowledges the Higher Education Commission for providing Thematic Research Grant for this project. The support and facilitation provided from time to time by HEC officials Mr. Fida Hussain, DG Academics, Ms. Ghayur Fatima, Director Academics, Mr. Sulaiman Ahmad Ex. Focal Person TGRP-II and others has been highly valuable. The cooperation and forward looking approach of Dr. Tahir Ali Shah, Dy. Director Academics and Focal Person Thematic Grants and his team is very sincerely valued in success of this research. The hard work done by the Project staff and resource persons mentioned in Annexure-01 is the key to success of this project. All well-wishers of Divine Economics also deserve our special and sincere thanks for they value innovation and encourage when other are silent. The academic guidance and spiritual motivation provided to the project team by multi-disciplinary scholars who are optimist about a future global economy to be driven by values of justice, peace and responsibility deserve our praise and prays !

Dr. Syed Nisar Hussain Hamdani

Executive Summary

As the title indicates, this research project is a blend of values, sustainability and Divine Economics theory. Alternatively, the research explores multi-dimensions of economic as well as some apparently non-economic realities. It studies sustainability in the structure of divine economics which allows the analysis of values, religiosity, and spirituality the same way as other economic variables. As the details will show, sustainability is the allocation of the current resources in such a way that a balance can be established between the world's current consumption and the consumption of the future generations. Likewise, the Divine Economics augments the traditional economic theory by incorporating the role of faith in the allocation of resources. The additional dimension that needs attention under sustainability economics is the happening of disasters after which individual and collective behaviors are affected. Understanding the role of values is important because with a set of values relating to human self, society, nation, environment and faith, the desirable behaviors can be maintained even after disasters. The project, funded by the Higher Education Commission of Pakistan and Conducted by the Kashmir Institute of Economics, University of Azad Jammu and Kashmir, comprises a series of studies, which test different aspects of sustainability while extending Divine Economics theory. The study attempts to identify and bring into mainstream the role of local, contextual and universal values in individuals' behavior towards their economic allocation choices including disaster and post-disaster related decisions such that a new understanding regarding sustainability of development initiatives by public, private and non-government sectors can be developed.

Broadly, the work is divided into many chapters which cover, without a demarcation of chapters various aspects of the study. The first aspect is the background that how religiosity affects human behaviors. The second is how religiosity is related to the economic variables. For instances, the variables that are discussed include saving, time poverty, willingness to pay for water, firms' output performance etc. in relation to certain values and testing nexus

between time allocation, poverty, and religiosity. The third aspect is the results that show that individuals with higher prevalence of religious and other values are relatively less time poor; they save more as compared to the less-religious ones; they are willing to pay for public services such as safe water; and, a higher level of the workers' and firm's ethical raises the firms' productivity. Since this is a multi-disciplinary research, a number of aspects other than those mentioned above are being presented in separate volumes.

The chapter wise sketch of the report is as follows; this report consists of six chapters, beginning from the background of Divine Economics and introduces the concepts that are mainly discussed in the coming chapters or in other reports. In addition chapter 1 provides details about the objectives of the study, a brief methodology, the testable propositions/hypotheses and data generating process. It also introduces the online survey on Universal Values which was an outcome of this research. This inter-disciplinary study used both quantitative as well as qualitative method. The sample data was collected from sampled locations. The qualitative data has been collected from within Pakistan, Iran and UK the through in-depth interviews and case studies of respondents having distinct values, social capital, religious capital and spiritual human capital. Multi-disciplinary scholars within the country and abroad The analysis was carried under the Divine Economics Disaster Framework [1999, 2000, 2004] and that developed by LWP, Harvard University (2006) for faith-based disaster economic analysis. Chapter 2 reviews the existing studies and provides the fundamental theoretical background for the studies that are conducted under this project. For instance, it discusses the literature including both the conventional and the heterodox, which is helpful in formulating the analytical structure for the studies under this project. Chapter 3 describes that how values, social and spiritual, affect economic behaviors. It concludes that differences in values, social capital, and spiritual capital have significant effects on time allocation, that relation with relatives and friends and self-reported satisfaction. Chapter 4 presents the main findings of some of the specific studies that are conducted under this project. Chapter 5 provides the conclusion of the analysis and proposes some policies, programs and interventions for sustainable outcomes relating to social, religious and ethical

management of economic behaviors in normal and post disaster situations. A precaution is important here, i.e. neither the analysis nor the policies proposed in this report are exhaustive because besides the report in hand [i.e. Report No. 03], a number of other reports and documents have been produced under the overall research project which are available separately. These reports extend Divine Economics Framework in and present additional data analyses and suggest respective policies too. It is recommended that before reading this report, a look at different other reports and especially the Report No. 02, that is, '*A Divine Economics Approach to Universal Values*' should be seen which would be helpful in developing a background for understanding the economic behaviors in perspective of values, social capital, and spiritual capital both theoretically as well as empirically.

How to Use this Report

The Report in hand is one of different reports generated as an outcome of the Divine Economics Project assisted by Higher Education Commission entitled " The Role of Values, Social Capital, and Spiritual Capital in Normal and Post-disaster Economic Behaviors: An Empirical Extension of Divine Economics Framework in Sustainability Perspective". The purpose of this report is not to cover all the aspects and objectives of the overall project. This report only presents a partial analysis of a huge and multi-dimensional data set of the research work conducted under the project. The other reports include; a) Project Report covering general aspects of the overall research project and its accomplishments, b) Theoretical report 'A Divine Economics Approach to Universal Values' that reviews the available literature relating to the nature, types and classification of values; presents a new approach to classification and short-listing, develops a base for empirical framework through the first-ever online *Universal Values Survey*, c) Pictorial report on capacity building activities of the project, d) Report about the International Conference on Divine Economics held in December 2013, e) new short lists of universal values, f) Divine Economics Survey – Manual, g) special editions of UAJK's journal *Kashmir Economic Review*, h) Disaster Perception Survey and Analysis, i) various working papers and many other short documents of research importance such as instruments.

Keeping in view the above mentioned information about different other reports of the project, the present report can be used as stand-alone if the reader is interested in looking at how some of the so many theoretical ideas developed under the present research were tested empirically. For other purposes, the reader should consult all the reports as a single set.

Chapter 1

Introduction

1.1 BACKGROUND OF THE STUDY

Values, religiosity and spirituality are important determinants of human behavior all over the world. Except only seven to eleven percent people on earth who show no affiliation with any religion, sect, or spirituality pattern, rest of the world population follow some form of faith or spirituality pattern. Being intrinsically present in humans, such patterns, more sustainably, govern other aspects of human life including economic behavior. However, the conventional economic models hardly recognize such important determinants which directly or through formation of different values, influence the human allocation decisions.

The sustainable development is an approach that aims to develop human and physical resources in a manner that the world's current development does not take place at the cost of the development of future. Development of any form either human or physical derives from economic decisions, i.e. decisions about production, consumption, and allocation. These economic decisions are made by human behaviors that, in turn are shaped by different factors. Faith is one of those factors that shape human behavior and hence affects economic decisions. Faith accommodates loop to sustainable development in a manner that faith shapes human behavior. Many economists (See for instance, North, 1990; Hamdani, 2004; Bowles, 2006) have studied the response of faith to socioeconomic behaviors. For instance, Hamdani (2004) argued that people having strong faith of any form, especially in an afterlife; systematically differ in their socioeconomic behaviors from those who have little or no faith in an afterlife. It is also widely agreed that religion and faith significantly help alterations in the lifestyle to live within the carrying capacity of the environment and within the tolerance level of people with whom living remains unavoidable.

Values are other factors that affect economic decisions. The significance of values is gaining popularity not only in sociology, psychology, and religious studies but also in economics.

Values and ethics are important because these are translated into people's socioeconomic conditions and life styles including their thinking and ideas about what ought to be regarding the 'self' and for 'others'; and also for 'today' and for 'tomorrow'. Recently economists and development practitioners' emphasize the need for changing human values, attitudes, and behaviors in order to achieve the sustainability goals. Values have different types such as instinctual, geographic, cultural, economic, religious, spiritual, secular, and universal, etc. Most of these values have positive impact on the economic behavior including the environment oriented sustainable human development. Thus, for the better understanding of human behavior and sustainability, it is important to analyses the impact of values on individual s' economic decision-making and hence on development.

This study is an interdisciplinary work to explore the magnitude and direction of relationships among faith, values, and economic sustainability. Besides, the study promotes understandings towards disaster preparedness and post-disaster rehabilitation that ensures sustainable development. Research grant for this study has been provided by the Higher Education Commission.

1.2 DIVINE ECONOMICS

The study is an empirical extension of the framework of Divine Economics (Hamdani, 2004, 2006, 2008). The Divine Economics provides theoretical basis for incorporating the role of faith in economic decision-making. According to this framework, individuals are rational to maximize their utility subject to time and resource constraints; however, utility is the sum of current utility and the future streams of utility.¹ The perceived afterlife also comprises of three distinct stages known as the purgatory i.e. a state of living for human soul during the period between death and the day of judgment (*Barzakh*), the Day of Judgment for reward and punishment decisions, and heaven or hell which is the ultimate place of living attributable to human deeds performed during the period of life on earth. The Divine Economics claims that these three stages of afterlife have different impacts on humans' allocation decisions during

¹Future comprises of the remaining part of life on earth and a perceived life after death.

life on the earth. Consequently, individual having faith in an afterlife is likely to systematically alter current life decisions and allocations. The intensity of faith and the level of religious performance 'religiosity' which may be low, medium, or high shall also act as determinant of economic behaviors (Hamdani, 2004). Religiosity is the nature, type, and magnitude of any activity that is performed due to religious injunctions / requirements.

Regarding the implications of faith and religiosity level for sustainable development, the Divine Economics asserts that all human activities can be classified into five types as given in the table 1.1. This classification, derived from Islamic Sharia, is consistent with other religions. For instance, almost in all religions, there are certain things emphasized and others are discouraged.

Table 1.1: Islamic Classification of Human Activities Reflecting One's Religiosity

S. No.	Type of Activity	Islamic Terms
1	Obligatory**	<i>Fardh/Wajib</i>
2	Meritorious or admirable and voluntary but not obligatory#	<i>Sunnah/Musta'hab</i>
3	Permissible; neither meritorious nor abominable	<i>Mubah</i>
4	Abominable, but not prohibited	<i>Makrooh</i>
5	Prohibited, unlawful	<i>Haraam</i>

Notes:

**Under obligatory, there are further categories of acts, which indicate ones religiosity level such as 'mohimm' (More important at a given time and place) and 'ahamm' (Most important at a given time and place), where most important shall be served first.

Some acts are meritorious or admirable because the Holy Prophet ^(PBUHAP) has performed them and also these have some direct or indirect benefit for individual, society or other creatures.

Source: Modified from Hamdani (2004)

Besides religions, the states also enforce certain laws, which make something obligatory and prohibit other things. The above classification has important implications for all dimensions of sustainable development like environmental obligations or other duties of individuals relevant to sustainability. The framework of Divine Economics combines the above classification with other ethical and economic considerations. For example, a recent development in the Divine Economics Framework is the Divine Capital Model (Hamdani, 2012). In this model, Divine Capital comprises of four components, i.e. religiosity, spirituality, morality, and reinforcement. According to the model, variations in these components are likely to have systematic effects on economic behavior. In line with Divine Economics framework, the main objectives of the study are given below.

1.3 SOCIAL CAPITAL AND SPIRITUAL CAPITAL

A huge volume of literature is now available on social capital. It is the connectedness of among people and is assumed to play a role in production of collective commodities. This is the reason why social capital is an important aspect while studying values and behaviors. According to Harvard definition,² social capital may means resources inherent in social relations which facilitate collective action such as trust, norms, and associations, groups for a common purpose. Social capital has a large number of socio-economic correlates mentioned in diverse literature. The drastic changes in information technology, public policy and globalization has significantly affected the system of human values and the intensity of social capital in the world. Economists now give importance to incorporate social capital into economic models.

² <http://www.hks.harvard.edu/saguaro/web%20docs/GarsonSK06syllabus.htm>

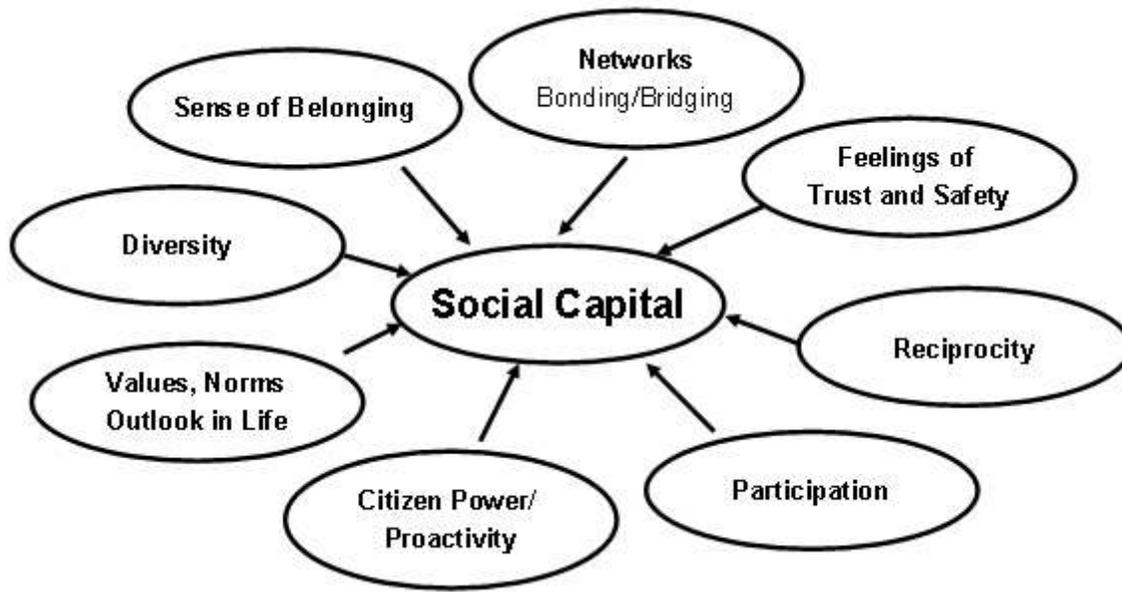


Figure – 01: Social Capital

Source: <http://www.qualitative-research.net>

The figure above is a simple depiction of what makes social capital. A more detail is available in next chapters.

The spiritual capital is yet a stranger in economics. Only a limited work is available to find the correlates of spiritual capital with economic behaviors. No consensual definition of spiritual capital yet exists. Broadly speaking, it is the feelings, perceptions, and set rules relating to deeper meaning of life, purpose, interactions, nature, non-material entities (angels, evil spirits etc.) and one's perceived supreme being (differently named such as Allah, God, gods, Buddhas). In available literature and our earlier studies, it has been found that this form of capital in human being govern and direct human behavior in the matters relating to their 'self' and also anything included in 'other than self'. The underlying concept that motivates us to include spiritual capital in economic research is that individuals globally exists who perceive that utility or wellbeing or eternal bliss in the afterlife depends on the allocations made in the present life. Therefore, knowing more about this form of capital may add valuable content in economic analysis and help in a further understanding of interrelationships among the human's response to material or empirically observable

variables and non-material variable. "Mankind has an innate spiritual intelligence, and the development or awakening of this intelligence has both social consequences and individual health benefits. I have found that affirmations that appeal to a higher sense of being, a supreme purpose to creation, the beauty and miraculous nature of life itself, can produce remarkable outcomes" [Elden Taylor]³. The concept of Divine Capital which includes spiritual dimension of humans has been discussed in the next chapters as a contribution towards this understanding.

1.4 OBJECTIVES OF REPORT

As already mentioned, the present report is a partial outcome of the overall research on the role of values and economic behavior conducted by the Kashmir Institute of Economics, financially assisted by Higher Education Commission of Pakistan. There are six major objective of the overall research project [See Report 01]. The present report presents the analysis relating to some of them as follows; identifying the role of conventionally neglected factors such as religiosity, spirituality, and universal values in individuals' behavior; empirical extension of the Divine Economics (i.e. faith-based) Framework; the interrelationships of economic decision making with various types of social, religious, moral and spiritual dimensions of humans and, some policies for sustainable economic, social, religious and cultural management. All the analyses either directly or indirectly lead towards an understanding of disaster perspectives and economic sustainability.

The conventional economics attempts to explore the instigating questions such as; what should be done to enhance workers' productivity. How priorities should be fixed between consumption and saving to ensure sustainability? How recovery after a disaster can be made efficient? How non-income poverty [time poverty] can be reduced? How natural resource use may be regulated where government cannot reach effectively? The conventional economics, however, seems constrained to find answers of such questions through studying around merely economic variables. In contrast, the recently emerging Divine Economics Framework

³ <http://www.eldontaylor.com/>

has created the opportunity to answer the above questions by incorporating the role of values, beliefs, and non-economic factors in economic analysis. Therefore, using this framework, it has become possible to test the following hypotheses:

- Whether or not the individuals or groups having little or no religiosity (such as faith in an after-life) significantly differ in term of their socio-economic behaviors from those who possess more (true) religiosity.
- Whether or not the individuals possessing higher level of social, religious, and spiritual capital significantly differ from those having low level of social, religious, and spiritual capital in terms of their socio-economic behaviors.
- Whether or not the local, contextual, and universal values prevailing among individuals' of diverse backgrounds have no significant impact on the behavior towards disaster preparedness, recovery, and rehabilitation.
- Whether or not the religious, spiritual, moral, or universal values have any relevance with the globally accepted environmental, or sustainability values for achieving sustainable development global-goals

The above hypotheses can be tested against the alternative hypotheses that there exist a systematic relationship among faith, religiosity, spirituality, and ethics with the economic behaviors. Some of these relationships are estimated in the report in hand and others are presented separately in other volumes.

1.5 METHODOLOGY

The theoretical foundation of this research is based on extensive study of literature relating to economics, religions, spiritual traditions, ethics, psychology and other sciences. A detailed methodology for identifying values and their classification has been provided in the separate report titled, "A Divine Economics Approach to Universal Values". The interrelationships among values and other aspects of this study are identified on the basis of earlier work in Divine Economics. The model specification, rationale and construction of variables involved

under different topics and other technical information is given where applicable under the respective studies.

1.5.1 The Data Generating Process and Analysis

To achieve the research objectives, the mixed method was applied to generate quantitative and qualitative data. The rationale behind using this method was the nature of research issues which required both qualitative and quantitative inquiry.

Qualitative Data: Keeping in view the pioneering nature of this study of economics as it revolves around religion, spirituality and ethics, special attention has been given to conduct extensive sessions with the scholars of religion, spirituality and ethical philosophies. According to qualitative method, data is collected through many ways such as Focus Group Discussion [FGD], case studies or stories and in-depth values-interviews [IDI] especially from key informants. Sometimes, participatory personal observations of researcher is also done in addition to the methods mentioned above. Since the present study is about the role of values, religiosity, spirituality and ethics in economic behaviors, all these variables are very difficult to explore because of the psychological, religious, sectarian, and social tendencies among respondents. This method is preferable especially when the required data is sensitive and people tend to hide under-state or over-state their responses. The data coming through survey representing population averages can be validated through the FGDs and IDIs.

Quantitative Data: The quantitative data are collected through survey of sample locations. The survey methods of measurement in applied social research is very important. Stratified multi-stage sampling method has been used for collecting quantitative data. The details of survey are provided below.

1.5.2 Survey Modules: To meet the diverse data requirements of the project, many modules were developed, tested and administered for data collection. These include;

1. Main Module
2. Extended Module
3. Specific Modules
 - a. Ethics and Worker's Performance (a. Teacher's performance b. Enterprise)

- b. Religiosity and Time Allocation
- c. Wellbeing and Time Allocation Patterns
- d. Religiosity and Consumption
- e. Disaster Perceptions and Preparedness Module

The Main Module contained questions about Worklife, Spirituality, Ethical values, Wellbeing, Willingness to pay; the Extended Module covering *deeper* aspects of Worklife, Spirituality, Sleep Poverty, Water; and, the 'specific modules' aimed at collecting topic-specific information using a sub-sample or a smaller separate sample.

Sampling Technique for Main Module -Divine Economics Survey 2013

For the present study, the field survey was conducted using stratified multi-stage sampling technique for main module and context specific sampling for other modules as explained below. For qualitative data, some in-depth interviews and Focus Group discussions were conducted in Azad Kashmir, Pakistan, Iran, and United Kingdom.⁴The field survey was conducted using a set of questionnaires specific to different aspects of study. Additionally, the other required tools of research such as religiosity scales, ethical indexes, and values measurement tools have been developed by involving scholars of relevant disciplines. These religiosity scales and questionnaires were developed through extensive comparative study of religions and sects, in-depth interviews and case studies of subject specialists of different disciplines, religious scholars of different religions and sects residing in variety of religious environments. In addition to the field survey, a questionnaire for Universal Values Survey, developed in previous study (2006), was updated for including some new dimensions. For online survey, a professional software/web-engine was used.

⁴A personal-personal interaction was made with the scholars from different countries and backgrounds for conceptual understanding and qualitative insights on the researchable issues. These scholars belonged to, for example, London School of Economics (Such as Lord Layard, the pioneer of *Economics of Happiness*) Al-Mustafa International University of Iran such as Dr. Hassan Agha Nazari, University of Religions & Denominations of Qom, King Saud University Saudi Arabia, Harvard University (such as Richard B. Freeman and Prof. Robert Barro), George Masson University of Virginia (Such as the world renowned scholar on Economics of Religion Prof. Laurancelannaconne).

Area and Zones: Using multi-stage, stratified random sampling techniques, for the present research project on Divine Economics, assisted by Higher Education Commission of Pakistan, we have drawn sample size on the basis of population ratio of each district. The total population of Azad Jammu and Kashmir is 1.5 million (according to the census of 1998). We have selected 5 districts for our sample out of 10 districts. The districts which we selected are having nearly same topology and environment. On the basis of different topology, environment and geographical location, Azad Kashmir can easily be divided into two zones. In zone one, we have Muzaffarabad, Hattian, Bagh, Poonch and Sudhnoti. Neelum valley which is adjacent to Muzaffarbad has very different environment, and this difference is mainly because of two reasons; it remains disconnected from other areas for many months due to heavy snow fall and lack of basic facilities like electricity and telecommunication. Because of these two reasons "Neelum district" was not included in sample zone one of Azad Jammu and Kashmir. The other four districts (Mirpur, Kotli, Bhimber and Haveli) have different topology and environment. So, we finally decided to limit our sample to the five districts in zone one.

<u>Sample Size:</u>	Gross	Final
Main Module	1000	851
Extended Module	400	385
Specific Modules [120+120+110+83+120]	600	433
TOTAL	2000	1789

Online survey of Universal Values

[It has been permanently set up online and sample size will continue to grow]

Future surveys should not necessarily follow this sampling design and may adopt any alternative strategy as appropriate to meet the objective of respective researches.

The description of different modules and corresponding information is given below;

Main Survey Module: We have calculated population proportion for each district of Azad Jammu and Kashmir in our sample size of 1000 households. Then the desired number of sample for all respective districts is drawn on the basis of population proportion.

The following table shows the population proportion and respective samples size required from each district. The minor difference in required and actual sample size from each district is due to cleaning of data and discarding few questionnaires.

Table 1.1 District wise sample size distribution of 'Main Survey'

District	Population	n1	n2	n3
Muzaffarabad	0.454	295	251	327
Hattian	0.166	108	92	104
Poonch	0.411	267	228	116
Bagh	0.282	183	156	82
Sudhnoti	0.224	146	124	222
Total	1.537	1000	851	851

Note:

- n1 is suitable sample size for n = 1000
- n2 is suitable sample size for n = 851
- n3 is actual sample size for each district in our sample.

The sample size for district Poonch is less than the required sample size on the basis of population proportion. The reason is harsh weather and inaccessible road/infrastructure system. The survey was conducted in winter season; the sample size collected is less than the required sample size.

Extended and Specific Modules: The sampling details of extended and specific modules are given separately along with different studies conducted as Master's, M. Phil or PhD research.

1.5.3 The Survey Instruments: Keeping in view the study requirements, a number of instruments were used which included a Main Questionnaire, the Extended Questionnaire, the topic specific Questionnaires, the Interview Schedule, FGD Checklists and a separate online survey questionnaire. A comprehensive set of questionnaires was developed with the help of scholars and researchers for Divine Economic Survey 2012 and 2013. This questionnaire has a main module for overall analysis, an extended module and different sub-modules for deeper analyses on specific topics explored by M. Phil and PhD scholars. These sub-modules include consumption pattern, saving pattern, time allocation pattern, income, demography, work life, water usage, religiosity, spirituality, ethics and social capital etc. Almost all the instruments are available at our official website and the readers are encouraged to visit website for viewing them directly in addition to the manual in hand. The different survey instruments are elaborated separately, however, the Main Questionnaire is explained in this manual.

The field survey data has been profoundly analyzed in order to draw conclusions in accordance with the objectives of the study. In this connection most of the hypotheses tested with rigorous empirical analysis, however some of the hypotheses have been tested with simple statistical analysis (i.e. averages, percentages, correlations etc.). For analysis of data EXCEL, SPSS, and STATA software were used.

Ethical Consideration: All ethical principles including anonymity were maintained during conduct of surveys. Since, the topic pertained much sensitivity, all social, religious and cultural differences and conflicting interests were carefully considered during the study in the light of the experience gained during the previous series of *Divine Economics Surveys* held from year 2000 onward. Where needed, permission to conduct a survey in an institution was duly obtained from the competent authorities prior to survey. The respective Deputy Commissioners were duly informed in writing about the field survey schedule. Surprise filed monitoring visit during survey was arranged twice to assess through respondents' verbal briefing to the monitoring consultant that whether or not the survey process was according

to ethical standards? Taking these measures, efforts were made to ensure that the data generated for this faith-based research meets the quality requirements.

1.6: The Online Survey of Universal Values

The online survey on Universal Values is also an outcome of this research. It enables to collect data from within Pakistan as well as other countries. The conceptual framework for this survey was developed in many phases. First, it was initiated by our earlier study conducted through Labor & Worklife Program, Harvard University in 2006, for faith-based disaster economic analysis. Using the available content, the survey was updated and expanded by the present study. A complete detail of various rounds of this research, and survey information is provided in the Project Report – 02, '*A Divine Economics Approach to Universal Values*' separately available.

1.7 Limitations and delimitations

A number of constraints limit the present research to meet the generalization requirements. Besides the usual limitations faced by social survey-based studies such as administrative issues, financial constraints, sample size, etc., the present study is limited by technical reasons too. The Divine Economics theory, concepts, definitions and terminology is in its early phase of development. Its religiosity scales and survey instruments are under test and refinement process. It is difficult to collect faith-based data especially when spirituality, sect, and moral values are involved in the questionnaire or FGD or an interview with even an intimate respondent. Therefore, it is likely that the magnitude and the direction of relationships found in the present study alters when such limitations are removed. Although, that is not a simple task. A team of multi-disciplinary scholars with sufficient resources after working for decades can take the faith-based economics to its required standards. Hence, currently, in all the studies of Divine Economics including this one, the results and conclusions are presented as insights rather than strong conclusions.

There are certain choices made by the project for overall research as well as what to be included in the present report. For the overall research a multi-disciplinary literature was reviewed but not included here for the purpose of brevity. The methodologies proposed for the study were subject to provision of an amount of grant in a timely manner. But due delays in release of grant, the project faced difficulties in implementing the proposed workplan. Therefore, the sample size of the topic specific studies generated from the project were reduced to some extent. If time and resource constraint can be removed by future studies on this subject, it is possible to conduct all such studies in a more appropriate manner.

1.8 Organization of the report

Chapter 2 provides the fundamental theoretical background through review of literature, for the studies that are conducted under this project. Both the conventional and the heterodox literature has been reviewed. Chapter 3 describes that how values, social and spiritual, affect economic behaviors. Chapter 4 presents some of the main findings of the specific studies that are conducted under this project. Chapter 5 provides the conclusion of the analysis and proposes some policies, programs and interventions for future. As already mentioned under 'How to use this report' that neither the analysis nor the policies proposed in this report are exhaustive because besides the report in hand [i.e. Report No. 04], a number of other reports and documents have been produced under the overall research project which are available separately. These reports present additional data analyses relating to values, social capital, religious and spiritual capital, disaster perceptions and behavior, Divine Economics Survey and a new short list of universal values.

Chapter 2

Review of Literature

In this chapter, we focus mainly on the existing literature including both the conventional literature and the faith-based literature relating to the subject under study.

2.1 The Conventional Economic Literature

This section reviews the studies relating to our areas of focus in the present report, that are ethics, values, religiosity, productivity, time poverty, saving and willingness to pay for services and sustainability.

2.1.1 Ethics, Values, and Productivity

Ethics is a branch of philosophy that studies the meaning of values, morality, and moral judgments⁵. Adam Smith, the pioneer of classical economics, has discussed the relationship between ethics and economic prosperity. In the same way, Karl Marx (1887) highlighted the impact of ethics on economic growth. In 1966, Simon Kuznets elaborated the relationship between income inequality and economic growth and stated that ethical factors have implications for income inequality. Sen incorporated the ethical dimensions in social choice theory, poverty, inequality, and capacity development. For instance, he stated in his book *'On Ethics and Economics'*, "that economics, as it has emerged, can be made more productive by paying explicit attention to the ethical considerations that shape human behavior and judgment" (Sen, 1970; 1987: 1996).

Recently, a major portion of theoretical and empirical work was initiated as an offshoot of a new faith-based economic theory titled as *'Divine Economics'*. Numerous studies conducted under this framework explain, among others, the role of ethics and values in economic performance. For instance, Hamdani (1999⁶) gives the concept of a life cycle that comprises a worldly life and a life here after and argues that that time allocation of a conventional agent

⁵ De George 1986; Chryssides et al. 1996; Finken 2007; Crane et al. 2010 and Freeman et al. 2010

⁶ Hamdani, Syed Nisar Hussain (1999), 'Faith as a Factor in Economic Behavior', PhD Synopsis Seminar, Department of Economics, Quaid-i-Azam University, Islamabad

and an agent having faith on both lives systemically differs. Based on the model of Hamdani (2002), Hamdani and Ahmad (2002) analyzed the role of religiosity on the economic and non-economic behavior of individuals. In line with the above a pioneering work on disaster, faith and rehabilitation conducted by Hamdani (2006) at Labor & Work life Program, Harvard University USA, revealed that ethics, values, spirituality, and religiosity play role in economic performance in post-disaster periods (Hamdani, 2007). Issues of Measuring Religiosity for Empirical Studies, Ethics, Human Interdependence and Future Lifestyles and Use of Natural Resources and Mahdism Doctrine (Hamdani 2013, 2007, and 2008 respectively) are important works that provide foundations and insights for studying the role of values in economic performance. A provoking work (Hamdani, 2008) on economic relevance of spiritual capital lays ground for studying spiritual values with reference to economic performance. He argued that values should be changed across the regions, religions, cultures and economic entities, the Divine Economics studies specific to universal values have paved the way for integrating universal values in economic analyses.⁷ In conventional economic circles, religion and ethics is rarely discussed; hence, neither special survey is conducted in Pakistan in this field nor do national surveys incorporate such topics for facilitating economic analyses. This deficiency has been partially bridged by Divine Economics Survey Series (2000, 2006, 2008, 2009, 2012, 2013, 2014), yet a lot needs to be done in this direction.

Almost all religions give great importance to values and ethics. Islam lays emphasis on ethical conduct in all aspects of life including economics/business. Beekun and Jamal (2005) examined the Islamic business ethics from normative perspective and said that Islam and the other religions have common ethical values as far as economic activities are concerned. According to them, the Islamic ethical system is unbiased, just, and caring. For instance, in Islamic System, the responsibility of each stakeholder in business is based on trust (Amanah), benevolence and excellence (Ihsaan), equity, balance and fairness (adl and qist). Furthermore, Seidu (2008) discuss the importance of good employer-employee relationship and states that

⁷The needs for reshaping the economic research has been discussed in Hamdani (2004-5), "A Future Agenda of Education and Economic Research in Pakistan", *Sindh University*, Vol. XXXIV, pp.137-153.

this type of good relation can be achieved by adopting the Islamic principles of human resource management. He argues that in Islam the employer-employee relationship is based on mutual trust. In similar line, Hussain (2010) argue that according to Islamic perspective, works ethics directly influence the performance and job satisfaction of workers in an organization. He states that the performance of workers in organizations increases by practicing Islamic work ethics.

Qizilbash (2007) provided a detailed review of literature on ethics and economics, and concluded that ethics has a considerable impact on growth. Ahmad and Pi-Shen (2009) explored dominant attitudes towards the thoughts like ethics and social responsibility among the owners of small and medium scale industries in Australia and Malaysia. In particular, they identified that the issues related to ethics and social responsibility have important impact on small firm in Australia and Malaysia. In the same way, a number of other research studies argue that ethics has significant impact on the performance of workers. Liao and Mei (2010) examined the relationship between ethical training and employee satisfaction and identified that ethical training i.e. corporate-responsibility practices and employee satisfaction have a significant positive relationship. Aguinis (2009) proclaim that the employee's behavior significantly contributes to firm's performance. Yair (2010) examined the importance of motivation on the job performance of employee and provided the types of motivational factors and practical strategies that actually matter. He explained that the implementation of the strategies requires the honesty of managers, as honest managers with their employees are more able to handle the challenges of motivation. These and other studies highlight the human behavior in perspective of ethics and values.

2.1.2 Time Allocation and Poverty⁸

Poverty is one of the core topics of economics as it affects all aspects of life. Economists decompose poverty into two broad types, i.e. income poverty and non-income poverty. Time

⁸ The umbrella theme of Higher Education Commission Thematic Research Grants was poverty. Therefore, while exploring the role of values [religious, ethical etc.] time poverty has been chosen for analysis in this research which is relatively a less explored area in economics.

poverty is one of the important types of non-income poverty.⁹ A number of definitions are available in conventional and Divine Economics. Divine economics defines time poverty as, 'the gap between desired time for an activity and available time for the same'. The Hadith narrated by Imam Moosa Kazim (125 - 187 A.H) from which the Divine Economics Model was derived for the first time (Hamdani, 1999), the daily time is to be divided into four activities; economic engagements, leisure, social activities and religious activities. Using this allocation pattern, further classification was made in leisure time as active leisure (time with spouse, children, TV watching, etc. and passive leisure (pure rest or sleep). Similarly, market time was divided into activities which either bring current income required for own consumption or donations to others or which can pave the way for a stream of expected future income such as training, working for experience, accumulation of social capital etc. [Hamdani, 2004].

This definition has many implications; *firstly*, the one whose desires list is too long to be fulfilled within 24 hours is the poorest regardless of billion dollars and property whatsoever he possesses. *Secondly*, the desires cannot necessarily be in line with biological or contextual requirements of humans. For example, youth may need seven hours daily sleep on average. From this perspective, those whose available sleep time is lesser than biologically required time are considered as poor. From religion's perspective, activities can be classified as a) obligatory, b) desirable but not obligatory, c) neither desirable nor prohibited, d) not prohibited but undesirable and e) prohibited (for Islamic classification, see footnote)¹⁰. So, those who cannot find sufficient time for performing at least 'obligatory' religious activities are considered as poor. Due to instinctual design, humans tend to volunteer own time to needy ones. When their circumstances do not allow them to make at least as much units of time as they perceive as minimum unavoidable (for example number of hours per month committed to an organization or an old-age relative), they are also time poor. *Thirdly*, those who neither have extraordinary desires nor compelled by any technical reason for not being

⁹Individuals who have high disposable income but relatively less leisure time as a result he suffers from time poverty (Wikipedia).

¹⁰ a) Wajib or Farz, b) Mustahab, c) Mubah, d) Makrooh, and e) Haraam

able to balance their life activities in an appropriate manner (i.e. they are poor in time management), are likely to face time use hazards and may be considered as time poor.

Besides the above-mentioned definitions of time poverty under Divine Economics, many other definitions are also available in the literature. According to Fear (2010), an individual is considered as time poor when he cannot allocate time among all of his activities in a balance way and remains unable to spare enough time for leisure. The economic theory considers time as not only an increase of moments nor a benchmark between two or more events in time, but as a production factor like labor or capital (Caragea, 2009). However, many studies consider time as a resource and as important as income (Vickery, 1977; Douthitt, 1994; Damian, 2003; Ilahi and Nadeem, 2000, 2001; Bardasi and Wodon, 2006).

Who is time poor? Whether men or women? What are economic implications of this type of poverty? Economists are now recognizing the importance of research to explore answers of such questions. In this regard, David (2006) provides a comprehensive analysis by using a large-scale representative survey. According to his study, men are more time poor than women are. Similarly, Fear *et al.* (2010) found that men spend more time than women in paid jobs do; and similarly men spend more, travel more, and prefer to work more. Ndirangu *et al.* (2009) also got similar results by including location of participants in their study. In contrast, Lawson (2006) used large-scale representative survey and concluded that men are slightly more time poor than women. He also investigated the impact of socio-economic and infrastructure on time poverty. The study found that infrastructure provision such as better transportation and water services reduce time poverty.

The concept of time poverty in economics is not new; however, its empirical analysis is relatively new. Vickery (1977) was the first, who empirically analyzed time allocation and its impacts on wellbeing. The study argues that families facing time shortage suffer from low level of well-being. Such families take time out for leisure from their busy schedule out of sheer necessity.

Saqib *et al.* (2012), using the time survey 2007 of Pakistan, found that women are more time poor than men in Pakistan irrespective of whether they are employed or not. Renate (2007) analyzed time poverty between parents and children and found that parents are more time poor than children are because they have number of work to do; hence they are left with less time and are not satisfied with the time they spend with their children.

Bardasi and Wodon (2006) analyzed time poverty by computing the total amount of time spent by individuals in the labor market, in domestic chores, in collecting water and wood, and in undertaking community services. They discuss that there are no established practices to measure time poverty; however, there is one point to use as time poverty line that is a multiple of the median number of hours for the all individuals. The current literature analyzes time poverty through the availability of time for leisure and work. However, as elaborated above, Hamdani (1999) argued that leisure is the combination of active and passive leisure and the real state of leisure is passive leisure that is time for sleep.

In the present research, time poverty is measured under the framework of Divine Economics that divides daily time into four activities, i.e. time for work and work related activities, time for family and society, time for personal care and leisure, and time for religion and religious activities. Contrary to the conventional literature, Divine Economics draws poverty line in the same way as for financial poverty, through the time for sleeping and use this as a proxy for time poverty. It takes sleep as a proxy for passive leisure as in case of active leisure, one remain in leisurely mood yet may also remain engaged in doing at least something else such as watching the nature or TV, reading newspaper, enjoying the presence of kids or animals etc. The mind during active leisure is not in the state of rest and hence it does not serve perfect leisure. The existing empirical studies follow the conventional definition of time poverty, hence only consider pure rest, and sleep in measuring of time poverty. The definition of time poverty in Divine Economic framework along with classification as active and passive leisure creates a new avenue for researchers and economists to discuss economics and religion in each other perspective.

2.1.3 Households' Willingness to Pay for Services

People's willingness to pay for different services has many implications for economics including sustainability. Assuming that willingness to pay is determined by both economic as well as non-economic factors including religiosity, spirituality therefore, exploring this aspect is one part of the of the present research. This linkage shall be elaborated later. Here, some studies are reviewed relating to people's behavior about willingness to pay for services.

It is a well-recognized fact that even the most developed economies cannot ensure provision of various services without the contribution of beneficiaries. Their willingness to pay for services helps governments as well as other service providers to plan for a better future. Hence it is important to know the people's willingness to pay for any services, which is influenced by many economic as well as non-economic factors including faith, morality, and spirituality. Keeping this in view as possibility, this section reviews conventional literature about willingness to pay for water. This will be related to the faith-based concept and empirical testing later on.

Governments World Health Organization (WHO) (2000) reported that approximately 2.2 million people die due to diarrhea each year caused by impure drinking water. World Health Organization (2002) also reported that approximately 3.1 percent of deaths in world are caused due to impure, unhygienic, and hazardous water. These issues clearly highlight the significance of water for both the life of individuals as well as their economic wellbeing. Hence, there is significant amount of research on factors affecting the willingness to pay for water. For example, Haq *et al.* (2008) apply Contingent Valuation Method (CVM) and Averting Behavior Methods to examine the households' Willingness to Pay (WTP) for improved water services in the Abbottabad district of Pakistan. The findings of study show that location of the households (urban or rural area) has statistically significant effect on WTP, as people living in urban area are willing to pay more for better water services. Source of water and education of the family members also have significant effects on households' WTP for improved water services. In averting behavior methods (boiling, filter, chemical), the income and water quality

are found to be highly significant in all water purification strategies. They have also found that along with these factors, households' awareness has an important impact on WTP and water purification.

Similar, Adenike, and Titus (2009) analyzed the WTP for the services of improved water supply by the households in Osogbo metropolis Osun State of Nigeria. They used multi-stage random sampling for data collection and the technique of logistic regression for data analysis. The findings of their study show that higher education affects the Willingness to Pay for improved water services. The findings further indicate that the income is positively affecting the willingness to pay. The findings further indicate that the people with higher income are more willing to pay for improved water services suggesting that an increase in income increases can be channelized towards improved water services.

Weldesilassie *et al.* (2009) used CVM to analyze farmers' WTP for safe (improved) use of wastewater in crop production within and around the Addis Ababa, Ethiopia. Study applied double-bounded dichotomous-choice elicitation question format to elicit farmers' value of the improvement program. The results of the study showed that, as expected, the number of years with irrigation experience, education, total annual yield value, location and the kind of policy option significantly affect wastewater farmers' WTP. Further, the results confirm that safe use of wastewater for irrigation, or improved use of the irrigation system is important to farm households. Alternatively, the welfare gain to farm production is high for these households and wastewater is a valuable source of irrigation. The wastewater and freshwater farmers are willing to pay for programs designed to improve the existing unsafe and improper use of irrigation water.

Ahmed *et al.* (2010) also conducted similar study for district Peshawar in Pakistan. They use primary data on a sample of 315 randomly selected households. The study use bi-variate and multinomial logit techniques to investigate the WTP for improved water quality and services. The indicators, i.e. schooling, exposure to mass media, households' income and the

occurrence of diarrheal diseases were used to measure the households' response towards the health risks associated with contaminated water. The findings of the study indicate statistically significant effects of formal education on WTP for improved water services whereas informal education has stronger effects on water purification behaviors of households. The study also finds that WTP of more educated people is higher than uneducated people.

Niringiye and Douglass Omotor G. (2010) used CVM to elicit households' WTP for improved solid waste management in Kampala city using multi-stage sampling technique. The logistic regression estimates showed that the age of the households' head is negatively associated with the WTP. This indicates that as people grow older their WTP for waste management decreases. The findings also indicate that households' level of education, households' size, households' expenditure, marital status and quantity of waste generated do not have significant impact on WTP for improved waste management. However, these findings are in contrast with the earlier findings (Alta and Dehazo, 1996; Cairncross, 1990; World Bank, 1995). Amfo-out *et al.* (2012) have done the study in the same field at Akuapem North District in Ghana. They used purposive sampling to collect data from 60 households' head through semi-structured interviews. They estimated WTP by using logistic regression and found that respondents sex, level of education, income, expenditure level, frequency of payment, frequency of collection and satisfaction with the present waste management system have no significant impact on WTP for waste collection. Whereas other variables such as mode of collection, occupation and age showed significant effects on WTP. These findings suggest that district authorities should concentrate on more affordable mode of collection to get better encouragement and support from the society.

Moffat *et al.* (2011) investigated the WTP for an improved water quality and reliability in Chobe ward in Maun, the fifth largest town in Botswana. The findings of the study show that, on average, 54 percent of the households are willing to pay for improved water quality. Residents with a higher income were willing to pay more for an improved water quality and

the reliability of supply. Orgill (2012) estimated WTP for improved water quality and the effects of perception of water quality. He used data from 915 households from two communities in Cambodia. Logit model was used to analyze the data. His findings show that households who believe that in-house water quality is not perfectly safe are willing to pay \$ 1.50 per month more than those who believe their in-house water quality is perfectly safe. Cecilia and Titus (2012) have also done a similar exercise for Lagos state Nigeria. They used primary data. Descriptive statistics and logistic regression were used as analytical tools. Their findings show that respondents marital status, households' size, sex, households' monthly expenditure and connection charge do not significantly affect WTP for improved water quality. However, price, age of the respondent and level of education are statistically significant.

Wendimu and Bekele (2011) used the CVM for the factory villages of Wonji Shoa Sugar Estate, Ethiopia to determine the WTP for water. The study showed that income, households' size, age of the respondent, education level of the respondent, reliability of the existing water supply and respondent perception on the quality of the existing water source are important variables that explain the WTP for improved water supply. While Whittington *et al.* (1992) also conducted CVM survey in Anambra State, Nigeria, to estimate rural households' WTP for drinking water of public taps and private house connections. It is argued that the estimates based on bids from respondents who had time to think are possibly better measures of the value of improved water services. The findings of study corroborate the notion that "the education and demographic characteristics of a typical respondent and an average consumer in a developing economy are significant."

Babatunde *et al.* (2012) assess households' WTP for community health insurance and its determinants using data from eastern Nigeria. Descriptive cross-sectional study with Multistage sampling technique was used for respondent's selection. Their results shows that age, sex, educational attainment, income, households' size, and past health expenditure of households' heads affect WTP.

The above review of literature shows the level of work done on factors influencing WTP for water. However, despite the significance of water in relation to Divine attributes such as positive values, religiosity and spirituality etc., no prominent work has yet appeared that explores the willingness to pay for water using the framework of Divine Economics in Pakistan. Perhaps this may also be true that in the accessible world literature, there is hardly any study on this topic using the 'Five-ordainment approach' introduced in Divine Economics.¹¹ However, in Azad Jammu and Kashmir, one study (Farrukh, 2014) has been conducted based on the Divine Economics framework relating to natural resource use, environment, and sustainability. Farrukh analyzed the people's willingness to pay for water in religious context. Religiosity is one of the important variables that are likely to affect human behavior; several studies examined the role of religiosity in economic decision-making¹². As willingness to pay is an economic decision, hence we want to analyze that along with other factors how religiosity affects house holds' economic decision (WTP for improved water services). To meet the objective we used religiosity indices of Divine Economics (Hamdani, 2004).

2.1.4 Religiosity and Households' Saving Behavior

Saving today for safeguarding a sustainable consumption tomorrow is a subject that occupies huge space in sustainability literature. Although very little can be found how far human values, faith patterns and extent of practicing one's faith [religiosity] affects on saving behavior. Academicians as well as practitioners usually recognize the significance of saving as one of the means of provision of social security to households (Montalto and Hanna 2006). The ultimate meaning of saving is postponed or delayed consumption out of current of income.¹³ Broadly saving fall into two types that public and private savings, whereas private is further divide into household and business savings. The savings done by individuals as well as families is called household saving. Similarly, the purchase and expansion of capital comes

¹¹Farz/wajib, Mustahab, Mubah, Makrooh and Haraam as ordained in Islam. These have systematic effects on economic behavior.

¹²See for instance, Hadawayet *al*, 1993; Hadaway and Marler, 2005).

¹³Saving is a part of income, which is not consumed at a specific period of time (Strydom, 2007).

under business savings (Mark et al., 1999; Issahaku, 2011). Household saving signifies a decision to spend less income in existing state to fulfill financial goals (Sturm, 1983). Keynes (1936) suggested that there exists positive relationship between saving and income. After the contribution of Keynes, Duesenberry (1949) presented the concept of association between consumption and saving with absolute as well as relative income. Then, Friedman (1957) presented Permanent Income Hypothesis (PIH). The Life Cycle Hypothesis (LCH) by Modigliani (1963) stated that the motivation of saving is smoothing lifetime consumption. However, households might be deficient in self-control to reduce current consumption (Thaler and Shefrin 1981).

Saving patterns of households differs from each other despite having similar demographic and socio economic characteristics (Venti and Wise, 1998). Comprehensive research has done regarding saving and saving behavior (Deaton, 1992; Browning and Lusardi, 1996; Attanasio, 1999; Denizer *et al.* 2002). An inter-temporal choice exists between consumption and saving, where households are faced with considering the tradeoff between present and future consumption (Gough and Sozou, 2005).

Saving is determined by income according to Keynesian theory. With the gradual improvement, economists identified and analyzed demographic and socioeconomic determinants of saving (Ahmed and Asghar, 1999; Kibet *et al.* 2009; Ghafoor *et al.* 2010; Rehman *et al.* 2010; Rehman *et al.* 2011; Obayelu, 2012; Issahaku, 2012; Gedela, 2012; Sebhatu, 2012). Most of the empirical literatures about households' saving behavior design in conventional economic framework (i.e. Keynes, 1936; Friedman, 1957; Modigliani, 1963).

On the other hand, studies under the Divine Economic framework discuss religion and economics in each other perspective that incorporate the role of faith in economic decision-making. Some of the work done under this framework hypothesizes that the level of conspicuous spending is likely to be low for religious people; hence, their saving is likely to be

high on this account.¹⁴ Conversely, due to faith pattern which evolves human values such as 'contentment' [*Qana'at*], trust in God [*Tawakka*] etc. it is likely that more religious people will tend to donate more for humanity purposes, hence, would save lesser. In the next section, we are reporting some review of religious literature.

2.2 RELIGIOUS PERSPECTIVE ON VALUES AND ECONOMIC INTERRELATIONSHIPS

Within the domain of the study, this section reviews some religious and other literature relating to relationship of values such as faith or religiosity with economic aspects like productivity, willingness to pay and time poverty etc. Hence, based on the available literature on the subject, this section paves the way for the rest of the chapters.

A. Religiosity, Ethical Values, and Productivity

Although a number of ethical values prevail in humans regardless of religion and sect yet religions help in promoting these values and intensity of their prevalence too. In almost all societies, ethics is considered important for making and developing a sound and pious social system.¹⁵ Ethical values have a great importance in divine religions (i.e. Islam, Christianity, and Judaism). For example, in Jewish religion King Solomon declared that. "To do righteousness and justice is preferred by God above sacrifice" (Prov. 21:3). Christians are called to practice the kind of unconditional, volitional, respectful love for God with one another (one Corinthians 10:24; Ephesians 4:1-6). In the same way, with regard to forgiveness, it is written, "If you forgive those who sin against you, your heavenly Father will forgive you. However, if you refuse to forgive others, your Father will not forgive your sins. (Matthew 6:14-15).

In Islam, ethical values are placed at the highest level in all aspects of human life. Islam provides moral and spiritual guidance through the Qur'an and the Prophet's sayings. For example, it is compulsory for all Muslim believers to fulfill their duties and establish a just and peaceful society. These ethical norms and moral codes are evident from the verses of the Holy

¹⁴For other reasons, saving may be higher among more religious people when other factors held constant.

¹⁵Syed AbulA'alaMawdoodi, (1994) *Tafheem-ul-Qur'an*, Irfanafzal printing press Lahore.

Qur'an and the teachings of the Prophet (Peace Be upon Him). The Holy Qur'an says: "You are the best nation that has been raised up for mankind; you enjoin right conduct, forbid evil, and believe in Allah". (3:110). "Islam is the religion of values and the privilege of human being in this world and life hereafter depends on the possession of divine values and attributes. Honor, justice, sacrifice, patience, generosity and responsibility are examples of these values which needs to be possessed and practiced by human being in their entire life"(Naqvi 2008, p. 5).

In the same way, the performance of an organization and worker ethics is closely related to each other in Islam (Ali and Al-Owaihan, 2008; Kumar and Rose 2010). Islamic work ethics like honesty and fairness at workplace increase the organizational performance and efficiency of workers (Abbasi *et al.* 2012; Yousef 2000; Rahman *et al.* 2006; and Ahmad 1976). Hashim (2012) explained core Islamic values, beliefs, and idea regarding business and trade. Islam gives complete freedom to economic enterprise. "Islam pursues man to co-operate with others and leads him to the protection of social justice, which is the mean of divine pleasure" (Al-Sadar 1993). Justice is core value in Islamic economic system. The Holy Qur'an says;" And O my people, Give full measure and weight in justice and reduce not the things that are due to the people, and do not commit mischief in the land, causing corruption(*Surah* Hud, 12:85).

The Holly Prophet (Peace Be upon Him) gave great importance to the economic welfare of the people and rigorous development of human resources¹⁶. He allocated a high worth on industry, worker efficiency and appreciated enterprises and initiatives. Al-Miqadam reported the Hazrat Muhammad (Peace Be upon Him) saying:

"No one has even better food then what he eats as a result of the labor of his hand. In addition, verily, Allah's Prophet Dawud, used to eat by the work of his hand (Shih Bukhara, BK. 34, and Ch.15). The Holly Prophet (Peace Be upon Him) said: "Pay the laborer his wages before

¹⁶The Holly Prophet (Peace be Upon Him) said; "I will be foe to three persons on the Last Day: one of them being the one who, when he employs a person that has accomplished his duty, does not give him his due". (Bukhari, No: 2109)

drying up of his sweat" (Sunnan Ibn-e-Maja, BK 16, and Ch. 3). Hazrat Ali (Allah be Pleased with Him) Said: "A person came to the Prophet of Allah (May Peace be Upon Him) and asked: 'O Messenger of Allah: what type of earning is best?' The Prophet (Peace Be upon Him) said: 'A man's work with his hand and every business transaction which is approved, for Allah loves a believer who is a craftsman. And said a person who suffers pain to feed his dependents is like a person who fights in the cause of Allah, the Mighty and Glorious (Masnad Zahidb. 'AL Hadith 544). These and other preaching of religions influence the followers and shape their behavior in home, in the market, in enterprise, and everywhere. Hence, studying how far such non-economic factor affect human productivity or other economic outcomes becomes important. But the available literature of economics does not provide much material about such type of interrelationships and there consequences.

B. Religiosity, Time Allocation, and Poverty

Religions, whatever is their form, have a major social impact on some societies (Keister, 2007; Jong, 2008).). Many people allocate their leisure time for work but religion does not allow them to do so.¹⁷ Religion (especially Islam) encourages allocating time more efficiently in a balanced way between work, family, religion and leisure. In this way a religious person, avoid time poverty. Islam ordains its followers to organize their lives in a way that all who deserves one's attention must get their due share of time (Hamdani, 2002). Therefore, religiosity (religious factors like those that time spends for prayers, reading religious books, attending religious ceremonies, other religious activities etc.) has significant effect on time allocation. Here some of the verses from the holy Qur'an regarding sleep: "Sleep and rest are His gifts to the people whom He loves." "He takes away their damage." "He provides a period of calm so that their bodies can become strong again." "Accept sleep as a gift from the Lord."

¹⁷Ibn e Abbas narrated that Prophet Mohammad (PBUH) said: "There are two blessings which many people lose: (They are) health and free time for doing well." (Bukhari 8/421).

On another place The Prophet said, "On the Day of Resurrection the feet of the son of Adam (man) will not move away till he is questioned about four matters: how he spent his lifetime, how he spent his youth; from where he acquired his wealth and how he spent his leisure time.

Some people feel guilty about sleeping. They have so much to do and the day seems so short. Therefore, they push themselves to do without sleep in order to accomplish more. Sometimes, they get to the point where they no longer sleep well when they sleep. In Islam, it is compulsory to provide physical and mental rest to oneself and strive for spiritual happiness and peace of mind thus recharging one's body and mind for better performance in worldly and religious pursuits during post leisure time¹⁸. Sleep is very important for living things because without having a minimum level of rest a normal man is likely to become sick or unable to perform effective economic activities (Hamdani, 2004).

Qur'an uses, in Arabic, uses the word "*Noum*" for sleep. Qur'an defines sleep in following words; "It is Allah that takes the "Nafs" (of men) at death¹⁹; and those that die not (He takes) during their sleep: those on whom He has passed the decree of death, He keeps back (from returning to life), but the rest He sends (to their bodies) for a term appointed. Verily in this are signs for those who reflect." (Surah 39:42)

In Bible, it is mentioned that God says you will not accomplish more if you do without adequate sleep. It is a gift from God. Do not over-sleep. However, get enough sleep. According to Bible, "It is vain for you to rise up early, to sit up late, to eat the bread of sorrows: for so he giveth his beloved sleep"(Psalm 127:2). It is also clear in Bible clearly God protects during sleep "Even while you sleep among the campfires, the wings of my dove are sheathed with silver, its feathers with shining gold." (Psalm 68:13)

One should give importance to his sleep and rest because his/her body has right on him. One Hadith by the Prophet (P.B.U.H) in Sahih Al-Bukhari says, "If anyone of you feels drowsy while praying he should go to bed (sleep) till his slumber is over" (Sahih Al-Bukhari: 210). On another occasion Holy Prophet (P.B.U.H) told one of his companions (Ibn Amr) who was praying the

¹⁸ Surely you are bound to safeguard the right of your (Hadith).

¹⁹ In Islamic literature, '*Nafs*' has been used for many meanings such as soul, self, intellect, heart and the breathing of humans.

whole night "Offer prayers and also sleep at night, as your body has a right on you" (Sahih Al-Bukhari 1874).

C. Religiosity and Natural Resource Use (Water)

Religiosity as a human value, affects human behavior regarding the use of natural resources. For example, water as a natural resource is used by every individual on earth. Some of the people use it in a moderate manner and others tend to waste it. This difference has not been studied much in economics. Considering the importance of water for life and its even more importance with regard to human sustainability, a review of some works is done here with the aim to develop a background of the next chapter from religious perspective.

For the last few decades, religion is getting space in conventional economics literature. In this connection, Azzi and Ehrenberg (1975), Iannaccone (1984, 1988, and 1990) have contributed considerably in economics of religions. The work of Mack and Leigland (1982) and Barro (2003) also deserves attentions and highlighted some core issues while explaining correlation between religion and economics. Hamdani (2000) develop a formal framework of 'Divine Economics'. In this framework, economics and religion are studies in each other's perspective. It comprises a theoretical model, empirical work, a series of papers and some survey instruments.

These studies strongly believe economic rationality play a vital role religious activity selection. It is also argued that a correlation exists between religiosity and the use of natural resources and people are likely to gain utility by choosing these activities like other commodities (Hamdani 2008).

It is also argued that as per teaching of Islam the belief on afterlife has influence on the choices and economic decisions of individuals⁸. However, little attention has been given by economists on the economic outcomes of such type of human behavior. In this connection Hamdani (2003) explains that there is a great importance of hope for an afterlife reward

(divinely promised benefits in heavens) when talking about consumer behavior in Divine religions including Islam. Similar belief can be seen in other religions. Empirical evidences show that people perform various activities in the hope of afterlife consumption (Azzi and Ehrenberg; 1975). For the maximization of utility, a rational consumer will consider life hereafter a factor in his decision-making. The belief in afterlife changes the perception of an individual that in turn influences his decisions regarding resource allocation.

Barro and McCleary (2003) came up with the view that individuals' behavior is influenced by religious beliefs that results in enhancement of economic performance while Hamdani *et al.* (2004) emphasizes that there is need to analyze the effect of religions and economics in each other's' perspective through comparative study of religions. This is the way to approach a practical analysis of actual human behavior rather than a theoretical discussion. This way provides a better understanding about the preferences.

The Holy Qur'an and Bible present various references regarding the use of natural resources. The Holy Qur'an mentions the word "water" 63 times whereas in Bible water is mentioned 722 times. In the Bible books; Genesis and Revelation, water flows right through pages of scriptures⁹ and a number of times the word water can be seen in Hadith books from two major sects of Islam i.e. Sunni¹⁰ and Shia.¹¹ Here some references from Divine books and the books of Hadith are presented to confirm the importance, features, and proper use of water.

The most precious and valued source granted by Almighty Allah for human to survive and sustain in this world is water without which human existence is impossible. The Holy Qur'an affirms that the water is sole basis for the emergence of life on earth. The importance of water cannot be judged by this but the fact that Allah created every living thing from water: "We have made every living thing out of water" (Qur'an 21:30).

⁹<http://www.learnthebible.org/water-in-the-bible.html>

¹⁰ References about water are taken here from four books namely SahiBukhari, Sahi Muslim, Sunan Abu Dawood and MalikMuwatta from Sunnite sources.

¹¹ Two books namely UsoolKafi and TahdibulAhkam are used here from Shiite sources for relevant references.

Regarding the importance of water the Bible also mentions it a number of times and sheds light on its importance as Genesis (1:8-10) states that "People staggered from town to town for water but did not get enough to drink, yet you have not returned to me," declares the Lord" (Amos 4:7-9). The Hadith reveals the importance and use of water in context of wudu as; "A Muslim slave (or a trusting slave) does wudu and as he washes his face every wrong action he has seen with his eyes leaves with the water (or the last drop of water), as he washes his hands every wrong action he has done with his hands leaves with the water (or the last drop of water), and as he washes his feet every wrong action his feet have walked to leaves with the water (or the last drop of water) so that he comes away purified of wrong actions" (Malik's Muwatta 2.6.32). An overwhelming dependence on water in every sphere of life stands testimonial of its significance.

Water is the important source for plants to grow. Plants are God's blessing on humanity, which are necessary for fruit production and environmental balance: "Who has made the earth a resting place for you, and the sky as a canopy, and sent down water (rain) from the sky and brought forth therewith fruits as a provision for you". Then do not set up rivals unto Allah (in worship) while you know (that He Alone has the right to be worshipped)" (Qur'an 2:22). "And We send the winds fertilizing (to fill heavily the clouds with water), then cause the water (rain) to descend from the sky, and We give it to you to drink, and it is not you who are the owners of its stores (i.e. to give water to whom you like or to withhold it from whom you like" (Qur'an 15:22). "And Allah sends down water (rain) from the sky, and then He revives the earth therewith after its death. Verily, in this is a sign (clear proof) for people who listen (obey Allah)" (Qur'an 16:65). The Bible in this connection mentions, "Now the earth was formless and empty, darkness was over the surface of the deep, and the Spirit of God was hovering over the waters." (Genesis 1:1-3) "And God said, "Let there be a vault between the waters to separate water from water." (Genesis 1:5-7) "And God said, "Let the water under the sky be gathered to one place, and let dry ground appear." And it was so. From above verses of Holy Qur'an, the references from the Bible and Hadith books the importance of water is clear. "Water is a primary building block of life. Without water there is no life, yet water has the

power to destroy as well as to create. We are at the mercy of water just as we are at the mercy of our God. The significance of water presents itself differently in different religions and beliefs but it is these two qualities of water that underlie its place in our cultures and faiths".¹² Importance of water is obvious for humanity in general and for Muslims in particular.

The above paragraph shows importance of water in religious scripture. On the other side, religions emphasize on ritualistic purity. Islam puts great stress on physical cleanliness and spiritual purity. For this purpose, water is the most important ingredient that helps attaining cleanliness of body and soul. Muslims use it for performing the ablution prior to the five obligatory prayers performed daily. Cleanliness has been discussed in the Holy Qur'an at various times. "(Remember) when He covered you with a slumber as a security from Him, and He caused water (rain) to descend on you from the sky, to clean you thereby and to remove from you the Rijz (whispering, evil-suggestions) of Shaitan (Satan), and to strengthen your hearts, and make your feet firm thereby" (Qur'an 8:11). At another place, Allah says: "Truly, Allah loves those who turn to Him constantly and He loves those who keep themselves pure and clean" (Qur'an 2:222). "And Allah loves those who make themselves clean and pure" (Qur'an 9:108). Whereas in Bible, importance of cleanliness is also highlighted at many places as; "When a man has sexual relations with a woman and there is an emission of semen, both of them must bathe with water, and they will be unclean till evening" (Leviticus 15:17-19). "And this water symbolizes baptism that now saves you also not the removal of dirt from the body but the pledge of a clear conscience toward God. It saves you by the resurrection of Jesus Christ" (One Peter 3:20-22). At another place it is stated that "On the day you were born your cord was not cut, nor were you washed with water to make you clean, nor were you rubbed with salt or wrapped in cloths" (Ezekiel 16:3-5). The Judaism view is that "Let us draw near to God with a sincere heart and with the full assurance that faith brings, having our hearts sprinkled to cleanse us from a guilty conscience, and having our bodies washed with pure water" (Hebrews 10:21-23). The word "water" appears 851 time(s) in 452 hadith(s) in

¹² <http://www.africanwater.org/religion.html>

Bukhari translation, 598 time(s) in 358 hadith(s) in Muslim translation, 167 time(s) in 95 hadith(s) in Muwatta translation and 155 time(s) in 109 hadith(s) in Abudawud translation. The cleanliness and purity also remained the focus of Hadith books as "Hammam b. Munabbih who is the brother of Wahb b. Munabbih. said: This is what has been transmitted to us by Abu Huraira from Muhammad, the Messenger of Allah (may peace be upon him) and then narrated a hadith out of them and observed that the Messenger of Allah (may peace be upon him) said: The prayer of none amongst you would be accepted in a state of impurity till he performs ablution" (Sahih Muslim Book No. 2 Hadith No. 435)". In another Hadith the same example can be found as "Narrated AbulMalih: The Prophet (peace be upon him) said: Allah does not accept charity from goods acquired by embezzlement as He does not accept prayer without purification." (Sunnan Abu-Dawud Book No. 1 Hadith No. 59).

Keeping in view the importance of water mentioned in religions, one may infer that the demand for water will be systematically related with human values including faith and religiosity. This will affect their behavior about use of water or wasting it. Usually, to make water available in homes, people either install water supply system or they get water from outer sources such as spring, well, stream, river etc. sense of dignity and modesty of women in regard with fetching water from outside. As scarcity and non-availability of water at doorstep, compel people to fetch water from outside. For this purpose, women are assumed responsible for fetching water. In this tiresome exercise, women remain on source of water for their water need even after dark. They are always in danger with pestering and attack by snakes and wild animals. Specially for Muslim women it is matter of great disrespect and against the basic Islamic teachings as Allah says in Qur'an: "And tell the believing women to lower their gaze (from looking at forbidden things), and protect their private parts (from illegal sexual acts) and not to show off their adornment except only that which is apparent (like both eyes for necessity to see the way, or outer palms of hands or one eye or dress like veil, gloves, head-cover, apron, etc.), and to draw their veils all over Juyubihinna (their bodies, faces, necks and bosoms) and not to reveal their adornment except to their husbands, or their fathers, or their husband's fathers, or their sons, or their husband's sons, or their brothers or

their brother's sons, or their sister's sons, or their (Muslim) women (their sisters in Islam), or the (female) slaves whom their right hands possess, or old male servants who lack vigor, or small children who have no sense of feminine sex, And let them not stamp their feet so as to reveal what they hide of their adornment, And all of you beg Allah to forgive you all, O believers, that you may be successful" (Qur'an 24:31). As also mentioned in Hadith as "The Prophet (PBUH) said, 'He who averts an impediment of water or fire from a group of Muslims becomes deserving of obligatory entrance into Paradise.'" (Book: Al-Kafi Vol.: Five page 55 Hadith No. 3).

It is evident from the above discussion that water is important; scarce in some cases, essential for ritualistic purity before worship, and important for life of humans, animals and plants. Therefore, the value 'moderation' seems to be of high importance in this regard. However, there hardly exists any study that explores the relationship between prevalence of value 'moderation' and water use behaviors except a negligible number.

D. Religiosity and Financial Resources (Saving) and other outcomes

Holy Scriptures laid great emphasis on ways of living for human beings. These Scriptures have distinct rules regarding financial matters. The Holy Books i.e. Torah, Bible, and Holy Qur'an provide an economic system to their followers with some constraints of right and wrong. Following are some verses from Holy Scriptures and narrations of Holy Prophet Muhammad (SAWW) regarding saving money in different circumstances. "And let not thy hand be not chained to thy neck nor open it with a complete opening, lest thou sit down rebuked, denuded" (Qur'an 17:29). (In reference to the slaves of Allah) "And those who, when they spend, are neither prodigal nor grudging; and there is ever a firm station between the two" (Qur'an 25:67). Qur'an light on altering circumstances such as "For seven years you should cultivate the land as usual, but leave the harvest that you reap in the year except for a little that you eat. Then after that will come seven difficult years in which you will eat all that you have set aside except for a little of what you have stored. Then will come a year of abundance in which you will press wine and oil" (Qur'an 13: 47-49).

Hadith of Holy Prophet (sawa) as Anas a companion of him narrated: "The Prophet never saved anything for himself for the next day" (At-Tirmithi). However, the Prophet did not absolutely abandon saving. 'Umar narrated: "The Prophet used to sell the harvesting of the date-trees of Beni Nadheer (a Jewish tribe) (which he , gained as a war booty) and he would keep for his family what they would suffice them to eat for a whole year" (Al-Bukhaari and Muslim). "Keep some of your properties for yourself because it's better for you" (Sahih Bukhari).

Ibn Daqeeq Al-'Eed explained the two narrations saying that the first narration refers to saving for himself and the second narration refers to saving for his family even though he is benefitting from that as well. However, if he was lonely and did not have a family he would not have saved for himself at all. Abu Huraira narrated from the Prophet (P.B.U.H), "The best charity is that which is practiced by a wealthy person. And start giving first to your dependents".²²The Holy Prophet (SAWW) said, "Moderation in expenditure is half economy". He also said "those who stay content during hardship will find safe heaven with Allah". With a great insight, he (SAWW) admonished that, "if a man owns even a valley full of gold, he would still wish for another valley".

Proverbs 21:20 says, "There is treasure to be desired and oil in the dwelling of the wise; but a foolish man spend it up." and "For which of you, intending to build a tower, sit not down first, and count the cost, whether he has (sufficient) to finish (it)"? (Luke 14:28) "Keep your life free from love of money, and be content with what you have, for he has said, "I will never leave you nor forsake you." (Hebrews 13:5)

According to Berger (1999), the key idea that modernization deteriorates religion in human minds and society was wrong. Uppal (2001) reported that South Asians are profoundly religious and every aspect of their lives, comprising attempt to obtain material progress is affected by religiosity (beliefs and values). Chitiji and Hamilton (2002) found that the

²²Bukhari Volume 2, Book 24, Number 507.

categorization of saving behavior might be due to altruistic behavior. The dissimilarity, presently observed between whites and blacks, may not absolutely reflect preference difference of consumption and saving. Having an impact on person and mind set religion may possibly influence economic behavior of an individual as the provision of ethical teachings to their followers (Barro and McCleary, 2003).

Keister (2003, 2005, and 2008) concluded that divine teachings infrequently deter saving money. Religion directly affects wealth i.e. scheme of saving and investment and indirectly has an influence on an individual (consumer). Religious beliefs enhance saving with sacrificial giving. As far as wealth distribution is concerned, lowest level of wealth was accounted by conservative Protestants, mainline Catholics. Protestants were at the center of the distribution in religious context, and Jews reported completely different tendency. Religions directly affect wealth with provision of strategies for investment and saving and have an indirect effect on labor supply behavior, education and fertility (Keister, 2003, 2005, 2008a, 2008b). With the difference in religions, the pattern of wage as well as education change.

Guiso *et al.* (2003) explored that religiosity has much influence on saving. Household finance and religion were casually linked with each other Keister (2004) stated that large family size diminished the accumulation of wealth and also the chance of separation and divorce is significantly decreasing with the increase in the size of the family. Individuals that attend religious services weekly have higher earnings than others, it supports the hypothesis; religious involvement affects labor market outcomes (Chiswick and Huang, 2007). Barrett *et al.* (2007) suggested that specification of religious affiliation turned to be more productive. This specification included the remarkableness of religion, religiosity of individual, religious dimensions and religious beliefs (Idler *et al.* 2003; Kosmin and Keysar 2006; Glass and Nath 2006); estimation of participants and religious affiliation of parents (Pearce and Thornton 2007; Branas-Garza and Neuman, 2007). Lehrer (2008) stated an explanation of results on the role of religion with economic and demographic behaviors from previous and updated studies. Most of the studies included in this research are from US; however, some studies from

other countries were also included in accordance with relevancy. Commitment to the religion affects economic and demographic factors. Its second effect is on health and wellbeing and its long run implication is manifested by the better performance of children in educational achievement. The studies concluded that, religion has an impact on economic as well as demographic attitudes. Commitment to the religion changes the attitudes of people and religion has its short as well as long run implications on different aspects.

In microeconomics perspective a study is conducted by Rossi and Rossi (2008) in which, decision making of an individual regarding church attendance was selected as an important indicator of religiosity in Latin Europe and Latin America as a comparison. The information used in this study was taken from International Social Survey Network members' i.e. the survey of citizenship. The results of the study showed that the differences in levels of the religiosity among countries and the religion that got dominance were of Catholics. Gender, age, marital status and income showed positive relationship with religiosity however, the countries which have higher income per capita appeared to be less religious. Further, an increase in number of children increases the religiosity level.

Heaton *et al.* (2007) used Ghanaian Demographic and Health Survey. Interviews were conducted in five major areas of Ghana. Multi-level model was used for the analysis. Results showed that religion is the determinant of educational attainment both at individual level as well as at community level. Rates of educational enrollment were higher in the areas where both wealth and maternal education were higher. The significant disadvantages were found for non-religious group. Muslims, Catholics, and other Christians have significant advantage in socioeconomic outcomes.

Different countries have their different degrees of selflessness, which affect their volume of trade as examined by Leroch *et al.* (2012). Different categories of home bias are presented in this study as health care preferences; goods and services by foreign countries. Using data of fifteen countries, with prohibit regression as an estimation technique, the results revealed

that religious openness showed positive relationship with home bias. The result was surprising that religious affiliation has a minor effect on economic choices made by individuals. In rational choice theory, religiosity is based on preferences. In part, preferences of people become a reason of their choice of interaction with people (Sherkat and Wilson, 1995). There comes the difference of preferences regarding religion with the difference of brought up (McCullough, Tsang, and Brion, 2003; Sherkat and Wilson, 1995; Schiffman and Kanuk, Zinkhan, 2007 and 1992).

Renneboog and Spaenjers (2009) concluded that, households who are more religious tend to keep aside money than non-religious households by keeping other factors constant. As far as different religions are concerned, Catholics are less likely to invest in risky assets as compared to Evangelical. Financial decisions, religious denominations, and variation in economic attributes are related with each other. Tendency of high saving was found in religious households and particularly in households who have longer planning horizons i.e. Catholics as well as Protestants. The results also suggested that, religious households are less likely to gamble money. Furthermore, it is concluded that economic beliefs and preferences are affected by religion.

The above review of literature shows that there exists a relationship between religiosity and economic outcomes. However, not much about this type of relationships is currently available in conventional economic literature.

2.3 RELIGIOUS PERSPECTIVE ON SOCIAL CAPITAL, SPIRITUAL CAPITAL, AND ECONOMIC BEHAVIOR

Social and spiritual capital plays an important role in economic development as it shape individuals' behavior, which in turn develop economic and political institutions. A well-established segment of economic literature came up with the view that social capital plays a vital role in productivity enhancement. For instance, Putnam, 1993 argued that features of social organization, such as trust, norms, and networks could improve workers' efficiency by

facilitating co-ordinates actions. In similar lines, Malloch (2003) define that as social capital involves the social elements that contribute to knowledge sharing, innovation, and therefore increase productivity. Recently, Sjoerd and Sjak (2004) have carried out comprehensive empirical that extend the basic growth model that incorporate social capital as a factor of production. They have used data set of European Value Studies for empirical analysis. Following Putnam's distinction between bonding and bridging social capital, in model social capital as participation in two types of social networks: first, closed networks of family and friends, and, second, open networks that bridge different communities. Agents have a preference for socializing, which they trade off against material well-being. Participation in both social networks is time-consuming and comes at the cost of participation in the formal economic sphere and working time. Through this channel, higher levels of social capital may crowd out economic growth. In addition, participation in intercommunity networks reduces incentives for rent seeking and cheating. Through this channel, higher level of bridging social capital may enhance economic growth. Testing the model, they find that regional differences in materialistic attitudes and the value attached to family life significantly reduce the participation in open networks and that in turn reduces regional output growth in Europe. Carcach and Huntley, (2002) analyzed that crime rates are lower in local areas with high levels of participation in community oriented activities. The reasoning is that participation in local organizations leads to increased opportunities for social interaction, which in turn enhances the community's ability to work together in the solution of local problems, realize common values, provide for informal social control to reduce local crime, and increase the community's ability to achieve improved levels of public safety.

Like social capital, spiritual capital also affects human behaviors and hence affects economic decisions. Keeping in view the role of spiritual capital in economic decision making many studies have analyzed intensely both theoretically and empirically. For example, Woodberry (2003) defines spiritual capital "as resources that are created or people access to when people invest in religion as religion" and argues that spiritual capital differs from other forms of capital. Woodberry asserts that like social capital, religiously motivated social groups.

Moreover, religious groups have an additional concern, which derives from their stress on their relationship with the Supreme Being. The study concludes that social capital does not fully encompass religious groups the spiritual capital they generate. Glaser, Laibson, and Sacerdote in 2002, consider social capital a “person” social characteristics, which enables him to reap market, and non-market returns from interaction with other.

In 2005, the Spiritual Capital Research Program announced a \$3.75 million grant “to catalyze the emergence of a productive, vital and interdisciplinary research field of spiritual capital in the social sciences, with particular attention to building connections to economics” (Spiritual Capital Research Program 2005). Spiritual capital is one of the emerging fields of economics. Recent developments in the subfields of economics such as economics of religion (Iannaccone 2003), divine economics (Hamdani 2002, 2004, 2014 etc.), behavioral economics, and brain scan economics helped in finding the economic effects of different religious behaviors. Woodbery (2003) defines spiritual capital “as resources that are created or people access to when people invest in religion as religion” and argues that spiritual capital differs from other forms of capital. He asserts that like those who have social capital, religiously motivated social groups have also, “material resources, skills, trusting relationships, and cultural – valued knowledge that is financial, and human, social, and cultural capital.”

The development of spiritual capital as a multi-level form of organizational value, operating at the individual level as a disposition to serve and subsequently at the organizational level as systems, norms, and culture. Spiritual capital has been broadly defined as the effects of spiritual and religious practices, beliefs, networks, and institutions that have a measurable impact on individuals, communities and societies (Metanexus Institute, 2006). This definition, while an important foundation, requires distinction, alignment, and integration with the more established concepts of human, social, and cultural capital. This paper posits a more specific conceptualization of spiritual capital, providing a base from which to discuss implications and applications for leadership across levels of analysis and sectors of practice.

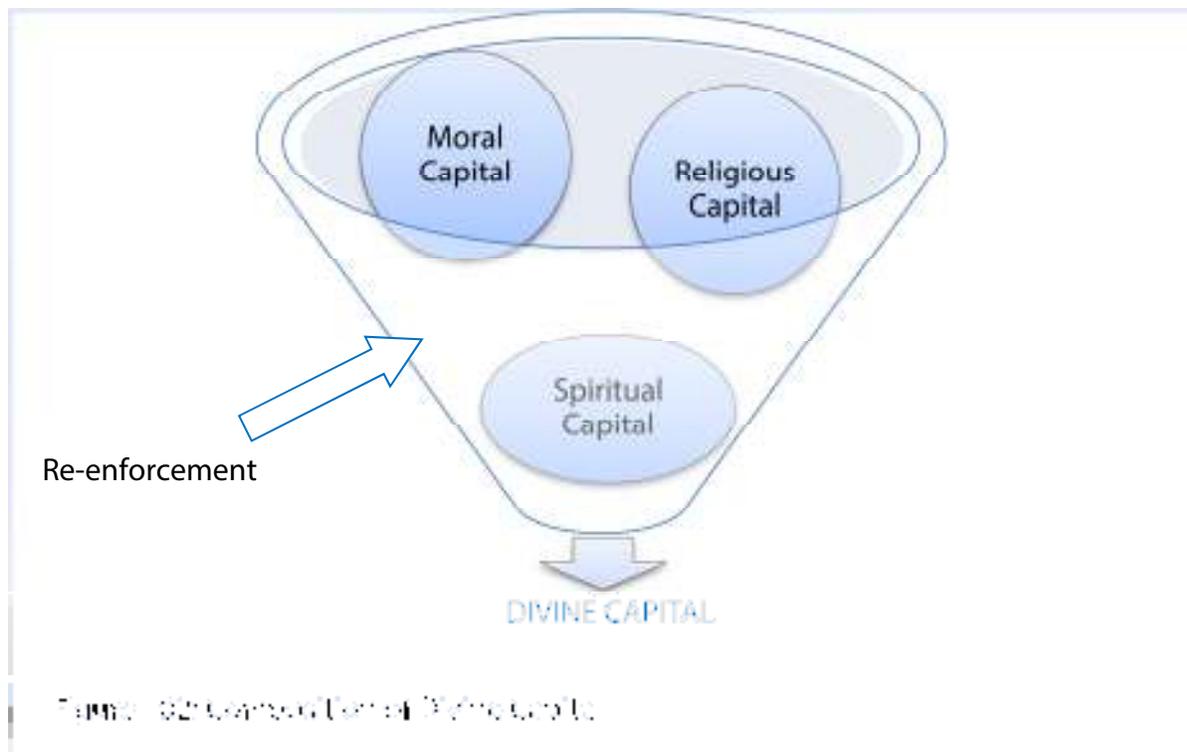
Importance of spirituality is a process of theorizing this value and its implications for different aspects of humans including education, health and productivity has started [Oman and Thoresen, 2005]. Hence, issues in measurement of religiosity and spirituality as latent variables are also gaining attention.²³For a discussion on spirituality, spiritual capital, its types and its economic interpretation can be found in Hamdani 2008 and Hamdani and Haque Nawaz 2009. The literature mentioned above can serve only as thought provoking and insightful. A more solid theoretical and empirical work seems to be a future agenda of economists.

2.3.1 The Divine Capital [Religious, Spiritual, Ethical Capital and Reinforcement]

The Divine Capital is a recently introduced concept in the Divine Economics.²⁴ Hamdani (2012) first presented this concept and claimed that divine capital plays its role in economic activities in the same way as the other forms of capital. The same study defined it as the type, level and combination of four values or divinely attributes viz. religiosity, spirituality, morality and reinforcement [through infrastructure]. The type and intensity of these attributes produce a typical of wisdom which ultimately governs human's whole allocation process. Figure 2.1 below shows the four components if Divine Capital implications of which are elaborated subsequently.

²³ For a discussion on measurement of spiritual capital see www.researchmethods.org and for issues in measurement of religiosity see Hamdani (2006 and 2008).

²⁴ The reason why it has been titled as Divine Capital is that all its four components i.e. religiosity, spirituality, ethics and wisdom are divinely endowed to humans with varying intensities. Even a non-believer shall possess some form of faith, ethics and spirituality.



Source: Hamdani (2012), *Divine Capital Model*, Lecture at Kashmir Institute of Economics

The figure above is a simple depiction of the postulated interrelationship between religious, spiritual and moral capital and re-enforcement which all form what we call 'Divine Capital'.

2.3.2 Implications of Divine Capital

There are several implications of the Divine Capital with regard to economic activities. Literature or empirical evidence exists that points to importance of these divinely attributes in the production of utility, commodities, and circumstances. Some of them are mentioned below.

Religiosity: The neoclassical economics mainly work under three assumptions i.e. Rationality, Perfect Information, and Exogenous and Stable Preferences. However, it ignores the structure on which these assumptions are based. For instance, structures like religion, institutional, social norms, tradition, past experience, vertical and horizontal learning shape human

behavior that affect their decisions and preferences. This is the one major criticism that creates avenue for economists to revisit the basic economic philosophy. In this association, Hamdani (2000) developed a new discipline of economics termed as *Divine Economics*. Divine Economics, which is the '*study of religion, and economics in each other's perspective*' attempts to explain the structures that shape human behavior by considering religiosity in their setup. According to this model, an individual's economic choices are not only governed by worldly life but also by a belief in the life hereafter. An individual has to choose acts of greater goodness much the same way as he chooses a commodity having greater utility in a given condition. For the maximization of utility, a rational consumer will consider life hereafter a factor in his decision-making. The belief in afterlife changes the perception of an individual that in turn influences his/her decisions.

Ethics: Ethics is a branch of philosophy that studies the meaning of values, morality, and moral judgments (De George 1986, Chryssides *et al.* 1996, Finken 2007, Crane *et al.* 2010 and Freeman *et al.* 2010). Ethics play an imperative role in the efficiency of any economic activity as specified by Ahmad, 2009 that "ethics concerns the proper way of conducting production, consumption, distribution, and transfer of assets in any economic activity". In similar line, Berrone (2005) argued that strong ethical identities positively influence workers' performance, which in turn affects its financial performance. Rashida (2013)²⁵ is the first to apply Divine Capital Model 2012 for investigation of the role of ethical factors in the performance of handicrafts enterprises in Muzaffarabad. The study analyzed empirically that how workers' divine attributes (ethics, religiosity, and reinforcement factors) affect firms' productivity through efficiency, honesty, loyalty, and justice. To accomplish this she constructed separates indexes of these divine attributes of workers. The overall evidences of the study substantiate the fact that workers' divine attributes affect firms' productivity positively which support the claim that attributes originating ethics, religiosity, and reinforcement factors along with other physical infrastructure make the workers systematically different from their counterparts.

²⁵M.Phil thesis defended at Kashmir Institute of Economics, University of Azad Jammu and Kashmir, Muzaffarabad.

Spirituality: Spirituality is defined in number of ways; it is attachment to spirit as opposed to material interests and to unseen as opposed to physical. The religious inclinations, quest for deeper truths and meaning in life, beliefs, sense of peace and connection with self and others are all considered as spirituality.²⁶It also means purification of soul and inner self. Spirituality has been discussed many times in the Holy Book of Islam-Qur'an and in one way or the other is related to human's ultimate success.²⁷Although, different Islamic schools of thought have different perceptions and practices in spirituality yet all Muslims have one common objective in it and that is purification of soul for nearness to God.

About two third of the world population follows some belief or spiritual pattern. According to a recent study by Spiritual Research Foundation, a breakdown of the world population by level of spirituality in the year 2013 has been estimated. It was revealed that 63% of world population possesses 20-29% level of spirituality, 33% possesses 30-39% and 4% possesses 40-49% level of spirituality. Here the low percentage indicates people with no spirituality and high unhappiness and above 70% level indicates something like sainthood with complete happiness with the living.

Spirituality is now being recognized in economics. Some studies have considered spirituality is an economic good that like other economic goods it requires inputs such as time and wealth. Hevia, 2004 argued that time allocated for spiritual activities is leisure time and from consumption point of view spirituality expressed itself as normal good. In production approach studies holds the claim that spirituality affect good work place outcomes as it shape workers' attitudes positively that in turn ensure cooperation, compassion, trust, non-violent, sense of meaning and purpose in work (Miller and Ewest, 2013, Rego and Cunha, 2008, Clark,

²⁶Spirituality 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 *spiritus* assigned to a person "of the spirit."

²⁷For instance, "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." At another place, Qur'an 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 different ways of practicing spirituality by Muslims have common objective that is purification of soul and nearness to God.

1996). Bouchaert, 2007 argued for the spillover effect of spirituality because it is public good in nature, hence workers can get benefits with zero cost.

Proposition:

The Divine Capital Model 2012 proposes that 'Spirituality type and intensity systematically affects economic behaviors'. More theoretical and empirical work is yet to be done in this direction.

Reinforcement: Reinforcement is a gist that affects future response whenever that behavior is preceded by a specific thing or event. Reinforcement includes movement/actions that affects behavior e.g. stimuli, events and situations. Broadly, reinforcement is grouped into two, that primary and secondary. Primary Reinforcement occurs naturally, and does not need any learning in order to work. Primary reinforces often have an evolutionary basis in that they aid in the survival of the species. Examples of primary reinforces include food, air, sleep, water etc. Secondary re-enforcement is conditional in nature-conditioned reinforcement, involves stimuli that have become rewarding by being paired with another reinforcing stimulus.

In Divine Economics, and especially under the Divine Capital Model 2012, this concept has been introduced to capture the effects of such physical capital and non-physical infrastructures which help reminding, strengthening, or reinforcing certain perception, intentions, verbal communication, actions or behaviors. Some examples are; religious or spiritual symbols, sounds, flags, monuments, shrines, narrations, rhyme etc. All these affect on the level of religiosity, morality and spirituality of people in one way or the other. This in turn affects the human attribute known as 'wisdom' that is central to human decision-making system. The application of Divine Capital has been discussed in the next section.

Proposition: The Divine Capital Model 2012 proposes that 'Reinforcement' type and intensity systematically affects economic behaviors' through formation of typical wisdom. More theoretical and empirical work is yet to be done in this direction.

2.4 ECONOMIC SUSTAINABILITY IN NORMAL AND POST DISASTER SITUATIONS

Economic sustainability cannot be treated the same way in a normal [or pre-disaster] situation as after happening of a disaster, crisis, accident or challenges. One of our earlier work 'Analytical Guidelines for Post-disaster Studies under Divine Economics Framework done at Harvard University²⁸ pointed out that people's socio-economic allocation process systematically alters after any disaster or other shock depending on their nature and values-types. It is quite likely that they possess one set of values before a disaster and display another set of values after the disaster. This insight is very important for future studies on the role of values and economics sustainability in short and long run. Because, policy prepared in a normal situation for management of a post-normal situation would prove merely redundant if understanding about human types and their corresponding values in diverse situations is poor. Hence, there is a need to enhance understanding about this important aspect.

In the literature, sustainable development is defined as the need to maintain a permanent income [or consumption] for humanity, generated from non-declining capital stocks. Serageldin and Steer (1996) Serageldin (1997), and Pearce (1997) argued that constant stocks of human, manufactured, natural, and social capital are considered as necessary condition of sustainable development. Usually, in literature, sustainability is discussed in perspective of normal economic situations and the next generations. The economic analysis or other judgments may or may not remain the same in an after-disaster situation. For example, in less religious and less ethical communities, the victims of a disaster may face dual losses; one because of the disaster and the other because of theft, violence, and damages originating from greed, lust, selfishness and other crimes etc. To control such tendencies of humans which create obstacles for disaster mitigation initiatives or divert such initiatives towards fulfillment of their vested interests, economic intervention need to be supplemented with ethical behaviors of victims, relief providers, government functionaries, non-government organizations and religious groups. But such ethical behaviors cannot be created in days especially in post-disaster situations. Rather this requires investment in what we call 'Divine

²⁸[Hamdani, 2006c

Capital' i.e. religiosity, spirituality, morality and re-enforcement infrastructure. Values play an important role in the sustainability of economic development through governing human habits and transforming them from self-regarding to others-regarding even in situation of disasters when, otherwise, self-survival becomes most higher objective for human self. A complete theoretical concept followed by empirical analysis has been made available separately.

Propositions:

1. Divinely attributes such as spirituality, religiosity, ethics and reinforcement [through infrastructure] systematically affect the human decisions for time and resource allocation.
2. Religious beliefs and attitudes²⁹ do also influence the same way other conventional economic factors on households' willingness to pay for services in accordance with the five-ordainments [*Ahkaam-e-Khamsah* i.e. *wajib, mustahab, mubah, Makrooh* and *haraam*].
3. The economic allocation behavior of the agents having higher level of universal values shall be systematically different from those having lower level of universal values when other things are assumed constant.
4. Spiritual places induce more spending for spiritual or religious purposes including travel hence is likely to alter the whole economic allocation pattern.
5. The level of true religiosity affects the workers' efficiency in the same way the efficiency-wage while other things held constant.
6. The types of *spiritual capital* systematically affect the economic decision making of the individuals.
7. Individuals with some forms of religiosity would avoid cutting trees unnecessarily, polluting public water, wasting personal water, and creating other forms of negative externalities.

²⁹ *Islam lays great emphasis on spiritual and physical purity. Water is the most important ingredient for attaining cleanliness of body with Muslims using it for performing the ablution prior to the five obligatory prayers performed daily. According to the Bible, water is connected with the baptismal cleansing for the forgiveness of sins as in Hebrews 10:22. Also in Judaism rituals, washing is intended to restore or maintain a state of ritual purity and its origins can be found in the Torah. These ablutions can be washing the hands, the hands and the feet, or total immersion which must done in 'living water'* (<http://www.africanwater.org/religion.htm>).

8. Other things held the same, a higher level of Divine Capital attributes among individuals shall lead to a systematically different amounts of demand, supply, type and quality of food. For example, a more ethical supplier shall supply more secure foods. A more religious individual shall demand lesser quantity of insecure goods which are religiously prohibited or disliked [*Makrooh*].

The above mentioned propositions can provoke further thoughts in this direction and studies can be initiated to test such propositions. Some of them are tested under the present research.

2.4.1 Divine Capital and Sustainability

As explained in section 2.3.1 above that Divine Capital comprises of four elements viz religiosity, spirituality, ethics and reinforcement. The Divine Economics postulates that each of these elements systematically affect the economic process and preferences. In section 2.2.1, it has been elaborated how ethics and values are related with productivity and hence ensure sustainability. The model claims that apart from the conventional factors identified in the literature, *Divine Capital*³⁰ or Divinely attributes such as spirituality, religiosity, ethics and reinforcement affect the human decisions for time and resource allocation. The coming chapters further extend the applicability of this model.

³⁰The *Divine Capital* is defined as the level and combination of religiosity spirituality, ethics and infrastructures which re-enforces all these attributes. When all these are combined, it produces a systematically different wisdom for resource allocation (Hamdani, 2012).

Chapter 3

Economic Behaviors: Values, Social and Spiritual Capital

3.1 BACKGROUND

This chapter discusses the role of values, social capital, and spiritual capital on economic behavior. In contrast to conventional economics, which does not consider faith, spirituality, and religiosity as economic factors, we examine the role of these factors in the framework of Divine Economics on economic behavior. This framework assumes rationality keeping in view the life after death. According to Hamdani (2004), "life after death has well-defined stages known as purgatory (*Barzakh*), the Day of Judgment (*Mahshar*) and the eternal life in heaven or hell (*Jannat* or *Jahannum* respectively)". The main implication of this definition is that 'the expected streams of benefits do not terminate at the death of individuals. They believe in some form of afterlife consumption, which motivates them to allocate their time and financial resources in a systematically different way than the allocation of time and financial resources of a conventional economic agent [ibid].

Values shape our relationships, behaviors, choices, and sense of who we are. Values are important as they guide not only our personal choices but also our perceptions of the worth of others (Chippendale, 2001). They are the motive power behind purposeful action¹. They are the ends to which we act. Without them, life would be impossible. Life requires self-generated action to sustain itself. Values stand at the very core of human decision making (Barrett, 2006). Values can make something desirable or undesirable (Zalabak, 1999). Values enhance the society and bring the social welfare (Bisman, 2004), Values create individuals who are smart, skilled, character full, independent, religious and responsible to the environment and to the nation (Sari,2013), by practicing the values the human being can develop his personality and springs up being powerful and trustworthy in society and these inborn virtues lead the society towards development (Banerjee, 2014), by fostering the human being in making him responsible towards the society (Goodstein, 2000), and fulfill the basic aim of economics that

is happiness as pointed by Aristotle² "living well and doing well are the same as being happy" at the end a good life is the result of acting according to virtues (values), and habitual virtuous activity eventually moves one towards sustainable happiness.³¹ In this chapter we specifically find relationship between values, social and spiritual capital and various economic decisions.³²

3.2 VALUES AND ECONOMIC PERFORMANCE

The impact of values on economic performance is analyzed by testing the ways used by head of business enterprise for enhancing the performance of workers. In the survey, we asked a question regarding the approaches for the improvement of workers' performance. Table 3.1 provides the answer to the same question by the heads of the business enterprises.

Table 3.1: Approach to Improve Workers' Performance

Efficiency Improvement Approaches	Number	Percent
Improved external observance (Example CCTV, presence of supervisor etc.)	145	17
Improving the Workers' personal or moral value (religious/spiritual development etc.)	684	80.4
Any Others	12	1.4
Total	841	98.8

The table shows that 17 percent of head prefer using external tool for the improvement of workers' performance. However, 80.4 percent of the heads prefer to use moral values for improving workers' performances. This shows the weight people give to values for its role in enhancing the performance of workers and hence the profitability of firms.

³¹www.importanceofphilosophy.com

²Aristotle (1984). The Complete Works of Aristotle. Princeton, NJ: Princeton University Press.

³²For this we use survey based data, collected by team of Kashmir Institute of Economics (see Appendix No.1).³² The sample consists of 851 households from five districts of Azad Jammu and Kashmir.

3.3 RELIGIOSITY AND ECONOMIC PERFORMANCE

As mentioned in introductory chapter (chapter 1) that religiosity shape human behaviors, which in turn affect their economic performance. In this regard, the following proposition is tested.

Proposition: Other things constant, a more religious person will regularly allocate time to personal leisure and home care as compared to a less religious person.³³

Table 3.2 shows the evidence in support of the above hypothesis. Individuals with high level, of ethics and spirituality allocate more time to religious activities whereas individual with low value of religiosity, ethics, and spirituality allocate more time to work. The time allocation for social activities of individual with religiosity, ethics, and spirituality is mix. For instance, people with high level of religiosity allocate less time to social activities as compared to less religious individuals. Whereas, individuals with high level of ethical values and spirituality allocate more time to social activities. It is pertinent to mention that the time allocated to personal care by religions individual help them to perform better in economic activities as it keep them fit for it. On the other hand less religious people mostly face fitness issues.

Table 3.2: Time Allocation with Religiosity Ethics and Spirituality

Type of Time Allocation	Religiosity Index		Ethics Index		Spirituality Index	
	Low	High	Low	High	Low	High
Time allocation to religious activities in hours per month	47.1875	64.1245	51.0409	59.2835	45.5871	61.1053
Time allocation to work in hours per month	272.6835	263.6359	274.9517	269.6478	285.4926	264.4288
Time allocation to social activities in hours per month	135.0236	131.6332	116.2452	136.4656	114.2	138.2005
Time allocation to self-care in hours per month	245.4587	255.1947	265.8591	251.7991	266.6667	252.1454

³³Hamdani (2004) tested the same proposition.

3.4 SOCIAL CAPITAL AND ECONOMIC PERFORMANCE

Time allocation model of divine economics explain that balancing of time allocation among competing activities would have important consequences for one's own life as well as life of others who are directly or indirectly associated to him. In order to test the hypothesis we asked a question regarding "*Respondent attempts to urgently reach to relatives/near ones in troubles*". Table 3.3 presents the response of respondents about the said question.

Table 3.3: Respondent Attempts to Urgently Reach to Relatives/Near ones in troubles [Social Capital]

	Never	Rarely	At leisurely	In any case respond immediately	Total
Number	1	20	96	734	851
Percent	0.1	2.4	11.3	86.3	100

An exceptionally high rate of 86 percent is observed who urgently reach to relatives and near ones when they are in troubles. We observed during the field work that the people, who rarely try to reach to their near-ones in the time of emergencies or disasters, have a lower level of overall social capital as compared to those who always try to reach the needy ones immediately. They get similar response [a form of social capital] from their near and society when they suffer from a disaster or emergency. A more rigorous analysis can be performed using larger sample size to confirm such results. This would help in promoting the policy that the value of connectedness and the same form of social capital should be enhanced through effective education and orientation system for a sustainable economy even during and after adverse situations and disasters.

Whether social capital is affected by religiosity? To answer this question, we analyze the relationship between divine attributes and social attributes. The findings appear in Table 3.4. The table shows that divine capital (religiosity) and socialization (relation with relatives and friends) are not independent. This indicates that religiosity affect socialization. Similarly is the

case of ethics, spirituality, and overall divine capital where the null hypotheses are rejected, which reveal that not all these divine attributes are independent from socialization.

Table 3.4: Socialization and Divine Capital

		Socialization/connectedness with Relatives and Friends	
		Low	High
Religiosity	Low	62	47
	High	215	257
	<u>Chi Square P value (Gamma)</u>	0.033	
Ethics	Low	153	106
	High	254	328
	<u>Chi Square P value (Gamma)</u>	0.000	
Spirituality	Low	117	86
	High	259	310
	<u>Chi Square P value (Gamma)</u>	0.003	
Overall		Low	High
Divine Capital	Low	64	39
	High	194	233
	<u>Chi Square P value (Gamma)</u>	0.002	

3.5 RELIGIOSITY, VALUES AND ENVIRONMENTAL SUSTAINABILITY

To investigate the impact of religion and values on environmental sustainability the following hypothesis is tested.

Proposition: Other things being equal, individuals with high-level of religiosity and values, will display a systematically different behaviors for environmental protection than those having lower level of religiosity and values

Table 3.5 presents the statistical analysis of the above proposition. The table shows that both approaches (promotion of religion, spiritual and universal values, and promotion of modern/scientific education have almost same consideration in environmental sustainability. Forty seven percent of respondents consider that promotion of religious, spiritual, and universal values is more effective way to protect environment/ water, air from pollution.

Almost the same (47.2 percent) number of respondents considers that promotion of modern/scientific education is the effective way to avoid environmental degradation. In similar line, response about these strategies have been analyzed for the consideration of best approach of cleanliness/solid waste management. About 62 percent of respondents consider that promotion of religious, spiritual, and universal value is the best approach for the cleanliness/solid waste management, whereas, just 32 percent consider promotion of modern/scientific education is the best approach.

Table 3.5: Effective Approaches of Environmental Protection

		Promotion of religious, spiritual and universal values	Promotion of modern/scientific education	Never thought	Total
Respondent considers more effective way to protect environment/ water, air from pollution (sustainability)	N %	401 47.1	402 47.2	48 5.6	851 100
Respondent considers best approach for the cleanness/solid waste management	N %	525 61.7	269 31.6	56 6.6	850 99.9

3.6 SELF-REPORTED SATISFACTION

Human satisfaction is a universal values that is central to economic allocation process of humans. That's why it has occupied huge space in economics. Although, conventional economics does not much recognize the role of values and other attributes of Divine Capital, yet it does not reduce the importance of such attributes in the discussion of human satisfaction. Recently some studies about wellness claimed that material or physical resources (mainly income) do not fully explain individual happiness/satisfaction. Most of these studies claim that financial status is an important factor of one's satisfaction however there exist many other factors, which effectively work either in isolation from income or in an interactive manner. These include factors originating from religiosity, spirituality, and values, which are considering as 'non-economic' in conventional economic literature, hence are mostly neglected. Among religious people or spiritual people it has been observed that they may

feel more happy or satisfied if they find that their near-ones, relatives and friends perform religious and spiritual activities in a way or at the level they like. One's satisfaction may increase due to many things such as a smooth completion of one's routine tasks, satisfactory quality of drinking water, and present job status/situation. Similarly, an individual may feel satisfied due to tidiness and discipline within household or business, or due to good quality of sleep, leisure, and recreation or fulfillment of life material or spiritual goals. There are people reporting satisfaction due to their successful social relations or educational achievements. Table No. 3.9 presents some observations in the sampled population [in terms of percentage distribution] that give only insights at this stage about the sources of self-reported satisfaction.³⁴

Table 3.9: Respondents' Satisfaction from Different Factors (Percent)

	Totally unsatisfied	Unsatisfied	Mixed	Satisfied	Totally satisfied	Total
Satisfaction due to religious and spiritual activities of your near relatives and friends	1.6	7.9	30.4	53.5	5.9	99.3
Satisfaction due to smooth completion of tasks	0.6	6.5	23	56.4	13.5	100
Satisfaction due to quality drinking water	7.2	22.4	14.8	42.8	12.8	100
Satisfaction due to present work status/situation	3.9	17.2	21.5	41.7	15.3	99.5
Satisfaction due to present financial status	9	29.5	22.2	31.1	8.1	100
Satisfaction due to household tidiness and discipline	0.2	4.6	14.8	59	21.4	100
Satisfaction due to sleep and leisure	1.4	8	14	53.1	23.5	100
Satisfaction due to fulfillment of life goals	4.2	16.2	28.8	40.7	10	99.9
Satisfaction due to social relations	0.1	2.9	14.9	57.1	24.9	100
Satisfaction due to present educational achievements	Percent	8	24.7	18.1	38.9	10.3

³⁴The data are available for a detailed analysis at a later stage.

Concluding remarks

The discussion in the above sections presents a glimpse of interrelationships among economic behaviors, values, social capital and spiritual capital. The preliminary analysis above shows that on average people prefer using moral oriented approaches for enhancing the performance of workers. Likewise, people consider that religious agents are environment-friendly. They are of the view that the people with higher level of religiosity bear traits in line with the traits required for a sustainable environment. The chapter also analyses that religious people give more time to self-care and this makes them productive for work. The social capital of religious people is also high as compared to those who have low level of religiosity. The findings show that religiosity, values and social capital are not independent rather are closely related. The discussion in the chapter is an indication of the role of religiosity in affecting many economic variables such as economic performance and protection of the environment. Using the same data of Divine Economics Survey 2013, the future researches can analyze in-depth empirical implications of this discussion. In future, a more rigorous analysis can help exploring the strength of relationship among religiosity, values, social capital, and other economic behavior.

Divine Capital and Economic Decision Making

4.1 BACKGROUND

Conventionally, faith and spirituality are not considered important in economic analysis. In previous chapter, it has been discussed that values such as faith, spirituality, morality and wisdom affects human behavior and economic allocation process. The Divine Capital Model 2012 has also been introduced in the previous chapter. This chapter discusses that how the two components of Divine Capital (i.e. religiosity and ethics) affect economic decision making. In particular, we aim to examine its impact on the allocation of money and time. The allocation of money is captured through household's saving decision and their willingness to pay for clean water, while, the allocation of time is captured through time poverty and effective time for the production of output.

4.2 RELIGIOSITY AND HUMAN BEHAVIOR

Religiosity is one of the important variables that are likely to affect human behavior. In the existing literature, we find studies, which have examined the impact of religiosity on economic decision-making. (See for instance, Hadaway *et al*, 1993; Hadaway and Marler, 2005). Using religiosity indices of Divine Economics (Hamdani, 2004) this chapter of the study is devoted to discuss the impact of religiosity on saving, time allocation, and willingness to pay for water.

4.2.1 Saving and Religiosity

Saving is considered as a key determinant of economic growth. Savings help individuals as well as households by providing them smoothness and security in future consumption, hence is important for economic sustainability. According to the Keynesian theory (1936), saving is determined by income. However, Ghafoor *et al*. (2010) and Rehman *et al*. (2010) also analyze

the effect of demographic as well as socioeconomic variables on household saving. The impact of religiosity on the saving pattern of households is examined here using the Divine Economics Survey 2013 data pertaining to Northern Azad Jammu and Kashmir (Muzaffarabad and Rawalakot). The study hypothesizes that the level of conspicuous spending is likely to be low for religious people; hence, their saving is likely to be high. The study captures religiosity level through an index. Table 4.1 presents descriptive statistics of variables under consideration.

Table 4.1: Descriptive Statistics

Variables	Observations	Mean	Std.Dev	Minimum	Maximum
Saving(Thousand rupees per annum)	275	28842.66	48951.15	0	450000
Age (years)	275	45.66	11.66	22	85
Education (completed years)	275	9.56	4.84	0	18
Religiosity Index of household head (min=0, max= 100)	275	76.85	16.49	22.22	100
Income (thousand rupees per annum)	275	589536.7	892265	48000	7800000
Liabilities (In rupees per annum) (loan which have to be paid	275	51771.82	123964	0	1200000

Source: Atiqua Naqvi, M. Phil Thesis (2013), completed under the Divine Economics Project (HEC assisted), Kashmir Institute of Economics, University of Azad Jammu & Kashmir.

The empirical findings of the study are shown in Table 4.2 below. In the table saving is a dependent variable which is measured in rupees per annum.

Table 4.2: Empirical Findings (Dependent variable is HH' Saving Per Annum)

Variables	Model
Age	-0.046* (0.07)
Household size	-0.078 (0.54)
Income	1.748*** (0.000)
Gender of household head (male=1)	0.718 (0.58)
Education of household head(Number of completed years)	-0.148** (0.02)
Liabilities	-0.159*** (0.004)
Interactive term of (Household religiosity index and Saving for religious purpose as an obligation (Ummra Hajj Zayaraat))HRI*SRPO	0.041*** (0.000)
Constant	-16.468*** (0.001)
Number of observations	275
F-Statistics	8.71
R-Squared	0.22
Adj R-Squared	0.20
Root MSE	4.987

1. *** Significant at 1%, ** Significant at 5 %, and * Significant at 10 % level.

2.Value in parentheses is P-Values for T-test

Source: Syeda Atiqua Naqvi, M. Phil Thesis (2013), completed under the Divine Economics Project (HEC assisted), Kashmir Institute of Economics, University of Azad Jammu & Kashmir.

Results presented in the table indicate that the age of household head has significant negative effect on saving. Income has positive and significant effect on saving. The gender of household head also appears as insignificant means that there is no difference in the saving of household among male or female head in the sample area. Education of household head bears negatively and significantly affect saving. The finding is against expectation and

indicate that with an increase in education it is possible that the living standards increase, leading to low saving. It is also possible that more educated household heads are much worried about the education of their dependents, hence spend more for this purpose leaving lesser for saving. Liabilities of household in terms of rupees per annum are statistically significant and bear an expected negative sign. The interactive term of household religiosity index and saving motive for religious purpose entered also found positive and is statistically significant. This shows that people who are relatively more religious save more. This may be due to high motivation to perform religious obligations such as Hajj, Ummra, pilgrimage of spiritual places and other religious obligations involving money. The overall findings of the study are consistent with conventional work such as Rehman et al. (2010), Basit et al. (2010), Rehman et al.(2011); Akerelo and Ambal, (2012), Chhoedup, (2013), Ghafooret al.(2010), Issahaku (2011), Chhoedup, (2013), Guiso et al., Majid and Abdullah, (2003), Renneboog and Spaenjers, (2012) and Leon (2013). In addition, the findings of our study suggest that apart from other factors religiosity affect household saving significantly in the sampled area. Therefore, considering the relationship between saving and sustainability one important conclusion can be drawn that religiosity has positive role in sustainability through saving.

4.2.2 Empirical Evidence of Religiosity and Behavior towards the use of Water

A detailed discussion has been presented already about the relationship between religiosity and behavior regarding the use of resources or willingness to pay for services for example safe drinking water. Water is the most important ingredient for attaining physical cleanliness for people in general and also spiritual purity among Muslims. Muslims use water for performing ablution prior to the five daily obligatory prayers. Hence, it appears very likely that their demand for water is systematically different from those who don't perform prayers. According to a Hadith (Sahih Muslim: Book 2, Number 0432), "cleanliness is half of faith." Likewise, the Qur'an says "Allah loves those who cleanse themselves (9:108)" and instructs them: "O you who believe, when you rise to pray, wash your faces and your hands as far as the elbow, wipe your heads, and your feet to the ankle. If you are Polluted, cleanse yourselves--- Allah does not wish to burden you, but desires to purify you (5:6)". Hence, a more religious person is likely to be more conscious about the performance of obligatory activities. Based on the above, the Divine Economics puts forward a proposition;

"Other things held equal, the people with high religious values are likely to pay more for water"

The rationale behind this proposition has been discussed in previous chapter that all activities of Muslims fall in any of the five ordainments [*Ahkaam-e-Khamsah*]. Hence, if a Muslim possesses high religiosity, he is likely to perform all obligatory [*wajib*] and admirable [*Musta'hab*] activities including ablution, essential baths, Friday bath, essentially washing the cloths or floor when it becomes ritually impure [*Najas*]. Besides using this framework, Farrukh (2014) used Extended Module Dataset of Divine Economics Survey 2013 comprising of 245 households from district Rawalakot Azad Jammu and Kashmir. He tested the propositions by estimating the following model;

$$WTP_i = \beta_0 + \beta_1 H_i + \beta_2 L_i + \beta_3 A_i + \beta_4 R_i^2 + u_i$$

WTP_i = HHs' willingness to pay for water in PKR

H_i	=	HHs' characteristics (Income, Education, Age, HHs' Size, Satisfaction from existing water system, water fetching, Sever Issues in the locality).
L_i	=	Location of HHs (Urban, Rural)
A_i	=	HHs' Awareness about Water use.
R_i	=	Religiosity index variables - Purdah Dummy taking 1 for purdah and 0 otherwise

Table 4.3: Empirical Finding (Dependent Variable: Willingness to Pay in PKR Per Month)

HHs' expenditures	0.0032*	(0.000)
HHH General Education (Years)	2.5364	(0.703)
HHH Age (Years)	0.8614	(0.405)
HHs' Size	-2.6450	(0.654)
Location [Rural/urban dummy]	10.662	(0.718)
S.F.E.S (Satisfaction from existing system (Yes=1 , otherwise=0))	-85.049*	(0.003)
Awareness [Index of electronic media, print media, mosque/Madrasah, local organizations, educational institutions and others]	1.1474	(0.173)
Severe Issue (1= Lack of water , 0=otherwise)	42.360	(0.162)
Own Source(1= Lack of water , 0=otherwise)	-27.943	(0.319)
Fetching of water (Fetching of water from outside source (Yes=1 , otherwise=0))	68.08**	(0.019)
Number of children (No. of children below age 10)	7.9808	(0.432)
HH religiosity Index (Index of religious beliefs and practices (Daily prayers, Recitation of Holy Qur'an and Religious study/audio visual etc.)	4.9621*	(0.000)
Purdah of women (1=Purdah, 0=otherwise)	54.863*	(0.000)
Constant	-310.76*	(0.002)
R^2	0.42	0.42
Adjusted R^2	0.38	0.38
F Statistics	0.000	0.000
Df	13,231	13,231
Number of observations	245	245

Source: Attique Farrukh M.Phil Thesis (2013), completed under the Divine Economics Project (HEC assisted, Kashmir Institute of Economics, University of Azad Jammu & Kashmir

The estimated model is shown in Table 4.3. The findings in the table show that apart from conventional variables such as income of the household, religious variables such as religiosity index and 'purdah' of women have significant impact on WTP for water. It appears that the households' who are more religious abide by the teachings of Islam and are more conscious about women going outside the home for fetching water. Moreover, their need for water is relatively more inelastic because of the Sahriah requirement in the form of *Ahkaam-e-Khamsah* already discussed above and in the previous chapter. Hence, they show more willingness to pay for water as compared to those households' where women do not observe

purdah Likewise, religiosity index (Daily prayers, Recitation of the Holy Qur'an, Religious study/audio-visual etc.) is positively related to WTP for water. This implies that higher the religious orientation of a household, the more willing they are to pay for water. Whether and what type of religiosity affects human's environmental behavior in a positive direction is not in the scope of the present study, however, the above findings support the propositions of this study that religious values affect households' economic decisions such as their water use and consequently their willingness to pay for water.

Since *Ahkaam-e-Khamsah* lead the follower Islam to consumer moderately therefore, another insight from the study may be drawn that religiosity promotes the universal value of moderation which is a key to economic as well as environmental sustainability. Therefore for policy, it can be implied that religiosity also positively contributes environment management and sustainability. However this proposition needs to be empirically tested in later studies.

4.2.3 Empirical Evidence on Religiosity, Time Allocation, and Time Poverty

It has been explained in the previous chapter that poverty can be divided into income poverty and non-income poverty. Time poverty is a type of non-income poverty. An individual is assumed time poor if he/she has high disposable income but relatively less leisure time. Recent economic literature have analyzed the impact of different variables such as age, gender, location, marital status, employment and occupation etc., on time poverty (see for example, Najamus Saqib,2012; Riberio *et al.*,2012; Bardasi and Wodon, 2006 and 2009; David, 2006; Jeff *et al.*, 2000). However, an important variable of religiosity is ignored by this literature. Hence, there is a need to work on this area. According to Islamic faith in general and *Ahkaam-e-Khamsah* in particular, a more religious person is likely to be less time -poor. Islam encourages allocating time in a balanced way between work, family, society, religion and leisure. It ordains its followers to organize their lives in a way that all who deserve one's attention must get their due share of time (Hamdani, 2002). Keeping in view this, the following proposition is presented;

Proposition: *Other things held equal, the people with high religious values are likely to allocate daily time to self, family, society, work and religion in a relatively more balanced manners as compared to others".*

According to the Divine Economics Framework, daily time has to be divided into four main activities: time for work and work related activities, time for family and social work, time for personal care and leisure, and time for religion and religious activities (Hamdani, 2002). Moreover, leisure is of two types: active and passive leisure. It is worth mentioning that sleep is passive leisure, while in active leisure one remains engaged in doing something where his or her mind is not in the state of rest. In this way it does not give the true meaning of leisure. Therefore, those individuals who do not have sleep according to their biological need as prescribed by medical science are in the state of time poverty. Hence, the loss of passive leisure is considered as time poverty. To analyze the impact of religiosity on time poverty the following model is estimated by Maria (2013) using the Divine Economics Model and its survey dataset 2013;

$$TP_i = \beta_0 + \beta_1 R_i + \beta_2 X_i + \varepsilon_i$$

Where

TP_i = Time poverty

R_i = Religiosity(Index of religious activities , religious education etc)

X_i = The vector of control variables(Like age, gender, marital status, household size, health, location, etc)

To examine the hypothesis 299 individuals have been interviewed in District Muzaffarabad AJ&K out of which two hundred forty (80.2 percent of the total sample) are male and fifty-nine (19.7 percent of the total sample) are female. Table 4.4 presents the descriptive statistics of variables under consideration.

Table 4.4: Summary Statistics of Variables under Consideration

Variables	Observations	Mean	Std. Dev.	Min	Max
Age of the respondent	299	38.6	12.2	18	20
Sleep per week [hours]	299	55.3	5.5	35	64.1
Religious practice Index	299	59.4	20.75	0	100

The regression results of the same are shown in Table 4.5 below.

Table 4.5: Empirical Findings (Dependent Variable is Time Poverty)

Variables	Coefficients	Sig.
Gender (male=1)	5.035***	(0.000)
Marital Status (married=1)	1.835**	(0.043)
Location (Urban=1)	0.0211	(0.973)
Age (in years)	0.00072	(0.980)
Index of Religious practices	-0.0273 *	(0.074)
Constant	56.888***	(0.00)
R ²	0.1602	0.1602
Adjusted R ²	0.1430	0.1430
Root MSE	5.1193	5.1193
Number of observations	299	299

The findings in the table show that men are more time poor than women. Since sample size is not large enough and due to sensitivities, women response are not proportionate to their population but women were interviewed due to their status as head of household [where applicable], therefore this result should not be taken more than insights for future research. Likewise, a married person is more time poor and this result is supported by Saqib *et al.* (2012). Surprisingly, age has negative and insignificant effect on time poverty while as a priori, it was expected be positive due to possibility that with increase in age, the home responsibilities such as caring of family and children also increase which might leave lesser time for sleep. However, the negative result is supported by Saqib *et al.* (2012) but their result is significant. One reason for the negative result may be that with age increase especially in older age, economic and social responsibilities of family are shouldered by younger brothers, children/adults leaving spare time for elderly. Religious education has negative and significant effect on time poverty. Individuals with higher level of religious education are less time poor unless he acts against religious education which motivates the followers about

moderation. This is an expected result because the person who has high religious education spends his time among all activities with justice. This result is also in line with the proposition by Hamdani (2002). According to him, other things held constant a more religious person would allocate more time to personal leisure, so the person with more religious education is likely to be less time poor. The index of religious practices has also negative and significant effect on time poverty. Analysis of the above all studies show that religiosity is an important determinant of human behavior. Future researchers can explore other dimensions of human behavior that is likely to be associated with religiosity such as cooperation, helping others, use of public facilities, paying taxes etc.

4.2.4 Empirical Evidence on Religiosity, Ethics, and Productivity

In Chapter 2, a review about workers' efficiency and firms' productivity was given. A number of determinants of the workers' efficiency or firms' output performance have been defined in both the theoretical and empirical literature. However, most of the existing literature associates workers' efficiency with the traditional factors like human capital attributes such as education, skills, experience etc. (Griliches and Regev, 1995; McNabb and Whitfield, 1998; Oulton, 1998; Griffith and Simpson, 2004). Most of these studies show that one has to go deep into the behavior of employers and employees for understanding the determinants of firms' output performance. However, the behaviors of both employers and employees, in turn, are shaped by a blend of conventional and unconventional factors.³⁵

Recently, various studies have shown that along with conventional factors, the ethical attributes of workers can play an important role in firms' output performance (Spence, 1999; Spence and Lozano, 2000; Berrone et al., 2005).³⁶ Similarly, attributes like spirituality, honesty, etc. shape the behavior of workers and may, in turn, affect firms' output performance

³⁵For instance, according to Morrison (2000), firms being integrated part of the whole society would have some moral and ethical obligations. Thus, in formulating its objective functions, they have to incorporate social, cultural, moral and ethical variables besides conventional economic variables.

³⁶Ethics is the science of morals that distinguish between right and wrong and it is concerned with the principles of human duty (Crane et al., 2010 and Freeman et al., 2010). Ethics concerns the proper way of conducting production, consumption, distribution, and transfer of assets in any economic activity (Ahmad et al., 2009).

(Hamdani, 2002; North, 1990; Longenecker et al., 2005; Gibb, 2005; Lather, 2008; Ahmad et al., 2009; Shen, 2009; Freeman et al., 2010). For instance, Gibb (2005) state that the socially responsible behavior among smaller firms should be considered as a key competency that lays the ground for the way the business should operate. North (1990) argues that decent, fair and trustworthy individuals make it easier for poor quality formal institutions (i.e., where there is minimal oversight, few resources devoted to detection, and small chances of punishment) to work. Similarly, North (1990) further argues that transaction costs – the costs of policing the trading arrangements – are lower when individuals share beliefs, norms, ideology and a common sense of fairness, which can limit their opportunism. This implies that the lower levels of institutional quality will suffice in environments where individuals share such values. However, regarding the relationship between ethics and firms' performance, the consensus is not general. For instance, Hosmer (1994) and Jones (1995) argue that ethics is good business because it generates positive externalities like trust and commitment to stakeholders, which in turn assures long-term performance. In contrast, others remain skeptical (Friedman 1970; Schwab, 1996; Jensen, 2001). For instance, they argue that ethical initiatives are investments without payoffs and therefore against the shareholders' best interest. However, most of these studies have focused on employers' ethical attributes while neglecting the employees or workers' ethical attributes. We fill this gap by focusing on both the employers' and the employees' ethical attributes. In particular, we analyzed how attributes like honesty, loyalty, and justice affect workers' efficiency or firms' productivity.

A Case Study: To test the proposition whether or not ethical values influence firms' performance through workers' productivity, an analysis of small handicraft enterprises in Muzaffarabad Azad Jammu and Kashmir (AJK) was carried out under the present research keeping in view three background issues; First, the available research on ethics and firms' performance has been largely concentrated on large firms (Morris et al., 2002). Second, the size of the firm is a significant differentiator for ethical issues whereby such issues identified in larger firms do not reflect what is actually happening in smaller firms (Spence and Rutherford,

2001). Third, smaller firms have strong interconnectedness with local community in which they operate (Gibb, 2005).

Assuming that both human capital attributes (education, skill, experience) and ethical attributes (honesty, spirituality, and religiosity) are human phenomenon that could affect workers efficiency and hence firms' productivity, the following regression model was estimated to investigate the contribution of workers' ethical attributes to firms' productivity.

$$P_i = \beta_1 + \beta_2 e_i + \beta_3 X_i + \varepsilon_i$$

P_i is the productivity of firm i , measured by the monetary value of its sales per annum. e_i Denotes the index of firms' ethical index estimated through workers ethical attributes that captures the characteristics explained below. A composite index is calculated by combining these characteristics. X_i is the vector of control variables. The main variables that we control for include number of workers in a firm, working hours of workers in a year, physical capital, workers' education, and workers' experience. ε_i denotes error term of the model with the usual properties. The data of our analysis is survey based, so most of the variables of our analysis are self-constructed. For instance, firm's productivity is measured by firm's annual sale of products. The main variable of our concern is the firms' ethical index constructed through workers' ethical values. The index captures six ethical values of workers that are responsibility, justice, sacrifice, generosity, honesty, and patience. The index of values ranges from 1 to 30, with highest score showing highest inclination towards ethical values.

The number of workers includes both the skilled and the unskilled workers that are hired by the firm on full time basis. In most of the cases, it also includes employer as is stated earlier the owner of the handicraft firm actively participate as a worker in the production process. The working hours of workers is the total working hours of firms' workers per day. Firm's physical capital is measured by the total value of the firms' capital goods. Firm's workers education measures the average education level of firm's workers, which is measured in years. Similarly, workers experience measures the average experience level of firm's workers, measured in years. Furthermore, an index of the market related factors is developed which

captures the provision of raw material, the prices of raw material, the availability of loan, infrastructure facilities, skilled labors, foreign products and the marketing skills. The index ranges from 1 to 27 with highest score showing higher access to market related facilities. In the same way, like the index of market related factors, an Index of government related facilities is developed. It captures facilities like the provision of small amount of loan, the provision of interest free loan, tax reduction, subsidy (on electricity, raw material, transport), government sale and purchase center, and training facilities. It is intended to see whether the government provides these facilities or not.

The Divine Economics proposition which integrates the study of ethics into economic analysis of firms in above mentioned manner, was empirically tested by Rashida (2014). She used the data of *Divine Economics Survey - 2013* of Kashmir Institute of Economics (KIE) collected from district Muzaffarabad in the spring of 2013. She used 'Ethics and Productivity Module' of the Survey.³⁷ Both employer and employees of eighty-three handicrafts firms were interviewed at the premises of the firms through a well-structured and pre-tested questionnaire.

Table 4.6: Summary Statistics

Variable	Observations	Mean	Std. Dev	Min	Max
Log (Sales of firm per annum)	83	12.34	1.23	10.59	14.46
Index of firms' ethics	83	82.64	6.72	48.10	95.00
Index of workers' ethics	83	81.88	7.99	53.33	95.50
No of workers in firm	83	3.13	1.25	2.00	10.00
Total working hours of workers in firm	83	13.94	2.28	8.00	19.00
Total capital of firm	83	11.96	1.40	9.58	14.75
Index of market related factors	83	65.68	10.03	29.10	85.00
Index of government related facilities	83	45.71	8.70	37.00	86.00
Education of firm workers	83	7.58	3.006	1.00	20.00
Total experience of worker (in Years)	83	10.73	6.26	3.00	33.33

Notes: Indices of firms' ethics and workers' ethics are in percentage terms ranging from 1% to 100%. Workers' experience are measured in number of years.

Source: Rashadia Saddique M. Phil Thesis (2014), completed under the Divine Economics Project (HEC assisted), Kashmir Institute of Economics, University of Azad Jammu & Kashmir.

³⁷In the beginning, she had no secondary information regarding the location of these handicraft firms; therefore, she used snowball sampling technique which is the non-probability sampling method used for unknown or rare population.

The dependent variable is the logarithm of the annual sales of the firm, which range from 10.66 to 14.45 with a standard deviation of 1.23. Similarly, our main variable of interest in the list of explanatory variables is workers' ethical attributes. The index for the workers' ethical attributes that we develop in this study takes the values ranging from a minimum 53.33 to a maximum of 95.51 with a standard deviation of 7.99. The lower standard deviation of both the annual sales of the firms and workers' ethical attributes show that our data don't suffer from the problem of high dispersion. Similarly, in the list of control variables, the index of firms' ethics denote the aggregate ethical attributes of both employers and employees and is ranging from 48.10 to 95 with average of 82.64. Moreover, since the handicraft industries are small scale industries, the number of workers is relatively low, ranging from 2 workers to 10 workers. Given the small number of employees; accordingly, the total working hours per day in a firm range from 8 hours to 19 hours with an average of 13.94. Furthermore, the variable workers' experience is measured in years and the average score on these variables is 1.02, 7.57 and 10.73 years respectively.

Table 4.7: Dependent Variable: Firms Productivity (Log of Annual Sales in Pakistani Rupees)

Variables	I	II	III	IV	V	VI
Firm ethics	0.034** (0.01)	-----	0.032** (0.01)	-----	0.034*** (0.00)	-----
Workers' Ethics	-----	0.026** (0.01)	-----	0.023** (0.03)	-----	0.023** (0.05)
Number of worker in firm	0.228*** (0.00)	0.220*** (0.000)	0.229*** (0.00)	0.220*** (0.00)	0.241*** (0.00)	0.226*** (0.00)
Total working hours of workers in firm	0.109*** (0.00)	0.105** (0.01)	0.100** (0.01)	0.096** (0.01)	0.097** (0.01)	0.097** (0.01)
Total Capital of firm	0.451*** (0.00)	0.427*** (0.000)	0.462*** (0.00)	0.438*** (0.00)	0.423*** (0.00)	0.414*** (0.00)
Index of market related factors	-----	-----	0.018** (0.03)	0.018** (0.05)	-----	-----
Index of government related facilities	-----	-----	-----	-----	-0.018* (0.08)	-0.009* (0.38)
Education	-0.019 (0.37)	-0.020 (0.36)	-0.021 (0.33)	-0.022 (0.33)	-0.017 (0.45)	-0.018 (0.45)
Experience of workers within firm	0.039** (0.02)	0.043** (0.01)	0.032* (0.06)	0.032** (0.05)	0.035** (0.03)	0.034** (0.02)
Constant	1.754 (0.22)	2.747 (0.026)	0.823 (0.57)	1.920 (0.131)	2.924 (0.06)	3.663 (0.02)
N	83	83	83	83	83	83
R-Squared	0.651	0.647	0.672	0.665	0.666	0.651
Adj R-Squared	0.624	0.619	0.641	0.635	0.635	0.651
F-Statistic	23.69***	23.27***	21.92***	21.29***	21.29***	19.99***
Root MSE	0.753	0.756	0.735	0.742	0.743	0.758

The above table summarizes the empirical results of the estimation where we regress the logarithm of firms annual sale on workers' ethical attributes along with other control variables. There are two points to be noted in the analysis. First, the sample size is 83 handicraft industries of Azad Jammu and Kashmir, Pakistan for all the estimated columns. Second, the differences between the index of firms' ethics and the index of workers' ethics are

minimal as in most of the handicraft industries the employers are also employees at the same time. Thus, we consider both the aggregate firms' ethics and the workers' ethics in our analysis. Columns II and I are showing our base line regressions for firms' ethics and workers' ethics respectively. In these baseline models, we include the number of workers, total working hours, physical capital, education, and experience along with the variables of interest. In both of the models, the variables of our interest, *i.e.* firms' ethics and workers' ethics are significantly contributing to firms' productivity as measured by the annual sales of the firms. For instance, in case of firms' ethics, a 1 percent change in firms' ethics increases firms' productivity by 3.4 percent. Similarly, in case of workers' ethics only, a 1 percent change in workers' ethics increase firms' productivity by 2.6 percent. Additionally, in both of the models, the number of workers, total working hours, physical capital, and experience have significant positive effects on firms' productivity. Interestingly, education has no significant effects on firms' productivity. The justification for the insignificance of education is that, in Pakistan, uneducated and semi-skilled workers characterize majority of the small-scale industries. Second, we have no formal training facilities as far as handicraft industries are concerned. Moreover, both base line models explain almost 65 percent variation in firms' annual sales respectively as is shown by the values of R^2 . In addition, in both case we have significant *F*-Statistics, which show the significance of overall regressions. These results resemble with the findings of Jones (1995) and Jones et al. (1999) where they show that the proactive ethical initiatives have a positive impact on firms' financial performances. It is also related to Ahmad and Pi-Shen (2009) where they find that in small firms, ethics, and social responsibility issues are important determinants that affect entrepreneurial behaviors and therefore firms' productivity.

From column (II) onwards, sensitivity analysis have been carried out. For instance in columns (III) and (IV), we add the index of market related factors to our base line regressions respectively. In both of these cases, we have significant contribution of market related facilities to the firms' productivity. However, the significance of our main variables of interest remains intact. Onwards, we add the index of government related facilities to the list of

control variables in columns (V) and (VI). In both cases, these facilities have no significant contribution to firms' productivity, showing the lower level of government facilities provided to the handicraft industries. Again, the significance of ethics variables and the overall regression remains intact, *i.e.* firms' ethics and workers' ethics still enhance firms' productivity by 3.4 percent for a 2.3 percent respectively.

The empirical evidence supports the hypothesis that the ethical attributes of workers or firms affect firms' productivity positively. This support the idea that ethical values among workers or management of enterprises make the workers systematically different from their counterparts.

Summary, Conclusions and Recommendations

5.1 Summary and Conclusions

Values, religiosity and spirituality are not recognized important determinants of human behavior in conventional economics despite the fact that 89 to 93 percent of world population shows affiliation with some religion, sect, or spirituality pattern. Being intrinsically present in humans, such patterns, more sustainably, govern other aspects of human life including economic behavior. Sustainable development is an approach aims to develop human and other resources in a manner that the world's current consumption does not take place at the cost of consumption of future generations. One may disagree to have a faith of any type, but it is difficult to disagree that people having strong faith of any form, especially in an afterlife, systematically differ in their socioeconomic behaviors with those who have little or no faith in an afterlife (Hamdani 2004, 2006). It is also widely agreed that religion and faith significantly help alterations in the lifestyle to live within the carrying capacity of the environment and within the tolerance level of the people with whom living remains unavoidable. Values and ethics are translated into people's socioeconomic living styles including their thinking and ideas about what ought to be for the 'self' and for 'others'? for 'today' and for 'tomorrow?'. This explains the interrelationships among values, social capital, religious capital and spiritual capital in sustainability perspective. However, the type and magnitude of such capital determines how far it may be effective in a normal and post-crisis situations. A detailed inquiry about such neglected factors that influence the human allocation decisions is a long felt need.

The present research attempts to contribute towards bridging this gap. It explores multi-dimensions of economic and apparently non-economic realities in the structure of divine economics which allows the analysis of values, religiosity, and spirituality the same way as other economic variables. The research project is funded under Thematic Grants of Higher

Education Commission of Pakistan and Conducted by the Kashmir Institute of Economics, University of Azad Jammu and Kashmir. The report in hand is one of the series of studies/reports, which attempt to bring into mainstream the role of values in individuals' economic allocation choices under the normal conditions and in post-disaster situations. This requires human being to utilize both material and non-material resources in the best possible (optimal) way. However, conventional economics assumes that individuals are motivated by self-interest [hence behave in selfish way] and one can expect that a self-regarding individual will mainly prefer to consume resources for self or for today rather as compared to the 'others-regarding' individual who would forego something today for wellbeing of the future generations. From here the importance of ethics and values in sustainable development arises. The 'other-regarding' behavior emerges due to a set of values which are systematically different under different religions, sects and spirituality patterns. Therefore, the conventional sustainability economics cannot escape from the integration of what we called 'Divine Capital' which comprises of religiosity, spirituality, ethics and reinforcement. But the fact is that the researchers fail to provide a sound ground for ethics and morality in the conventional paradigm of economics.

Divine economics framework attempts to fill this gap and provides ground for the existence of a value-loaded micro economic agent. Divine Economic Framework assumes a model where individuals are rational utility maximizers subject to time and resource constraints. In the model, utility is the sum of current and future stream of utility, where future comprises of the remaining part of life on earth and a perceived life after death. The perceived afterlife contains different phases which are very well defined, explained and preached by religions. For example, in Islam, the life phase starting from death is called purgatory [*Barzakh*], a period starting from death till the Day of Judgment where pre-fixed punishments and rewards are attributed to only some of the human decisions and deeds on earth. Then there is a Day of Judgment [*Mahshar*] when all the human decisions and deeds shall be evaluated and punishment and reward shall be announced for an eternal life of perfect comfort and wellbeing or a severe disutility and discomfort, the eternal destiny known as either heaven or

hell. Here, the Divine Economics emphasizes that regardless of the debate whether one should believe in a religion or not, the honest economist cannot disregard people's perceptions which they form about a an afterlife [whatsoever] because those perceptions systematically alter their values patterns which consequently govern their personal, economic, social, religious, spiritual, national and environmental behaviors and allocation decisions during the life time spent on earth.

Since, in divine economics model, agent decision is based on the belief of life in this world and hereafter too which makes him different from the conventional economic-man, therefore, the divine economic man is [rationally] halted from doing an activity that may be perceived by him as harmful for his current or future life or both. He would display the same behavior even without entering into cost-benefit analysis of actions and allocations when, according to his perceptions [whatsoever], such actions or allocations are not in accordance with the commandments of an entity he believes to be supreme in the universe (named as Allah, God, Raam, etc.). For example, while calculating cost-benefit, a Muslim, does not behaves according to his personal likes and dislikes but rather he assigns weight to what Almighty Allah terms some activity to be beneficial or harmful. According to Islam the Divine economic agent thinks that, Allah has perfect and supreme knowledge and is the creator of whole universe; hence he is sure that Allah's justice requires him for doing an activity that must also safeguard the interest of himself as well as of future generations. Thus, divine economic model assumes that the behavior of a divine economic agent is likely to be perfectly in line with sustainable development.

Based on the Divine Economic Framework, the present research aims to propose new faith based ideas and explore empirically the level of strength between faith and economic decisions that have direct or indirect interrelationship among values, religiosity, spirituality and economic sustainability. The main hypothesis of the study is whether systematic relationship exists among faith, religiosity, spirituality, and ethics with the economic behaviors. The project in particular takes those economic behaviors that have direct or

indirect implication for sustainability. For example, saving is an economic behavior that has direct implication for future generations. The project tests whether saving behavior of religious individuals is different from the saving behavior of less religious individuals. Likewise optimal time allocation is required for balanced life and sustainable development. If a person does not observe balance in time allocation and gives more time for work and less time for leisure or sleep, he/she would lose the energy to productively work in subsequent period. In other words, his labor productivity shall not be sustainable. Likewise, water is important for environment. The optimal use of water is a need for sustainable development. Optimal use of water requires that people should value water. This valuation behavior is not similar among all people. A number of factors affect such behavior which may be captured through willingness to pay for water. Once again, the study tests whether people with higher level of religiosity are more likely to pay more for the water due to the religious obligations for which water is a pre-requisite. In the same manner, the study tests whether religious people are more productive than less religious. People that are more productive are more important for an economy as the more they produce the more they can earn leading to more saving for future generations.

Part of the overall research project outcomes is presented in the report in hand which is organized as follows. Chapter 1 provides details about the research project, its objectives and introduces the basic concepts. Chapter 2 provides the details of these relationships as given in conventional and religious literature. For instance, it provides the links of ethics with the above-mentioned variables, i.e., saving, time allocation, productivity, and willingness to pay for water. Chapter 3 provides the some of the results relating to the underlying hypotheses. This chapter shows with the help of data analysis that difference in the level religiosity, social and spiritual capital and values has significant effects on time allocation, time poverty, altruism, connectedness with relatives and friends [social capital]. Since, human wellbeing is at the center of sustainability economics, this chapter also points through data analysis to individual's self-reported satisfaction level in perspective of values under discussion. Chapter 4 provides details of four specific analyses that test nexus between saving, time allocation,

willingness to pay for water, and firms/workers' output with reference to religious and ethical variables. The results lead to conclusion that individuals with higher level of religiosity are relatively less time poor; save more; their willingness to pay for water is higher due to religious obligations,³⁸ and workers' or firms' having higher score on ethical index have higher productivity. These results are drawn from a sample of Islamic society, the rationale behind these is simple because Islamic faith provides a complete code for performing life which determines follower's allocation decisions. For example, since Islam declares worship, ritual cleanliness and internal purity as obligatory, therefore, use of water among strongly practicing Muslims is systematically different from others. The systematic difference may be of two directions. On one hand, demand for water among strongly practicing Muslims would be higher due to obligations, whereas on the other hand, it would be lower because of Islamic preaching about austerity and fair use of resources. The later may lead to less wastage of resources. In case of firm's performance, the index of the workers' ethical attributes like honesty, responsibility, justice, sacrifice, generosity, and patience seem to work well the same way as conventional factors. The subsequent section of the current chapter provides some insights for future research in this direction and also makes some recommendations for future policy purposes.

The present research facilitates the way for innovation and pondering over social, ideological and contextual needs of Pakistan. Examining the role of religiosity, spirituality, ethics, and other such aspects is important for economists who believe that Pakistan faces the problem of corruption, bad-governance, injustice, disparities and other micro and macro level evils. Divine Economics being at its initial phase can help in developing basic ideas, propositions, initial models, religiosity indexes and case studies. For instance, the Social Choice Framework offers a possible way of articulating religiosity indexes. However, the only way out to the negative result of Social Choice Theory for religiosity indexes is the refinement of information available for individual evaluations. Additionally, there are some possibilities and potential problems awaiting any researcher who intends to take religion, especially Islam, as a factor

³⁸ such as "purdah" of women

affecting the behavior of a consumer, entrepreneur or producer, labor, and other economic agents. However, the construction of religiosity indexes, if not impossible, is, at least, very difficult due to large subjectivism involved in the treatment of different religious perceptions, beliefs, activities and diversity of religious interpretations. Possibilities may exist that these problems might disappear if religiosity is measured using some other framework than Social Choice Theory for analysis. On the positive side, the observance of Divine Economics for example what is known as the limits fixed by the Divine Itself [for example what is known in Muslim faith as *Hudood-ullah*] is an indicator for measuring development. In this regard, the approach of divine economics can be a step forward in finding the quantitative level of observing Divine ordainments or commandments. In other words, Divine economics offers an opportunity to measure religiosity through various religiosity indexes. One existing promise of Divine Economics that distinguishes it from Economics of Religion mainly developed under Christianity and Judaism is its attempt and a successful start of using the vocabulary concept, definitions, propositions, and axioms on the bases of the latest religion Islam while erecting its models and theories on the common beliefs and principles of religions. It safeguards Islamic spirit but uses the language and terminologies to make it communicative not less than the conventional economics. The values, social capital, and spirituality are Islamic priorities but through the present attempt of extension in Divine Economics, these factors have been successfully modeled as framework and tested empirically in conventional manner to allow development of Islamic Economics in a language that can better communicate rather confront with Western economics.

5.2 Insights for Future Research

To draw insights for development of alternative faith-based models, the present study conducted analysis of Divine Economics Survey 2013 Main Module, and its case studies based on Main as well as Extended Modules of selected topics. The following are some potential insights for future research;

- On supply side, the present study analyzed the impact of workers ethical attributes /values on firms' output performance, which, as a case study, covered only small-scale enterprises in a limited area of Azad Kashmir. The same analysis can be carried out (extended) for large-scale industries and Institutions everywhere with wider datasets and also a wider list of religious, ethical and spiritual values as determinants.
- Considering saving as one of the important aspect of sustainability economics, another case study analyzed the impact of religiosity on households saving behavior in district Muzafarabad AJ&K to see the role of religiosity in saving behavior. The same analysis can be carried out (extended) to other similar topics with a wider list of religious, ethical and spiritual values and other geographic areas.
- Work leisure imbalance as well as other types of imbalance in time use creates health and other implications of individuals hence needs to be analyzed in values and sustainability perspective. The impact of religiosity on time-poverty was modeled incorporating faith and, as a case study, only Muzaffarabad AJ&K data were collected. It can be tested 'whether income poor are also time-poor'. Furthermore, similar study can be carried out for the whole of AJ&K and Pakistan, or other countries with a wider list of religious, ethical and spiritual values as determinants.
- The above proposed researches can be made for better understanding of human happiness and well-being across people varying in religiosity, spirituality, morality and reinforcement. Such analyses can be done around local, social, cultural, environmental, national and universal values.

5. 3 Policy Recommendations

Based on the present research, the following recommendations are made for policy makers, economic administrators, professionals, academia and others who are stakeholders of economy, society, religion and economic performance;

The study theoretically and empirically established that the importance of religiosity in determining various economic behaviors. On one hand we explore that economic factors which are visible such as money, taxes affect behavior while on the other hand we find that religious factors, such as fear of God, fear of hell in the life hereafter, the incentive for entering to paradise also affect economic behavior. Therefore, we can claim that those factors which enhance the level of religiosity can be used for increasing or decreasing the cost of some undesirable behavior which is not in line with the development of ideological countries like Pakistan. For example, corruption is one of the major issues in Pakistan but because of weak values of institutional framework, absence of moral strength and lack of religious harmony and spiritual impurity hinders in eradication of corruption. More technically speaking both formal and informal institution failed in minimizing the corruption from society. The government, the universities and research organizations need to clearly identify the role of religiosity in promoting the values such as faith, contentment, moderation, justice, respect, care, purity, wisdom and responsibility etc. for promoting good governance of economy in a sustainable way. In the same manner, through investment in Divine Capital [religious capital, moral capital, spiritual capital and a reinforcement mechanism], the people can be educated about the both-worldly cost of corrupt practices to enable them rationally choosing the just-practices. This can be done in a number of ways including, for example, curriculum change, teaching aids, reforms in formal, non-formal and madrassah education systems. Moreover, an important step in this regard can be media regulation in accordance with Pakistan's religious, cultural and other contextual requirements.

Pakistan is an Islamic Republic. Since all actions and behaviors under Islam fall under *Ahkaam-e-Khamsah*,³⁹ that leads the follower of Islam to allocate resources under the values of Islam which are in fact the universal values. Hence, an insight from the study may be drawn for

³⁹ *These are Wajib/Fardh, Musta'hab, Mubah, Makrooh, and Haraam.*

policy that investment in promotion of true religiosity and the universal values would serve as a key to higher economic performance and a sustainable life one the globe.

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ANNEXURES

Annexure - 01: The Research Team

Divine Economics Project [Report 02]

The Role of Values, Social Capital, and Spiritual Capital in Normal and Post-disaster Economic Behaviours: An Empirical Extension of Divine Economics Framework in Sustainability Perspective

Principal Investigator

- Dr. Syed Nisar Hussain Hamdani

Co-Principal Investigator

- Ms. Fozia Munir

Technical Assistance

- Dr. Miraj-ul-Haque, Research Fellow in Divine Economics

Senior Research Fellows [Post-Doctoral]

- Institutional Economics: Dr. Karim Khan, Assistant Professor Economics, PIDE, Islamabad
- Behavioral Economics: Dr. Anwar Shah, Assistant Professor Economics, School of Economics, QAU, Islamabad

Trainers

- Dr. Abdul Sattar, Instructor, Federal Bureau of Statistics, Islamabad
- Mr. Sayed Abdul Majid, Research Economist, PIDE, Islamabad

Data Management

- Mr. Syed Ali Abidi

Research Associates

- Ashar Awan
- Rashida Siddique
- Mr. Aasim Shamim Khan
- Atiqua Naqvi

Multi-Disciplinary Resource Persons / Religious Scholars

- Dr. Mohammad Sadiq Afridi, Visiting Faculty KIE/Director Agricultural Research & Technology Transfer, PARC, AJ&K, Muzaffarabad
- Dr. Usman Mustafa, PIDE, Islamabad

- Ikram-ur-Rashid, Associate Professor Isl. Studies/Arabic, University of AJK
- Molana Matloob Muhammadi, Porfessor (Philosophy), Al-Mustafa International University Qom, Iran
- Dr. Mahmood Khalid, HoD, Deaprtment of Health Economics, PIDE, Islamabad
- Mr. Abdul Shakoor Mehravi, District Qazi, Government of AJ&K, Muzaffarabad
- Hasnat Gilani, PhD Scholar, IIU, Islamabad
- Allama Mufti Syed Kafayat Hussain Naqvi, Member Islamic Ideology Council, Government of AJ&K.
- Molana Sahibzadah Salim Chishti, Chairman, Ulama and Mushaikh Council, Government of AJ&K
- Mr. Syed Saqib Hamdani, Al-Mustafa International University Qom, Iran
- Mr. Aliraza Kazmi, Al-Mustafa International University Qom, Iran
- Ms. Dr. Tasnim Akhtar, University, Bangladesh
- Mr. Mudassar Gardezi, Lecturer Law, UAJK
- Mir Adnan Rehman, Lecturer Law, UAJK

P.HD and M.Phil Scholars of KIE [Beneficiaries]

- Ms. FoziaMunir
- Ms. Maryum Bint-e-Ejaz
- Mr. AsharAwan
- Ms. Rashida Saddique
- Ms. Syeda AttiqaNaqvi
- Mr. Attique Farrukh
- Ms. Maria Siddique
- Ms. Maryum Banday
- Ms. Tooba Bandy
- Mr. AsimShamim
- Kh. Ashfaq Banday
- Ms. Seema Ameen
- Mr. Shahid Quddoos
- Mr. Asraar Ahmad

Others

- Mr. Ch. Mohammad Naveed [Data Entry]
- Mr. Adeel Kazmi [Data Entry]
- Zaigham Abbas [Values Classification]

Support Staff

- Mr. Muhammad Shafiq
- Mr. Ibne Ali Arif

- Mr. Wajid Khalil
- Mr. Naeem Ahmad
- Kamal Abbas, IT Section, UAJK

Valuable Cooperation

- John Thrumpbour, Research Director, Labor & Work life Program, Harvard University, USA
- Dr. Mirza Burgees Baig, Professor of Sociology, King Saud University Saudi Arabia
- Dr. Mohammad Nasir, Coordinator Universal Values Survey, Manchester, UK

Annexure – II: List of Project Reports

Report-1: Project General Report on project achievements

Report-2: A Divine Economics Approach to Universal Values

Report-3: International Conference Highlights [partially assisted by the project]

Report-4: Technical Report on partial research work and findings [*in-hand*]

Report-5: Project Policy Brief

Report-6: Divine Economics Survey 2013 -Manual

Other documents in-process

Disaster Perception Survey and Analysis

Capacity Building Programs – Pictorial Glimpses

Kashmir Economic Review - Conference Proceedings Edition

Universal Values Classification - A New Short List

Divine Economics Discussion/Working Papers [Series]