

Consumption of Family Takaful affected by Microeconomic Factors: A Case Study of Islamic insurance Takaful in Pakistan

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Abstract—This study empirically verifies the link between macroeconomic variables (i.e. income per capita, savings, inflation, stock and index) with the demand for Family Takaful in the context of Pakistan using time-series data from 2006 to 2016 of Pak-Qatar Family Takaful Company and Dawood Family Takaful Company. It was concluded from this study that per capita income is a strong forecaster of Family Takaful demand in Pakistan, while other macro-economic factors such as KSE composite index has significant and positive relationship with Takaful demand in Pakistan. The other three variables i.e. saving, interest rate and inflation are having insignificant relationship with Family Takaful demand in Pakistan.

Keywords: *Takaful demand, Per capita income, Stock (KSE Index), Saving, Interest rate and Inflation*

I. INTRODUCTION:

Over the period of time Islamic finance has grown into two main segments i.e., Islamic insurance and Islamic banking [1]. Though Islamic banking has taken off a bit in but Islamic insurance is still in its adolescence [3,28].

Islamic form of insurance i.e., Takaful is based upon assistance and cooperation amongst members against some specified loss [30]. Muslims in various parts of the world are now increasingly inclined towards takaful to face life uncertainties. In Islamic settings takaful operators function as management agents for risk coverage of policy holders who contribute premium for such services. This serves as financial security to policy holders in case of loss, for which the takaful operator has legal responsibility [19,21,32,37]. However, if case of no loss during the tenancy of takaful policy the accumulated amount is distributed amongst members. [ibid].

As Pakistan insurance sector has grown to a sizeable segment of economy over time consisting of 27 general, 7 life and 5 takaful and re-takaful companies therefore it has become imperative to initiate a research study aiming at factors that affect insurance and takaful business in Pakistan.

LITERATURE REVIEW:

A. *Islamic insurance Takaful:*

The concept of Takaful Insurance ages back to the time of Holy Prophet (SAWWM) when it was prescribed by the system of “Aaqilah”, which was an arrangement of mutual assistance or indemnification customary in some tribes [1]. It was practiced by receiving contributions from community [5,6]. Aaqilah concept also has applications in respect of distribution of blood money where whole tribute is obliged to blood money [7,19]. Takaful can therefore be termed as a system of mutual financial assistance shared by a group of people called policyholders who also borne the respective risk [12,22]. The surplus, if any, arising out Takaful process is distributed amongst all policy holders according to pre agreed sum, however, any deficit is borne by the Takaful operator in the form of an interest free loan [12,19,22,35]. Summing up, Takaful is a type of joint insurance mechanism [38,41].

Most of the Takaful operators use Mudarabah and Wakalah models where they are also required to meet religious and country standards [2,26]. Mudarabah is a profit sharing contract between provider of capital and entrepreneur whereas Wakalah is an arrangement where a principal authorizes a “Wakeel” to manage its affairs and funds for a fee payment. Conducting and investing in business of Takaful, shareholders may also be entitled to share a sum from surplus business [10,16]. There are some types of Takaful which are explained hereinbelow:

a. *Family Takaful*

Under this takaful arrangement the contract with the insured has a maturity. The insured also makes periodic payments in the takaful fund to meet individual savings targets and to assist needy families [2,9 &10]. This takaful arrangement also serves as a long-term savings and investment arrangement under which a financial guarantee is also provided for financial assistance in the event of death to the contributor [4]. The main objective of this plan is to

save regularly over a fixed period of time, to earn profit on contributions paid in installments from Sharia Compliance investments and to gain Takaful protection in case of death of the participant prior to the maturity of the plan [8,22,40].

b. General Takaful (Non-Life Insurance)

Under General Takaful insurer acts a trustee of funds received from the insured. The funds so received are invested in some profitable ventures alongwith any profits earned thereupon. The surplus is normally distributed after the expiry of each insured contract maturity [19]. If, however, the sum of the premium and investment income is insufficient to meet the claims the exaggerated may be levy for additional premiums [12]. In short General Takaful is a n arrangement to compensate participants aganis financial loss [31]. The contribution under such arrangement is termed as Tabarru [19,39].

c. Re-Takaful (Re-Insurance)

Re-takaful is in fact an arrangement to reduce risk of the original takaful insurer, the difference being only the fact that in re-takaful insured is a takaful operator instead of an individual [16,20]. In Retakaful the retakaful operator receives a part of premium originally received by takaful operator and invests such receipts into profitable avenues [20]. Retakaful has to parties, the insured (ceding company/Takaful operator) and the insurer (Re-Takaful operator)[23]. It is a contract between professionals rather individuals[15,18]. The re-takaful activity helps in reducing risk of original takaful operator and thereby helps in takaful promotion. Re-insurance assures that Takaful funds are managed to meet the insurance commitments of the insured and Re-insured to continue the Takaful business [5].

B. Takaful Insurance in Pakistan

Pakistan is characterized with low adult literacy, low GDI, though present increased with CPEC, and moderate per capita which all result in low purchase power [34]. The share of takaful in Pakistan's in global takaful premium is estimated to be around 1% which is very small as compared with other countries like Malaysia, Indonesia and USA. However, keeping in view a population of more than 200 Million in Pakistan it is expected to increase in future

Takaful companies incorporate as financial institutions in Pakistan under the laws of Securities and Exchange Commission of Pakistan applicable to limited liability companies doing business of insurance. The first Takaful Company to operate in Pakistan was Pak Kuwait Takaful Company Limited, who began its Takaful operations in the year 2005. Whereas, currently there are five Takaful operators

comprising of three General Takaful and two Family Takaful Companies, namely.

a) General Takaful Companies

- i. Pak Kuwait Takaful Company Limited
- ii. Pak Qatar General Takaful Limited
- iii. Takaful Pakistan Limited

b) FAMILY TAKAFUL COMPANIES

- i. Pak Qatar Family Takaful Limited
- ii. Dawood Family Takaful Limited

C. Impact of Microeconomic factors on Takaful consumption per capita

a. Income

It has been established through literature that insurance and level of income has positive relationship [11,17]. Also per capita income and its variants have also been used in many research studies for gauging level of income, therefore we also use per capita income measured as ratio of GDP to the population to represent income per capita[18].We formulate the following hypothesis for this variable:

Hypothesis I: *There exists positive relationship between Demand for Family Takaful and level of income in Pakistan.*

b. Interest Rate

According to literature there exists a +ve relationship between interest rates and takaful [13]. This relationship exists in such a way that increased real interest rates lead to increased returns on investment of insurer which ultimately benefits the insured through higher gains [14].We formulate the following hypothesis for this variable:

Hypothesis II: *There exists a positive relationship between Demand for Family Takaful and the level of interest rates in Pakistan.*

c. Inflation

Inflation occurs when prices rise sharply. This scenario reduces purchases and ultimately the demand of goods and services in the country [24]. As inflation reduces purchasing power therefore it also leaves negative effect of the demand of life insurance [5,29]. An account of theories on the aspect of insurance also establishes relationship between inflation and demand of life insurance is negative [27]. Similarly various researches also reveal –ve relationship between life insurance and inflation [29]. The hypothesis for this variable there is :

Hypothesis III: *There exists a negative relationship between demand for family takaful and inflation.*

d. Savings

In studies exploring the relationship between the demand for life insurance and savings it has been recommended that if the return on insurance policy is favorably greater than the return of other saving instruments, life insurance would look more attractive to potential savers, given its other features like the protection it provides [33]. Similar to other studies, this variable is measured by the rate of return of savings accounts offered by commercial banks in a country [34]. We formulate the following hypothesis for this variable:

Hypothesis IV: *The level of savings is negatively related with the demand of Family Takaful.*

e. Stock

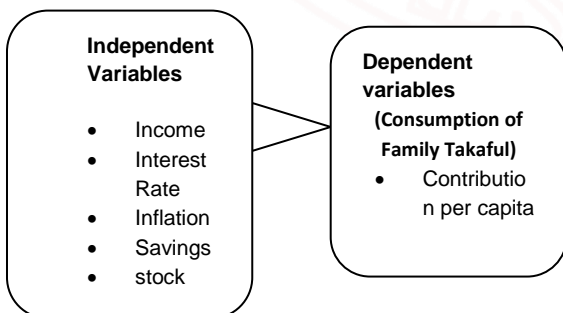
Researchers suggest that life insurance has competitive relationship with stock sales in financial markets in such a way that higher stock prices will allure investors to channelize its funds towards it ultimately adversely affecting life insurance sales [11]. Many researches have taken place relating stock market behavior with life insurance which suggest that life insurance sales declined during the periods of higher stock prices [10,40]. Accordingly we formulate our hypothesis hereunder:

Hypothesis V: *There exists a negative relationship between the demand for family takaful and stock prices.*

The overall conceptual framework as described above can be presented in the form of a functional relationship describing dependent and independent variables as under:

$$\text{Demand} = f(\text{income, interest, inflation, savings, stock}) + \epsilon$$

A simple theoretical framework can be describes diagrammatically as under:



II. METHODOLOGY

A. Statistical Tools

This research study is descriptive in nature which is typically structured with clearly stated hypothesis followed by finding associations among different variables. Secondary data has been collected from different journals, research case studies, articles and financial reports of State Bank of Pakistan and different Takaful companies operating in Pakistan. A general multiple regression model is designed to test the relationships between the dependent variable (demand for family Takaful) and independent variables (level of income, interest rate, inflation rate, savings rate and stock composite).

The regression model is expressed as a linear equation as follows:

$$\text{Demand} = \alpha + \beta_1 (\text{INC}) + \beta_2 (\text{INF}) + \beta_3 (\text{STK}) + \beta_4 (\text{SAV}) + \beta_5 (\text{IR}) + e$$

B. Data

Family takaful does not have deep roots in Pakistan as it started only about 10 years ago. The data about takaful premium was taken from annual reports of respective companies as described above for the period starting from 2006 to 2016. The relevant economic data had been extracted from reports of Pakistan Economic Survey State Bank of Pakistan, World Development Indicators, Financial review of Pakistan and Pakistan Stock Exchange for the span of 11 years period under study i.e. from 2006 to 2016. At the end of 2016 total assets of Pak-Qatar Family Takaful and Dawood Family Takaful were at Rs.9 billion. It was only 6.5% of the total assets of private conventional life insurance companies, which equaled Rs139.1 billion in 2016.

III. RESULTS & DISCUSSION

A. Regression Analysis

TABLE 1

| VAR | STD COEF | T | SIG |
|-------|----------|---------|-------|
| | β | | |
| CONST | | -12.348 | 0.000 |
| STK | 0.291 | -4.744 | 0.000 |
| INF | -0.061 | -1.619 | 0.109 |
| INC | 0.652 | 15.064 | 0.000 |
| IR | -0.153 | -1.793 | 0.076 |
| SVR | 0.148 | 2.481 | 0.150 |

The estimated coefficients indicate that the income and stock variable are highly significant as its value is 0.00 and standardized beta value shows that there is positive relationship between stock, income with Family Takaful demand, therefore, it can said that income and stock are a strong predictor of Family Takaful consumption. Other variables inflation, interest rate and savings significant value is 0.109, 0.076 and 0.15 respectively which shows that these entire three variables have no impact on Family Takaful.

IV. EXPLANATION OF RESULTS:

TABLE 2

| R | R ² | AD R ² | CHANGE STATISTICS | | |
|------|----------------|-------------------|--------------------|---------|--------|
| | | | R ² CHN | F CHN | SIG. F |
| .970 | .940 | .937 | .940 | 282.599 | .000 |

Table 2 shows the values of R, R², adjusted R², and the standard error of the model. This is used to explain how perfectly a regression model fits behavior of data. Table shows that R² is 93% which means 93% variation in dependent variable in the model is explained by independent variables. This relationship is also very significant as depicted by highly significant P value.

TABLE 3 :

| HYPOTHESIS | ACCEPT/REJECT |
|---|---------------|
| Hypothesis I: There exists positive relationship between Demand for Family Takaful and level of income in Pakistan. | Accepted |
| Hypothesis II: There exists a positive relationship between Demand for Family Takaful and the level of interest rates in Pakistan. | Rejected |
| Hypothesis III: There exists a negative relationship between demand for family takaful and inflation. | Rejected |
| Hypothesis IV: The level of savings is negatively related with the demand of Family Takaful. | Rejected |

| | |
|---|----------|
| Hypothesis V: There exists a negative relationship between the demand for family takaful and stock prices. | Accepted |
|---|----------|

V. CONCLUSION

This study uses per capita contribution as dependent variable to gauge demand for consumption of family takaful in Pakistan. The results suggest that per capital income has positive and significant relation with demand of family takaful along with stock prices which has strong significant negative relationship. All other variables in the model revealed insignificant relationship. We can infer from the results that as income of the people rises the demand for family takaful arises due to increase in purchasing power of the masses. On the other hand, stock price movements leaves negative impact on demand for family takaful because masses recognize family takaful as an investment opportunity in a sense but prefer it only as a last resort in case long term downward trend in falling stock prices. This study suggests that Family Takaful operators and policy makers can augment the Family Takaful in Pakistan by direct interventions of macroeconomic variables.

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